

**HEARING ON A 'WORLD-CLASS' MILITARY: ASSESSING CHINA'S
GLOBAL MILITARY AMBITIONS**

HEARING
BEFORE THE
U.S.-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION

**ONE HUNDRED SIXTEENTH CONGRESS
FIRST SESSION**

THURSDAY, JUNE 20, 2019

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WASHINGTON: 2019

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The Commission was created on October 30, 2000 by the Floyd D. Spence National Defense Authorization Act for 2001 § 1238, Public Law No. 106-398, 114 STAT. 1654A-334 (2000) (codified at 22 U.S.C. § 7002 (2001), as amended by the Treasury and General Government Appropriations Act for 2002 § 645 (regarding employment status of staff) & § 648 (regarding changing annual report due date from March to June), Public Law No. 107-67, 115 STAT. 514 (Nov. 12, 2001); as amended by Division P of the “Consolidated Appropriations Resolution, 2003,” Pub L. No. 108-7 (Feb. 20, 2003) (regarding Commission name change, terms of Commissioners, and responsibilities of the Commission); as amended by Public Law No. 109-108 (H.R. 2862) (Nov. 22, 2005) (regarding responsibilities of Commission and applicability of FACA); as amended by Division J of the “Consolidated Appropriations Act, 2008,” Public Law Nol. 110-161 (December 26, 2007) (regarding responsibilities of the Commission, and changing the Annual Report due date from June to December); as amended by the Carl Levin and Howard P. “Buck” McKeon National Defense Authorization Act for Fiscal Year 2015, P.L. 113-291 (December 19, 2014) (regarding responsibilities of the Commission).

The Commission’s full charter is available at www.uscc.gov.

September 9, 2019

The Honorable Chuck Grassley
President Pro Tempore of the Senate, Washington, DC 20510
The Honorable Nancy Pelosi
Speaker of the House of Representatives, Washington, DC 20515

Dear Senator Grassley and Speaker Pelosi:


We are writing to notify you of the Commission's June 20, 2019 public hearing on "A 'World-Class' Military: Assessing China's Global Military Ambitions." The Floyd D. Spence National Defense Authorization Act for 2001 § 1238, Pub. L. No. 106-398 (as amended by the Carl Levin and Howard P. "Buck" McKeon National Defense Authorization Act for Fiscal Year 2015 § 1259b, Pub. L. No. 113-291) provides the basis for this hearing.

At the hearing, the Commissioners received testimony from the following witnesses: Christopher A. Ford, Assistant Secretary for International Security and Nonproliferation, U.S. Department of State; Mary Beth Morgan, Acting Deputy Assistant Secretary of Defense for East Asia, U.S. Department of Defense; Daniel K. Taylor, Acting Defense Intelligence Officer for East Asia, Defense Intelligence Agency; Dean Cheng, Senior Research Fellow, Asian Studies Center, Heritage Foundation; M. Taylor Fravel, Ph.D., Arthur and Ruth Sloan Professor of Political Science, Massachusetts Institute of Technology; Phillip C. Saunders, Ph.D., Director of the Center for the Study of Chinese Military Affairs, National Defense University; Isaac B. Kardon, Ph.D., Assistant Professor, Strategic and Operational Research Department, U.S. Naval War College; Christopher D. Yung, Ph.D., Donald Bren Chair of Non-Western Strategic Thought and Director of East Asian Studies, Marine Corps University; David Santoro, Ph.D., Director and Senior Fellow for Nuclear Policy, Pacific Forum; Thomas G. Mahnken, Ph.D., President and Chief Executive Officer, Center for Strategic and Budgetary Assessments; and Abraham M. Denmark, Director, Asia Program, Woodrow Wilson International Center for Scholars. The following submitted statements for the record: Elbridge Colby, Director, Defense Program, Center for a New American Security; and Derek Grossman, Senior Defense Analyst, RAND Corporation. This hearing examined the internal and external challenges the Chinese Communist Party (CCP) faces in its attempts to consolidate power at home and increase its influence abroad. The first panel explored the implications of President Xi and the CCP's tightening control over economic and security policy making. The second panel examined China's domestic challenges, considering China's economic weakness and financial sector risks, the risks and benefits of China's state-led economic policies, and the country's reliance on a number of key foreign technologies. The third panel assessed China's external challenges, focusing on the People's Liberation Army's shortcomings and the limits of Chinese soft, sharp, and hard power.

The full transcript of the hearing, prepared statements, and supporting documents are posted to the Commission's website, www.uscc.gov. Members and the staff of the Commission are available to provide more detailed briefings. We hope these materials will be helpful to the Congress as it continues its assessment of U.S.-China relations and their impact on U.S. security.

The Commission will examine in greater depth these issues and the others in our statutory mandate this year. Our 2019 Annual Report will be submitted to Congress in November 2019. Should you have any questions, please do not hesitate to have your staff contact one of us or our Congressional Liaison, Leslie Tisdale Reagan, at 202-624-1496 or lreagan@uscc.gov.

Sincerely yours,


Carolyn Bartholomew
Chairman


Robin Cleveland
Vice Chairman

cc: Members of Congress and Congressional Staff

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A ‘WORLD-CLASS’ MILITARY: ASSESSING CHINA’S GLOBAL MILITARY AMBITIONS

THURSDAY, JUNE 20, 2019

U.S.-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION

Washington, DC

The Commission met in Room 2255 of Rayburn House Office Building, Washington, DC at 9:30 a.m., Commissioner Kenneth Lewis and Commissioner Michael McDevitt (Hearing Co-Chairs) presiding.

OPENING STATEMENT OF COMMISSIONER LEWIS HEARING CO-CHAIR

COMMISSIONER LEWIS: Thank you for the panelists for coming. The long process of political upheaval in contemporary China began in 1911, when revolutionaries threw off the shackles of the Qing Dynasty and sought to build a modern nation.

The original goals of the Xinhai revolution-- nationalism, democracy, and the peoples' livelihood-- were supplanted by Marxism-Leninism, following the victory of the Chinese Communist Party, in a civil war that left millions dead by its conclusion in 1949.

After several decades of mutual hostility the United States welcomed Beijing into the community of nations. We assumed that through engagement and good will the People's Republic of China would evolve into a true democratic republic.

Today there is a strong bi-partisan consensus that the core assumptions and expectations that guided Chinese policy in the past are no longer valid.

At Chinese Communist Party's 19th National Congress in 2017, Chinese President and General Secretary of the CCP, Xi Jinping, declared that China was now approaching the world center stage, and pledged to build what he termed a world class military by 2049, the centennial of the founding of the People's Republic of China.

Xi Jinping has also identified 2049 as the year China will attain national rejuvenation, implying that building a world class military and national rejuvenation are intrinsically linked.

As political scientist Ian Bremmer notes, China presents a contradictory legacy. On the one hand, the Chinese Communist Party has presided over the largest economic expansion in human history.

Nearly two-thirds of the population lived on \$1.90 a day or less in 1990. In 2015, 25 years later, that number was less than one percent. Per capita income increased by more than 900 percent over that period. And infant mortality rates fell by more than 80 percent.

On the other hand, as it has grown more powerful the Chinese Communist Party has doubled down on its most malign instincts. Chinese leaders have ordered the People's Liberation Army to coerce China's neighbors into conceding their territory and national sovereignty, while jailing over one million of its ethnic Uyghur population in so called re-education camps.

As early as 2010 China's then-Foreign Minister, Yang Jiechi, outlined the philosophy that

appears to guide China's conduct in its region and around the world, declaring “China is a big country, and other countries are small countries. And that is just a fact.”

The words of Mr. Yang are typical of a Chinese Communist Party whose world view combines Marxist dialectic precepts of inevitable conflict with the traditional Chinese concept of *Tianxia*, or all under heaven, which dictates that China is the world's only civilization, and every other nation is inherently inferior.

This is antithetical to liberal democratic norms of equality between states, a principle that has been promoted by the United States since it became a world power.

Beijing's entire approach to geopolitics is fundamentally rooted in this unique world view. As Congressman Mike Gallagher noted in a timely piece in the *American Interest*, the CCP perceives itself in a “life-or-death” struggle against Western ideas, including democracy and universality of human rights.

They do not see relations between nations as equal. One is a hegemon, and one is a vassal. China approaching the world center stage then may not be an entirely welcome phenomenon for the rest of the world.

China continues to bully and pressure regional states. That leaves our longstanding democratic ally, Taiwan, which has never been under the control of the People's Republic of China.

As we just witnessed, two million people demonstrated on the streets of Hong Kong against Beijing's efforts to undermine Hong Kong's freedom.

Xi Jinping has explicitly broken his pledge to the United States not to militarize the South China Seas with the building of the islands. Under his watch the PLA has been told to be ready to “fight and win” a war against a “powerful enemy,” Beijing's code word for the United States.

China has also rededicated itself to securing a preponderant position in the 21st century's latest technologies, at the expense of the United States and other countries, often by lying, cheating, and stealing its way to the top.

Building a world class military will provide Beijing with an even more powerful tool to continue this behavior and achieve these goals.

With that I turn to my distinguished co-chair, Commissioner and Admiral Mike McDevitt, who will provide his thoughts on what the world class military might look like. I look forward to hearing our esteemed witnesses' testimony today.

PREPARED STATEMENT OF COMMISSIONER LEWIS HEARING CO-CHAIR

The long process of political upheaval in contemporary China began in 1911, when revolutionaries threw off the shackles of the Qing Dynasty and sought to build a modern nation. The original goals of the Xinhai revolution—nationalism, democracy, and the people’s livelihood—were supplanted by Marxism-Leninism following the victory of the Chinese Communist Party (CCP) in a civil war that left millions dead by its conclusion in 1949. After several decades of mutual hostility, the United States welcomed Beijing into the community of nations and assumed that, through engagement and good will, the People’s Republic of China would evolve into a true democratic republic. That assumption is no longer valid today.

At the CCP’s 19th National Congress in 2017, Chinese President and General Secretary of the CCP, Xi Jinping, declared that China was now approaching the “world’s center stage” and pledged to build what he termed a “world-class” military by 2049, the centennial of the founding of the People’s Republic of China. Xi Jinping has also identified 2049 as the year China will attain “national rejuvenation,” implying that building a “world-class” military and “national rejuvenation” are intrinsically linked.

As political scientist Ian Bremmer notes, “China presents a contradictory legacy.” On the one hand, the CCP has presided over the largest economic expansion in human history. Nearly two-thirds of the population lived on \$1.90 per day or less in 1990. In 2015, that number was less than 1%. Per capita income increased by more than 900% over that period, and infant mortality rates fell by more than 80%.

On the other hand, as it has grown more powerful, the CCP has doubled down on its most malign instincts. Chinese leaders have ordered the People’s Liberation Army (PLA) to coerce China’s neighbors into conceding their territory and national sovereignty while jailing over one million of its ethnic Uyghur population in so-called “re-education camps.” As early as 2010, China’s then-foreign minister, Yang Jiechi, outlined the philosophy that appears to guide China’s conduct in its region and around the world, declaring that: “China is a big country and other countries are small countries and that is just a fact.”

The words of Mr. Yang are typical of a CCP whose world-view combines Marxist dialectic precepts of inevitable conflict with the traditional Chinese concept of *tian xia*—or, “All Under Heaven”, which dictates that China is the world’s *only* Civilization, and every other nation is inherently inferior. This is antithetical to liberal democratic norms of equality between states, a principle that has been supported by the United States since it became a world power.

Beijing’s entire approach to geopolitics is fundamentally rooted in this unique world-view. As Congressman Mike Gallagher noted in a timely piece in the *American Interest*, the CCP perceives itself in a “life-or-death struggle” against Western ideas, including democracy and the universality of human rights.

China approaching the “world’s center stage,” then, may not be an entirely welcome phenomenon for the rest of the world. China continues to bully and pressure regional states, not least our long-standing democratic ally, Taiwan—which has never been under the control of the

People's Republic of China. As we just witnessed, 2 million people demonstrated on the streets of Hong Kong against Beijing's efforts to undermine Hong Kong's freedom. Xi Jinping has explicitly broken his pledge to the United States not to militarize the South China Sea. Under his watch, the PLA has been told to be ready to "fight and win" a war against a "powerful enemy"—Beijing's code word for the United States. China has also rededicated itself to securing a preponderant position in the 21st century's latest technologies at the expense of the United States and other countries—often by lying, cheating, and stealing its way to the top. Building a "world-class" military will provide Beijing with an even more powerful tool to continue this behavior and achieve these goals.

With that, I turn to my distinguished co-chair, Commissioner and Admiral Mike McDevitt, who will provide his thoughts on what this "world-class" military might look like. I look forward to hearing our esteemed witnesses' testimony today.

OPENING STATEMENT OF COMMISSIONER MCDEVITT HEARING CO-CHAIR

COMMISSIONER MCDEVITT: Thank you, Commissioner Lewis. And I want to first, having spent late last night reading all of the testimony, thank all of the witnesses for their time and effort they have put into preparing testimony for what I consider a ground breaking hearing.

And I certainly want to thank the House Foreign Affairs Committee for securing this room for us to use today.

Since the PLA's modernization drive began in the 1990's its capabilities have grown dramatically. I'm not going to get into a recitation of what these are or not. But I want to emphasize the comment addressed by my co-chair, that Xi Jinping has made his ambitions for the PLA perfectly clear.

There is no mystery. What he wants for China, he wants a PLA that "makes an all-out effort to become a world class armed force by 2050."

Being world class carries the connotation of being second to none, or being top tier, or being the best in the world. Most significantly is a established and accelerated time table for completion of modernization.

He has spoken about stepping up their efforts. And what that means in practice was also announced in his 19th Party Congress report, when he said we'll "make it our mission to see that by 2035," which by the way, to remind everybody, is just 15 years from now, "the modernization of our national defense and our forces is basically completed. And by that, by the mid-21st century our people's armed forces will have been fully transformed into world class forces."

Since then Xi has continued to stoke a sense of urgency. Take, for example, on May in 2018 a South China Sea naval review, which Xi watched from the flying bridge of a brand new destroyer, wearing his trending camo uniform.

It reminded the 10,000 sailors involved in the 50 odd ships and submarines that "the task of building of the strength of the people's navy has never been so urgent."

The buildup of the navy has been impressive. It means that just in 18 months or so China is likely to have the world's second most capable navy, at least in terms of ships and installed weapons systems. And how they'll be employed is unclear.

A partial answer to the question can be found in Djibouti, on the Horn of Africa, and as the far, in the far reaches of the Indian Ocean, where Beijing opened a base in 2017.

Twenty years ago Beijing claimed it did not station troops or send military bases in any, or set up military bases in any foreign country as a matter of policy. That was then. This is now. Beijing's policy on this issue, like so many other examples, is conditional. It is what it says it is.

For the United States the very big question is, when General Secretary Xi describes his vision for the PLA we really don't know what he has in mind. What does he believe a world class PLA actually looks like?

We can assume it will be large. But how large? And with what blend of capabilities? We must never forget, this is a party military, not a national military. It does what the party tells it to do. Or at least that's what Xi harps on and expects.

Will it be a force with a global expeditionary capability, mimicking the United States? Or is it going to be an overwhelming regional force, reminiscent of Imperial Japan on the eve of World War II? Actually, the two are not mutually exclusive. It could be both.

This hearing will explore these questions, and assess what the implications of a world class military might be for the United States and its allies and partners.

Our objective with this hearing is to begin a public discourse, and hopefully a Government discourse on this topic. And develop recommendations for Congress on how the United States might best protect its interests in the face of a highly capable Chinese competitor.

Our first panel today will provide U.S. Government views on China's military ambitions, and how China's military-civilianfusion strategy fits into these ambitions.

But before we begin I want to let everybody know that today's testimonies and transcripts will be posted on our website at www.uscc.gov. Also, our next hearing on China's medicine and health development is going to be on July 31st.

With that, thank you again for joining us. And now I'm going to go ahead and introduce our first panelist.

PREPARED STATEMENT OF COMMISSIONER MCDEVITT HEARING CO-CHAIR

Thank you, Commissioner Lewis, and good morning, everyone. Thank you, particularly, to our witnesses for the time and effort they have put into their testimonies and to the House Foreign Affairs Committee for securing this room for our use today.

Since the People's Liberation Army's modernization drive began in the 1990's, its capabilities have grown dramatically. I want to emphasize the comment made by my co-chair that General Secretary of the Communist Party Xi Jinping made his ambitions for the PLA perfectly clear. There is no mystery what he wants for China: a PLA that (quote) "makes an all-out effort to become a world-class armed forces by 2050." Being "world-class" carries the connotation of being "second to none," being "top tier," or being the "best in the world." Most significantly, he established an accelerated timetable for completion of military modernization. A sense of urgency is clear. Xi said, "We will step up efforts to build China into a strong maritime country." He went on to explicitly outline what "stepping up efforts" actually meant:

We will make it our mission to see that by 2035, [just 15 years from now] the modernization of our national defense and our forces is basically completed; and that by the mid-21st century our peoples armed forces have been fully transformed into world-class forces.

Since then Xi has continued to stoke a sense of urgency. Take, for example, a May 2018 South China Sea naval review, which Xi watched from the flying bridge of a new destroyer. Wearing his trendy "camouflage uniform," he reminded the 10,000 or so sailors involved on 50 odd ships and submarines "that the task of building up the strength of the people's navy has never been so urgent."

The build-up of the navy has been most impressive. It means that China will be the second-most capable navy in the world by 2020, at least in terms of ships and installed combat systems. How these ships will actually be employed is unclear. As the PLAN's "blue water" capability continues to expand, will it begin to operate sizable naval Task Forces aboard on a routine basis similar to the way the U.S. Navy does, or will the operational focus remain regional with only modestly-sized formations active abroad?

A partial answer to this question can be found in Djibouti on the Horn of Africa at the far reaches of the Indian Ocean, where Beijing opened a base in 2017. Twenty years ago Beijing claimed it "does not station any troops or set up any military bases in any foreign country" as a matter of policy. That was then. This is now. Beijing's policy on this issue, like so many other examples, is conditional. It is what it says it is.

For the United States the very big question is when General Secretary Xi describes his vision for the PLA we really don't know what he has in mind. What does he believe a "world-class" PLA actually looks like? We can assume it will be large, but how large and with what blend of capabilities? We must never forget this is Party military, not a national military. It does what the Party tells it to do, or least that is what Xi harps on and expects. Will it be a force with global expeditionary capability, mimicking the United States, or an overwhelming regional force

reminiscent of Imperial Japan on the eve of World War II? As the two are not necessarily mutually exclusive, could it be both?

This hearing will explore these questions and assess what the implications of a world-class Chinese military might be for the United States and its allies and partners. Our goal is to begin a public dialogue on this topic and develop recommendations for Congress on how the United States might best protect its interests in the face of a highly-capable Chinese competitor.

Our first panel today will provide U.S. government views on China's military ambitions and how China's military-civilian fusion strategy fits into these ambitions.

But before we begin, I wanted to let everyone know that today's testimonies and transcript will be posted on our website, www.uscc.gov. Also, our next hearing, on China's medicine and health development, will be on July 31st.

Thank you, again, for joining us today. With that, we will proceed with our first panel.

PANEL I INTRODUCTION BY COMMISSIONER MCDEVITT

First we're going to hear from Christopher A. Ford, the Assistant Secretary for International Security and Non Proliferation, at the U.S. Department of State.

Before coming to ISN Dr. Ford served as Special Assistant to the President, and Senior Director for Weapons of Mass Destruction and Counter Proliferation. I hope you made it clear that you were not, you were going against the proliferation, as opposed to -- That's a heck of a title.

Anyway, Dr. Ford served on several Congressional staffs, including the Senate Select Committee on Intelligence, the Senate Committee on Foreign Relations, and in 2003 served as the Principle Deputy Assistant Secretary in the State Department's Bureau of Verification and Compliance.

He's also a Senior Fellow at Hudson Institute. And he served as an intelligence officer in the U.S. Navy Reserve from 1994 to 2011.

He earned his Bachelors Degree at Harvard and his PhD from Oxford, and as a Rhodes Scholar. And he has a law degree from Yale Law School.

So, Dr. Ford, why don't I ask you to begin your commentary. Each witness is asked to keep your verbal remarks to around seven minutes. And then we'll have enough time for questions and answers.

**OPENING STATEMENT OF CHRISTOPHER A. FORD, ASSISTANT SECRETARY
FOR INTERNATIONAL SECURITY AND NONPROLIFERATION, U.S.
DEPARTMENT OF STATE**

DR. FORD: Thank you, Mr. Commissioner. It's a pleasure to be here. And thanks for the chance to talk about these topics. I will be giving what I hope will be an appropriately abbreviated version of my remarks. But I would ask that the full text be entered into the record, if that is acceptable.

COMMISSIONER MCDEVITT: That's no problem.

DR. FORD: Well, Mr. Commissioner, Commissioners, as we develop an ever better whole of Government approach to meeting the challenges that are presented by China's power, and its increasingly assertive self-aggrandizement in the international arena, we are proceeding along, of course, the compass bearing provided by the National Security Strategy and the National Defense Strategy, which clearly focuses us upon the imperative of meeting the competitive challenge of near peer adversaries, such as China and Russia.

I would like to try to address today a little bit only one piece of that broader puzzle. And that is the question of how technology acquisition fits into China's geopolitical strategy.

As I say, this is really only one piece of that puzzle. But it is the one that my little corner of the State Department spends a great deal of time on. So, I hope you'll forgive me for dwelling somewhat upon it.

Understanding Chinese strategy in this respect I would argue is critical. Because it is only upon a basis of that clear understanding that we can take effective countermeasures.

Despite decades of propaganda tropes about win-win, and the peaceful rise, and that sort of stuff, it turns out when one looks at it closely, and indeed when one observes the emerging behavior, that military muscularity, and indeed an increasing degree of military muscularity is central to Beijing's geopolitical vision.

China has adopted a whole system strategy to develop what it calls a world class military, so as to achieve the so called strong military dream referred to by Xi Jinping, by 2049.

By that date the Chinese Communist Party hopes to have legitimated its authoritarian rule by having achieved what is called the great rejuvenation of the Chinese Nation, as China reclaims for itself the geopolitical centrality that it sees to be its birthright, and of which Chinese nationalists feel that their country was robbed in the 19th century by predatory European imperialists.

This is a central priority for Xi Jinping, who explained at the 19th Party Congress that the strong military dream is critical to China's rejuvenation. But even though he is unprecedentedly unabashed in the pursuit of this global military power, this is not a new theme for him.

Our National Security Strategy describes China as one of the revisionist powers that threaten U.S. security interests.

China's conception of its national identity and its national security strategy seem to be premised upon a strong sense of mission, in the form of acquiring greater power and status in the world.

That power and that status are in turn the currencies with which it is felt that China will rectify the historical grievances associated with its so called century of humiliation that followed the Middle Kingdom's 19th century defeats, at the hand of European imperialists, using advanced military technology of the period.

Despite the win-win propaganda rhetoric therefore, this is not a peaceable, benevolent,

live and let live vision of 21st century engagement.

In the scope of its ambitions the Chinese Communist Party I would argue is inescapably revisionist, even revanchist in its approach to influencing the rest of the world.

Its self-conceived national mission is to make itself ever more powerful, vis-a-vis everyone else. And particularly vis-a-vis the United States. And it has devoted its national security policy to what the 2002 Chinese Defense White Paper described as a policy of unremittingly enhancing the overall national strength.

And unfortunately it does not appear that this objective is merely one of acquiring relative power and status. Fascinatingly, and I would suggest worryingly, Chinese officials have also made clear that in some sense their target is what I like to describe as the current sociopolitical operating system of the international community.

This was a problem called out in the National Defense Strategy, which noted specifically that China aims to shape a world consistent with its authoritarian model, gaining veto authority over other nations' economic, diplomatic, and security decisions.

But you didn't just take our word for it. Xi Jinping himself noted with alarming confidence that China's development over the past four decades had demonstrated to the international community what he described as a new model of modernization that other countries should look to, and should adopt.

In effect, this model is one of state controlled economics and authoritarian dictatorship. And thus, one of direct, indirect competition with the liberal institutions of our current international systems.

He makes no bones about this. And this makes him in some sense the first Chinese leader since Mao Zedong to openly state that China wishes to overturn the norms governing the international system, and remake the world in line with its own image.

Let me turn to the issue of technology in this strategy, however. Because that is a critical piece that we work on.

To help facilitate the growth of the military power that it sees as the key to helping achieve this dream, China has adopted an approach that it calls military civilian fusion, military civil fusion, or MCF, which seeks to in effect break down all the barriers between the civilian sector and China's defense industrial base, in order to simultaneously achieve economic development, as well as military modernization.

Some of the roots of this I think go back all the way to the 19th century, where as I alluded to before, China has painful memory of what happens when advanced military technology allows one empire to dominate and humiliate another empire.

China may have lost out on the last, or prior revolutions in military affairs. But it is determined to win the next one. And it sees the acquisition of technology, and the development of technological capabilities, in particularly advanced artificial intelligence facilitated war fighting, as being the key to the success that it wishes to have in the next RMA, that will decide the future of the late, mid late 21st century.

And to fuel this military civil fusion strategy China has focused relentlessly not just upon acquiring technology indigenously, but also upon acquiring it abroad, by means both fair and foul, in order to tilt the playing field in favor of itself, at the expense of U.S. and global companies.

This is one of the reasons why we focus so much in the U.S. Government right now upon reforming national security export control rules, recalibrating our export control policy, building out recent statutory changes, which we are very grateful to have gotten from Congress, that are

designed to help close loopholes in our traditional methods of screening investments in the United States for national security implications.

And the emphasis that we also place upon screening visa applicants, to try to weed out persons who are seeking sensitive technologies. And of course, upon shoring up cyber defenses against cyber facilitated theft.

So, some of what needs to be done, forgive me, I'm already almost out of time. Some of what needs to be done is, lies in that realm of Government policy. But much of it also relates to a broader sort of awareness of this challenge.

And here is where I'm so pleased to be able to testify here today, because of the importance of increasing public awareness of these challenges.

Business people, researchers, academics, technologists, and scientists of all sorts need to be keenly aware of these problems, and of the need to collectively come up with a better response. We all need to be part of this.

Because the implications of the sort fused, whole-ist system approach that China is taking, both to its broader geopolitical strategy, and to the technology aspects that are sort of nested within that strategy, is not something that the Government, I'm afraid, can undertake alone.

We all need to build circuits of what I call sort of appropriate caution into the back of our heads. And I'm not suggesting in any way that this should lead to any kind of a call for a technological boycott of China. That would be untenable and unwise.

But it is an important lesson. Because we need to be much, much, much more careful than we have been for a long time. One of the central challenges, I would argue, is that we face a geopolitical competitive adversary in China, with whom we need to have, and learn how to have, both a competitive relationship and a simultaneously cooperative one.

And doing those things at the same time is something for which we don't have much of an intellectual template from the Cold War, where our dealings with the Soviets were much more purely competitive.

We have to figure this out, almost as Deng Xiaoping himself suggested, one could feel one's way across a river by feeling for the stones if you can't see beneath the water.

We are making this up as we go along. But a critical aspect to this is awareness of the problem. And that is why this Commission can play such an important role in drawing attention to these challenges, and encouraging ever more effective responses to the collective challenges that we face.

I would ask if you could that my longer remarks, that go into some more detail about aspects of China's technology acquisition policy be entered into the record. And I very much look forward to your questions, and our discussion here today. Thank you, sir.

**PREPARED STATEMENT OF CHRISTOPHER A. FORD, ASSISTANT SECRETARY
FOR INTERNATIONAL SECURITY AND NONPROLIFERATION, U.S.
DEPARTMENT OF STATE**

Technology and Power in China’s Geopolitical Ambitions

The Hon. Christopher A. Ford
Assistant Secretary of State for International Security and Nonproliferation

Testimony to the
U.S.-China Economic and Security Review Commission
Washington, D.C.
June 20, 2019

Good morning, Commissioners, and thank you for inviting me. I am pleased to offer some thoughts for you today on the subject of China’s geopolitical technology strategy, and although I will only deliver an abbreviated version to you here in person, I request that the full text of my prepared remarks be entered into the record.

As someone who in my own scholarship has spent some time studying China – and especially as someone who has been [writing for more than a decade](#) about the challenges that the United States and the international community would likely face as the growth of China’s wealth and power enabled the Chinese Communist Party to pursue Indo-Pacific regional hegemony in the near-term and displacement of the United States to achieve global preeminence in the future – it has been gratifying to see the U.S. policy community and our national security bureaucracy focus with increasing emphasis upon the challenges of competitive strategy vis-à-vis Beijing. I would argue that this emphasis is notably overdue. Nevertheless, as we develop an ever-better “whole of government” approach to meeting the challenges presented by China’s power and its increasingly assertive self-aggrandizement in the international arena, we are developing improved answers to these national security challenges along the compass bearing provided in the 2017 National Security Strategy and the 2018 National Defense Strategy – which focus unmistakably upon the imperative of addressing threats from great-power “near-peer” competitors such as China.

In my current capacity at the State Department, I have spoken about these issues publicly on multiple occasions, including about the [challenges of developing a competitive strategy in the new geopolitical context](#), how [nonproliferation tools can be used in the service of competitive strategy](#), the [challenges that China presents to traditional models of export control](#), the importance of [building “coalitions of caution” in slowing the transfer of sensitive technology to China](#), and [how China intends to use technologies bought or stolen from the West to position itself to best the United States in the next anticipated “revolution in military affairs”](#) that Chinese strategists assess now to be getting underway. What I would like to do today is to try to shed a little additional light upon why this all matters so much – and specifically, upon how China itself appears to see technology acquisition fitting into its geopolitical strategy.

I. *The Geopolitics of Grievance and Ambition*

Understanding this strategy and context is vital, and not merely, because it is only upon the basis of such a clear understanding that we can take effective countermeasures. Honesty and clarity on these points are also vital. This is a time in which [some are trying to persuade the world](#) that the United States is merely making up spurious national security excuses to take umbrage at China in the service of specifically tariff-related economic interests. Ladies and gentlemen, I only wish it *were* true that our anger and distress over China's behavior related solely to matters of dollars and cents. Unfortunately, however, the security threats China presents in these and multiple other respects – not just to the United States but to China's neighbors, to states ever farther from its own shores, and indeed to the structure and function of the current international system – are very real indeed.

One key to understanding this context is to appreciate that despite decades of “win-win” and “peaceful rise” Chinese propaganda tropes, military muscularity – and, more to the point, a steadily *increasing* military muscularity – is central to Beijing's geopolitical vision. China has adopted a whole-of-system strategy to develop what it calls a “world class military” in order to achieve the so-called “Strong Military Dream” by 2049. By that date – the symbolically potent centennial of the conquest of China by the Chinese Communist Party (CCP) – the Party hopes to have legitimized its authoritarian rule by having achieved “the great rejuvenation of the Chinese nation” (*Zhonghua minzu weida fuxing*) as China reclaims for itself the geopolitical centrality it sees as its birthright, and of which Chinese nationalists feel their country was robbed in the 19th Century by predatory European imperialists.

This is a central priority for Xi Jinping, who explained at the 19th Party Congress that the “Strong Military Dream” is critical to China's national rejuvenation. But even though he is unprecedentedly unabashed in the pursuit of such global military power, this emphasis is hardly unique to Xi. China's military ambitions apparently have roots that go back to China's defeat by British ironclads in the Opium War of the 1840s – a defeat which impressed upon Chinese nationalists the ways in which military technological advancement can permit one empire to humiliate and displace another, and which set off a long countervailing Chinese scramble for technologically-facilitated global military power, over the most recent and most successful manifestation of which Xi now presides.

Our National Security Strategy describes China as one of “the revisionist powers” threatening U.S. security interests. As I have pointed out for years, China's conception of national identity and its national security strategy seem to be premised upon a strong sense of “mission,” in the form of acquiring greater power and status in the world. This power and status are, in turn, the currencies with which it is felt that China will rectify the historical grievances associated with the so-called “Century of Humiliation” that followed the Middle Kingdom's 19th Century defeats at European hands.

Despite the “win-win” propaganda rhetoric, then, this is no peaceable, benevolent live-and-let-live vision of 21st-Century international engagement. In the scope of its ambitions, the Chinese Communist Party is inescapably revisionist, even revanchist, in its approach to influence the rest of the world. Its self-conceived national mission is to make itself ever more powerful

vis-à-vis everyone else – and particularly vis-à-vis the United States – and it has devoted its national security policy to what Beijing’s 2002 Defense White Paper described as a policy of “unremittingly enhancing the overall national strength.”

Nor, it would appear, is the objective merely relative power and status. Fascinatingly – and worryingly – Chinese officials have made clear that in some sense their target is what I like to describe as the current socio-political “[operating system](#)” of the international community. This was a problem called out in our National Defense Strategy, which noted that China aims “to shape a world consistent with [its] authoritarian model – gaining veto authority over other nations’ economic, diplomatic, and security decisions.”

But you need not just take our word for it. Xi Jinping himself noted with alarming confidence that China’s development the past four decades had demonstrated to the international community what he described as a new model of modernization that other countries should look to and adopt. In effect, this model is one of state-controlled economics and authoritarian dictatorship, and thus one in direct competition with the liberal institutions of the current international system. Xi makes few bones about this, describing today’s world environment as a conflict between modernization systems. This makes him the first Chinese leader since Mao Zedong to openly state that China wishes to overturn the norms governing the international system and remake the world more in line with its own image.

This is not a new idea, however, nor one unique to Xi Jinping. Chinese leaders may once have been content – in Deng Xiaoping’s famous formulation – to “bide their time and hide their capabilities,” but such “biding” was inherently tactical, and its cautiousness was clearly understood to serve a broader purpose. (When you bide your time while hiding your capabilities, you are obviously *waiting* for some opportunity!) And indeed, as China’s power has grown, they have been increasingly disinterested in such coy postures and more inclined to act out.

Under Hu Jintao, officials in Beijing began to talk of creating a “harmonious world” explicitly modeled on China’s own, Party-managed “harmonious society” at home. They even spoke for a while about aiming for China’s “return,” before apparently toning down that rhetoric for fear that it would too clearly signal Beijing’s ambition to reacquire the position of global privilege and centrality vis-à-vis all other nations that gave the “Middle Kingdom” its ancient name. For his part, Xi has now raised the ante with his rhetoric of the “China Dream,” the “Strong Military Dream,” and geopolitical rejuvenation – and he seems uninterested in toning down his rhetoric just because it is beginning to alarm people who see it for what it is.

Today, China is working to export its model of authoritarianism through its “Community of Common Destiny” to reshape global governance, utilizing the power of the Chinese economy to coerce and to corrupt governments around the world that are already suffering from underdeveloped or unstable democracies and taking advantage of countries suffering from financial instability to push them toward the desired end state. Ultimately, China seems to think that it really can reorder the world. As a Chinese ambassador exclaimed some years ago during negotiations over China’s accession to the World Trade Organization, China expects eventually to dictate the rules for the world system: “[We know we have to play the game your way now, but in ten years we will set the rules!](#)” His timing may have been a bit off, but it seems very clear what he had in mind.

II. *Technology and Chinese Strategy*

So *this*, then, is the context for understanding China’s whole-of-system strategy to modernize the People’s Liberation Army (PLA) into a global military power to underpin the China Dream. To help facilitate this military power, China has adopted an approach it calls “military-civil fusion” (MCF), which seeks to break down all barriers between the civilian sector and China’s defense industrial base in order simultaneously to achieve economic development and military modernization.

As I mentioned, some of the roots of this approach can be seen in China’s painful experience, when encountering Industrial Revolution-era European power, of how military technology can facilitate global power. Beijing may have lost out on prior “revolutions in military affairs” (RMAs), but it is determined to *lead* the next one. Chinese strategic writers expect that the next RMA will be one of “intelligent warfare” – a whole new arena of state-of-the-art military power driven by the application of artificial intelligence (AI) and AI-enabled technology in to military systems and doctrine.

It is the objective of MCF to help fuel this success, permitting the seamless flow of materials, technology, knowledge, talent, and resources back and forth between the military and civilian industrial complexes. This is the context in which one must understand Chinese interest not merely in AI applications in traditional military sectors – including aviation, aerospace, nuclear, shipbuilding, and land systems – but indeed also in setting international norms for certain enabling technologies that are expected to provide the backbone for AI-enabled future warfare, including 5G and the Internet of Things.

III. *Evolving Responses*

And, in turn – to fuel MCF itself – China has focused relentlessly not just upon developing technology indigenously but also upon acquiring it abroad, by means both fair and foul, tilting the playing field in its favor at the expense of U.S. and global companies. Not surprisingly, this is one of the reasons we are focusing so much, in the U.S. Government right now, upon reforming national security export control rules and recalibrating export control policy, upon building out recent statutory changes designed to help close loopholes in our traditional methods of screening foreign investments in the United States for national security implications, upon screening visa applicants to try to weed out persons seeking sensitive technologies, and upon shoring up defenses against the cyber-facilitated intellectual property theft that former National Security Agency director Keith Alexander has suggested may constitute “[the biggest wealth transfer in history.](#)”

Some of what needs to be done in increasing awareness vis-à-vis high-technology engagements with China lies in such areas of government policy. Meeting these challenges, however – and doing so without throwing the proverbial economic baby out with the security bathwater of China tech-transfer policy – requires much broader involvement and buy-in across the civilian sector, not only in the United States but across the world. Business people,

researchers, academics, technologists, and scientists *all* need to understand the broader context of China’s global strategy, and the implications of its “fused” military-civilian industrial complex. This is not a call for anything like a complete high-technology “boycott” of China, but there *is* a need for serious risk mitigation.

This is true in large part simply because there are so many points of contact between China’s MCF industrial complex and the outside world. Authoritative Chinese sources, for instance, have explained that the entire Chinese university *system* is considered – in the words of the *Xinhua* state news agency in 2018 – the “front line” of MCF. As befits the priority given to the “front line” in any kind of struggle, the MCF system is working along multiple lines of effort to advance Chinese capabilities through the development of a talent pool of doctoral, masters, and undergraduate-level workers in STEM fields. The Chinese government certifies universities to undertake classified research and development on military contracts, as well as certifying them for weapons production – a policy known in China as the “three certifications.” To date, more than 80 Chinese universities have already been certified to undertake Top Secret or Secret level military research and development under this program.

Significantly, this approach also includes implementing a policy under which state-owned defense enterprises fund the education of students at the undergraduate, masters, and doctoral level – even to the point of providing living stipends. These student subsidies turn their recipients into something akin to *employees* of China’s defense industry, especially since this support is given in return for a service commitment from the students to the companies that fund their education.

As you might imagine, this well-developed system for leveraging military advantage out of China’s enormous flows of outbound and returning students in STEM fields presents enormous challenges for those of us concerned with screening visa applications for proliferation risks – one of the responsibilities of my bureau at the State Department. It is extremely important to put some national security brakes on the Chinese system’s massive technology-transfer bureaucracy. It is also important, however, to avoid the unjustified conclusion that all Chinese students or technicians seeking to come here are threats – or that the solution to the national security problem with which the CCP’s strategy has confronted us is simply to shut down all ongoing engagements with the world’s second-largest economy.

Striking the right balance is not easy. Even as we police against those who would take advantage of our openness to collect technology for those seek to collect knowledge with which to do us harm, however, we must also remain open and welcoming to Chinese talent that wants to work within our university and lab system to help push the frontiers of the emerging and even disruptive technologies that can help fuel mankind’s flourishing in the years to come.

So that’s one of our challenges. But this difficulty is inherent in the challenge of living out a relationship with China that is both cooperative *and* competitive in significant ways. This is one of the key challenges of our era, and while no one can guarantee you that we will always get the balance right, I can assure you that we are keenly aware of these imperatives and are committed to answering these challenges effectively.

Thank you.

OPENING STATEMENT OF MARY BETH MORGAN, ACTING DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR EAST ASIA, U.S. DEPARTMENT OF DEFENSE

COMMISSIONER MCDEVITT: Well, not only will it go into the record, but you can be assured we're going to ask you some questions that will give you a chance to elaborate.

Let me turn now to Ms. Mary Beth Morgan, who is the Acting Deputy Assistant Secretary of Defense for East Asia. By the way, once I spent a year as an Acting Deputy Assistant Secretary of Defense. So, I've trod, I understand the path you're traveling here.

She is responsible for advising senior leadership with DoD on all policy matters pertaining to the development and the implementation of defense strategy, plans, policies, bilateral security relations in East Asia.

Her previous roles in the Department of Defense, including served as, serving as Chief of Staff to the Assistant Secretary of Defense for Homeland Defense and Global Security, Director for Cyber Strategy and International Engagement, and Regional Director for Southeast Asia and Oceania.

Ms. Morgan holds both a Bachelors Degree in International Affairs, and an MPA from George Washington University. She's also a graduate of the National War College, my alma mater. And earning, is working on a master of science, oh, and earned a Master of Science degree in National Security Strategy.

Ms. Morgan, over to you.

MS. MORGAN: Thank you, sir. Commissioner Lewis, Commissioner McDevitt, Members of the Commission, and staff, thank you so much for the opportunity to meet with you today.

My remarks will hopefully briefly address how the Department views the military component of China's rise, and discuss the implications for the Department, and how we're working to address the challenge.

China's leaders have set major economic and political milestones in the lead up to the 100th anniversary of the founding of the People's Republic of China in 2049. And China's military ambitions are linked to these milestones as well.

By 2035 China wants to complete its military modernization. And by 2049 they have characterized their goal of becoming a world class military.

In this regard China's efforts are designed with a clear purpose in mind, to displace the United States in the Indo-Pacific region, to expand beyond the reaches of its state driven economic model, and to reorder the region in its favor.

This is in direct contrast to the U.S. vision for a free and open Indo-Pacific that promotes security, stability, and prosperity for all, based on the following principles, respect for sovereignty and independence of all nations, peaceful resolution of disputes, free, fair, and reciprocal trade, based on open investment, transparent agreements, and connectivity, and adherence to international rules and norms, including those of freedom of navigation and overflight.

From the Department's perspective we view China's activities as seeking to erode U.S. military advantages. China is working to become the preeminent power in the Indo-Pacific region, while simultaneously undertaking plans to expand its overseas presence, and developing capabilities to sustain military operations farther from Chinese shores.

The People's Liberation Army is implementing a long term, comprehensive modernization effort to fight and win short duration, high intensity conflicts along its periphery,

including against strong military opponents.

Some of its activities, include continued militarization in the South China Sea, which erode the international rules based order.

I want to briefly highlight some developments related to PLA modernization. I know that Mr. Taylor will speak in greater detail. But I think it's important to tell you what we're paying close attention to.

First, China continues to implement major restructuring of its armed forces. It's also developing and fielding new classes of weapons systems.

In recent years these have included precision guided cruise and ballistic missile systems, its second and third aircraft carriers, and modern combat and support aircraft, as well as a very robust space launch program.

Third, China's nuclear forces are also undergoing significant reform, as well as PLA is modernizing its training and exercises, by increasingly using professional opposition forces during its training, to improve the realism.

In addition, China is focused on widening the PLA's operational reach to match what its leaders consider to be the global nature of China's economic and national interests.

Over the past few years we have seen public statements calling for expanded basing and access overseas. And in fact, Xi Jinping in January called for the completion of the security system for the One Belt One Road Initiative, to strengthen protection of its overseas interests, and ensure the security of major overseas projects and personnel.

The Department is responding to these developments in line with the objectives of the 2017 National Security Strategy, and the 2018 National Defense Strategy, which is clear on DoD priorities, and lays out the central challenge that we face, which is the return of great power competition.

And as such DoD's military advantage, vis-a-vis China, is eroding. If inadequately addressed this will undermine our ability to deter aggression and coercion.

A negative shift in the regional balance of power could encourage competitors to challenge and subvert the free and open order, which supports the prosperity and security for the United States and our allies and partners.

The NDS explains how the Department will engage in long term competition with China. And we are executing the strategy along three lines of effort.

The first line of effort is preparing for a more lethal and resilient joint force. Our efforts span both near term force employment activities and longer term investments, including new asymmetric ways to upgrade and employ legacy systems, as well as the experimentation and exercises needed to test evolving war fighting concepts and capabilities.

With the help of Congress we've begun to restore our competitive edge. And recent budgets have allowed us to build readiness, and invest in new capabilities, while meeting our current operational requirements.

Greater investments into our own modernization include emphasis on space, cyber, and new missiles such as hypersonics.

Our second line of effort is strengthening alliances and attracting new partnerships. Our alliances and partnerships are a crucial and durable asymmetric advantage that no other country can match.

As China continues to leverage its economic, political, and military tools to erode the sovereignty of others, we're redoubling our focus on our alliances and partnerships.

We're doing this through strengthening our traditional alliances, operationalizing our

major defense partnerships, and expanding our long standing partnerships with the likes of Singapore, New Zealand, Mongolia, and India. And we're working to engage new partners like Indonesia and Vietnam.

To maintain a free and open Indo-Pacific we're also working together with United Kingdom, France, and Canada, who have their own Pacific ideas.

A key focus of our efforts is expanding interoperability with allies and partners to ensure that we can work together effectively during day to day competition, crises, and if necessary conflict.

Specifically, we're focused on building greater security cooperation, information sharing agreements, and training for high end combat missions in alliance, bilateral, and multi-lateral exercises.

We're also working to promote a network security architecture that's capable of decisively meeting these challenges. So, we're trying to augment our bilateral relationships with trilateral and multi-lateral arrangements, and encouraging intra-Asian security relationships. Thereby creating more partnerships with purposes.

Our last line of effort is reforming the Department for greater performance and affordability. For us competition does not mean confrontation. Nor must it lead to conflict.

The United States seeks a constructive, results oriented military to military relationship with China. And we're focused on reducing the risk of misunderstanding or miscalculation, ensuring the safety of our forces operating in close proximity, and enhancing our ability to communicate in the event of a crisis.

We do not believe that our countries are destined to be adversaries. And we remain open to cooperation with China where our interests align.

At the recent Shangri-La dialogue earlier this month Acting Secretary Shanahan met with Chinese Minister of Defense Wei Fenghe to exchange views and discuss areas of potential cooperation and collaboration.

During their meeting Acting Secretary Shanahan raised how China can do more to enforcer U.N. sanctions against North Korea, which North Korea is evading by conducting ship to ship transfers of refined petroleum, including near or in Chinese territorial waters.

We seek cooperation where our interests align. But we will also call out China's behaviors that are counter to the rules based international order, and the norms of behavior that are expected of all countries.

For example, the U.S. has called for all of China's maritime forces, including China's Coast Guard and Maritime Militia, to abide by international rules and norms for safe encounters at sea.

We're also prioritizing defense engagements that promote safety and reduce risk, such as those through the Military Maritime Consultative Agreement. And also working to implement existing confidence building measures, and utilize our defense telephone link to promote communication.

As the Commission is aware, China is expanding and diversifying its nuclear arsenal, and may double the size of its stockpile over the next decade.

The 2018 Nuclear Posture Review emphasizes the continued importance of the U.S. nuclear triad. And that is why the U.S. has undertaken a nuclear modernization program intended to ensure an effective and credible nuclear triad for decades to come.

The triad provides diversity and flexibility that allows us to tailor strategies to deter nuclear armed competitors like China. This approach is necessary, given the scope and scale of

China's nuclear modernization program, and its continued lack of transparency on nuclear issues.

This issue speaks to the impetus for including China in multi-lateral arms control. President Trump has directed the Administration to think more broadly about arms control, and seeking to bring both China and Russia to the negotiating table.

As a major power it's appropriate for China to act responsibly, and join in multi-lateral arms control. The U.S. will continue to seek a meaningful dialogue with China on our respective nuclear policies, doctrine, and capabilities, to reduce the risk of miscalculation and misunderstanding.

Ultimately how constructive our relationship can be is contingent on whether, and the extent to which China is willing to engage in behaviors that support rather than undermine the rules based international order.

Our vision for a free and open Indo-Pacific is inclusive and affirmative for any country, China included, who chooses to support the enduring principles embedded in our vision.

I thank you for the opportunity to speak with you today. And I look forward to your questions.

**PREPARED STATEMENT MARY BETH MORGAN, ACTING DEPUTY ASSISTANT
SECRETARY OF DEFENSE FOR EAST ASIA, U.S. DEPARTMENT OF DEFENSE**

“A ‘World-Class’ Military: Assessing China’s Global Military Ambitions” Testimony before the U.S.-China Economic and Security Review Commission

Office of the Secretary of Defense
Office of the Assistant Secretary of Defense for Indo-Pacific Security Affairs
Acting Deputy Assistant Secretary of Defense for East Asia
Mary Beth Morgan

June 20, 2019

Commissioner Lewis, Commissioner McDevitt, members of the Commission, and staff, thank you for the opportunity to meet with you today. My remarks will briefly address how the Department of Defense views the military component of China’s rise, and discuss implications for the Department and how we are working to address this challenge.

China’s leaders have set major economic and political milestones for 2021, 2035, and 2049 in the lead up to the 100th anniversary of the founding of the People’s Republic of China. China’s military ambitions are linked to these milestones. By 2035, China’s military leaders seek to complete military modernization and by 2049, they have characterized their goal as becoming a “world-class” military. In this regard, China’s efforts are designed with a clear purpose in mind: to displace the United States in the Indo-Pacific region; to expand the reaches of its state-driven economic model; and to reorder the region in its favor.

This is in direct contrast to the U.S. vision for a free and open Indo-Pacific that promotes security, stability, and prosperity for all based on the following principles: respect for the sovereignty and independence of all nations; peaceful resolution of disputes; free, fair, and reciprocal trade based on open investment, transparent agreements, and connectivity; and adherence to international rules and norms, including those of freedom of navigation and overflight.

The Department views China’s activities as seeking to erode U.S. military advantages. China is working to become the preeminent power in the Indo-Pacific region, while simultaneously undertaking plans to expand its overseas presence and developing capabilities to sustain military operations farther from Chinese shores.

The People’s Liberation Army (PLA) is implementing a long-term, comprehensive military modernization effort to fight and win short-duration, high-intensity conflicts along its periphery, including against “strong military opponents.” Some of its activities, including continued militarization in the South China Sea, erode the international rules-based order.

I want to briefly highlight some developments related to PLA modernization that the Department is monitoring closely.

First, China continues to implement a major restructuring of its armed forces, which has included reorganization; personnel reductions; and creating new institutions like the Strategic Support

Force and Logistics Support Force.

Second, China is developing and fielding new classes of weapon systems. In recent years, these have included precision-guided cruise and ballistic missile systems; its second and third aircraft carriers; modern combat and support aircraft; and a robust space launch program.

Third, China's nuclear forces are also undergoing significant reform, including expanding and diversifying China's nuclear arsenal, pursuing a viable nuclear "triad," and developing nuclear theater-range precision-strike systems capable of reaching U.S. territory and that of our allies and partners, as well as U.S. forces and bases in the region.

Fourth, the PLA is modernizing its training and exercises by increasingly using professional opposition forces during training to improve realism.

Fifth, China is also focused on widening the PLA's operational reach to match what its leaders consider to be the global nature of China's economic and national interests. Press reporting in 2018 indicated China sought to expand its military basing and access in the Middle East, Southeast Asia and the Western Pacific. Xi Jinping in January 2019 called for the completion of a "security system" for the "One Belt, One Road" Initiative to "strengthen protection of [its] overseas interests and ensure the security of major overseas projects and personnel." The PLA Navy has advocated for a long-term strategy to obtain bases in other countries, using methods such as the construction and purchase of ports, as well as long-term leases, to gain rights to foreign ports.

The Department is responding to China's activities as part of a whole-of-government response in line with the objectives of the 2017 U.S. *National Security Strategy* and the 2018 *National Defense Strategy*. The NDS is clear on the Department's priorities and lays out the central challenge we face, which is the return of great power competition. As such, the Department's military advantage vis-à-vis China is eroding. If inadequately addressed, this will undermine our ability to deter aggression and coercion.

A negative shift in the regional balance of power could encourage competitors to challenge and subvert the free and open order, which supports prosperity and security for the United States and its allies and partners.

The NDS explains how the Department will engage in long-term competition with China and calls for the Department to execute the strategy along three lines of effort.

The first line of effort is preparing a more lethal and resilient joint force. Our efforts span both near-term force employment activities and longer-term investments in the Joint Force, including new, asymmetric ways to upgrade and employ legacy systems, experimentation, and exercises to test evolving warfighting concepts and capabilities. With the help of Congress starting in 2017, we began to restore our competitive advantage. Recent budgets have allowed us to build readiness and invest in new capabilities while meeting our current operational requirements. We continue to put greater investment into modernization – including emphasis on space, cyber and new missiles, such as hypersonics.

The second line of effort is strengthening alliances and attracting new partners. America's alliances and partnerships are a crucial and durable asymmetric advantage that no other country can match. As China continues to leverage the economic, political, and military tools at its disposal to erode the sovereignty of others, we are redoubling our focus on alliances and partnerships.

The Department is strengthening traditional alliances, including with Japan, South Korea, Australia, the Philippines, and Thailand. We have also taken steps to expand partnerships with Singapore, Taiwan, New Zealand, and Mongolia. Within South Asia, we are working to operationalize our Major Defense Partnership with India, while pursuing emerging partnerships with Sri Lanka, the Maldives, Bangladesh, and Nepal. We are also continuing to strengthen security relationships with partners in Southeast Asia, including Vietnam, Indonesia, and Malaysia, and sustaining engagements with Brunei, Laos, and Cambodia. In the Pacific Islands, we are enhancing our engagement to preserve a free and open Indo-Pacific, maintain access, and promote our status as a security partner of choice. We are also working with the United Kingdom, France, and Canada, who have their own Pacific identities, to maintain a free and open Indo-Pacific.

A key focus of our efforts is expanding interoperability with allies and partners to ensure that we can work together effectively during day-to-day competition, crises, and, if necessary, conflict. To this end, the Department is building closer relationships through focused security cooperation, information-sharing agreements, and training for high-end combat missions in alliance, bilateral, and multilateral exercises.

As articulated in the NDS, the Department will work with allies and partners to develop a networked security architecture that is capable of deterring or decisively acting to meet shared challenges. In the Indo-Pacific, we are augmenting our bilateral relationships with trilateral and multilateral arrangements, and encouraging intra-Asian security relationships for partnerships with purpose. The desire is for a network capable of deterring aggression, maintaining stability, and ensuring free access to the global commons.

The third line of effort is reforming the Department for greater performance and affordability. Our efforts include organizing Department structures to promote innovation, protecting key technologies, and harnessing and protecting the national security innovation base to maintain the Department's technological advantage.

With regard to U.S.-China military-to-military relations, competition does not mean confrontation, nor must it lead to conflict. The United States seeks a constructive, results-oriented military-to-military relationship with China. The Department of Defense is focused on: reducing the risk of misunderstanding or miscalculation; ensuring the safety of our forces operating in close proximity; and enhancing the ability for our countries to communicate in the event of a crisis. We are prioritizing defense engagements that promote safety and reduce risk, such as the Military Maritime Consultative Agreement. In addition, we are working to implement existing confidence building measures, such as the Defense Telephone Link mechanism to promote communication.

The United States and China are not destined to be adversaries, and the United States is pursuing cooperation with China where our interests align. At the Shangri-La Dialogue earlier this month, Acting Secretary Shanahan met with Chinese Minister of Defense Wei Fenghe to exchange views and discuss areas of potential cooperation and collaboration. During their meeting, Acting Secretary Shanahan raised how China can do more to enforce U.N. sanctions against North Korea, which North Korea is evading by conducting ship-to-ship transfers of refined petroleum, including near or in Chinese territorial waters.

That said, the United States will call out China's behaviors that are counter to the rules-based international order and the norms of behavior that are expected of all countries. For example, the United States has called for all of China's maritime forces, including the China Coast Guard and the People's Armed Forces Maritime Militia, to abide by international rules and norms for safe encounters at sea.

Regarding nuclear issues, as the Commission is aware, China is expanding and diversifying its nuclear arsenal and may double the size of its stockpile over the next decade. The 2018 *Nuclear Posture Review* emphasizes the continued importance of the U.S. nuclear triad. That is why the United States has undertaken a nuclear modernization program intended to ensure an effective and credible nuclear triad for decades to come. The triad provides diversity and flexibility that allows us to tailor strategies to deter nuclear-armed competitors, like China. This approach is necessary given the scope and scale of China's nuclear modernization program and its continued lack of transparency on nuclear issues.

This issue speaks to the impetus for including China in multilateral arms control. President Trump has directed the Administration to think more broadly about arms control, seeking to bring both China and Russia to the negotiating table. As a major power, it is appropriate for China to act responsibly and join in multilateral arms control. The United States will continue to seek a meaningful dialogue with China on our respective nuclear policies, doctrine, and capabilities to reduce the risk of miscalculation and misunderstanding.

Ultimately, how constructive our relationship can be with China is contingent on the extent to which China is willing to engage in behaviors that support – rather than undermine – the rules-based international order. Our vision for a free and open Indo-Pacific is inclusive and affirmative for any country – China included – that chooses to support the enduring principles embedded in this vision.

OPENING STATEMENT OF DANIEL K. TAYLOR, ACTING DEFENSE INTELLIGENCE OFFICER FOR EAST ASIA, DEFENSE INTELLIGENCE AGENCY

COMMISSIONER MCDEVITT: Thank you very much for a very comprehensive statement. Finally, let me introduce Mr. Daniel K. Taylor, who is the Acting Defense Intelligence Officer for East Asia at the Defense Intelligence Agency.

In this role he serves as a subject matter expert and senior level advisor to the Director for Analysis, and the Director for the Asia Pacific Regional Center, and supports the Office of the Secretary of Defense, the Joint Staff, the military departments, the combatant commands, and other U.S. Government departments and agencies, friendly foreign Governments, and the Department of Defense, and intelligence community officials on all intelligence matters related to East Asia.

He previously served for four years as DIA Senior Defense Intelligence Analyst for China, and in the U.S. Army as a field artilleryman, both in the regular Army and in the Army National Guard.

Welcome, Mr. Taylor. And we're looking forward to hearing from you.

MR. TAYLOR: Thank you, sir. Good morning. Thank you to all the Commissioners for having me here today to talk about this important topic.

We in DIA are closely following China's efforts to develop what they call a world class military, and what these efforts tell us about how China will act on the world stage over the next several decades.

As has already been discussed this morning, China's leaders see their country as one that is moving closer to the center stage in the world as they strive to achieve, as already has been discussed, the great rejuvenation of the Chinese nation.

This ambition permeates China's National Security Strategy, and the PLA's role in supporting the Party.

In his work report to the 19th Party Congress in October 2017 Xi Jinping called on the PLA to "prepare for military struggle in all strategic directions." And said the military was integral to achieving China's national rejuvenation.

In his speech Xi set three developmental benchmarks for the PLA, including becoming a mechanized force with increased, informatized, and strategic capabilities by 2020, a fully modernized force by 2035, and as we've said, a world class military by 2049.

The latter two goals build on the call in China's 2013 Defense White Paper, also issued under Xi, for China's armed forces to achieve status, as they say, commensurate with China's international standing.

Viewed in sum, Xi's vision for the PLA constitutes a logical outgrowth of China's Communist Party instructions to the PLA since 2004, to protect China's expanding development interests at home and abroad.

To develop this world class military China is advancing a comprehensive military modernization program. Over the past decade China has increased its capability to address a range of regional security objectives beyond its continued emphasis on capabilities for Taiwan contingencies.

Modernization includes improvements to military capabilities, to conduct operations against potential foreign intervention in a regional conflict, nuclear deterrents, and power projection operations.

The PLA continues to enhance capabilities to conduct space, counterspace, electronic

warfare, and cyberspace operations. The PLA also seeks enhanced joint operations, command and control, joint logistics support, and a real time surveillance, reconnaissance, and warning systems to bolster its war fighting capability.

PLA modernization includes command and force structure reforms to improve operational flexibility, and readiness for future deployment. The PLA often uses the term informatization to describe the transformation of becoming a modern military that can operate in the digital age.

The concept figures prominently in PLA writings, describing a force's ability to use advanced information technology and communications systems to gain operational advantage over an adversary.

The PLA uses the term informatized warfare to describe the process of acquiring, transmitting, processing, and using information to conduct joint military operations across the domains of land, sea, air, space, cyberspace, and the electromagnetic spectrum during a conflict.

When we try to understand what China means by a world class military it's important to look at the types of missions China believes its military must be able to execute.

In 2015 their White Paper on military strategy outlined eight strategic tasks, as they called them, or types of missions the PLA must be ready to execute.

These included safeguarding the sovereignty of China's territory, safeguarding national unification, safeguarding China's interests in new domains, such as space and cyberspace, safeguarding China's overseas interests, maintaining strategic deterrents, participating in international security cooperation, maintaining China's political security and social stability, and also conducting emergency rescue, disaster relief, and what they called rights and interest protection missions abroad.

Beijing almost certainly views these missions as necessary national security tasks for China to claim great power status. In 2017 Beijing emphasized several of these tasks in a different White Paper, stressing the need for a PLA that is able to conduct expeditionary operations and other activities to defend and secure growing Chinese national interests overseas from what they called destabilizing and uncertain factors.

The groundwork for the PLA's role in overseas missions was laid in 2004, when then President Hu Jintao outlined for the PLA what are commonly referred to as the new historic missions, that augmented the PLA's role as a guardian of China's global interests.

These missions included ensuring China's sovereignty, territorial integrity, and domestic security, preserving what they call the period of strategic opportunity for China's development, safeguarding their expanding national interests, and helping ensure world peace.

Hu's endowment of the PLA with these missions at a time when economic interests had become substantial drivers of Beijing's foreign policy signified a critical inflection point in the PLA's assumption of a global role. And it transitioned away from a force bound only to defending China's immediate territorial and sovereignty interests.

Subsequent PLA activities, such as counter piracy operations in the Gulf of Aden since 2009, international training and exercises, noncombatant evacuations in Libya and Yemen, and expanded peacekeeping operations in Africa under U.N. auspices have all been part of China's increasingly ambitious vision for expanding PLA activities to support its growing global roles.

China's establishment of its first overseas military base in Djibouti in 2017, as noted, this was overturning Beijing's insistence from its first Defense White Paper in 1998, that China does not station troops or set up military bases in any foreign country, is only the latest development in this progression.

The base in Djibouti, with a deployed company of Marines and their equipment, and probable follow on bases at other locations, signals a turning point in the expansion of PLA operations in the Indian Ocean region and beyond.

These bases, and other improvements to the PLA's ability to project power during the next decade will increase China's ability to deter by military force, and sustain operations abroad.

Beyond bases, China's maritime emphasis and concern with protecting its overseas interests have increasingly drawn the PLA Navy beyond China's borders and immediate periphery.

The evolving focus of the PLA Navy from what they called offshore waters defense to a mix of offshore waters defense and what they call opens seas protection reflects China's desire for a wider operational reach.

China's efforts to enhance its presence abroad, including boosting economic connectivity under what they call the Belt and Road Initiative could enable the PLA to project power at even greater distances from the Chinese mainland.

In 2017 China's leaders said that the Belt and Road, which at first included economic initiatives in Asia, South Asia, Africa, and Europe, now encompasses all regions of the world, including the Arctic and Latin America, demonstrating the scope of Beijing's ambition.

Growing PLA mission areas and enhanced presence abroad may lead to an increase in demand for the PLA to protect China's overseas interests, and provide support to Chinese personnel abroad.

Beijing's objective of building a world class military also includes developments in its nuclear capabilities. We know this because Xi Jinping has raised China's Rocket Force in stature, have identified it as supporting China's major power status, and has called on the Rocket Force to enhance its nuclear deterrents and nuclear counterstrike capabilities.

Similarly, Xi Jinping has called for China's sea-borne nuclear forces to advance by leaps and bounds. In the 2015 Military Strategy White Paper they highlighted that a nuclear force is China's strategic cornerstone for safeguarding national sovereignty and security, noting that it will optimize it by improving strategic early warning, command and control, missile penetration, rapid reaction, and survivability.

Despite China's rapid improvement in nuclear weapons capabilities we don't have evidence that Beijing seeks quantitative parity with the United States. However, a doubling of the stockpile will narrow the gap in capabilities.

As DIA has previously published in other documents, China probably maintains an operational nuclear warhead stockpile in the low hundreds. It probably has enough nuclear materials for a potential nuclear weapon stockpile of several hundreds in the future.

China probably seeks the narrow match, or in some areas exceed the qualitative equivalency with the United States. China probably continues research and development on new nuclear warheads, given the development of new nuclear weapons delivery systems, such as the DF-26 intermediate range ballistic missile with precision strike capability, and the road mobile DF-41 intercontinental ballistic missile with MIRVs. There are no fielded U.S. equivalents to these systems.

Development of a next generation ballistic missile submarine and accompanying missile, and development of a stealth strategic bomber highlight ways in which China is attempting to field capabilities that are similar to the United States.

Development of hypersonic live vehicle technologies, as well as air launched ballistic missile highlight activities where China is conducting substantial research that could significantly upgrade the quality of its nuclear force.

Finally, we consider China's stockpile of nuclear material to be an impediment though to rapid increase in the number of warheads that would reach quantitative equivalency with the United States.

For example, China would probably need to construct new plutonium production reactors, or repurpose civilian nuclear reactors in order to produce the required materials to reach quantitative equivalency with the United States.

China may be trying to alleviate developmental limitations, as a result of limited large scale testing prior to their self-imposed testing moratorium in 1996 by conducting a substantial number of tests that simulate the extreme physics of a nuclear blast.

We will continue to follow these developments as we watch what China's building toward in the future. And we look forward to your questions.

PANEL I QUESTION AND ANSWER

COMMISSIONER MCDEVITT: Thank you. Very interesting. All of the Commissioners have already indicated that they want to ask questions. So, I'll, we have about 55 minutes or so of questions here.

So, I'm just going to have one for all of you. Mr. Taylor has answered it to a large degree. But to me the million dollar question when you talk about what is a China, Chinese military that is world class look like?

Does that include the nuclear component? In other words, they are certainly not world class in terms of quantity, and what have you. And so, this is an opinion piece. I'm just asking for your views.

Do you think that China has, harbors the desire to build to equivalency, or near equivalency with the United States, in terms of its overall nuclear warfare capability?

Or are they going to be satisfied with something less, as long as it's an assured retaliatory capability? Let me start with Dr. Ford, given the fact that you've treaded some of these lanes before.

DR. FORD: Well, I would certainly have to defer to my intelligence community colleague in terms of any current assessment of Chinese intentions in this respect.

I would point out that in our, over many years, in our engagements with China, and I speak for more the older ones than the more recent ones. Because this aspect is not really my lane in the road. It's Department of State right now.

But at least in prior engagements with China to inquire about the degree to which it may be possible to bring them in, as Ms. Morgan said, about bring them in in some fashion to the arms control business.

The usual response, the traditional response is that we might be happy to talk about strategic arms control at such point as you come down to our level.

And you could take that as an encouragement for disarmament progress, or you could take that as an implied promise that we will only engaged in this when we have reached parity, whether that is by you coming down, or us coming up.

COMMISSIONER MCDEVITT: Right.

DR. FORD: Or some combination of the two. I will leave that to others to interpret. But it's a notably ambiguous statement that has always raised questions in my mind about what the ultimate strategic intention is.

If I could say just more broadly about sort of strategic vision of China's military role in the world? I was very struck by the comment that Mr. Taylor made about rights and national security protection missions abroad as being an emerging mission, particularly from the naval perspective.

Just, as a long time reader of Chinese propaganda narratives, I have noticed a great deal of emphasis over a couple of decades now upon the historical model of the great Chinese Admiral Zheng He, who in the 15th century traveled an amazing series of voyages, with an extraordinarily impressive so called treasure fleet, sailing around.

And many of these Chinese propaganda narratives point to Zheng He as an example of what Chinese sort of risen military power would be like.

And they describe Zheng He as being a, essentially a global peace emissary. This is not about European style conquest, you know, parenthetically inserting, like the Opium Wars with those British ironclads. This is about a sort of a global peace mission of engagement and trade,

and that sort of thing.

In fact, if you go do your research on what Zheng He actually got up to, it is a much more interesting and challenging conceptual model indeed for China's global naval presence.

And what Zheng He actually did was, yes, he did engage, and did trade, and did lots of things. And brought giraffes and things back to the Court.

But what he also did was engage in essentially a 15th century version of gunboat diplomacy, in which his naval armada intervened occasionally in local civil wars, in favor of candidates that the Chinese Emperor, that the Imperial, that the Chinese Empire favored. I think he even took one local leader back in chains aboard his vessels.

So, there is a gunboat diplomacy analogue here that I think, if they are in fact themselves invoking the 15th century treasure voyages as a model of what China's global naval presence would be like, we should do our homework, and be very careful about that.

COMMISSIONER MCDEVITT: Thank you. Ms. Morgan, I know your testimony emphasized the importance of getting China into an arms control regime. But being in an arms control regime does not preclude parity.

And so, the question to you is, do you think, I'm not asking, do you believe that China might be, have the vision of parity, or near parity with the United States?

MS. MORGAN: I think it's important that we put it in the larger constructs of the military modernization writ large. They're advancing across the board.

So, when you see assessments that they're looking at increasing the level of their nuclear stockpile. It's a natural addition, right, to what they're already doing.

And I think we have to look very carefully. Because the Chinese have benefitted from the ability to pursue shorter and intermediate range ground launch systems and capabilities, where we have not, just given a lot of the treaty requirements.

So, we need to consider what kind of systems we should be pursuing. And in the Indo-Pacific context consider, you know, what that actually means in terms of basing and how China will factor into those future arms control considerations.

And I think when you look at the Nuclear Posture Review of 2018, when it's calling for flexible and tailored options, and it talks about low yield ballistic warheads, and nuclear sea launched cruise missiles, that's a way of addressing these changes within the region, in a tailored and strategic way.

And, I mean, there's a lot of work that the Department is still doing on that. But I think some of this is just the natural growth. And they view the United States as the pace setter, and the peer that they want to rise to that level to.

They have watched us in our military operations since the First Gulf War. And they have learned from that. And they're beginning to adapt and learn from that. So, I think it's only natural that that would include their, the nuclear piece. And I think the 2018 NPR acknowledges that.

COMMISSIONER MCDEVITT: Mr. Taylor, without reprising your testimony, do you have any other thoughts on this?

MR. TAYLOR: My main thought at this point would be, we still see a China that is focused on maintaining that assured retaliatory capability that's sort of been the bedrock of their nuclear force since it's been around.

However, they also have had a central concept of ambiguity in their nuclear forces, and a sort of a lack of transparency that we've seen over the years, as they would portray themselves as such a weaker power that they had to maintain this little bit of ambiguity.

But we're getting to a point with this potential significant growth in their total warhead numbers into the next decade. And the technologies that are maturing, such as more precision strike capable systems, nuclear arms systems that give them different options, development of a triad, as they feel the Air Force moves back into the nuclear business.

So, the leaders of the Party will have more options in the nuclear realm. And they'll have more potential decision space there within this level of ambiguity.

So, it's unclear what exactly changes might be coming in their nuclear strategy and doctrine. But we don't see, to go back to the, directly answering the question, we don't see any evidence that they are pushing for equivalence in numbers to the United States.

COMMISSIONER MCDEVITT: Okay. Thank you. I'm going to turn now to Commissioner Lewis. And then we'll continue to work our way across the spectrum of questions here.

COMMISSIONER LEWIS: I have one question. And this relates to something you said, Dr. Ford, about the U.S. cooperation with China.

In cooperating with China, if our military meets with them, with their military, where we talk to them about technological aspects, how do we make sure that we are not enhancing their abilities against us?

DR. FORD: Excellent question, sir. I would again defer to my DoD colleagues on the implications of mil to mil contacts. Although, I should note the Chinese are always very happy to have those, for whatever reasons that may be.

In terms of cooperation with China, if I could perhaps by analogy tell a story of our own challenges in this respect when it comes to civil nuclear cooperation.

That's one of the things that my bureau does in the Department of State is negotiate so called 123 agreements with other countries. And we also do national security export controls.

We have had a civil nuclear cooperation agreement with China for many years now. A new version of it came into force in 2015. And at the time it was felt that we could sort of mitigate the risks of that kind of engagement with the policies that were then in place.

We've subsequently learned a great deal about how the Chinese nuclear industry works. About its deep enmeshment with military civil fusion, about the role in which Chinese nuclear industrial giants play in supporting naval nuclear propulsion developments that will go in the future into aircraft carriers, that will be used to intimidate China's neighbors into next generation ballistic missile submarines,

and attack submarines that will directly menace American forces in the American homeland. And into things like floating nuclear power plants that could be, are intended to be used, for example, in places like those little manufactured islets in the South China Sea.

So, we became rather alarmed over a period of several years with regard to what it was that we feared that our nuclear engagement with China was contributing to. We also learned a great deal about how they were stealing information from us.

And as a result of becoming concerned about the implications of the policies that we had adopted several years ago we have now, as of last autumn, announced a new, a very significant recalibration of our export control strategy, with respect to China in the civil nuclear space.

We do not cut it off. But we have dramatically scaled it back. And we are much more scrupulous about the types of technologies, and the types of engagements that will be licensed by the Department of Energy, by whomever else it may be.

So, I, you know, I don't know what the right answer is on the mil-mil context. but I would suggest that that sort of general story of becoming aware of the challenges presented by

China's strategy, and of the implications of our own engagement as China seeks to learn from the outside world in order to supercharge its global ambitions.

You know, we can apply that very basic conceptual model in other areas. Perhaps even to mil-mil as well. But perhaps that's already underway. But I don't want to say more about the mil-mil stuff than that at this time.

But I would suggest that kind of caution is something that we should emulate across many areas of our engagement with the People's Republic.

COMMISSIONER MCDEVITT: Thank you. Commissioner Wessel.

COMMISSIONER LEWIS: I think she wanted to say something.

COMMISSIONER MCDEVITT: Oh, I'm sorry. Go ahead.

COMMISSIONER LEWIS: Did you have something you wanted to say about that issue?

MS. MORGAN: Well, I just think to, just to emphasize, as I said in my opening statement. The Department is very cognizant of how we're looking at that.

And as we're approaching mil to mil we're trying to be very pragmatic and constructive in our engagement. Because as the Chinese begin to operate more beyond its shores our forces are going to be in closer to proximity to one another on a regular basis.

And so, that's why we're trying to work to promote, at those working levels, understandings of, these are the international rules of the road in maritime and for overflight, so that we don't have a miscalculation and an incident that then puts us into an escalation cycle, so that we understand.

So, we're trying to find very pragmatic ways to reduce the risks first. There are value added exchange. We do have policy dialogues that we try to have, where we want to better understand their strategy and doctrine, again, with an eye towards reducing that risk and miscalculation.

And so, we're very clear sighted on that, you know, in our approach. And we're being much more focused I think on that as we move forward.

COMMISSIONER LEWIS: Thank you.

COMMISSIONER MCDEVITT: Commissioner Wessel.

COMMISSIONER WESSEL: Thank you all for being here. And thank you to our two co-chairs for putting together a excellent hearing, along with staff.

I'm hoping you can help me on what being a pure competitor means in what I think is an evolving landscape that, you know, the traditional view I think was battleships and bombs, the ability to project power through forward basing, oilers, all the various things you know a lot better than I.

And I, you know, the Chinese, as well as technology, have looked at both space and cyberspace as both an asymmetric opportunity where it, that will be increasingly important to a competent military. And clearly we have great opportunities and capabilities there.

But it seems that China, again in those two domains has accelerated their activities. And I'm wondering if you can help me as to whether they are a near peer competitor at this point?

You know, stories, public stories over the last six to eight years indicate that China has been engaged in a substantial amount of electronic reconnaissance of U.S. assets, military, critical infrastructure, financial networks, et cetera, that I think from public perception would potentially disable our economy, and lead to a tremendous unrest, concern, et cetera.

Where do we stand on the continuum of being a near peer competitor? Or are they in fact a peer competitor in the space, cyberspace domain? What do you think our greatest vulnerabilities are? And are the concerns I've just outlined overstated?

Whoever would like to start. Dr. Ford, you started with technology. I'll let you, I'll bat it over to you.

DR. FORD: All right. Your question about, what does it mean to be a peer competitor in the evolving landscape, I think is an excellent one.

And I would say, just from what I have seen of how Chinese strategists themselves approach this, I would say that they have a very broad view of what that means.

It is not by any means purely a military thing. It is, the concepts that you see in Chinese strategic writings revolve heavily, since maybe the early, mid 1980s, around the concept that they call comprehensive national power, or CNP in the translated acronym, which is a little bit like the Soviet correlation of forces idea.

But I think it probably has a broader aperture in so far as, although it also includes things like raw economic power and technology, and military things, I think it probably has more of an emphasis relatively speaking than the Soviets did in their correlation of forces thinking.

More of an emphasis in the Chinese contexts upon sort of whole of society things. More upon, you know, soft power and culture. And fits with their own sort of civilizational self image as a, you know, and feeling of grievance in having lost the status of being the sort of civilizational polestar of humanity, if you will, back in the day. And a sort of romanticized vision of what China's role used to be in the world, and what they wish they could declaim for themselves.

So, in that sense I think they view this as a very, very broad aperture game. And by their own metrics here, although they do try to -- There's some remarkable writing in the Chinese canon that purports to kind of quantify CNP, you know.

Obscure academics will publish papers on how, ah, China is now 3.4 percent closer to comprehensive national power than, you know, whatever it might be. Things that don't make a lot of sense to me personally.

But I think even by their own metrics they're not there yet. We, I like to use the term near peer, which is one that I think I may have learned when I was doing work for Andy Marshall years ago.

But in any event, near peer is a useful way to think about someone who is extremely powerful and worth worrying about, but who is not in fact yet a peer. I think they are very much not yet a peer along really any of those axis.

COMMISSIONER WESSEL: But near peer does not make them less of a threat, does it?

MR. TAYLOR: I think, historically, one can perhaps make the argument that sometimes near-peers, if they are self-assertive rising near-peers, are perhaps more of a threat. Historically, there is debate about what model of sort of imperial succession or hegemonic succession may be applicable here, but sometimes powers rise against each other and get along okay, more or less. You look at us and the Brits, for example, although we didn't have entirely a smooth ride. But sometimes it goes rather badly. And you, of course, see Japanese imperial ambitions in the Pacific. You see late 19th century or early 20th century Wilhelm in Germany, for example, being rather a problem when it came to being an assertive near-peer to or becoming a near-peer to other powers in the arena.

How this is played and whether China is -- you know, how prudent it is in its engagement with the rest of the world, how boldly self-assertive it is, and how wisely we react, these are the pieces that will decide, frankly, the future of the 21st century. And that's why this kind of engagement of the sort that the Commission is engaged in and that we are delighted to have this discussion with you about, that's why this kind of stuff is so important, because we absolutely

have to get this mix right.

DR. FORD: So, I can address a little bit on the cyber and the space aspects that you were asking about. I think it's important to notice that the PLA has been studying very carefully what they see as the nature of modern war, and they have come to the conclusion a long time ago that dominance in the information domain is the first priority in modern conflict. And they have been building capabilities for a couple of decades now. It sort of culminated in the recent reorganization of the PLA and the establishment of the Strategic Support Force to bring space, cyber, electronic warfare, all into one organization, because they realized they needed to pull together those capabilities in a more efficient and more effective manner.

The more visible aspect of their development in these areas, of course, is the rapid growth in the number of on-orbit satellites they have of all different types to support missions, both civil and military, from a very low base 20 years ago to a very large number, maybe not necessarily equal in quality to the best U.S. or Western satellites, but quantity has a quality all its own, as they say.

So, when you look at their developments, it becomes very hard to come up with the definition of peer or near-peer in these domains. But, obviously, from our perspective, we have seen them put a tremendous amount of emphasis on what they think is the most important thing that they are doing to develop their military capabilities. And we've seen this tremendous amount of progress that I don't think will stop going forward.

COMMISSIONER WESSEL: Thank you.

COMMISSIONER McDEVITT: Commissioner Kamphausen?

COMMISSIONER KAMPHAUSEN: Thank you very much, Mr. Chair.

And thank you to our presenters. It's great to see you all again.

I have three very distinct questions, one for each of you. And so, I'll move very quickly.

I am also pleased that several of our presenters at later panels are here, so you begin to get a sense of the kind of things that we'll focus on.

For Dr. Ford, in your title is included the word "Nonproliferation". So, give me a minute on what your top three nonproliferation issues are with China.

DR. FORD: Well, I would say, from a traditional, nonproliferation perspective, the top priority is the unfortunate fact that China remains the point of origin of choice for so much of the proliferation activity that is still going on around the world. We see Chinese entities consistently providing components and materials for things such as Iran's missile program, for example; programs in Pakistan, for example, and that sort of thing. That is probably the biggest headache that I have from a nonpro perspective.

In the case study, the poster child, quite literally, because he's actually on FBI wanted posters, the poster child for that is a fellow by the name of Li Fangwei, who is known as Karl Lee. He is probably Iran's most important source of materials and components for its missile program. We have been demarcheing our Chinese counterparts repeatedly over him for many, many years, putting lots of sanctions on him. He is wanted in U.S. courts. And the Chinese government has consistently not shut down his activities. He is at the very --

COMMISSIONER KAMPHAUSEN: Are there other priorities beyond that?

DR. FORD: That's the top one. But I would say most of what I was describing in terms of worrying about technology control and the way that we can do more, we hope, to keep advanced technologies from feeding some of these Chinese military ambitions, I think that more in the international security than the nonproliferation piece per se. But I would identify the point of origin for proliferation items and materials as the first bit in the nonpro area. And secondly,

the degree to which we, as we've already heard from other panelists here, are also very concerned with ensuring that China does its part to keep the pressure regime on North Korea under international sanctions.

COMMISSIONER KAMPHAUSEN: Okay. Thank you.

Ms. Morgan, you highlighted that the PLA is modernizing to the point that we'll be able to conduct a short, high-intensive war in its near periphery, or nearly words of that sort. And the policy response is the three lines of effort that you described, at least the first two of which could apply to almost any scenario, right, a more lethal joint force and enhanced cooperation with allies?

Connect the dots for us, if you would on what specific things at a policy level we can do to prepare for this short, high-intensive war in China's near periphery. I mean, there are cases we can imagine that they have in mind. I'm not sure what the examples are that they would be using, and this may go to a question for Mr. Taylor in a minute. I'm not sure what models they're using to conduct that sort of war. I understand the vulnerabilities it presents to us. But it would be helpful to hear just any thoughts you might have on that.

MS. MORGAN: I think writ large the three lines of effort are all encapsulating, right. You have to have the capabilities; you have to have the posture to be ready to respond. And when you look at the Chinese developments, why does it matter? Well, it's eroding the military advantage, both the legal and illegal ways that negate the billions of dollars in investment. So, how are we countering that in a strong way to be prepared?

The other feature of what they're doing, because of their behavior writ large, is trying to erode and divide us and separate us from our allies and partners in the region. So, our efforts with them, as our allies and partners are, they're nervous and very concerned about China's rise as well. So, together, as we are working with them to build, it's powering, posturing, and thinking differently to get the allied capabilities and investments and capacities at a higher level. So, you're actually making it more difficult and you're increasing the level of deterrence then, making it more complicated for China to achieve its goals and objectives in that way.

COMMISSIONER KAMPHAUSEN: Okay. So, I would characterize what you said as it introduces a sense of urgency to both our own efforts and interactions with our allies because of the temporal challenge that this is war might present.

Thank you.

For Mr. Taylor, you talked about Djibouti. I'll tip my hand. I don't think it's the model for Chinese bases overseas. I wrote the first study in 2006 on what future Chinese bases might look like, when everyone said they'll never do such a thing. And this is the antithesis of that. Not to say it can't be true because I didn't predict it, but the unique circumstances; namely, most, 80-plus percent of PLA peacekeeping operations are in Africa, and the PLA Navy has a very real need to support its anti-piracy operations in the Gulf of Aden.

I'm really asking, what other models for bases might we see? Would it be a mistake -- it's a leading question -- would it be a mistake to conclude this is the only type of base that we might see from them?

And before you answer it, let me say to both Ms. Morgan and Mr. Taylor, I think the public is very appreciative of the work of the DoD Report to Congress and the new DIA Report on China Military Power. Thank you for those public reports. They've very helpful.

MR. TAYLOR: Well, speaking of reports, I'll have to go back and read your paper from 7/6 to make sure -- (laughter) -- I'm up-to-date on the thinking on this thing.

So, I think you're right that there is no one model and there are certainly unique aspects to

Djibouti. It was a uniquely-favorable environment for a foreign military base since the United States has a foreign military base in Djibouti and others have operated there.

They had also specific interests related, as I mentioned during my testimony, to their counter-piracy patrols for the past decade in the Gulf of Aden. And so, it was favorable in those aspects and, of course, the peacekeeping aspect, right? The PLA abroad, it used to be we only talked about it in the context of peacekeeping because that was really the only way the PLA went abroad.

I think that there are a variety of potential models, and I think we sometimes forget that the other part of the Belt and Road is a land-based belt through Central Asia. And we are not seeing a lot of discussion about how the PLA might project military force or military forces into Central Asia. And that would be a very much emerging model that I think would probably follow along some sort of a cooperative model with a host nation element, likely in security for investments, security for Chinese personnel, or counterterrorism operations, although we haven't seen much maturity in that model going forward.

On the sort of more traditional one that we've talked about, the naval base option in the Indian Ocean region or beyond, I think we've looked at a variety of levels of potential PLA access to places, based on either Chinese commercial investments in port facilities to maybe a model we haven't seen yet, but maybe a model that involves dedicated space for the PLA to operate at a pier, to maybe a model where they have a small support element available to help out with operations, to at the very high end, something more similar to Djibouti where they'll have their own pier and their own security forces, which while we talk a lot about potential places where they might develop such a base, the host nation has a vote, and most of them are not nearly as favorable an environment as Djibouti has been to them. So, I would really expect to see them pursuing a variety of agreements to enable PLA presence abroad.

COMMISSIONER McDEVITT: Thank you very much.

Before I turn to Commissioner Wortzel, on the issue of Djibouti, on Monday I had an opportunity to meet with a gentleman from Djibouti who is briefing on Chinese influence in the region. And I asked him about, well, China, I assume the PLA wants access to an airfield that actually can handle large aircraft, and what have you. And he said, "Oh, there's lots of room." And I said, "Where?" And he says, "To sea." In other words, it seemed to me that the implication would be the government of Djibouti would be quite willing to allow China to do a dredging operation and build a runway out into the Indian Ocean to expand that helicopter thing. So, it's just something to think about.

COMMISSIONER WORTZEL: I appreciate you all being here. I echo what Commissioner Kamphausen said about public reports. Public reports, public testimony really inform the public. And all the secret briefings in the world don't always help.

Xi Jinping, who's been rather critical of PLA leaders -- he's accused them of being broadly incapable of conducting modern wars. I'm not going to repeat the five incapables and the two insufficient capabilities -- (laughter) -- but, as late as early this year, he has been critical.

Given that, how is the PLA doing in meeting the timetables set out by Xi? What are the weak areas and what are the strong areas? And will they meet his timetables for 2025 and 2035?

MR. TAYLOR: Very good questions, all right. I really appreciate the opportunity to address some of these issues here.

I think it has been very clear that Xi Jinping has been, ever since he came in, his focus has been on fighting and winning the wars for the PLA. And you have to think about it in the context of the PLA that he inherited and he had been involved in before he became -- and he was

the Vice Chairman of the CMC and various other positions previously in his career. So, he's been around even when he was a very young man as a mishu to the Defense Minister.

He has been around the PLA. He's seen it, and he clearly decided that there were elements of the PLA that were not conducive to this fighting and winning wars, and that there were senior leaders in the PLA who were more focused on other activities than preparing the military for the challenges that he thinks that they need to face in the future.

And so, he's been very open about the need for change and development, professionalism. And as my colleague, Mr. Allen in the back of the room, will be happy for me to mention, the people involved in the PLA, and that he needs to have -- he did have the right people who weren't in the PLA to enrich themselves or various other things we've seen in the past with corruption in the PLA. So, he's had that focus.

When you look at the rather happier question, though, about will they meet the goals, and what aspects do they need to work on, I think the traditional model in the party leadership and in the PLA, they will publicly meet their goals. That's pretty clear, that we will hear a report from the Party Congress or something else saying they've met their goals.

But when we look at these issues, for us right now looking at the PLA, the biggest challenge is that people part. We could sit here and talk all day about technology and about weapons systems and about advancing in military operations. And we've seen tremendous amounts of that, especially over the past two decades. And we think that's going to continue.

The military-civilian fusion that Dr. Ford mentioned will enable them to develop a lot of this, the hardware aspect of it. The question is the software aspect and the people aspect of it, which I alluded earlier to their large-scale reorganization in the PLA that's been taking place over the past few years. This is a tremendous challenge for them.

We look at this as a cultural shift in how the PLA, previously a very service-centric, stovepiped organization, is now being forced to think about how to operate. If you want to be a world-class military, you have to operate in -- they talk about integrated joint operations -- but joint operations capabilities. And they're really at the ground floor of that as far as the senior officers and even mid-level officers who've never really operated with the other services yet. And so, there's a lot of work that needs to be done to get to these goals of a modern military in 2035 and a world-class military in 2049.

But, for us in DIA and across the intelligence community, the hard part is it's really hard to measure how much progress they've made inside their cognitive biases and their training aspects and the people in the force. We can give you checkmarks of new aircraft carriers, new missiles, new capabilities, but we're going to have to look really close to figure out how good they're getting at actually operating that military.

COMMISSIONER WORTZEL: If you look at Chinese Central Television descriptions of what are supposed to be very sophisticated exercises, they're nothing but firing tables for tanks and very limited airborne drops. I mean, they're rudimentary. They are what the United States military would do for its lieutenants and captains and they're not effective yet.

MR. TAYLOR: To add onto your comment -- and obviously, you've been watching PLA exercises longer than I have -- but, in the time that I have watched them, we have always discussed the sort of showpiece nature of them, the scripted nature of PLA exercises.

And as we noted earlier, and Ms. Morgan noted earlier, we have seen in recent years' progress in actual confrontation exercises involving professional opposing forces, something that they really didn't have much of in the past. And I think they have a long way to go to build this, but they seem to be building the pieces together to go toward that.

And it becomes hard sometimes because I think there is a messaging aspect to what's on television, as they're trying to portray the growing capabilities of the PLA, both to their internal domestic audience and to the rest of the world.

COMMISSIONER McDEVITT: Thank you.

Senator Talent?

SENATOR TALENT: Thanks, Mr. Chairman.

And thanks to all of you.

I hope the five incapables are true.

(Laughter.)

You know, they have been strong enough to take a shoal from one of our treaty allies to build the reclaimed reefs and militarize them against their promises to us and to so threaten the Senkakus, that the Japanese have decided to change their constitution to rebuild their defenses. So, I just would not discount -- I know you're not doing that. Let's not discount their abilities.

I want to say to you all, I think I'm astonished and very pleased at the speed at which the basic strategy has changed in the bipartisan support here in the Congress, and really throughout this town, for what you all are doing in the new National Security Strategy, and it's very encouraging.

I do want to follow up on Commissioner Kamphausen's second question about specific steps that the Department might take in the region to increase the strength or credibility of deterrence. Yes, I mean, the next scheduled date is 2035. That is 15 years from now, and I don't think that nothing is going to happen in the region during that period of time.

So, what do you think would be the most effective, in terms of what the Department can do, in reassuring allies about our sustainability in the region and in increasing deterrence in the minds of Beijing? Is it really building as many of the new missile frigates as we can and deploying them in the region? Is it a land-based cruise missile? I think you were referring to that, Ms. Morgan. It's going to be something fairly asymmetric, I would assume, because I just don't think in the near-term we're going to be able to put a lot of really expensive assets.

And I'll just say, we do make recommendations to the Congress as part of our report. So, what would you suggest along those lines? And any of you who want to answer. I imagine probably Ms. Morgan and Mr. Taylor.

MS. MORGAN: Thank you for your question.

And I think you started your comment on what's been so important for the Department, to actually implement the defense strategy, where we have a National Defense Strategy that we're being honest with ourselves in terms of near-peer competition and what that means. So, having the right budget to align and giving the sense of urgency to the entire Department -- Acting Secretary Shanahan likes to say, you know, "I've got 2 million people and I'm aligning all of them to move forward on this." And so, what does that mean?

And I broadly described what we're doing in terms of the lethality of the forces are a critical component and our working with allies and partners. And to that, right, it's about presence. We're there, both operationally and active, but also engaging.

The efforts that we're doing in our security cooperation realms to build the capabilities and the capacities of our allies and partners, again, help complicate the calculus for China and can increase that level of deterrence. So, in doing that, that is a mix of all of the things that you suggested in your remarks, whether it's missiles, whether it's making it more survivable.

But also looking at the key capabilities that we bring in space, in cyber, and the new technologies that we're investing in and in autonomy. That can be very fast in terms of

sometimes lower cost, and you can produce a lot of them at scale. And when you're getting your allies and partners more capable, again, it's that numbers problem that you're working across the landscape. So, I think those are some of the areas that we're working on.

But, also, as part of that capacity, it's getting the countries of the region to work better with one another. So, the notion of information-sharing with one another and building the capacities related to maritime domain awareness and security.

Because if the partners in the region can understand what's going on and have a better operating picture, right, then they can choose how to engage and operate and have security, and not be intimidated to take advantage of the economic benefits that they have in their EEZs, and what not, just as an example.

So, it's combination in that of the security cooperation and, then, all of that partner engagement to build those capacities, that information-sharing, as well as the hard capabilities. But it's all that relationship-building.

So, it's very much, I think, a complex combination of all of that. And through our policy and Joint Staff, as well as Indo-Pacific Command, we're all driving towards that. And the partners are very receptive and eager and want to work with us in that way. So, making sure we can keep that flexibility in those security cooperation funds I think is really critical for us in these areas as we move forward.

SENATOR TALENT: Thank you.

COMMISSIONER McDEVITT: And let me -- oh, I'm sorry. Go ahead.

DR. FORD: Forgive me, sir.

Just from a State Department perspective, I would add a couple of things to that, all of which makes perfect sense to me.

But I would add, also, like from the perspective of, as I mentioned before, the technology challenge, this is not just a U.S. problem. It is basically a China and the rest of the world problem. And to the degree that we can be engaged with partners, with technology possessors in the developed world to slow the degree to which this flow of militarily-useful technologies goes to China in order to shore up its military-civil fusion efforts, to shore up its military modernization/strong military dream strategy, that will be important. And that is necessarily a partnership- and relationship-building exercise. It may also be a capacity-building thing, because the export control mechanisms, the regulatory apparatus, the attention and focus, and simply the bandwidth upon these kinds of things varies a lot across the international arena. And to the degree that we can be working with partners to build what I call coalitions of caution in that respect, we can perhaps have an impact over time in helping bound the problem set that my DoD colleagues have to worry about.

And I should say, also, we can also be engaged politically and diplomatically in helping and encouraging would-be partners of China to resist the potential entanglements that can create problems and undermine the solidarity of the rest of the world in confronting these challenges as well.

I mentioned the civil nuclear stuff before. China uses its nuclear industry, as an example -- and this is true of many aspects of infrastructure development, but I know the nuclear one best -- as a strategic tool. And to the degree that we can encourage people to not become entangled in the kind of debt-facilitated entrapments that are entailed by involvement with Chinese infrastructure projects in various respects, we will reduce the degree to which the people in Zhongnanhai, in Beijing, are able to use those infrastructure engagements as pressure points to undermine the decision making and the political autonomy of the rest of the world, as it seeks to

deal with Chinese challenges.

So, these are things that I think we can attribute to this and help make the DoD problem set less severe than it would otherwise be.

MS. MORGAN: Yes, and if I can just add one point that Chris is raising? I was speaking to what we can do as the DoD.

SENATOR TALENT: Well, that's the question I asked.

MS. MORGAN: Yes. But I think it's really important for the Commission to consider how important the China challenge is to the entire United States Government. And a strong whole-of-government response is very important. We need a strong State Department that's fully resourced. We need to be able to message/counter message. We need to get our story out in a strong way.

And there's a lot of different areas, when you're looking at Pacific islands and illegal fishing and what that means; and law enforcement development that the FBI can help with, and our Coast Guard, and things like that. That's all a part of this.

So, it truly is a whole-of-government. All instruments of national power have to be put to all of these challenges. I know we're focused on the military component today.

SENATOR TALENT: Right.

MS. MORGAN: But I think that's really important.

SENATOR TALENT: I agree.

MS. MORGAN: We can't do it alone.

SENATOR TALENT: The point I was making is that numbers do still matter, and we are outnumbered and outgunned in the near seas. And that's not your fault because we don't have the hot production lines to be able to produce things quickly. I mean, I get all that. But I think we have to recognize that and, then, see what we can do in the short-term maybe to build some more asymmetrical firepower.

And your reference -- and I know you can't go that far yet -- to the idea of land-based cruise missiles, or something, I think is a really sound thing to be considering.

Thank you, Mr. Chairman.

COMMISSIONER McDEVITT: I want to turn now to our Commission Chairperson, Commissioner Bartholomew.

But, before we do, Ms. Morgan, just if you take a look at the totality of our hearings this year, we, in fact, do cover whole-of-government protection.

CHAIRMAN BARTHOLOMEW: Thank you. Thank you to the Co-Chairs for putting together this hearing.

Thank you to our witnesses for appearing today.

I'd also like to extend appreciation to the Administration for allowing witnesses to appear today from the Administration. We went through a number of years where nobody showed up. So, we're really appreciative, and it makes for a more fulsome conversation, a more fulsome debate.

A lot of issues to cover. I think, first, I want to start, though, with the role of the PLA in protecting Chinese economic interests. You mentioned BRI. You also, Mr. Taylor, mentioned the importance of not neglecting the land activities that the BRI does.

The Wall Street Journal has just done a big piece on them, the presence of the PLA in patrolling the Tajikistan-Afghanistan border. So, there's economic interest there. The pipeline is in Pakistan.

So, I just wonder, as we look forward, it's taking you a little bit out of the region, but

what is the role of the PLA going to be in protecting China's economic interests beyond Noncombatant Evacuation Operations (NEOs), and particularly in terms of state-owned enterprises?

MR. TAYLOR: Sure. I guess I'll start on that.

So, you hit on the NEO aspect. The fundamental part of this that drives a lot of this is concern about Chinese citizens abroad and Chinese interests that are involved in these investment opportunities. I mentioned there have been a couple of small models of noncombatant evacuations by the PLA. And I think they're starting to think in the way that they need to be -- as there are more interests abroad, more investment abroad, there is a security aspect of that. I think it's going to be different in different places. I think a lot of it, as I mentioned earlier about the basing question, depends on the host nation receptivity. I think they would prefer in most cases, if they can, to work with a security partner in the host nation to secure Chinese investments in facilities and personnel.

But the PLA's role I think will probably be somewhat similar to what we've seen -- and I know this is a little bit of a stretch -- but when we've seen the PLA operate in the South China Sea, for example, it has been sort of an over watch for militia and coast guard and more civilian elements forward.

So, in my mind, the PLA's direct role related to BRI types of investments would be this sort of over watch that will be able to be persistently present in areas much further afield from where they were operating in the past, that has credible capability to either go in and conduct an evacuation, or at some point down the road they may decide that they want to be more interventionist, using their military. They've been very hesitant to use their military sort of in violation of their non-intervention principles that they have espoused for many years. I think they would like to work cooperatively with other countries, but they would like to have that capability because they believe that this is a capability great powers have, is that they have militaries that can operate globally away from home and protect interests, if they are called upon.

CHAIRMAN BARTHOLOMEW: There are frequently rumors, of course, there's a PLA out there doing protection activities. I think it was also a pipeline in Sudan. It's very hard to pin that down.

I would like to, again, sort of looking at this whole-of-government approach, we were established, of course, to look at the national security implications of the economic relationship. And we try to merge those things.

So, I would like to take you, if you all could get out of the stovepipe of what we're doing, Dr. Ford, you talked about the need to prevent China from getting certain technologies. But one of the challenges, of course, which we've just seen with this story on the circuit boards and the F-35 is who is it who can produce these things. Because we can't simply say to people, "Don't use Chinese stuff." What do we do? What do we do, and how do the different pieces of the U.S. Government work together to reach that end?

DR. FORD: I wish there were a crisp and easy answer. I like to say that these things are Aristotelian virtues in the sense that, you know, just as Aristotle courage was something that was sort of somewhere in the middle between recklessness, on the one hand, and cowardice on the other, there isn't a crisp, bright-line recipe for how to do this right.

What we are trying to do, on an increasingly whole-of-government basis, is look at some of these technology issues, for example, on a sort of risk and threat prioritized basis. There are many things that one might wish one could do with a magic wand, but we haven't yet been able to persuade people to appropriate for one of those.

So, what we are doing is trying to sort of economize with the resources we have in order to address the most important challenges first and to build out, in a sense, in concentric circles from there.

In terms of the challenge, it is -- I mean, you mentioned state-owned enterprises a moment ago in your previous question. I would say that, just as an example of the challenge that we are trying to grapple with, state-owned enterprises are actually important to pieces of China's technological outreach as well, not simply by virtue of their direct involvement in things, but by virtue of the fact that these SOEs also play an important role in funding the education of students at the doctoral, the undergraduate, the master's level who go abroad to work in STEM fields, in particular. And these SOEs provide to some extent, even to the extent of providing support, living stipends, for example, for some students abroad.

And there are well-established practices of what's known as sort of background obfuscation, so that it's not entirely obvious that this particular person is, in fact, receiving a stipend from a defense industry in order to go study some advanced topic overseas. Struggling with that as a technology acquisition method is one of the things that we, unfortunately, have to spend a lot of time worrying about, as we screen visa applications for their national security implications. So, that is just one of the things.

And making sure that we have, working with our colleagues and other pieces of the interagency -- the intelligence community, DoD, Commerce, Treasury -- we have, I think, quite well developed now, or increasingly well developed, interagency mechanisms for looking at how to do this right, to make sure that, when we screen, we are screening on an appropriate dataset for understanding which of the 80 -- there are at least 80 Chinese universities that have certified to do top secret or secret-level Chinese weapons development and production, as part of this integrated military-civil fusion game. If some of those universities are producing -- you know, knowing from where people come and what the sort of network of connections are back home is a piece of what we need to have in our minds and databases in order to do this screening properly.

That only happens through interagency cooperation, and it's a thing that we are trying to approach much more systematically now than before. I think, so far, it's becoming a success story.

MS. MORGAN: Could I add, just building on some of the other questions, an aspect of this, just as Assistant Secretary Ford said, kind of more specifically when you're looking at like what do we do in terms of having an industrial base, right, that can thrive across technologies and the next generation of technologies, not just for DoD, but what does the United States future economy look like?

More and more, as the importance of cyberspace has come into fruition, right, as it's really taken home, more and more, right, national security and national economic security go hand-in-hand. Because for the first time now -- there was always industrial espionage, right? But now, you don't have to actually physically get in to steal the documents or have an insider. Yes, you can have insiders and, yes, you can do that, but now, if you don't have strong cybersecurity, both at a government level, but also in our industry, that's a critical component to all of this as well.

And it's really hard because, if you're the adversary trying to get the information, you only have to be right once. I mean, defense is very hard. But that's an area where, as a whole of government, we've also been working very hard. And that's a really key component as we work with our colleagues at DHS and Department of Energy, and all the other agencies, when we look

at whether it's critical infrastructure protection, but also the defense industrial base and our industrial base writ large.

So, it's just another factor that was mentioned before that's really important of how we address some of these challenges to try and mitigate them. So, I just offer that food for thought.

CHAIRMAN BARTHOLOMEW: Great. Thank you.

COMMISSIONER McDEVITT: Okay. I'm sorry. We have three minutes left before we break. I'm graded on how well I get everybody out the door on time.

(Laughter.)

Seriously, though, I have one last question that you can answer very briefly, Ms. Morgan, which is, I think you've said in your testimony that China has the intent of becoming the predominant power in the Indo-Pacific. I've heard that time and again, about East Asia or within the first island chain, but you're talking about a chunk of geography that goes all the way to, partially encompasses all of the state of India. So, is that correct, that Defense Department's assessment is that China wants to become the predominant power in the Indo-Pacific?

MS. MORGAN: Yes.

COMMISSIONER McDEVITT: Yes? Okay.

(Laughter.)

No, thank you all very much for very, very useful testimonies and question-and-answer. Much appreciated. Thanks very much.

(Whereupon, the above-entitled matter went off the record at 11:08 a.m. and resumed at 11:22 a.m.)

PANEL II INTRODUCTION BY COMMISSIONER LEWIS

COMMISSIONER LEWIS: The second panel is about to begin.

This panel will examine the drivers behind China's ambitions to develop a world-class military, China's strategy for the employment of this force, and the budgeting and resources supporting China's military ambitions.

We are very fortunate to have three wonderful panelists today who will give us more information than we now know about what's happening.

First, we will hear from Dean Cheng, Senior Research Fellow with the Asian Study Center at the Heritage Foundation. Prior to joining the Heritage Foundation, he was a Senior Analyst with the China Studies Division at CNA, from 2001 to 2009, where he specialized in Chinese military issues and authored studies on Chinese military doctrine, mobilization concepts, and space capabilities. Before joining CNA, Mr. Cheng held a number of analyst roles, including with Congress' Office of Technology Assessment in the International Security and Space Division, and is the author of many publications on the Chinese military.

Mr. Cheng, please go ahead.

OPENING STATEMENT OF DEAN CHENG, SENIOR RESEARCH FELLOW, ASIAN STUDIES CENTER, HERITAGE FOUNDATION

MR. CHENG: Good morning, and my thanks to the U.S.-China Commission for the opportunity to be here today.

My comments are going to be looking at the Chinese efforts to develop what they would term an (Chinese term used), , or world-class People's Liberation Army.

Xi Jinping has talked about developing a world-class PLA, and I would suggest that this is driven by several considerations. The first is the defense of what the Chinese would term "core interests" or (Chinese term used), which the Chinese have outlined for us as the continued role of the Chinese Communist Party, the preservation of China's territorial integrity and sovereignty, which, obviously, has relevance to places like Taiwan, but also Xinjiang and the South China Sea, and preserving China's economic development, including access to resources. And because China today has a global economy, it has global interests.

Second is that the PRC is reasserting itself as one of the world's major powers. And for the Chinese, what is essential here is the ability to deter aggression against China or violations of those core interests.

And finally, the Chinese experience from the century of humiliation, that a weak military, a weak set of capabilities invites aggression.

The key tasks, therefore, confronting the PLA, I would suggest, begin with what Hu Jintao termed "the new historic missions". Enunciated in 2004, those missions remain in place today. They include keeping the Chinese Communist Party in power, which is perfectly reasonable, given that the PLA is a party army; preserving the conditions for economic development, and preserving Chinese interest in key domains, including the maritime, outer space, and electromagnetic domains.

The Chinese PLA is also charged with deterring adversaries, but here it's very important to note that the Chinese term that we translate as deterrence, (Chinese term used), is more accurately translated as "compellence". And this is an important point because the Western concepts of deterrence have specifically rejected the aspect of coercion. Thomas Schelling, John Mearsheimer, all of these folks, in their writings say, yes, when we talk about deterrence, there's no compellence aspect. Whereas the very term (Chinese term used) embodies compellence, coercion.

And finally, the PLA is charged with fighting and winning what they now term "informationized local wars". And this, in particular, means establishing information dominance.

Information dominance in this regard is the ability to gather, transmit, analyze, and exploit information more rapidly and more accurately than your adversary. If you are able to conduct, to fight and win, informationized local wars, from the Chinese perspective, this is the best way to deter. The best way to deter is to demonstrate that you can fight and win. That, in turn, requires fielding capable forces, demonstrating the willingness to use them, and communicating both capability and will to your adversary.

So, in this context then, informationized local wars, the PLA's vision of what future conflicts are going to look like, one of the key evolutions under Xi Jinping is this idea that they are now going to occur under the so-called "new circumstances". And these new circumstances, basically, acknowledge the ever-growing importance of information and communications technology.

And so, what we see, therefore, is the Chinese writing about the importance of integrated network and electronic warfare because, to their mind, electronic warfare and network warfare, which includes, but goes beyond cyber, are actually flip sides of the same coin. This is very different from our military where we still have enormous bureaucratic and other fights, including issues of authorities between electronic warfare, a military Title 10 responsibility, and network warfare, what we would focus more on cyber warfare, which is often seen as a Title 50 intelligence issue and possibly a law enforcement issue. For the Chinese, it's convenience that, as a party army, none of this necessarily applies. They do what is necessary.

The other aspect here, then, is that, in the context of the new circumstances then, we see a growing emphasis on what they term "ABC," artificial intelligence, big data, and cloud computing. Because one of the ideals behind this growing set of new circumstances is that, amidst the giant flood of terabytes of data gathered from everything from ISR platforms to weapons themselves, to old-fashioned human intelligence, how do you find the relevant data, the important data? Wading through all of that for the nuggets, the Chinese see that as big data held in clouds that artificial intelligence can help filter and wade through. So that it's not the idea of a Chinese Arnold Schwarzenegger as terminators, so much as a Chinese artificial staff helping the human staff make decisions.

The other element here is the ability to secure space dominance. And here, we see a concerted Chinese effort to develop a range of offensive as well as defensive space capabilities to effect space deterrence as well as space blockades.

We see the steady movement of the Chinese out from not only the traditional orbits of low earth orbit, mid-earth orbit, and geosynchronous, but all the way out now to the Lagrange Points and beyond geosynchronous in terms of the entire portfolio of space as physical domain combined with the elements of space as an integrated system of systems, including satellites, ground stations, and the data that links it all together.

So, from the Chinese perspective, space dominance is not simply about the ability to engage satellites, but the ability to limit the information that flows across the space set of systems. Taking out terrestrial ground stations, if you are successful, and killing off the satellites feed is every bit as effective as blowing satellites out of the sky. The objective, as always, is information dominance.

So, I would suggest, ladies and gentlemen of the U.S.-China Commission, that this is the world-class PLA that Xi Jinping is talking about, one that can achieve information dominance, to help coerce as well as deter others, including the United States, in order to preserve the ability of China to develop economically and, ultimately, to keep the CCP in power.

Thank you very much.

**PREPARED STATEMENT OF DEAN CHENG, SENIOR RESEARCH FELLOW,
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CONGRESSIONAL TESTIMONY

Getting to Where the PLA Needs to Be

Testimony before U.S.–China Economic and Security Review Commission

June 20, 2019

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My name is Dean Cheng. I am the Senior Research Fellow in the Asian Studies Center Davis Institute for National Security and Foreign Policy at The Heritage Foundation. The views I express in this testimony are my own and should not be construed as representing any official position of The Heritage Foundation.

Introduction

Since the early 1990s, the People’s Liberation Army (PLA) of the People’s Republic of China (PRC) has been steadily evolving its approach to warfare. Not having fought a war since 1979, the Chinese military is forced to rely on other peoples’ experiences, in other peoples’ wars, to derive lessons about what future wars will be like. This includes drawing upon not only American military actions, but also Russian, as well as broader changes in the global social-economic-technological environment. The result has been an increasing emphasis on the role of information, and the belief that achieving “information dominance” will be essential in fighting and winning future wars.

Evolving View of Future Wars

In the wake of the first Gulf War (Operation Desert Shield/Desert Storm), the Chinese concluded that there was a need to prepare for what they termed “local wars under modern, high-technology conditions (*gao jishu tiaojian xia jubu zhanzheng*; 高技术条件下局部战争).” The characteristics of such wars included:

- The quality, as well as the quantity, of weapons matters. The side with more technologically sophisticated weapons would be able to determine the parameters of the conflict, and effectively control its scale and extent.

- The battlefields associated with such conflicts are three-dimensional, and extend farther and deeper into the strategic rear areas of the conflicting sides.
- The conflict is marked by high operational tempos conducted around the clock, under all-weather conditions.
- The fundamental approach to warfare is different. Such wars would place much greater emphasis on joint operations, while also incorporating more aerial combat, long-distance strike, and mobile operations.
- Finally, the role of command, control, communications, and intelligence (C3I) is paramount. C3I functions are seen as essential to successful implementation of such wars; consequently, the ability to interfere with an opponent's C3I functions also became much more important.¹

The conduct of such wars would entail coordinated joint operations among forces drawn from multiple different services, operating in the same general physical area. For the PLA, “joint campaigns” within the 1990s context were defined by four criteria:

- The campaign involved two or more services;
- Each service contributed a *juntuan*-level of force, i.e., a group army, a military region air force, a fleet, a Second Artillery base;
- The campaign had a single, unified command structure; and
- The command structure developed a single, unified campaign plan, which all the participating forces were obliged to follow.²

By the early 2000s, having witnessed Western military operations in the Balkans and Afghanistan, the PLA shifted to preparing for “local wars under informationized conditions (*xinxihua tiaojian xia jubu zhanzheng*; 信息化条件下局部战争).” This change was incorporated in the 2004 Chinese white paper on national defense, but was apparently already being discussed in 1999 PLA professional military literature, and was “officially incorporated into the lexicon of the ‘Military Strategic Guidelines for the New Period’” in 2002.³

Informationization (*xinxihua*; 信息化) is the consequence of the Information Age, and the widespread introduction of information technology. Beginning in the 1970s, the proliferation of microelectronics, computers, and telecommunications technology accelerated the ability to gather, store, manage, and transmit information. Information technology, including computers and telecommunications systems,

¹Chinese Military Encyclopedia Committee, *Chinese Military Encyclopedia*, Vol. II (Beijing, PRC: Academy of Military Science Publishing House, July 1997), pp. 126–127.

²Gao Yubiao, Chief Editor, *Joint Campaign Course Materials* (Beijing, PRC: Academy of Military Science Publishing House, 2001), p. 27.

³David Finkelstein, “China’s National Military Strategy: An Overview of the ‘Military Strategic Guidelines,’” in Roy Kamphausen and Andrew Scobell, eds., *Right-Sizing the People’s Liberation Army: Exploring the Contours of China’s Military*, (Carlisle, PA: Strategic Studies Institute, 2007), p. 96.

have also permeated all aspects of society and national economies and become an integral part of a nation's infrastructure.⁴

From the Chinese perspective,

Informationization is a comprehensive system of systems, where the broad use of information technology is the guide, where information resources are the core, where information networks are the foundation, where information industry is the support, where information talent is a key factor, where laws, policies, and standards are the safeguard.⁵

In the face of this broad trend of economic, political, and social informationization, threats to national interests and security have also become informationized. The continuing spread of information technology means that potential adversaries have unprecedented access to each others' national economies, as well as the broader population and the top decision makers. Just as the bomber and long-range missile allows an opponent to directly strike a nation without having to first break through ground or naval defenses, information technology similarly outflanks traditional military forces. Indeed, the proliferation of information technology into all aspects of society and economics makes those same aspects now more vulnerable to a range of new pressures and threats.

These threats extend beyond the information networks (e.g., vulnerability to denial-of-service attacks) and the component computers (e.g., computer viruses, malware). Instead, the very information itself can constitute a threat, if, for example, it erodes the morale of key decision makers, popular support for a conflict, or the will of the military to fight. Consequently, China's interpretation of its national interests has expanded, in step with the expanding impact of information writ large on China.

In the more traditional military sense, warfare has also become informationized. As information technology has also been incorporated into various weapons, they have become ever more precise and lethal. The networking of weapons with each other, and with sensors, allows for higher operational tempos, as night and weather conditions no longer constrain military forces as much as in the past. But informationized warfare goes beyond the incorporation of information technology into individual weapons, or even into broader systems. Rather, it is the creation of systems-of-systems, including the incorporation of information technology into every facet of military activities, e.g., logistics, intelligence collection and exploitation, and transportation, etc., that sets it apart from simply more sophisticated weapons. Indeed, one of the hallmarks of "informationized warfare" is that conflicts are not platform-vs-platform, or even system- (*xitong*; 系统) versus-system, but battles between rival arrays of systems-of-systems (*tixi*; 体系).⁶

⁴Tan Wenfang, "The Impact of Information Technology on Modern Psychological Warfare," *National Defense Science and Technology*, No. 5 (2009), p. 72.

⁵State Council Information Office, Tenth Five Year Plan for National Economic and Social Development, Informationization Key Point Special Plans, October 18, 2002, http://www.cia.org.cn/information/information_01_xhgh_3.htm (accessed June 14, 2019).

⁶Bai Bangxi and Jiang Lijun, "Systems of Systems Conflict Is Not the Same as Systems Conflict," *National Defense Newspaper*, January 10, 2008.

This, in turn, has led to a modification of the concept of joint operations. Joint operations, under informationized conditions, involve integrated or unified joint operations, among forces operating across multiple domains, including the land, sea, air, outer space, and informational space domains, under a single, unified command. In this informationized environment, the distinction between forward and rear areas is blurring, as are lines separating offensive and defensive operations, or positional, mobile, and guerrilla warfare. In short, informationized warfare appears to have accelerated an evolution of joint operations, from coordinated joint operations to unified (or integrated) joint operations (*yitihua lianhe zuozhan*; 一体化联合作战) and unified strength (*yitihua liliang*; 一体化力量).⁷ To use a PLA analogy, coordinated joint operations is the equivalent of “three eggs in a bowl,” each egg distinct. Unified joint operations is “three eggs broken in a bowl,” where the eggs intermix somewhat.⁸

Tasks and Missions for the PLA

In December 2004, Hu Jintao, in his role as chairman of the Central Military Commission, gave a major speech where he provided guidance for what the PLA should be preparing for, by charging it with a set of “historic missions for the new phase of the new century,” commonly referred to as the “new historic missions.”

These missions include:

- Safeguarding the role of the Chinese Communist Party (CCP). As the PLA remains a “Party army,” its first responsibility is to preserve the CCP’s grip on power.
- Safeguarding China’s national development. As the PRC remains a developing country, it is essential that the PLA help preserve the conditions for sustaining economic development. This is especially important as the CCP considers that this is a “period of important strategic opportunity for national development”; it is therefore important the PRC capitalize on this period to develop the PRC’s comprehensive national power. The PLA serves this goal by helping maintain national unity, e.g., preventing secession or other breakaway tendencies.
- Safeguarding China’s expanding national interests. While the PRC may be a developing country, its expanding economic strength, as well as developments in technological trends, mean that the PLA must expand its focus beyond its traditional land frontiers.
- Safeguarding world peace.

The “new historic missions” remain in place for the PLA. Under Xi Jinping, however, the PLA itself has been massively reformed in order to better fulfill these missions as well as in order to better accommodate the evolving circumstances under which those missions must be fulfilled. Under Xi, the PLA is now preparing to undertake “informationized local wars (*xinxihua jubu zhanzheng*; 信息化局

⁷Kou Shiqiang, “A Clarification of Unified Joint Operations,” *People’s Liberation Army Daily*, August 11, 2004, http://www.china.com.cn/military/zhuanti/sjxjsbg/txt/2004-08/11/content_5632264.htm (accessed June 14, 2019).

⁸Yuan Wenxian, “Strengthening Communications Training in Joint Operations,” *People’s Liberation Army Daily*, April 9, 2002, in Foreign Broadcast Information Service .

部战争),” reflecting the “new circumstances” or “new conditions (*xin xingshi*; 新形势)” now confronting it.

These “new circumstances” have arisen because of a series of transformations in the broader socio-techno-economic context. These include:

- Technological transformation, rooted in big data, cloud computing, and other changes in electronic information technology;
- Industrial transformation, resulting from networking, the growth in artificial intelligence, and other elements that have elevated traditional industries to new levels;
- Military transformation, as a consequence of weapons incorporating more and more intelligence and units becoming more digitized.⁹

The result of this last transformation is a further deepening of trends that had already begun in the earlier part of this decade, including the rise of “unified joint operations (*yitihua lianhe zuozhan*; 一体化联合作战)” as the fundamental expression of future warfare.¹⁰

Of particular note is the new historic mission of “safeguarding China’s expanding national interests.” Chinese writings note the growing importance of the maritime, space, and electromagnetic domains for national security.¹¹ The “new historic missions” require that the PLA be able to establish dominance of each of these domains as a prerequisite for defending the PRC’s interests. Underlying this task, in turn, is the ability to dominate the information domain, to establish “information dominance (*zhi xinxi quan*; 制信息权).”¹² This will have even greater urgency in light of the “new circumstances.”

Establishing Information Dominance. Because all operations require information, whether about one’s own forces or the adversary or the broader operational environment, only with information dominance can air, land, sea, or outer space capabilities operate to their full potential. Conversely, without information dominance, there can be no air, land, sea, or outer space dominance—and victory becomes difficult if not outright impossible. Information dominance is what supports and safeguards the other dominances.¹³ PLA analysts assume that both sides will be constantly striving to achieve

⁹Ma Ting, Li Qian, and Wei Fan, “Overall Planning of the Military Electronics Industry Under the New Situation,” *Journal of the China Academy of Electronic and Information Technology*, Vol. 12, No. 6 (December 2017), p. 582, and LI Chengan, *Reforming Military Education Under the New Circumstances* (Beijing, PRC: National Defense University Publishing House, 2015), p. 20.

¹⁰Ma, Li, and Wei, “Overall Planning of the Military Electronics Industry Under the New Situation,” *Journal of the China Academy of Electronic and Information Technology* (XII, #6, December 2017), p. 582.

¹¹“Military Assessment: Discussing Our Military’s Historic Missions in the New Phase of the New Century,” *PLA Daily*, January 9, 2006, <http://mil.news.sina.com.cn/2006-01-09/0616342953.html> (accessed June 14, 2018).

¹²Zheng Weiping and Liu Minfu, *Discussions on the Military’s New Historic Missions* (Beijing, PRC: People’s Armed Police Publishing House, 2005), p. 138.

¹³Li Yousheng, *Science of Joint Campaign Teaching Materials* (Beijing, PRC: Military Science Publishing House, 2012), p. 69. See also pp. 69–72 for a fuller discussion of the interplay between information dominance and domination of each of these other physical domains.

information dominance, and therefore, both sides will be trying to weaken and undermine the adversary's information networks, while also trying to preserve their own.

At the same time, the proliferation of various sources of information, as well as the increasing ability to move massive amounts of data, mean that there will be more opportunities to create a common situational picture among all the participating forces. By generating such shared situational awareness, exploiting all the available information sources, Chinese analysts expect a more rapid cycling of information, allowing commanders' decisions to be more rapidly disseminated to the units, leading to a more flexible, rapid, tailored response. Command will be in real time, and operations will be promptly adaptive.

At the same time, this common situational picture would allow commanders to better track not only adversary forces, but also friendly units. This latter aspect is especially important, given the involvement of forces drawn from all the different services, who would be operating across multiple domains. As one Chinese analysis observed, even Sun-Tzu had written that only by knowing oneself as well as the adversary can one hope to be ever victorious.¹⁴ This would be even more true in the Information Age.

This common situational picture is built upon several key pillars.

- **Real-time information.** Perhaps most important is the ability to obtain and transmit information on a real-time or near-real-time basis. Unlike in the industrial era, information systems are now sufficiently prolific that they permeate the battlefield, allowing for near-instantaneous capture of information and its transmission. Moreover, because of the advances in electronics and associated information technology, smaller, cheaper sensors can nonetheless collect and transmit enormous amounts of data. At the same time, modern warfare requires prompt access to information, because warfare under informationized conditions is both more rapid and more intense. Given the importance of establishing information dominance, it is vital that information be readily available.
- **Accurate data.** Complementing real-time availability is accuracy. In order to counter an adversary, Chinese analyses argue that it is necessary to calculate their overall combat capabilities and determine their likely courses of action, down to the individual unit level. This must include not only their equipment and manpower strength, but also their physical reach, the radius of action within a given time period, and the quality of the forces.¹⁵ If the information necessary for such determinations is inaccurate, then the decisions that will be generated will be flawed. Similarly, the information regarding one's own forces' disposition and capabilities must not only be timely but accurate as well. Chinese assessments seem to view the greater quantity of data as leading to greater accuracy, in part because it will be collected from many

¹⁴Zou Zhenning and Cha Rui, *Command Information Capabilities Research, Based on Systems Combat Between Information Systems* (Beijing, PRC: Oceans Publishing House, 2011), p. 57.

¹⁵Sun Jinwei, *Research on Laws Governing Campaign Dilemmas and Activities* (Beijing, PRC: National Defense University Publishing House, 2013), p. 74.

different sources, including a wide array of sensors, open-source information, and cyber intelligence. Such a diverse set of sources provides a more comprehensive picture of one's own forces. It may also complicate an adversary's attempt to undertake camouflage, concealment, and deception measures (CCD), since these efforts would have to be mutually consistent to successfully fool intelligence analysts.

- **Collection of many different kinds of information for many different users.** The variety of sensors and other information sources means that information can be collected from many different domains, including the land, sea, air, outer space, and electromagnetic spectrum, to support users in not only the ground, naval, and air forces, but the political realm (for political warfare) as well. Similarly, all this information can support operations from outer space to the ocean depth, and across both an adversary's depth and one's own rear areas. Such levels of information collection are necessary, in order to maximize the effectiveness of one's own arsenal; at the same time, though, it allows commanders an unprecedented degree of situational awareness, extending for far greater distances and across a wider variety of types of information. Indeed, the collection and dissemination of information in a wide variety of forms also means that different types of information (electro-optical images, radar-generated images, electromagnetic characteristics) are all available and can be blended together to provide a more in-depth look at a target or an environment. All of this helps create a single, integrated situational picture that can then be accessed by all the participating forces, allowing everyone to have a better understanding of friendly and adversary dispositions, the overall environment, and intended operational goals and methods.
- **Intelligent information processing.** The information that is gathered, moreover, will also allow planners a very high level of efficiency, as all this information will allow for much better matching types and numbers of weapons precisely against any given target set. This will be based, in part, on the incorporation of information-processing capabilities on sensors and even weapons, so that analysts will be able to focus better on the elements that matter the most. As platforms themselves become more intelligent, it is expected that the information provided will be better tailored to the individual user, avoiding information overload despite the growth in information collected.¹⁶
- **Reliable communications.** One of the most essential advances allowing for the creation of a common situational picture is the advent of more secure communications. Indeed, the advances in information technology, in the Chinese view, allow not only more information to be securely transmitted, but also the greater variety, as noted previously. This increase in reliability will benefit not only command and intelligence functions, but every aspect of the joint force, including navigation, force coordination within the same echelons, and between front lines and

¹⁶Zou and Cha, *Command Information Capabilities Research, Based on Systems Combat Between Information Systems*, p. 61.

rear areas. As important, Chinese analysts seem to think that future communications architectures, given their networked nature and the incorporation of various security measures, will ensure that communications are safe as well.

These characteristics, in combination, will allow commanders and their subordinate forces to share information on a near-real-time basis, thereby allowing all the forces to integrate their actions. Enemy vulnerabilities can be rapidly identified, all available friendly forces can be deployed to exploit them, and strikes from a variety of locations can be coordinated to maximum effect. At the same time, better information will allow more sustained operations, preventing the adversary from regrouping while exploiting newly arising opportunities. Rather than a linear progression, operations will be able to proceed in parallel, across the depth and breadth of a theater, with precise attacks paralyzing an adversary, rather than relying upon brute force to bludgeon them into submission.¹⁷

From the Chinese perspective, a clear demonstration of what such information sharing can achieve was provided by the American-led coalition's operations against Iraq in the 2003 Iraq war. Because the coalition forces had superior Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance capabilities, they could forge a truly joint operational approach to the conflict, with smooth communications among the various forces. This was a significant improvement upon what had been undertaken in the Gulf War, a decade previously, where coalition ground forces had some difficulties coordinating with naval and air forces.¹⁸

This, in turn, requires actively undertaking offensive actions—information dominance cannot be achieved through solely defensive, reactive measures. Indeed, because of the importance of information systems to local wars under informationized conditions, as well as the nature of the information environment, “it is more important to emphasize the offensive with regards to the information domain than it is in the traditional land, sea, and air domains.”¹⁹ In particular, one needs to take sustained offensive action against the adversary's information networks, command and control infrastructure, as well as key combat forces.²⁰ These activities constitute the core of “information warfare (*xinxi zhan*; 信息战).”

Offensive actions are essential, as only by neutralizing the adversary can one ultimately secure one's own networks and systems-of-systems. If one's information warfare efforts are successful, the adversary's traditional combat forces will be reduced to an Industrial Age capacity. They may remain locally potent, but with only a disrupted, paralyzed, and destroyed information network, they will have only limited effectiveness.²¹ In both the Gulf War and the Balkan conflict in Kosovo, the Iraqi and Serbian forces, respectively, suffered relatively few casualties, but the destruction of their “three major systems” meant that the remaining forces could not have a decisive impact. In those conflicts,

¹⁷Chinese Military Encyclopedia 2nd Edition Editorial Committee, *PLA Encyclopedia, 2nd Edition, Campaigns* (Beijing, PRC: China Encyclopedia Publishing House, 2007), p. 127.

¹⁸He Zhu, *Experts Assess the Iraq War* (Beijing, PRC: Military Science Publishing House, 2004), p. 146.

¹⁹Academy of Military Science Operations Theory and Regulations Research Department and Informationized Operations Theory Research Office, *Informationized Operations Theory Study Guide*, p. 87.

²⁰Wu Renhe, *Theory of Informationized Conflict* (Beijing, PRC: Military Science Publishing House, 2004), p. 168.

²¹Wang Hui, *Foundational Knowledge, Considerations, and Explanations of Informationized Warfare* (Beijing, PRC: Military Science Publishing House, 2009), p. 111.

however, the America-led coalition forces had an overwhelming set of advantages, including far more extensive information resources than the Iraqis or Serbs could field. Under more even circumstances, Chinese analyses suggest that information dominance is likely to be a more localized, temporary condition. The pervasiveness and resiliency of information networks means that it would be difficult to establish permanent information dominance. Consequently, the weaker side, by constantly and actively seeking out opportunities to concentrate their information warfare resources, can often nonetheless achieve at least local conditions of information superiority and advantage. Exploited to maximum advantage in the offensive, such local conditions can nonetheless create opportunities to paralyze the adversary and defeat them.

At the same time, whether one has achieved information dominance or not, one must also constantly undertake defensive efforts to try and preserve the integrity of one's own systems-of-systems. For the side that is technologically inferior, this will be even more difficult, as the adversary may well exploit paths and approaches that one either had not conceived of or had insufficiently prepared defenses for. Attacking the adversary's information networks must therefore be part of one's defensive efforts, even if one is weaker, both to deny the adversary the initiative and to alleviate pressure on one's own systems. It is the best means by which the weaker side can sustain an asymmetric stance that can compensate for those weaknesses and unbalance a stronger adversary.²²

For both sides, then, whether in defense or offense, the priority targets in conducting information warfare and pursuing information dominance will include the adversary's intelligence and surveillance systems; their high technology weapons platforms and bases where they are located; their safeguarding infrastructure, systems, and forces; and their command, control, and communications networks.²³ The winner of information warfare is the side that retains a relatively more intact set of system-of-systems; in particular, the side that retains better connectivity among the various constituent systems.

Achieving "information dominance" in the face of this maelstrom of hard-kill and soft-kill weapons and tactics is not solely or even predominantly a matter of computer network attack (or defense). Instead, the Chinese conceive of information warfare at the campaign level as comprising several key lines of operations, including electronic warfare, network warfare, and space warfare.

Electronic Warfare (dianzi zhan; 电子战)

Electronic warfare is one of the earliest and most fundamental forms of information warfare. There was widespread employment of electronic warfare in the Second World War (e.g., the use of "Window" or chaff by Allied bombers to blind German air defense radars and the exploitation of cryptanalysis by all sides to outmaneuver their adversaries), and it has become increasingly sophisticated and important in the intervening decades.

Electronic warfare is the effort by each side to degrade and disrupt the adversary's electronic systems, while preserving one's own.²⁴ It occurs in the "electromagnetic space (*dianci kongjian*; 电磁空间),"

²²Academy of Military Science Operations Theory and Regulations Research Department and Informationized Operations Theory Research Office, *Informationized Operations Theory Study Guide*, p. 87.

²³Zhang, *The Science of Campaigns*, p. 90.

²⁴Wang, *Foundational Knowledge, Considerations, and Explanations of Informationized Warfare*, p. 180.

or the electromagnetic spectrum, ranging from super low frequency to ultraviolet, including the visible light spectrum. The electromagnetic space is seen by Chinese analysts as the fifth domain of warfare, alongside land, sea, air, and outer space.²⁵ Indeed, electronic warfare is actually a struggle to dominate the electromagnetic spectrum, establishing electromagnetic dominance as part of the larger effort to establish information dominance.

The successful domination of the electromagnetic spectrum provides an enormous advantage in the effort to dominate the broader information space, and thereby secure the initiative, because it affects the vast majority of systems that collect, transmit, or exploit information. Electronic warfare conceptually affects radars, communications systems such as radios, as well as electronic countermeasures and electronic counter-countermeasures (ECM and ECCM) systems, as well as weapons control and guidance systems. The ability to operate successfully in the land, sea, air, or outer space will therefore be heavily influenced by the ability to operate electronics successfully. Indeed, as one Chinese assessment notes, the effort to establish the “three dominates” will be heavily influenced by the side best able to succeed at electronic warfare.²⁶

Chinese analysts also argue that electronic warfare occupies a central role in modern warfare because electronics are now integrated into the very function of most weapons. Indeed, electronics have assumed a growing proportion of the cost and sophistication of modern weapons; some of the most expensive elements of modern warships or fighter planes are often embodied in the onboard electronics, rather than the metal. As one PLA analysis noted, electronics represent 20 percent of the cost of a modern warship, 24 percent of the cost of a modern armored fighting vehicle, 33 percent of a military aircraft, 45 percent of a missile, and 66 percent of a satellite.²⁷

At the same time, as more and more aspects of modern warfare involve portions of the electromagnetic spectrum, the electronic environment has become much more complex. Already, current battlefields are exhibiting an increasing density of electronic systems, with both sides fielding a wide array of sensors, communications systems, and other electronic systems. Even without the two sides striving to erode the others’ electronic systems, there is already an enormous amount of electromagnetic energy being emitted by the combatant forces, with the potential for mutual interference. Understanding the electromagnetic battlefield (which will likely span much greater volumes where troops are operating) is further complicated by the efforts of each side to deny the other easy access and smooth operation of their electronic systems. Not only will an enemy seek to deny easy access and smooth operation within the electromagnetic spectrum, but one’s own forces and efforts may generate interference. Thus, an essential part of electronic warfare is frequency and spectrum management by the joint campaign command and reconciliation of electronic activities among the various forces, to minimize the effects of friendly emissions and those from natural sources.²⁸

As the Chinese observe, some nations define electronic warfare narrowly. In the Chinese assessment, the Russians, for example, see electronic warfare as mainly involving the use of software to attack the

²⁵All Army Military Terminology Management Commission, *Chinese People’s Liberation Army Terminology* (Unabridged Volume), p. 255.

²⁶Yuan Wenxian, *The Science of Military Information* (Beijing, PRC: National Defense University Publishing House, 2007), pp. 84–85.

²⁷Wang, *Foundational Knowledge, Considerations, and Explanations of Informationized Warfare*, p. 179.

²⁸Yuan, *The Science of Military Information*, pp. 84 and 85.

adversary's electronic systems.²⁹ Similarly, a different Chinese volume concludes that the U.S. military is focused on the exploitation of the electromagnetic spectrum, both in attack and defense. In this assessment, the American approach neglects several important additional means of neutralizing an adversary's electronic systems, including

- Using either human agents or physical weapons to physically attack electronic systems;
- Using propaganda and psychological warfare techniques to degrade the effectiveness of electronic systems; or
- Using non-electromagnetic systems to counter electronic equipment.³⁰

By contrast, the PLA adopts a much more expansive definition of electronic warfare. According to Chinese analyses, electronic warfare embodies the range of activities whereby one seeks to maximize the ability of one's own side to exploit the electromagnetic spectrum, while also striving to erode the adversary's ability to do the same.³¹ Electronic warfare, from the Chinese perspective, therefore includes not only electronic-based weapons, but the conduct of electronic reconnaissance and counter-reconnaissance; interference and preservation measures for electronic information; and all efforts at disrupting and countering the disruption of electronic systems. Electronic warfare measures would include attacks on an adversary's communications land lines, radio networks, microwave transmission networks, and position, navigation, and timing (PNT) systems.³² It incorporates not only soft-kill techniques, such as jamming or other forms of electronic interference and suppression, but also hard-kill approaches. The latter includes the use of artillery, aerial bombardment, and other firepower strikes to kill key kill electronic systems.

It is also important to note that, whereas electronic warfare has historically often been a tactical issue (e.g., the provision of jamming assets in support of a specific bombing raid), in the Chinese estimation electronic warfare will constitute a campaign-level activity in future local wars under informationized conditions. The proliferation of electronic warfare tools and weapons across land, sea, air, and space platforms, and the development of electronic weapons whose effects will span dozens or even hundreds of kilometers, will expand the area affected by orders of magnitude. In particular, the ability to undertake electronic warfare against space-based communications, reconnaissance, surveillance, PNT, and meteorological assets will be a vital means of establishing dominance over the electromagnetic domain.³³

Network Warfare (wangluo zhan; 网络战)

Network warfare is the partner of electronic warfare. Also termed “network conflict (*wangluo duikang*; 网络对抗),” it is an aspect of information warfare involving the range of activities that occur

²⁹Academy of Military Science Operations Theory and Regulations Research Department and Informationized Operations Theory Research Office, *Informationized Operations Theory Study Guide*, pp. 93–94.

³⁰Ye, *Science of Information Operations Teaching Materials*, pp. 21–22.

³¹Academy of Military Science Operations Theory and Regulations Research Department and Informationized Operations Theory Research Office, *Informationized Operations Theory Study Guide*, pp. 93–94.

³²Yuan, *The Science of Military Information*, p. 71.

³³*Ibid.*, p. 314.

within networked information space, as the two sides seek to reduce the effectiveness of the adversary's networks, while preserving one's own.³⁴ Like electronic warfare, it includes not only offensive and defensive components, but also reconnaissance of adversary and others' networks.

Network warfare occurs in the realm of "network space (*wangluo kongjian*; 网络空间)," a term that roughly parallels that of "cyberspace." However, network warfare is seen as moving beyond just computer networks, although computer network warfare remains an integral element of network warfare. In relation to information warfare at the campaign level, it occurs within networks that are part of the overall battlefield (which can extend to outer space and deep into the two sides' homelands as part of the command and control, and logistical and support infrastructures).³⁵

The purpose of network warfare is to establish "network dominance (*zhi wangluo quan*; 制网络权)." When one has "network dominance," the full range of one's networks (not just computer networks) can operate smoothly and the information on those networks is safeguarded while being rapidly moved and applied, while an adversary's networks are prevented from doing the same. Some of the networks that are integral to network warfare include the command and control network, intelligence information network, and air defense network.³⁶ Network space is sometimes characterized as the sixth domain (alongside land, sea, air, outer space, and the electromagnetic spectrum). In some cases, however, it is seen as the fifth domain, encompassing the electromagnetic spectrum.

Because of the importance of these various networks in the conduct of unified joint operations, network warfare is considered by the Chinese as inevitably a central part of future local wars under informationized conditions. It is seen as an especially effective means for the weaker player to balance the capabilities of the stronger one. One Chinese analysis observes that in the Balkan conflicts of the 1990s, although the Serbian forces were generally outmatched by NATO, they were nonetheless able to repeatedly penetrate various NATO networks and degrade their operations. The Chinese write that the Serbs were able to penetrate the networks of the aircraft carrier USS *Theodore Roosevelt* and British Meteorological Office, affecting air operations.³⁷ Another Chinese analysis similarly observes that the disparities in conventional strength between NATO and Serbia were not paralleled on the Internet, where Serbian forces successfully attacked various NATO and individual member states' websites.³⁸

Integrated Network and Electronic Warfare (*wangdian yiti zhan*; 网电一体战)

Of particular importance in future local wars under informationized conditions will be the steady merging of network and electronic warfare. This is the embodiment of the Chinese concept of unified joint operations. As network warfare expands and electronic warfare systems are networked, the

³⁴All Army Military Terminology Management Commission, *Chinese People's Liberation Army Terminology* (Unabridged Volume), p. 286, and Ye, *Science of Information Operations Teaching Materials*, p. 24.

³⁵Ye, *Science of Information Operations Teaching Materials*, p. 28.

³⁶Ibid., pp. 24 and 25.

³⁷Yuan Wenxian, *Joint Campaign Information Operations Teaching Materials* (Beijing, PRC: Military Science Publishing House, 2009), p. 14.

³⁸Yuan, *The Science of Military Information*, p. 73.

Chinese see network warfare and electronic warfare as inextricably linked. Indeed, Chinese military theorists were among the earliest adopters of the concept of integrated network-electronic warfare (INEW), and see INEW as a fundamental characteristic of information warfare and the informationized battlefield.³⁹

The PLA defines the INEW concept (which it at times translates as “network-electronic integration warfare”) as a form of information warfare where one implements information attacks against the enemy’s networked information systems through highly melded electronic warfare and network warfare.”⁴⁰ It is those information warfare methods that use a combination of electronic warfare and network warfare techniques to attrit and disrupt the adversary’s networked information systems, while defending one’s own, in order to secure information dominance over the battlefield. It is the main expression of information warfare.⁴¹

As one Chinese analysis notes, in future conflicts, the electromagnetic spectrum will be the key influence upon the operation of network-space, with network and electronic warfare organically linked, operating under a single unified direction.⁴² Therefore, network warfare will be affected by efforts aimed at dominating the electromagnetic spectrum, while the ability to operate electronic systems will be directly affected by efforts to penetrate and damage networks. The two elements are seen as mutually complementary in a unified effort to degrade the enemy’s system-of-systems. Neither electronic warfare nor network warfare alone can comprehensively disrupt that system-of-systems, but given the mutually supporting nature of the two different types of warfare in terms of attack concepts, attack methods, and operating environments, they constitute a highly effective integrated attack methodology.

One Chinese volume observes:

From a technical angle, electronic warfare and network warfare can be greatly complementary. Electronic warfare emphasizes attacking the signal layer, with the use of strong electromagnetic energy to drown out target signals. Network warfare emphasizes attacking the information layer, using disruptive information flow, transported into the enemy’s network systems, as the means of attack.⁴³

In the Chinese view, as individual facilities and their attendant information systems are networked together, the physical infrastructure upon which information passes and the information itself became an integrated whole. INEW is an effort to unify the concrete physical aspects and virtual aspects of

³⁹Academy of Military Science Operations Theory and Regulations Research Department and Informationized Operations Theory Research Office, *Informationized Operations Theory Study Guide*, p. 101.

⁴⁰All Army Military Terminology Management Commission, *Chinese People’s Liberation Army Terminology* (Unabridged Volume), pp. 262–263.

⁴¹Chinese Military Encyclopedia 2nd Edition Editorial Committee, *PLA Encyclopedia*, 2nd Edition, *Military Command*, p. 327.

⁴²Ye Zheng, *Concepts of Informationized Operations* (Beijing, PRC: Military Science Publishing House, 2007), p. 157, and YE Zheng, *Science of Information Operations Teaching Materials* (Beijing, PRC: Military Science Publishing House, 2013), p. 27.

⁴³Ye, *Science of Information Operations Teaching Materials*, pp. 28–29.

information warfare, merging them into a single concept of operations.⁴⁴ By undertaking attacks on both of these elements, it is more likely that one can establish information dominance. INEW therefore envisions using electromagnetic attack and defense and information attack as the main techniques for degrading adversary ability to gather and exploit information, treating networked information systems as the domain of operations. Successful conduct of integrated network and electronic warfare should lead to dominance of the entire “battlefield information space (*zhanchang xinxi kongjian*; 战场信息空间).”

The central point of the Chinese conception of INEW is the incorporation of targeting (and defense) of the physical element of the information networks into network warfare. This is what makes INEW more than simply adding electronic warfare techniques to network warfare; it expands information warfare beyond the predominantly virtual world of data to include the physical, tangible world. In the context of the greater emphasis on unified joint operations, INEW is envisioned as a key example of the new kind of unified jointness necessary to successfully fight local wars under informationized conditions.⁴⁵

Space Warfare (*taikong zhan*; 太空战)

As PLA writings have noted, “informationized warfare” does not simply refer to the use of computers and cyberwarfare. It involves the acquisition, transmission, and exploitation of all forms of information. Chinese writings indicate a growing recognition that space plays a central role in all these tasks. In the 2006 edition of *The Science of Campaigns*, it is specifically stated that “the space domain daily is becoming a vital battle-space.... Space has already become the new strategic high ground.”⁴⁶ In the subsequent 2013 edition of *The Science of Military Strategy* from the PLA’s Academy of Military Science, space is deemed the “high ground in wars under informationized conditions,” tied to the struggles in network space and the electromagnetic spectrum as key future battlegrounds.⁴⁷

In the 2015 PLA National Defense University volume also entitled *The Science of Military Strategy*, space is discussed at length, both as a new area of military conflict (alongside network space and deep ocean regions), and as an area of acquisition and development. In the first case, it is described as a key factor in the ongoing military transformation, with a major impact on future warfare’s stance, form, and principles.⁴⁸ In the latter section, this is reinforced by the observation that space is the strategic “high ground” in any international military competition. “A nation’s military aerospace strength will determine a nation’s international standing and security.”⁴⁹

⁴⁴Academy of Military Science Operations Theory and Regulations Research Department and Informationized Operations Theory Research Office, *Informationized Operations Theory Study Guide*, p. 101.

⁴⁵Ye, *Science of Information Operations Teaching Materials*, p. 28.

⁴⁶Zhang, *The Science of Campaigns*, p. 87.

⁴⁷Academy of Military Science Military Strategy Research Office, *The Science of Military Strategy* (Beijing, PRC: Military Science Publishing House, 2013), pp. 146–147.

⁴⁸Xiao Tianliang, *The Science of Military Strategy* (Beijing, PRC: National Defense University Publishing House, 2015), p. 136.

⁴⁹*Ibid.*, p. 373.

In the Chinese conception, space is important for the advantage it confers with regards to the ability to collect, transmit, and exploit information, rather than for its own sake. As other Chinese analysts conclude, “space operations will be a core means of establishing information advantage.”⁵⁰ To this end, Chinese analysts have long recognized, since at least the first Gulf War, that space is a key means of providing information support to terrestrial forces. Consequently, the emphasis upon establishing “space dominance (*zhitian quan*; 制天权),” as part of the struggle for information dominance, has become more explicit.

Several PLA analyses, for example, have observed that space is the “strategic high ground (*zhanlue zhigao dian*; 战略制高点)” in informationized warfare. They conclude that the ability to dominate space will have greater impact on informationized warfare than any other domain because it will provide:

- Real-time, global monitoring and early warning, such that no major military activity can occur without being spotted;
- Secure, long-range, intercontinental communications; and
- Positional and navigational information that will support long-range precision strike, including against targets that are over the horizon.

All of these will occur without restriction from political borders, physical geography, or weather conditions and time of day.⁵¹

Space dominance entails not only the ability to provide information support to the PLA, but also to deny an adversary the ability to exploit space to gain information. The American reliance on space systems, in particular, has been remarked upon. One Chinese assessment notes high levels of American investment in military communications satellites, navigation satellites, reconnaissance and surveillance satellites, ballistic missile early warning satellites, and environment monitoring satellites.⁵² These satellite constellations, moreover, will be complemented by an array of terrestrial and aerial systems to provide a complete, overlapping array of surveillance capabilities. The expectation is that the United States is preparing to disrupt, degrade, deny, and destroy adversary space systems in the effort to establish information dominance; conversely, that the Americans are also preparing to face such attacks against their own systems.

Nor is American dependence upon space unique, in the Chinese view. PLA writings indicate that they are also closely observing other nations’ space developments. Russian space developments, in particular, seem to garner heavy Chinese attention. The Chinese military textbook *Military Astronautics* discusses Russian as well as American aerospace forces.⁵³ The 2013 edition of *The Science of Military Strategy* observes that Russia has made space a major focus of its military refurbishment effort, and that Moscow has increased its investments in the space sector as the Russian

⁵⁰Yuan, *Science of Military Information*, p. 324.

⁵¹Ye, *Concepts of Informationized Operations*, p. 154, and Chi Yajun and Xiao Yunhua, *Essentials of Informationized Warfare and Information Operations Theory* (Beijing, PRC: Military Science Publishing House, 2005), pp. 38–39.

⁵²Xu Guoxing, *Research on Our Military’s Information Operations Strength Construction* (Beijing, PRC: Military Science Publishing House, 2013), p. 50.

⁵³Chang Xianqi, *Military Astronautics*, 2nd ed., (Beijing, PRC: National Defense Industries Press, 2005), pp. 219–220.

economy has improved.⁵⁴ In particular, Russian dependence on space systems has been noted. One Chinese volume related the Russian observation that “[i]f Russia did not have an advantage in space, then it would not have reliable communications and reconnaissance, in which case, it would lack modernized information systems,” leaving Russia blind and deaf.⁵⁵

This will make the struggle for space dominance that much more pointed. If, as Chinese authors believe, without space dominance, one cannot obtain information dominance and aerial dominance, and therefore one cannot achieve land or maritime dominance, then space will inevitably be a battleground, if only in order to deny an adversary the ability to use space freely.⁵⁶ Therefore, the space arena will be one of the very first scenes of conflict, as the two sides struggle for control of space. Neither side can afford to neglect this theater, as it will be a central determinant of who will secure information dominance.⁵⁷

Prospects for the Future

The PLA, despite being a Party army, is nonetheless a professional organization devoting substantial effort to analyzing the nature of modern conflict, in the Information Age, in order to better fulfill its “new historic missions.” As important, it is modernizing its forces, based on its findings.

In light of the “new historic missions,” for example, it should not be surprising that there has been a substantial effort to improve the PLA’s maritime capabilities. As the 2019 Department of Defense report to Congress on China’s military capabilities notes, the PLA Navy is replacing “obsolescent, generally single-purpose platforms in favor of larger, multi-role combatants featuring advanced, anti-ship, anti-air, and anti-submarine weapons and sensors.” At the same time, the Chinese navy is increasingly emphasizing the maritime domain, as it now regularly conducts various missions and operations farther and farther from Chinese shores.⁵⁸ This has included indigenous construction of aircraft carriers, serial production of multiple different surface combatants and submarine classes, and the expansion of the PLA naval infantry force. This last effort, which is expected to see a tripling in size from 10,000 men organized in two brigades to 30,000 men in seven brigades, is consistent with the ongoing focus on Taiwan.⁵⁹

Similarly, the Chinese emphasis on space dominance would suggest that the PLA would not be focused solely on information collection systems, but would also push the development of space weapons. This is also consistent with what has been observed in China’s military space forces.

Under Hu Jintao, the PLA began to demonstrate overt space combat capabilities. The PLA tested its direct ascent, kinetic kill anti-satellite (ASAT) system in January 2007. Launched from Xichang

⁵⁴Academy of Military Science Military Strategy Research Office, *The Science of Military Strategy*, p. 180.

⁵⁵Wu Renhe, *Theory of Informationized Conflict* (Beijing, PRC: Military Science Publishing House, 2004), p. 102.

⁵⁶Ye, *Concepts of Informationized Operations*, p. 154.

⁵⁷Chi Yajun and Xiao Yunhua, *Essentials of Informationized Warfare and Information Operations Theory* (Beijing, PRC: Military Science Publishing House, 2005), pp. 38 and 39.

⁵⁸Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2019* (Washington, DC: Department of Defense, 2019), p. 35.

⁵⁹Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments Involving the People’s Republic of China 2018* (Washington, DC: Department of Defense, 2018), p. 24.

Satellite Launch Center, the Chinese ASAT destroyed a defunct Fengyun-1C weather satellite in low orbit. In the process, China also generated a massive amount of space debris.⁶⁰ Almost precisely three years later, in January 2010, China engaged in what was termed an anti-missile test, involving “two geographically separated missile launch events with an exo-atmospheric collision also being observed by space-based sensors,” according to the United States Department of Defense.⁶¹ This test also helped Chinese scientists improve their ASAT system. And in August 2010, two Chinese microsattellites were deliberately maneuvered into close proximity, and apparently “bumped” each other.⁶²

These efforts at developing anti-satellite systems have been sustained under Xi Jinping. In May 2013, the Chinese conducted another anti-satellite test. This weapon, however, is assessed as demonstrating an ability to threaten targets as far as the geosynchronous belt, over 26,000 miles away.⁶³ This is the first time that any nation has tested a weapon explicitly intended to hold satellites in that orbit at risk. Described by one senior U.S. military officer as the “most valuable orbit,” the geosynchronous region is populated by not only large numbers of communications satellites, but also strategic early warning satellites as well as weather satellites.⁶⁴ The ability to destroy such satellites would be a major step towards establishing information dominance. China conducted what it termed a missile interceptor in July 2014, but which the United States has assessed as an anti-satellite weapon.⁶⁵

As important as the individual weapons, from the Chinese perspective, is the ability to field weapons in units, as part of a system-of-systems. In this regard, American intelligence assessments have concluded that the PLA is already employing these weapons at the unit level.⁶⁶ These units, moreover, are part of the PLA Strategic Support Force (PLASSF), a new organization created at the end of 2015 that combines China’s electronic warfare, network warfare, and space warfare forces. Given the importance of these capabilities in the Chinese view for achieving “information dominance,” the consolidation of the units that conduct these operations into a single service would be consistent with efforts to secure such dominance.

⁶⁰Leonard David, “China’s Antisatellite Test; Worrisome Debris Cloud Encircles Earth,” *Space.com*, February 2, 2007, <http://www.space.com/3415-china-anti-satellite-test-worrisome-debris-cloud-circles-earth.html> (accessed June 14, 2019).

⁶¹“China: Missile Defense System Test Successful,” *USAToday*, January 11, 2010, http://www.usatoday.com/news/world/2010-01-11-china-missile-defense_N.htm (accessed June 14, 2019).

⁶²William Matthews, “Chinese Puzzle,” *Defense News*, September 6, 2010, <http://www.defensenews.com/story.php?i=4767907> (accessed June 14, 2019).

⁶³Brian Weeden, *Through a Glass Darkly: Chinese, Russian, and American Anti-Satellite Testing in Space* (Washington, DC: Secure World Foundation, 2014).

⁶⁴Mike Gruss, “Space Surveillance Satellites Pressed into Early Service,” *Space News*, September 18, 2015, <http://spacenews.com/space-surveillance-sats-pressed-into-early-service/> (accessed June 14, 2019).

⁶⁵Mike Gruss, “U.S. State Department: China Tested Anti-Satellite Weapon,” *Space News*, July 28, 2014, <https://spacenews.com/41413us-state-department-china-tested-anti-satellite-weapon/> (accessed June 14, 2019).

⁶⁶National Air and Space Intelligence Center, *Competing in Space* (Dayton, OH: NASIC, 2019), p. 21, https://www.nasic.af.mil/Portals/19/documents/Space_Glossy_FINAL--15Jan_Single_Page.pdf?ver=2019-01-23-150035-697 (accessed June 14, 2019).

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OPENING STATEMENT OF M. TAYLOR FRAVEL, PH.D., ARTHUR AND RUTH SLOAN PROFESSOR OF POLITICAL SCIENCE, MASSACHUSETTS INSTITUTE OF TECHNOLOGY

COMMISSIONER LEWIS: Thank you, Mr. Cheng. And I want to congratulate you on being within the seven minutes. Thank you.

Next, we will have M. Taylor Fravel, the Arthur and Ruth Sloan Professor of Political Science at Massachusetts Institute of Technology. Dr. Fravel studies international relations such as focus on international security, China and East Asia. He is an authority on Chinese military strategy and is the author of the recent book *Active Defense: China's Military Strategy since 1949*.

Dr. Fravel is a graduate of Middlebury College and Stanford University, where he received his PhD. He also has graduate degrees from the London School of Economics and Oxford University, where he was a Rhodes Scholar. What a wonderful honor.

We are so pleased to have you here, Dr. Fravel.

DR. FRAVEL: Thank you. Thank you very much.

Commissioner Lewis, Commissioner McDevitt, Members of the Commission, thank you for inviting me to appear before you today to discuss China as a world-class military and its global military ambitions. I have been asked to comment on the strategy and employment of the PLA as a world-class force.

In my remarks, I would like to make three points. My first point, based on authoritative Chinese sources, the idea of a world-class military should be viewed as a general, high-level, and overarching concept of force development. The idea of a world-class military should not be viewed as a strategic concept that outlines how China plans to use its armed forces or where in the world it might use them.

To start, let me discuss the origins of the term "world-class military". This is necessary because Chinese government and PLA documents lack an official definition of the term. Use of the term "world-class military" is commonly associated with the 19th National Party Congress, which was held in October 2017. At the Congress, General Secretary Xi Jinping said the Party should, "fully build the People's Army into a world-class military by the middle of the century".

In fact, however, Xi began using the term several years before in early 2016. Specifically, Xi used it in the following phrase in which he called on the PLA to, "achieve the goal of a strong army and build a world-class military".

Xi introduced the goal of building a strong army in 2013 as part of the China Dream. It provided an overarching rationale for the unprecedented organizational forms of the PLA that began in 2016.

Thus, by invoking the objective of building a world-class military in the context of becoming a strong army, Xi's initial use of the term "world-class military" indicates that it is also a general force development concept. In other words, it explains what kind of a strong army to build. A strong army will be a world-class one. Nevertheless, Xi Jinping himself, to my knowledge, has never given a speech outlining what the concept of a world-class military is.

Even though the term has not been defined in authoritative sources, PLA officers and scholars have written commentaries to explore what it might mean. These commentaries make several points about world-class militaries.

First, in terms of capabilities, a world-class military is one that can match or balance the armed forces of the leading powers in the system, especially the United States. It refers to being

in the top tier of military powers, not necessarily being the dominant military power.

Second, these commentaries note militaries become world-class by possessing their own advanced doctrines, weapons, personnel, management procedures, and ability to innovate. World-class militaries are those that others want to copy or emulate. The characteristics of world-class militaries provide benchmarks for assessing PLA's own progress towards military modernization.

Third, these commentaries note that the PLA is not yet a world-class force. In particular, they highlight deficiencies in the areas I just mentioned above: doctrine, weapons, personnel, management procedures, capacity to innovate, among others.

Finally, these commentaries do not discuss the geographic characteristics or requirements of a world-class military. That is, they do not describe the global posture requirements of being a world-class military, especially in the way in which we might think about world-class in terms of global power projection.

Let me turn to my second point. The concept of the military strategic guideline which outlines China's national military strategy can best illuminate how the PLA approaches questions of strategy and employment of China's armed forces. China has adopted nine military strategies or strategic guidelines since 1949. These guidelines stress how to prepare to fight the future wars China might face and to guide the development of the PLA's own operational doctrine for structuring training.

China's most recent national military strategy was adopted in July 2014 with the label "Winning Informatized Local Wars". This strategy has several components.

First, it continues to stress preparing the PLA to prevail in conflicts on its periphery involving China's sovereignty disputes, especially over Taiwan.

Second, it emphasizes improving the PLA's ability to conduct joint operations, highlighting the importance of the collection, processing, and utilization of information in all aspects of contemporary warfighting.

Third, it is China's first military strategy to highlight competition in the maritime domain, especially as it relates to China's many sovereignty disputes. The primary strategic direction or center of gravity in the current strategy now includes parts of the Western Pacific in addition to China's Southeast.

Fourth, it emphasizes crisis prevention, crisis management, and escalation control, in addition to warfighting.

And finally, it provides an overarching justification and rationale for the unprecedented reforms that began in 2016.

What are the implications of China's military strategy for the PLA's global role? Let me note four.

First, geographically, in terms of force employment and warfighting, the PLA remains focused on East Asia defined broadly to include these eastern parts of the Western Pacific. In an authoritative list of strategic tasks for the PLA, defense of China's sovereignty and unification rank first and second, respectively. Globally-oriented tasks such as safeguarding overseas interests or international security cooperation rank fourth and sixth. They are not unimportant; they are just not the primary focus.

Second, so long as China's major sovereignty disputes remain unresolved, especially Taiwan, its military strategy will continue to emphasize East Asia over other regions. The PLA will not likely expand significantly beyond East Asia until its major sovereignty disputes are resolved or until it has achieved a position of military dominance in these disputes.

Third, also for this reason, the fulcrum of military competition between the United States and China will also be centered in East Asia.

Fourth, China's global military presence outside of East Asia will grow in the coming decade, but it is likely to be relatively modest when compared with other major military powers.

Third and finally, I would like to offer several recommendations for Congress to consider. Briefly, they are:

First, Congress should increase funding for open source analysis of issues relating to China's foreign and security policies. There's never been a greater need than today to understand how China thinks about and writes about pressing problems. Yet, funding for such open source analysis continues to decrease.

Second, Congress should examine the possibility and feasibility of a strategy of active denial for the U.S. to adopt to meet the challenges posed by China's military modernization in East Asia.

Thank you very much for the opportunity to appear before you today, and I look forward to your questions.

**PREPARED STATEMENT OF M. TAYLOR FRAVEL, PH.D., ARTHUR AND RUTH
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Testimony before the U.S.-China Economic and Security Review Commission

***Hearing on “A ‘World-Class’ Military:
Assessing China’s Global Military Ambitions”***

M. Taylor Fravel
Arthur and Ruth Sloan Professor of Political Science
Member, Security Studies Program
Massachusetts Institute of Technology

June 20, 2019

Commissioner Lewis, Commissioner McDevitt, members of the commission, thank you for inviting me to appear before you today to discuss China as a world-class military and its global military ambitions. I have been asked to comment on the strategy and employment of a world-class military force. My testimony will examine how authoritative and other Chinese sources define the concept of a world-class military, discuss how China's military strategic guidelines can illuminate its military strategy and how the People's Liberation Army (PLA) thinks about the use of armed force, and provide several recommendations for Congress to consider.

“World-Class Military” as a Force Development Concept

China's goal of building a “world-class” military is commonly associated with the work report delivered by general secretary Xi Jinping at the Nineteenth Party Congress of the Chinese Communist Party (CCP) in October 2017. In the report, Xi said the party will “strive to basically complete national defense and military modernization by 2035 and fully build the people's army into a world-class military by the middle of the century.”¹

Although Xi Jinping has used the term “world-class military” (世界一流军队) on multiple occasions, authoritative Chinese government and PLA documents do not provide a clear and accepted definition of the term.² Below, based on commentaries by PLA scholars and senior military officers, I will argue that, in a Chinese context, the idea of a “world-class military” should be viewed as a general, high-level, and overarching concept for force development, which outlines the intended outcome of PLA modernization and thus a set of benchmarks for assessing the PLA's progress toward achieving this objective. In this way, the goal of building a world-class military defines what it means to “achieve the goal of a strong army,” a goal that Xi introduced in early 2013 as part of his “China dream.”³

At the same time, the notion of building a world-class military does not reflect a comprehensive military strategy. That is, it does not identify for what ends a world-class or even modernizing PLA will be used nor does it outline the manner in which such forces will be used. It is also not a geographic concept, in so far as it does not describe a global posture or role for the PLA except in the most general sense.

Origins of “Building a World-Class Military”

The concept of a world-class military was first used in early 2016 in a series of speeches that Xi Jinping gave before military audiences. At this time, the PLA had just launched far-reaching and

¹ Xi Jinping, “决胜全面建成小康社会夺取新时代中国特色社会主义伟大胜利——在中国共产党第十九次全国代表大会上的报告 [Secure a Decisive Victory in Building a Moderately Prosperous Society in All Respects and Strive for the Great Success of Socialism with Chinese Characteristics for a New Era, hereafter “Work Report”], October 18, 2017, http://www.gov.cn/zhuanti/2017-10/27/content_5234876.htm.

² In a Chinese context, the term could also be translated as “world-class army,” as the character 军 can refer both the PLA (解放军) and a military in a general sense (军队). In other contexts, “一流 (yiliu)” means “first-class” or “top-tier.” So, the idea of a world-class military is one that belongs in the top tier of militaries around the world.

³ *Liberation Army Daily*, December 13, 2012, p. 1; *Liberation Army Daily*, March 1, 2013, p. 1.

unprecedented organizational reforms⁴ and was finalizing the five-year development outline (规划纲要) for China's armed forces, as part the government's Thirteenth Five-Plan. These development outlines provide a template for military modernization—what PLA sources often describe as “national defense and army building” (国防与军队建设).⁵ This outline would govern national defense and army building from 2016-2020.⁶ The year 2020 itself is important because it marked end of the second stage in Jiang Zemin's 1997 “three-step” modernization plan for the PLA (see below).

In this context, Xi Jinping first raised the idea of building a world-class military. Specifically, it as part of a phrase describes the high-level goals for PLA modernization: “achieving the goal of a strong army, building a world-class military” (实现强军目标，建设世界一流军队).⁷ Although no official Chinese definition of the term world-class military exists, Xi's first use of the term clearly indicates that it is a force development concept, part of Xi's goal of transforming the PLA into a strong army. The simplest interpretation is that China would achieve this goal by building a force that was world class. In addition, the goal of a strong army provided the rationale and motivation for the far-reaching reforms announced at the end of 2015 and whose implementation began in 2016. Thus, the idea of building a world-class military explained how the goal of having a strong army would be realized—when the PLA had become a world-class force.

This link between the goal of a strong army and building a world-class military appears in other speeches Xi delivered before the Nineteenth Party Congress. In a 2017 speech on the occasion of the 90th anniversary of the founding of the PLA, for example, Xi repeated similar language from 2016. As he told the assembled troops, “We must thoroughly implement the party's thought on strengthening the army, unswervingly follow the road of strengthening the army with Chinese characteristics, strive to achieve the Party's goal of a strong army under the new situation, and build our heroic people's army into a world-class military.”⁸ By describing what a strong army should be, the idea of building a world-class army is clearly a force development concept, not a strategic concept that can illuminate the future employment of the PLA.

After the initial use of the term world-class military in 2016, it peaked in 2017 and has then declined. To put use of the term in context, Figure 1 shows the number of times “strong military goal” and “world-class military” have appeared in articles published in the *Liberation Army Daily* (解放军报), the PLA's official newspaper. As the figure shows, the frequency of “strong

⁴ For an excellent overview and analysis of the reforms, see Philip C. Saunders et al., eds., *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms* (Washington, DC: National Defense University Press, 2019).

⁵ The PLA defines army building as “a general designation of all activities to build armed forces, maintain and improve the system of military power, and increase combat power.” See Junshi kexue yuan, ed., 中国人民解放军军语 [Military Terminology of the Chinese People's Liberation Army] (Beijing: Junshi kexue chubanshe, 2011) p. 8.

⁶ “中央军委颁发《军队建设发展“十三五”规划纲要》 [Outline of the 13th Five-Year Plan for Military Building and Development],” *Xinhua*, May 12, 2016.

⁷ *Liberation Army Daily*, March 24, 2016, p. 1.

⁸ Xi Jinping, “在庆祝中国人民解放军建军90周年阅兵时的讲话 [Speech at the Military Parade Celebrating the 90th anniversary of the Founding of the Chinese People's Liberation Army],” *Xinhua*, July 30, 2017, http://www.xinhuanet.com/politics/2017-07/30/c_1121403100.htm.

army goal” peaked in 2013 and 2014, after Xi began to use the term. The frequency of the term “world-class military” has never exceeded that of “strong army goal,” again suggesting the idea of building a world-class military explains how the goal of a strong army will be realized. Interestingly, the frequency of both terms has declined significantly. The data for 2019 is incomplete and includes articles published through June 15, 2019.

At the Nineteenth Party Congress, Xi linked the idea of building a world-class military with a general timetable for PLA modernization. Almost twenty years earlier, back in 1997, general secretary Jiang Zemin identified three goals for PLA modernization known as the “three steps” (三步走).⁹ By 2010, the PLA would create a foundation for modernization. By 2020, it would complete mechanization and “make great progress toward informatization.” Finally, the third step was “to achieve national defense and military modernization by the middle of the 21st century.”

Xi modified Jiang’s own timetable in two ways. First, by 2049, the goal was not just to realize defense and military modernization, but to complete building a world-class military. Thus, Jiang’s goal was now described as to “fully build the people’s army into a world-class military by the middle of the century.” Second, Xi added an interim stage by which to assess the PLA’s progress, to “strive to basically complete national defense and military modernization by 2035.”¹⁰

Xi’s change raises the question of whether he altered Jiang’s original timetable for PLA modernization. However, little has been published in authoritative sources on the meaning of 2035 benchmark. One interpretation is that Xi accelerated Jiang’s original timetable for PLA modernization by fifteen years.¹¹ Another is that Xi clarified how the modernization goal for mid-century that Jiang identified would be realized, as the inclusion of “basically” in the context of 2035 suggests additional work would be required before modernization would be “fully” complete in 2049. In other words, Xi defined the completion of PLA modernization as becoming “world class,” while also adding an interim step. A manual published by the CMC Political Department described Xi’s timetable as “a grand blueprint for comprehensively advancing national defense and military modernization.”¹²

A final and perhaps simpler explanation is that the 2035 and mid-century benchmarks for PLA modernization complement development goals for the PRC. At the Nineteenth Party Congress, Xi introduced a two-stage plan for China’s national development. By 2035, the work report noted, “socialist modernization” would be “basically realized.” By mid-century, China would become “a great modern socialist country that is prosperous, strong, democratic, culturally advanced, harmonious, and beautiful.”¹³ Identification of 2035 as a milestone in China’s

⁹ Jiang Zemin, 江泽民文选 [*Jiang Zemin's Selected Works*], Vol. 2 (Beijing: Renmin chubanshe, 2006), pp. 83-84.

¹⁰ Xi Jinping, “Work Report.”

¹¹ One Chinese sources that makes this point is Guofang daxue dangwei lilun xuexi zhongxin nzu, “把人民军队全面建成世界一流军队 [Fully Build the People’s Army into a World-Class Military],” *Qiushi*, No. 13 (2018).

¹² “跨越，向着世界一流军队—怎么看全面推进国防和军队现代化的战略安排 [Leap toward a World-Class Military: What are the Arrangements to Comprehensively Promote National Defense and Army Modernization],” *Liberation Army Daily*, November 14, 2018, p. 7.

¹³ Xi Jinping, “Work Report.”

national development by definition carried implications for the level of military modernization that would need to be achieved at that time. As one commentary notes, PLA modernization should be “closely aligned with the strategic arrangement for national modernization.”¹⁴

In addition, the party congress work report did not limit the use of “world class” to describe only the desired outcome of PLA modernization. The report uses world class to describe the goals for transforming other parts of the state and Chinese society. These include fostering “world-class advanced manufacturing clusters,” cultivating “world-class scientists and technologists,” turning “Chinese enterprises into world-class, globally competitive firms,” and working “to build Chinese universities into world-class universities and develop world-class disciplines.”¹⁵

Commentaries on “Building a World-Class Military”

Authoritative Chinese government and PLA sources do not contain any definition of the term “world-class military.” To better understand the meaning of the term, this section reviews commentaries on the term authored by PLA officer and scholars. Most of them have appeared in party or military publications, such as *China Military Science* (中国军事科学) (the journal of the PLA’s Academy of Military Science), in the “military forum” (军事论坛) section of the *Liberation Army Daily*, and *Seeking Truth* (求是) (a party journal). These commentaries are less authoritative than leadership speeches or government statements and documents, as the authors are usually writing in their personal capacity (based on their qualifications) and not representing their organizations. These commentaries provide support for the argument that “building a world-class military” is a force development or army building concept. The commentaries revolve around how to identify what constitutes “world class” in an effort to develop benchmarks for assessing progress for the PLA’s modernization.

These commentaries describe world-class militaries in several ways. The first concerns the overall capabilities of world class militaries. Simply put, they are as capable as the best militaries in the world. One professor from the PLA’s National Defense University (NDU) describes being world class as “having the ability and strength to compete on a par with the world-class militaries” and “having the powerful strength and deterrent force to match [抗衡] the militaries of world powers [世界强国].”¹⁶ A professor from the Academy of Military Science (AMS) describes world class militaries as being able to “compete with world-class rivals [对手].”¹⁷ Elsewhere world-class militaries are viewed as “those who have the military ability to compete with the world’s strongest players.”¹⁸

The second description of world-class militaries in these commentaries concerns the characteristics of world-class militaries that makes them world class. Most of the commentators

¹⁴ “Leap toward a World-Class Military.”

¹⁵ Xi Jinping, “Work Report.”

¹⁶ Ren Tianyou, “迈向世界一流军队的战略引领[Strategic Leadership for Marching toward a World-Class Military],” *Ziguangge*, No. 8 (2018), p. 11.

¹⁷ Xiao Tiefeng, “从世界各国军队的发展经验中寻找攻玉之石—探索建设世界一流军队的特点规律 [Seeking the Stone of Jade from the Development Experience of the Armed Forces of the World: Exploring the Characteristics of the Building of a World-Class Military],” *Liberation Army Daily*, February 27, 2018, p. 7.

¹⁸ Xiao Tiefeng, “Seeking the Stone of Jade from the Development Experience of the Armed Forces of the World.”

agree with Cao Yimin, chief of staff of the ground forces in the Western Theater Command, who describes world-class militaries as possessing world-class operational theories, personnel, weapons and equipment, law-based management, combat power, and innovation abilities.¹⁹ Likewise, as a scholar from AMS writes, “a so-called world-class military means having world class military theories, military systems, weapons and equipment, personnel, and training levels.”²⁰

A number of the commentaries highlight the need for clear benchmarks or standards to measure the PLA’s progress toward becoming world class. These benchmarks also offer insight into how the PLA views what constitutes world class.²¹ AMS scholar Xiao Teifeng offers a lengthy description, which distinguishes between benchmarks for operations and for army building. Regarding operations, he writes:

World class militaries should have advanced military thinking and strategy and tactics, efficient and sensitive command and control, real-time or near-real-time intelligence surveillance capability, combined and integrated firepower strike capability, actual combat training, trans-regional and trans-continental force delivery capability, and comprehensive, efficient and seamless link support level.²²

Turning to army building, Xiao offers an even longer list of benchmarks:

World-class militaries should ... possess advanced leadership and management concepts, and intensive and efficient military institutions and organizations; have world-class modern equipment, especially realizing the composite development of mechanization, informatization and intelligentization; have a perfected system of military regulations and rules; possess abundant and high-quality military human resources and high comprehensive quality of military and civilian personnel; realize the deep military-civil fusion and the people and form a "whole country" and “great national defense" system; have a good international image and a high degree of internationalization.²³

Implicit and often explicit in these discussion of benchmarks is the assessment that the PLA currently falls short of what might constitute a world-class military. Many commentaries note that China’s level of military modernization lags behind the country’s economic accomplishments and significant reforms are still needed for the PLA to become world class. They also note that the goal of becoming world class underscores the imperative of

¹⁹ Cao Yimin, “把握建设世界一流军队科学内涵 [Grasp the Scientific Implications of Building a World-class Army],” *Liberation Army Daily*, January 16, 2018, p. 7.

²⁰ Xiao Tiefeng, “Seeking the Stone of Jade from the Development Experience of the Armed Forces of the World.”

²¹ Xiao Tiefeng, “Seeking the Stone of Jade from the Development Experience of the Armed Forces of the World’: Liu Jianguo and Han Weifeng, “关于建设世界一流军队的若干思考 [Some Thoughts on Building a World-Class Military],” *China Military Science*, No. 4 (2016), p. 24-32; Zhang Dongjiang, Wu Jun, and Xiao Tiefeng, “习主席“建设世界一流军队”重要思想的科学内涵与建设路径 [The Scientific Connotation and Construction Path of President Xi's Important Thought of "Building a World-class Military"],” *China Military Science*, No. 4 (2016), p. 1-10.

²² Xiao Tiefeng, “Seeking the Stone of Jade from the Development Experience of the Armed Forces of the World.”

²³ Xiao Tiefeng, “Seeking the Stone of Jade from the Development Experience of the Armed Forces of the World.”

implementing the 2016 reforms.²⁴ As one group of AMS scholars write, “Compared with the world’s first-class militaries, our army is still in the historical stage of the composite development of mechanization and informatization and many ‘shortcomings’ [短板] for development exist.”²⁵

As a world-class military, the United States looms large in Chinese discussions of what it means to be world class. Nevertheless, these commentaries do not dwell excessively on the United States. Some of them mention the US pivot or the rebalance to Asia as part of the security challenges China faces and that a world-class or at least more modernized PLA would be better able to address.²⁶ Others describe the United States as a world-class military, often along with Russia and sometimes France and the United Kingdom. Nevertheless, the implication of becoming world class is clear: China would be in a position to match and deter the United States.

These commentaries do not discuss the geographic characteristics or requirements of a world-class military. That is, the commentaries do not describe a world-class military as a global military that can project power around the world in the way that the United States military can today. Certainly, some degree of power projection is implied by using the United States, Russia, France and others as current examples of world-class militaries. Nevertheless, there is little discussion in these commentaries of where the Chinese military would be used beyond East Asia or what kind of global posture would be required in order to be world class. However, two exceptions exist. The first is references to China’s overseas interests, though these commentaries do not define them in detail or link them to specific military forces.²⁷ The second is international security cooperation, as these commentaries note how world-class militaries are able to participate in international security cooperation and make contributions to the international community.²⁸

The Military Strategic Guidelines

As argued above, as used by Xi Jinping and in other Chinese sources, the idea of building a world-class military is a force development concept. As such, it does not illuminate broader questions relating to China’s military strategy or force employment. Instead, a review of China’s national military strategy, contained in what the PLA calls the “strategic guidelines” (战略方针) or “military strategic guidelines” can help to answer these questions. Below, I argue that, from

²⁴ Liu Jianguo and Han Weifeng, “Some Thoughts on Building a World-Class Military,” *China Military Science*, No. 4 (2006), p. 31-32; Zhang Dongjiang, Wu Jun, Xiao Tiefeng, “The Scientific Connotation and Construction Path of President Xi’s Important Thought of “Building a World-class Military,” p. 3-4.

²⁵ Zhang Dongjiang, Wu Jun, Xiao Tiefeng, “The Scientific Connotation and Construction Path of President Xi’s Important Thought of “Building a World-class Military,” p. 3.

²⁶ Liu Jianguo and Han Weifeng, “Some Thoughts on Building a World-Class Military,” p. 3; Zhang Dongjiang, Wu Jun, Xiao Tiefeng, “The Scientific Connotation and Construction Path of President Xi’s Important Thought of “Building a World-class Military,” p. 26.

²⁷ Liu Jianguo and Han Weifeng, “Some Thoughts on Building a World-Class Military,” p. 27.

²⁸ Xiao Tiefeng, “Seeking the Stone of Jade from the Development Experience of the Armed Forces of the World”; Zhang Dongjiang, Wu Jun, Xiao Tiefeng, “The Scientific Connotation and Construction Path of President Xi’s Important Thought of “Building a World-class Military,” p. 3-4.

the standpoint of strategy and warfighting, the PLA remains focused on East Asia more than any other region.²⁹

Overview of the Strategic Guidelines

In PLA's approach to doctrine, the military strategic guidelines (sometimes called just the strategic guidelines), contain the essence of China's national military strategy at different points in time. The PLA itself describes the strategic guideline as containing the "principles and plans for preparing for and guiding the overall situation of war."³⁰ The concept of the strategic guideline has a long history in the PLA and the CCP. It was first used in the early 1930s to provide operational guidance when faced with repeated Nationalist efforts to invade the Jiangxi base area and destroy the Red Army. It was then used during the Long March, in the war against Japan, and during all phases of the civil war with the Nationalists that began in 1946.

After PRC's establishment in 1949, the concept of the strategic guideline has been used to delineate China's national military strategy. The purpose of the guidelines is to answer core questions that, in turn, shape the development of the PLA's operational doctrine, force structure, and training. As the Chief of the General Staff Zhang Wannian said when developing the 1993 strategy, the strategic guideline should answer following questions: "With whom will China fight? Where will China fight? What is the character of the war China will fight? How will China fight?"³¹

In the jargon of Chinese strategy, the guidelines identify the following:

- "With whom China will fight" identifies the primary strategic opponent (主要战略对手) and operational target or China's main adversaries
- "Where will China fight" identifies the primary strategic direction (主要战略方向), where China expects armed conflict to occur
- "What is the character of the war China will fight" identifies the basis of preparations for military struggle (军事斗争军备基点), which describes how the PLA envisions warfare will be conducted at any point in time
- "How China will fight" identifies the main form of operations (作战形态) that the PLA should be able to conduct and basic guiding thought for operations for executing such operations.

The formulation of the strategic guidelines should be viewed through the lens of the CCP's approach to policymaking in other domains. With one exception, each guideline has been formulated by the Central Military Commission (CMC) of the Central Committee of the CCP, the party's top body for military affairs, with the final consent of the top party leader. In other

²⁹ This section draws from my own recent research, especially M. Taylor Fravel, *Active Defense: China's Military Strategy Since 1949* (Princeton, NJ: Princeton University Press, 2019). For a summary of the key arguments, see M. Taylor Fravel, "Shifts in Warfare and Party Unity: Explaining Changes in China's Military Strategy," *International Security* Vol. 42, No. 3 (Winter 2017/2018), pp. 37-83.

³⁰ Junshi kexue yuan, ed., *Military Terminology of the Chinese People's Liberation Army*, p. 50.

³¹ Guo Xiangjie, ed. 张万年传 (下) [*Zhang Wannian's Biography* (part 2)] (Beijing: Jiefangjun chubanshe, 2011), p. 60.

words, the strategic guideline for any period represents the consensus of the PLA high command, approved by the paramount leader. New strategic guidelines are introduced in a speech delivered at an enlarged meeting of the CMC, which gathers the most important officers in the PLA (including the heads of the services, theater commands, academies and other top-level military bodies). Such speeches are similar to the work report that the party general secretary delivers at a national party congress. The content of the strategy is then distributed through a process of “communicating documents” or “*chuanda wenjian*,” in which the contents are disseminated through lower levels of the PLA (often through meetings of party committees in different units.) Importantly—and unlike in the United States—the content of the strategic guidelines is not contained in a document that is widely accessible inside the PLA or even the civilian parts of the CCP, much less Chinese society at large.

Like high-level CCP policymaking, the adoption of a new strategic guideline represents only the beginning of the process of implementing a new military strategy. They contain the major goals to be achieved and the principles that should guide the achievement of these goals, but not a detailed plan of implementation. The expectation is that the details will be fleshed out afterward in a way consistent with the objectives and principles in the guidelines, often in the context of the development of national five-year plans and corresponding military development outlines drafted on the same schedule. Thus, the PLA can adopt a new military strategy quickly, as circumstances require, because the details will be added later.

Since 1949, the PLA has adopted nine military strategic guidelines, or roughly one every eight years. The first five strategies, adopted between 1956 and 1980, focused on how to defeat either an American or Soviet invasion of China. The last four strategies, adopted between 1988 and 2014, have addressed how to prevail in local wars over limited aims on China’s periphery, primarily in conflicts involving Chinese sovereignty such as the status of Taiwan, the border dispute with India, and maritime disputes.

Some of these nine strategic guidelines were more important than others. The strategies adopted in 1956, 1980, and 1993 constituted major changes in the PLA’s approach to strategy. By major change, these guidelines outlined a new vision of warfare that required transforming the PLA’s approach to operational doctrine, force structure, and training. The other six strategies reflected minor changes or adjustments and refinements existing strategic guidelines. Either they did not contain a new vision of warfare or did not require major organizational changes.

All of the guidelines have been based on the Chinese idea of “active defense” (积极防御). Mao Zedong defined active defense in 1936 as “offensive defense or defense through decisive engagements.” In general, active defense refers to the idea that China’s strategy is strategically defensive, but, once China is attacked, China will engage in offensive actions at the operational and tactical levels to achieve defensive goals.

“Winning Informatized Local Wars”

The PLA’s current military strategy was adopted in July 2014, with the formulation of “winning informatized local wars” (打赢信息化局部战争). It is also often described as the “military strategic guideline of the new situation” (新形势下军事战略方针) in order to link the strategy

with Xi Jinping's leadership of the party and the PLA. The 2014 strategy is the second adjustment to the 1993 strategic guideline adopted after the Gulf War, in which the PLA highlighted the role of high technology in warfighting and the shift to joint operations among the services.

The 2015 white paper lists the “strategic tasks” (战略任务) or goals for China's military:³²

- Deal with (应对) a wide range of emergencies and military threats, and effectively safeguard (有效维护) the sovereignty and security of China's territorial land, air and sea
- Resolutely defend (坚决捍卫) the unification of the motherland
- Safeguard (维护) China's security and interests in new domains
- Safeguard the security of China's overseas interests
- Maintain strategic deterrence and carry out nuclear counterattack
- Participate in regional and international security cooperation and maintain regional and world peace
- Strengthen efforts in operations against infiltration, separatism and terrorism so as to maintain China's political security and social stability
- Perform such tasks as emergency rescue and disaster relief, rights and interests protection, guard duties, and support for national economic and social development

The 2014 strategy contains important elements of continuity with China's previous military strategic guidelines, especially the 1993 and 2004 strategies. First, the 2014 strategic guideline remains premised on how to prevail in local wars on China's periphery involving Chinese sovereignty claims. China has not yet adopted a strategy that has emphasized substantially broader goals than contained in 1993 and 2004 strategic guidelines. Second, within the context of local wars, the primary strategic direction or the most important area where the PLA believes conflict will occur remains the southeast. The primary operational target remains Taiwan along with the United States to the degree it becomes involved in Taiwan's defense. Likewise, the southwest (the border with India) and the south (the South China Sea) are still secondary strategic directions or not the top priority in China's military strategy. Third, the main form of operations for the PLA to be able to conduct remains joint operations, which the PLA now conceptualizes as “integrated joint operations” (一体化联合作战) Fourth, the strategic guiding thought or strategic guidance continues to stress crisis prevention, crisis management, and escalation control if war occurs. Finally, the 2014 strategic guideline remains premised on concept of active defense. Today, the PLA defines active defense as “using proactive offensive actions to defend against the attacking enemy.”³³

Nevertheless, the 2014 strategic guideline contains several important differences with previous strategies. First, the basis of preparations of military struggle—what kind of wars the PLA should be prepared to fight—was adjusted to highlight the role of informatization in warfare. In contrast to the 2004 strategic guideline, the 2014 strategic guideline indicates that informatization is no longer just a condition of warfare, but the dominant feature or characterization. In the simplest terms, informatization refers the collection, processing, and

³² 中国的军事战略 [*China's Military Strategy*] (Beijing: Guowuyuan xinwen bangongshi, 2015).

³³ Junshi kexue yuan, *Military Terminology of the Chinese People's Liberation Army*, p. 52.

utilization of information in all aspects of warfighting in order to seamlessly link individual platforms in real-time from across the services to gain leverage and advantage on the battlefield.

Second, perhaps the most important change in the 2014 strategic guideline is the emphasis on the maritime domain. Specifically, the new strategy called for “highlighting maritime military struggle and preparations for maritime military struggle.”³⁴ Thus, this marked the first time that any domain of warfare has been singled out in a strategic guideline and at the strategic level. Maritime military struggle does not refer only to naval conflict but instead it refers to the maritime domain in many of the local wars the PLA may need to fight, especially Taiwan but also of course in maritime disputes in the East and South China Seas. This component of the 2014 strategy, however, appears to remain under development, as the phrase has only appeared thirty-four times in the *Liberation Army Daily* since 2014. In this way, the lack of development of this aspect of the 2014 strategy may be a victim of the organizational upheaval created by the PLA’s reorganization that began in 2016.

Third, and relatedly, the main strategic direction was expanded to include parts of the Western Pacific, as it would relate to a conflict over Taiwan. This perhaps reflects what other Chinese military sources have described as “forward defense” (前沿防卫), which seeks to push the frontline of combat away from China’s national borders.³⁵

Based on the limited sources that are available, my analysis suggests that the strategic guideline was adjusted in 2014 for two reasons. The first and most important reason was to provide an overarching rationale or justification for the reforms that were launched in 2016. The previous strategic guidelines adopted in 1993 and 2004 had called for the PLA to be able to conduct joint operations, but organizational and other reforms were never implemented to enable the PLA to be able to do so. The link between changing the strategic guideline and pursuing reform appeared in the “decision” of the third plenum in November 2013. In the preamble to the section on defense issues, the plenum’s decision called for both “improving the military strategic guideline of the new period” and “reform of the military leadership system.”³⁶ This was the first time that the decision to pursue organizational reforms was announced simultaneously with the decision to change the strategic guidelines. In December 2013, during a speech at an enlarged meeting of the CMC, Xi made this link clear: “we have extensively explored the command system for joint operations, but the problem has not been fundamentally resolved,” citing numerous “deep contradictions.”³⁷ The reforms have been unprecedented and constitute the most important organizational transformation of the PLA in over sixty years. The new strategic guideline provided a high-level rationale and justification to guide these reforms. Even though the 2014 guideline did not envision waging war in a new way, the reforms it justified are poised to have a significant effect on the PLA’s military effectiveness if implemented successfully.

³⁴ *China’s Military Strategy*.

³⁵ For more on how Chinese scholars from AMS view the concept, see M. Taylor Fravel, “China’s Changing Approach to Military Strategy: The Science of Military Strategy from 2001 to 2013,” in Joe McReynolds, ed., *China’s Evolving Military Strategy* (Washington, DC: Jamestown Foundation, 2016), pp. 59-60. The concept, however, does not appear in discussions of the 2014 strategic guideline.

³⁶ “中共中央关于全面深化改革若干重大问题的决定 [Decision of the Central Committee of the Communist Party of China on Some Major Issues Concerning Comprehensively Deepening Reform],” November 13, 2013, http://www.gov.cn/jrzq/2013-11/15/content_2528179.htm.

³⁷ Fravel, *Active Defense*, p. 34.

The second reason for changing strategy in 2014 was to note the growing importance of the maritime domain for Chinese interests. As noted in the 2015 white paper on Chinese military strategy, “It is thus a long-standing task for China to safeguard its maritime rights and interests.” Chinese sources identify growing threats in the maritime domain, including in the South China Sea as well as in a Taiwan conflict, along with potential threats to China’s growing interests overseas. The emphasis on the maritime domain also provides the naval pillar of China’s aspirations to become a maritime power, as first codified at the Eighteenth Party Congress in 2012. Toward this end, the service strategy for the PLAN was altered from focusing only on the “near seas,” or defense of Chinese sovereignty interests in East Asia, to gradually combining near seas defense (近海防御) with far seas protection (远海护卫), or a focus on China’s interests beyond the region.³⁸

Implications of the Strategic Guidelines for the PLA’s Global Role

This review of China’s strategic guidelines and its current military strategy contains several implications for considering the global role of the PLA today. First, geographically, in terms of force employment and warfighting, the PLA remains focused primarily on East Asia (defined broadly to include the eastern parts of the Western Pacific). The reason is that China remains involved in disputes over its sovereignty, which are the kind of issues that could most easily escalate into armed conflict. Toward this end, the first two strategic tasks for the PLA listed in the 2015 white paper on China’s military strategy are to “effectively safeguard the sovereignty and security of China’s territorial land, air and sea” and “resolutely defend the unification of the motherland.”³⁹ Actions and operations outside the region, to include “protecting the security of overseas interests” and participation in international security cooperation rank fourth and sixth on this list, respectively. They are not unimportant, but they are also not the primary focus in the PLA’s current military strategy.

Second, so long as China’s major sovereignty disputes remain unresolved, especially Taiwan, its military strategy will continue to emphasize East Asia over other regions. This does not mean the PLA will not continue to explore how to operate in other regions or even increase its ability to do so—it certainly has, as the establishment of a PLA base in Djibouti in 2017 indicates. However, the PLA will likely not expand significantly beyond East Asia until its major sovereignty disputes are resolved or until it has achieved a level of military dominance in these disputes such that the final outcome of these disputes is not in doubt from China’s perspective. After all, Taiwan’s unification remains part of the preamble of the constitution of the PRC. Military dominance in these sovereignty disputes will be hard to achieve, however, especially over Taiwan, so long as the United States maintains its commitments and pledges to Taiwan’s security under the Taiwan Relations Act.

Third, the focal point of military competition between the United States and China will also be centered in East Asia. The PLA’s ongoing modernization since the late 1990s has enabled it to

³⁸ In Chinese sources, the near seas are generally defined as the Yellow Sea, East China Sea, waters to the east of Taiwan, and the South China Sea. The far seas are the waters that lie beyond the near seas.

³⁹ *China’s Military Strategy*.

project power farther from its shores than ever before, challenging the sanctuary that US forces previously enjoyed in maritime East Asia. Although distance creates challenges for US force projection into East Asia, China also faces challenges to projecting its forces farther and farther from its shores, especially beyond the range of air defenses and fighter aircraft based on mainland China that can protect naval forces at sea. Thus, competition between the United States and China will focus on a contested zone in maritime East Asia into which both sides can project power but neither may be able to dominate.⁴⁰ Nevertheless, China's current strategy is not premised on expelling or extruding the US military from the region. Nor is it, as the US National Defense Strategy suggests, a strategy "that that seeks Indo-Pacific regional hegemony in the near-term."⁴¹ Of course, China would likely prefer that the United States was not a military power in the region, but the question remains at what price China is willing to achieve that goal. So far, China is focused on diminishing the ability of the United States to play a decisive role in China's sovereignty disputes, especially Taiwan. China's strategy remains focused on how to prevail in its sovereignty disputes and how to do so if the United States if it becomes involved in these disputes.

Fourth, China's global military presence outside of East Asia will grow in the coming decade, but it is likely to be relatively modest when compared with other major military powers. The United States currently has military bases, operating locations and access points in roughly forty countries, often with multiple facilities in the same country.⁴² France and Great Britain have roughly overseas military bases in eleven countries and Russia nine.⁴³ Although much speculation surrounds where China might establish additional military bases in addition to the facility in Djibouti, they will most likely be astride the Indian Ocean. In peacetime, even if China does not establish more overseas bases, an increasingly global presence of the PLA could enable further cooperation between the United States and China. In 2017 and 2018, for example, the two governments worked together to facilitate the removal of fissile nuclear material from Ghana and Nigeria, respectively.⁴⁴ In wartime, however, in a conflict between the United States, China's bases beyond East Asia would likely be quite vulnerable if the United States chose to attack them.

Policy Recommendations

⁴⁰ 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* Vol. 41, No. 2 (Summer 2017), pp. 7-48; Eric Heginbotham et al., *The U.S.-China Military Scorecard Forces, Geography, and the Evolving Balance of Power, 1996-2017* (Santa Monica, CA: RAND, 2015).

⁴¹ *Summary of the 2018 National Defense Strategy of the United States of America*, (Washington, DC: Department of Defense, 2018), p. 2.

⁴² Michael J. Lostumbo, *Overseas Basing of U.S. Military Forces: An Assessment of Relative Costs* (Santa Monica, CA: RAND, 2103).

⁴³ Frank Jacobs, "The World's Five Military Empires," *The Big Think*, July 10, 2017, <https://bigthink.com/strange-maps/the-worlds-five-military-empires>.

⁴⁴ Aaron Mehta, "How the US and China Collaborated to Get Nuclear Material Out of Nigeria — And Away From Terrorist Groups," *Defense News*, January 14, 2019, <https://www.defensenews.com/news/pentagon-congress/2019/01/14/how-the-us-and-china-collaborated-to-get-nuclear-material-out-of-nigeria-and-away-from-terrorist-groups/>; Richard Stone, "U.S.-China Mission Rushes Bomb-grade Nuclear Fuel out of Africa," *Science Magazine*, August 31, 2017, <https://www.sciencemag.org/news/2017/08/us-china-mission-rushes-bomb-grade-nuclear-fuel-out-africa>.

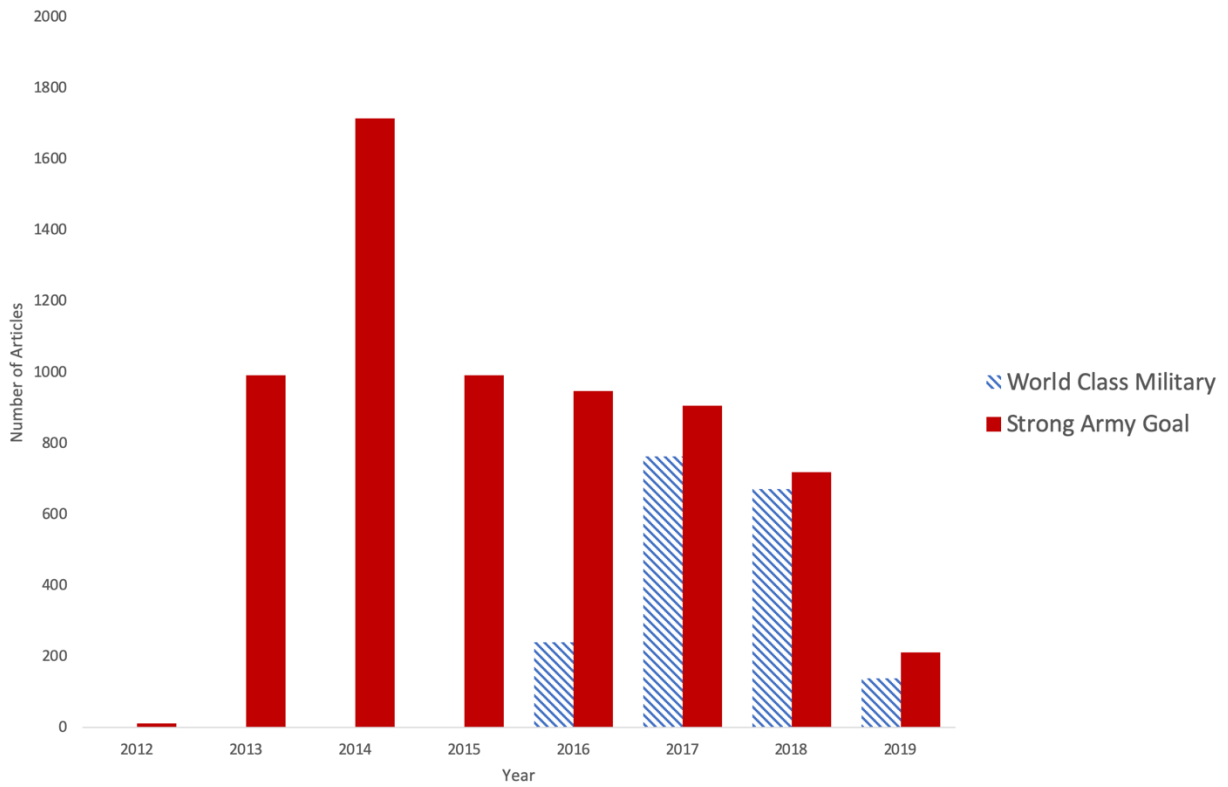
The analysis above yields several recommendations for Congress:

First, Congress should increase funding for open-source analysis of issues relating to China's foreign and security policies. A tremendous amount of information is available, in Chinese, from a range of open sources. These sources include some of those cited in this testimony, such as newspapers, military journals, military textbooks, military books, among others. Much can be gleaned from these sources about how China approaches questions of strategy if they are systematically collected, analyzed, and translated into English to make them accessible to a wide audience. Since the end of the Cold War, however, support for open source analysis, and making it available as widely as possible inside and outside the government, has waned even though such sources have perhaps never been more important than they are today. Thus, Congress should consider significantly increasing funding for Open Source Enterprise and for making it as widely available as possible.

Second, Congress should examine the possibility and feasibility of a strategy of "active denial" for the US to adopt to meet the challenges posed by China's military modernization in East Asia. This strategy would seek to deny China a quick victory and force it to face the prospect a protracted contest to be able to achieve its national objectives through the use of armed force.⁴⁵ Such an approach can increase crisis stability and deterrence. The key components are to increase the resiliency and survivability of US forward-deployed forces, emphasize capabilities to counter Chinese power projection in the region, and work more closely with the allies.

⁴⁵ For an overview of such an approach, see Eric Heginbotham and Jacob L. Heim, "Deterring Without Dominance: Discouraging Chinese Adventurism Under Austerity," *The Washington Quarterly*, Vol. 38, No. 1 (Spring 2015), pp. 185-199

"Strong Army Goal" and "World-Class Military" in the *Liberation Army Daily*, 2012-2019



**OPENING STATEMENT OF PHILLIP C. SAUNDERS, PH.D., DIRECTOR OF THE
CENTER FOR THE STUDY OF CHINESE MILITARY AFFAIRS, NATIONAL
DEFENSE UNIVERSITY**

COMMISSIONER LEWIS: Thank you very much. And you also are congratulated for doing what you did within seven minutes.

We'll now here from Phillip Saunders, Director for the Center of Chinese Military Affairs of the National Defense University. He previously worked at the Monterey Institute of International Studies, where he served as Director of the East Asia Nonproliferation Program from 1999 to 2003, four years, and worked on Asia policy issues as an officer in the United States Air Force. His research focuses on Chinese foreign policy, security policy, and military issues, and he's the author of many publications on the Chinese military and Asia security.

Please go ahead.

DR. SAUNDERS: Great. Thank you very much. It's an honor to testify before the Commission.

I'm asked to talk about what we can tell from China's official budget figures, what are some trends there, and what happens as the Chinese economy slows down, and how will that affect modernization. And it's a great set of questions.

Economics is the foundation of military power. The size and technological sophistication of a country's army serves as a hard constraint on the potential size and capability of its military forces; and in China's case, its rapid economic growth and technological upgrading that is both funding and supporting Chinese military modernization with sustained increases in defense spending.

In looking at the official data, this is challenging. China gives an annual total, but the detailed information is quite limited. The best they do is to give three broad categories of personnel spending, training and maintenance, and equipment spending, including R&D, procurement, and maintenance. They don't release figures for individual services or figures for the 13 to 15 categories they use internally to manage the PLA budget.

So, one challenge is the official figures include a lot of things that are related to defense, but aren't included. That includes the People's Armed Police; some domestic procurement and R&D expenses; procurement of foreign weapons; demobilization, retirement, and education expenses; military construction; some aspects of the space program; some nuclear weapons spending, and reimbursement for military expenses and disaster relief. So, there's a number of boxes that are defense-related that are not in the budget, and that's something we have to deal with.

The official defense budget figure for 2017 was about \$160 billion. And we have a couple of different estimates of what's in those boxes that are not included. An OSD estimate is it's about \$30 billion more; a DIA estimate, the same. IISS says maybe it's \$53 billion more than the official budget. And SIPRI, which uses a much broader, more inclusive definition, says it might be as much as \$69 billion higher. And from that, I would say there's probably a figure of about \$30 to \$50 billion more than the official budget.

And the first thing to note is that's very different from when we were looking at this in the 1990s and we said the official budget, the actual budget might be two or three times. So, there is significant money that's not counted, but it's much less as a percentage. And I think that's because the official budget has gone up very dramatically in recent years. So, a lot more of it is on-budget, and some of these off-budget revenues and expenditures have either moved into

the budget or declined in size relative to the official budget.

For example, procurement of foreign weapons, we used to say that's about \$3 billion a year. It certainly ought to be part of the budget. SIPRI, in 2017, says it's about \$1.2 billion. So, it's smaller in absolute size and as a proportion of the budget.

What I think we see in the very recent trends, which I've got in the paper, first, you have to start by huge sustained increases in real defense spending, double-digit increases through about 2016. But that's started to slow to about 5 to 7 percent growth rate in the last couple of years.

And if you look at the figures as a proportion, you see that defense spending occasionally has outpaced GDP growth, but mostly is in line with it and mostly is consistent with increases in overall government spending. So, the conclusion from that is the official data don't indicate that defense spending is becoming a higher priority in recent years. It's going up with other government spending, and as a share of GDP, it's fluctuated between 1.2 and 1.4 percent of GDP.

So, a couple of trends we can pull out of the data. First, more spending to the air force, the navy, and the rocket force since 2004. Second, the portion of the budget going to equipment has gone up from about 32 percent to about 41 percent. And that's the hardware recapitalization, expansion of the force, more sophisticated weapon systems, and the R&D and the maintenance required to keep them going.

The share of the budget going to personnel is down from about 34 percent to about 31 percent. That's a little surprising because they've having to pay more to recruit a talented force. The reforms have certainly changed this internally, but there just is not data available publicly to see precisely how this is broken out.

And so, that's a first conclusion, is the lack of public data, it imposes limits on what we can do. The Commission might want to commission classified briefings on specific aspects of Chinese defense spending or maybe research on the financial details of the defense industry, where more data is available.

So, a couple of other things. What are some of the trends we see kind of going forward? One of them is increased competition between the services for resources. And we see that with respect to areas like maritime operations. That's a priority. All the services want to be part of that. We see it in precision strike, where they're all developing long-range precision systems, and, also, in the nuclear domain, as the navy's nuclear force comes online and the air force starts to get into that business. And this is a real challenge for them. Recent interactions with the PLA show that they're grappling with how you reconcile the competing demands from the services and the theater commands for more money and more systems.

So, let me, in my limited time, talk a little bit about where is this going in the future. I think everybody sees the Chinese economy as slowing down. Just it's a big economy. It's hard to go as fast. They're running into some limits of their model. And if they keep the same relative priority, that suggests defense spending growth is going to slow down significantly. It's already starting to do that. But a couple of things to think about that trend.

The recapitalization and expansion of the PLA, the hardware they've both, that has life-cycle costs. And so, the force they have today, they're going to be paying for the next 30 years, and that will eventually turn into a sunk cost. And it may constrain some ability to innovate.

Second, the point I made about increasing competition between services and missions is a trend. I think if we see an economic downturn or crisis beyond what we expect, which is a slowing of growth, that could delay production or fielding of high-end assets and constrain modernization. And collectively, to me, that suggests they will eventually get to an equilibrium

point where they're growing slowly, but the rapid growth in budget and capability will slow down.

I want to highlight, while resources are important, people is the ultimate constraint on the PLA's capability, and having high-quality officers who can command a joint force is critical.

I'm on penalty time now, but let me hit two big trends.

This might change if they come to regard external military threats as the biggest threat to the China state and to the Communist Party rule. And they're very nervous about shifts in U.S. policy and strategy that are much more focused on them. If they conclude this is the major challenge, this may require adjustments in grand strategy and military modernization, including more defense spending.

But I would caveat by saying, they've looked closely at what brought down the Soviet Union and concluded that overspending on military capabilities at the expense of economic development was a major factor. I think, right now, they're more focused on internal challenges, and that means spending enough on development to raise living standards, spending enough on internal security to keep the population in line. And those are more important relative priorities than military modernization.

The one thing that might change that is if Chinese leaders perceive U.S.-China strategic competition as headed toward an inevitable military slowdown, and that would change their priorities.

Thank you.

**PREPARED STATEMENT OF PHILLIP C. SAUNDERS, PH.D., DIRECTOR OF THE
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DEFENSE UNIVERSITY**

Testimony before the U.S.-China Economic and Security Review Commission

Hearing on A ‘World-Class’ Military: Assessing China’s Global Military Ambitions

Dr. Phillip C. Saunders¹

Director, Center for the Study of Chinese Military Affairs,
National Defense University

June 20, 2019

Introduction

Economics is the ultimate foundation of military power. The size and technological sophistication of a country’s economy serves as a hard constraint on the potential size and capability of its military forces. In the case of China, rapid economic growth and increasing technological capability in the reform era (1979-present) have provided the foundation for significant improvements in the capability of the People’s Liberation Army (PLA). Chinese leaders have placed increasing emphasis on building a military that can “fight and win wars” and have backed up this commitment with sustained increases in military spending. The professed goal of military modernization is to basically achieve modernization by 2035 and to build a world class military by mid-century.

This testimony examines trends in Chinese defense spending and their implications for future military modernization. It begins by examining the Chinese official defense budget, which excludes a number of items usually considered to be part of defense spending. These “off budget” revenues and expenditures mean that the official defense budget understates actual

¹ Phillip C. Saunders is Director of the National Defense University’s Center for the Study of Chinese Military Affairs and a Distinguished Research Fellow at the NDU’s Institute for National Strategic Studies. The views expressed are his alone and do not necessarily reflect those of the National Defense University, the Department of Defense, or the U.S. government.

defense spending, but the size of these “off budget” expenditures appears to have declined over time. A survey of estimates of Chinese defense spending suggests that actual spending is about \$30-50 billion more than the official budget.

The testimony then examines trends in defense spending. As Chinese economic growth has slowed, defense spending has grown at a rate that has sometimes outpaced GDP growth, but which remains roughly consistent with growth in national government spending. The data do not indicate that defense spending is becoming a higher relative priority for Chinese leaders. Defense spending has declined over time as a percentage of government expenditure (to about 5 percent in 2017 and 2018) and has fluctuated between 1.2 and 1.4 percent of GDP (with a modest increase in 2014-2016 that was not sustained).

Projections that Chinese economic growth will continue to slow in the future and the potential for significant fiscal and financial system crises suggest that future defense budgets will experience slower growth than in the past. China may eventually reach an equilibrium point where defense budgets grow at slower, steady-state level that produces slower improvements in defense capabilities. This might change if Chinese leaders conclude that external military challenges—especially those posed by the United States—constitute the most important threat to the Chinese state and continued Chinese Communist Party (CCP) rule.

Chinese Defense Spending Data

China releases a figure for its total annual defense budget, but the available public information is extremely limited. The Chinese annual government budget lists figures for central government and local government spending on national defense, with no breakouts by service or type of expenditure. In some years, China has published white papers with defense budget information or submitted reports on defense spending to the United Nations. These provide a breakout of

defense spending in three broad categories: 1) Personnel, 2) Training & Maintenance, and 3) Equipment (including research and experimentation, procurement, and maintenance costs). China does not release budget figures for the individual services or figures for the 13-15 categories it uses internally to manage the PLA budget.²

The official Chinese defense spending figure excludes a number of categories related to national defense, but which are contained in other parts of the government budget (and not broken out separately). These include the budget of the paramilitary People's Armed Police (PAP); some domestic procurement and research and development (R&D) expenses; procurement of foreign weapons; some demobilization, retirement, and education expenses; some military-related construction expenses; some military aspects of the space program; spending on nuclear weapons and strategic rockets; and reimbursement for military expense in disaster relief.³ The official budget also does not include various "off budget" revenues, such as revenue and goods produced by military enterprises.

China's official defense budget figure for 2017 was 1,026,635 million RMB, or about \$159.9 billion. The Office of the Secretary of Defense estimates that actual military related spending in 2017 was more than \$190 billion, or about \$30 billion more than the official budget.⁴ A Defense Intelligence Agency report looking at the 2018 budget gives a similar estimate that actual

² Dennis J. Blasko, Kenneth W. Allen, and Samm Tyroler-Cooper, *Chinese Defense Budgeting: Training and Maintenance* (Vienna, VA: DGI, Inc., 2010), 8-10.

³See Dennis J. Blasko, Chas W. Freeman, Jr., Stanley A. Horowitz, Evan S. Medeiros, and James C. Mulvenon, *Defense-Related Spending in China: A Preliminary Analysis and Comparison with American Equivalents* (Washington, DC: The United States-China Policy Foundation, 2007); Blasko, et. al., *Chinese Defense Budgeting*; and Adam P. Liff and Andrew S. Erickson, "Demystifying China's Defence Spending: Less Mysterious in the Aggregate," *China Quarterly* No. 216 (December 2013), 805-830.

⁴ *Military and Security Developments Involving the People's Republic of China, 2018*, (Washington, DC: Office of the Secretary of Defense, 2019), 82.

defense spending in 2018 was about \$30 billion higher than the official budget.⁵ IISS estimates that actual Chinese defense expenditure in 2016 was about \$53 billion larger than the official budget.⁶ SIPRI, which uses a broader definition of defense expenditure that includes pensions and other expenses, estimates China's 2017 defense expenditure at \$227.8 billion, about \$69 billion higher than the official budget.⁷

This data collectively suggest that China spends significantly more on defense than the official defense spending estimate, perhaps \$30-50 billion more. These estimates contrast with figures from the 1990s, when analysts believed that actual Chinese defense spending might be 2-3 times the official figure. The changes reflect the fact that central government spending on defense has increased steadily over the last twenty years, often at a double-digit rate, and that many off-budget revenues and expenditures have moved "on budget" or declined in size relative to the official budget.

For example, Chinese President Jiang Zemin ordered the PLA to divest most military-owned enterprises in 1998, and a second round of divestiture took place over the last several years as part of ongoing anti-corruption efforts. The divestiture greatly reduced off budget revenue and expenditure. The omission of procurement of foreign weapons from the official budget used to amount to about \$3 billion annually, but SIPRI data from 2017 indicate China only imported about \$1.190 billion in arms in 2017.⁸ This is both an absolute decline in value from earlier years, and an indication that the omitted category is becoming relatively smaller as a percentage of overall PLA spending on weapons and equipment.

⁵ Defense Intelligence Agency, *China Military Power: Modernizing a Force to Fight and Win* (Washington, DC: Defense Intelligence Agency, 2019), 20.

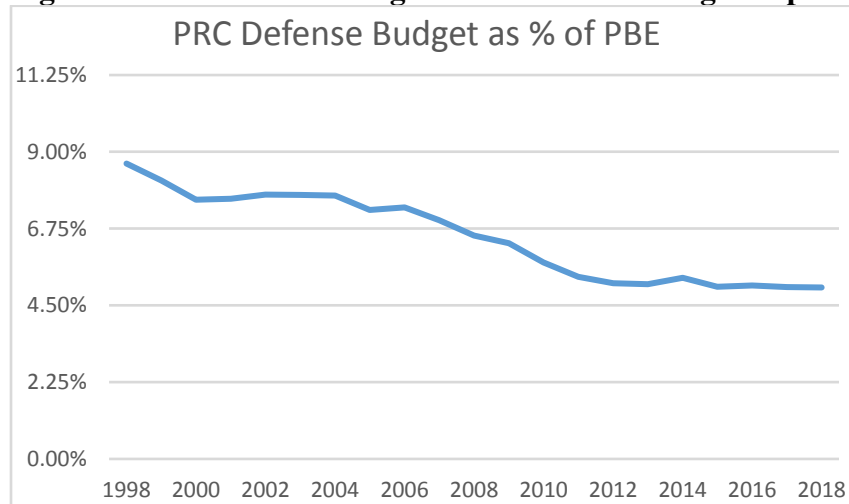
⁶ *The Military Balance*, 2018 (London: International Institute for Strategic Studies, 2018), 249.

⁷ SIPRI Military Expenditure Database (Stockholm: SIPRI, 2019), <https://www.sipri.org/databases/milex>

⁸ SIPRI Arms Transfers Database (Stockholm: SIPRI, 2019), <https://www.sipri.org/databases/armstransfers>

The appendix has data on trends in Chinese defense spending based on official budget figures. A recent DIA report notes that “China’s military spending increased by an average of 10 percent (inflation adjusted) per year from 2000 to 2016 and has gradually slowed to 5 to 7 percent growth during the past two years [2017-2018].”⁹ As Chinese economic growth has slowed over the last decade, defense spending has grown at a rate that has sometimes outpaced GDP growth (as in 2014-2016), but which has remained roughly consistent with overall GDP growth and with growth in central government spending. In other words, the official data *do not* indicate that defense spending is becoming a higher relative priority for Chinese leaders. Figures 1 and 2 indicate that defense has declined over time as a percentage of government expenditure (about 5 percent in 2017 and 2018) and has fluctuated between 1.2 and 1.4 percent of GDP.

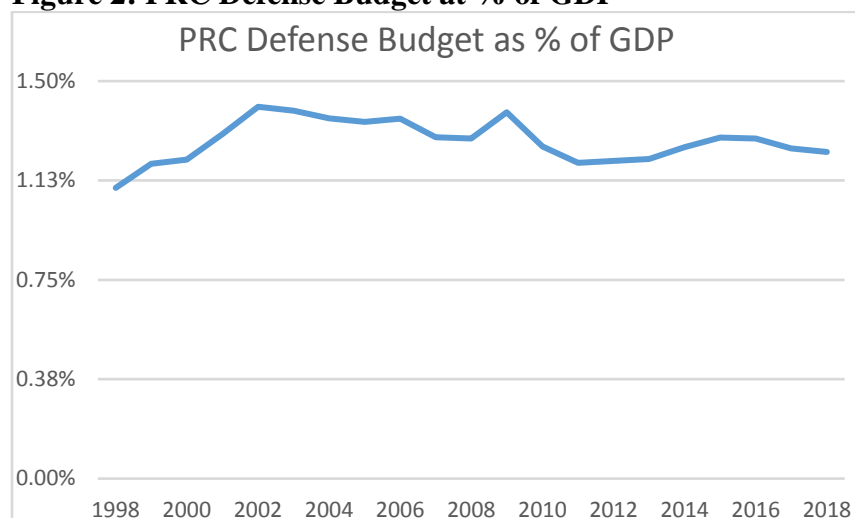
Figure 1: PRC Defense Budget at % of Public Budget Expenditures (PBE)



Source: China Statistical Yearbook

⁹ *China Military Power*, 20.

Figure 2: PRC Defense Budget at % of GDP



Source: China Statistical Yearbook

If it were possible to develop consistent estimates for the defense spending that is missing from the official budget, these percentages would both be somewhat higher. However, since “off budget” expenditures have either migrated into the official budget or declined in significance relative to official budget spending, the trend lines in defense spending as a percentage of government expenditure and defense as a percentage of GDP would not change radically. In fact, addition of data on off budget spending would likely show a steeper fall in the percentage of central government spending devoted to defense over time, since off budget spending was more significant in earlier years.

The public data, while limited, are sufficient to indicate several significant trends in defense spending over time. Although China does not release budgets for the individual services, the Chinese 2004 defense white paper indicated that the PLA was increasing spending on the navy, air force, and Second Artillery Force (now Rocket Force), increasing their relative share of the overall PLA budget at the expense of the ground forces.¹⁰ Table 1, which examines the data that

¹⁰ *China's National Defense in 2004* (Beijing: Information Office of the State Council, December 2004), <<http://en.people.cn/whitepaper/defense2004/defense2004.html>>.

China submitted to the United Nations with breakouts of PLA spending, shows that the share of the PLA budget devoted to equipment increased from 32.2 percent in 2007 to 41.1 percent in 2017.

Table 1: Chinese Military Expenditure Breakouts, 2007 and 2017

	2007		2017	
Personnel	120,015	33.8%	321,052	30.8%
Training and Maintenance	121,042	34.0%	293,350	28.1%
Equipment	114,434	32.2%	428, 835	41.1%
Total	355,491		1,043,237	

Source: China's military expenditure submission to the United Nations, 2008 and 2018.

This indicates that the PLA's equipment buildup and modernization efforts are consuming an increasing share of the growing defense budget, not surprising in a military that is expanding the size of its air, naval, and missile forces and investing in replacing older systems with upgraded modern weapons. It is notable that the share of the budget devoted to personnel expenses decreased from 33.8 percent of the budget to 30.8 percent. Increases in the overall defense budget permitted major increases in PLA salaries and benefits during this period, even as the budget share devoted to personnel declined. However, as the PLA competes with the civilian economy for soldiers, officers, and non-commissioned officers with greater technical knowledge, personnel costs are likely to rise in the future.

The major Chinese military reforms that began in late 2015 have changed the relative size of the services in the PLA (for example, the PLA Army now makes up only half of the total force) and surely have caused shifts in the budgets allocated to Central Military Commission offices, the services, the five theater commands, and the new Strategic Support Force and Joint Logistics

Support Force.¹¹ They also stripped many of the economic functions away from the PAP, ended its dual subordination to the State Council, and refocused it on support to military operations, internal security, and maritime security functions. The Chinese Coast Guard was also resubordinated to report directly to the PAP.¹² This strengthens the case for considering PAP (and Coast Guard) spending as part of China's overall defense spending. However, in 2018 the PAP (and Coast Guard) spending continued to be listed within the public security budget.¹³ The PAP budget in 2017 was 192,369 RMB, or \$29.9 billion, which does not include the Coast Guard budget.¹⁴

The lack of detailed, publicly available data on Chinese defense spending imposes limits on open source analysis of trends within the PLA. For example, it is difficult to track expenditures on specific weapons programs, the relative share of the service budgets over time, or details of personnel expenses. However, financial data on the Chinese defense industry are more available and may yield interesting insights.

The commission may wish to request classified briefings on specific aspects of Chinese defense spending or commission research on the financial details of the Chinese defense industry.

¹¹ For a comprehensive analysis, see Phillip C. Saunders Arthur S. Ding, Andrew Scobell, Andrew N.D. Yang, and Joel Wuthnow, eds., *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms* (Washington, DC: National Defense University Press, 2019).

¹² See Joel Wuthnow, *China's Other Army: The People's Armed Police in an Era of Reform*, China Strategic Perspectives 14 (Washington, DC: NDU Press, April 2019).

¹³ “海警开支是否属军费？ 国防部：国防费保障包括现役部队、预备役等，” http://www.sohu.com/a/298312274_161795

¹⁴ <https://www.ceicdata.com/zh-hans/china/government-revenue-and-expenditure/government-expenditure-public-security-armed-police>

Potential Impact of a Chinese Economic Slowdown

Projections that Chinese economic growth will continue to slow in the future, the drag of government budget deficits on the financial system, and the potential for significant fiscal and financial system crises all suggest that future Chinese defense budgets will also experience slower growth than the 5-7 percent increases in recent years. If the CCP leadership maintains the relative priority of defense spending, the future growth rate of PLA budgets will continue to decline in line with slower GDP growth and slower growth in central government spending. There are some indicators that smaller increases in defense spending are already starting to impose some constraints on the PLA, and that these are likely to increase over time.

The surge in procurement of existing and planned PLA advanced weapons systems implies significant long-term financial commitments to operate, maintain, and upgrade these systems over their life-cycles. The recent expansion of the navy, air force, Rocket Force and the cost of the advanced weapons systems they operate will incur continuing expenses for the next 20-30 years, regardless of future PLA decisions about procurement. These financial commitments to traditional air, naval, and sub-surface platforms—which will eventually turn into what the U.S. military calls legacy systems—may eventually limit PLA financial flexibility to invest in new areas of warfare.

Slower growth in defense spending is already producing increasing competition among the PLA services for roles and missions (and the budgets that accompany them). For example, the higher priority accorded to the maritime domain by Xi Jinping has prompted efforts by the air force, Rocket Force, and even the army to develop and showcase capabilities relevant to maritime

operations.¹⁵ Similar trends are evident in long-range precision strike platforms, where the navy, air force, and Rocket Force all have systems that perform similar missions. In an environment where military budgets are growing more slowly, inter-service competition over missions and resources may impede operational cooperation. This may also be the case in the nuclear domain as the PLA Navy's submarine-launched ballistic missile-equipped nuclear submarines become operational and if the PLA Air Force develops nuclear capabilities.

One question going forward is whether the removal of the service commanders from membership on the CMC will allow that organization to override parochial service considerations and make procurement decisions that maximize PLA joint capabilities. Recent interactions with PLA officers suggest that the PLA is grappling with how to reconcile competing service and theater command requests for advanced systems and additional spending. According to one PLA officer, the service commanders regularly petition the CMC for additional money to fund their priorities.

One interesting new development involves efforts by the services and the Chinese defense industry to lobby for increased defense expenditures and for procurement of specific weapons systems. Military services are beginning to use more sophisticated public relations efforts—including movies such as *Shy Hunter* and *Operation Red Sea*—to boost recruiting and advocate for increased funding for individual services and branches.¹⁶ The Chinese defense industry is also making increasing use of advertising, lobbying, and defense exhibitions to influence PLA decisions about arms procurement. A good example is the FC-31 stealth fighter designed by

¹⁵ See Ian Burns McCaslin and Andrew Erickson, “The Impact of Xi Era Reforms on the Chinese Navy,” in *Chairman Xi Remakes the PLA*, 125-170.

¹⁶ For a look at the efforts of the air force, see Ian Burns McCaslin and Andrew S. Erickson, *Selling a Maritime Air Force: The PLAAF's Campaign for a Bigger Maritime Role*, (Montgomery, AL: China Aerospace Studies Institute, April 1, 2019).

Shenyang Aircraft Corporation. Although the FC-31 lost out to Chengdu Aircraft Corporation's J-20 in the PLA Air Force stealth fighter competition, Shenyang has mounted ambitious efforts to market the fighter to foreign customers and to try to lobby the PLA Air Force and PLA Navy naval aviation to procure the aircraft. The company is reportedly trying to modify the aircraft for possible use on Chinese aircraft carriers.¹⁷

Moreover, as the PLA competes with the civilian economy for the high-tech talent needed to operate a modern military, personnel costs are likely to rise significantly as the PLA pays more for salaries, benefits, personnel expenses (such as training, education, and relocation costs), and retirement costs. China's booming technology sector offers higher salaries and a less restrictive working environment than military careers.

An economic downturn or crisis could delay the production and fielding of high-end assets, which would constrain military modernization. An economic slowdown would probably result in even slower or no growth in defense budgets, which would further heighten inter-service competition for resources and missions. However, it is also possible that Xi or another future Chinese leader could decide to devote a higher proportion of Chinese spending to defense, in which case an economic slowdown would not necessarily result in scaled-back military ambitions.

These factors collectively suggest that China will eventually reach an equilibrium point where defense budgets grow at slower, steady-state level that produces more gradual improvements in defense capabilities. Given China's significant recent progress in military modernization, and the

¹⁷ See Ian Burns McCaslin, "Chinese Defense Firm Lobbying and Public Relations Efforts," draft manuscript, Center for the Study of Chinese Military Affairs, June 2019.

likelihood that other advanced militaries will also face budget constraints, such an equilibrium point might still be sufficient to achieve China's goal of building a world class military.

While resources devoted to defense matter, the biggest constraint in improving Chinese military capabilities and taking full advantage of advanced weapons and the reformed military structure is likely to rest with the quality of the personnel in the PLA, especially the senior military leadership. Reforms to the PLA educational, training, personnel assignment, and promotion systems are critical to building officers who can function as effective joint commanders and staff officers in a modern military.¹⁸

Conclusion

The trends discussed above might change if Chinese leaders conclude that external military challenges constitute the most important threat to the Chinese state and continued Chinese Communist Party (CCP) rule. China has tried to avoid direct confrontation with the United States, but recent shifts in U.S. policy and strategy have focused the U.S. government and the Department of Defense on posturing for long-term strategic competition with China and Russia. From China's point of view, this represents a significant adverse shift in the strategic environment that may require adjustments in its grand strategy and military modernization efforts, including adjustments in the resources devoted to defense. To date, however, Chinese leaders have sought to stabilize relations with the United States and called for maintaining the period of strategic opportunity for China's modernization.

If Chinese leaders conclude that confrontation with the United States is inevitable, they may increase the resources devoted to defense and military modernization. However, CCP leaders

¹⁸ See Joel Wuthnow and Phillip C. Saunders, "A Modern Major General: Building Joint Commanders in the PLA," in *Chairman Xi Remakes the PLA*, 293-326.

have carefully studied the collapse of the Soviet Union and concluded that over-spending on military capabilities at the expense of economic development was a major factor. This suggests that CCP leaders will probably continue to regard internal challenges as the greatest threat to continued CCP rule, and view efforts to raise living standards of the Chinese people and spending on internal security (which exceeds spending on national defense) as more important priorities. However, this judgement might change if Chinese leaders perceive U.S.-China strategic competition as headed toward an inevitable military showdown.

Appendix

Chinese GDP, Central Government Expenditure, and Defense Spending, 2007-2018

	2007	2008	2009	2010	2011	2012	2013	2014	2015
PRC Nominal GDP	270232.3	319515.5	349081.4	413030.3	489300.6	540367.4	595244.4	643974	689052.1
Central Government Expenditures	49781.35	62592.66	76299.93	89874.16	109247.8	125953	140212.1	151785.6	175877.8
Defense Spending	3482.32	4098.95	4825.01	5176.35	5829.62	6481.38	7177.37	8055.14	8868.51
Nominal growth rate in %	16.9%	17.7%	17.7%	7.3%	12.6%	11.2%	10.7%	12.2%	10.1%
as % of CGE	7.0%	6.5%	6.3%	5.8%	5.3%	5.1%	5.1%	5.3%	5.0%
as % of GDP	1.3%	1.3%	1.4%	1.3%	1.2%	1.2%	1.2%	1.3%	1.3%

Source: China Statistical Yearbook in 100 million RMB; figures are nominal.

PANEL II QUESTION AND ANSWER

COMMISSIONER LEWIS: Thank you very much.

I'd like to ask my Co-Chair for his question. Admiral McDevitt?

COMMISSIONER McDEVITT: Thank you.

I have a question for Dr. Saunders first. Based upon your assessment of looking at the budget and speculating about how it might decline as China's overall economy declines, a question I have for you is one of the ones that we talked about in my opening statement, which was, what do you think a world-class military would look like, if you will, or what would it be composed of?

Mr. Dean Cheng gave us one alternative, which is info dominance is equal to world-class. How do you see that?

DR. SAUNDERS: I think, to a considerable degree, they benchmarked this against the U.S. military. And if we think broadly, if we look at China in the 1990s, they said: what if we have to fight the U.S.? We're way behind. What can we do to give ourselves a chance? And that was investments in asymmetrical capabilities to try to overcome that.

If we look at the Chinese military today and where they're going, it is much more symmetrical with the U.S. military. Part of that is, as Dean said, investment in information capabilities and the ability to conduct what they call systems attack, what we call network-centric warfare. So, leveraging information technology, ISR, precision strike to build real capabilities.

But part of it, also, is platforms, and that's really kind of a surprising thing. We see China building aircraft carriers, stealth fighters, stealth bombers, very significant platforms. But that's not necessarily where the direction of modern warfare is going.

And I think that's a question: are they becoming more symmetrical with us because pilots run their air force and ship drivers run their navy? And are they leaving opportunities behind in terms of unmanned systems and a more information resource --

COMMISSIONER McDEVITT: I hope so.

(Laughter.)

DR. SAUNDERS: I hope so, too.

COMMISSIONER McDEVITT: I have one question for Dr. Fravel. The last question I asked the last panel, from the representative from the Defense Department, was this notion that China aspires to be the dominant force in the Indo-Pacific as opposed to East Asia, and what have you. Have you seen any evidence for that expansion of their ambitions in your research?

DR. FRAVEL: No. Especially if one defines Indo-Pacific from the India-Pakistan border to the West Coast of the United States, which is right into INDO-PACOM's area of responsibility.

COMMISSIONER McDEVITT: Right.

DR. FRAVEL: So, Chinese writings from a strategy and warfighting perspective are, I think, intensely focused on East Asia with the broader definition I mentioned, to include those western portions -- sorry -- the eastern portions of the Western Pacific. But, to the degree that they talk about achieving that same level of presence and potential capability and dominance in the Indian Ocean and against India, and against all the other countries who have military assets in that area, I don't see much support in Chinese writings for that.

COMMISSIONER McDEVITT: Thank you.

COMMISSIONER LEWIS: Mr. Cheng, I have a question for each of you, and I'd like to

ask each of you a question with a short answer, if you can do that.

You mentioned Taiwan as one of the drivers of Chinese military ambitions. Taiwan has never been part of the People's Republic of China. They were never ruled by the People's -- that island was never ruled by the People's Republic. Yet, they talk about rejuvenation or reunification. They know that it was never part. So, what is the driving force behind their desire to have Taiwan part of China?

MR. CHENG: So, the People's Republic of China views itself, the Chinese Communist Party views itself as the inheritor of China. So, Taiwan has been part of China, the civilization/state entity that predates the 1949 creation of the People's Republic of China. So, Taiwan was taken out of China for the first time, arguably, in 1894-95 after the first Sino-Japanese War. And that laid the foundation for a lot of the ongoing politics behind it.

So, from the CCP's perspective, they are defending China as a state or as a physical entity, which includes Taiwan, which includes the South China Sea, which includes Tibet and Xinjiang. So, that's the greater civilizational aspect.

The other element to this, however, is that, from a Party legitimacy perspective, this has always been part of the argument of why the CCP is or should be in charge; that it has been able to allow China to stand up to reclaim its proper position in the world, but that is predicated on the ability, again, to unify China and to right the wrongs of the past. Because Taiwan was torn away by the Japanese in the first Sino-Japanese War, because of the circumstances where it is governed by an illegitimate entity from Beijing's perspective today, that all has to be resolved in order for the CCP to retain its claim to legitimacy.

COMMISSIONER LEWIS: Is it your view that they will go to war over that issue?

MR. CHENG: It depends on the circumstances. I don't think that, in my opinion, I don't think the Chinese are going to wake up tomorrow morning and start a war. But if Taiwan were to declare independence, if there were some stimuli -- for example, a belief that the United States was going to recognize Taiwan as, you know, to break away from the American concept of the one China policy -- those are things that I think would open up very distinct possibilities of conflict.

COMMISSIONER LEWIS: Thank you.

Dr. Saunders, I have a question for you. Do you think it's possible that the PLA itself doubts the veracity, the Chinese defense spending numbers?

DR. SAUNDERS: I don't think they doubt them. I think they have real numbers that they use to manage their budgets and manage their procurement. So, I think they feel relatively confident what resources they have.

But, as I mentioned, there are recent interactions with the PLA, some of the stories they tell of trying to figure out how to balance/reconcile demands from the different services and the different theaters, and they tell us that the service commanders are constantly going back to the Central Military Commission and asking for more money for specific modernization priorities.

So, I think they have real numbers. I don't think all of that spending is in their official defense budget.

COMMISSIONER LEWIS: Thank you very much.

And, Dr. Fravel, I have a question for you. Your comment mentioned world-class military as a dynamic concept rather than a thing. It's almost like pornography: you'll know it when you see it. And I have a question about this.

The 2001 Science of Military Strategy states that, "From the defensive side, the strategy to gain mastery by striking only after the enemy has struck does not mean waiting for the enemy

to strike passively," implying that the PLA may be more prone to use force when the national leadership has determined when a red line has been crossed. Based on this, what would be a red line? What would a red line consist of? Would it have to be kinetic or could it be political?

DR. FRAVEL: Thank you very much for the question.

I think, traditionally, when China thought in terms of active defense, which that quote from the Science of Military Strategy discusses, it was a kinetic attack. But, in that version of the Science of Military Strategy, they did say, under certain conditions, political attacks could count as the first strike against China. In particular, they were referring to Taiwan and were referring to a declaration of independence or other kinds of activities that Dean Cheng mentioned could spark a war.

And so, it definitely could be political. I think the number of issues over which it would be political would be pretty limited and primarily outside of the case of Taiwan. It would still probably mostly be focused on kinetic actions.

COMMISSIONER LEWIS: So, a red line would be as a result of a political action?

DR. FRAVEL: It could be as a result of a political action, yes.

COMMISSIONER LEWIS: Thank you very much.

I'd like to call on the Chair of our Commission. Carolyn, you have a question?

CHAIRMAN BARTHOLOMEW: Thank you very much.

Yes, I guess, like everybody, have a question for each of you or one that spans it all, which is this issue of Chinese techno authoritarianism and the exporting of the surveillance state, most recently, of course, to Belgrade.

A lot of the discussion about things like 5G, it's like there's a gap between talking about the military use of it and, then, the civilian thing, right? So, you talk about smart cities and traffic control, and wouldn't this be great; we wouldn't have traffic jams and things like that. But I'm wondering if there's anything in PLA doctrine about the disruption of the civilian sector and how access to this kind of information or these nodes might play into it.

That's one. All right, you think about that. I'll say the other ones.

Dr. Fravel, you mentioned increasing investment in open source analysis. And we have recommended that in any number of years, but it's a huge topic. Are there any particular priorities you think should be identified as what it should do?

And then, Dr. Saunders, I was very interested where you said that the PLA competes with the civilian economy for high-tech talent. How do you tie that into military-civilian fusion? Is the talent that you're talking about operating or is it development of new technologies that keep things forward? Because if it's operating, it's a whole new generation with a lot of gaming skills. I don't know how much more beyond that people do for, need for operational work.

Okay, all three.

MR. CHENG: So, on the issue of Chinese techno authoritarianism, what I would suggest is, when the Chinese talk about information dominance, it is not simply about military information and military dominance. It's not just whether or not you could hack into a Patriot system or a THAAD system.

The reality is that all of our economies have civil-military fusion. We just call it different things. You could not imagine deploying units, equipment, et cetera, through TRANSCOM without relying on the internet, without relying on NIPRNet, in particular.

So, if I can, in theory, crash the air traffic control system of the United States, those C-17s are not flying to wherever they need to be. So, that's one aspect of it.

Another aspect to this is that we are also looking at the ability, for example, to disrupt

domestic security situations, ties-down, forces. You know, a lot of capability still resides in the National Guard. Those elements would probably not be available if American cities are blacked-out.

And then, the last aspect here is that the Chinese do talk about the importance of psychological warfare, and it is interesting to note that PLA Strategic Support Force apparently includes a political warfare element. So, therefore, one should assume that the effort to influence popular decision making, the population, military morale, is going to be part of any effort in a future conflict.

CHAIRMAN BARTHOLOMEW: Thanks.

Dr. Fravel?

DR. FRAVEL: Thank you.

So, regarding open sources, perhaps two ideas. First would be to put in specific authorization for much greater funding for -- I think it's called OSE now, you know, what --

CHAIRMAN BARTHOLOMEW: It used to be FBIS.

COMMISSIONER WORTZEL: It is shutting down.

DR. FRAVEL: Yes, I know, it's basically shutting down. Congress can do something about that, right? The specifics are beyond my area of expertise, but certainly Congress authorizes the spending of money, and that would be a great place, I think, to spend money.

Congress could also consider, if that's too tall an order, then thinking about a China-specific sort of open source center. I mean, there's a tremendous amount of information on the internet about things that China is doing, what the PLA is doing, in particular. It's just most of it happens to be in Chinese, and some of that Chinese is even technical. And so, it's hard for lots of people interested in what the rise of China means to access.

But if we really want to understand what the risk of China means, and how to sort of best respond to it, then we need to be able to have sort of a complete picture of what the Chinese themselves are saying.

CHAIRMAN BARTHOLOMEW: Dr. Saunders, quickly.

DR. SAUNDERS: I totally would agree with that.

I guess two points. How does the PLA get the people it needs inside the force? They've tried to upgrade their military academies to have more technical and technology content. They've tried to come up with mechanisms to recruit students from China's best universities. That hasn't worked out so well because there's a cultural clash. You get students who have the technical skills, but they don't mesh well with the rest of the PLA. And they recently ended the program, partly because of that; that the military guys didn't think these students with technical skills were military enough to work within the PLA. So, I think that's an issue where they're competing with people who have much better job prospects elsewhere.

Civil-military integration is a way of trying to outsource those skills to either have contract mechanisms or the ability to tap those technical skills inside the civilian economy. That's an effort to reconcile that and to find ways to work around it.

But I guess I see obstacles to that. We've got a couple of chapters in our book on PLA reforms that talk about that in some depth. I think there's still significant challenges with getting the expertise that the PLA needs, even on a contract basis.

CHAIRMAN BARTHOLOMEW: Thank you.

COMMISSIONER LEWIS: Mike Wessel?

COMMISSIONER WESSEL: Thank you, gentlemen. Very interesting, and I have a lot of questions which I'm going to try to shorten, both asking and having the answers shorter, but

would welcome follow up information from any of you.

Dr. Saunders, for you first, you talk about the Chinese military budget, and we have, of course, examined both as a Commission as well as the government the question of Chinese cyber theft, et cetera. Do you have any estimate of what the cost avoidance has been by Chinese cyber espionage in the U.S.? As we all have seen major weapon systems with tens of billions of dollars of development cost for U.S. interests, you know, full-scale plans taken by the Chinese, do you have an estimate of what that might reduce the Chinese budgetary payments for?

DR. SAUNDERS: No.

COMMISSIONER WESSEL: Okay.

DR. SAUNDERS: I mean, no, it's a technical thing and you need to do a technical analysis to try to get to it. It clearly does save them some money. It clearly does point them in the right direction. But even if you have the blueprint, that doesn't necessarily mean you can build the final product. So, significant cost savings, but I can't give you a point estimate.

COMMISSIONER WESSEL: Yes, agree, although I would say that, for example, Boeing's joint venture with, I believe it was AVIC on composite fabrics gave them more than just the blueprints, but the capabilities.

If you have any estimates afterwards or any thoughts you might have, that will be helpful.

Dr. Fravel, I had the joy last Monday of spending the day at MIT on disruptive technology discussions, some of it with your colleague, Dr. Negro Ponte, who is, of course, an esteemed expert in the field and was in China last week, as you probably know.

Your university has examined the relationship, especially in the military research field in the last couple of months, I think terminating some work with Huawei and ZTE; examining, as I understand it, the PLA researchers who have been doing work at the University.

To what extent does your work, your policy work, intersect with administrative examination at the University? How are they looking at what the research programs are? MIT is, you know, our crown jewel in AI, A/V, machine learning, et cetera.

Tell me about the intersection of what your policy initiatives or work is, if you can, with what's being done on the research side.

DR. FRAVEL: I think I'll let the administration at MIT answer that question for you.

COMMISSIONER WESSEL: Okay.

DR. FRAVEL: Simply because I'm a professor at MIT, but I'm not an administrator at MIT. And largely, they have me around to do the kind of research that I talked about.

COMMISSIONER WESSEL: Understand. I'm not trying to get you in hot water. But are there discussions about the policy implications?

DR. FRAVEL: Yes.

COMMISSIONER WESSEL: There are? Okay.

DR. FRAVEL: Yes, and very serious ones. I just don't want to characterize them inaccurately.

COMMISSIONER WESSEL: I understand.

And, Mr. Cheng, thank you for being here again, and always learn from you. And while I don't speak Chinese and I usually make a mess of pronouncing anything, you said, (Chinese term used), correct?

MR. CHENG: Correct.

COMMISSIONER WESSEL: Help me on the difference between deterrence and compellence. And I look at this as well, again, through some of the current conflicts we're having about the technology field cooperation, et cetera.

President Xi had a meeting, I think it was two or three weeks ago, with CEOs of a number of major U.S. companies, asking them not to participate in some of the initiatives that exist. Is that part of compellence? I mean, should we look at the power issue and, again, (Chinese term used), rather than just military deterrence as broader use and what it may mean, quite frankly, into our political sphere here?

MR. CHENG: Yes, sir. So, the difference between deterrence and compellence, first, very quickly. So, when we think about the Cold War and what the U.S. was doing, that was deterrence. We were going to deter the Soviets from taking Berlin or Norway, or anyplace else. From the Chinese perspective, that was part of (Chinese term used), but it can also include making other people do what they don't want to do. So, it is, basically, as one Chinese military writing put it basically, (Chinese term used) is making the other side bow to your will. You don't want to; we'll make you. You want to; we'll dissuade you.

The tools available in Chinese writings go much beyond military. So, for example, there's nuclear "weishe," conventional "weishe," informational "weishe," financial, mobilization "weishe".

And then, just one very quick example. What the Chinese did to the South Koreans with regard to the THAAD deployment is a great example. The Chinese engaged in weaponized tourism. Okay?

I mean, the idea that you would impact another country's policies by saying to your own people, "Don't go to South Korea as tourists"; to say to your own tourist groups, "Do not book tourism," and then, to go to the South Korean population and say, "You know, you live in a democracy. Isn't that wonderful? Because you get to change your government's policies. If you don't like what we're doing, tell your government not to deploy THAAD."

They went after Lotte supermarkets and other retailers, for the same purpose.

COMMISSIONER WESSEL: Right.

MR. CHENG: So, yes, absolutely. Talking to commercial, industrial companies is absolutely part of the "weishe" process.

COMMISSIONER WESSEL: Okay. Thank you.

COMMISSIONER LEWIS: Mr. Kamphausen?

COMMISSIONER KAMPHAUSEN: Well, thank you to our three panelists. Hard to think of three people whose work I respect and who I admire more. I only wish the panel could go on for a couple of hours because I have a lot of questions. But let me focus on two, which are general.

Your testimony is really helpful and focused. Let me take a step back. The first question is, in our first panel our Administration presenters talked about near-peer competitor status. And so, this is a two-part first question.

The first is, have we conflated the notion of a world-class (Chinese term used), Chinese military, by 2050 with near-peer or peer competitor status? And that's maybe not so important as the second part of the first question, which is, what are the benchmarks that you would use? Based on your judgment and your research and your experience, what are the tests that you would use to answer the question, is China a near-peer competitor? That's the first set of questions, and I ask that of each of you.

The second is, Dr. Fravel, in your testimony you talked about Chinese military modernization goals; we ought to think of them in tandem with general economic development goals. And I think that's a helpful frame. I would ask you to do a different sort of exercise and do a China internal net assessment of, as the PLA attempts to modernize on this ambitious

timeframe that it has, how do they think about the tensions internally that will act as brakes on that effort? You know, increasing debt, declining population, a workforce that peaked several years ago, and an overall population that will start declining in a couple of years, environmental issues, pressures from Hong Kong, and a whole variety of other things. What's the China internal net assessment look like?

One way I think of it is, it's a race, but it's a race with, the PLA is racing with itself. And Phil noted that there's still lots of budget that they could put against this problem, but it's not just, in my mind, a financial question. There's other factors. I would love to hear your thoughts on that.

MR. CHENG: Sure. So, great questions with plenty of time to answer, especially split among the three of us here.

(Laughter.)

I think that some useful benchmarks the Chinese themselves talk about, for example, they used to say that they are now a half-mechanized, half-informationized military, and that they are working overtime to try and solve the mechanized part.

More recent writings no longer describe it as half-mechanized. It's mostly mechanized and working on informationized. So, I would suggest that they, themselves, do see themselves as improving. I think that when the last of the purely leg infantry, tote artillery, most everybody walks, and not because they're like the 10th Mountain, but because they don't have the resources

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(Laughter.)

That's not a slam on the 10th. It's just -- yes.

When the PLA has light forces because they want light forces, and otherwise are capable of fielding as many informationized forces, I think that will be a key benchmark. That is going to face a lot of challenges. My fellow panelists have obviously laid out a number.

I would also just note that internal security spending seems to be greater than external security spending, which, if the truest sign of concern or love is how much you're willing to spend, clearly internal threats are what keeps Xi Jinping awake at night.

DR. FRAVEL: Very quickly, since you threw a second question in my direction, I would agree with Dean Cheng with respect to informatization. I think being fully informationized would be the main benchmark, and you would tease out the subordinate indicators in terms of being near-peer.

I think it is probably too easy to conflate near-peer and world-class military. As I've tried to suggest, I don't think world-class military is a fully fleshed-out concept. And so, it might not be that helpful to use.

Regarding China's internal net assessment, the documents that I reviewed in the course of preparing my testimony, at least from Chinese military officers, seemed to think it was going to be really challenging to have become world-class by the two milestones that were set for them. And so, I did not have time to sort of do the full sort of net assessment that you described, but I think even without taking into account the broader social sort of environment in which the PLA is trying to modernize, they see just within the PLA itself this transformation is going to be really, really challenging for them, for reasons that I think we have discussed before.

So, I don't know if they are that optimistic that they can be basically modernized by 2035, right, much less world-class by 2050, even though that is, you know, 30-some years into the future. Nevertheless, it's a good goal to aspire towards and you want, if you are seeking to improve your warfighting capabilities, to give your armed forces a goal that they might not

necessarily be able to achieve, but that will motivate them to make significant progress.

COMMISSIONER KAMPHAUSEN: Is it possible that part of the reason that the standards are not more clear is that a world-class military will be defined by what the PLA is currently at that point? Yes.

Dr. Saunders?

DR. SAUNDERS: Yes, I think there is something to that, to have a vague goal, and then, that makes it easy to declare success once you get there.

I think the main point I would make, I don't disagree with anything that was said, but I think it's the people side that is the big constraint. And we've just published a big book on PLA reform, which I have copies for you and others who have attended. But I think that's one of my conclusions there; it's less the hardware; it's less the organization. Do you have qualified people who are your staff officers? Do you have qualified joint commanders? And I think that's the area where the PLA sees real, real deficiencies in its force today.

That's a hard thing to benchmark, but, right now, an army officer will spend most of his career in one theater until he is a deputy corps commander. And that's a very limited window. It's good for conducting army operations, but you don't know how the other services work. You don't have a broader perspective. You don't know how a joint force operates. And I think those are real constraints.

And we talked in a chapter in the book about building joint commanders, all the things they have to do fix that. They have to change their personnel system. They have to change their promotion system. They have to have rotational assignments. They may have to have joint billets. And that's a huge, disruptive change throughout the PLA, and that's only to be pointed in the right direction.

The bigger question is, can you fix the organizational culture? Can you have a Leninist military that listens to orders from the top? When you want a military that takes advantage of information, that pushes initiative down, and that empowers its troops, is that compatible with the PLA organizational culture? Is it compatible with a Leninist system? I think that's a big question and a big obstacle.

COMMISSIONER KAMPHAUSEN: Thank you all very much. If other thoughts on how to benchmark this occur to you, we would certainly welcome any additional ideas you had.

Thank you, Mr. Chair.

COMMISSIONER LEWIS: Commissioner Wortzel?

COMMISSIONER WORTZEL: I appreciate you all being here.

I have two questions for Dr. Fravel. Well, I guess once he's done, I would be very happy to hear from either you, Mr. Cheng, or Dr. Saunders on the others.

Both come out of your testimony in different parts. On page 7 of your testimony, you sort of reprise what you said in your 2015 China brief article on the basis for the strategic guidelines. And the first one you list is with whom China will fight. So, who do you think they identify as the main enemy?

Second is from page 9 in your testimony, but it's really the whole last fourth part of your book Active Defense. And you briefly mention on page 9 maintain strategic deterrence.

But when I go through some Chinese documents, I find what I would call an entire ladder of deterrence mechanisms. And they range from public opinion operations through demonstrations of force, to actually conducting a missile-firing test near an adversary. And quite frankly, they don't seem to be in order. You know, it's like here's a menu; pick what you think works. And I've watched them do some of these things in 1995 and '96 during the Taiwan

elections and inauguration.

So, first of all, do you think there's any prioritization in their head about this? And second, some of them, like conducting -- let's say we're in some sort of a crisis and we have deployed U.S. forces in the Western Pacific -- conducting a firing exercise near those forces is pretty escalatory. So, I would like your thoughts on that.

DR. FRAVEL: Thank you.

So, yes, the first, and probably central, component of a strategic guideline is with whom will China fight. And that's usually divided between sort of who the primary adversary or adversaries is and, then, who the secondary adversary is.

And so, in the current strategy, I think it's Taiwan and the United States. With regard to a Taiwan scenario, I don't think the United States is an enemy separate from Taiwan, and that's an important distinction to make. I think secondary opponents would be India, Japan to some degree, although probably tertiary. I don't think there's great plans to launch a major war against Japan in China, but because of the dispute over the Senkaku Islands.

So, that's how I would characterize it today. It could change, right? And so, I think China has had nine strategic guidelines or nine strategies, one every eight years, more or less. And I think we're due to a change, probably when the reforms are completed. So, we'll have to see how that plays out. The role of the United States could become more prominent in China's military strategy because of the way in which the relationship has unfolded in the last few years.

Turning to your second question, ladder of deterrence and escalation, there's a lot of writing on this in what I would call authoritative, but not definitive sources, right? And so, this would be the Science of Military Strategy 2013 from the Academy of Military Science, and it would be the Science of Military Strategy 2015, revised in 2017, from the National Defense University. They both talk about escalation, but in quite exactly the same way.

And so, what I draw from that is that China has not yet necessarily perfected a systematic approach it's going to apply in all situations and scenarios. Instead, what I think happens, it's highly based on the contingency and on what the Chinese refer to as (Chinese term used), their sort of official assessment as to what the nature of the problem is, and that will, then, help them decide what kind of escalatory actions to take.

I would agree, certainly engaging in a live fire exercise in the way in which you describe would be highly escalatory. And if one reads certain elements of the Science of Second Artillery Campaigns from 2004, there's some very disturbing and worrying aspects in that book, too, and no awareness, at least, in the context of that text about how such actions could increase crisis instability.

And I'd take that to be those from the military or the PLA perspective, writing on the kinds of steps that their national leaders could take, are simply outlining the steps that they could take and not actually subjecting them to any analysis of whether or not it would be advisable to do in particular circumstances.

Thank you.

COMMISSIONER WORTZEL: Thank you.

DR. SAUNDERS: If I could add one kind of specific point, one thing that happened in the reforms is they downgraded the services and they reorganized the theater commands. So, each theater has responsibility for a specific set of contingencies. And so, they're planning for them. They're training for them. They're preparing for them.

And one consequence of that is you now have a functional differentiation where, if you're the northern theater command, you're very worried about Korea and a little bit worried about

Russia, and that's what you're arguing those ought to be priorities. And so, you now have different parts of the PLA with different responsibilities, the services arguing for different capabilities that they think are relevant for things. And this does seem to have produced a little bit of muddle as to how do you adjudicate that.

So, when we had a PLA delegation come to National Defense University, that was the question they asked us: how do you adjudicate the competing responses from your services and your combatant commands? And that indicates this is a problem that they are wrestling with, and it indicates a degree of a lack of focus.

I agree that Taiwan and the U.S. are still No. 1, but in different parts of their system they're worried about different things and they're arguing for different capabilities. And they haven't quite figured out how you reconcile that.

MR. CHENG: Just very quickly on the issue of deterrence, I think what is noteworthy here is that among the authoritative, but not definitive documents, aside from the nuclear issue, on space we see the same thing at the top of their deterrence ladder, if you will, which is use of weapons in actual live fire as a demonstration shot to destroy an adversary satellite. And we see this on the information side, the actual use of information weapons, presumably here meaning something like malware or viruses or ransomware, again, to demonstrate to an adversary this is your last chance. Yes, I have this capability.

So, there is a common theme here. Now, again, I agree with Dr. Fravel that this does not mean that this is exactly what they are going to do, but, rather, if the leadership were to say to the military, "Tell me what it is that is available as part of the menu," that this would be included as one of those.

COMMISSIONER WORTZEL: And following up, Taylor, your Active Defense, I mean, there's a certain amount of the concept of preemption in there. How does that affect their military thinking and planning?

DR. FRAVEL: I think one way to distinguish, I think, or they would distinguish between strategic preemption and tactical or operational preemption -- and I think they're much more focused on the latter, once they've decided strategically they're going to be in a war. I think, to paraphrase Mao, fight no battle; you're not prepared to fight. That's not exactly what he said, but something to that effect.

And so, I think the PLA is not positioning, I think, itself to be strategically preemptive, but it may conclude in certain situations, if a political action has been taken that they believe violates their core interest, it might make sense to go first, once they have -- again, with this idea of (Chinese term used) and the assessment, that they are now in a situation in which force will be used.

COMMISSIONER LEWIS: As with your presentations, you were very concise in your answers. So, we have some extra. So, we can go for a second round.

Mike McDevitt?

COMMISSIONER McDEVITT: Yes, I was negligent in not complimenting the three of you on your papers. I thought they were terrific.

The first question I have is, some of you were here for the first panel. And I asked about, when you talk about a world-class military, how does the nuclear dimension fit into that? So, I'd like to hear your views on that.

But the other thing that's troubling me is we don't know what Xi means by world-class. We are all speculating on it, but we're looking for what the Chinese may have said about it, and what have you. That strikes me as, because we're dependent upon what we can glean from what

China says about that, we're always in the position of shooting behind the rabbit.

And so, how should we get our arms around it ourselves in the United States? How should the U.S. Government get its arms around the notion of a world-class military, so that we can be anticipatory, so that we can program resources, so we can do these sorts of things?

And it's not just writing a bigger check and build more, you know, give me more stuff. And so, the question, we would rely on experts such as yourselves to help inform that, based upon certainly your research, but also your instincts and your intuition, and what you think they are going to do. And I'd like to hear off the top of your head some thoughts on that point.

DR. FRAVEL: I'll go first. At least on the nuclear dimension, I think China is still focused on maintaining assured retaliatory capability, but having sort of more options to do that. And secondarily, a lot of their systems, especially the missile systems, some of them are quite old and not that survivable, including the silo-based DF-5 and the DF-4 that has to be rolled out on a track, and so forth, right?

And so, China has, from its point of view, I think, real strong imperatives to modernize its system to include the DF-41, which will be MIRVed, as was mentioned earlier. And so, I think they would say that being world-class in the Chinese context means having a much more sophisticated force to achieve that goal of survivability. I don't think it means they're going to have a new strategy for the use of their nuclear weapons.

Second, with respect to your second question, one idea that just comes to mind is not to get too wrapped up around what these terms mean, right, and, instead, just focus at a lower level, what is the PLA actually doing and what is it writing about what it is actually doing?

And so, in the course of my research for this testimony, I just went through the Liberation Army database and looked at every article that had "world-class" in the title. Most of them had nothing to do with what a world-class military was. It was like political work in a world-class military, logistics in a world-class military, because it was just a slogan to which they had to attach what it is that they really wanted to do.

And so, I think, of course, PLA modernization is of essential importance to the United States, but we don't have to be too focused on whether or not it's world-class and what that means, but simply what are they doing, why are they doing it, and how much progress are they making towards achieving it? And I think that will still tell us almost as much as we need to know, as if we had a much finer understanding of what the subcomponents of being a world-class military is.

COMMISSIONER McDEVITT: Dean?

MR. CHENG: So, two quick points. On the nuclear capability aspect -- and this actually ties directly also to your second question -- I think that, again, as Taylor said, I don't think we should be expecting a 10,000-warhead PLA rocket force that looks complete with SS-18s, and the like. But I think it should be striking and notable that, as far as I understand, there are nuclear and conventional DF-21s, nuclear and conventional DF-26s, and that they appear to be mixed together. That's a fundamentally different approach towards crisis stability, nuclear signaling, and everything else, than we had with the Soviets. Those 10,000 warheads, SS-20s didn't run around with a conventional version, making our targeting more difficult, and vice versa. Pershing IIs, as far as I know, never went around with a conventional warhead.

And so, I would suggest that alongside the need for more open source analysis is the lack of that has led to a certain degree of not just mirror-imaging, they are going to be like us, but funhouse mirror-imaging. They're going to be like the Soviets.

And so, if we are going to try and get ahead of them, we have to know who they are.

And that means not, basically, saying, well, we knew how to deter the Soviets; we'll know how to deter the Chinese. Because the Chinese, if they are so different on as fundamental a thing as nuclear stability and intermixing conventional and nuclear, what other aspects are they going to be just so totally different that, when we think we're being clear and signaling, because, hey, this worked against Cuba in '62 or in the Middle East in '73, the Chinese are going to say, "I have no idea what you're talking about."

DR. SAUNDERS: Just a couple really quick points. I agree that that intermingling issue is an important one.

The second point is, if you look at their nuclear force, it's sort of coming to 1980s standards of technology in terms of mobile missiles and MIRV. So, it isn't on the cutting edge.

But one of the things that's really different is we're starting to see the command-and-control and the ISR infrastructure which could support a shift to nuclear doctrine. I don't necessarily see that coming, and Taylor's done great work on this. But the technical constraints on a shift in nuclear strategy are eroding because they're building out DSP so you can have launch detection, long-range radars so you can see the missiles coming, a more accurate missile force, better command and control, more survivable systems, which bring a shift in nuclear strategy into sight.

The question about what do they mean by world-class military, I'll just add a piece, which is a lot of what they're doing is catching up and looking at Russia as a model, looking at the U.S. as a model. And that, I think, has been a big focus.

But we're starting to see areas where there is innovation, where they're getting to the technology frontier, where they're doing some things differently. And I think the innovation piece is part of that. If you look at Chinese military writings, every time they do something that hasn't been done before, they make a really big deal out of it. This is the first time this has been done. This is the first time the PLA has done that.

So, I think there is a piece that is catching up, but also a piece looking how do you move ahead in specific fields. And the Commission has done some great work in illuminating some of them, like hypersonics and artificial intelligence. Those are areas where the PLA is getting to the technology frontier and starting to innovate.

So, I think that innovation piece and new technologies and new domains is one dimension of what a world-class military means. It's a military that's innovative and is on the cutting edge, at least in some areas.

COMMISSIONER McDEVITT: Thank you.

COMMISSIONER LEWIS: Chairman Bartholomew?

CHAIRMAN BARTHOLOMEW: Thank you.

Dr. Saunders, I'm going to go back to this issue of talent development or access to talent. I'm thinking, first, specifically about the PLA unit that has hackers. Are they having trouble recruiting people who come to do the hacking or do they have a system, acknowledged or unacknowledged, where people are doing what they do during part of their day and, then, making money separately from things that they might be hacking?

DR. SAUNDERS: I want to defer that to Dean, who wrote a book about Chinese thinking on informationized warfare. I don't have great insight into that piece of it, but I think there's a generic piece of that, that your best technology sophisticated computer people have huge opportunities in the private sector. And the PLA is competing for that talent.

In the U.S. military, in NSA, you know we've worked out ways. We don't care if you have an earring or funny-looking hair; if you're a great hacker, we want to find a way to work

with you.

My sense is the PLA culture is different from that, and that's much more of an obstacle. So, it's both there's better opportunities available for the best talent, and the PLA is resistant to adapting itself to make use of unorthodox people.

But Dean's written a book on that.

CHAIRMAN BARTHOLOMEW: Yes, Dean, let me just broaden it a little, which is, also, because of all of this focus on informationized, which I think at one point was informationized -- it keeps changing -- but also a focus on cyberspace. If they can't recruit the talent, then they're not going to succeed at these things that we all seem to be so concerned about.

MR. CHENG: So, first off, on the terminology, let me just note, yes, it's gone through multiple gyrations in the translation. It is always (Chinese term used) in Chinese. So, it hasn't changed from the Chinese side, just to clarify that.

With regards to personnel and recruiting, one, unlike us, we don't have access to a nice white paper or annual report to the National People's Congress from the Recruiting Command.

I would also suggest that one of the interesting issues here is the different nature of the challenge. Saying that I broke into the Bayi Building cyber wise does not carry anywhere near the cache of I broke into the Pentagon. And that's going to be true whether you are a Chinese hacker, a Venezuelan hacker, or a member of Antifa, or anything else. So, that is part of it.

Phil raised a very good point about a different culture, what the PLA is like with regards to that. But we also have seen in other Chinese writings that they do view the hacking community as drawn from military, nonmilitary government, and then, the broader population. And we have seen some evidence, certainly, of patriotic hackers. Now the extent to which they are centrally directed is unclear.

But I will note that the Chinese have spent an enormous amount of time, energy, and effort to do internal monitoring of their Chinese intranet. So, I find it fascinating that the Chinese simultaneously claim that we have this massive intranet surveillance of who's doing bad things on the internet, but when somebody hacks the Pentagon from China, "Well, we just have no idea who those people are." So, I personally find that somewhat odd, but I'm a cynic.

CHAIRMAN BARTHOLOMEW: Thank you.

COMMISSIONER LEWIS: Commissioner Kamphausen, you have another question?

COMMISSIONER KAMPHAUSEN: Thank you. It's great that we have some more time with you all.

So, I think, Dr. Fravel, based on your response to the first question, I might conclude that you think the use of the term "near-peer competitor" is not a particularly useful description by which to make a judgment. Is that a fair judgment? I'll give you a minute to think about that.

That is, though, a policy term, and even as a Commission, we have over time debated if there's a contribution we can make on clarifying this issue. It strikes me that, at least based on the testimony we heard this morning, that there is a proclivity, if not actual intent, on the part of the Pentagon to think in terms of conflating the terms for purposes of, then, providing both policy direction to the forces and, then, development of our own capabilities.

So, we're sort of in the place where we want to make a contribution, and simply dismissing the characterization doesn't get us anywhere. So, I'm pressing a little bit to see if you can be helpful.

You also spent, I guess -- so, part two -- you also spent a fair amount of time on the commentaries after having said it's not clear what Xi meant, but this is what it could mean. And

that's very helpful, but maybe add some more context to that. Isn't it sometimes the case that the commentaries are an invitation to speculate and we have to be careful how authoritative we might find them to be?

My own experience suggests that sometimes American observers can latch onto a particular point of commentary as authoritative because of both the rank and the position of the person who writes it. And the intent may well have been to participate in a Chinese-style debate to inform. It's maybe not necessarily written for a Western audience.

So, two sort of follow up questions that invite any thoughts you have. Thank you.

DR. FRAVEL: Thanks, Commissioner Kamphausen.

I guess, to my mind -- and this may reflect my professorial hat -- near-peer competitor is not that useful in the sense that if it means being able to do what the U.S. can do wherever the U.S. can do it, and the way in which the U.S. can do it.

China I think is very much focused on the region, at least from a warfighting perspective. The protection of overseas interests are generally not, I think, warfighting scenarios for them, but other uses of military power.

And so, the question would be, is China a global near-peer competitor because the U.S. is a global military force? And the answer would be no, right? Is China a serious competitor in East Asia? In other words, could it really stand up to the United States? And I think the answer is yes.

And so, I think it depends upon the context in which you are applying the term and what the scenario is. And so, I would say you could maybe parse it as a regional near-peer competitor, but I think the idea of a peer competitor in the way it's typically used is from the Cold War and a global military, not a world-class military. There's a difference between world-class and being global. And so, I think in that sense it's maybe not particularly helpful.

So, I included the commentaries because I was trying to find something to hang onto and provide some insight to the Commission. And I agree, one, they are invitations to speculate. And so, I tried to look at as many as I could find. And I think there were some threads.

But let me provide context to one set of the commentaries. So, they came out of an issue of China Military Science, which, as you know, is published by the Academy of Military Sciences. And they were presentations from a symposium held in 2016 after Xi first just kind of threw out the phrase in an offhanded way to try to figure out what it meant, right?

And this, I think, is a very classic way in which Chinese policymaking done. The leader has a slogan. It's usually not defined. This would include some other slogans that we talk a lot about today, which when they first came out, like One Belt One Road, were not very well-defined. And then, you have a series of, even an effort to sort of try to define what it means. And also, if you have a Chairman responsibility system, perhaps the military thought they had an extra responsibility to figure out what Chairman Xi had meant in this context.

And so, I would say they're certainly not authoritative because they are the views of the individual officers who are writing them, and that's how they should be treated, simple as part of the discourse as to what this means.

The other thing I would note is, in the course of the research I did, the use of the term "world-class military" is declining, right? So, it peaks in 2017, when the Party Congress Report comes out. That generates a bunch of fairly superficial commentaries. And if we just double the number of hits that have appeared in 2019, it's going to be maybe half the 2017 amount. This doesn't seem to be a phrase that the PLA itself is attaching as much importance to, which I think goes back to part of your question, which is that the earlier commentary may not have

necessarily been authoritative or definitive statements. And perhaps the PLA is moving on from figuring out what that term may or may not, because they're actually focused on kind of the modernization benchmarks.

COMMISSIONER LEWIS: Dr. Fravel, before I had asked you when do you think a red line was crossed, and you said political. Dean Cheng before mentioned that, if Taiwan were to declare independence, that might be a red line. Are there other red lines that can envision besides that one?

DR. FRAVEL: I think that's the most important one. I think China, actually, for most issues does not try to create clear red lines. It tries to leave a lot of ambiguity or flexibility. The Chinese have a term for this, (Chinese term used). It's another reason perhaps why some of these slogans we've been talking about are also vague, because, then, you don't necessarily fail in your task, if you can sort of redefine what the meaning is.

And so, I think the one area where I think China has issued clear red lines in a political context is Taiwan. I think in other areas, even where sovereignty is disputed, they've been much more flexible because they know that there is a cost, both internationally and domestically, to issuing these red lines, right? So, they could be punished or criticized domestically if they declare a red line and don't back it up. And internationally, of course, I think it would attract even more attention to China's military and China's rise. And so, they do want to preserve as much flexibility as they can, even as they're also trying to advance their interests in these disputes.

COMMISSIONER LEWIS: You don't see, then, the U.S. attempt to have freedom of navigation being one of the red lines?

DR. FRAVEL: No, I do not, certainly not a red line to go to war. It is something they dislike. They view it as a challenge to their sovereignty broadly-defined. I think the U.S. and China talk past each other in freedom-of-navigation operations typically, because the PLA and Chinese sources are quite fond of freedom of navigation in just about every other body in the world.

So, if you read China's white paper on Arctic policy, it's all about China's rights to enjoy freedom of navigation in the Arctic, in the areas where the U.N. Convention on the Law permits freedom of navigation. So, China has no principled opposition to freedom of navigation. They are opposed to certain kinds of navigation in their region, which they, I think from their point of view, believe poses a challenge to their security interests. And that's why they oppose it.

COMMISSIONER LEWIS: Dean, did you want to say something?

MR. CHENG: Yes, sir. So, I think one other red line would be the issue of regime survival.

COMMISSIONER LEWIS: Of what?

MR. CHENG: Regime survival. Now that sort of goes without saying. But I bring this up in this specific context. The Chinese have not produced a PLA white paper since 2015. They seem to have stopped producing those.

But what is striking is that, in that last defense white paper, they made the very specific observation that China is now confronted by external states that are attempting to effect "color revolutions" in China. That is basically a statement that China is already on the strategic defensive facing adversaries who are trying to create regime change.

And I would suggest, whether or not that has actually crossed a red line is one thing, but that it puts them in the interesting position that they could, in theory, invoke a strategy of active defense because they are already under assault in terms of regime survival and regime security.

COMMISSIONER LEWIS: Would you feel comfortable being more specific as to what you're talking about on the regime change?

MR. CHENG: The ability of the Chinese Communist Party to retain power. So, from their perspective, it would seem that, you know --

COMMISSIONER LEWIS: No, but you said they're under assault.

MR. CHENG: Their description in the defense white paper is that China is already having other states trying to create a "color revolution" in China.

Larry, did you have another question you wanted to ask? Thank you.

COMMISSIONER WORTZEL: I did, and it sort of bridges this panel and the one that will happen this afternoon, because this one has the ambitions. And we talked a lot about the Strategic Support Force. Nobody has mentioned the Strategic Logistics Force. And I'm still trying to figure out what it is myself. But if you talk about ambitions, and whether they're expeditionary or along the OBOR or force projection, that Strategic Logistics Force is nascent, but I wonder if any of the three of you have any thoughts on it.

MR. CHENG: Yes, sir, a couple of quick thoughts.

First is, when we look at PLA history, we see a military that traditionally has been very bad at logistics. The Korean War really was a stop/start kind of thing, massive stockpiling, massive offensive, runs out of gas literally or food, and then, sort of builds up.

They look at how other people -- namely, the United States -- has been engaging in combat and see the important of logistics. Going to the civil-military integration aspect, however, that Dr. Bartholomew noted, I would just make the following very quick observation: China has something called "Single's Day," November 1st, one of the biggest retail events annually, billions, literally billions of dollars worth of stuff is bought in one day. And it is, for the most part, delivered within two weeks. That is an enormous logistical undertaking of pulsing something through and delivered with tracking of packages, and everything else, that, arguably, dwarfs Amazon on a good day.

(Laughter.)

But that's logistics. That is, I mean, if you talk to UPS and FedEx, what do they do? They do logistics. So, the fact of the matter is that China, in a sense, goes through an annual, massive, nationwide logistics exercise that is unpredictable, that is tying together multiple different sources and end-points, and doing so smoothly with a human talent pool as well as software and others that, arguably, could be ported.

COMMISSIONER WORTZEL: And it could be mobilized under the national mobilization.

MR. CHENG: Yes.

DR. SAUNDERS: If I could add to that, so in our big book on PLA reform, there is a chapter on logistics.

(Laughter.)

You'll learn. You'll learn.

(Laughter.)

And it does examine that. And I think part of the conclusion is, it's been, they call it a long march toward joint logistics, because it fits and starts. It's trying to figure out this and go with the different services going, then thinking how do you have interoperable systems, how do you track things. The military is an early mover in that, but that, then, means you have legacy systems and interoperability problems.

So, where the civilian sector, as Dean says, is good at this, they've built it from scratch,

and the PLA has to keep operating even as they do this. And it's been a real challenge.

I think the conclusion of the authors is that there's still a long way to go. And the focus right now is domestically, figuring out how to make this work with the theater commands and the different services. There is an ambition to apply that overseas, but that seems to have been put aside a little bit, except for the Djibouti base, because the challenge of figuring out how to make it work internally and with the theaters is such a big one.

So, I think, ultimately, they will turn to more expeditionary logistics, and there's writing about it and thinking about. But, right now, just making it work within China in the context of the reforms in the new theaters is a really big challenge.

COMMISSIONER LEWIS: Thank you.

We're going to adjourn at 12:50 and reconvene at 1:40.

But, since you're here, we want to take advantage of all your possible time. And Mike Wessel has another question for you.

(Laughter.)

COMMISSIONER WESSEL: Which you have two minutes to answer.

Dean, and for others as well, we have wrestled here with the inners; it's mil-civ fusion, it's all the things we've wrestled with here as well. It seems to me, based on the discussions, including about personnel, et cetera, that the Chinese, as part of their strategies, could weaponize the private sector. Can you give me a little more thought about that? And I know the intelligence law, and we're having all these discussions about to what extent might Huawei participate or not. What are your views on the weaponization of the private sector?

MR. CHENG: Weaponization of the private sector is simply another phrase for mobilization. And what we have seen is a consistent Chinese effort to upgrade and modernize their mobilization structure to the point of the National Defense Mobilization Commission, which runs from the very top all the way down to the township level, which ties things together. We see exercises of the operations off the Chinese littoral involving the naval militia is a de facto mobilization of elements of things. We see transportation mobilization.

So, what I would suggest is that this is a fundamental piece of civil-military fusion, civil-military integration. It's not simply, hey, you know, when you're building a railway station, have it be able to handle military loads. It requires practice. It requires thinking things through.

I think it is a scary statement that we no longer have an Industrial College of the Armed Forces. We renamed it to get rid of that whole "industrial college" thing. Whereas, I would suggest that the Chinese are very happy to think of it as mobilization, (Chinese term used), which is exactly, sir, what you're talking about.

COMMISSIONER WESSEL: Okay. Thank you.

DR. SAUNDERS: Can I?

COMMISSIONER WESSEL: Please.

DR. SAUNDERS: Can I defend National Defense University?

(Laughter.)

They changed the name, but the Eisenhower School is very much focused on mobilization and on figuring out how to kind of recapture and refocus on this and its relations with the defense industry and training students who really understand this.

And maybe it's slipped a little bit, but that is where the leadership is focused right now, on something that's got to be a core mission of the Eisenhower School.

COMMISSIONER WESSEL: And I attended Commandant Jansen's two-day or three-day mobilization surge capability session last year. So, I agree with you, it is still part of the

effort.

COMMISSIONER LEWIS: I guess our time is up.
Thank you very much for helping educate our office.
We'll reconvene at 1:40.

(Whereupon, the above-entitled matter went off the record at 12:51 p.m. and resumed at 1:41 p.m.)

PANEL III INTRODUCTION BY COMMISSIONER MCDEVITT

COMMISSIONER McDEVITT: We're going to get started here, so we stay on time and that I at least get a B+ for my management here.

Panel is entitled, "Building a World-Class Military: Missions, Modernization, and Bases". And we're fortunate to have three particularly talented analysts that I've had the pleasure of getting to know over many years to talk today.

We're going to start with Dr. Isaac Kardon, who's an Assistant Professor at the China Maritime Studies Institute at the U.S. Naval War College. Dr. Kardon is also accredited to the Department of Strategy and Operational Research at Navy War College. He's a core member of the China's Maritime Studies Institute, where he researches and writes on maritime disputes, Indo-Pacific maritime security and commerce, and China-Pakistan relations and the Law of the Sea.

And I can also attest from my personal experience that, if you want a good description of what does China's maritime rights and interests mean, he's the guy to turn to.

He's also served as a Managing Editor for their Red Book series of monographs on China's Maritime Power. And he teaches classes on Chinese politics and foreign policy at the Naval War College.

He was formerly a Research Analyst at National Defense University, Study for Chinese Military Affairs, for two years. He was Visiting Scholar at NYU Law School for two years. He was at the Chinese National Institute for South China Sea Studies for 2014 and got to know Wu Shicun, among others, well. And he's also done work at Academia Sinica. I don't know I can never say that.

And he's earned his PhD in government from Cornell University, and a master's of philosophy in modern Chinese studies from Oxford, and a BA in history from Dartmouth College.

So, Isaac, over to you.

**OPENING STATEMENT OF ISAAC B. KARDON, PH.D., ASSISTANT PROFESSOR,
STRATEGIC AND OPERATIONAL RESEARCH DEPARTMENT, U.S. NAVAL WAR
COLLEGE**

DR. KARDON: Thank you, Admiral McDevitt, Commissioners. It's a pleasure to be here.

Time is short. It's a tough act to follow, but I will try and hit the wave tops --

COMMISSIONER McDEVITT: Well, you have seven minutes to do it in.

DR. KARDON: -- of my presentation.

So, we've been discussing the People's Republic of China's program to develop a world-class military. And among the critical challenges facing the PLA in fulfilling this lofty, but ill-defined goal is an obvious deficit in its capacity to safeguard overseas interests, as they call it.

The demand generated by China's rapidly-growing portfolio of personnel, capital, and resources abroad outstrips the supply of Chinese security. Certain security tasks may be outsourced to private or local forces, but it is the PLA, and principally the PLA navy, that must deliver military capability to distant theaters and secure the sea lines of communications between those far-flung locales and the Chinese mainland.

I want to stress upfront a couple of things that will help frame our understanding of how the PLA is tasked to do this. Becoming a world-class military does not mean becoming the U.S. military. There is no evidence, nor particularly sound logic, to support the expectation that the PLA needs to establish a large number of permanent military bases that support major combat operations abroad. This is hardly the same thing as saying that China's growing overseas military capabilities are unworthy of our concern, but it is a distinction with a difference that I'm going to try and lay out.

Among those differences, China does not have any military alliances, nor will it in the foreseeable future, North Korea notwithstanding. America, by contrast, has on paper 66 treaty allies, some 514 bases, 24 of which are characterized as large by the DoD.

There is no prospect that the largely commercial sites of most interest to the PLA at present could support such presence, nor any real prospect that they would be reliable, defensible sites in the event of a major conflict.

The second contextual point concerns the predominantly commercial character of China's overseas facilities. This hardly precludes dual-use functions, but I'd like to argue that it's not particularly illuminating to ask whether these facilities are commercial or strategic because the answer is, yes, commerce is the strategy. This is, of course, an oversimplified way of putting it, but it will not strain imagination to recognize that there are strategic effects that may flow from the commanding commercial position in global trade and logistics that a few Chinese state-owned enterprises have staked out.

If these facilities were to be overtly militarized, the commercial viability of many of these highly capital-intensive projects could be severely jeopardized, as would China's overall diplomatic position. There are, thus, clear, and possibly overwhelming, opportunity costs facing China as its leaders consider the choice of an overseas basing scheme to project power compared to a program of overseas commercial expansion, albeit one that unavoidably generates demands for military security.

Another way of putting this, you know, Xi Jinping wants a world-class military, but he does not want a black eye for the BRI. Managing that tension is what we're observing now in the Chinese discourse.

Finally, by way of framing, China's continental geography changes the geostrategic logic of overseas bases, another reason not to think of China like the United States, a maritime power by any estimation.

Overland routes from overseas ports to China are strategically meaningful, different than the United States. Chinese military power will continue to be projected largely from the land outward to sea and air. The vital SLOCs connecting China's coastal economic centers to resources and markets abroad will continue to traverse a series of vulnerable maritime chokepoints.

From the U.S. standpoint, these look like grave liabilities. From a Chinese perspective, they are mutable realities that require the development of a hybrid continental maritime state concept or approach to national security. So, if the United States is blessed by its splendid isolation, we can say the Chinese are cursed by difficult neighbors.

So, maybe foolishly, I responded more or less directly to the questions posed to me by the Commissioners. I hope that is acceptable, and I will quickly hit the answers that I offered, and then, if I have time, make a couple of recommendations.

So, we spoke about the establishment of the PLA, quote, "logistical support facility" in Djibouti in 2017. And this definitely marks a significant step towards the PLA achieving capacity to conduct out-of-area ground maritime and air operations. However, because this single outpost is not mutually supported or supplied by other sites, the PLA's ability to sustain large-scale operations beyond China's immediate periphery will remain limited for the foreseeable future. Again, the main developments to date have concerned a narrower PLA tasking to safeguard overseas interests.

I've been tracking a concept that's evolving in the Chinese literature and in some authoritative documents, including their economic planning documents, like their 13th Five-Year plan called strategic strongpoints. Conor Kennedy at CMSI also has led the way with this research.

You ask about the nature of these agreements. We know very little in open sources about the nature of China's lease on its facility in Djibouti other than that analysts suggest that it resembles very closely the American agreement as well as the Japanese agreement. I'd like to lay emphasis on that Japanese agreement.

Commissioner Kamphausen pointed out earlier that the presence of the Gulf of Aden anti-piracy mission and PKOs in Africa is an important consideration that makes Djibouti somewhat unlikely to be a model for future bases. I concur and would also add the fact that that's the site of Japan's overseas base was something that was first quite prominent in the minds of Chinese planners, and they expressly asked the Americans, how did you set it up for the Japanese? I think this, from a domestic Chinese standpoint, was instrumental to making the decision to actually have a base at Djibouti.

So, more probably than developing a vast network of overseas bases, the PLA will avail itself of a network of commercial facilities without any formal or overt agreements for military use. Such arrangements can likely be secured with increasing scale and efficiency because Chinese state-owned enterprises are now among the world's leading commercial port operators, as well as shipping line operators. And less than 13 of the 20 largest ports in the world are actually in mainland China, and some 70 in a database that we are working on now of the world's major ports now have a Chinese presence of some kind. And we're talking not about exclusive ownership of the port authority, but, rather, some degree of equity state operation of a terminal, things of that nature.

So, I will move quickly because I am short on time, and just emphasize that the key point that I want to make here is that the opportunity costs of pursuing a very large overseas military basing concept to support expeditionary offensive operations -- and this is the sort of extreme case of being modeled after the post-war United States military, and particularly the navy -- loom quite large.

This does not mean that China will not pursue all manner of dual-use, and maybe dual-use is actually sort of understating the variety and range of uses that commercial facilities can be put to. But the thing that is most important for us to understand is that looking for each of these facilities to become a military base at some point in the future is going to distract us from the very real and concrete functions which they serve at present. I do not expect them all to become bases, and if that's our analytical lens, we're going to be confusing ourselves when we look at incremental developments in their use.

So, I realize I'm over time. I think some of your other questions will come through later, and I turn it over to my colleague Chris Yung, who will speak much more authoritatively about expeditionary operations at any rate.

Thank you.

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Hearing on “A ‘World-Class’ Military: Assessing China’s Global Military Ambitions”

Panel III: Building a World-Class Military: Missions, Modernization, and Bases

Witness Questions re: “Bases, Places, and a ‘Security Guarantee’ for the Belt and Road Initiative”

Introduction:

The People’s Republic of China’s (PRC) program to develop a world-class military (世界一流军) is well underway. Among the critical challenges facing the People’s Liberation Army (PLA) in achieving this lofty but ill-defined goal is an obvious deficit in its capacity to “safeguard overseas interests.”¹ The demand generated by China’s rapidly growing portfolio of personnel, capital, and resources abroad outstrips the supply of Chinese security.² Certain security tasks may be outsourced to private or local forces,³ but it is the PLA – and principally the PLA Navy (PLAN) – that must deliver military capability to distant theaters and secure the sea lines of communication (SLOCs) between those far-flung locales and the Chinese mainland.

Becoming a “world-class military” does not mean becoming the U.S. military. Certainly, China’s objective entails fielding a force with joint capabilities that are at least competitive, if asymmetrically, with those of the U.S. and its allies. It does not, however, follow that the U.S. model of forward-deployed forces capable of global power projection for major combat operations is a requirement or even a long-term objective for the PLA. Among other contrasts, there is no evidence – nor sound logic – to support the expectation that the PLA needs to establish a large number of permanent military bases that support major combat operations abroad. This is hardly the same as saying China’s growing overseas military capabilities are unworthy of concern, but it is a distinction with a difference.

Even as Chinese analysts and planners draw inspiration from the “bases and places” concept employed by the U.S., the pattern and functions of China’s overseas facilities will remain

¹ This evolving mission is now a “strategic task” defined in the PRC State Council Information Office, “White Paper on China’s Military Strategy,” May 2015,

http://english.gov.cn/archive/white_paper/2015/05/27/content_281475115610833.htm

² One Beijing Academy of Social Sciences researcher describes a “serious structural imbalance between low supply and high demand in China’s international security market,” (Liu Bo [刘波], “Research on Private Security Companies in the Construction of the ‘Belt and Road’ Security System [‘一带一路’安全保障体系后减重的私营保安公司研究],” *Journal of International Security Studies* [国际安全研究], no. 5, 2018, p. 120). This is a clear way to express a common consideration that China does not provide military security for its overseas projects or citizens, and instead relies on local support or free-rides on U.S. security, in Afghanistan or Iraq for example.

³ A 15,000 person security force consisting of Pakistani military and paramilitary forces is tasked with providing security for Chinese personnel and assets in Pakistan (“Pakistan Army Plans New Unit To Protect CPEC Projects,” *Gulf News Asia*, 19 May 2019, <https://gulfnnews.com/world/asia/pakistan/pakistan-army-plans-new-unit-to-protect-cpec-projects-1.64050168>). For more wide-ranging discussions of the role of private and local security forces in protecting China’s overseas interests, see Cao Haifeng [曹海峰], Gong Weibin [龚维斌], “Improving the ‘Belt and Road’ Overseas Emergency Response Mechanism [完善“一带一路”境外涉我突发事件 应急管理机制],” *Chinese Cadres Tribune* [中国党政干部论坛], April 2019, pp. 63-65; Liu Bo [刘波] 2018: pp. 120-160; see also Heath, Timothy R., *China’s Pursuit of Overseas Security*. Santa Monica, CA: RAND Corporation, 2018. https://www.rand.org/pubs/research_reports/RR2271.html.

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distinctive. The American mode of overseas basing is indeed cited in Chinese writing on the PLA's need for overseas facilities. That need is now openly stated, in contrast to prior reticence or outright denials from all but the most forward-leaning voices in China.⁴ However, we should carefully distinguish when U.S. practice serves as a *model* for China vice a *justification* for PLA practice that differs along critical dimensions.⁵

Three such dimensions bear noting up front. First, **China does not have any military alliances**, nor will it in the foreseeable future (the treaty with North Korea is suspect and, at any rate, involves territory contiguous to China not suitable for overseas power projection). This fact surfaces an immediate and obvious contrast that imposes definite constraints on the PLA's overseas basing potential. America's treaty allies (66, on paper)⁶ have concluded binding agreements for mutual defense in wartime. Many allies and non-treaty partners host permanent facilities⁷ that support long-term deployments of significant numbers of military and support personnel, often with their families.⁸ There is no prospect that the largely commercial sites of most interest to the PLA at present could support such presence, nor that they would be reliable, defensible sites in the event of major conflict.

⁴ For example, PLA Air Force Senior Colonel Dai Xu has opined on the necessity for a military base for over a decade, e.g. 戴旭[Dai Xu], “中国应该建设海外基地 [China Should Establish Overseas Bases],” 环球时报 *Huanqiu Shibao*, Feb 3, 2009, <http://mil.huanqiu.com/top/2009-02/363027.html>; this has been a popular position among nationalist audiences at least since that time, e.g., Gao Youbin [高友斌], “Netizens Call for Overseas Base, Aircraft Carrier Formation to Maintain Distant Sea Rights and Interests” [网民呼吁寻求海外基地组航母编队维护远洋利益], *Global Times* [环球时报], October 21, 2009, available at <<http://mil.huanqiu.com/china/2009-10/608793.html>>. Others, including senior military officials, continued to downplay the possibility, e.g., Zhang Zhaozhong: Probability That China Builds Overseas Base Not Large” [张召忠：中国在海外建军事基地的可能性不大], *QQ.com*, January 19, 2010, available at <http://news.qq.com/a/20100119/002913.htm>. Officials resisted confirming that a base would be established until the Djibouti base was nearly opened, with the Ministry of National Defense denying reports as late as May 2016: Ben Blanchard, “China Military Declines to Confirm Djibouti Base Plan,” *Reuters*, June 25, 2015, available at <www.reuters.com/article/us-china-defence-djibouti/china-military-declines-to-confirm-djibouti-base-plan-idUSKBN0P51CV20150625>

⁵ This distinction is made explicit in some work, e.g. Sun Degang [孙德刚], “Analysis of the Conditions for the Deployment of Major Power Military Bases [大国海外军事基地部署的条件分析],” *World Politics and Economics* [世界经济与政治], no. 7, 2015, pp. 40-67; Xue Guifang [薛桂芳] and Zheng Jie [郑洁], “The Realistic Demand and Risk Response for China's 21st Century Construction of Overseas Military Bases [中国 21 世纪海外基地建设的现实需求与风险应对],” *International Outlook* [国际展望], no. 4, 2017, pp. 104-121; Sun Degang [孙德刚], “Overseas Bases Influence on the Power of Deploying Countries [论海外军事基地对部署国权力的影响],” *International Forum* [国际论坛], no. 5, 2014), Sun Degang [孙德刚], “On the Strategic Restructuring of U.S. Middle Eastern Bases Since the End of the Cold War [冷战后美国中东军事基地的战略调整],” *World Politics and Economics* [世界经济与政治], no. 6, 2016; Han Yue [韩跃], “A comparative study on the logistics support mode of Chinese and American Naval Escort Operations [中美海军远海护航行动后勤保障模式比较研究],” *National Defense* [国防], no. 6, 2017.

⁶ Douglas M. Gibler, *International Military Alliances, 1648–2008* (Washington, D.C.: Congressional Quarterly Press, 2009), <http://www.correlatesofwar.org/COW2%20Data/Alliances/alliance.htm>

⁷ The Department of Defense counts some 514, of which 24 are classified as “large sites” hosting significant capabilities and large numbers of personnel. U.S. Department of Defense, “Base Structure Report,” September 2017, <https://www.acq.osd.mil/eie/Downloads/BSI/Base%20Structure%20Report%20FY18.pdf>

⁸ Other sites, like Singapore, are not formal bases but provide logistical support for the U.S. Navy, including a dedicated berth for Nimitz-class carriers.

This **predominantly commercial character of China's overseas facilities** is a second limiting factor. For reasons explored below, this hardly precludes dual-use functions that challenge the U.S. and its allies. Nonetheless, it is not illuminating to ask whether the facilities are “commercial” or “strategic” because the answer is “yes” – *commerce is the strategy*. This is of course oversimplified, but it will not strain imagination to recognize that strategic effects may flow from the commanding commercial position in global trade and logistics that a few Chinese state-owned enterprises (SOEs) have staked out. If these facilities were to be overtly militarized, the commercial viability of many of these highly capital-intensive projects could be severely jeopardized, as would China's overall diplomatic position. There are thus clear and possibly overwhelming opportunity costs facing China as its leaders consider the choice of an overseas basing scheme to project power compared to a program of overseas commercial expansion – albeit one that unavoidably generates demands for military security.

Finally, **China's continental geography changes the geostrategic logic of overseas bases**. If the U.S. is blessed by “splendid isolation,” the PRC is cursed by difficult neighbors. Some 14 countries (several of them large and nuclear-armed) crowd China's continental periphery, whereas the U.S. enjoys the geostrategic luxury of meeting security challenges far from America's shores.⁹ Interior, not exterior, lines of communication are intrinsic to China's geographic position. This means, inter alia, that overland routes from overseas ports to China are strategically meaningful; that Chinese military power will continue to be projected largely from the land outward to sea and air;¹⁰ and that the vital SLOCs connecting China's coastal economic centers to resources and markets traverse a series of vulnerable maritime chokepoints. From the U.S. perspective, these look like grave liabilities; from the Chinese perspective, they are immutable realities that require development of “hybrid continental-maritime state” (陆海符合国家)¹¹ approach to national security.

With this context intact, we can examine some of the details of China's efforts to secure its overseas interests. This testimony follows the Commission's prompts to address (I) the emerging Chinese network of overseas bases and places, (II) the PLA's actual and possible roles and functions at these sites, (III) their viability for expeditionary operations, and (IV) their probable connection to artificial island bases constructed in the South China Sea.

⁹ 14 countries are contiguous to China, including four nuclear armed states (Russia, India, Pakistan, and North Korea). China also has eight or nine maritime neighbors (depending on how you count Taiwan), all of whom are in relatively close proximity due to the “first island chain” surrounding China's eastern flank and the Korean peninsula.

¹⁰ i.e., what Chinese military analysts often call “using the land to control the sea (以陆制海)” (See Erickson, Andrew S. and David D. Yang, “Using the Land to Control the Sea? – Chinese Analysts Consider the Antiship Ballistic Missile,” *Naval War College Review*, vol. 62, no. 4, pp. 1-34). This is the reverse of the U.S. doctrinal preference for military use of the sea and air to control the land, e.g., the U.S. Department of Defense, “Air-Sea Battle Concept: Service Collaboration to Address Anti-Access & Area Denial Challenges,” Air-Sea Battle Office (May 2013), <https://dod.defense.gov/Portals/1/Documents/pubs/ASB-ConceptImplementation-Summary-May-2013.pdf>

¹¹ This hybridity has been an ongoing conversation in Chinese strategic circles since the turn of the century, e.g., 邵永灵 [Shao Yongling] and 时殷弘 [Shi Yinhong], “近代欧洲陆海复合国家的命运与当代中国的选择 [The Fate of Modern European Land-Sea Hybrid States and China's Choices],” *实际经济与政治 [World Economics and Politics]*, October 2000, pp. 47-52. For a good round-up of this debate, see Daniel Hartnett and Frederic Vellucci Jr., “Continental or Maritime Power: A Summary of Chinese Views on Maritime Strategy Since 1999,” *Center for Naval Analyses*, October 2007.

I. What steps is Beijing taking to build a network of military bases and other support facilities overseas and how might this evolve, including the potential for agreements on supply and support to maritime and air operations? What do China's national leadership and the PLA envision for the PLA's role in supporting the Belt and Road Initiative?

The establishment of a PLA “logistical support facility” (后勤补给设施) at Djibouti in 2017 marks a significant step towards the PLA achieving capacity to conduct out of area ground, maritime, and air operations. However, because this single outpost is not mutually supported or supplied by other sites,¹² the PLA’s ability to sustain large-scale operations beyond China’s immediate periphery will remain limited for the foreseeable future. The main developments to date have concerned a narrower PLA tasking to “safeguard overseas interests.”¹³ This mission-set is more modest than the development of major combat capability overseas. Instead, it demands various bespoke operations to secure, defend, evacuate, and/or convoy Chinese personnel, assets, and resources, now widely distributed around the globe. Achieving this goal is the principle driver for China’s current push to establish overseas facilities and access points – that is, strategic strongpoints (战略支点).¹⁴

How will the PLA achieve the necessary logistical support for this mission to protect overseas interests? Djibouti is almost certainly not predictive of future arrangements. The agreement reached with the Djiboutian government for leasing and operation of the PLA base nearby Doraleh Multi-Purpose Port reportedly resembles the one concluded with the US.¹⁵ There are models for at least temporary status of forces embedded in China’s Shanghai Cooperation Organization agreements as well as its agreements for military exercises with Russia.¹⁶ It is unlikely, however, that such an agreement would be possible or desirable at many of the other locations at which Chinese state-owned enterprises (SOEs) have established commercial presence.¹⁷ Djibouti is unlikely to serve as the model for other bases. The conditions that led to its establishment are unique and quite unlikely to be replicated. Djibouti’s geographic position allows it to directly support the PLA’s first regular overseas military mission (the anti-piracy escort task forces operating in and around the Gulf of Aden). Furthermore, Djibouti is the site of Japan’s only overseas military installation, a crucial fact that Chinese interlocutors never fail

¹² One Chinese maritime strategist likened the PLA’s Djibouti base to Imperial Germany’s base at Qingdao, which was immediately seized by Japanese forces at the outbreak of World War I.

¹³ This is one of eight “strategic tasks” laid out in the 2015 Defense White Paper on China’s Military Strategy.

¹⁴ See below for further explication of this concept.

¹⁵ A “status of forces” agreement is not public, but a Chinese analyst from the PLA National Defense University plausibly claims it is modeled on that of the U.S. 丰松江 [Feng Songjiang]. 2018. “现代海外军事基地发展呈现新特点” [New Features in the Development of Modern Overseas Military Bases], *世界知识 [World Affairs]*, No. 11, pp. 60-61.

¹⁶ Some scholars advocate expressly for these to serve as a model for other bases and claim that the Agreement of the Shanghai Cooperation Organization Member States on Joint Military Exercises (Article 7) and The Agreement Between People’s Republic of China and the Russian Federation on the Temporary Status of Forces in the Other’s Territory during Joint Military Exercises (Article 5) provide useful templates for multilateral and bilateral military basing arrangements, respectively ((Xue and Zheng 2017: 105-107).

¹⁷ Chinese legal scholars note that international law is no constraint on bilateral arrangements at the invitation of the host country. For some, it would be irresponsible for China *not* to make formal military arrangements due to its international responsibilities and obligation to protect its own interests (Xue and Zheng 2017: 116); nonetheless, even these most gung ho of advocates for overseas basing recognize that the international political environment is not ready for such a development.

emphasize.¹⁸ The confluence of these two factors made the decision to establish a base much easier from a diplomatic and operational standpoint.

More probably, the PLA will avail itself of a network of commercial facilities without any formal or overt agreements for military use. Instead, Chinese forces operating abroad will likely secure supplies and other services at SOE-owned or -operated ports and facilities – or simply call at friendly foreign ports where husbanding arrangements can be made commercially on an ad hoc or contractual basis. Such arrangements can likely be secured with increasing scale and efficiency because several Chinese state-owned enterprises (SOEs) are now among the world’s leading commercial port operators. No less than 13 of the 20 largest ports in the world are in mainland China, and Chinese SOEs have equity and/or operating leases on upwards of 70 other key ports across the globe.¹⁹ To date, only one such SOE-invested or -operated port has resulted in a Chinese military base: the PLAN base adjacent to the China Merchants Port multi-purpose port in Djibouti. There is some potential for a variety of dual-use functions at many other facilities, but only limited scope for the development of more outright military bases.

Analytically, the Belt and Road Initiative is probably not the right category for determining where and how the China will establish such support facilities overseas. For one, as a simple matter of accounting, it remains unclear how many countries are “members” and what that status entails.²⁰ A Peking University research institute lists 64 countries as “沿线国家,” or “countries along” the BRI,²¹ while the PRC State Council’s National Development and Reform Commission’s official BRI website touts some 173 agreements with 125 countries and 29 international organizations that have some (undefined) connection to the BRI.²² Many news outlets report that there are about 70.²³ Meanwhile, not all countries where China has major “overseas interests” are classified as BRI countries, nor is there yet any evidence that being so designated entails any systematic differences in military to military or other bilateral relations.²⁴

It is therefore analytically preferable to look at the locations where Chinese SOEs have established commercial outposts and the sites where the PLAN has made port-calls in order to begin making inferences about the likely demands for PLA logistical support. Pending complete collection and analysis of those data, most of which are available in open sources, a conceptual

¹⁸ Author discussions with PLA and with US military commanders who discussed the establishment of a base with PRC personnel.

¹⁹ Author’s database, collected from open sources, e.g., Lloyd’s List Maritime Intelligence and IHS Markit Sea-web.

²⁰ A country’s decision to join BRI is already a function of its existing diplomatic relationship, rendering endogenous any subsequent decision to deepen bilateral relations with China by, say, developing a commercial port.

²¹ Peking University “One Belt One Road” Data Analysis Platform [北京大学《一带一路》数据分析平台], <http://ydyf.pku.edu.cn/yxgj/index.htm>

²² “Belt and Road Portal,” PRC State Council National Development and Reform Commission, <https://eng.yidaiyilu.gov.cn/qwyw/rdxw/86301.htm>

²³ The Economist counted 71 in April 2018: “What’s in it for the Belt-and-Road countries?” *The Economist*, 19 April 2018, <https://www.economist.com/the-economist-explains/2018/04/19/whats-in-it-for-the-belt-and-road-countries>

²⁴ Kenneth Allen, Phillip C. Saunders, and John Chen, “Chinese Military Diplomacy, 2003-2016: Trends and Implications,” China Strategic Perspectives No. 11, Center for the Study of Chinese Military Affairs, National Defense University, p. 1-3.

container better-suited to understanding where and how such logistical arrangements are likely is the “strategic strongpoint” (战略支点) overseas port.²⁵

The strategic strongpoint concept is increasingly deployed among Chinese strategists and officials to highlight the geoeconomic value of the location – its proximity to markets, resources, or SLOCs. This economic priority generates a necessity for security, largely the remit of the PLA. Importantly, this is a networked concept: a single site will not do. Mutually supporting, functionally differentiated points will afford the best possible security guarantee for China’s overseas interests.²⁶ Not all strategic strongpoints must be sites for PLAN port calls or military facilities of any kind, but rather can fall along a spectrum from friendly commercial ports of call to a full-up naval base like Djibouti.²⁷ Additionally, the strategic strongpoint is virtually never described as a platform for offensive military operations; rather, researchers portray such overseas ports as the logical sites for staging some military operations designed to “safeguard overseas interests” – especially the SLOC-protection mission.²⁸

This strategic strongpoint terminology has growing currency in authoritative official economic planning documents like the 13th Five Year Plan (2016-2020),²⁹ and the BRI’s guiding “vision” as released by several of China’s leading state agencies in 2015.³⁰ But the concept and its logic predates those BRI documents, appearing prior to the unveiling of the Initiative itself in the authoritative 2013 Science of Military Strategy, which states that the PLA:

“...must build overseas strategic strong points that depend on the homeland, radiate into the periphery, and move us in the direction of the two oceans [i.e. the Pacific and Indian Oceans]. These sites are to provide support for overseas military operations or act as a

²⁵ This is the author’s preferred translation, though “strategic support point” is also viable. See Kennedy, Conor, “Strategic Strong Points and Chinese Naval Strategy,” *Jamestown China Brief*, vol. 19, no. 6, 22 March 2019, <https://jamestown.org/program/strategic-strong-points-and-chinese-naval-strategy/>; see also Kardon, Isaac B. and Conor Kennedy, “A Base By Any Other Name? China’s Strategic Strongpoints,” in *Going Global? The People’s Navy in a Time of Strategic Transformation*, Newport: Naval War College Press, forthcoming 2020.

²⁶ For a particularly clear analysis of the varied types of mutually supporting strategic strongpoints from a scholar from the Academy of Military Sciences, see Hu Xin [胡欣], “The Expansion of National Interests and the Construction of Overseas Strategic Strong Points [国家利益拓展与海外战略支撑点建设],” *世界经济与政治论坛 [Forum of World Economics & Politics]*, No. 1, Jan. 2019, pp. 21-35.

²⁷ Indeed, another Chinese scholar from the PLA Academy of Military Science categorized Djibouti as China’s first strategic strong point. Liu Lin [刘琳], “Strategic Strongpoints and Military Diplomacy Construction Along the Belt and Road [“一带一路”沿线战略支点与军事外交建设],” *World Knowledge [世界知识]*, 26 July 2017, <http://m.dunjiaodu.com/waijiao/1562.html>

²⁸ Zhang Jie [张洁], “Maritime Channel in Southeast Asia and China’s Strategic Pivots [海上通道安全与中国战略支点的构建],” *Journal of International Security Studies [国际安全研究]*, No. 2, 2015, pp. 100-118.

²⁹ This most authoritative economic planning document charges the party-state to “actively advance the construction of strategic strongpoints along the 21st Century Maritime Silk Road, participate in the building and operation of major ports along the road, and promote the joint development of industrial clusters around these ports to ensure that maritime trade routes are clear and free-flowing,” PRC National Development and Reform Commission. 2016. “The Thirteenth Five Year Plan for Economic and Social Development of the PRC [2016-2020].” Beijing: Central Compilation & Translation Press, Part XI, Chapter 51, Section 2.

³⁰ “Vision and Actions on Jointly Building Silk Road Economic Belt and 21st-Century Maritime Silk Road [推动共建丝绸之路经济带和 21 世纪海上丝绸之路的愿景与行动],” Issued by the National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce of the People’s Republic of China, 28 March 2015.

forward base for deploying military forces overseas, exerting political and military influence in relevant regions. We should form a posture with the homeland strategic layout that takes account of both the interior and the exterior, connects the near with the far, and provides mutually supporting facilities.”³¹

The recent advent of BRI only compounds a shortcoming in overseas capability that the PLA has faced for at least 20 years. China’s firms have sought foreign markets and resources – and to develop the seaports that facilitate export and import – with increasing scale and tempo since becoming a net oil importer in 1993. Jiang Zemin’s “Go Out” (走出去) strategy, launched in 1999,³² is the forbear to steadily more grandiose programs pushed by Hu Jintao’s “New Historic Missions” and now Xi Jinping’s “Belt and Road Initiative” to promote China’s continued economic development. The PLA has consistently lagged behind this trend.

The flag evidently follows trade in the open, globalized economy of the early 21st century.³³ Arguably, this is because security for commerce is already fairly stable due to the overwhelming presence of the U.S. Navy and its allies and partners, and prevailing norms of “free and open” trade. Yet China is vulnerable to changes in U.S. strategy. Thus, Chinese leadership increasingly views it as a vital imperative to establish its own security backstop for its globalized commercial interests.³⁴

This mission falls primarily to the PLAN. South Sea Fleet Commander Wang Hai told the *People’s Navy* that “[w]e must closely coordinate with the Belt and Road Initiative, use multiple means to safeguard the security of strategic sea lanes in the region, and ensure that strategic capabilities can extend and radiate wherever China’s interests develop.”³⁵ He evokes the BRI not because it defines the geographic or economic scope of his mission, but because it is the surest way for PRC central leaders to market the military’s mission in a positive light.

Indeed, Xi Jinping told the first Belt and Road Forum (BARF) in May 2017 that “the Belt and Road initiative requires a peaceful and stable environment,” observing that the countries and regions it traverses “are often associated with conflict, turbulence, crisis, and challenge.”³⁶ At a 2019 address to the Central Party School, Xi proposed “improving the BRI security system [一

³¹ Shou Xiaosong [寿晓松], ed.. 2013. *战略学 [The Science of Military Strategy]*, Beijing: Military Science Press [北京: 军事科学出版社], p. 254. Henceforth “Academy of Military Sciences 2013”

³² Jiang Zemin originated the “Go Out” program in 1999, and it was expanded by Hu Jintao in 2003. The policy was explicitly linked to China’s accession to the World Trade Organization. PRC State Council Information Office. 2006. “Better Implement the ‘Go Out’ Strategy, [更好地实施“走出去”战略].”

³³ For cogent recent analysis of this pattern, see Scobell, Andrew and Nathan Beauchamp-Mustafaga, “The Flag Lags But Follows: The PLA and China’s Great Leap Outward,” in *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, eds. Phillip C. Saunders, et al., Washington: NDU Press, 2019, pp. 171-199.

³⁴ As a leading Chinese sea power theorist puts it: “Wherever the interests go, our security boundary must also go [利益走向哪里，我们的安全边界就走向那里],” in Zhang Wenmu [张文木], *On Chinese Seapower [论中国海权]*, Beijing: Maritime Press, 2014, p. 210-211. This is not a uniquely Chinese view on interests and security.

³⁵ “Unswervingly move toward the goal of comprehensively building a world-class navy [坚定不移向着全面建成世界一流海军目标迈进],” *People’s Navy [人民海军]*, 15 June 2018, pp. 2-3.

³⁶ “Full Text of President Xi’s Speech at Opening of Belt and Road Forum,” *Xinhua*, May 14, 2017, http://www.xinhuanet.com/english/2017-05/14/c_136282982.htm.

带一路安全保障体系]”³⁷...and “strengthening the protection of overseas interests and ensuring the safety of major overseas projects and personnel.”³⁸ BRI is the vehicle and an ex post justification of sorts for energizing a process to secure Chinese interests abroad that has been underway for some time.

The BRI also provides an administrative home for domestic reforms that will enable the PLA and private security to coordinate with the state and enterprises in providing security. The Office of the Leading Group for Promoting the Belt and Road Initiative, an “interagency” group under the State Council’s National Development and Reform Commission headed up by Chinese Communist Party (CCP) Politburo Standing Committee (PBSC) member Han Zheng proposed two security mechanisms toward this end. The first is a “security risk early-warning and monitoring mechanism,” and the second is an “emergency response mechanism.”³⁹

Neither mechanism has yet been fully articulated in a major speech nor implemented by the relevant agencies, though Central Party School researchers quickly began to elaborate the need to coordinate “front-end construction with back-end security.”⁴⁰ They recommend establishing a “‘Belt and Road’ Safety Emergency Subcommittee” under the PRC’s relatively new Central National Security Commission (中央国家安全委员会), which could help integrate the party, state, and military functions necessary to manage emergent security threats abroad. Relatedly, the Secretary General of the China Port Association, Ding Li, suggests a similar integration – in his case, a “Belt and Road national port liason mechanism” (建立“一带一路”国家港口联络机制) that would join party, state, and military leaders in a unified (but perhaps ad hoc) committee to facilitate security and coordinate policy at strategic strongpoint ports.⁴¹

Chinese leadership plainly wants to include the PLA in addressing overseas security concerns *without* giving the impression that it is “militarizing” all of its commercial facilities. This is a current and unresolved problem, and the commercial logistics facilities already established by SOEs are an overwhelmingly likely site for experimenting with ways to deter and control

³⁷ Although this prompt appears prominently in the Commission’s questions, I do not yet see evidence in open sources that this “system” has become a major theme in Chinese writing or thinking. There is evidently a centrally-funded grant for research on “Belt and Road Risks and Systematic Response” (国家社科基金项目“‘一带一路’战略风险及系统应对研究” [16XGJ010]. Beyond that, only two detailed examinations are readily available. One is by two researchers at Guizhou University, and focuses at a very generic, sloganeering level on security along the BRI (Yang Da [杨达] and Deng Yu [邓羽], “Perfecting the Collective Construction of the ‘One Belt One Road’ Security Guarantee System [完善共建‘一带一路’安全保障体系],” *Guangming Daily* [光明日报], 1 April 2019, p. 16, <http://mini.eastday.com/a/190401050446529-4.html>); a second is Liu Bo (2018) on the role of private security firms in this system (see fn 2). It is possible that this concept is simply new, but equally possible that it is one of many slogans relating to BRI that will not develop into a concerted set of policies backed by substantial resources.

³⁸ Xi Jinping [习近平], “To Prevent and Resolve Major Risks in Various Domains, Xi Jinping Has Clear Requirements [防范化解各领域重大风险, 习近平有明确要求],” *Xinhua* [新华网], January 22, 2019, http://www.xinhuanet.com/2019-01/22/c_1124024464.htm.

³⁹ Office of the Leading Group for Promoting the Belt and Road Initiative, “The Belt and Road Initiative: Progress, Contributions and Prospects,” 22 April 2019, http://www.xinhuanet.com/english/2019-04/22/c_137998357.htm

⁴⁰ Cao and Gong, “Improving the ‘Belt and Road’ Overseas Emergency Response Mechanism,” p. 63.

⁴¹ Ding Li [丁莉], “Writing a New Chapter in the Construction of the 21st Century Maritime Silk Road with the Port as a Strategic Strongpoint [以港口为战略支点书写 21 世纪海上丝绸之路建设新篇章],” *China Ports* [中国港口], no. 7, 2018, http://www.sohu.com/a/242651424_784079

emerging risks and threats to China's overseas interests. The strategic strongpoint concept is a leading contender in the debate about how to go about doing so without developing a large network of overtly military facilities. This remains a work in progress.

II. What, if any, evidence exists that China intends to use the construction, acquisition or management of commercial logistics infrastructure to develop an overseas support network for clandestine military or intelligence operations, including through the stationing of military or intelligence personnel at these facilities?

While we cannot rule out clandestine efforts to establish military or intelligence operations from China's commercial ports, open sources do not provide anything beyond speculation about such practices. The overt uses, however, of SOE-built, -owned, or -operated port facilities are worthy of attention in their own right. In particular, we should attend to the immense portfolio of overseas ports and related infrastructure designed, built, and sometimes owned and operated by subsidiaries of centrally-owned SOEs⁴² – especially industry leaders like China Merchants Ports (CMP), China Overseas Shipping Corporation (COSCO) Shipping Ports, and China Communications Construction Corporation (CCCC) and its subsidiary China Harbor Engineering Corporation (CHEC).⁴³

These SOEs are not “state-run” in the sense of being managed directly by state bureaucrats, much less by party cadres. Still, at the “group” or enterprise level, the central SOEs are led by a CEO or other executive appointed directly by the State Assets Supervision Administration Commission (SASAC) under the State Council, China's cabinet. That executive holds vice-ministerial rank and can therefore be reliably considered an agent of the state in certain respects. Even if that executive comes from industry, it is a political appointment. Therefore, the cloak-and-dagger clandestine infiltration of one of the 70-odd SOE-operated ports⁴⁴ seems unnecessary when the channels between the SOE and state agencies are direct and explicit.

Anecdotally, there are some port projects for which there is not a strong commercial rationale.⁴⁵ In such cases, the reasonable presumption is that political incentives pushed firm executives to pursue a project driven by China's broader diplomacy.⁴⁶ It can be “good for business” for an SOE to pursue a project for which there is strong political backing by elite party members or for

⁴² Central SOEs are those owned by the central government, some 96 firms that include the “big three” port developer/operator firms: China Merchants Ports (a subsidiary of China Merchants Group), COSCO Shipping Ports (a subsidiary of COSCO), and China Communications Construction Group (which operates China Harbor Engineering Corporation, the leading port dredger). For clear analysis of the relationships between SOEs and the party-state, see Rosen, Daniel H., Wendy Leutert, and Shan Gao, “Missing Link: Corporate Governance in China's State Sector,” *Asia Society Special Report*, Nov. 2018, https://asiasociety.org/sites/default/files/inline-files/ASNC_Rhodium_SOEReport.pdf

⁴³ These firms are involved in over 90% of Chinese firms' overseas port projects (author database).

⁴⁴ The data are still being collected to determine how many there are in total as well as the extent to which the Chinese SOE controls port operations. In some cases, as a majority equity holder and owner in whole or in part of a port authority, there will be considerable autonomy for an SOE to operate a port without supervision.

⁴⁵ This is based on interviews with managers from Chinese SOEs and those with close observations of their operations; it is difficult to make this judgment conclusively without seeing meeting minutes or internal documents in which the enterprise's leadership determines a project to be non-economic but pursues it anyhow.

⁴⁶ Sun Degang [孙德纲], “The Theory and Practice of China's Seaport Diplomacy [中国港口外交的理论与实践],” *World Economics and Politics [世界经济与政治]*, no. 5, 2018, pp. 4-32.

which there is a strong foreign policy rationale – thus the attractiveness of branding projects “BRI.” The cheaper financing available for such projects, at least until recently, is still more reason to do so. At any rate, infrastructure is not typically profitable in the short- or even medium-term, deriving its value by boosting logistics for peripheral industries and thus goosing local and regional commercial activity.⁴⁷

In short, good politics may outweigh good profits for some SOE corporate decision-making. These political incentives are quite obvious in SOE enthusiasm for certain dubious BRI projects. Still, the further expectation that these facilities might be available for military or intelligence use, clandestine or otherwise, is not as readily deduced. Hints of a mandate for such permissive corporate behavior are found in legislation like the 2017 National Defense Transportation Law. It indicates that “civil-military fusion” and “embedding military in civilian” are obligatory under the “principles of unified leadership...long-term preparation, [and] emphasis on the construction of key projects” (Article 4).⁴⁸ These are seemingly applicable provisions for the use of commercial ports by military personnel. The law further stipulates that the state will “guarantee the national defense mobilization expenses” (Article 6), underlining the seeming hazard for firms in the event that they are called upon to allow covert use of their facilities.

Even in the absence of exquisite intelligence on such clandestine operations, we can see quite overt intent and potential for use of commercial facilities for “civil-military” purposes. For example, the information about flows of goods and personnel through ports has clear military intelligence value. Systematic knowledge concerning the huge volume of merchandise trade, some of it destined for the U.S. military and its partners, is a clear advantage, and one that China can likely already exploit. However, it is a marginal capability and probably not useful in high-end warfighting. It is also entirely conceivable that sensors and other signals intelligence technology may be emplaced, human intelligence may be collected, and various other types of information may be gleaned in the process of conducting the normal commercial operations.

Those very same normal commercial operations, however, provide some strong arguments *against* utilizing overseas ports for clandestine intelligence and military operations. For one, doing so and being discovered risks the commercial viability not only of that compromised project, but also the diplomatic relationship with the host and its tolerance for other Chinese projects. Additionally, if publicized, such a scandal would damage diplomatic and commercial relationships with other partners hosting comparable Chinese-operated facilities. These foreseeable opportunity costs may not prevent surreptitious use, but it is quite reasonable to expect strong countervailing pressures from China’s own diplomatic and commercial stakeholders. It also bears noting that the SOEs are supposed to make money for their principal shareholder, the Chinese state, and avoid upending its other interests and operations. These are not clinching arguments, but should be factored in as liabilities for clandestine program.

⁴⁷ Ansar, Atif, Brent Flyvbjerg, Alexander Budzier, Daniel Lunn, “Does infrastructure investment lead to economic growth or economic fragility? Evidence from China,” *Oxford Review of Economic Policy*, vol. 32, no. 3, 2016, pp. 360-390.

⁴⁸ People’s Republic of China National Defense Transportation Law, 2017, http://eng.mod.gov.cn/publications/2017-03/03/content_4774223.htm

A black eye for the BRI is not the only liability that such a “weaponization” of commercial port facilities could present. Indeed, it may simply be operationally undesirable to rely on commercial facilities for anything but minor military and intelligence concerns. The argument against going too far towards using commercial facilities for military purposes is thus based not just on the opportunity costs of doing that rather than pursuing profitable trade and investment relations, but also on the unfeasibility of using these facilities to achieve desired effects. Even with the large number of overseas facilities operated by Chinese firms, very few are majority-owned. Rarely is more than an individual terminal under SOE control. These considerations thus support the judgement that covert and clandestine efforts at ports owned or operated by Chinese firms are possible, even likely, but not sufficient for supporting most significant military operations.

III. How does the PLA currently use commercial ports overseas? To what degree could China’s commercial investments in ports and airfields abroad support the PLA’s expeditionary operations? What are the current limitations of that infrastructure for support to expeditionary operations?

At present, the PLA uses commercial ports overseas primarily for friendly port calls. “Showing the flag,” refueling, and reprovisioning to the extent possible do not enable warfighting, though they do allow sustained non-war operations out of area. Several scholars have tracked the frequency and type of such port calls, which have seen a marked uptick since the launch of the PLAN anti-piracy escort mission in 2008.⁴⁹ Again, based on open source information, I can only testify that PLA use of commercial ports has largely been limited to these relatively mundane functions. Even without such pit stops, some underway refueling and limited resupply can be achieved with support vessels and helicopters, both of which are increasingly well-represented in the PLAN force structure. If we define “expeditionary operation” loosely to include escort and peacekeeping,⁵⁰ the very limited capacity afforded by commercial ports and the one base at Djibouti are sufficient for some modest expeditionary operations.

Further development of strategic strongpoint ports will enable the PLAN to steadily ramp up capacity for conducting such missions at higher frequency and intensity. The former PLAN Commander, Wu Shengli, noted that “overseas strategic strongpoint construction has already provided a new support for escort operations.”⁵¹ In respect of escort operations and SLOC protection, these commercial facilities provide ample, convenient services for most PLAN vessels to sustain such operations across the Indian Ocean region and beyond.

The question is whether they could do so in an opposed environment. At present, this seems to depend on who is opposing their operations. If the U.S. or India is attempting to deny China’s

⁴⁹ See Allen, Kenneth, Phillip C. Saunders, and John Chen, “Chinese Military Diplomacy, 2003-2016: Trends and Implications,” *INSS China Strategic Perspectives*, no. 11, 2017,

<https://inss.ndu.edu/Media/News/Article/1249897/chinese-military-diplomacy-20032016-trends-and-implications/>

⁵⁰ The U.S. military defines expeditionary forces as “An armed force organized to achieve a specific objective in a foreign country” (Joint Publication 1-02, DoD Dictionary of Military and Associated Terms, Washington, D.C.: U.S. Joint Chiefs of Staff, as amended through May 2019, p. 80

<https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/dictionary.pdf>.

⁵¹ 梁庆松 [Liang Qingsong], 王元元 [Wang Yuanyuan], “海军召开亚丁湾护航 8 周年研讨会” [The Navy Holds a Seminar on the 8th Anniversary of the Gulf of Aden Escorts], 人民海军 [People’s Navy], December 30, 2016, p. 1.

operations in the Indian Ocean region, unhardened commercial facilities in neutral countries are not likely to be sufficient. If no major power is involved, the steady development of strategic strongpoints will enable a range of non-combat military operations throughout the region. The addition of a single, more capable “base” in the central Indian Ocean (say at Hambantota, where much speculation abounds about Chinese intentions), on the west coast of Africa, and in the South Pacific, would shorten supply intervals such that the PLAN could sustain certain expeditionary operations throughout the Indian Ocean region, the South Atlantic, and the Western Pacific, respectively.⁵²

While Chinese officials analysts are quick to disclaim any intention to use such facilities for offensive operations as does the U.S.,⁵³ others are quick to assert that China’s model is switching from one “based on supply ships supplemented by foreign ports to one that is based on overseas bases supplemented by foreign ports and domestic support,” in the words of Li Chunpeng, Political Commissar of the PLAN base in Djibouti.⁵⁴ Other Chinese leaders send mixed signals, as former State Oceanic Administration Director and current Hainan province governor Liu Cigui puts it: “The security of sea lanes is the key to sustaining the stable development of the Maritime Silk Road, and ports and docks are the highest priority for securing the sea lanes...[they] must not only have the function of cargo handling, but must also provide replenishment and logistics services...[and] ensure the safety of the surrounding waterways.” They may be “built separately from the host country, jointly with China and other countries, or could involve leasing currently existing ports as a base of operations.”⁵⁵ The advent of a PLA Marine Corps is intended, in part, to create a more flexible force that can swiftly deploy and operate overseas without the need for large-scale forward operating bases.⁵⁶

Others simply doubt the operational capacity of commercial facilities to support the types of capabilities that China would need to conduct major expeditionary operations:

“construction of ports and related facilities through friendly cooperation with other countries can expand the scope of maritime operations and enhance their flexibility and sustainability. However, the construction of such commercial port facilities is extremely expensive and their practical utility is limited; they cannot meet the needs of munitions storage, maintenance and parts for large surface vessels, and security needed for military operations, especially in the event of conflict. If the intensity of China’s overseas military

⁵² Author interviews with U.S. navy logistics and supply officers.

⁵³ Several scholars from the Army Military Transportation University in Tianjin lay this out in some detail: Wang Tianze [王天泽], Qi Wenzhe [齐文哲], “An Exploration into the Support of Transportation and Projection for Military Bases Abroad [海军海外军事基地运输投送保障探讨],” *National Defense Transportation Engineering and Technology* [国防交通工程与技术], vol. 16, no. 1, 2018, pp. 32-35.

⁵⁴ “Military Report: Special Report on the 70th Anniversary of the Founding of the People’s Navy. Guaranteed to Win. Logistical forces extend to the far seas [军事报道:人民海军成立 70 周年特别报道 保障打赢 后勤力量向远海大洋延伸],” *CCTV*, 19 April 2019, <https://www.youtube.com/watch?v=Z4DyOGgTljk&feature=youtu.be>, at 5:30.

⁵⁵ Li Cigui [刘赐贵], “Some Thinking on Developing Maritime Cooperative Partnership to Promote the Construction of the Twenty-First Century Maritime Silk Road [发展海洋合作伙伴关系 推进 21 世纪海上丝绸之路建设的若干思考],” *Guoji Went Yanjiu* [国际问题研究], April 2014, http://intl.cssn.cn/zxz/gjzxx_zzx/201408/t20140819_1297241.shtml.

⁵⁶ An in-depth study on the PLAN Marine Corps is being conducted at the China Maritime Studies Institute by Conor Kennedy. See Conor Kennedy, “The PLAN Marine Corps,” in *Going Global? The People’s Navy in a Time of Transformation*, Newport: Naval War College 2020 (forthcoming).

operations increases as China's economic, political, and security interests continue to expand, commercial port replenishment is unlikely to be used as a long-lasting logistical support option. After all, foreign commercial port facilities also have their own commercial self-interests which requires the regular scheduling of commercial activities that will tie up most of the service capacity of any commercial port...[Therefore t]he lack of overseas bases has become an important factor limiting the effectiveness of Chinese military forces, including the Navy. How to build overseas bases is an issue that China cannot avoid.”⁵⁷

The existing stock of commercial “places” may be sufficient to build strategic strongpoints sufficient to support limited expeditionary operations tailored to the protection of China's overseas interests, even as they expand. Whether China's force structure can support higher-end, major combat functions without using these ports is beyond the scope of this testimony and my expertise. However, we should be looking at these facilities in terms of what they can – and in some cases *already* – deliver for lower-end operations. It does not take another navy modeled on the U.S. navy to generate significant strategic problems, to include peacetime coercion and horizontal escalation.

IV. What role might the bases China has built on artificial islands in the South China Sea play in the PLA's operations beyond its immediate periphery?

Chinese officials and scholars have not explicitly drawn connections between out of area operations and the artificial island bases that China has constructed in the South China Sea (SCS). Still, the augmented military and intelligence facilities in the Paracels (especially Woody Island, or 永兴岛) and in the Spratlys at Subi Reef (渚碧礁), Mischief Reef (美济礁), and Fiery Cross Reef (永暑礁) effectively extend China's territory some 800 miles south from its coast.⁵⁸ The logic of mutually supporting strategic strongpoints⁵⁹ dictates that these installations should function to extend the operational range of the PLAN well beyond the first island chain.

PLA doctrine supports this operating concept. The 2013 Science of Military Strategy posits the use of islands and reef installations to create a “large-area maritime defense system” (大区域海上防卫体系) to extend power projection.⁶⁰ This is characteristic of a continental power, treating proximate maritime areas as extensions of land power rather than hubs for maritime power projection. Further, China's geography – particularly the vast, foreign land territory that envelops its southern and western flanks – dictates that the South China Sea will be the nearest maritime area to support operations in the Indian Ocean, and likely in the Western Pacific. PLAN researchers have recognized this for some time, and explicitly linked it to the Spratlys since artificial island building got underway in earnest in 2014.⁶¹

⁵⁷ Xue and Zheng: 107-108.

⁵⁸ Zhanjiang, the home port of the South Sea Fleet, is about 820 miles, or 712 nautical miles, from Fiery Cross Reef.

⁵⁹ Academy of Military Sciences 2013: 254; Hu Xin 2019: 26

⁶⁰ Academy of Military Sciences 2013: 214

⁶¹ Jian Li [剑李], Chen Wenwen [陈文文], and Jing Jin [晶晶]. “Indian Ocean Seapower Structure and the Expansion of China's Seapower into the Indian Ocean[印度洋海权格局与中国海权的印度洋拓展],” *Pacific Journal [太平洋学报]*, vol. 22, no. 5, 2014. The authors are researchers at the PLAN's Naval Research Institute.

The newly formed Western Theater Command has no naval component that might execute such distant operations in the event of a conflict in the Indian Ocean. This task would fall to the Southern Theater Command, which now routinely operates into the far reaches of the SCS. China's expanding fleet of blue water vessels (especially the Type 055 *Renhai*-class guided-missile destroyers) can utilize the Spratly bases and thus skip the long voyage back to Hainan or Zhanjiang. So too can long-range strategic aircraft like the Y-20, AN-225, and even the H-20 strategic bombers. These assets are not able to operate out of more distant facilities, and though PLA warfighters would no doubt like to have forward operating bases, they will have to make due with Spratly outposts as the furthest extent of basing for the present.

Such use of SCS facilities modestly increases the out of area power projection of the PLA. The question of whether they can be effectively linked to other bases and places remains outstanding. Certainly, a link between the Djibouti base and the Spratlys is too distant for sustaining high-intensity operations. An intermediate base in, say, Sri Lanka, Burma, or the Maldives would help operations, though it might badly harm China's diplomacy and commercial ambitions in the region.

The opportunity costs of appearing to abandon China's "peaceful rise" are high, and not lost even on the PLA. The 2015 *Science of Military Strategy* evinces keen awareness of the perils of operating overseas. "A first consideration must always be to weigh the pros and cons of whether or not to 'go' at all. Diplomacy is no small matter, nor is the use of military force overseas...[even innocuous tasks like] peacekeeping, NEOs, maritime escort, and search and rescue must only proceed from careful consideration of the strategic requirements of China's political interests, economic interests, diplomatic interests and security interests."⁶² China will need to utilize overseas ports to protect its overseas interests, and the PLAN will be the main agent of that effort. Given the likely long-term limitations on building a large network of distant bases, they will largely have to flow the needed capabilities from the SCS.

⁶²肖天亮 [Xiao Tianliang], ed. 2015. Beijing: *战略学* [*Science of Military Strategy*]. 国防大学出版社 [PLA NDU Press], p. 299).

**OPENING STATEMENT OF CHRISTOPHER D. YUNG, PH.D., DONALD BREN
CHAIR OF NON-WESTERN STRATEGIC THOUGHT AND DIRECTOR OF EAST
ASIAN STUDIES, MARINE CORPS UNIVERSITY**

COMMISSIONER McDEVITT: Thanks, Isaac. We definitely will quiz you. My Co-Chair is very interested in base issues, and what have you, in foreign ports, and what have you. And so, I'm sure he'll have some questions for you.

Dr. Christopher Yung is the Donald Bren Chair of Non-Western Strategic Thought and the Director of East Asian Studies at Marine Corps University. In this capacity, he teaches all of the associated schools within the Marine Corps University umbrella. He specializes in Chinese strategy, foreign policy, the PLA, and China's naval and expeditionary capabilities. He's published articles and books and reports and has served as an editor for numerous publications on China's strategy and policy.

Previously, he was a Senior Research Fellow at the Center for the Study of Chinese Military Affairs at the National Defense University, and he provided research and policy recommendations for the Office of the Secretary of Defense, the Joint Staff, the intelligence community. And he also previously served as a Senior Research Analyst at the Center for Naval Analysis.

And by the way, during that period of time that he was at CNA, he had many opportunities to actually have field assignments where he was working with the operational Marine Corps observing amphibious ops, and what have you.

He's received both his doctorate and master's degree in international relations from Johns Hopkins University, SAIS.

And I would just add, Chris also has written a really remarkable book on the amphibious planning for the Normandy invasion. And I would commend it to you. Go to Amazon, right?
(Laughter.)

DR. YUNG: Yes.

COMMISSIONER McDEVITT: So, with that, Chris, over to you.

DR. YUNG: Thank you, Admiral McDevitt, Commissioner McDevitt, Commissioner Lewis, and all the Commissioners. I appreciate the opportunity to testify to the Commission on a subject which will be of increasing importance as China's global interests and reach start to significantly expand outside of Asia-Pacific.

The topic that I was asked specifically to look at is China as a world-class expeditionary power, which I will go into great detail, to the best I can within six minutes and 41 seconds.

(Laughter.)

But, before doing that, let's talk definitions. What's the definition of "expeditionary"? There are a number out there, but since I'm the Director of East Asian Studies at Marine Corps University, I'm going to use the Marine Corps definition.

(Laughter.)

The United States Marine Corps offers the following: "An expedition is a military operation conducted by an armed force to accomplish a specific objective in a foreign country. The missions of the military expeditions may vary widely. Examples include humanitarian assistance and disaster relief, establishing and keeping peace in a foreign country, protecting U.S. citizens and commerce abroad, retaliating for an act of aggression, and destroying an enemy government by defeating its armed forces in combat."

You'll notice that, before you even get to major combat operations and conventional war,

there's several types of operations that can be conducted. I would argue that that's what the PLA probably has in mind when they think about expeditionary operations.

All right. I've provided a lengthy description of what I believe to be China's strategic objectives. So, I won't take up your time talking about those.

In addition, we've already had a panel discuss ambitious, perspectives, and strategy. I can illuminate, if you have questions on that, but I'm not going to belabor my views on that.

But these strategic objectives inform the missions that I'm about to talk about. What are these larger expeditionary missions?

No. 1 -- and these are informed by some of what you heard in the earlier panel -- Taiwan contingency, No. 1.

No. 2, a South or East China Sea contingency and out-of-area operations supporting Belt and Road initiatives or in support of a Shanghai Cooperation Organization coalition member who is under distress. Terrorist attack, insurgency, coup d'état, civil war, some sort of a major conflict, and in the long-term a SLOC protection mission in the Indian Ocean, some sort of out-of-area mission to protect their sea lines of communication. And, then, of course, their corresponding land components operations that might need to be responded to.

I did not spend much time in my written testimony discussing the expeditionary requirements for the East China Sea and South China Sea contingencies because, in my opinion, I consider these to be lesser contingencies to the Taiwan contingency. You can do Taiwan. You could probably do an East and South China Sea mission.

Furthermore, I didn't spend a lot of time talking about the SLOC mission because, from my perspective, this is a long-term planning problem for the PLA and likely to take a back seat for now to more immediate force-building efforts.

And so, I argue, from the perspective of building a world-class expeditionary military, we should focus attention on what it would take for a Taiwan and an out-of-area support for a Belt and Road Initiative type of contingency.

There is ample evidence that the PLA is building an expeditionary force. Although the Liaoning operational carrier received most of the international attention in 2010 and '11, it's the procurement of the L Class ships, particularly the Yuzhao class, landing platform docks that have made the PLA an out-of-area expeditionary force.

This, combined with the possible acquiring of a landing helicopter dock ship, an LHD, changes, dramatically changes, the PLA's expeditionary capabilities, along, also, with the acquisition of hovercraft-like landing craft which have great carrying capacity, 150 tons, 60-knot speed, 300-nautical-mile range. That's a game changer.

The PLA navy is not the only service that is exhibiting signs of expeditionary capabilities. Both the PLA air force and ground forces have also become more expeditionary, the former expanding its strategic airlift capabilities and participating in out-of-area exercises; the latter dedicating divisions solely for the Taiwan mission and transforming ground forces into a much more rapidly-deployable force.

The service which demonstrates most visibly the PLA intent on becoming a more potent expeditionary force is the PLA marine corps. This includes the expansion of the marine corps from three to nine brigades and a projected end-strength increase from 10,000 to 30,000, tripling in size.

PLA training has also become more expeditionary, as illustrated by a decade-plus of trans-military region mobility exercises; PLA navy task force exercises of increasing size, complexity, and distance from China; evidence of lessons from counterpiracy task force

operations being applied to subsequent operations; marine corps training under different climates, terrains, and weather conditions; international exercises under the umbrella of the Shanghai Cooperation Organization; the annual Dongshan exercise near Taiwan; an impressive list of PLA air force out-of-area deployment exercises, and exercises out of area during counterpiracy operations. So, the training, platform development.

In researching what I needed to talk about, your staff has asked me to address observable gaps in expeditionary capabilities. As I said in my written testimony, it would be folly to assert that, after decades of thinking about the Taiwan problem, that the PLA lacks the basic fundamentals to conduct this kind of operation. I'm not going to make that argument.

The PLA has both the technological skill, the platforms and associated military weapon systems, to be able to launch successful assault on Taiwan. However, as I also said in my written testimony, this does not mean a successful invasion of Taiwan is a fait accompli.

I give the example of, on the verge of Normandy, we had all of that, still not certain that we were going to be successful. And we can talk about that at length since I wrote the darn book on it.

(Laughter.)

So, if I were to identify areas where there are gaps in the Taiwan mission, it would be in area where domains cross over into each other, and which require sophisticated command and control, and very practiced cross-service coordination. I would also venture a guess that a PLA assault would be stopped dead in its tracks by an effective mine defense of the island.

Moving beyond Taiwan, the PLA also suffers from a number of maritime capability shortfalls, which often go unnoticed by the untrained eye. The PLA plan has not had time to develop force protection assets to make forward-deployed forces secure in foreign ports. I can go into detail as to what those are, but I don't think they've thought through that problem yet.

Lastly, if China dispatches forces to respond to a Shanghai Cooperation Organization coalition response to terrorist, insurgent, or a large-scale civil unrest problem, the PLA still suffers from a less-than-robust command-and-control structure. Its logistical support is not robust enough to continuously supply sizable force abroad, and it still does not have a robust maintenance and repair capability abroad, nor a forward-deployed medical care capability.

All right. In short, technology to fill those gaps. First, I don't think it's a technology shortfall. It's a knowledge shortfall. As Dr. Saunders pointed out, the personnel, commanders, planners, and to some degree the Chinese military, doesn't know what they don't know. They're inexperienced. So, they don't know where all the gaps are.

So, first, I would argue it's less of a technology gap, more of an inexperience doctrinal gap. But, if I were to identify some technology gaps, those would be a landing craft that can operate in more survivable conditions. Don't have to worry about sea state, temperature, et cetera.

They have very little experience marrying expeditionary forces with maritime prepositioned forces. That's the second area. So, they would probably want some sort of maritime prepositioned ship that they can move around cargo internally.

Finally, the well decks of amphibious ships, very vulnerable to chem-bio attacks. We worry about that. The Chinese haven't even started thinking about that problem.

And then, finally, since the focus I think is going to be on non-contested, relatively low-intensity expeditionary operations, the PLA, China -- you mentioned civ-mil fusion -- that's going to be their focus. Logistics and communications. How do you do just-in-time logistics in this network of facilities that the PLA is trying to develop?

Secondly, how do you communicate when you're on the backbone of very underdeveloped countries that are going to be your host nation partners? That would be the technological areas that the PLA are going to have shortfalls in.

I will reserve a discussion on congressional action for the Q&A, which I know you all want to hear about. But, since my time is up, I will now pass the baton.

Thank you very much.

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“Building a World Class Expeditionary Force” Testimony Before the US-China Economic
And Security Review Commission Hearing on China as a World Class Military Power

June 20, 2019

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Introduction

Chairman Bartholomew and Vice Chairman Cleveland, and to all of the Commissioners, I appreciate the opportunity to testify to the Commission on a subject which will be of increasing importance as China’s global interests and reach start to significantly expand outside of China’s immediate neighborhood—that is, the Asia-Pacific Region. Xi Jinping’s Report for the 19th Party Congress laid out the goal for the People’s Liberation Army to become a World Class Military by the centennial of the founding of the People’s Republic of China. This ambition, combined with the significant military reforms and reorganization of the PLA initiated in 2015 and China’s increased foreign policy activism, manifest in the Belt and Road Initiative has correctly sparked the interest and in some quarters, suspicion, of China’s motives and has stimulated more than a passing interest to evaluate exactly what China’s pursuit of a “World Class Military” truly entails.

In my testimony today, I have been asked to evaluate what a “World Class Military” looks like from the perspective of an expeditionary power. Specifically your staff has asked me to examine what aspects of PLA modernization have provided or are currently providing China with a burgeoning expeditionary military capability? What are the weaknesses in this capability and how is the PLA attempting to address these weaknesses? Additionally the USCC staff have asked me to address how the PLA is currently training and developing its doctrine to address expeditionary operations? And related to this notion, whether its current out of area operations are contributing to the evolution of China’s expeditionary capabilities? Finally, your staff have asked me to examine what core technologies China needs to achieve its force building goals in relation to expeditionary operations.

Before embarking on that analytical crusade, I first deem it necessary to lay out what China’s strategic goals are in relation to its out of area operations; from there I venture to generate a number of missions that the PLA is expected to be able to perform in the near to medium term, some of which involve the need for expeditionary capabilities. Finally, it will be necessary to establish my definition of “expeditionary” which the analysis can use as a yard stick or baseline to compare China’s activities and efforts.

China’s Strategic objectives

As many China experts have stated before, China’s strategic objectives are synonymous with the Chinese Communist Party’s strategic objectives. These objectives laid out in official Party pronouncements, White papers, and General Secretary Work Reports, but most recently specified in the New Historic Missions are: (1) Ensure the Survival of the Chinese Communist Party; (2) protect China’s

national sovereignty and territoriality; (3) ensure continued economic growth; and (4) foster global stability and international peace and security.¹ These strategic objectives do ultimately translate into mission sets that the PLA is expected to be able to perform. Therefore, if regime survival is objective #1 for the PLA, then this translates into missions designed to address internal security and order. These in turn translate into mission sets designed to address terrorism, insurgency, ethnic disturbances, other wide spread mass disturbances, natural disasters, man-made disasters, and cyberspace threats to the regime. If national sovereignty and territorial protection is objective #2, then the PLA is expected to address border protection and border incursions, territorial rights protection, but it also encompasses the massive mission of keeping Taiwan from breaking away from the Mainland (More on this below). Strategic objective #4 also appears at first glance to be a throw away concept, but the idea of the Chinese military fostering international peace and stability, comes down to the recognition by the CCP that unstable, dangerous parts of the world cannot be ignored and could be addressed through UN peacekeeping, counter-piracy task forces, military and civilian nuclear and chemical inspectors, and other international security efforts. A fifth, unstated strategic objective is to shape the international system so that it is more suitable for and enhances the survival of authoritarian regimes like the Chinese Communist Party. This manifests itself in its wider foreign and defense policies such as its stance on cyberspace, and its policies related to the use of UN peacekeepers; however, this objective also reveals CCP efforts to erode American credibility in the Asia-Pacific Region and elsewhere, cooperation and alignment with nation-states which pose strategic challenges to US governance (e.g., Russia, and Iran), and the creation and promotion of alternate global institutions (e.g., the Maritime Silk Fund, the Asia Infrastructure Investment Bank, and of course, the Belt and Road Initiative itself).

The rather innocuous sounding objective #3, “Ensure continued economic growth”, interestingly is the rationale for China’s extremely vigorous activist foreign and security policy abroad. Since China depends on resources and energy imported from abroad, the PLA has been assigned the mission of assuring that continued access. Since Chinese citizens have been prompted to “go out” and start businesses and conduct commercial activities abroad, if those citizens are in peril, the PLA is expected to evacuate those citizens, provide protection for those citizens or at least help the host nation government create a more secure environment for those citizens to operate in. The PLA has been authorized to conduct counter-terrorism, counter-insurgency, and other security related functions if invited in by a Host Nation and/or if the UN authorizes the Chinese intervention. With the arrival of the Belt and Road Initiative, China’s investment between \$1 and 4 trillion in roads, ports, airports and other infrastructure projects, the PLA is now also expected to play some role in protecting the vast Chinese investment in this far ranging foreign economic policy. This could include the building of partner capacity, PLA intervention and response to a large scale terrorist attack on Chinese laborers and BRI funded investments. As other experts on the security implications of the BRI have noted, however, the initial Chinese response to this demand signal for security services will be to offer and provide private security contractors to the Host Nation government. At some point, however, the skeptics of Chinese motives in its out of area operations are probably correct that ultimately, gradually there has to be a PLA presence abroad in some capacity.

¹ Daniel Hartnett, “the ‘New Historic Missions’: Reflections on Hu Jintao’s Military Legacy” in Kamphausen, Lai & Tanner, eds., *Assessing the People’s Liberation Army in the Hu Jintao Era*, US Army War College, Carlisle, PA, April 2014, pp. 40-55.

One thing that is important to note about China's strategic objectives is that they are interlinked and their connectedness inform how the Chinese think about the operations and the missions designed to accomplish these objectives. If regime survival and internal security is a paramount objective, then this informs China's activities and actions abroad to foster continued economic growth. In order to promote internal stability AND economic growth, the CCP promoted the modernization and growth of China's inner provinces which had not successfully taken advantage of China's opening up to the global economy. This objective is directly linked to the creation of the BRI which was initially designed to promote the increased economic potential of China's poor inner provinces, and which seeks to link China's inner provinces to Central and South Asia through to Eastern and Western Europe. If promoting continued economic prosperity and growth, as well as fostering internal security are important objectives, as is ensuring the territorial integrity and national sovereignty of Chinese borders, then the Chinese efforts to create a coalition of like-minded governments intent on protecting national sovereignty against terrorists, insurgents, civil war and other governance threats, through the Shanghai Cooperation Organization makes full sense. The objective of shaping an international order that is safe for authoritarian regimes must be balanced off of the objective of ensuring continued economic growth—suggesting a Chinese policy approach that is gradualist and cautious in confronting the United States. The need to balance these strategic objectives off of one another, will be highly informative in explaining Chinese expected missions and by implication China's force structure goals, as we will discuss below.

What is Expeditionary?

A number of the US military services have offered definitions of expeditionary operations. The United States Army offers the following definition in its publication Army Doctrine Publication 3-0 Unified Land Operations. It defines expeditionary capabilities as “the ability to promptly deploy combined arms forces world-wide into any area of operation and conduct operations on arrival. Expeditionary operations require the ability to deploy quickly with little notice, rapidly shape conditions in the operational area, and operate immediately on arrival, exploiting success and consolidating tactical and operational gains. Expeditionary capabilities are more than physical, they begin with a mindset that pervades the force.”²

Interestingly the United States Marine Corps offers a much wider definition of expeditionary operations—one less wedded to the conduct of major military operations. MCDP 3, Expeditionary Operations defines it this way: “An expedition is a military operation conducted by an armed force to ACCOMPLISH A SPECIFIC OBJECTIVE IN A FOREIGN COUNTRY. The missions of military expeditions may vary widely. Examples of missions of military expeditions include providing humanitarian assistance in times of disaster or disruption; establishing and keeping peace in a foreign country; protecting U.S. citizens or commerce abroad; retaliating for an act of aggression by a foreign political group; and destroying an enemy government by defeating its armed forces in combat”. Given China's strategic and political goals, and its need to accomplish these goals short of war, it seems to be the case that the Marine Corps definition of expeditionary operations is closer to how the PLA might envision its future with expeditionary operations.³

² U.S. Army Doctrine Reference Publication (ADRP) 3-0, *Unified Land Operations*, November 2016, p. 1-10.

³ U.S. Marine Corps Doctrinal Publication (MCDP) 3, *Expeditionary Operations*, 16 April 1998, pp. 31-2.

Embedded in this latter definition of expeditionary operations is the idea that a military force can quickly embark on military platforms either through military shipping, military aircraft, or some other mode of transport (e.g., civilian air craft, merchant shipping, rail transport) be dispatched to an area of operation either currently involved in intense combat or at lower stages of conflict, and can immediately engage in military operations to shape the environment, exploit a tactical situation, and support national political and security objectives. Implicit in this definition is the idea that the military force has what it needs to protect itself, to supply itself or be supplied by supporting agencies, and to communicate with all relevant authorities for its operations.

What operational missions?

CCP strategic objectives tend to balance off of one another; with internal security and regime survival serving as the paramount objective and other objectives (important as they are) serving as secondary or tertiary objectives. This means that in addition to internal security, counter-terrorism and national stability missions within the PRC high up on the list of operational priorities will be a Taiwan mission, but that Taiwan mission must be balanced with an almost equally important objective of continued economic growth and international stability. The PLA has undoubtedly been tasked with planning for and executing military missions designed to keep Taiwan within the fold—preventing Taiwan from declaring de jure independence, or even asserting greater international autonomy for itself, but its mandate extends only so far. PLA force structure development with regard to its Taiwan mission appears to be to gradually develop the capability to fully assault Taiwan from the sea for the purposes of exerting maximum political pressure on the island.⁴ As time elapses however the PLA will eventually develop a “World Class Expeditionary” capability to fully address, militarily, its Taiwan problem. Table One lists the CCP’s “national sovereignty and territorial strategic objectives” and the PLA’s “out of area strategic objectives” and the associated notional operational missions. Table Two lists likely expeditionary missions associated with the larger operational issues the PLA will have to be able to plan for and execute in relation to larger strategic objectives listed in Table One.

The imperative to balance the CCP’s larger strategic objective additionally means that it is unlikely in the near to medium term that the Chinese are first and foremost seeking a full scale conventional war in the Indian Ocean and in South Asia or a policy of direct confrontation with the United States. A large scale conventional conflict in South Asia imperils China’s economic growth, puts at risk China’s borders, and potentially risks border insecurity and unrest within China. This does not mean that the PLA is not thinking hard about the mission of protecting its SLOCs against the possibility of Indian or possibly American interference, the PLA has probably already gamed out what requirements for this kind of contingency would look like and may have thought through potential mitigating operations should the two Asian powers slide into a conflict at sea (see the last category of Table one); it also suggests that while the PLA is cognizant of the power projection capabilities required to address a direct confrontation with the United States, the ultimate guarantor of security for the CCP regime, it will choose to accomplish its strategic objectives gradually and through a policy of erosion of American power. What this also suggests is that the PLA is thinking about the possibility of having to perform an

⁴ Both Bonnie Glaser and Tai Ming Cheung argue that the PLA had a hand in developing this strategy and policy toward Taiwan. Cheung’s analysis is cited in Glaser’s excellent chapter on the PLA role in national security decision-making. See Bonnie Glaser, “The PLA Role in China’s Taiwan Policymaking” in Saunders and Scobell, eds., *PLA Influence on China’s National Security Decision Making*, Stanford University Press, Stanford, CA, 2015, p. 168.

Indian Ocean wide SLOC protection mission or a maritime superiority mission somewhere in the future, but its current and near term emphasis is probably protecting those immediate interests associated with Chinese citizens living and working abroad, helping to protect and respond to threats to overseas Chinese businesses, the enormous Chinese interests associated with the BRI, and fostering a collective security response through the SCO.

Strategic Objective	Associated Operational Mission
Protect national territory & national sovereignty	Foster military cooperation with Taiwan; promote political integration; deter & coerce Taiwan; increase coercive pressure; isolate Taiwan; seize offshore islands; full-scale invasion
Support to HN authorities--	Build Partner Capacity; Private Contractor Security support; Law Enforcement or Local Incident Response/Investigation; Coalition response thru SCO; Joint Patrolling; Advise & assist in implementation of internal security measures; Medical response; HA/DR response; Direct Counter-terrorism/COIN support; PLA deterrence presence; PLA Direct Action vs. Terrorists, insurgents
Protection of Chinese citizens/businesses	Non-Combatant Evacuation Operations; Private Contractor Security Support; Search & Rescue Operations; Law Enforcement or Local Incident Response/Investigation; Direct CT/COIN support
Support to Belt & Road Initiative Projects	Build Partner Capacity; Private Contractor Security Support; Law Enforcement or Local Incident Response/Investigation; Coalition Response through SCO; Joint Patrolling; Advise & Assist in implementation of internal security measures; Direct CT/COIN support; PLA deterrence presence; PLA Direct Action vs. Terrorists, insurgents
Counter-Piracy, Counter-Trafficking, and Local SLOC protection	Ship escort; Maritime Intercept Operations; Visit Board Search & Seizure; Law Enforcement or Local Incident Response/Investigation; PLA Direct Action versus transnational criminals, pirates
Regional Stability Operations	Show of force; Coalition response thru SCO; joint patrolling; PLA Direct Action vs. terrorists/insurgents; PLA deterrence presence; Support to HN authorities missions; UN Peacekeeping operations; Possibly ARG-MEU operations
Extra-regional SLOC protection	Carrier maritime superiority missions; area air and missile defense; Anti-Surface Warfare (ASUW); extra-regional ASW; extra-regional littoral operations in a contested environment (LOCE); show of force; VBSS; MIO; area wide

	Search & Rescue; limited carrier strike operations; coordinated surface/sub-surface operations
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Table 1. CCP Out of Area Strategic Objectives and Notional Operational Missions

In addition to strategic objectives related to operational missions associated with Taiwan, Table One lists the CCP's out of area strategic objectives and the associated notional operational missions. A cursory glance at this table reveals that there are definitely potential expeditionary missions associated with these broad operational missions. Table Three maps the potential "Far Seas" expeditionary missions to the identified larger operational missions of the PLA listed in Table One.

PLA operational missions related to Taiwan	Associated Notional Expeditionary Missions
Promote mil-to-mil cooperation; foster Taiwan-Mainland integration; create/enhance joint security perspective	HA/DR; NEO (including Taiwan citizens); escort of Taiwan flagged shipping; joint patrolling in SCS/ECS; logistics supply & cooperative activities with Taiwan forces on Taiping
Deterrence; coercive actions; Strategic signaling; erode Taiwan sovereignty	Amphibious demonstration (exercises); large scale naval maneuvers & ATF operations at sea (east of Taiwan); Airborne & SOF simulation exercises; Trans-Theater Mobility Exercises
Increase coercive pressure; isolate Taiwan; impede commerce & free flow of goods to/from Taiwan; warning shots;	Transportation of ground, air, SOF forces to TCS near Taiwan; load amphibious ships & Prepositioned ships; deploy ATF east of Taiwan; naval blockade, MIO, VBSS; coordinated naval amphibious, Air Force exercises with Strategic Rocket ballistic missiles fired around Taiwan
Seizure of offshore islands; seizure of Taiping island (SCS); SOF insertion & espionage on Taiwan; seizure of single port/airfield	JFEO; SOF Insertion; NGFS; C2 Air Support; CATF-CLF turnover of command; Airborne operations; coordinated missile, ground, air, sea operations offshore; Beach operations
Full-scale invasion; large scale amphibious assault; SOF/airborne insertion; seizure & hold PODS/APODS; cross-channel logistics; maritime & air superiority over Strait & Taiwan airspace; comprehensive "counter-intervention" operations to keep US/Allies at bay	JFEO; Establish & expand beachhead; Cross-Theater transportation of PLA ground & air forces to PODS/APODS; SOF Insertion; NGFS; C2 Air Support; CATF-CLF turnover of command; Airborne operations; coordinated missile, ground, air, sea operations offshore & in wider region; Beach operations; Multi-domain situational awareness, C2;

Table 2. Notional Sovereignty & Territoriality missions and Associated Expeditionary Missions

Larger PLA Out of Area operational missions	Associated Notional Expeditionary Missions
Private contractor support; law enforcement incident response/investigation; advise & assist internal security measures; coalition response thru SCO	C2 platform; afloat stationing of personnel; Amphibious and Air Lift; transportation of person and equipment

HA/DR; NEO; COIN; CT; SOF Direct Action; hostage rescue	Amphibious lift; Air lift; transportation of person/equip; C2 platform; mother ship
Build Partner Capacity; joint training	Exercise platforms
MIO; VBSS; Counter-piracy, trafficking	C2 platform; mother ship; air surveillance & airborne early warning
Show of force; coalition response to major terrorist event; ARG-MEU operations	Amphibious task force; personnel and equipment carrier; C2 platform
Limited littoral operations in contested environment	Amphibious lift; C2 platform; regional air and missile defense
Maritime superiority; air superiority; ASW; ASUW; JFEO	Amphibious lift; Amphibious task force; Air superiority; carrier operations; Joint Air and Sea operations; comprehensive multi-domain operations

Table 3. PLA Out of Area Missions and Associated Expeditionary Missions

PLA modernization and the evolution of China’s expeditionary capability

Although the commissioning of the Liaoning, China’s first operational aircraft carrier, which gained most of the international attention in 2011, it was the procurement of L-class ships which truly heralded the arrival of China’s naval expeditionary capability. Its Yuzhao Class ships, close to the U.S. San Antonio Class Landing Platform Dock or LPD, can carry a force of roughly the same size as a battalion with four air cushioned landing craft in its well deck and 4 Z-8 support rotary wing aircraft. There are currently four Yuzhao class ships in the PLAN inventory with more to follow. There is also strong evidence that the Chinese are on the verge of developing an LHD style large deck amphibious ships, akin to the Wasp Class LHD in the US Navy inventory. Such a platform significantly expands the PLA’s expeditionary lift capacity. A ship of this size and capacity can carry 1,900 troops and its associated ground transportation assets and equipment, 30 helicopters, six fixed wing aircraft, an associated air element, and 3 air cushioned landing craft and/or about 30 amphibious assault vehicles.

The Chinese also have over the past decade been procuring and have now developed an indigenous hovercraft style landing craft or Type 726 Class landing craft which has a top speed of over 60 knots, can carry a payload of 150 tons, and a 300 nm operational range.⁵ A far cry from the Landing Craft Vehicle and Personnel (LCVP) of the Second World War, the Type 726 class landing craft can carry approximately 60 to 70 troops in addition to one Type 96 Main Battle Tank or four armored vehicles.⁶ Although the Department of Defense cancelled the much anticipated Advanced Amphibious Assault Vehicle or AAV, the Chinese have gone ahead and procured a similar vehicle for the PLA Marine Corps.⁷

Although most likely part of a long-term planning assessment the PLA could be contemplating extensive blue water SLOC protection missions in anticipation of a future major power conflict either with India or with the United States. As the last field of Table 1 illustrates, this requires quite an extensive naval capability; one which the PLA clearly lacks at present. There are nascent signs that the PLAN could be heading in this direction although the evidence remains debatable. These signs are: (1)

⁵ Ronald O’Rourke, “China’s Naval Modernization: Implications for U.S. Navy Capabilities—Background and Issues for Congress”, August, 2018, p. 47.

⁶ Ibid.

⁷ Ibid.

the procurement of two aircraft carriers (the Liaoning and the Shandong) and evidence that China could have a total of four by the middle of the next decade; (2) ever increasing numbers of surface combatants each class improving in stealth, stability, range of weapons systems, radar capability, and area air defense capability; (3) recent procurement of nuclear attack submarines with increasing willingness to employ these out of area; (4) enhanced naval aviation capability as evidenced by the PLAN's interest in procuring the follow-on to the J-15--the FC-31; and (5) and the effort to increase the fielding of rotary wing assets (the Z-8 and Z-9) to the Sea Fleets for the purpose of making more robust task force operations region-wide.⁸

Expeditionary capability is not strictly defined as naval. A nation's ability to conduct expeditionary operations applies to the other services as well. In China's case, the PLA Air Force (PLAAF) has also been procuring capabilities which can be characterized as expeditionary. First, its air transport capability has over the past fifteen years expanded significantly with the co-development (with Ukraine) of the AN-225 the world's largest military air transport aircraft.⁹ Previous efforts to improve the PLAAF's air transport capability have focused on the PLAAF's Yun class aircraft, although much more limited in range to the USAF's C-17 and C-5 transport aircraft play similar roles.¹⁰ The Chinese have used these aircraft to transport PLA airborne forces across military regions during exercises; have transported cargo and personnel to distant and remote areas within China following natural disasters; and have transported equipment, vehicles and personnel to the far reaches of China to bolster border defenses (e.g., against India during tense times) or to areas outside of China to participate in NEOs and out of area exercises. Additionally, PLA Air Force exercises have emphasized rapid deployment, austere air field, and sparse supporting activities in their operations.¹¹

The PLA Ground Forces have been making efforts to make their operations more expeditionary in nature. Since 1993 following the lessons learned from observing the Gulf War, the PLA ground forces have become more amphibious in nature, first, by dedicating infantry divisions to the amphibious mission for Taiwan; secondly, the PLA ground forces have embraced the concept of modularity or multi-functionality by creating combined arms brigades;¹² and the PLA ground forces have been identified as the "out of area force" when it comes to Military Operations Other Than War (MOOTW), especially for UN peace keeping.¹³ The ground forces reducing the size of staffs and moving from Division to Brigade centered organization was in part motivated by the need to make the PLA ground forces more mobile and expeditionary. PLA Army ground forces have clearly been moving toward a greater expeditionary focus, however, the most revealing link between expeditionary operations and Chinese force modernization is the renewed focus on the PLAN Marine Corps.

⁸ Ibid, pp. 8-50.

⁹ "The AN-225 Transport Aircraft" GlobalSecurity.org as accessed in <https://www.globalsecurity.org/military/world/china/an-225-htm>

¹⁰ Ankit Panda, "China's Air Force Declares Shaanxi Y-9 Transport Aircraft Operational" in *The Diplomat*, December 2017.

¹¹ Christina Garofalo and Timothy Heath, *The Chinese Air Force's First Steps Toward an Expeditionary Air Force*, RAND, 2017, pp. 12-33.

¹² Dennis Blasko, "The Biggest Loser in Chinese Military Reform: The Army" in Saunders, Ding, Scobell, Yang and Wuthnow, *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, National Defense University Press, Washington, DC, 2018, pp. 362-8.

¹³ Ibid, pp. 371-3.

The PLAN Marine Corps is expanding from a 10,000 size force of three brigades strictly associated with the South Sea Fleet, to a 30,000 size force of about nine brigades, each associated with the three PLAN Sea Fleets (North Sea Fleet, South Sea Fleet, East Sea Fleet).¹⁴ The expansion of the PLANMC appears to have been entirely at the expense of the PLA Army Ground Forces, primarily from Army amphibious units associated with the Taiwan mission;¹⁵ this makes sense. The separation of PLANMC exercises, operations, and career paths from those of PLA ground force amphibious units suggests that the PLA has created a hard division between the two expeditionary forces, with the Army amphibious units still strictly reserved for a Taiwan contingency and the PLAN Marine Corps missions centered around the maritime territorial disputes, and out of area missions.

A military is characterized as expeditionary not simply by its platforms. It is also defined by capabilities which permit a military to operate at long distances and for extended periods of time in austere conditions. In addition to the direct expeditionary platforms just listed, the PLA has also been making investments in underway replenishment ships, air to air refueling capability, ship tenders, and increasing the number of PLAN ships with satellite communications.¹⁶

Finally, a military may be characterized as expeditionary if its logistical, maintenance, and rotational process supports a consistent ability to deploy forces long distance, sustain them, rotate them out, maintain them on a periodic basis, upgrade them, and then put them through a rigorous training and work-up process before they deploy again. From the ten years of evidence that we have of China's counter-piracy operations to the Gulf of Aden, China has something close to a well-executed process.¹⁷

PLA Training and lessons learned for an evolving expeditionary force

There is ample evidence in the Open Source literature that the PLA has been engaged in increased expeditionary operations training. Dennis Blasko and Rodrick Lee have documented the evolution of PLA Marine Corps training from that restricted to South China Sea related missions to an ever expanding training regimen involving diverse climate, terrain, and geography.¹⁸ A recent RAND report on the PLA's transition to a force capable of engaging in air expeditionary operations also details the PLA's increasing involvement in exercises outside of China, with an increasingly diverse array of foreign exercise partners, and involving an increasing number of air personnel and aircraft.¹⁹ The PLA's ability to operate out of area for the purposes of engaging in training is unquestioned. The real question is: has the PLA been training to address some of the missions already discussed in this paper and has it been gathering lessons learned to improve its performance in these mission areas?

There is every bit of evidence to suggest that this is indeed the case. First, the PLA has, since the mid-2000s been engaged in international counter-terrorism exercises along with coalition partners in

¹⁴ Dennis Blasko and Rodrick Lee, "The Chinese Navy's Marine Corps, Part 1", *China Brief*, Jamestown Foundation, February 02, 2019.

¹⁵ Ibid.

¹⁶ Bernard Cole, *China's Quest for Great Power: Ships, Oil and Foreign Policy*, Naval Institute Press, Annapolis, MD, pp. 51-84.

¹⁷ Andrew Erickson and Austin Strange, "No Substitute for Experience: Chinese Antipiracy Operations in the Gulf of Aden", China Maritime Studies Institute, # 10, Naval War College, November 2013, pp. 81-108.

¹⁸ Dennis Blasko and Rodrick Lee, "The Chinese Navy's Marine Corps, Part 2: Chain of Command Reform and Evolving Training", *China Brief*, Jamestown Foundation, February 2019.

¹⁹ Garofalo and Heath, pp. 12-33.

the close to yearly Shanghai Cooperation Organization exercises. These exercises with Central Asian countries, Russia and China have invariably involved some kind of major terrorist incident or threat to the sovereignty and survival of a partner regime.²⁰ The PLA has therefore had over a decade and a half to practice expeditionary responses to the kind of major crises possibly associated with its interests in Belt and Road Initiative countries.

Second, the PLA has had a decade of experience conducting counter-piracy operations and has had that long to practice the deployment of both naval and ground forces out of area to address threats to shipping and its SLOCs. A number of assessments have noted that China's real world operations, particularly its anti-piracy operations have led to a number of lessons learned and improvements in PLA expeditionary operations. In particular, Andrew Erickson and Austin Strange ("Learning by Doing") have noted the distinct improvement in PLAN training and "work up" preparation; the collection and fusion of intelligence while deployed and the utilization of intelligence to inform current operations; the specific procedures of the PLAN task force to include procedures on underway replenishment, vertical replenishment, force make up, force protection procedures, leave policy, and food preparation and preservation.²¹

Third, there is every reason to believe that the PLA is now beginning to incorporate these new out of area missions into its training and education regimens. When the author visited the PLA Marine Corps training academy in Guangzhou as part of a Marine Corps War College exchange with the PLA in both 2016 and 2018, he was told by the faculty and the leadership that lessons from these out of area operations are starting to be included in the curriculum so that the upcoming generation of operators can have the benefit of these expeditionary lessons.²²

There is also evidence that the PLA has an even greater desire to learn from and improve upon its most likely real world operation—Non-Combatant Evacuation Operations. During dialogues with the Chinese defense scholars, an oft repeated subject raised was the possibility of table top exercises in which the scenario was a major crises in a third country prompting the need for a NEO. The Chinese suggested that a joint table top exercise in which the two sides had to coordinate and plan a NEO was a possibility. In meetings with Chinese defense and foreign policy analysts in Beijing in 2011 the author was informed that the PLA and various other agencies had gathered in Beijing to engage in a lessons learned discussion on the Libya NEO.

Lastly, that the PLA takes these expeditionary operations seriously and plans on providing rigorous training and education in support of them is illustrated by the resources put toward these

²⁰ Ibid, pp. 13-5; Christopher Yung, "Politics in Command": The Political Dimensions of Chinese Military Exercises" in Heuser, Heier, and Lasconjarias, *Military Exercises: Political Messaging, Strategic Impact*, NATO Defense College, Forum Paper # 26, 2018, pp. 347-8; Cortez Cooper, "Controlling the Four Quarters": China Trains, Equips, Deploys a Modern People's Armed Police" in Kamphausen, Lai, and Tanner, eds., *Learning by Doing: the PLA Trains at Home and Abroad*, Strategic Studies Institute and US Army War College, Carlisle, PA, 2012, p. 153.

²¹ Andrew Erickson and Austin Strange, "No Substitute for Experience: Chinese Antipiracy Operations in the Gulf of Aden", China Maritime Studies Institute, # 10, Naval War College, November 2013, pp. 81-108.

²² U.S. Marine Corps War College exchange with the PLAN Marine Corps Training Academy, Guangzhou, PRC, May 2016 and 2018.

efforts. The Chinese have created and put in place a Peacekeeping training center in Beijing to which PLA units and command elements must attend prior to deploying on any UN Peacekeeping mission.²³

Gaps in China's expeditionary capabilities

It would be folly to assert that after decades thinking about, planning, rehearsing and developing the capabilities for an amphibious assault on Taiwan that the PLA lacks the basic fundamentals to conduct this kind of operation. The US amphibious doctrine template for sound, effective amphibious operations is the acronym PERMA (Planning; Embarkation; Rehearsal; Movement; and Assault). There is ample evidence that the Chinese have over the decades embarked on all of these activities with regard to Taiwan. Technologically the PLA has the scientific skill to procure the platforms and weapons systems to be able to undertake a large scale amphibious assault. The PLA has all of the components—landing craft, amphibious assault vehicles, landing ships, surface combatants, amphibian trained ground forces, support aircraft—to conduct an assault. At the same time, as the history of amphibious operations attests, the possession of technical skill and the material resources does not ensure a successful amphibious assault. On the verge of D-Day in 1944, the Allies possessed the technological skill, the amphibious lift, the air support, and detailed planning; nonetheless, Operation Neptune was by no means a *fait accompli*. Any number of actions that the German defenders undertook in France could have unraveled the success of Neptune and Overlord.

If I were to identify areas where the PLA likely has gaps in its ability to assault Taiwan these areas would center around the seams of expeditionary operations—areas where domains cross-over into each other and which require sophisticated command and control, very practiced cross-service coordination; and very well thought out doctrine designed to minimize confusion when sea operations cross over into land, where surface operations must be coordinated with sub-surface, where the passing of command goes seamlessly from a maritime commander to a ground force commander. Additionally, the PLA also lacks the ability to fully address the likely mine problem which Taiwan's defenders would most likely utilize. Although I do not possess hard evidence of this, it is also likely that the PLA has not fully developed a number of "behind the scenes" operations which would prove crucial to a full scale assault of the island. These are: naval beach operations; tactical control of aircraft (both off of aircraft carriers, off of amphibious ships, and out of mainland airfields) off of amphibious shipping or an at sea maritime force commander; combat loading of amphibious ships and the tactical use of prepositioned merchant shipping; and high intensity air traffic control off of flight decks.

Moving beyond Taiwan, despite the great strides the PLA has made in evolving an expeditionary oriented out of area military capability, it is still suffering from a number of gaps or shortcomings in that capability as well. First, the PLAN still does not have a uniform force of platforms each equipped with satellite communication capabilities. An increasing number of PLAN ships have long-range communications capability, but this is not universally so.²⁴ Second, the PLANMC has only recently begun its expansion and so it is reasonable to assert that the PLANMC is not fully operational and not expected to be so for at least five to ten years. Third, although the PLA is not planning on a large scale conventional conflict in the Indian Ocean its out of area task forces are still largely vulnerable to attacks in the maritime domain. The PLAN's notoriously poor ASW capability leaves any type of PLAN out of

²³ Michael Kovrig, "With an Influx of Blue Helmets and Cash, China's Role in African Security Grows More Pervasive", *China File*, October 2018.

²⁴ Clarence Robinson, "China's Military Potency Relies on Arms Information Content" in *Signal*, November 2019.

area mission seriously vulnerable to submarine attack.²⁵ It is also the case that any PLA task force operating abroad would be vulnerable to air and anti-ship missile attack as well.²⁶ This will surely continue to be the case until China has developed further its aircraft carrier and associated battle/strike group capabilities.

The PLAN also suffers from a number of maritime capability shortfalls which often go unnoticed to the untrained eye. The ability to successfully conduct expeditionary operations in a contested environment has to account for a number of capabilities that a clever and determined foe can use to seriously impede, degrade and possibly devastate an out of area force. For example, the PLAN has minimal mine clearing capability and would be stopped dead in an expeditionary operation if a determined adversary sowed the very shallow water, shallow water, surf zone and the beach with any variety of modern and vintage sea and land mines. The PLAN has not had time to develop the force protection assets to make forward deployed forces secure in foreign ports; it has not developed a forward deployed naval coastal warfare capability, it does not have a dedicated force of divers to ensure protection against sabotage, and its forward deployed Explosive Ordnance Disposal (EOD) capability, a deployable Riverine force and expeditionary Construction Battalion (Seabee) force are practically non-existent. The PLAN additionally has not thought through and implemented what a military professional might deem a minimal capability to deal with medium to low intensity threats. For example, a PLAN amphibious task force operating forward still will have not worked out tactical air control of its air assets. A carrier may be assigned to protect that task force but the Chinese have not had to work out tactical control of aircraft in operations outside of the Asia-Pacific; the amphibious task force has yet to invent a TACRON.

Additionally, it is one thing to procure a platform which has all of the trappings of a significant expeditionary capability; it is quite another to be able to operate off of that platform with all of the functions associated with that expeditionary capability. Let's take a closer look at the large deck amphibious ship that the PLAN is purported to be developing. There has thus far been no evidence that the PLANMC has developed the doctrine to operate on that ship and to work out all of the doctrine associated with "Far Seas" expeditionary operations off of that and any other L-class ship. Would the PLANMC know how to conduct an opposed NEO in some war torn country in Africa? Has it worked out the use of rotary wing aircraft to insert PLA Marines deep into a country, round up citizens unable to make their way to the coasts, provide a safe landing zone for the incoming aircraft, properly load the citizens on the aircraft and return these citizens with escort aircraft back to the expeditionary task force. The Chinese are presently wholly unprepared to do this mission.

If we ease the threat environment in which the PLA is expected to operate we still see that the PLA may be suffering from some serious gaps in its capabilities. The most obvious likely real world operation the PLA will have to respond to is a Shanghai Cooperation Organization coalition response to some major disaster or threat to a coalition country. If China dispatches the PLA as part of a coalition effort to address a terrorist, insurgent, or large scale civil unrest, and China has the platforms to reach the target area (all reasonable assumptions) the PLA still suffers from a less than robust command and control structure for far seas and "out of area" operations; its logistical support is not robust enough to

²⁵ O'Rourke, pp. 4-5.

²⁶ Ibid.

continuously supply a sizeable force abroad;²⁷ and the PLA still does not have a robust maintenance and repair capability network abroad to deal with damaged or destroyed equipment.²⁸ Related to these points, if the PLA finds itself in a much more severe security environment in which its forces are taking serious casualties, there is no significant casualty care or mortuary service support system upon which the PLA can depend on.²⁹

Core Technologies in support of Expeditionary Force Building Efforts

In most of the cases of PLA gaps in expeditionary capabilities, the PLA has not necessarily lacked a specific technology as it has not effectively worked out the doctrine, procured the right equipment, or provided the right training to perform the mission. The PLA has the technological capacity to produce or buy the equipment to address the needed shortfall; the PLA has simply been inexperienced in a particular mission area and does not know what it does not know. For example, the PLA's lack of an opposed NEO capability. That requires the development and purchase of a more robust helicopter force designed to lift troops, provide escort, and can conduct rudimentary close air support. The PLA has the technological capability to procure this kind of capability but for any number of reasons has not done so.

On the other hand, in some cases the PLA does lack the technological skill to address an expeditionary short fall. In some cases, the technological skill lacking isn't simply a Chinese problem, but a world-wide military problem. The United States Navy has problems with the mine problem and has spent decades trying to work out the best solutions to deal with this thorny problem. Nonetheless, if the PLA intends to be a robust, world class expeditionary force it will have to deal with these problems as well. It will have to deal with the difficult problem of being able to spot mines in varying depths of water, neutralize the mines, clear the mines and dispose of them in a timely fashion. Similarly the PLA will need to explore counter-IED technologies as did the U.S. military in response to its experiences in Iraq and Afghanistan.

The PLA will also eventually have to address obstacles which have tended to plague U.S. amphibious forces. These include the operational limitations associated with landing craft; the complexities of marrying PLA expeditionary ground forces with merchant and prepositioned supplies; the vulnerability of a well deck to an assortment of non-traditional threats (e.g., chemical and biological attacks); and the limitations of capacity on an amphibious flight deck compared to the potential aviation-related missions which could be assigned. Consequently, we can expect to see the Chinese to push for development of: a faster, more survivable, versatile landing craft that can operate regardless of the sea state or the temperature; unmanned systems deployed off of amphibious ships operating over both water and land, and capable of surveying, monitoring, intercepting and attacking targets in a wide range of operating environments; advanced maritime prepositioned forces vessels which can store huge amounts of cargo and equipment, easily rearrange storage at sea, flexibly gain access to the equipment, and can offload the equipment through a variety of means (cranes, lighterage, causeways);

²⁷ O'Rourke, p. 58.

²⁸ Christopher Yung, "Not An Idea We Have to Shun: Chinese Overseas Basing Requirements for the Twenty First Century", China Strategic Perspectives # 7, Institute for National Strategic Studies, National Defense University, 2014, pp. 11-2, 28-33, and 39-43.

²⁹ Ibid.

and well-decks designed to reduce likelihood, mitigate the consequences of, and speed the cleanup of, chemical, biological and other non-conventional attacks on an expeditionary force.³⁰

Perhaps the area where we can expect to see the PLA pursue technologies in support of expeditionary, and out of area operations will be in support of operations in a non-contested or minimally contested environment. That is, operations which support China's strategic-political goals and not necessarily those designed for warfighting or contesting in a littoral environment. In short, expeditionary operations which allow China to support host nation countries either with private contractors or a small, minimal PLA presence; operations which permit the PLA to react rapidly to security situations in Belt and Road Initiative countries; operations which permit the PLA to conduct counter-terrorism, counter-insurgency, protection of Chinese businesses abroad; which enhance PLA presence abroad so that the PLA can conduct joint patrolling, joint training and other building partner capacity activities; and operations which cement China's growing security relationship with host nation governments alongside China's periphery.

These technologies can largely be grouped into two broad categories: logistics and communications. Recent observers of China's activities in relation to the Belt and Road Initiative have observed that the Chinese are making a concerted effort to pursue technologies in these core areas. At home the Chinese have been engaging in a "full court press" to develop civilian-military fusion in the logistics arena.³¹ That is, the Chinese have been attempting to marry advances in civilian logistical and communications technologies with military operations. Initially observers of China's military reforms concluded that such civ-mil fusion ideas could have little relevance to out of area operations or expeditionary operations; however, given the nature of Chinese strategy, which is to enhance its power projection reach gradually through cooperation with host nation countries around its periphery, such an initial assessment must be considered premature. The Chinese have to be marrying "just in time logistics technologies" or "real time" capabilities to identify supply requirements, target suppliers either in China or elsewhere worldwide, notify potential shipping or transport vendors, track the movement of supplies, and then distribute the part or the supply where needed.³²

The paucity of Chinese military basing and overseas facilities solely under Chinese jurisdiction also poses technological challenges to China's out of area operations; in particular PLA command and control of its forces. If the Chinese intend to operate out of area and intend to do so with a minimal footprint and infrastructure, it is going to have to acquire and make more compatible its communications networks with those of the host nation countries it will be operating in. This means that notoriously poor countries with very poor digital footprints will have to serve as the back bone or foundation of China's communications along its periphery. This is going to require a communications network that is secure, inter-operable or largely compatible with a host nation's internet infrastructure, and can facilitate China's underlying strategic rationale for the BRI—its commercial expansion in the

³⁰ With the exception of unmanned systems, the remaining technology developments have been on the Amphibious Forces wish list for close to two decades. Two examples are LCU Replacement and Maritime Prepositioned Force (Future).

³¹ Leigh Ann Luce and Erin Richter, "Handling Logistics in a Reformed PLA: The Long March Toward Joint Logistics" in Saunders, Ding, Scobell, Yang, and Wuthnow, *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms*, National Defense University Press, Washington, DC 2018, pp. 267-9.

³² *Ibid*, pp. 264-7.

developing world; no mean feat. A commercial network which can address all or most of these requirements is a tall order.³³

Potential Congressional Action

In this testimony I have discussed what I believe to be the direction of China's expeditionary force development. The Commission staff has asked me to specifically address what Congressional actions might address some of the concerns generated by this testimony. Obviously Congressional oversight of the Defense budget has direct pertinence to this issue. I am on the record in other venues and publications to caution the Department of Defense, and the Department of the Navy to carefully evaluate the force structure implications of the emerging era of Great Power competition.³⁴ There will be a natural rush to procure platforms directly related to large scale conventional conflict. In the Navy's case, the rush to purchase blue water, power projection, maritime superiority assets. These will unquestionably be important assets to consider; however, the caution comes from the nature of the strategic competition to be. The Chinese are moving to procure long-range, out of area expeditionary platforms like the Type 075 Landing Helicopter Dock; take note that it is also moving toward carrier development. As my testimony should illustrate the Chinese recognize that these expeditionary platforms and capabilities have significant strategic utility, and generate oversized political effects. In shipbuilding and force acquisition considerations, the Navy needs to stop thinking of our amphibious forces simply as transportation assets, and needs to start re-evaluating these platforms as strategic effect platforms. In contemplating a carrier versus amphibious ship purchase, then, that is the proper mind-set to conduct an analysis of trade-offs.

A second potential impact on Congressional action is related to the types of technologies the Chinese will be seeking to obtain over the next few decades. Since the Chinese will be heavily in pursuit of communications technologies and will be pressing hard to develop civilian communications technologies which can be fused with military applications, it is a safe bet that Chinese efforts to obtain these kinds of technologies by a wide variety of means: espionage, forced technology transfers, cyber hacking, and through human capital transfer of Chinese graduate researchers returning to China. Congressional action related to reducing these kinds of activities cannot be overstated. Congress should probably pass the China Technology Transfer Act which places all Chinese "core technologies" from "Made in China 2025" on the Department of Commerce's Commercial Export Control List; by contrast, and ironically, it should probably take a good look again at laws which discourage Chinese students with STEM backgrounds and a talent for hi-technology research to have to return to China.

Finally, my testimony argues that a large portion of the expeditionary gaps in the Chinese military comes not from the absence of technologies, but simple inexperience and lack of doctrine and training. The Chinese seek to gain this knowledge through its interactions with the U.S. military. I am on the record as stating that US-China mil-to-mil produces more good than ill; however, it is my opinion that certain types of capabilities and knowledge should remain on the restricted list in our interactions with the Chinese. These include the ability to do Non-Combatant Evacuation Operations and other

³³ Ibid.

³⁴ Christopher Yung, "China's Evolving Naval Force Structure: Beyond Sino-US Rivalry", *China Brief*, Jamestown Foundation, April 2018.

MOOTW like expeditionary operations. Congress has the power to impose these restrictions through the specific restrictions it incorporates in the National Defense Authorization Act (NDAA).

Conclusion

The PLA as a whole is making significant strides toward becoming a “World Class expeditionary power, its procurement of a number of well-known expeditionary platforms is certainly evidence of this. At the same time, the PLA has demonstrated a number of significant gaps in its expeditionary capability. Some of these gaps, largely associated with expeditionary operations in a high intensity conflict environment, will take decades to address. In order to fully address these shortcomings, the PLA will need to embark on a period of sustained naval procurement of some very sophisticated naval platforms and an extended period of training and doctrinal development to bring these capabilities to fruition. Even expeditionary operations in a moderately contested environment will take at least a decade or two to fully address. These specific gaps are not necessarily due to a lack of technological prowess, but can be traced back to simple inexperience and low visibility deficiencies such as in the areas of counter-mine warfare, force protection, and tactical control of aircraft.

The area where China will seek to vigorously obtain new technologies to complement its evolving expeditionary military capability are those technologies which support PLA operations in a non-contested or minimally contested environment. Since the PLA is supporting China’s larger national objectives of assuring access to energy, raw materials and goods and services, creating a stable and “harmonious” zone along its periphery, and contesting American hegemony and influence in parts of Central, and South Asia, the Middle East and the Eurasian land mass through the Belt and Road Initiative, it can leverage off of initiatives started back in China related to civilian-military fusion of logistics and communications technologies. Initiatives related to “just in time logistics”, and the “digital silk road” are sure to be pursued with military applications in mind.

The purpose of this hearing is to address the question of China’s pursuit of a “World Class Military”. Taken as a theme the question of whether China’s pursuit of expeditionary power has achieved world class status remains. It is the conclusion of this paper that the PLA scorecard in that regard is mixed. The PLA has demonstrated “world class” capability to link its political and strategic objectives with its current and developing military force structure. It has successfully embarked on the acquisition of platforms, weapons systems, and related civilian assets to conduct operations in support of its “out of area” interests and its interests directly related to Taiwan. China has also partially set the stage and laid the ground work to operationally support peacetime, and low intensity contingency missions through joint and service reforms. However, at the same time the PLA must demonstrate that it is able to operate under extremely severe and highly threatening combat environments before a moniker of “World Class” can be assigned to it. It is here that the PLA’s record falls short for the moment: its logistics are still centered on interior, vice exterior lines; its communications are still not robust enough to handle high intensity combat situations; command and control are still designed for a centralized, hierarchical system not a dynamic, autonomous, mission-command oriented process; and the PLA has demonstrated insufficient experience with joint planning and joint operations in an austere, expeditionary environment. The 2015 Joint Reforms is a significant step for the PLA to take in the right direction; however, it is not there yet and it is safe to stay that it won’t be there for quite a number of years.

OPENING STATEMENT OF DAVID SANTORO, PH.D., DIRECTOR AND SENIOR FELLOW FOR NUCLEAR POLICY, PACIFIC FORUM

COMMISSIONER McDEVITT: Thank you very much, Dr. Yung.

We turn now to Dr. David Santoro. He's the Director and Senior Fellow for Nuclear Policy at Pacific Forum out in Honolulu.

I want all of you to realize that he's made a sacrifice to fly in from Hawaii to Washington. (Laughter.)

Dr. Santoro is Director and Senior Fellow in Nuclear Policy at the Pacific Forum. He specializes in strategic and deterrence issues, as well as nonproliferation, nuclear security, with a regional focus in the Asia-Pacific and Europe.

His current interests focus on cross-regional deterrence and assurance, especially between Northeast Asia and Europe, and in nonproliferation and nuclear security in Southeast Asia. He also manages Pacific Forum's Track 1.5/2, nuclear policy dialogs that have been going on for a number of years. They include the U.S.-China strategic nuclear dialog, the U.S.-Japan and the U.S.-South Korea extended deterrence dialogs, and the U.S.-Myanmar nonproliferation and nuclear security dialogs.

Before joining Pacific Forum, Dr. Santoro worked on nuclear policy issues in France, Australia, Canada, and the United Kingdom. And in the spring of 2010, he was a Visiting Research Fellow at NYU, their Center on International Cooperation. And he was also a Stanton Nuclear Security Fellow at the International Institute for Strategic Studies in London.

He holds his doctorate from Macquarie University in Sydney, Australia.

David, over to you.

DR. SANTORO: Thank you very much, Admiral, and thank you to all the Commissioners for inviting me to testify on the implication of China's reform for Chinese nuclear strategy and weapon program.

To do this, we first need to understand that China's nuclear strategy has been consistent since Beijing first developed nuclear weapons in 1964. And there are three important, longstanding features.

No. 1, the top political leadership never delegated authority of a nuclear strategy to senior officers of the People's Liberation Army, the PLA, because it was considered a matter of supreme national policy, and this is still the case today.

No. 2, and as a result, the views of the top political leadership, especially at the time China built its arsenal, had a powerful influence on Chinese nuclear strategy. These views are based on the limited utility of nuclear weapons and they support maintaining a strategy of assured retaliation and not pursuing any form of nuclear warfighting. And that, too, is still the case today.

No. 3, that's why Beijing has always claimed to have a self-defense nuclear strategy. That's why the Second Artillery Force, which is the component of the PLA in charge of Chinese nuclear weapons, has had the sole mission of conducting a nuclear counterstrike. And that's why Beijing has developed a small nuclear force. That's why it's refused to join any arms races and, also, why it's adopted a no-first-use policy.

So, as a result, for a very long time, China did not rank high in U.S. strategic thinking. China's nuclear program, nuclear weapons program, was simply not considered a threat to the United States.

Now things began to change, especially over the past decade and a half, because Beijing

began to modernize its strategic force, diversify its delivery systems, and increase the number of nuclear weapons in its arsenal.

Now, in response to growing U.S. concerns, Beijing has argued that these developments are purely defensive; that there is no change to its policy and strategy, and that it's only building a so-called lean-and-effective force that is justified in the context of improved U.S. missile defenses and conventional capabilities; and also, a refocus on the Indo-Pacific.

Now, of course, the problem is that the United States doubts the veracity of China's no-first-use policy and has been concerned that Beijing may actually decide to abandon its practice of minimum deterrence and decide to sprint to nuclear parity with Washington and Moscow.

These worries have been amplified by China's lack of transparency about the current and future size and shape of its nuclear forces and activities. Worries have also increased in recent years as a result of China's growing assertiveness in the Indo-Pacific, particularly since President Xi took office in 2012. And, of course, Beijing's refusal to engage in strategic nuclear dialog with Washington has not helped.

So, this is the context in which the Chinese military reforms have been rolled out. And so far, the most significant change that is relevant to the nuclear weapon program has been renaming the Second Artillery "the rocket force" and upgrading it to a full service status.

Now there's a lot of uncertainty about what that change actually means or will mean, but it seems to me that there are two options. On the one hand, the new rocket force and its upgrade to a full service might just codify its de facto status, which has increased in recent years. And if that's the case, well, maybe we are likely to see the continuation of steady, yet relatively modest, growth of the nuclear arsenal, and China's longstanding nuclear policy and strategy would be maintained. And according to Beijing and most Chinese strategists, this is what to expect; the reforms will not lead to nuclear change.

Also, significantly for now, nuclear command and control do not appear to have changed. They seem to continue to be centralized at the highest level, and some Chinese have even argued that centralization could be reinforced as a result of the reforms. So, if all that is confirmed, the rocket force could be expected to continue to focus on expanding and improving its conventional assets while keeping, and maybe even pushing, nuclear forces into the background.

Now, alternatively, the reforms might lead to greater autonomy or even independence of the force, which could open the door to radical changes in China's nuclear force structure and posture, and even driving changes in policy and strategy. And some analysts have stressed that official characterizations of the new rocket force could suggest much greater expectations for the force, including in the nuclear domain.

And so, if this is correct, then faster growth of the Chinese nuclear arsenal could be in the works. China could also decide to adopt a much more aggressive nuclear posture, including in a warfighting role, as some PLA officers have occasionally recommended. And Beijing and the PLA could also give authority over nuclear forces to the theater commands, making it easier to actually use nuclear weapons in a crisis or in a war.

Now I think it's too early to tell whether the reforms will lead to continuity or to change. But it seems to me that at least we will see some degree of change over the coming years, and for three reasons mainly.

One, because we know that the Chinese nuclear arsenal is likely to continue to grow. The question actually is not whether it will grow, but how fast and how big it will become. Now there's a lot of disagreement about this, but there is broad consensus that the Chinese arsenal is already today pushing the boundaries of a minimum deterrence, which means that it will be

difficult for China to continue to remain opaque about its forces and its activities.

No. 2, I think it will become increasingly difficult for Beijing to maintain its longstanding nuclear policy and strategy because of its modernization efforts, especially because of the emergence of a nuclear triad. And even if the Chinese want continuity, they most likely will have to adjust their country's policy and strategy.

Finally, No. 3, I think it's highly likely that the modernization of Chinese nuclear forces will create at least some complications for command and control, just simply given the number of platforms that Beijing is bringing online.

So, in conclusion, I think the jury is pretty much still out about the implications of the reform, but Beijing is for sure reaching a crossroads with its program. And the question is really whether the reform will lead to radical change or to slower, more managed change.

I see I'm out of time. So, I will skip the recommendations, and I'm happy to talk about it in the Q&A. Thank you.

**PREPARED STATEMENT OF DAVID SANTORO, PH.D., DIRECTOR AND SENIOR
FELLOW FOR NUCLEAR POLICY, PACIFIC FORUM**

Testimony before the U.S.-China Economic Security Review Commission

Hearing on “A ‘World-Class’ Military: Assessing China’s Global Military Ambitions”

Panel III: Building a World-Class Military: Missions, Modernization, and Bases

David Santoro, PhD
Director and Senior Fellow for Nuclear Policy
Pacific Forum International

June 20, 2019

Thank you to the Commissioners for giving me the opportunity to testify on the implications of China’s military reforms for Chinese nuclear strategy and weapon program. Before I begin, I want to stress that even though the Pacific Forum is an independent, nonpartisan think tank that does not take institutional positions on policy issues, I am speaking in my personal capacity.

To understand the implications of China’s military reforms for Chinese nuclear strategy and weapon program, it is necessary to understand not only the origins and key features of that strategy and program, but also recent developments and the situation on the eve of the reforms. That is why in this testimony, I begin with an overview of the key decisions and developments that have shaped China’s nuclear strategy and weapon program from its inception. I then move on to discuss more recent dynamics and the “state of play” before Chinese President Xi Jinping announced the launch of the reforms, which he stated aim to build “world-class forces” for China by 2049.¹ On that basis and using publicly available information as well as drawing on landmark studies and my work in track-2 and track-1.5 initiatives on strategic nuclear issues with the Chinese national-security community, I reflect on what the reforms could have in store for China’s nuclear strategy and weapon program.² Finally, I conclude with recommendations for the U.S. government.

I make the following arguments and recommendations:

- China’s nuclear strategy has been consistent since Beijing first exploded a nuclear device in 1964. It has been a self-defense strategy, which is why China has adopted a no-first-use (NFU) policy and chosen to develop a small nuclear force.
- In recent years, however, China has been modernizing, diversifying, and expanding its nuclear arsenal at a relatively rapid pace, raising concerns in Washington and elsewhere that Beijing may be on the cusp of some policy and strategy changes.

¹ President Xi and others first announced their intention to launch military reforms at the Third Plenum of the 18th Party Congress in October 2013. Yet it was at the 19th Party Congress in October 2017 that Xi stressed that the people’s armed forces should become “world-class forces” by mid-century.

² While there are several track-2 and track-1.5 initiatives with the Chinese, the main dialogue on strategic nuclear issues is the biannual “U.S.-China Strategic Nuclear Dynamics Dialogue,” led by the Pacific Forum and Naval Postgraduate School and in partnership with the China Foundation for International and Strategic Studies and China Arms Control and Disarmament Association since the mid-2000s. The public reports of the dialogue are available on the Pacific Forum website at www.pacforum.org. For a summary of findings until 2014, see also Michael O. Wheeler, *Track 1.5/2 Security Dialogues with China: Nuclear Lessons Learnt* (Washington, DC: IDA, 2014).

- Rolled out in that context, it remains to be seen if Beijing's sweeping military reforms will mean "nuclear continuity" for China or if they will trigger "nuclear change." Looking ahead, however, it appears clear that some degree of change is likely to happen.
- In these circumstances, the United States should 1) invest to maintain effective deterrence of China (and extended-deterrence commitments to its allies); 2) create the conditions for U.S.-China strategic nuclear dialogue to begin now; 3) lead on arms control, beginning by pursuing extension of the 2010 U.S.-Russia New Strategic Arms Reduction Treaty (New START); and 4) prioritize crisis management.

The long shadow of the past: Origins and key features of China's nuclear strategy and weapon program

China's conventional military strategy has been dynamic, changing several times since the founding of the People's Republic of China (PRC) in 1949. Yet by contrast, China's nuclear strategy has remained unchanged since Beijing exploded its first nuclear device in 1964. Significantly, China did not seek to change its nuclear strategy despite its vulnerability either to an invasion or a nuclear first strike by the United States or the Soviet Union during the Cold War, and despite continued vulnerability after the Cold War, mostly vis-à-vis the United States. Accordingly, one word best describes China's nuclear strategy: consistency.

Recent scholarship has shown that China's nuclear strategy and program have several unique features.³ Three stand out. First, unlike conventional military strategy, the top leadership of the Chinese Communist Party (CCP) *never* delegated authority over nuclear strategy to senior officers of the People's Liberation Army (PLA). From the time it was first articulated, Chinese nuclear strategy was viewed, and continues to be viewed thereafter, as a matter of supreme national policy. That means that it had to be controlled at the highest level: the Central Military Commission (CMC), which reports to the Chairman, Xi Jinping today; in addition to his presidential duties, Xi Jinping serves as General-Secretary of the CCP and Chairman of the CMC.

Second, as a result, the views on nuclear weapons of the top leadership of the CCP at the time China built its arsenal had, and have had to this day, a *powerful* influence on Chinese nuclear strategy. These views, based on the limited utility of nuclear weapons, support maintaining a strategy of assured retaliation and not integrating nuclear strategy with conventional strategy or pursuing any form of nuclear warfighting, even limited. More specifically, longstanding Chinese thinking on nuclear weapons has been that these weapons *only* serve to prevent nuclear coercion and deter nuclear attack.⁴ Mao Zedong, for instance, stated in 1960 that "our country in the future may produce a few atomic bombs, but we by no means intend to use them. Although we do not intend to use them, why produce them? We will use them as a defensive weapon."⁵ Chinese officials have also held the belief that nuclear weapons provide other important benefits, notably major-power status to China and a source of national pride to all Chinese.

³ M. Taylor Fravel, *Active Defense: China's Military Strategy since 1949* (Princeton, NJ: Princeton University Press, 2019), notably pp. 236-269.

⁴ Concerns that the United States would use tactical nuclear weapons during the 1950-1953 Korean War, a threat Washington made almost explicit, was a major factor in Beijing's decision to develop nuclear weapons. Significantly, Beijing declared upon conducting its first nuclear test in 1964 that it was meant to respond to "the United States imperialist policy of nuclear blackmail and nuclear threats."

⁵ Quoted in Fravel, *op. cit.*, p. 238.

Third, and logically, that is why Beijing has always claimed to have a “self-defense nuclear strategy.”⁶ That is also why Beijing has given the Second Artillery Force (SAF), the component part of the PLA created in 1966 to control Chinese nuclear weapons, the sole mission of conducting a nuclear counterstrike, and why Beijing has “only” sought to develop a small nuclear force and refused to join any arms races. Beijing, in other words, has focused on developing “the minimum means of reprisal,” just enough to conduct an effective nuclear counterstrike.⁷ In turn, that explains why Beijing has focused on developing a nuclear force based on missiles rather than gravity bombs (missiles are more adequate for counterstrike purposes), why it has maintained a de-mated force posture (because it has no intention to engage in nuclear warfighting), and why it has adopted an NFU policy and given negative security assurances to non-nuclear-weapon states.⁸

Recent developments: The state of play on the eve of China’s military reforms

Accordingly, at least until the mid-/late 2000s, China was “little more than a footnote in the history of the nuclear era,”⁹ an “afterthought,”¹⁰ and even a “forgotten nuclear power”¹¹ in U.S. strategic thinking. China’s nuclear-weapon program, quite simply, was *not* deemed a serious threat to the United States. What’s more, Washington had other priorities. During the Cold War, its focus was the Soviet Union and, in the 1990s, U.S. attention shifted to “rogue states,” notably Iraq, North Korea, and Iran, and to strengthening the nonproliferation and nuclear-security regimes.

Over the past decade, however, Washington has begun to worry about China’s nuclear-weapon program, mostly because Beijing has been modernizing its strategic force, diversifying its delivery systems, and increasing the number of nuclear weapons; China now has an arsenal more capable than ever of striking the U.S. homeland. Moreover, Beijing has been improving its capacity for power projection into neighboring waters as well as in the space and cyber domains, becoming increasingly capable of holding U.S. forward military presence and U.S. allies and partners at risk.

China does not reveal the size of its nuclear arsenal, but experts estimate that it has nearly doubled over the past decade and a half, consisting today of approximately 290 warheads.¹² While it is

⁶ For a long time, China’s nuclear strategy was based on the statements of CCP leaders and internal doctrinal publications. References to China’s “self-defense nuclear strategy” first appeared in the 2006 Defense White Paper. See Information Office of the State Council of the PRC, *China’s National Defense in 2006*.

⁷ For a comprehensive overview, see Jeffrey Lewis, *The Minimum Means of Reprisal: China’s Search for Security in the Nuclear Age* (Cambridge, MA: The MIT Press, 2007).

⁸ Immediately after conducting its first nuclear test in 1964, China declared that “The Chinese Government hereby solemnly declares that China will never at any time and under any circumstances be the first to use nuclear weapons.” Since then, China’s NFU commitment has been emphasized in all official statements and publications.

⁹ Brad Roberts, *China-U.S. Nuclear Relations: What Relationship Best Serves U.S. Interests?* (Washington, DC: IDA, August 2001), ES-2.

¹⁰ Brad Roberts, *Asia’s Major Powers and the Emerging Challenges to Nuclear Stability Among Them* (Washington, DC: IDA, 2009), p. 33.

¹¹ Brad Roberts, Robert A. Manning, and Ronald N. Montaperto, “China: The Forgotten Nuclear Power,” *Foreign Affairs*, vol. 79, no. 4, July/Aug. 2000, p. 53.

¹² Hans M. Kristensen and Robert S. Norris, “Chinese Nuclear Forces, 2018,” *Bulletin of the Atomic Scientists*, June 2018. See also Hans M. Kristensen and Matt Korda, “The Pentagon’s 2019 China Report,” Report from the Federation of American Scientists, Washington, DC, May 2019. Note that there is no certainty to this figure. Some estimates suggest that China’s arsenal is significantly bigger: up to 1,600-3,000 weapons. These higher estimates, however, are largely based on speculation. Most experts do not believe they are credible.

much smaller than the U.S. and Russian arsenals (estimated to sit at approximately 6,185 and 6,500 warheads, respectively), it is bigger than the United Kingdom's (estimated to consist of 215 warheads) and roughly on par with France's (estimated to include 300 warheads).¹³

More worrying has been Beijing's rapid and impressive modernization and expansion of its nuclear delivery systems, which are becoming increasingly diversified, mobile, resilient, and effective.¹⁴ Beijing's land-based nuclear missile force now includes mobile, solid-fueled systems, approximately 80 intermediate-range ballistic missiles (IRBMs) and 90 intercontinental ballistic missiles (ICBMs); the most notable additions have been the dual-capable DF-26 IRBMs and DF-31AG ICBMs, as well as the DF-31 ICBMs (the latter are still in development). Beijing also has been developing penetrative aids and MIRVing existing missile models, notably the DF-5C ICBMs, while pursuing hypersonic glide vehicle technology, which makes systems more maneuverable, faster, and more capable of penetrating existing missile defense systems. Finally, Beijing has begun to bring online sea and air nuclear platforms, entering the exclusive club of nuclear-armed states possessing a nuclear triad. The PLA Navy (PLAN) has been developing China's first credible sea-based nuclear capability in the form of four *Jin*-class (Type 094) ballistic missile submarines (SSBNs), each capable of carrying 12 JL-2 MIRV-capable submarine-launched ballistic missiles (SLBMs); China's next-generation SSBNs, the Type 096, will likely be armed with the JL-3 SLBMs, which are still in development.¹⁵ The PLA Air Force (PLAAF), for its part, has been developing an air-based capability in the form of a new strategic bomber (dubbed H-20) coupled with nuclear-capable air-launched ballistic missiles.¹⁶

In response to concerns, Beijing has argued that these developments are purely defensive, that China has always had, and maintains, a self-defense nuclear strategy and NFU policy, and that its modernization efforts are consistent with its tradition of minimum deterrence and solely aimed at developing a "lean and effective" force.¹⁷ These are codewords to stress that China must ensure that its nuclear forces remain reliable and survivable, especially in the context of improving U.S. missile defense and conventional strike capabilities and, more recently, the U.S. refocus on the Indo-Pacific, which Beijing regards as directed against China and an attempt to maintain U.S. military hegemony. As one senior Chinese scholar has put it: "Be it the Rebalance or the Indo-Pacific Strategy, it's always been about containing China and maintaining U.S. primacy."¹⁸

Yet in addition to doubting the strength and even the veracity of China's NFU policy, the United States has been concerned that Beijing may decide to abandon its practice of minimum deterrence.¹⁹ The concern that Beijing might "sprint to nuclear parity" with Washington and

¹³ Hans M. Kristensen and Matt Korda, "Status of World Nuclear Forces," Report from the Federation of American Scientists, Washington, DC, May 2019.

¹⁴ For more details, see *Annual Report to Congress: Military and Security Development Involving the People's Republic of China 2019* (Washington, DC: Department of Defense, 2019), notably pp. 65-67.

¹⁵ China's old *Xia*-class submarine has not gone on patrol and is usually assumed to be not operational/nor deployed.

¹⁶ There is disagreement among experts as to whether China's old H-6 bomber is nuclear-capable. The U.S. Department of Defense typically assesses that it is.

¹⁷ Fravel reports that the "lean-and-effective" formulation was first uttered by Commander Li Shuqing in a 1978 speech (*op. cit.*, p. 261). It appeared in writing in the 2006 Defense White Paper and is used in follow-on documents.

¹⁸ Interviews conducted by the author, Beijing, China, March 2019.

¹⁹ Chinese strategists have been debating the pros and cons of maintaining an NFU policy since the 2000s. While most agree that China should maintain that policy, Beijing has injected uncertainty as to whether it would go nuclear in

Moscow has been especially serious given that the United States and Russia, unlike China, have been building their nuclear arsenals down, not up.²⁰

Furthermore, Washington has been worried that China's evolving nuclear capabilities will present Beijing with new, problematic strategic options and create significant command, control, and communication (C3) issues. For starters, the Chinese modernization program could lead Beijing to change its stance on nuclear counterattack: it could adopt a launch-on-warning (LOW) posture, abandoning its traditional stance to retaliate only after it has absorbed a nuclear strike. The improved mobility, readiness, and informatization of SAF assets and the PLA's space-based early-warning system have increasingly made adoption of such a posture possible. The emerging nuclear roles of the PLAN and PLAAF will make it even easier because nuclear warheads *have* to be mated with delivery systems on sea and air platforms. Is an LOW posture compatible with an NFU policy, especially given that Beijing has often pointed to its de-mated posture as evidence that it abides by NFU principles?

Another area of possible change concerns Chinese thinking about adopting a limited nuclear warfighting posture as a result of the increasing commingling and co-location of its nuclear and conventional assets, the diversification of its nuclear forces (notably its emerging nuclear triad), and its work to enhance "integrated strategic deterrence."²¹ Could these developments lead Beijing to endorse warfighting as an option for its nuclear forces?

The consequences of Chinese modernization for C3 have also been worrisome to Washington. While the SAF was tasked to pursue "dual deterrence and dual operations," i.e., wield both nuclear- and conventional-capable missiles, as early as in the mid-1980s, the modernization, diversification, and expansion of China's conventional force has, as mentioned earlier, only begun to grow fast in recent years. Looking ahead, it is likely that the continued introduction of new dual-capable missiles, the increasing dispersal of land-mobile missiles, and the steady rise in the number of deployable nuclear weapons will, at the very least, complicate the C3 systems of China's land-based nuclear delivery systems. What's more, the emerging nuclear roles of the PLAN and PLAAF will add extra and probably *major* layers of complexity.

The concern is that a human error or malfunction could increase instability or lead to inadvertent escalation. Many questions remain unanswered: Will C3 systems be modernized in a timely fashion, as nuclear modernization proceeds? Will the SAF be involved in PLAN and PLAAF nuclear missions? Will the PLAN and PLAAF develop nuclear-warhead management know-how and capability of their own? How do Beijing and the PLA intend to communicate with PLAN assets? Will they introduce pre-delegated authority to launch nuclear weapons?

some circumstances, notably in the case of a non-nuclear attack that would degrade its nuclear forces. The PLA's 2013 *Science of Military Strategy*, for instance, talks about the need to maintain "an appropriate degree of ambiguity."

²⁰ Michael O. Wheeler, *Nuclear Parity with China?* (Washington, DC: IDA, 2012).

²¹ While Chinese strategists in the 1990s discussed nuclear weapons as the cornerstone of deterrence, *weishe* today ("deterrence" in Chinese) encompasses a broader definition, including all aspects of "comprehensive national power" (*zonghe guojia liliang*): Zhou Peng and Yun Enbing, "Developing the Theory of Strategic Deterrence with Chinese Characteristics," *China Military Science*, No. 3, 2004. For an in-depth analysis, see Michael Chase and Arthur Chan, *China's Evolving Approach to "Integrated Strategic Deterrence"* (Washington, DC: RAND Corporation, 2016).

These worries have been magnified by China's lack of transparency about the current and future size and shape of its nuclear forces and activities. For instance, despite invitations to do so (including in track-1.5 discussions), Chinese officials have refused to articulate a level at which China would have "enough" nuclear weapons and, significantly, China is the *only* P-5 member that leaves open the possibility of producing *more* fissile material for explosive purposes. Opacity has been Beijing's tradition practice given its choice to develop a smaller arsenal than the United States and Russia. As PLA Major-General (Ret.) Yao Yunzhu has put it, "For a state adopting a no-first-use policy and intending not to waste too much money on unusable weapons, dependence on opaqueness to bring about greater deterrent value is a wise choice."²²

In recent years, worries have also heightened as a result of China's growing assertiveness in the Indo-Pacific and beyond, notably since President Xi Jinping took office in 2012. Moreover, Beijing's refusal to engage in comprehensive strategic nuclear dialogue with Washington has not helped. To better understand Chinese nuclear thinking and developments, address China's concerns about the United States, and move toward a more predictable strategic relationship, Washington has been seeking to engage in official discussions with Beijing for years, an offer that Chinese officials have *systematically* declined, arguing that "the conditions are not ripe" because the U.S. arsenal is much larger than China's and because they stand to lose as they would be required to accept a level of transparency that would compromise the survivability of their strategic force. Yet while rejecting dialogue, Beijing has still sought reassurance from Washington, encouraging the United States, in vain, to adopt an NFU policy and to accept mutual vulnerability as the basis of the U.S.-China strategic relationship.²³

Of note: a considerable amount of work has been done between Americans and Chinese at the track-2 and track-1.5 levels, which has been invaluable in helping Washington and Beijing better understand each other. From a U.S. perspective, however, these initiatives are not, and should not be considered, a substitute for track-1 engagement. While an increasing number of Chinese participants have come to concur with U.S. participants that China should engage in official dialogue, Beijing has chosen not to take up their advice, so far.

China's military reforms: The trigger to nuclear change?

Xi Jinping rolled out China's military reforms in that context. The reforms, which aim to reshape the PLA to improve its ability to fight and win informationized wars and to ensure that it remains loyal to the CCP, have sought to strengthen civil-military integration and to improve joint-operations capability.²⁴ So far, the most significant (or most visible) change to China's nuclear-weapon program has been renaming the SAF the PLA Rocket Force (PLARF) and upgrading it to full-service status, equal to the army, navy, and air force; until then, the SAF had been an independent branch that is considered equal to the services.

²² Yao Yunzhu, "China's Perspective on Nuclear Deterrence," *Senior Leaders Perspective*, Spring 2010, p. 29.

²³ For efforts to start nuclear dialogue with China, see David Santoro, "Asia-Pacific Strategic Nuclear Policy Dialogues 2: Asia's Four Nuclear Armed States," APLN/CNND *Policy Brief* No. 27, Jan. 2017, notably pp. 1-4.

²⁴ For a comprehensive analysis of China's military reforms, see Phillip C. Saunders, Arthur S. Ding, Andrew Scobell, Andrew N. D. Yang, and Joel Wuthnow (eds.), *Chairman Xi Remakes the PLA: Assessing Chinese Military Reforms* (Washington, DC: NDU Press, 2019).

While there is *much* uncertainty about what the reforms will mean for China's nuclear strategy and weapon program, both because the situation remains extremely fluid and because there is little public information available, there seem to be two possible options: continuity or change.

Option 1: Continuity

The new PLARF name and its upgrade to a full service might merely codify the Force's de facto status. This is a possibility. One analyst has made that case, stressing that the change is mainly giving the Force the status and prestige it deserves. As he points out:

The Second Artillery's organizational clout had steadily grown in the last 15 years. Prior to the creation of the Rocket Force, the Second Artillery commander and other senior leaders enjoyed ranks and grades equivalent to that of their counterparts in the services. The Second Artillery had the same constellation of bureaucratic structures as the services, including a Political Department, Logistics Department, Armaments Department, and Command Academy.²⁵

In these circumstances, the most likely developments in the foreseeable future would involve the continuation of steady yet relatively modest growth of the Chinese nuclear arsenal. Similarly, China's longstanding nuclear policy and strategy, which, as mentioned earlier, are and always have been deeply ingrained in the Chinese psyche, would be maintained. According to Chinese official statements, multiple Chinese media reports, and Chinese strategists, this is what to expect.

In describing the PLARF, Xi Jinping has used language similar to the one authoritative Chinese documents described the SAF, notably the 2015 Defense White Paper (China's latest).²⁶ For instance, he said that the PLARF will be "a fundamental force for our country's strategic deterrent, a strategic pillar for our country's great power status, and an important cornerstone in protecting our national security."²⁷ A *China Daily* article also added that China's nuclear policy will remain unchanged: "Reiterating the no-first-use nuclear weapons policy and the country's defensive nuclear strategy, [Ministry of National Defense Spokesman] Yang [Yujun] said China always keeps its nuclear capabilities at the minimum level required for safeguarding its national security."²⁸ In track-1.5 and track-2 engagements as well as one-on-one discussions, Chinese strategists have echoed these words: the reforms, they say, will *not* lead to nuclear change.

Moreover, in addition to dismissing systematically (to this day) the possibility that Chinese nuclear forces adopt a warfighting role, Beijing has insisted that technological and operational improvements of its forces will *not* affect China's longstanding policy and strategy. The PLA's 2013 *Science of Military Strategy*, for instance, suggests that adoption of an LOW posture would be consistent with China's NFU policy: "Rapid launch of nuclear missiles for counterattack is

²⁵ David C. Logan, "Making Sense of China's Missile Forces" in Saunders et al., *op. cit.*, p. 412.

²⁶ State Council Information Office of the PRC, *China's Military Strategy*, 2015.

²⁷ Wang Shibin and An Puzhong, "Founding Ceremony for Army Leading Organization, Rocket Force and Strategic Support Force Held in Beijing," *China Military Online*, Jan. 1, 2016.

²⁸ Zhao Lei and Li Xiaokun, "Three New Military Branches Created in Key PLA Reform," *China Daily*, Beijing, Jan. 2, 2016.

consistent with [China's] no first use policy and could effectively prevent further loss of nuclear forces, and increase the survivability and counterattack capabilities of [China's] nuclear power."²⁹

It is also worth noting that despite the creation of a new, operational command structure for the PLA, PLARF C3 systems do not appear to have changed. An article in *Rocket Force News* stated that the PLARF is “a strategic military service directly controlled and used by the Central Party Committee, Central Military Commission, and Chairman Xi.”³⁰ Chinese strategists, similarly, have insisted that the command authority of the nuclear forces *in particular* (but of conventional assets too) remains centralized under the CMC. Some have even argued that such centralization could be *reinforced* as a result of the reforms.³¹ That is why they have dismissed concerns about potential issues involving China's C3 systems, often adding that new technologies will help enhance control over these forces, including the emerging PLAN and PLAAF nuclear platforms.³²

If all this is confirmed, the PLARF can be expected to continue to focus on expanding and improving its conventional assets, while keeping (maybe even pushing?) nuclear forces in the background, even as Beijing is bringing online new and more diversified nuclear-capable systems (including a nuclear triad) and making progress towards a more integrated strategic deterrence posture. Significantly, a recent study has shown that the PLARF could strengthen its conventional mission over the nuclear mission because the latter is less dynamic and deemed *much* less prestigious, making it more difficult, as a result, for officers who choose it to ascend to the ranks of senior leadership.³³

Option 2: Change

Alternatively, the PLARF's new name and upgrade to full-service status might signal or lead to much greater autonomy, even independence, for the Force, potentially opening to the door to radical changes in China's nuclear force structure and posture, and in turn in policy and strategy. Despite the insistence of the Chinese leadership, media outlets, and expert community that the reforms will not bring about change for China's nuclear strategy and weapon program, change, even major change *is* a possibility.

Some analysts have stressed that despite important similarities with the SAF, official characterizations of the PLARF seem to point to a much more expansive role and greater expectations for the new Force.³⁴ They explain that at the PLARF's inauguration ceremony in December 2015, Xi Jinping articulated a new formulation for the Force's strategic requirements, arguing that it needs to “possess both nuclear and conventional [capabilities]” and be prepared to conduct “comprehensive deterrence and warfighting” operations. While, as mentioned earlier, the requirement to possess both nuclear and conventional capabilities is not new, the emphasis on “comprehensive deterrence and warfighting” is, they opine, significant because it suggests that the

²⁹ *The Science of Military Strategy* (Beijing, China: Chinese Academy of Military Science, 2013).

³⁰ Huang Jinxin, “My Views on the Rocket Force as a Strategic Military Service,” *Rocket Force News*, Jan. 13, 2016.

³¹ Interviews conducted by the author, Beijing, China, August 2018.

³² Discussions held at the track-1.5 “U.S.-China Strategic Nuclear Dynamics Dialogue” on Maui, Hawaii, April 2018.

³³ Logan, *op. cit.*, pp. 418-419. See also Logan, “Career Paths in the PLA Rocket Force: What They Tell Us,” *Asian Security*, Jan. 25, 2018.

³⁴ Bates Gill and Adam Ni, “The People's Liberation Army Rocket Force: Reshaping China's approach to strategic deterrence,” *Australian Journal of International Affairs*, vol. 73, no. 2, Jan. 2019, notably, pp. 162-163.

PLARF now needs to be able to operate not only across different regions and distances, but also across land, sea, aerospace, and electromagnetic spectrums, and do so both for deterrence *and* warfighting purposes. The fact that President Xi added that the PLARF should enhance its ability for “strategic balancing” (obviously of the United States) also suggests that Beijing might envision a much greater role for the Force, including of its nuclear components.

If this assessment is correct, faster growth of the Chinese nuclear arsenal could be in the works. China might also decide to adopt a much more aggressive nuclear posture, including the peacetime mating of warheads, an increase in alert status, endorsement of an LOW posture, and abandonment of the longstanding NFU policy and traditional practice of minimum deterrence. These are steps that some PLA officers (so far a minority) have recommended occasionally.³⁵ Significantly, in the context of mounting tensions between Washington and Beijing (notably after the release of the U.S. *Nuclear Posture Review* in February 2018 and the U.S. *Missile Defense Review* in January 2019), some Chinese officials and PLA officers—still a small minority—have been reportedly “quite active” in lobbying Beijing to implement changes of that sort.³⁶

Should such changes be implemented, China’s nuclear doctrine and forces would be much more closely aligned with the country’s conventional doctrine and forces. In other words, they would have both a deterrence and a warfighting mission. Presumably, nuclear and conventional forces would also be (further) integrated and PLARF as well as emerging PLAN and PLAAF nuclear assets would become active, rather than passive, components of China’s evolving integrated strategic deterrence posture. Such integration could even be further enhanced through coordination with the new PLA Strategic Support Force, an independent branch (and a product of the ongoing military reforms) which, as two analysts have described it, is intended to “create synergies between disparate information warfare capabilities in order to execute specific types of strategic missions that Chinese leaders believe will be decisive in future major wars.”³⁷

In these circumstances, it is even possible to envision that C3 systems over China’s nuclear forces be relaxed or that the CMC even end up abandoning its role of command authority altogether. Beijing and the PLA could choose to give some authority to the theater commands to make nuclear use easier in the event of a crisis or war, which, of course, would amount to a 360-degree departure from China’s traditional nuclear policy and strategy.

The way forward

It is too early to tell whether the military reforms will, as Chinese authorities and strategists claim, lead to continuity rather than change for China’s nuclear strategy and weapon program. Yet it is important to keep in mind that even if the balance does tip in favor of the “continuity scenario,” some degree of change *will* take place, probably sooner rather than later. This is virtually guaranteed, at least for three reasons.

³⁵ Discussions held in various track-1.5 and track-2 forums. See also Gregory Kulacki, “China’s Military Calls for Putting Its Nuclear Forces on Alert,” Report from the Union of Concerned Scientists, Washington, DC, Jan. 2016.

³⁶ Interviews conducted by the author, Beijing, China, March 2019.

³⁷ John Costello and Joe McReynolds, “China’s Strategic Support Force: A Force for a New Era” in Saunders et al., *op. cit.*, p. 438.

First, there is almost no doubt that the Chinese nuclear arsenal will continue to grow. The question is not whether it will grow, but how fast, and how big it will become. Speculations abound. For instance, U.S. Senator Jim Risch (R-Idaho), chairman of the Senate Foreign Relations Committee, recently stated that “Reports indicate China is on track to double its nuclear stockpile over the next decade.”³⁸ Lieutenant General Robert Ashley, director of the Defense Intelligence Agency, went further, indicating that “Over the next decade, China is likely to *at least* [emphasis added] double the size of its nuclear stockpile.”³⁹ Independent experts, however, have expressed skepticism about these predictions.⁴⁰ Others, for their part, have assessed that Beijing may be aiming to build an arsenal of, or close to, 600 warheads because it would be consistent with Chinese fissile material stocks.⁴¹ Still, while this is difficult (perhaps even impossible) to predict the future size China’s nuclear arsenal with accuracy, there is at least broad consensus among experts that, as two analysts have put it:

Although China’s nuclear arsenal is far smaller than that of Russia and the United States, the growing and increasingly capable Chinese nuclear arsenal is pushing the boundaries of China’s “minimum” deterrent and undercutting its promise that it “will never enter into a nuclear arms race with any other country.”⁴²

Looking ahead, that makes it difficult for Beijing to continue to remain silent about the current and future size and shape of its nuclear forces and activities. Plainly, China will likely have to become more transparent and possibly abandon its traditional practice of opacity.

Second, it will become increasingly difficult for China to maintain its longstanding nuclear policy and strategy as is because of the rapid and impressive modernization, diversification, and expansion of its nuclear forces, especially the emergence of a nuclear triad. Even if Chinese officials do want continuity, they most likely will have to, at a minimum, *adjust* the country’s policy and strategy, de facto or in more real, measurable ways. They have already begun to do so: they have worked hard, as mentioned earlier, to reconcile possible adoption of an LOW posture with China’s NFU policy; many experts question whether it is a tenable position. Discussions in track-1.5 and track-2 dialogues also suggest that Chinese strategists are well-aware that technological developments will begin to loom large on China’s policy and strategy and that, looking over the horizon, some degree of change is probably unavoidable. For instance, when describing the likely impact of technological developments, Chinese strategists, of late, have been careful to stress that the “broad contours” of China’s policy and strategy will not be affected.⁴³

Third, it is highly unlikely that the modernization, diversification, and expansion of Chinese forces, which, significantly, are taking place at a rapid pace, will not create at least some complications

³⁸ Chairman Risch Opening Statement, Hearing on Future of Arms Control Post-INF Treaty, United States Senate Committee on Foreign Relations, Washington, DC, May 15, 2019.

³⁹ Lt. Gen. Robert P. Ashley, Jr., Remarks at the Hudson Institute on “Russian and Chinese Nuclear Modernization Trends,” Washington, DC, May 29, 2019.

⁴⁰ Hans M. Kristensen, “DIA Estimates for Chinese Nuclear Warheads,” Report from the Federation of American Scientists, Washington, DC, May 31, 2019.

⁴¹ Therese Delpech, *Nuclear Deterrence in the 21st Century: Lessons from the Cold War for a New Era of Strategic Policy* (Santa Monica, CA: RAND Corporation, 2012), p. 120.

⁴² Hans M. Kristensen and Matt Korda, “The Pentagon’s 2019 China Report,” *op. cit.*

⁴³ Discussions held at the track-1.5 “U.S.-China Strategic Nuclear Dynamics Dialogue” in Beijing, China, June 2016.

for C3 systems, even if control is maintained by the CMC. In other words, over the next few years, business-as-usual is not in the cards for China's nuclear C3 systems: Beijing and the PLA will have to make important adjustments.

In sum, while the jury is still out regarding what the reforms have in store for China's nuclear strategy and weapon program, one thing is clear: Beijing is reaching a crossroads and will soon have to make decisions to, at a minimum, adjust many of the features that have been central to its approach to nuclear weapons since 1964. As suggested earlier, Chinese authorities would have reached that decision point regardless of the reforms. The question is whether the reforms will trigger radical change or slower, more managed change. Much of it will likely depend on how the reform process proceeds, notably who "wins" the growing inter- and intra-service competition, which is reportedly becoming "extremely severe" because "everyone is competing for Xi's ear."⁴⁴

Irrespective of what happens (and to some extent, how it happens), it is important to keep in mind that the outcome can be positive. Chinese nuclear forces may end up more reliable and more survivable, which could help strengthen strategic stability. A negative outcome is also possible, however: Chinese decisions and developments may fuel competition and lead to arms-race instability or, worse, crisis instability and the overall deterioration of strategic stability.

Recommendations for the U.S. government

This analysis leads me to make the following four recommendations for the U.S. government:

1. Invest to maintain deterrence of China and extended-deterrence commitments to allies.

Because advances in the modernization, diversification, and expansion of China's nuclear and conventional arsenal will present new deterrence complexities and challenges, both to the U.S.-China strategic relationship and to China's deterrence of U.S. allies, Washington should keep pace with these developments and craft strategies to deter Beijing effectively and provide an adequate security umbrella to its allies. In other words, as recommended in the 2018 *Nuclear Posture Review*, Washington should develop deterrence strategies appropriately *tailored* to China as Beijing is adapting its military forces.⁴⁵

It is true that, on the one hand, a stronger Chinese arsenal may strengthen strategic stability. Yet, on the other, China's ability to deter the United States and its allies more effectively may embolden Beijing to act more aggressively up to, and perhaps even at, the nuclear level. Washington, therefore, should maintain and modernize its own deterrence capabilities at all rungs of the escalation ladder, and discuss and coordinate strategy implementation with its allies.

Given China's growing and diversifying array of nuclear and strategic conventional capabilities as well as its leverage of the space and cyber domains, the United States and its allies should focus on enhancing defensive and offensive countermeasures in all these areas. The goal should be not only to deter attacks, notably nuclear attacks, but also to strengthen U.S. and allied ability to preempt, eliminate, and defend against acts of aggression. This requires, of course, that the United

⁴⁴ Discussions held at the track-1.5 "U.S.-China Strategic Nuclear Dynamics Dialogue" on Maui, Hawaii, April 2018.

⁴⁵ *Nuclear Posture Review* (Washington, DC: Department of Defense, 2018), notably pp. 31-32.

States be in sync with its allies not only about its assessment of the “China threat,” but also about what responses are most appropriate, how they should be made, and by who.

2. Create the conditions for U.S.-China strategic nuclear dialogue to begin now.

Washington should make every effort to encourage Beijing to engage in bilateral strategic nuclear dialogue expeditiously. Launching such dialogue, which, as mentioned earlier, the United States has long sought (and which remains a goal of the 2018 *Nuclear Posture Review*), would be timely to help Washington better understand China’s nuclear decisions and developments in the context of its ongoing military reforms.⁴⁶ Beijing, for its part, would gain a better understanding of U.S. nuclear policy and actions. The hope is that this would help Washington and Beijing develop a framework to allow for a more stable and more predictable strategic nuclear relationship. To the extent possible, seeking to insulate the bilateral strategic nuclear relationship from the increasingly competitive nature of broader U.S.-China relations should be a priority.

Of course, launching such dialogue will be possible only if concessions are made on both sides. Washington would need to acknowledge what has long been the case (and the primary sticking point for Beijing to accept dialogue): that China possesses a credible nuclear deterrent, i.e., that the United States and China are in a mutually-vulnerable relationship.⁴⁷ Beijing, meanwhile, would need to accept (or be made to understand) that despite disparities between the U.S. and Chinese arsenals, it has reached a point where it can no longer be considered a “responsible nuclear-weapon state” or seek a “constructive nuclear relationship” with Washington *and* reject dialogue.⁴⁸ Especially if the United States concedes on mutual vulnerability, China would need to be convinced that it would lose more if it still refused to engage.

3. Lead on arms control.

Leading on arms control begins by not letting the entire arms-control architecture collapse. In other words, it means that Washington should pursue extension of New START, which is set to expire in February 2021. This should be a no-brainer not only because it is both in U.S. and Russian interests (and because Moscow has already expressed interest in extending the Treaty), but also because failure to do so would signal to Beijing that Washington and Moscow can now operate, and potentially perfect, their large nuclear forces unconstrained.

Because Chinese strategists have for years stressed that arms control between the United States and Russia has a positive impact on international stability and China’s security specifically, the collapse of New START could, in theory, push Beijing toward strategic nuclear dialogue with the United States, especially if the alternative would be unrestrained competition with a much more

⁴⁶ *Nuclear Posture Review*, *op. cit.*, p. 7.

⁴⁷ Acknowledgement of mutual vulnerability with China would come with some risks. It could, in theory, embolden Beijing to act more aggressively at the conventional level. It is unlikely, however, especially if such acknowledgement is made, as it should be, with the explicit goal of opening strategic nuclear dialogue, i.e., easing tensions.

⁴⁸ These are buzzwords often used by Chinese strategists, notably in track-1.5 and track-2 dialogues. See Ralph Cossa, Brad Glosserman, and David Santoro, “A Realistic Way Forward for the U.S.-China Strategic Nuclear Relationship”: A Conference Report of the 11th China-U.S. Strategic Nuclear Dynamics Dialogue,” *Issues & Insights*, vol. 18, CR1, Beijing, China, Jan. 2018, pp. 2, 6.

powerful nuclear contender.⁴⁹ This is unlikely, however. Rather, as one Chinese strategist has explained, the end of New START may not, in and of itself, drive China to implement radical changes to its nuclear strategy and weapon program, but that could well happen depending on U.S. actions after Treaty's demise, with negative consequences for strategic stability.⁵⁰ At a minimum, he argues, the collapse of New START would comfort Beijing's belief of the strategic necessity of its traditional practice of opacity as well as its skepticism about arms control more generally.

There is another reason why extending New START is important: because it would give time to open discussions about confidence-building measures and arms control at the multilateral level, i.e., with other nuclear-armed states.⁵¹ Such discussions, which should build on the preliminary work conducted by the P-5 since 2010, are essential to engage China. Of late, Chinese strategists have stressed in track-1.5 and track-2 dialogues that while Beijing worries mostly about the United States, it now also has to take into account "other nuclear-armed states."⁵² This reflects the fact that when it comes to defense planning, China must look east, to the United States, but also north and increasingly south, i.e., to Russia and India, and what's more, China must factor in the increasingly sophisticated North Korean nuclear arsenal. Improving the U.S.-China strategic nuclear relationship, in other words, cannot happen solely via bilateral engagement; it also has a multilateral dimension.

4. Prioritize crisis management.

Independently of whether or not U.S.-China strategic nuclear dialogue commences, Washington should immediately seek to establish crisis-management mechanisms with Beijing in specific areas. Despite rising tensions between Washington and Beijing since 2012, some crisis-management mechanisms have been set up in recent years, suggesting that progress *is* possible. A 2014 memorandum of understanding, for instance, led to the establishment of two bilateral military-to-military mechanisms, one setting rules of behavior for safety in air and maritime encounters, the other requiring advanced notification of major military activities.

More mechanisms of that sort are needed, notably ones that focus on preventing escalation to the nuclear level. In that spirit, defining "rules of the road" for nuclear, space, and cyber domains and the interplay between them could help prevent misunderstandings during crises or during the early stages of conflict, thereby avoiding "nuclear war by accident." Significantly, the track-1.5 "U.S.-China Strategic Nuclear Dynamics Dialogue" has developed a memorandum on these issues, which Washington could use as a starting point to engage Beijing.⁵³ This is an initiative that Washington should prioritize, especially given the progress that each are making toward integrated strategic deterrence.

⁴⁹ Vince Manzo, *Nuclear Arms Control Without a Treaty? Risks and Options after New START* (Washington, DC: CNA, 2019), pp. 103-104.

⁵⁰ Tong Zhao, "China in a World with No U.S.-Russia Treaty-Based Arms Control" in Manzo, *op. cit.*, pp. 118-125.

⁵¹ New START extension would constrain U.S. and Russian strategic nuclear forces for five additional years from February 2021, bringing the Treaty's new expiration date to February 2026.

⁵² Chinese strategists have begun to voice concerns about "other nuclear-armed states" from the mid-2010s.

⁵³ For the latest (published) working draft of the memorandum, see Ralph A. Cossa, Brad Glosserman, and David Santoro, "Reaching an Inflection Point? The Tenth China-U.S. Dialogue on Strategic Nuclear Dynamics," *Issues & Insights*, vol. 16, no. 20, Beijing, China, Dec. 2016, p. C-1.

PANEL III QUESTION AND ANSWER

COMMISSIONER McDEVITT: Thank you very much. That was very helpful and, yes, indeed, we're interested in the recommendations. I'm going to have a couple of questions and, then, turn to Chairman Lewis and other members who have already indicated they want to ask some questions.

For Dr. Kardon, I'd be very interested, without asking you to reveal if it turns into a forthcoming book or not, some more details on the strategic strongpoints. It seems to me, looking at the first eight years of anti-piracy patrols, the PLA has been using the strategic strongpoints, i.e., the marriage of a port that will grant diplomatic clearance. It's safe. They can get food and vegetables and fuel. And the sailors can go on liberty. And they have a state-owned enterprise there to act as the husbanding agent. So, they've been doing that.

And as a point of information, I mentioned earlier that I had met with somebody at a conference from Djibouti. He claims that the United States pays an annual rent to the government of Djibouti of \$630 million; the Chinese pay only \$300 million. So, the Chinese got friendship prices from the government of Djibouti. Given the amount of money they've poured into the country, it's probably understandable.

For Dr. Yung, is there anything that you've seen in your research to suggest that, particularly as the L Class ships -- if the expectations for the growth in L Class ships continues to grow, that China is thinking about the Chinese equivalent of an amphibious-ready group on rotational deployments, where you would have 1500-2,000 Chinese marines who would go off on a six-month cruise around the Indian Ocean, and that sort of a thing?

And for Dr. Santoro, I can't let you off the hook after I've asked everybody else during the hearings. If I could draw you out on your thoughts on China's sprint to parity or at least coming close to the U.S. inventory, so that their nuclear force structure would also be judged as world-class?

DR. KARDON: So, on the strategic strongpoint concept, I've got to finish my book on the Law of the Sea before I move on to the book on strategic strongpoints, but it is going to be featured prominently in a China Maritime Studies Institute Red Book that we're working on as a group project, and a number of other publications focusing on the PLA component less so than on the broader sort of political economic strategy.

But a few things just to highlight about the concepts, and I do think that it is not the same as a base, even if Djibouti can be certainly considered a strategic strongpoint, which it is explicitly in the Chinese literature. It is important to stress that this is not a term of art. It doesn't show up in PLA doctrine as something that's fully defined and fleshed-out. What we're seeing is, as Dr. Fravel described, one of these high-level concepts that's floated down, and now it's being iterated out. And I actually kind of like to think that I'm feeding into this process now and maybe helping shape it in a way we can live with, which is something I'd like to get to.

But the geographic distribution of them I think is quite important. It's important to think of them as networked and important to think of them as functionally differentiated. It depends on the location; it depends on the host partner what you're going to get out of it.

Some states really care about the legal contractual issues. Some states don't. China is agnostic. I think they show up and, you know, they have firms that show up with a very impressive package of not just a port. They tend to come in and they say, we're going to build a port, a park, and a city, an industrial-free trade zone, as well as it will spawn residential and commercial stuff around it, and it will be linked up to intermodal infrastructure.

And so, it's important to understand what's the interface and what is the principal purpose as far as the SOEs are concerned. They are there to -- making profits and having good politics are sort of mixed up with them. And I think there's a spectrum of port projects all the way from having nothing to do with any Chinese foreign policy and are about commercial operations. And you see a lot of these in the acquisitions, I think, of the SOEs, of existing projects. And it's very difficult to conceive them being able to use them for anything other than commercial operations, all the way to a full-up base like you have at Djibouti. But, then, I think there's every single shade in between.

And I guess the other thing to add is, and to continue on Admiral McDevitt's point, we have not seen the contract that the PLA signed. I have also heard that it's cheaper. I do know that when Chinese analysts write about it, they are emphatic about it being sort of modeled on the U.S. and on the Japanese.

And now, there are people more from the commercial side. The guy who is the Secretary General of the China Port Association is talking about trying to come up with what he called a Belt and Road national port liaison mechanism that's supposed to fuse the commercial and the state, and possibly the military side, in some of -- you know, this is another one of these not-fully-fleshed-out ideas, but it's published. And they are trying to think it through.

The SOEs want to do business, but they also want to make sure that they're not offending Beijing, and they try to keep them at arm's length. And so, they want to invite them in, but certainly this is an important point to stress: they don't want the PLA using all their pier space. The way they make money is by being as efficient as they possibly can, and if you look at all their corporate strategy -- and it's out there and they hype it a lot -- they're out there trying to -- they are not just competitive. A couple of these firms are really quite commanding in the field, and it's because they are fast.

COMMISSIONER McDEVITT: Dr. Yung?

DR. YUNG: There's nothing in the literature that suggests the Chinese are going to be putting together an amphibious-ready group/marine expeditionary unit, or ARG/MEU. However, I think it's inevitable. I think it's just too tempting a capability and it just makes too much sense. There's plenty of speculation amongst us American China-watchers that have argued that. I have gone on the record saying I think it's within 10 years.

Why do I think it's inevitable? So, you have an amphibious force with ground forces on it capable of responding quickly to potential crises in Belt and Road Initiative countries and out-of-area contingencies that are of interest to China.

So, one, you deal with the time-distance problem by having your forces forward-deployed. Secondly, they've had over a decade to work out, and they know they need to be able to be in area to respond quickly to these issues, these contingencies. It addresses a lot of their logistical problems.

And then, in addition, it's just that right balance of non-threatening to the countries of the world, and from the United States, I don't see why we would necessarily be threatened by an ARG/MEU ourselves. So, to me, it has all of the formulas of the right mix that spells China strategy all over it.

It's tempting. It responds to a bunch of different missions the Chinese know they need to address. It's politically palatable. And the Chinese get to wave the flag around in the Indian Ocean and other areas to satisfy their foreign policy interests.

Now, before I think you would see it, a couple of things would have to happen. One, they would have to have their large desk amphibious ship online. They would have to have that

big of a capability in order to have that force to go out into the Indian Ocean.

And then, they would have to have a lot of moving parts associated that I don't see yet. I don't see them able to operate a flight deck off of a -- they don't even have the LHD yet. But they haven't even worked out entirely flight deck operations on carriers yet. So, there would have to be a lot of moving parts that they would have to put together before we could say definitively it's coming. But, in my opinion, it's probably 10 to 15 years away. But I've not seen any definitive evidence that that's the case.

COMMISSIONER McDEVITT: Dr. Santoro?

DR. SANTORO: Thank you for the question.

I think it's inevitable that we'll see an increase in the arsenal, like I mentioned. Right now, they're at about 290, according to various estimates, weapons. We are likely to see an increase for sure. The Chinese do not describe it as a world-class nuclear force. They don't use those terms, at least for the nuclear component.

Now you see various estimates as to how much is enough and what ceiling they're looking to get to. They won't talk about it. But, based on their stockpile, it looks to me that it's possible to reach 600. Now what's unclear is whether it will get to 600 within the next decade, like we have heard recently, or whether it will take more time.

Now the Chinese keep talking about, we want to lead an effective force. My sense is they are right now focusing more on the effective side than on the lean side. And they're thinking about deterrence in an integrated way. So, it's really not just about the nuclear component, but it's about how to use multiple systems together, including with the newly-created Strategic Support Force, to create a more integrated deterrence posture.

But, again, the Chinese say, "No, we're not looking for parity with the United States or with any other power, for that matter. We're only focusing on developing a force that will give us enough for an effective nuclear counterstrike."

COMMISSIONER McDEVITT: Do they write about escalation dominance?

DR. SANTORO: No. Well, there are some writings that talk about escalation and escalation problems. Unfortunately, at least the Chinese that I have engaged on those issues completely dismiss the possibility of whether, even inadvertent escalation, they tend to disregard that as a problem that we need to contend with, which is very distressing.

COMMISSIONER McDEVITT: Great. Thank you.

Commissioner Lewis?

COMMISSIONER LEWIS: Dr. Kardon, I'm not sure I heard you correctly. But did you say that focusing on the military aspects of the ports that China controls throughout the world is focusing on the wrong thing and we should look at their function instead of their military applications? Did you say that?

DR. KARDON: Not exactly. What I said is that, analytically, if what you're doing when you look at what we're calling strategic strongpoints is what are the steps towards which -- what are the steps they're taking towards becoming a military base, then you're going to miss the fact that they already have some discrete military functions, just lower-end for lower-intensity types of operations.

COMMISSIONER LEWIS: What do you think the Chinese purpose of getting these ports around the world is?

DR. KARDON: I think the principal purpose is economic development. Like I said, I think commerce is the strategy. As was pointed out earlier today, military power is built on economic strength. I think that's intrinsic to China's theory.

But it's important to note that, as opposed to the age of European exploration, where they used to say that trade follows the flag, the flag is following trade now. The people in the driver's seat are the people with the money in China, and port developers want to make money building ports. And they also want to do well by the Chinese Communist Party at home.

The PLA, similarly, has taskings that are thrown off of this broader foreign policy which is now being described as the Belt and Road, which is to say to secure these assets and resources and personnel. And so, there are military missions associated with it, but I think that's not the principal determinant of where Chinese commercial ports are going.

COMMISSIONER LEWIS: It's my understanding that the Chinese control all the ports at both ends of the Panama Canal.

DR. KARDON: It's not correct to say that they control all of the ports at both sides. They have -- I'll need to look specifically at my database, at what the stake is in which parts of these ports. But, yes, it is the case that there is a Chinese commercial operator on Atlantic and Pacific sides. Again, I'll need to double-check it, but I don't believe that there is a majority stake in any of them or that they control all the terminals.

So, this is not to say that it's trivial, but it's also to say it's very difficult to imagine a scenario in which they could fully seize operational control of the port for military operations, unless in the midst of a full-scale conflict and that was part of their campaign, in which case I think the U.S. Navy would be there contesting it. And I don't think they would be able to do that very effectively.

COMMISSIONER LEWIS: So, you don't think there's really military implications for these port controls now?

DR. KARDON: No, so to clarify, I think not only are there military implications, there are empirical military realities that you can observe. The military goes and refuels. They take liberty calls. You know, it's friendly port visits. They're contracting for commercial husbanding arrangements with commercial ports in which there's no Chinese operator or stake. Salalah in Oman was where they used to go all the time for the Djibouti mission before they started using their own facility.

Again, it's a question of the priority and emphasis and how we ought to interpret China's overseas ports. And again, if we are looking at it as a strategy to build a forward-deployed expeditionary navy, I think we're making an analytical mistake. I don't think that's the intent.

COMMISSIONER LEWIS: Dr. Yung, I have one question for you. You mentioned the Shanghai Cooperation Organization and that the Chinese maritime navy might get involved if there were an attack on one of the members of the Shanghai. Could you elaborate on that, please?

DR. YUNG: I would expand that to the PLA. The PLA could respond to some sort of attack or security problem with one of the Shanghai Cooperation Organization members.

COMMISSIONER LEWIS: That hasn't happened yet?

DR. YUNG: No, there's not been a PLA response to some sort of internal major security threat to any of the countries. However, I think what you can do is you can look at the exercises China has undertaken as part of the SCO umbrella, in cooperation with a coalition of states in Central Asia and in Russia. And I believe Iran has just been invited or --

COMMISSIONER KAMPHAUSEN: Observer.

DR. YUNG: -- it's now an observer. And India I believe has also been invited.

And so, what I can imagine happening -- now this, again, to contrast with what the Chinese have written, right, and you had a whole discussion about what they write and authorize

and say under authoritative sources. This is all analysts looking out and saying this is a possibility, although not backed by anything authoritative that the Chinese say.

Now, at the same time, I can evaluate as a military planner the possibilities. And one of the possibilities, in my mind, is they exercised this contingency over and over and over again for over a decade. And so, to me, that to me is going to be, if China reacts to an out-of-area operation, that is going to be probably the first one you will see that's some sort of major contingency within one of these SCO-related countries -- and it may overlap with the Belt and Road Initiative -- having some sort of problem. And China, then, along with Central Asian countries, Russia, responding as a coalition to help bolster that country in peril.

And so, it backs all of China's foreign policy principles. They'll say, "We were invited in by the host nation country." There might even be U.N. authorization. It's, "We're not interfering in the internal affairs of another country and, oh, by the way, it's a threat to the sovereignty of that specific country. We have all the authorization we need to go in and help that country out." That would be an expedition that the Chinese could undertake out of area.

COMMISSIONER LEWIS: Thank you.

Dr. Santoro, the last question is for you. In your testimony, you state that, "Unlike conventional military strategy, the top leadership of the Chinese Communist Party never delegated authority over nuclear strategy to senior officers of the PLA, and that nuclear strategy is controlled directly by the Central Military Commission." Why do you think this decision was made? And does this mean nuclear strategy is, therefore, divorced from overall military strategy?

DR. SANTORO: I think the decision at the time was that nuclear weapons is a special category of weapons and it had to be excluded from all other military operations. It was considered to be, like I mentioned, a matter of supreme national policy. And so, they wanted to, the Party basically wanted to retain control of --

COMMISSIONER LEWIS: Tightly controlled?

DR. SANTORO: Very tight control. And to my knowledge, that hasn't changed. Nuclear command and control is still managed by the Central Military Commission at the very top.

And as a matter of fact, one of the issues that we have today is, because China developing so many platforms, is that going to be maintained? All the Chinese I've talked to say, yes, it will continue to be managed by the Central Military Commission. It's not going to change. In fact, it might even be reinforced. And they mention that new technologies might actually help tighten control over nuclear weapons. So, I have my doubts, personally, that this will happen.

COMMISSIONER LEWIS: So, nuclear strategy and the military strategy are kind of divorced?

DR. SANTORO: Right.

COMMISSIONER LEWIS: Thank you very much.

DR. SANTORO: Sure.

DR. KARDON: I just wanted to add to Chris' remarks, to concur that that type of counterterrorism operation in SCO countries seems like there would be the least friction for a combat out-of-area operation. And some Chinese legal scholars have been looking around at what are the existing authorizations for it, just to add a little bit more color to this.

And the SCO agreement as well as China's agreement with Russia for temporary status, the forces already exist. And so, you could ask the question of whether it matters, what the lawyers think. We could have a long conversation about that. But I do think that China is very

sensitive to perceptions of it militarizing its foreign policy. And so, you would look to those countries, places, and, frankly, issue areas, particularly counterterrorism in Central Asia, where it's not as heavy a lift for them to get there, both in terms of actual lift as well as in domestic political terms and international image terms.

COMMISSIONER LEWIS: Are you saying that the status-of-forces agreements are made by China when they are in these ports around the world?

DR. KARDON: There are not. There is one status-of force agreement with Djibouti which we have not seen, but which is, reportedly, modeled explicitly on all the others in the area. And they even asked the Americans for help with it.

COMMISSIONER LEWIS: Thank you.

COMMISSIONER McDEVITT: Commissioner Wortzel?

COMMISSIONER WORTZEL: Thank you. I appreciate all of being here and your testimony.

For Dr. Yung, Chris, let me characterize four kinds of expeditionary capabilities. The United States, global, and the full range from humanitarian to warfighting; Soviet, in the '70s and maybe into the '80s, which is a little more limited but global, with a robust force backed up probably by air and naval power.

I'd go next to the Brits, capable of something like the Falklands if they needed to, but really very limited and very targeted. And then finally the French, a Mali type thing where if they needed to, they could do it and they could go into a contested or medium intensity area.

So if you look to 2035, what is China going to look like? And then if I could for Dr. Santoro, I think one could argue that this buildup -- and I think 600 is very realistic when you look at DF-41s and coming online with ten warheads, some of them with penetration aids -- it's still at least limited and, if not, a minimal force because the objective remains not parity, but effective deterrence. And with the amount of defenses that not only the United States but Japan are putting in, they need that buildup.

So I'd invite your comment on that. And then if you have any thoughts on the same question I asked of Dr. Fravel about whether they really understand that some of their deterrence mechanisms could be highly escalatory, Chris?

DR. YUNG: Okay, so you're asking --

COMMISSIONER WORTZEL: I want you to put on your futures hat.

DR. YUNG: You want me to put out my crystal ball. The problem with the four that you gave me is that there's no exact fit. So instead of saying, oh, it's just going to be just -- first of all, I can say right off the bat it's not going to be like a U.S. global, global network of bases, alliances, et cetera.

What you've already heard today is that's a pretty steep hill for them to climb, so I don't see that. Secondly, I think it will be definitely more, there will be more power projection than a France type, probably more than an England beyond what the English could put together in a Falklands campaign. In fact, the Chinese have studied very carefully that campaign.

So what this leaves you with is sort of a Soviet-style model, all right. Although I'm uncomfortable -- so what do we see with the Soviets, right? They had these sort of loose basing arrangements.

In fact, some really interesting -- actually, one of the first studies we did for NDU were like how did the Soviets operate out of area? And they had these really strange agreements or they would have these operations or they'd send some of their logistic forces just outside of the territorial waters of some of these countries, et cetera.

I would say that it's probably somewhere between a Soviet style expeditionary force and the U.S. That's a pretty wide range. Let me inset -- it's still a pretty dangerous range.

But let me describe more about what I would envisage is probably going on in 2035 and sort of build the expeditionary force around that versus let's try and jam other countries' models into this.

So, first of all, let's assume that the Taiwan problem is already resolved; that they folded Taiwan in and they no longer need to worry about -- and it is a separate problem.

Now let's assume that they need to continue supporting their out-of-area interests and that includes their Belt and Road Initiative countries, their Shanghai Cooperation Organization coalition countries, and that they've got interests expanding throughout South Asia, Central Asia and into the Middle East.

So we're talking about a pretty extensive global -- now we're not talking about operations in the Mediterranean. We're not talking about operations in the Atlantic. But we are talking about operations in which they've got an interest in the Indian Ocean.

They've got interests in South Asia, Central Asia and the Middle East. And okay, well, we can talk about that as well, what the implications are for their moving in the other direction.

But what that suggests to me is the comment that Isaac made about the land component of this, which is it's not entirely going to be a maritime force. There's going to be the land communications part of it and the ground forces, air forces, response, the contingencies along their land routes is going to be something that's interesting to watch as well.

But I would still argue that it's still going to be a commercially-driven network of facilities with some limited degree of PLA presence. Because one thing that we haven't talked about already is that there's going to be a demand for PLA or security services to protect Chinese interests abroad, and then also to support the countries who are hosting huge amounts of Chinese investments in Belt and Road Initiative countries.

And so, first, you're going to see private contractors coming in providing that, that initial security support, and then what -- it's going to be inevitable, in my opinion, that there's going to be some limited PLA presence. And then the need to respond to whatever contingency-- terrorist attack, insurgency--and therefore, you're going to have enough of a PLA capability to respond to those types of capabilities.

So to answer your question, it's not quite the U.S., probably something a little bit more than what the Russians have, but something in between. I don't know exactly, but that's sort of the world I envisage in 2035, 2045.

COMMISSIONER WORTZEL: I would only point out that every train station and airport in China has a PLA presence.

DR. SANTORO: Thank you for your question.

So is 600 still a minimum deterrent? In theory, yes, because, you know, the American and Russian arsenals are considerably bigger. The problem though is that Americans and Russians are going down, Chinese are going up, and 600 is still speculative.

We don't really know where they're going. They won't even say how much is enough. They just say we want a lean and effective force, and therefore it's troubling. They're reluctant to be transparent. They're reluctant to even engage in dialogue.

And my sense -- and that's why in my recent testimony I actually encourage opening dialogue with them to at least work out what, you know, how they are, should be thinking about the arsenal where they want to go.

So, in theory, yes, I agree. But it would be good for them to be more transparent. And

until they are it's going to be very difficult to continue the downward spiral on U.S.-Russian arms control.

So that's --

COMMISSIONER WORTZEL: What is their deterrence?

DR. SANTORO: I'm sorry?

COMMISSIONER WORTZEL: The deterrence measures, the escalatory nature of their deterrence measure.

DR. SANTORO: Right, so for your second question, unfortunately they don't seem to be worried. Not only about some steps that they take that would cause escalation, and they're not worried about inadvertent escalation that has to do, for instance, with command and control.

Some of their writing talk about it. All the Chinese strategists that have I've talked to, they tend to refuse to engage on those questions. And that includes, you know, things like commingling and colocation as well as, you know, the emerging sea and air nuclear platforms that they're bringing on line.

Some of them won't even recognize that these platforms are coming on line, so they completely dismiss the potential for escalation that this brings and it is troubling.

COMMISSIONER MCDEVITT: Thank you.

Commissioner Kamphausen?

COMMISSIONER KAMPHAUSEN: Thank you all very much. It's a pleasure to have you here.

Quickly, Dr. Kardon, I think we're largely in sync in terms of how we see this, but just a couple of factual points. Was Japan's base in Djibouti, did it precede the PLA base?

And then, secondly, you made the point about 70 potential ports that might provide access to the PLA Navy. It wasn't clear from your testimony whether that's the universe of BRI projects or is there some more precise way you've measured that?

DR. KARDON: So, yes. The Japanese base predated it. So the 70 are not potential, those are actual commercial facilities in which there is a Chinese state-owned enterprise that either has some equity stake or some operating lease. Whether or not there's PLA access in them is not in open sources.

But one thing, if you don't mind me just taking the opportunity to say, I don't think BRI is the right political container for it either. The ports are in lots of places.

COMMISSIONER KAMPHAUSEN: Don't want to get bogged down with that. What it does -- there is an implication which says we paid maybe too much attention to this concept or this idea. If commerce is the strategy, then we ought to be prepared to think about a potential PLA Navy access point at wherever they have a state-owned enterprise.

Okay, Dr. Santoro, thank you very much. It's been my understanding at least based on open source that the PLA does not exercise integrated conventional nuclear warfighting.

Can you answer that in the open source whether that is the case or not?

DR. SANTORO: Yes. No, they are not. They exclude nuclear forces from other forms of warfighting.

COMMISSIONER KAMPHAUSEN: Thanks. This has implications both for escalation control that Dr. Wortzel was talking about, but I think it also should inform our own thinking about potential future conflicts in areas with the Chinese.

All right, leaving the bulk of my time for Dr. Yung.

Chris, you asked me to ask hard questions. I'm perplexed by your written statement because you said expeditionary operations could be all of these things and then you spent the bulk of your time talking about the Taiwan scenario which is a very conventional expeditionary

operation, at least it seemed that way to me in your prepared testimony.

Is that the test case for whether the PLA sees itself as a world-class military by mid-century? And then there's a follow-up that really pertains to U.S. policy, but go ahead.

DR. YUNG: So I didn't think my written testimony focused on Taiwan. I thought it was important to touch on it because it would have been -- if I had done nothing about -- and, actually, my first draft didn't even talk about Taiwan, and I said the commissioner is going to say what the heck?

The most important mission for the PLA is regime survival and making sure Taiwan does not go off the reservation. Therefore, they have to have been obsessed with thinking about keeping Taiwan in the fold, which implies obsession with Taiwan as an expeditionary mission.

So, first point. And then your second question, is that the measure upon which the PLA will consider itself a world-class military force and my answer is no. Because like I said in my testimony, I think the PLA has the capability to do it now.

It's still -- there's still some things that would make it not a *fait accompli*, but the capability is there to just sort of -- if the PLA is perfectly willing to eat the political costs, the high casualties and the disregard for the effect on the economy, then go to town. That is not a world-class military.

So, first, the PLA is thinking about this is probably not that Taiwan serves as the measure of what a world-class military -- so in other words, if Xi Jinping -- if you're trying to read between the lines what was Xi Jinping talking about when he gave that speech at the Party congress, he was probably not saying we want a world-class military to finally resolve the Taiwan issue. Although that's probably one of the things they want to do, he's thinking, I think, much more expansively.

COMMISSIONER KAMPHAUSEN: Okay. Then at what point did it become the case that if the PLA were willing to expend all the costs that they could have done it? I mean that's not a new development. It's not a capabilities set of developments, right?

DR. YUNG: Right.

COMMISSIONER KAMPHAUSEN: I mean that could have been the case at some point

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DR. YUNG: Yeah.

COMMISSIONER KAMPHAUSEN: -- in the past.

DR. YUNG: So repeat the question. I want to make sure I answer the right question.

COMMISSIONER KAMPHAUSEN: That's more of rhetorical question.

DR. YUNG: Yeah.

COMMISSIONER KAMPHAUSEN: So the other thing I wanted to really get to with you is in our first panel this morning, the executive, the administration presenters talked about near peer competitor status.

DR. YUNG: Right.

COMMISSIONER KAMPHAUSEN: Our second panel said it's really, it's maybe the wrong metric by which we should judge Chinese modernization at least based on their own terms and definitions.

How have you thought about reconciling this, what the PLA sees as its own aspirations and what we, USG, DOD, see as an imperative to characterize --

DR. YUNG: Okay. So having been in this business a while and worked with some of you gentlemen for quite a while, I find the near peer competitor a useful tool because it allows you to measure who your competitors are, and therefore you can -- so let's put it this way.

I teach at a professional military education institution and those military officers at every level know who the, quote unquote, is and this is the new term, facing threat, all right, who to watch for. And so, those officers now are saying how do we compare in terms of personnel? How do we compare in terms of military platforms?

So it does provide a useful tool in that if this is the country that you can expect to be our major competitor, not necessarily your adversary or the country you're going to be at war with, but this is a country that the Department of Defense is declaring you need to pay attention to, I think a near-peer competitor is a useful analytical tool to help focus on the attention on what needs to be examined.

So that's the first part of the answer. Now does it conflict -- now that's the DOD strategist in me talking. Now the sinologist inside of me is saying, all right, now does that help in terms of what the PLA's doing and how to measure progress?

And that's where your second panel were wrestling with that because what you're going to see, is you're going to see them, themselves, wrestling with how to then measure a world-class military.

Some of what the PLA is saying or thinking about is measuring against the United States, no question. I mean just look at the way they copy the United States in certain types of operations.

The fact that they look at an aircraft carrier and you look at how they run a flight deck, so that tells me that maybe they're not writing about it, but they're certainly observing and comparing their actions, what needs to be done with what we're doing.

So I would say that near peer competitor serves as a useful tool to sort of measure, put things into context. I would say that in terms of what the Chinese view of what a world-class military is, is part of the answer because they are certainly looking at our actions.

But you can't divorce that from the strategic objectives they're trying to accomplish and that may not have nothing to do with the comparison with the United States.

COMMISSIONER KAMPHAUSEN: Yeah, okay. Just one last point if I can?

COMMISSIONER MCDEVITT: Okay, we're -- go ahead. A quick answer, quick question.

COMMISSIONER KAMPHAUSEN: It's not a question, really, but can we ask you to follow up with some of what the metrics would be to making a judgment about near peer competitor status? Not to answer now, but in follow-up. Thanks.

COMMISSIONER MCDEVITT: Oh. Commissioner Wessel.

COMMISSIONER WESSEL: Thank you, gentlemen. I also share my accolades with your work and that of the other panelists earlier today, so thank you. A couple of questions.

Several of you have talked about the knowledge shortfall. And we held a hearing earlier this year looking at China-Soviet relations, so wondering if you can give us some thoughts there.

It seems that the relationship is somewhat built on desperation and weakness. Desperation and weakness from Russia's side both on wanting to have a confluence of interests to respond to the U.S. as well as economic weakness and desire for Chinese investment, Chinese arm, you know, purchases of arms, et cetera.

On the Chinese side, and we are a U.S.-China Commission, it appears that China both wants of course some of those armaments where it has limitations--capabilities, R&D, et cetera-- as well as it's hoping through certain joint exercises to gain the knowledge to fill some gaps that exist.

Although everything I've seen, Vostok and all the other exercises, seem to show very limited benefit from the joint exercises. Can you provide some thoughts on what is coming out of that as it relates to the modernization issues?

Is the relationship one that's providing anything more than some jet engines and some other technologies and very little on jointness, command, control, et cetera?

And, Dr. Yung, if you'd like to start.

DR. YUNG: I have been a Russia-China skeptic from the beginning. This isn't to say that there's some utility. There's definite strategic utility. There's a strategic utility on China's part in aligning with a country that is a challenge to the United States, so, first of all.

So if China sees itself as a global competitor with the United States, it sees itself as benefitting from a soft alignment with Russia. You see that in U.N. Security Council voting patterns. You see it in China with no real tangible interest in Syria of aligning with the Russians to help Russian interests in the Middle East. It's a you scratch my back, I scratch yours.

There's definitely an economic component to the relationship as you've alluded to. The Chinese do need some of Russia's weapons system and platforms. The Russians -- and the gas, natural gas that the Russians have to offer. So I would say that there is a complementary relationship that exists, but it has its limitations. The Russians are still paranoid about Chinese potential encroachment upon Russian territory in their east, in their Pacific area.

And then in addition, here's another interesting wrinkle from this. China's action in the Belt and Road Initiative which encroach upon a number of -- it's not only encroaching upon U.S. view -- U.S. interests globally, it's also encroaching upon regional hegemony.

And so, who happens to be the regional hegemon dominating the Central Asia area, the Russians. So, initially, I was getting reports that the Russians seem to be okay with this, but not recently.

Recently, Putin has been a little unhappy in insisting that Belt and Road have more benefits to the union that he's trying to create in the Eurasian land mass. So I would say that there are limitations to how far the Russia-China relationship can go. I would go -- it is far from an alliance.

And then to answer directly your question, the interoperability benefits from those exercises, in my opinion, are minimal. That is, it's more of a show of solidarity. It's a show of minimal interoperability. It shows that there's an alternative to NATO and Western security architecture.

But I haven't seen any real hard evidence of close interoperability, joint operations, joint planning, any of that. I've not seen that yet.

COMMISSIONER WESSEL: Okay. Any other quick thoughts?

DR. KARDON: Sure. I'd just pick up on where Chris left off on suggesting there are limitations in how far we'll go and it's far from alliance.

It's a similar analytical issue with the bases, places, ports question. If what you're looking for is China and Russia becoming treaty allies with a mutual defense commitment, that is not happening and so you can look around for all the reasons why that is.

But what we do see, you know, you can come up with whatever terminology you want to call it in terms of their relationship, but it does have strategic effects. It doesn't take that much coordination, which would be short of cooperation, it doesn't take that much coordination in the event of an actual military contingency for this to pose extremely severe challenges to the U.S. military.

And as far as broader geopolitics, they don't need to cooperate that much to frustrate a lot

of American efforts, and certainly the U.N. Security Council is structured that way.

So, you know, I would push back against the idea that it is a relationship built on desperation and weakness. I think they are both proud, sovereign nations that think they're acting in their best interests and they are, you know, especially Russia, facing major deficits and asymmetries and they are sort of using the resources that they have.

And I think leveraging up on Chinese economic power and increasingly military power is quite an effective strategy, and so I would not dismiss it as meaningless just because they're going to continue to have issues with one another.

COMMISSIONER WESSEL: Well, I didn't say it was meaningless.

DR. KARDON: Right. Sure, but I also think that there's a tendency to overplay the degree to which they cannot get along.

Yes, it's, I'm sure, the case that there's not a lot of love lost on a lot of issues, but the Chinese in particular assess the Sino-Soviet split to have been a grave strategic error. They're acutely aware of it. They are not intending at least to do that again, and I believe the Russians think of it similarly.

And I would push back also on the idea that there's a knowledge deficit. There may be in this room. I'm certainly not a China-Russia specialist, but I think there is certainly quite a lot of Russia expertise around.

COMMISSIONER WESSEL: No, no. The knowledge was that the warfighter, the jointness, et cetera. It was not --

DR. KARDON: Sure. Okay, fair enough. But -- so on that question I think there is quite a lot of good work on Russia and on China and on the two of them together.

COMMISSIONER WESSEL: No, no. That I understand, thank you.

COMMISSIONER MCDEVITT: Commissioner Bartholomew?

CHAIRMAN BARTHOLOMEW: Thank you. Thank you, gentlemen, for your interesting testimony.

Dr. Kardon, I want to go back to this issue of sort of ports, because it keeps coming up, and I feel like in some ways there's been a difference between what you've been saying and what you wrote.

It sort of comes across in the answers to the questions that some of these things are things that should not be so much of a concern to us. But as I look at your testimony, this whole strongpoints concept means that the issues are there, they're just being thought about differently. Is that correct?

DR. KARDON: I am not sure I understand exactly. I think I've spoken consistently with what I've written and I'm happy to explore any aspect of that for you.

Is there a particular --

CHAIRMAN BARTHOLOMEW: No. I guess I just again have the feeling that we might come away thinking that this concern about ports and how China might use them is overplayed. And there are a couple of issues related to that that I would like to raise specifically.

One is, you say that commerce is strategy, right, commercial is strategic, which raises the very real possibility that ports that are being run by Chinese companies, state-owned enterprises, could engage in economic warfare, right, which is they could block U.S. flagged ships from coming in.

They could raise the fees for ships that are carrying American goods coming in. We've seen that kind of use of economics as a way to send a message. So I wonder if you could -- I mean, do you think that that's a possibility that that's going to happen? That's one piece of it.

And then, also, you say specifically that commercial operations provide some strong arguments against utilizing overseas ports for clandestine intelligence and military operations.

And I guess what surprises me there is, I'm just presuming that everybody presumes that there's being espionage being done where the Chinese have these facilities. So, you know, it would be shocking if people were shocked that that was actually taking place.

And also, in some of this you talk about it risking diplomatic relationships. But in some of these countries where they are, there's both either a debt burden, which we'll call -- which provides leverage for the Chinese, or there's corruption; that payments have been made to the leaders of those countries.

And so, I'm just not as convinced as you are that it would endanger diplomatic relationships if they did spying in these places or used them to the advantage of Chinese companies. I guess that's more of a statement than a question, but I'd like to hear your response.

DR. KARDON: Sure. Thank you, Commissioner Bartholomew. I'll take them in sequence.

And so, I would not characterize what I've said as being the port question is overplayed or is not significant, far from it. What's overplayed is the expectation that they are all on their way to becoming military bases. And what I'm arguing for is that we should look at what they are now and what they could plausibly be in a reasonable time frame under conditions, known conditions, and that the commercial functions, we should not be sleeping on those commercial functions, and I'll get to that.

It's, you know, I don't think that there's going to be high-end PLA use of these facilities, and if that's what you're looking out for you're going to be very disappointed.

So your question about economic warfare, I would say economic coercion is part of the tactical package that the POC has been using in a lot of different domains. I don't have any evidence that they've done any of the specific things that you've noted, but it's certainly plausible.

And then the question, then it would verge on economic warfare if, for example, China Merchant's ports were to start doing that systematically because American cargoes are a big part of their revenue and so there would be some retaliation, and that actually would be, that would be a different type of escalation, but you could imagine that leading to extreme commercial tensions.

We're certainly in the midst of unprecedentedly extreme commercial tensions now, and so I certainly wouldn't rule it out. But I think that there's a high threshold for doing that and that would come along with other sort of much more aggressive foreign policy. So I don't think that's the leading edge, but plausible.

On espionage, look, we don't know -- my understanding is that everybody does it and you're just not supposed to get caught and I think that the Chinese would probably adhere to that norm. And what I'm trying to emphasize is that if they were to really do that at scale and get caught, that would be toxic for the brand of BRI.

If -- and, you know, leaving aside whether or not there is corruption or some complicity among the local port operators or even the local national government, what I'm talking about is it's not in Beijing's interest.

And again, this doesn't mean that they wouldn't do it, but I think they probably wouldn't and shouldn't do it. It is not in Beijing's interest for the brand of BRI to be these are all fronts for the PLA, they're sending intelligence and military personnel disguised as longshoremen to your facilities.

Again, it doesn't rule out the possibility they do it, but I think if they do it, they should do it with a very light footprint and at a small scale to support something other than major combat operations, but to do things more like the commercial espionage that we see kind of distributed across the board.

So, yeah, again, I would not downplay the importance of risking diplomatic relations. I'm talking about a big structural issue. China's Xi Jinping cares a lot about the Belt and Road and about China's commercial success. The Party's legitimacy, the Party's capacity to stay in power depends in large part, certainly not the only consideration, on its economic success and its economic success depends in large part on its performance overseas.

And so, I think the opportunity cost again of abandoning that strategy is extremely high and will continue for the foreseeable future to be a very strong break on overtly militarizing any of these facilities.

CHAIRMAN BARTHOLOMEW: And I think the distinction, of course, is when you're talking about overtly militarizing versus the potential of these places being used --

DR. KARDON: Don't get caught, but that's --

CHAIRMAN BARTHOLOMEW: But no, I wasn't even just thinking about espionage, which of course don't get caught is a really good rule. But the ability in the event of a conflict, right? I mean China's COSCO shipping company is what, the fourth largest freight carrying company in the world. It is an SOE. It could be mobilized in the event of a conflict to move freight, to move things, and having friends and people in these ports could facilitate things, right.

So that's short of. That's not saying that they're going to have military bases in all of them, but it is acknowledging that there are potential uses by the military.

DR. KARDON: There is no doubt that their potential uses, and I think we talked about this earlier, so, you know, commercial logistics, civilian logistics is a huge force multiplier. It's extremely important and the U.S. Navy relies on a lot of commercial logistics.

And to the extent that China now has this in a vertically integrated firm that is not operated or managed by the state but it is part of a broader organism that responds to the state, yes, it is no doubt giving them a variety of marginal advantages in moving supplies around the globe and in additionally knowing where other supplies are going that they're handling with their shipping line.

So not trivial, but again, you know, I think if they were to start moving nuclear warheads around and trying to stage them in these ports, we would know about it and it would be extremely costly for them, so they don't want to do that. What they would do is lightly flow supplies that support these lower-intensity PLA operations overseas.

CHAIRMAN BARTHOLOMEW: Thank you.

COMMISSIONER MCDEVITT: Well, we have about five minutes left for this panel and I have one --

CHAIRMAN BARTHOLOMEW: Sorry.

Mr. Chairman, I have to say that my colleague here has just pulled up a story from the South China Morning Post, the headline of which is, "U.S. security concerns force COSCO-owned Orient Overseas to sell Long Beach port in California." Timely.

PARTICIPANT: This was a little while ago.

PARTICIPANT: This has been going on some time, yeah.

DR. KARDON: That's right. CFIUS insisted that when COSCO acquired, I believe it was -- yeah, Overseas Orient commercial liner, that they sell that as a condition for the acquisition.

COMMISSIONER MCDEVITT: Right.

DR. KARDON: But they also acquired stakes in other U.S. ports in that same deal.

COMMISSIONER WESSEL: Including Tampa, I believe.

COMMISSIONER LEWIS: And Israel.

DR. KARDON: Haifa and another port in Israel are under contracts and are not being operated yet. I know the U.S. Senate in particular has taken up the issue of Haifa because the U.S. Navy operates there. And I think they haven't finalized the decision on whether or not Shanghai International Ports Group is going to hold that lease.

COMMISSIONER WESSEL: And I apologize since I got the testimony. Do you have the list of the 70 ports in your testimony? I don't --

DR. KARDON: The testimony does not include the database because it is a work in progress, but I assure you it will be available to the Commission once it has been --

COMMISSIONER WESSEL: That would be great.

DR. KARDON: -- fact-checked and quality controlled.

COMMISSIONER WESSEL: It may be helpful to our report, so thank you.

PARTICIPANT: Thank you.

COMMISSIONER MCDEVITT: Okay, three minutes left. I'm going to ask David one last question because I had it on my list and when he talked about command and control of the nuclear system.

So I want to know what you know or have surmised about command and control for China's SSBN fleet. How are they dealing with that?

DR. SANTORO: It's going to be very short. I don't know anything, and no one does. Unfortunately, every time we meet with Chinese colleague we ask, you know, how they think about it, how -- will the Rocket Force have a role with the PLA Navy; is the PLA Navy going to be alone. And we get no answer. So, unfortunately, I can't answer your question.

COMMISSIONER MCDEVITT: I know you can't answer it, but what are your suspicions?

DR. SANTORO: You know, my guess is that I think the PLA Navy will operate those platforms alone and that they will develop nuclear knowledge and capabilities to do so. It's unclear to me that the Rocket Force will have a role because they're two very distinct platforms, but I really don't know.

COMMISSIONER WORTZEL: Well, let's follow it up. What will --

COMMISSIONER MCDEVITT: Larry, use your mic.

COMMISSIONER WORTZEL: In other words, will the CMC still have an authorization as relates ---

DR. SANTORO: And this has been actually one of the key questions because it actually relates to command and control. Is that still going to be centralized given that the developing and bringing online, so different platforms, how do you do command and control in those conditions?

And again, unfortunately, we get no answers. And we keep asking and asking, but, you know, it remains unclear.

COMMISSIONER MCDEVITT: Let me thank all three of you for a very stimulating panel, particularly after lunch. I thought you all three did a terrific job keeping us alert and engaged, and educated. So thanks a lot, and if you have any additional thoughts that you'd like to submit for the record, please forward them and we will make sure that they're included.

I think we have a ten-minute break now. We'll recommence at 20 minutes past 3:00 for

our final panel. And I see we have our two panelists here.

(Whereupon, the above-entitled matter went off the record at 3:09 p.m. and resumed at 3:21 p.m.)

PANEL IV INTRODUCTION BY COMMISSIONER LEWIS

COMMISSIONER LEWIS: Good afternoon, everybody. Our final panel which is composed of former senior U.S. officials will address the implications of Beijing's military ambitions for the United States and U.S. allies and partners in the Indo-Pacific and beyond, as well as recommendations for U.S. response.

First, we have Thomas Mahnken, President and Chief Executive Officer at the Center for Strategic and Budgetary Assessments. He's also a Senior Research Professor at Johns Hopkins University, Paul Nitze School of Advanced International Studies, and serves as a member of the congressionally-mandated National Defense Strategy Commission as a member of the board of visitors at Marine Corps University.

Dr. Mahnken's previous government career includes service as Deputy Assistant Secretary of Defense to Policy Planning from 2006 to 2009 where he helped craft the 2006 Quadrennial Defense Review and 2008 National Defense Strategy.

He's the author of a number of publications on Asian security issues including the *Gathering Pacific Storm: Emerging U.S.-China Strategic Competition in Defense Technological and Industrial Development*. That's a long title for a book. He also served for 24 years as an officer in the U.S. Navy Reserve. He holds a B.A. from the University of Southern California, an M.A. and Ph.D. from SAIS.

Thank you very much. Why don't you please start?

OPENING STATEMENT OF THOMAS G. MAHNKEN, PH.D., PRESIDENT AND CHIEF EXECUTIVE OFFICER, CENTER FOR STRATEGIC AND BUDGETARY ASSESSMENTS

DR. MAHNKEN: Thank you for the opportunity to appear before you today to discuss the implications of a world-class Chinese military for the United States and our allies and partners. I think it's a very real human tendency when we look at --

COMMISSIONER LEWIS: I'm going to check the sound here.

DR. MAHNKEN: Yes. There we go. Sounds good. Okay. Thank you again. It's still a pleasure to be here.

COMMISSIONER LEWIS: We won't count that time. Let's start the time over again.

DR. MAHNKEN: There we go. There we go. It'll be soccer time.

COMMISSIONER LEWIS: I learned that from basketball. He gets his time back.

DR. MAHNKEN: There we go, thank you.

Look, it's a very real human tendency when we think about the present, we cannot help but be informed by the past. And oftentimes that is useful, but sometimes, particularly when you're talking about a rising or emerging power, that past can blind us to the present and potentially the future.

And I would say bureaucracies even more than individual human beings tend to lag that changing reality. So that's really where I want to focus my remarks, because gone are the days when China posed solely a regional challenge to the United States and its allies, confined to the Western Pacific. It now poses a global challenge to world order.

And China is seeking not only to exert influence in the Asia Pacific region, but across the globe. Indeed, Beijing is increasingly exerting its political, economic and military influence to coerce U.S. allies and partners to contest international law and freedom of navigation in crucial waterways such as the South China Sea, to weaken the U.S. position across the globe, and otherwise seek a position of geopolitical dominance from the Western Pacific to the Indian Ocean and influence beyond that.

Gone also are the days when the military challenge posed by China was confined to the U.S. Indo-Pacific commands area of operations. Rather, China poses a challenge, a political, economic and military challenge that crosses the boundaries of the Defense Department's geographic combatant commands and the State Department's regional bureaus.

And here I would actually, I would resort to history. It's worth noting that throughout the Cold War there was no single office. There was no Deputy Assistant Secretary of Defense, for example, for the Soviet Union. Why?

Well, it was because the U.S.-Soviet competition suffused our relationship and, really, if you will, every Deputy Assistant Secretary of Defense or Deputy Assistant Secretary of State or leader in the U.S. Agency for International Development or leader in the U.S. Information Agency, they saw the U.S.-Soviet competition as being their job.

Now I'm not saying this to predict a new Cold War, but merely to say one of the major implications of China's growth as a world-class military is that the China challenge has grown far beyond the geographic boundaries of the Western Pacific and far beyond the bureaucratic boundaries in Washington, D.C.

Now let me focus for the remainder of my time on the military dimension of it, although happy to take the discussion wherever you would like afterwards. Heretofore, China's military modernization has been driven in large measure by a set of perceived challenges, strategic and

operational challenges, and a set of strategic and operational challenges that the Chinese leadership has seen really largely coming from us.

And these include the perceived need to counter the attractiveness of democracy and the threat that it poses to the Chinese Communist Party, the pervasiveness of Western media and again the threat, or the perceived threat that it poses to the CCP's leadership, and the dominance of existing ways of war to include the U.S. style of power projection.

China has been innovating to solve these challenges for years and even decades, and has in the process developed new ways of war that range from so-called anti-access area denial, or in Chinese parlance, counter intervention capabilities, to so-called gray zone warfare.

Now China has also invested in a series of capabilities designed to demonstrate that China possesses a top tier military. China has been and Beijing's been investing in coins of the realm, right, and that's actually lead to, I think, some interesting tensions.

I mean thus, the PLA has not only built a formidable force to counter U.S. power projection capabilities including aircraft carriers, but has also pursued power projection capabilities including aircraft carriers of its own. China is not only developing and fielding a suite of anti-satellite weapons, but is also lofting an ever-larger constellation of military satellites of its own.

And as China continues to become a world-class military, I would expect that to continue. China's drive to become a world-class military has also threatened the qualitative superiority of the U.S. armed forces, something that we've long taken for granted.

To date, China's been most successful in innovating in a limited set of areas, particularly missile and space areas. However, Beijing is devoting considerable resources to spur innovation in emerging areas as a way of stealing a march or re-leveling the playing field.

So for the United States, dealing with that challenge is already important and I think it's going to become even more important as we move into the future. The U.S. Government needs to ensure that it has the ability to harvest the fruits of private sector innovation for national defense and to safeguard the national security innovation base against malign foreign influence, and doing so will be vital to maintaining or qualitative edge into the future.

Beyond that, beyond our technological edge and beyond just the need for defense spending, developing innovative operational concepts and fielding new organizations and capabilities to overcome the challenges posed by China should become an urgent focus of the Defense Department.

In an era of constrained resources, those concepts and capabilities that offer the greatest strategic and operational leverage should receive preferential funding over those that don't. And I believe the defense leaders really do need to take an active role and Congress has a role to play in sparking the development of innovative operational concepts by requiring and funding experiments and demonstrations and demanding realistic assessments of them.

I have more thoughts, but I know I have limited time. These thoughts are in my written statement, but certainly look forward to greater discussion of those as we move forward.

**PREPARED STATEMENT OF THOMAS G. MAHNKEN, PH.D., PRESIDENT AND
CHIEF EXECUTIVE OFFICER, CENTER FOR STRATEGIC AND BUDGETARY
ASSESSMENTS**

TESTIMONY

TESTIMONY BEFORE THE U.S.-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION

HEARING ON A “WORLD-CLASS” MILITARY: ASSESSING CHINA’S GLOBAL MILITARY AMBITIONS

June 20, 2019

Thomas G. Mahnken, Ph.D.
President and CEO, Center for Strategic and Budgetary Assessments

Thank you for the opportunity to appear before you today to discuss the implications of a “World-Class” Chinese military for the United States and its allies and partners.

Gone are the days when China posed solely a regional challenge to the United States and its allies in the Western Pacific. It now poses a global challenge to world order. China is seeking not only to exert influence in the Asia-Pacific region, but across the globe. Indeed, Beijing is increasingly exerting its political, economic, and military influence to coerce U.S. allies and partners, contest international law and freedom of navigation in crucial waterways such as the South China Sea; weaken the U.S. position across the globe; and otherwise seek a position of geopolitical dominance from the Western Pacific to the Indian Ocean and influence far beyond.¹ It is using predatory economic statecraft in an effort to weaken its geopolitical rivals, including the United States, and give it decisive strategic leverage over its neighbors.

Gone also are the days that the military challenge posed by China was confined to the U.S. Indo-Pacific Command’s area of operations. Rather, China poses a challenge – political, economic, and military – that crosses the boundaries of the Defense Department’s geographic combatant commands and the State Department’s regional bureaus.

Four aspects of the rise of China stand out as being of particular concern to the United States and its allies.² If these features were to change, all else being equal, the United States would be much apt to view China as a competitor.

¹ Thomas G. Mahnken, Ross Babbage, and Toshi Yoshihara, *Countering Comprehensive Coercion: Competitive Strategies Against Authoritarian Political Warfare* (Washington, D.C.: Center for Strategic and Budgetary Assessments, 2018).

² See the discussion in Thomas G. Mahnken, Travis Sharp, Billy Fabian, and Peter Kouretsos, *Tightening the Chain: Implementing a Strategy of Maritime Pressure in the Western Pacific* (Washington, D.C.: Center for Strategic and Budgetary Assessments, 2019) and Thomas G. Mahnken, “The Australia-US Alliance in US Strategic Policy” in Peter J. Dean, Stephan Frühling, and Brendan Taylor, eds., *Australia’s American Alliance* (Melbourne: Melbourne U P, 2016).

The first has to do with the Chinese Communist Party (CCP) leadership's increasing attention to external affairs. It is axiomatic that any country's political leaders pay greater attention to domestic matters than to international affairs, and that is certainly true regarding the CCP leadership, which is highly attentive to threats to domestic stability. Nevertheless, in recent years China has become increasingly active on the international stage. China has not only exerted its weight in its neighborhood, but also doing so increasingly in areas far removed from the Asian continent, to include Africa and the Persian Gulf. This international activism, to include not only economic investment and attempts to increase political influence, but also increasingly military deployments, raises concerns in the United States and among America's allies.

The second aspect of China's rise that raises concern has to do with China's geopolitical orientation. Whereas the People's Liberation Army (PLA) was long focused on the Asian continent, in recent decades it has increasingly adopted a maritime orientation. It is thus the build-up of the PLA Navy (PLAN) and PLA Air Force (PLAAF), as well as other anti-access/area denial (or, in Chinese parlance, counter-intervention) capabilities, such as Beijing's missile and anti-satellite weapons, and not Chinese military spending in the abstract, which has stimulated a US and allied response. Similarly, China's efforts to claim sovereignty over the South China Sea and East China Sea and attempts to coerce or invade Taiwan would bring China into conflict with the United States and its allies.

A third area of concern, related to the previous two, involves China's attitude toward the international status quo: China's leadership has increasingly challenged the status quo, whether rhetorically or, increasingly, through action. Nothing illustrates this attitude more tangibly and dramatically than China's campaign of building and then militarizing new land features in the South China Sea as a means of bolstering Beijing's claim of ownership.

A final area of concern has to do with China's domestic political system. However loudly or quietly the United States and its allies seek to promote democracy abroad, China's authoritarian political system and disregard for human rights and personal freedom is a recurring source of tension with the United States, its allies, and others in the region and beyond. Whatever U.S. leaders say, the leadership of the CCP firmly believes that the United States is out to overthrow it. Moreover, under Xi Jinping the CCP has set about establishing an authoritarian alternative to the liberal international order.

A strong case can be made that if these features were to change – if China were to become more internally focused, emphasize more the Asian continent over its maritime periphery, become more supportive of the status quo, and more pluralistic – then the United States and its allies would be much less concerned about China's overall rise. Indeed, under these circumstances China would come more to resemble today's India: a rising power with growing economic strength that is internally focused, continentally focused, supportive of large parts of the international status quo, and pluralistic—indeed, a robust—democracy.

China's military modernization has been driven in large measure by a perceived set of strategic and operational challenges – strategic and operational challenges that, in the view of Beijing's leaders, we pose to them. These include the perceived need to counter (1) the attractiveness of democracy, (2) the pervasiveness of Western media, and (3) the dominance of U.S. power projection forces. China has been innovating to solve these challenges for years and even decades and have in the process developed new ways of war that range from so-called “anti-access/area denial” (or “counter intervention”) capabilities to so-called “gray-zone warfare”.

Beijing has also invested in a series of capabilities designed to demonstrate that China possesses a top-tier military. Thus, the PLA has not only built a formidable force to counter U.S. power projection capabilities (including aircraft carriers), but also pursued power projection capabilities (including aircraft carriers) of its own. China is not only developing and fielding a suite of anti-satellite weapons, but also lofting an ever-larger constellation of military satellites.

China's drive to become a world-class military is also threatening the qualitative superiority of the U.S. armed forces – something we have long taken for granted. To date, China has been most successful in innovating in a limited set of areas, to include missile and space capabilities. However, Beijing is devoting considerable resources to spur innovation in emerging areas of technology, to include artificial intelligence, quantum computing, and other areas with significant military potential. The U.S. Government needs to ensure that it is able to harvest the fruits of private sector innovation for national defense and to safeguard the national security innovation base against malign foreign influence. Doing so will be vital to maintaining our qualitative edge into the future.

Beyond additional defense spending, developing innovative operational concepts and fielding new organizations and capabilities to overcome the challenges posed by China should become the urgent focus of Defense Department investment.³ In an era of constrained resources, those concepts and capabilities that offer the greatest strategic and operational leverage should receive preferential funding over those that do not.

The Office of the Secretary of Defense and the Joint Staff should lead the development of joint operational concepts, including efforts both to use existing capabilities in new and innovative ways as well as to craft roles for truly new capabilities. Today as in the past, Congress can spark the development of innovative operational concepts by requiring and funding experiments and demonstrations and demanding realistic assessments of them.

Potential innovative programs where the Department of Defense can begin these experiments include:

Neutralizing Anti-Access/Area-Denial Threats through Long-Range, Multi-Dimensional Strike. Several subordinate efforts appear particularly promising.

First, the U.S. government purchased two X-47B stealthy unmanned aerial system (UAS) technology demonstrator aircraft before terminating the program. The Defense Department could use the aircraft to develop innovative concepts of operations for stealthy land- and sea-based unmanned systems, to include the value of autonomy in such systems as well as the use of innovative logistical concepts to extend their range.

Second, the Navy is procuring three DDG-1000 Zumwalt class surface vessels. The attributes of these ships, to include their stealth, large displacement, and electric propulsion, make them both unique as surface combatants as well as potentially valuable assets for experimentation. The Defense Department could use the ships to develop concepts of operations for operating within range of an adversary's anti-access/area-denial capabilities. Specifically, they could be used to determine the value of stealthy surface combatants for conducting anti-air, anti-surface, and strike warfare in denied environments.

³ See Thomas G. Mahnken, Grace B. Kim, and Adam Lemon, *Piercing the Fog of Peace: Developing Innovative Operational Concepts for a New Era* (Washington, D.C.: Center for Strategic and Budgetary Assessments, 2019)

Third, the Defense Department is currently procuring a new Long-Range Anti-Ship Missile (LRASM), which should provide a highly capable weapon against enemy ships. However, current plans call for the missile to be carried by three aircraft, the B-1B, F/A-18E/F, and F-35, which will be increasingly challenged to operate in the Western Pacific due to growing threats to aircraft, tankers, and bases in that region. Accordingly, the Defense Department should develop concepts to integrate LRASM onto the B-2 stealth bomber, which has the range and survivability that may be needed to reach Chinese or Russian shipping in defended waters. Should the concept prove successful, LRASM could subsequently be integrated onto the forthcoming B-21 bomber, which should be available in greater numbers than the B-2 for missions such as maritime strike.

Creating Anti-Access/Area Denial Challenges for Competitors. Each of the Services is developing capabilities that could be used to create anti-access challenges for competitors. The Army and Marine Corps are both exploring deploying land-based anti-ship missiles such as LRASM, the Naval Strike Missile, and Maritime Strike Tomahawk; the Navy is modernizing its anti-ship and land-attack capabilities; and, as described above, the Air Force plans to equip some of its aircraft with anti-ship missiles. Deployed in the First and Second Island Chains and fed by ISR and targeting information from UASs such as the MQ-9, such capabilities could reassure allies and deter China from committing aggression. Further experiments and demonstrations could yield innovative operational concepts for linking U.S. and allied forward-based and expeditionary land-based precision strike systems with sea-based munitions and tactical aircraft. Such experiments could yield new concepts for projecting and sustaining forces in A2/AD environments as well as reinforcing and sustaining forward engaged forces.

Protecting Critical Bases of Operations Against Salvo Attacks. The United States should develop innovative operational concepts for defending those bases. Such defenses could include medium-range high-energy lasers (HEL), high-power microwave (HPM) systems, guided projectiles launched by rapid-ring guns, and low-cost surface-to-air missiles. Unmanned and manned aircraft carrying extended-range air-to-air missiles and equipped with wide-area surveillance sensors, HELs, and possibly HPM systems could further extend the range and increase the threat engagement capacity of a base salvo defense complex.⁴

Establishing Survivable C4ISR Networks. The Defense Department should develop innovative operational concepts and business practices to allow it to develop rapidly new space capabilities, and to launch them on relatively short notice. Such an approach could include not just the development of innovative practices, but also relationships with civilian space industry. It should also explore alternatives to space for services such as communications; intelligence, surveillance, and reconnaissance; and precision navigation. For example, the Defense Department should experiment with the use of UASs such as the MQ-9 to provide such services in a space-denied environment. Indeed, UASs can provide these capabilities at much lower cost than launching new satellites. Such initiatives would yield insight into the capabilities needed to enhance the capability and survivability of space systems and the services they provide, as well as new ways to leverage interoperable joint C4ISR in the face of adversary threats.

The development of new concepts and conclusion of experiments are not ends in and of themselves. Too often, Defense Department experiments have been side projects that create a façade of innovation without actually having any substantial impact. As a result, the forces and capabilities we have today—and are

⁴ Mark Gunzinger and Carl Rehberg, *Air and Missile Defense at a Crossroads: New Concepts and Technologies to Defend America's Overseas Bases* (Washington, D.C.: Center for Strategic and Budgetary Assessments, 2018).

currently procuring—are out of alignment with the world of 2019 and beyond. The objective of concept development and experimentation must be to inform major shifts in investment and force structure toward the forces and capabilities that can bring the U.S. military back into alignment with the operational challenges it faces.

About the Center for Strategic and Budgetary Assessments

The Center for Strategic and Budgetary Assessments (CSBA) is an independent, nonpartisan policy research institute established to promote innovative thinking and debate about national security strategy and investment options. CSBA's analysis focuses on key questions related to existing and emerging threats to U.S. national security, and its goal is to enable policymakers to make informed decisions on matters of strategy, security policy, and resource allocation.

OPENING STATEMENT OF ABRAHAM M. DENMARK, DIRECTOR, ASIA PROGRAM, WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS

COMMISSIONER LEWIS: Thank you for being within the time limit. Thank you.

Finally, we'll hear from Abraham Denmark, Director of the Asia Program at the Woodrow Wilson International Center for Scholars. He's also a Senior Fellow at the Center's Kissinger Institute on China and the United States and an adjunct Associate Professor at the Edmund Walsh School of Foreign Service at Georgetown University.

Mr. Denmark previously served as Deputy Assistant Secretary of Defense for East Asia and is the author of the forthcoming book, "Engineering Allies: A Strategy Empowering Allies, A Strategy for a New Era in the Indo-Pacific." Mr. Denmark holds an M.A. in International Security from the Josef Korbel School of International Studies at the University of Denver, and received a B.A. in History with Honors from the University of Northern Colorado and has also studied at Peking University.

Thank you to our esteemed witnesses for your participation.

How long were you at Colorado?

MR. DENMARK: In Colorado, I grew up there. I was there about 23 years.

COMMISSIONER LEWIS: I see. Your time, thank you.

MR. DENMARK: Thank you. Thank you, Mr. Chairman, and thank you, Commissioners, for having me here. It's always a pleasure to testify before your Commission and a pleasure to be able to talk about our allies and partners, see China's military ambitions to field a world-class military.

Off the top, I'd like to say that my testimony today reflects my views alone, not those of the U.S. Government or of the Wilson Center.

In my written testimony, I offered some general observations about the geopolitical context of this subject. Because of my limited time I'll refrain from detailing them here, but I would encourage you take a look at them as they are, I think, critical to understanding how our allies and partners view China's military modernization from a perspective that's beyond the military.

But broadly speaking, across the Indo-Pacific and especially in East Asia, China's military modernization and Beijing's expanding strategic ambitions are a source of concern. While countries have welcomed China's prosperity and have sought to benefit from it, many have grown increasingly concerned about the scope and pace of China's military modernization and how Beijing may seek to militarize its newfound military might.

Speaking at the 2019 Shangri-La Dialogue, Singapore's Prime Minister Lee Hsien Loong gave voice to the concerns that I believe are held by many across the region, and I will quote what he said.

"Now that China is a major power with the second largest defense budget in the world, its words and actions are seen differently. To protect its territories and trade routes, it is natural that China would want to develop modern and capable armed forces and aspire to become not just a continental power but also a maritime power.

"At the same time, to grow its international influence beyond hard power, military strength, China needs to wield this strength with restraint and legitimacy."

So I have three observations about how our allies and partners view China's military modernization ambitions. First, U.S. allies and partners are broadly concerned that they see China as making progress in its ambition to acquire the ability to undermine the effectiveness of

an armed U.S. intervention in a China-related contingency by building military capabilities to degrade core U.S. operational and technological advantages.

This trend is especially worrying for those countries that have heated disputes with China and also rely on the United States for their security.

COMMISSIONER LEWIS: Like which countries?

MR. DENMARK: I'd say countries like Japan, Taiwan, Philippines, Australia even, under all concerned.

COMMISSIONER LEWIS: And Korea.

MR. DENMARK: Korea to a lesser degree in that China is not at the height of their security concerns, quite obviously, but they do watch these trends quite closely.

COMMISSIONER LEWIS: Thank you. Thank you.

MR. DENMARK: Of course.

Second, as China's military capabilities continue to improve, U.S. allies and partners are concerned that the PLA is growing increasingly capable of asserting China's interests and claims responding to crises in the Taiwan Strait, in disputed claims in the East and South China Seas, along China's border with India and on the Korean Peninsula.

Even for those allies and partners without a specific dispute with China, most are deeply concerned about China's regional assertiveness and how these disputes may impact regional stability in the course of China's rise.

Third, U.S. allies and partners are also concerned about China's expanding international interest in global footprint as driving a range of missions beyond China's periphery including power projection and sea lane security.

For countries further afield from the Chinese mainland, China's expanding military interests and capabilities are uniquely troubling, but in some cases are also seen as a positive and beneficial development.

For countries less concerned about China's strategic ambitions, China is seen as a potential partner for providing humanitarian and disaster relief, military assistance and potentially domestic security support.

For most African and Latin American countries, for example, China's military modernization represents little more than an additional potential benefit building off of opportunities of Chinese trade, investment and infrastructure assistance.

Europe, however, is a different matter. For Europe's larger nations, especially France and the United Kingdom, China's military modernization and concerns about potential Chinese revisionism have recently drawn renewed attention to China as a geopolitical and security challenge. It is clear that Europe's major powers have deep concerns about China's ambitions and its approach to the liberal international order and see a role for themselves in responding.

For the United States to successfully compete with China and to sustain a robust and successful liberal international order, U.S. allies and partners will be critical to U.S. foreign policy.

Not only do they facilitate American military presence and access around the world, but they are also vital partners to advancing shared interests and addressing mutual challenges. The U.S. should treat its allies for what they are, tremendous geopolitical assets and a critical source of American power, access and influence.

To these ends, I have five recommendations of how the U.S. can engage its partners and allies in response to China's ambitions to develop and field a world-class military. And due to time constraints, I'll roll through them rather quickly.

First is to avoid a false and unnecessary choice, and some in the United States

Government have sought to force U.S. allies and partners, reportedly, to choose between the United States and China.

Being forced to choose between these two countries, in many cases their top trade partner and their top security partner, is a strategic nightmare for many of our allies and partners. Moreover, I believe it is an unnecessary choice at this juncture. We should be engaging with our allies and partners and working with them to develop common strategies against common challenges.

Two, to empower U.S. allies and partners. There are substantial opportunities for the United States to build the capabilities of its allies and partners across the Indo-Pacific and empower them to defend themselves from potential Chinese aggression and contribute more to the health and success of a liberal international order.

At the most fundamental level, the United States should work with its allies and partners to ensure that each country in the Indo-Pacific has the ability to peacefully pursue its interests and defend its sovereignty free from Chinese military coercion.

Three, invest in American military advantages in the Indo-Pacific and beyond. I won't get into the specifics of that for time.

Four, reduce the PLA's options to expand by working to limit the options Beijing has to build new military facilities abroad.

And, finally, five, to continue to adjust U.S. defense posture in the Indo-Pacific. And to accomplish this goal, the U.S. would need strong collaborative relationships with allies and partners across the various government departments and especially between countries' leaders.

So in conclusion, Mr. Chairman, while the PLA one day may achieve Xi Jinping's vision of building a world-class military, the United States has the opportunity to maintain and even expand its military advantages. To stay ahead, we must be focused on our investments and policy decision-making and prioritize strategic competition with China above other less significant long-term challenges.

And I look forward to your questions. Thank you very much.

**PREPARED STATEMENT OF ABRAHAM M. DENMARK, DIRECTOR, ASIA
PROGRAM, WOODROW WILSON INTERNATIONAL CENTER FOR SCHOLARS**

A ‘World-Class’ Military: Assessing China’s Global Military Ambitions The View of U.S. Allies and Partners

Testimony before the U.S.-China Economic and Security Review Commission

Abraham M. Denmark

Director of the Asia Program

Senior Fellow at the Kissinger Institute on China and the United States

The Woodrow Wilson International Center for Scholars

June 20, 2019

Rayburn HOB Room 2255

Chairman Lewis, Chairman McDevitt, and Commissioners: I am honored to join you at the end of what I expect has been a long and fascinating day of testimony on China’s ambitions to field a world-class military.

From my positions inside and outside of government for the past 15 years, I have both studied and interacted directly with both the People’s Liberation Army (PLA) as well as our allies and partners across the Indo-Pacific. I was therefore pleased to be asked to focus my remarks on how U.S. allies and partners have reacted to China’s ambitions to develop a world-class military. These are critical issues for the United States, and will have significant implications for the long-term prosperity and security of our country and the Indo-Pacific. With that said, I would like to note that my testimony today reflects my views alone, and are not those of the Wilson Center or of the U.S. government.

Geopolitical Context

Commissioners, before delving into the specifics of how U.S. allies and partners are reacting to China’s ambitions to field a world-class military, I want to begin with five observations regarding the geopolitical context of this subject:

1. The perspectives of U.S. allies and partners on issues related to China are informed by their broad assessment of geopolitical trends – not solely military issues. While most U.S. allies and partners are certainly concerned about China’s expanding military power and Beijing’s ambitions for regional dominance and global influence, they also see China as a critical source of trade as well as an unavoidable political power. In fact, for most U.S. allies and partners, China is not seen primarily as a military threat, but rather as both a geopolitical challenge and an economic opportunity.

2. The significant economic connectivity between China and U.S. allies and partners has important geopolitical implications. These close economic ties represent a potential avenue for

China to exert pressure, as we have seen when Japan, the Republic of Korea (ROK), and Australia have made decisions to counter Beijing's prerogatives. Yet this is not to say that the specter of China's economic coercion is decisive in the minds of our allies and partners. Indeed, the story of Chinese attempts at economic coercion has often been a story of Beijing's failure to use economic coercion to achieve its strategic objectives.

3. U.S. allies and partners in the Indo-Pacific, therefore, confront a geopolitical dynamic that is entirely new and, for them, deeply challenging. They must navigate a strategic conundrum in that their primary economic partner – China – is embroiled in an escalating strategic competition with their primary security partner – the United States. Moreover, they see China not only as a critical economic partner, but also as an increasingly problematic source of instability and, for some, as a threat to their sovereignty and territorial integrity.

4. Within foreign policy circles among several U.S. allies and partners, there is a robust and active debate about the sustainability of American power, the reliability of American commitments, and the implications of intensifying competition between China and the United States. While most have concluded that sustaining robust relations with the United States remains in their long-term interests, U.S. allies and partners also seek to build productive relations with China despite any lingering territorial disputes or diverging interests. Simultaneously, many are concerned that the intensifying geopolitical competition between China and the United States threatens to drive the region toward strategic decoupling, potentially forcing them to choose sides.

5. U.S. allies and partners are supportive of the United States continuing to play a leading role in the Indo-Pacific and either support U.S. competition with China or understand the drivers and motivation of that competition, yet many are perplexed by Washington's unwillingness or inability to pursue policies that would better enable its ability to compete successfully. Several policies that limit the ability of the United States to compete – including the withdrawal from TPP, the lack of a compelling alternative to Beijing's the Belt and Road Initiative, threats to sanction imports that are critical for allied economies, and elevated expectations for allied payments for host nation support – drive questions about U.S. intentions, commitment, focus, and priorities.

The View from U.S. Allies and Partners: Military Calculations

Commissioners, as I'm sure you have heard throughout the day, and as described in the Pentagon's annual report to Congress, Beijing's military ambitions have expanded greatly. Xi Jinping's call from the 19th Party Congress of the Chinese Communist Party to “strive to fully transform the people's armed forces into a world-class military by the mid-21st century,”¹ seemed to divorce the PLA's

¹ Xi, Jinping. “Xi Calls for Building a Strong Army.” *Xinhua*, 2017.
http://english.gov.cn/news/top_news/2017/10/27/content_281475922905044.htm.

development from any specific set of contingent capability requirements, and instead tied military modernization to China's future as a great power. The 2017 Party Congress report identifies two stages of development, the first occurring from 2020 to 2035 (during which China sees itself as growing its economic and technological strength while addressing domestic challenges that could cause instability) and the next coming from 2035 to 2050, which Beijing identified as a period during which China will become a prosperous, modern, and strong socialist country with a "world-class" military.

Across the Indo-Pacific, and especially in East Asia, China's military modernization and Beijing's expanding strategic ambitions are a source of concern. The 2018 U.S. National Defense Strategy accurately describes the challenge from China thusly:

China is leveraging military modernization, influence operations, and predatory economics to coerce neighboring countries to reorder the Indo-Pacific region to their advantage. As China continues its economic and military ascendance, asserting power through an all-of-nation long-term strategy, it will continue to pursue a military modernization program that seeks Indo-Pacific regional hegemony in the near-term and displacement of the United States to achieve global preeminence in the future. The most far-reaching objective of this defense strategy is to set the military relationship between our two countries on a path of transparency and non-aggression.²

This trend has not gone unnoticed around the world. While countries have welcomed China's prosperity and sought to benefit from it, many have grown increasingly concerned about the scope and pace of China's military modernization and how Beijing may seek to utilize its newfound military might. Speaking at the 2019 Shangri-La Dialogue, Singapore's Prime Minister Lee Hsien Loong gave voice to the concerns held by countries across the Indo-Pacific:

... now that China is a major power with the second largest defence budget in the world, its words and actions are seen differently. To protect its territories and trade routes, it is natural that China would want to develop modern and capable armed forces, and aspire to become not just a continental power but also a maritime power. At the same time, to grow its international influence beyond hard power, military strength, China needs to wield this strength with restraint and legitimacy.³

Each U.S. ally and partner has particular priorities and concerns about China's military modernization and ambitions. Broadly speaking, however, they see China as narrowing U.S. military

² United State Department of Defense, *Summary of the 2018 National Defense Strategy*, by James N. Mattis, 2018, 2.

³ Lee, Hsien Loong, "Keynote Address by Prime Minister Lee Hsien Loong at the 18th IISS Shangri-La Dialogue on Friday 31 May 2019." Speech, The International Institute for Strategic Studies, Singapore, 2019, 5.

advantages, exacerbating regional territorial disputes, and asserting Chinese interests and ambitions at increasingly greater distances beyond China's immediate periphery.

Perceived Diminishing U.S. Advantages

U.S. allies and partners are broadly concerned that they see China as making progress in its ambition to acquire the ability to undermine the effectiveness of an armed U.S. intervention in a China-related contingency by building military capabilities to degrade core U.S. operational and technological advantages. This trend is especially worrying for those countries that have heated disputes with China and also rely on the United States for their security. If China succeeds in its stated ambition to eventually field a "world-class military," and if the United States were to fail to maintain its military advantages and perceived reliability as a security guarantor, U.S. allies and partners in the Indo-Pacific may examine options to either pursue a strategy of internal balancing (i.e., building their own military capabilities sufficient to defend their interests and deter conflict) or bandwagoning (i.e., acceding to Beijing's demands and aligning more closely with China).

There are two interrelated aspects of how U.S. allies and partners will evaluate the relative balance of U.S. and Chinese military capabilities. The first is the most straightforward: assessing the overall military balance of power between the PLA and what the U.S. military can plausibly deploy to a China-related contingency. There are both quantitative and qualitative aspects of these calculations. Any assessment of the military balance at any given time between China and the United States will be necessarily unspecific and reflective broader trends than a specific correlation of forces. Moreover, the potential role of the armed forces of a U.S. ally or partner in such a U.S.-China military contingency would also need to be taken into account.

The second aspect of how U.S. allies and partners will evaluate U.S. military advantages and disadvantages vis-à-vis China is not entirely military, per se, but political. Even if the United States maintains a technical military advantage, U.S. allies and partners in this scenario would be concerned that China would be able to inflict sufficient damage on the U.S. military to render the costs of an intervention unacceptable for Washington. In other words, they worry that a world-class PLA would have the ability to deter a U.S. intervention even before it has the ability to defeat it. Their calculation, therefore, will be based as much on their evaluation of the will of the American president to sacrifice American lives in defense of their country – a perpetual question for allies, but one that is exacerbated when the number of lives that may potentially be lost increases as a result of diminishing American military advantages.

So far, most U.S. allies and partners have decided to remain aligned with the United States, even while they may pursue a productive relationship with China. Australia's 2016 Defense White Paper made an assessment that I judge most others around the world would agree to: "The United States will remain the pre-eminent global military power over the next two decades. It will continue to be

Australia's most important strategic partner through our long-standing alliance, and the active presence of the United States will continue to underpin the stability of our region.”⁴

Exacerbating Regional Disputes

Across the Indo-Pacific, several U.S. allies and partners are embroiled in some form of a dispute with China. As China's military capabilities continue to improve, U.S. allies and partners are concerned that the PLA is growing increasingly capable of asserting China's interests and claims or responding to crises, in the Taiwan Strait, in disputed claims in the East and South China Seas, along China's border with India, and on the Korean peninsula. Even for those allies and partners without a specific dispute with China, most are deeply concerned about China's regional assertiveness and how these disputed areas may impact regional stability and the course of China's rise.

While the security dynamics that Taiwan and Japan have with China are significantly different in several important ways, they also share similar concerns about China's rapid military modernization and the recent actions of its military forces. Both see Chinese forces as unilaterally escalating tensions by increasing the pace and scope of its military operations around Taiwan and in the East China Sea respectively, and both are concerned about Beijing's attempts to change the status quo by employing political, economic, and military coercion.⁵ Finally, both are concerned – as described above – that China's growing military capabilities have the potential to eventually enable China to deter or defeat an armed U.S. intervention into a future crisis related to Taiwan or Japan.

The South China Sea is a different story, both as a result of the area's unique geography but also due to the different nature of U.S. relationships with the two countries with the most active disputes with China: the Philippines and Vietnam. While Manila is a long-standing treaty ally of the United States, and is therefore covered by American extended deterrence commitments, Hanoi has no such guarantees. Yet under President Rodrigo Duterte the Philippines has leaned closer toward China, and Defense Secretary Delfin Lorenzana has called for a review of the Mutual Defense Treaty with the United States out of fear it could pull the Philippines into an unwanted war with China.⁶ The result is that both Hanoi and the Manila are hedging between Beijing and Washington, and seek to avoid scenarios that would drive them to lean heavily in either direction.

⁴ Australian Government Department of Defense. *2016 Defence White Paper*, 2016, 41.

⁵ For example, see Japan Ministry of Defense, *Defense of Japan 2018*, 2019, 10.

⁶ Jason Gutierrez, “Philippine Official, Fearing War With China, Seeks Review of U.S. Treaty,” *The New York Times*, March 5, 2019, <https://www.nytimes.com/2019/03/05/world/asia/philippines-defense-treaty-us.html>. It should be noted that views on this issue are not universally held in Manila, as Foreign Affairs Secretary Teddy Locsin has stated his opinion that a review of the treaty is unnecessary as he believes in the “old theory of deterrence.” See Patricia Lourdes Viray, “Locsin on US-Philippines treaty review,” *The Philippine Star*, March 5, 2019, <https://www.philstar.com/headlines/2019/03/05/1898877/lorenzana-contradicts-locsin-us-philippines-treaty-review>.

Countries with active disputes with China are concerned that China may continue to use so-called “gray-zone” tactics to advance its claims in disputed waters while staying below the threshold of conflict. In these cases, U.S. allies and partners are less concerned about China’s military modernization ambitions per se and more about China’s apparent ability to reclaim islands and militarize them with few significant consequences. Over time, China’s military modernization could allow it to solidify and enforce its claims across nearly the whole South China Sea, effectively turning the entire body of water into a Chinese territorial sea, and using it as a base of operations to enable power projection throughout Southeast Asia, deep across Oceania, and into the Eastern portion of the Indian Ocean.

India is also watching China’s military modernization very closely. Having already fought a war with China over their disputed northern border, many in Delhi believe that border tensions could generate more crises. Others are equally concerned about China’s rapidly improving naval capabilities and apparent interest in establishing overseas military facilities to support naval operations in the high seas, and fear that Beijing may be eyeing the Indian Ocean as a future locus for competition and crisis.⁷

Finally, Seoul is primarily and understandably focused on the military threat posed by North Korea. Yet below the surface, there are deepening concerns about the role China may play in contingencies on the Korean Peninsula. While this is a subject that is not often discussed publicly by Korean officials and scholars, it is a topic that deserves a greater degree of scrutiny. China already has significant land power capabilities, and there are critical open questions as to how China may respond in the face of instability on the Korean peninsula. As China’s military capabilities improve, these questions will gain even greater importance and urgency. While more analysis on this issue is warranted, I would point this commission to the excellent work by Dr. Oriana Mastro of Georgetown University, who wrote in *Foreign Affairs* that “in the event of a conflict or the regime’s collapse, Chinese forces would intervene to a degree not previously expected—not to protect Beijing’s supposed ally but to secure its own interests.”⁸

Concerns Further Afield

As a result of China’s growing military capabilities, U.S. allies and partners are increasingly concerned about China’s expanding international interests and global footprint as driving a range of missions beyond China’s periphery, including power projection and sea-lane security. For countries further afield from the Chinese mainland, China’s expanding military interests and capabilities are uniquely troubling, but in some cases are also seen as a positive and beneficial development. For

⁷ Lee, Jeong-ho. “How Tiny Djibouti Became the Linchpin in China’s Belt and Road Plan.” *South China Morning Post*, 2019. <https://www.scmp.com/news/china/diplomacy/article/3007924/how-tiny-african-nation-djibouti-became-linchpin-chinas-belt>.

⁸ Mastro, Oriana Skylar. “Why China Won’t Rescue North Korea,” *Foreign Affairs*, 2019. <https://www.foreignaffairs.com/articles/asia/2017-12-12/why-china-wont-rescue-north-korea>.

countries less concerned about China's strategic ambitions, China is seen as a potential partner for providing humanitarian assistance and disaster relief, military assistance, and potentially domestic security support.

For most African and Latin American countries, China's military modernization represents little more than an additional potential benefit building off of opportunities for Chinese trade, investment, and infrastructure assistance. Indeed, Djibouti saw benefits to expand its strategic relationship with China – and acquire some much-needed financial support – by hosting China's first overseas military facility. In all likelihood, Beijing expects this facility is to be the first of many. We can expect other countries in key geographic positions to also look favorably at potentially hosting Chinese military facilities, although I do not expect to see any such a facility in Latin America for the foreseeable future. Commissioners, considering the dearth of conflicting security interests between China and the nations of Africa and Latin America, I do not expect China's military modernization will play a significant role in the foreign policy calculations of either continent – beyond as a driver of competition between China and the United States and (for some) as a potential source of arms, training, and humanitarian assistance.

Europe, however, is another matter. For Europe's larger nations – especially France and the UK – China's military modernization and concerns about potential Chinese revisionism have recently drawn renewed attention to China as a geopolitical and security challenge. At the 2019 Shangri-La Dialogue, French Defense Minister Florence Parly described a more active and engaged role for France in the Indo-Pacific, and released a major report on the subject. The report describes France's concerns about China's actions in the South China Sea and elsewhere, and details France's expanded military engagements across the region.⁹ Similarly, in April 2019, the UK House of Commons Foreign Affairs Committee published a report on the UK's relations and strategy toward China, noting that “the combination of a China characterised by strengthened Communist Party control and a desire to project its influence outwards, on the one hand, and ever-increasing economic, technological and social links between the UK and China, on the other, presents serious challenges for the UK.”¹⁰ It calls for London to take a more balanced view of China and to recognize that China's interests and values are not always the same as those of the UK.

Even though they do not have specific territorial disputes with China, it is clear that Europe's major powers have deep concerns about China's ambitions and its approach to the liberal international order, and see a role for themselves in responding. Their position is nuanced, and they also continue to recognize the significant opportunities that China represents. Nevertheless, Europe's newfound concerns about the challenges posed by China and its expanding military positions are strategically significant and indicate an opening for the United States to deepen its engagement with European allies on these issues.

⁹ Ministère des Armées, *France and Security in the Indo-Pacific*,

¹⁰ House of Commons Foreign Affairs Committee, *China and the Rules-Based International System*, April 4, 2019, 4.

Recommendations

For the United States to successfully compete with China and sustain a robust and successful liberal international order, U.S. allies and partners will be critical to U.S. foreign policy. Not only do they facilitate American military presence and access around the world, but they are also vital partners to advancing shared interests and addressing mutual challenges.

Unfortunately, the U.S. approach to alliances and partnerships has recently seemed increasingly bifurcated. While officials in the Pentagon and State Department continue to laud the importance of U.S. alliances and partnerships, other parts of the U.S. government seem to see our allies and partners more as competitors or freeloaders. For example, President Trump's threat to invoke a Section 232 tariff on auto imports threatens a key sector of both the South Korean and Japanese economies. Additionally, President Trump's oft-repeated criticism of the levels of allied host nation support – as a candidate in July 2016, for example, he stated that the United States would defend only NATO allies who have “fulfilled their obligations to us” – suggests he sees the relationships less as based on mutual interests and shared values, but more as a financial transaction for protection.¹¹

The United States should treat its allies for what they are: tremendous geopolitical assets and a critical source of American power, access, and influence. Not only should the United States continue to maintain a robust military presence in the region and sustain its commitments to its allies, but there are also a range of policy options the U.S. should consider to react to China's rapidly growing military capabilities. To these ends, I have several recommendations of how the U.S. can engage its allies and partners in response to China's ambitions to develop and field a world-class military.

Avoid a False, Unnecessary Choice: In recent months, there have been reports that some U.S. officials have sought to force U.S. allies and partners to “choose” between China and the United States. For example, U.S. officials have sought to dissuade allies and partners from pursuing trade and investment agreements with China,¹² and have criticized those that have agreed to allow Huawei to install telecommunications equipment in their networks.¹³ Additionally, former Obama White House official Ryan Hass described the overriding message of Vice President Mike Pence's remarks on China in October of 2018 as “the United States is strong and determined, China is a significant threat, and countries should position themselves with the United States.” In doing so, Hass rightly

¹¹ Sanger, David and Maggie Haberman. “Donald Trump Sets Conditions for Defending NATO Allies Against Attack - The New York Times.” 2016. <https://www.nytimes.com/2016/07/21/us/politics/donald-trump-issues.html>.

¹² Wong, Edward, and Alan Rappeport. “In Race for Global Power, U.S. and China Push Nations to Pick a Side.” *The New York Times*, 2018.

¹³ Choudhury, Saheli Roy. “Trump to Threaten to Curb Intelligence Sharing with UK over Huawei: FT.” *CNBC*, 2019. <https://www.cnbc.com/2019/05/31/trump-to-threaten-to-curb-intelligence-sharing-with-uk-over-huawei-ft.html>.

argued that “the Trump administration risks embarking on a Cold War-like approach toward China, but without the clear backing of any ally anywhere in the world for joining the United States in a purely confrontational posture toward China.”¹⁴

Being forced to choose between Washington and Beijing is a nightmare for most of our allies and partners. Moreover, I believe it is an unnecessary choice at this juncture. Alliances are not relationships in which a smaller power cedes its sovereignty to the larger power. In fact, the health and success of U.S. alliances since the end of World War II can be attributed to American support for the sovereignty and independence of its allies – friends and allies can disagree. Recall that Canada did not officially send troops to support U.S. military operations in Vietnam, and that the Suez Crisis pitted Washington against London and Paris on an issue of tremendous geopolitical significance. Yet in both cases, NATO survived.

Issues such as China’s debt trap diplomacy, the South China Sea, and Huawei are certainly of great importance. We should be engaging with our allies and partners on these issues, and working with them to develop common strategies against common challenges. Yet this is done most effectively through dialogue and cooperation – not with threats and ultimatums. While eventually a choice may need to be made if some in the Trump administration succeed in truly “decoupling” the U.S. and Chinese economies, at this point they remain too interconnected at this time to force any sort of choice upon U.S. allies and partners whose economies are far more profoundly connected to China than is that of the United States. Prematurely demanding U.S. allies and partners to “choose” risks further alienating them, and could limit the ability of the United States to harness alliances and partnerships toward shared objectives.

Empower U.S. Allies and Partners: There are substantial opportunities for the United States to build the capabilities of its allies and partners across the Indo-Pacific, and empower them to defend themselves from potential Chinese aggression and contribute more to the health and success of the liberal international order. While I will primarily focus on military opportunities, I would briefly note that non-military cooperation in areas such as infrastructure development, creating and enforcing international laws and norms, supporting good governance, and promoting political and economic liberalism are all areas where U.S. allies and partners – large or small, close or distant – can contribute.

At the most fundamental level, the United States should work with its allies and partners to ensure that each country in the Indo-Pacific has the ability to peacefully pursue its interests and defend its sovereignty free of Chinese military coercion. For the larger and more advanced U.S. allies and partners in the Indo-Pacific – such as Japan, Taiwan, Australia, and India – this strategy will mean consistently providing military capabilities that are both effective and sustainable, while also relevant

¹⁴ Hass, Ryan. “Who Was Mike Pence Really Addressing in His Speech on China?” *Brookings*, 2018. <https://www.brookings.edu/blog/order-from-chaos/2018/10/04/who-was-mike-pence-really-addressing-in-his-speech-on-china/>.

and effective in blunting potential Chinese military aggression. This approach will also involve continuing to build and utilize bilateral, trilateral, minilateral, and multilateral military cooperation mechanisms that enable closer training, joint operations, and greater interoperability across shared contingencies.

For America's smaller and less advanced allies and partners, Washington should modulate its ambitions to match their lower capacities. This tactic will mean a greater emphasis on low-end security cooperation and support, such as building regional coast guards and facilitating greater maritime domain awareness cooperation, as well as assistance with maintenance, training, and sustainability. The unfortunate reality, however, is that there are few U.S. military platforms that are affordable for many of its smaller or developing allies and partners – they do not have the funds to purchase high-end U.S. military equipment, which is often more advanced than they require regardless. In these cases, the U.S. should prioritize developing Indo-Pacific allies and partners when distributing Excess Defense Articles in relevant security domains. Additionally, Washington should encourage its more advanced allies and partners, whose defense industries produce more appropriate systems, to deepen defense cooperation with the U.S. smaller allies and ensure that such cooperation contributes to a broader, networked approach to regional security.

There are a few challenges that the United States should consider, however, when pursuing a strategy to empower its allies and partners. For some allies and partners, China is not the only – or even the primary – security challenge. They may see the acquisition of additional military capabilities as a way to not only defend against potential Chinese coercion, but also as a means to assert other interests or claims against countries other than China. Clearly, the United States does not want to fuel an arms race that detracts from our shared objectives and could undermine – rather than buttress – regional stability. That is why such military cooperation must be done responsibly, emphasizing defensive rather than offensive capabilities, and alliance and partner relationships should continue to be strengthened.

Additionally, there is a danger that calling on other countries to “do more” to contribute to regional security and provide public goods may be interpreted as the United States withdrawing from the region. Perceptions that the United States was reducing its engagement and commitment to the Indo-Pacific, and attempting to use its allies and partners to fill the void, would precipitate a rapid geopolitical adjustment across the region, likely including broad realignment toward Beijing and some countries' pursuing indigenous nuclear capabilities. This means that the United States cannot look to its allies and partners as potential *replacements* for American military power, but rather, as *supplements* to American military capabilities that continue to grow more capable.

Invest in American Military Advantages in the Indo-Pacific and Beyond: While I have full confidence in the ability of the United States to achieve its military objectives across the Indo-Pacific, my confidence will diminish if Washington is unable to make significant investments in the kinds of military capabilities that would be necessary to sustain American military advantages vis-à-

vis China. This will mean investing in critical high-end military capabilities, while also practicing strategic restraint in other areas of the world where American priorities and interests are less critical.

Reduce the PLA's Options to Expand: The United States should work to limit the options Beijing has to build new military facilities abroad. This policy would mean engaging potential Chinese military partners, and offering the appropriate mix of incentives and disincentives to prevent the construction of additional Chinese military facilities abroad.

Continue to Adjust U.S. Defense Posture across the Indo-Pacific: During the Obama administration, the United States sought to build a defense posture in the region that is geographically distributed, operationally resilient, and politically sustainable.¹⁵ While significant progress was made, this initiative remains incomplete – especially as China's military modernization continues to progress. The United States should continue to make progress on defense posture initiatives in Okinawa, Australia, Guam, the Philippines, and elsewhere in order to ensure the U.S. military is able to effectively defend the United States, its allies, and its interests. Yet to accomplish this goal, Washington will need strong, collaborative relationships with its allies and partners across the various government departments and, especially, between the countries' leaders.

Conclusion

Mr. Chairman, Commissioners: China has been modernizing its military for decades, and is now reaping the benefits of decades of significant, targeted investments in its armed forces. While the PLA one day may achieve Xi Jinping's vision of being a world-class military, the United States has the opportunity maintain, and even expand, its military advantages. To stay ahead, the United States must be focused in its investments and policy decision-making, and prioritize strategic competition with China above other, less significant long-term challenges.

A critical aspect to any American strategy to successfully compete with China will require robust relations with its allies and partners. While China has significantly improved its military capabilities already and has grand ambitions for the future, there is still time to focus our policies and investments and successfully compete with China. But this strategic window of opportunities is closing. I hope that my recommendations can help adjust the U.S. approach to our allies and partners in the face of China's expanding military ambitions, and I look forward to your questions.

Thank you.

¹⁵ United State Department of Defense, *Quadrennial Defense Review*, by Chuck Hagel, 2014, 34.

PANEL IV QUESTION AND ANSWER

COMMISSIONER LEWIS: Thank you very much. You ended up exactly on time. Thank you.

Admiral McDevitt?

COMMISSIONER MCDEVITT: Today, I learned that the latest Department of Defense Indo-Pacific strategy that came out -- which I admittedly have not yet read, I've downloaded it but not yet read it -- made the assertion that China seeks to be the predominant military power in the Indo-Pacific.

For many -- for some time now, I and among many others have been aware of the Chinese ambition to be the predominant force in East Asia, but this strategy is the first indication that their ambitions for predominance have stretched into the Indian Ocean all the way to include India itself and perhaps all of the Indian Ocean.

In previous testimony, some, a number of individuals, I asked if there was any analytic basis that they were aware of to inform this discussion and they were not aware. Nonetheless, since the purpose of this panel is intended to try to what I have called define the size or define what the bread box of world-class military would look like, it occurs to me that if, in fact, China could be the predominant power in the Indo-Pacific, not counting the Mediterranean or the Atlantic or what have you, that would be the equivalent of being a world-class military.

So the question I pose to you, first of all, in your research and your work in open source information and what have you, have you found any indication that suggests that this is an ambition that the PLA has?

And, secondly, even if it's not, would you agree that if, in fact, it could be the predominant power in the Indo-Pacific that would be the equivalent of being a world-class military?

DR. MAHNKEN: So on the first point, I don't claim expertise as a sinologist. But I would say that, you know, the Chinese doctrinal publications that I've read, you know, they talk about a pretty ambitious vision, you know, for the PLA.

And I think we also have seen a track record where past doctrinal publications really have, you know, shown the path that we now know that the PLA took, right. So, and that's a vision that includes naval power projection that includes long-range aviation, so that's the first thing I would say.

Second, I think, you know, what would -- how would I answer that question, right? And I think some of the difficulty I have answering that question goes back to my opening statement, which is merely thinking about Chinese military power within a particular geographic frame, whether it's the Western Pacific or the Asia Pacific or the Indo-Asia-Pacific, only captures some elements of it.

So if I was trying to attack this problem, what would I be looking at? I'd be looking at the size. I'd be looking at the deployment patterns of the PLA Navy. That's probably the most clear cut one, right.

And are they seeking preponderance and predominance relative not just to the U.S. Navy but also, say, the Indian Navy, the Royal Australian Navy, I'd be looking at that.

In terms of air capabilities, right, I'd be looking at the air patterns of operations. But then, even then I'd be looking at the Rocket Forces. I'd be looking at missile deployments, not only in Asia but also in South Asia.

But even that would only partially capture this, right, because I think so much of what the

PLA is doing is truly global, whether we think about cyber, whether we think about space. And that's part of -- and that even leaves aside a growing basing network and various other, you know, political influence, economic statecraft. So that's why I guess, just personally I think that just trying to encompass the PLA's military activity within a frame, bigger, smaller, is only capturing part of it.

But I do agree with your second point that if we're looking for a surrogate that's probably a reasonable surrogate. If you can dominate over the United States and India, you know, that would be pretty powerful.

MR. DENMARK: Yeah, I agree with Dr. Mahnken. I think that we need to be careful. Just all I'd add is, I think we need to be careful about applying our own frames to this in that I have not seen credible, open sources about the Chinese military talking about dominance the way that American military analysts talk about dominance over a particular geographic area.

That much more of the writing from the PLA talks about achieving specific missions in a specific context in terms of sea lane, protecting sea lanes of communication, being able to project power into certain places, to defend Chinese interests in certain areas, less about a general sense of peacetime dominance the way we talk about it.

But I do think as Dr. Mahnken said that if China does seek to be able to defend its sea lanes in the Indian Ocean up to the Middle East from the American Navy, from the Indian Navy, from any other navy that it may come into contact with, at some point, yes, that does require a world-class military that is second to none. But I think they're a long way from where they are from where they need to be able to get together.

COMMISSIONER LEWIS: So you're saying then you don't have to be dominant to be a world-class military?

MR. DENMARK: I would say that you don't have to be a world class military in order to achieve your objectives in a specific geography in a specific set of time.

And this goes back to other writings going back several years where China does not need to even be able to equal American military power in specific contingencies in order to cause trouble, in order to cause problems for the American military. And of course, it's easier for them closer to home. It gets harder for them as they get further away.

But they do not need to be equal with us in order to be able to achieve some of their objectives and at some point become dominant in a specific area.

COMMISSIONER LEWIS: Mr. Kamphausen, he has to leave at 4 o'clock.

COMMISSIONER KAMPHAUSEN: Thank you both. You're both scholars and students of these important issues and have served in policy positions, responsible policy positions in the Office of the Secretary of Defense.

So, I think you have a unique perspective to reflect on this question. My fellow Commissioners may get tired of my broken record on this point, but it's about the nexus of world-class military and near peer competitor.

And, I'm sorry, but these guys can answer this -- can address this in unique ways, I think.

First of all, world-class military is a Chinese term for itself, not further defined by Xi Jinping. And, according to Dr. Fravel on panel two, is of diminishing use since 2017.

And, in fact, the commentary, the PLA unofficial but well informed commentary, has provided a whole range of potential definitions as to what it might mean.

I don't think we need to try to figure out what they mean necessarily because they give themselves until 2050, and as we postulated earlier, they may well define the state where they are at 2050 as being equivalent to being a world-class military. Right?

But what we do, and you all have been a part of, is this debate about China is a near peer competitor. And, more specifically, whether the PLA is a near peer competitor of the United States.

So, I'd invite your comment on that question, but maybe more importantly, what are the metrics that we ought to use to make a judgment about that?

Actually, Dr. Mahnken, you actually gave several in answer to an earlier question and maybe you would repeat those.

But what should we -- what should be used to judge whether they reach that status? I think it's sloppy for us to use a term without a shared understanding. I'm not saying you all, I'm saying our broader community.

And so, it'd be helpful, any ideas you have that would lend some specificity and clarity to that.

Thank you.

DR. MAHNKEN: No, that's an excellent question. And, maybe, you know, a couple of ways to think about this.

So, and whether it's -- actually, whether it is without the quotes, a world-class military or a near peer competitor, I think, you know, one element of it is, how do they match up against widely recognized benchmarks of what it is to be a top tier military. Right?

So, in at the turn of the last century, you know, you would have said, well, you measure it in battleships. Right? So, to be a serious power, you measure it in battleships.

Well, you know, today it's nuclear weapons. It's intercontinental reach. It's space. It's aircraft carriers.

And, again, I think we see -- and it's civil space programs, it's a number of things. Right? And, we certainly see China investing in those existing benchmarks.

And then, as we look to the future, it's innovation in some particularly promising areas. So, I think they're making their bets there with AI and a number of areas.

But then, I think another useful way to think about it from a U.S. perspective is the ability to deny us our objectives, to be able to, you know, to defeat U.S. forces, to thwart U.S. forces.

And here, to echo the earlier point, you know, Japan in 1941 had an economy one-ninth the size of the U.S. economy. And, yet was able to run roughshod over the Western Pacific and Southeast Asia.

So, you can, you know, you can pose a near peer threat without, you know, without being an economic equal. It's the way I would think about it.

COMMISSIONER KAMPHAUSEN: And, that example also suggests it's highly temporal. I mean, that change within a period of 24, 30 months.

MR. DENMARK: That would be the point that I would make actually is that the title, what defines a world-class military power is an ever moving target. And, I would say that the U.S. military sets the standard.

And, my hope is that we can maintain that advantage by continuing to move the standard of world-class military beyond the reach of the PLA.

In terms of metrics, I would say -- my sense is that defining as a world-class, whether or not this is world-class, whether or not this is a peer competitor, I think is ultimately for analysts and for policymakers is not terribly meaningful.

To me, I think we need to keep in mind that the purpose of military capabilities is to achieve political objectives.

So, to me, the only metric that really matters ultimately is can China's military

capabilities enable them to achieve their political objectives through the use of force?

And, if they can, even in if in going against the U.S. military, and that to me, is enough of a capability.

COMMISSIONER KAMPHAUSEN: Just one quick comment in response. Abe, I totally agree.

Unfortunately, our system is predisposed to use slogans to have meaning. Right? And so, I'm not saying you ever did it, but it is -- it wouldn't be the first time tomorrow if an official in the Pentagon said, China's a near peer competitor and we still don't know exactly what they mean.

We have an impression and then we define it by our own. So, we're wrestling to try and see if we can add some clarity. But, anyway, thank you very much.

COMMISSIONER LEWIS: Mr. Mahnken, I have a question for you.

According to the Defense Intelligence Agency, the Chinese military boasts to world's largest and most comprehensive missile force in the world today.

Beijing has been able to build such an impressive missile force due to the fact that China never exceeded to the intermediate range nuclear forces, the INF treaty.

Now that the U.S. will withdraw from the treaty, is there a case to be made for deploying land based missiles in Asia to deter China?

And, if yes, where should they be deployed? And, what is the value to the United States of a U.S. China military to military engagements, if any?

DR. MAHNKEN: How much time to I have? I guess four minutes and 23 seconds.

COMMISSIONER LEWIS: You have several minutes.

DR. MAHNKEN: Okay. So, to take us back to the INF treaty, right, the INF treaty equated a basing regime, land basing and a range regime with nuclear systems. Right?

So, it was the intermediate range nuclear forces agreement.

And, I agree that that framework no longer really captures as much meaning as it once did. And, as you point out correctly, China has never been constrained by the INF treaty and has built the world's largest missile force.

As we leave the INF treaty, as the INF treaty goes away, I would be careful to decouple the basing regime and the range regime from nuclear delivery.

So, to answer your question, I think there is actually a very -- there is a strong case for land based conventional missiles deployed along the first island chain in anti-ship roles, potentially in strike roles.

There may be a case for intermediate range nuclear forces. But what I would say there is, I think that case would be strongest if the circumstances of the 1970s and 1980s that led to the U.S. to deploy Pershing II and ground launch cruise missiles repeat themselves.

Which is, those weapons were only deployed because of our allies request. We developed and we deployed those forces at the behest of our allies who were worried about becoming decoupled from U.S. extended nuclear deferent.

Were that situation to repeat itself, were U.S. allies to ask for that, I would think that would be something that we would want to consider.

Even absent that, however, I think those range limits and the land basing limit make less and less sense for things like anti-ship missions.

And, realizing they are not to get too wonky on it, about it, but where -- when you're particularly thinking about like a land based cruise missile, range is also a surrogate for loiter time.

So, you could have a long range missile that could go point to point long range but could also loiter and could also search. And, there's a lot of value in that.

COMMISSIONER LEWIS: Thank you.

What's the value to the United States of U.S. China military to military engagement?

DR. MAHNKEN: I think there is value to the U.S. military and the PLA talking to one another. I think in understanding one another, I do have concerns, though, that often times the value of military to military exchanges gets inflated and sometimes it becomes -- they become an end to themselves rather than a means to an end.

I think we need to remember that the PLA is a party army. It is the party's army. It's the civil military relationship on the Chinese side is very different than the civil military relationship on our side.

And, I think I've certainly seen mirror imaging on the U.S. side in the past in dealing with the PLA where it wasn't warranted.

So, in an attempt to build personal relations between Chinese and American leaders, you actually create a mistrust and all sorts of miscommunication.

COMMISSIONER LEWIS: And, we're certainly the ones who inform them how to get stronger.

DR. MAHNKEN: We like to show things off. We -- I think maybe that's a human tendency and maybe we should be a little bit smarter about that sometimes.

COMMISSIONER LEWIS: Mr. Denmark, I have one question for you.

In your testimony, you state that forcing allies and partners to choose between the United States and China would be a nightmare and is unnecessary at this time.

A strategic ally versus a commercial ally or a commercial friend.

At some point, allies or partners may have to choose sides. What is the best way for the United States to ensure that they choose the United States?

MR. DENMARK: That's a very good question. I think this is reacting to some of the pressure that's been coming in from the U.S. government forcing the allies to choose sides.

They're in a very uncomfortable position in that, for the first time, their top security ally is not the same country as their top trading partner.

And, even worse, from their perspective, their top security partner is in a deepening competition with their top trading partner.

In many ways, especially for our allies, the choice is not between being on Team America or being on Team China. In that, they're allies of the United States. Their security is dependent on --

COMMISSIONER LEWIS: We tried to get various allies not to choose the 5G from China.

MR. DENMARK: Right. And, so, my point is that, we had these -- we've had issues with our allies throughout the history of these alliances.

During the Cold War, you know, Canada did not send troops to Vietnam. Right? We had the Suez Crisis in the middle of the Cold War. Yet, NATO survived throughout these.

It's okay for allies to disagree on certain issues. The alliances can survive them. And, they do -- I think they will continue to remain allied to the United States, to remain comfortable in that alliance if we maintain our ability to defend them, if we continue to demonstrate our willingness and ability to defend them, and if we stick to the values that are key to our attractiveness in terms of democracy, in terms of openness, in terms of --

COMMISSIONER LEWIS: Human rights.

MR. DENMARK: -- political and economic liberalism including human rights, yes.

COMMISSIONER LEWIS: Thank you very much.

Larry Wortzel?

COMMISSIONER WORTZEL: Dr. Mahnken, Mr. Denmark, thank you both for being here.

I got questions for both of you and I'm going to ask you each to be a little more specific.

Tom, your third sentence is that China is a global challenge to the world order, and I don't disagree.

But what I'd like you to do is, now the Chinese Communist Party depends on some aspects and institutions of the world order, but it chafes at other aspects of the institutions.

So, I'd ask you to be a little more specific and talk about what they really want to undermine and what aspects of it that we also depend on, they depend on.

And then, Abe, one of your objectives, one of your recommendations, is to work to limit the options Beijing has to build new military facilities of abroad. All right?

So, if that's a strategy, that's your end. I'd like you to talk about the ways you would do that. How would you recommend the United States do that?

And then, in terms of means, what resources does the United States have available to employ to do that?

And then, finally, because this is what we are about as a Commission, what recommendations would you have for what Congress can do to support your objective?

DR. MAHNKEN: Thank you.

When I talk about China as a global challenge, you know, I'm thinking in part about the military dimension, but particularly about the political and economic dimensions.

So, ultimately, the Chinese Communist Party leadership wants to perpetuate its rule. That involves maintaining domestic security, maintaining control over the Chinese populous.

It also requires a preponderance within China's immediate region.

But those things are, they are necessary but insufficient. So, if we look at Chinese political influence operations, they are truly global and they are meant to influence not only Chinese diaspora populations across the world, but also the attitudes of governments across the world.

Their attitudes towards Taiwan, certainly, but also their attitudes towards China.

If we look at Chinese economic statecraft, it is similarly a global phenomenon meant to curry favor among different companies, states with China.

And, I think ultimately, yes, it does rise to challenging the global order, whether it's the global economic order, the global political order, it is the existing global order is one that has benefitted China tremendously.

But I think it's the fact that the Chinese Communist Party did not participate in the creation of that order chafes at them in a fundamental way.

But you're absolutely right, there is attention there. China has benefitted tremendously from, you know, from the international order. But it's not always an international order that is comfortable to the CCP leadership, whether it's our freedom of navigation, the rules there, whether it's protection for intellectual property, whether it's human rights policies that grant refuge to folks that the Chinese government may find noxious.

So, I'm not surprised that they ultimately, you know, want to change things in a way that's more beneficial to them.

MR. DENMARK: Very quickly, Mr. Commissioner, on your question, I think the key to

recognize with what we've seen so far with Djibouti, at least, is that for China, building a military facility, a military support facility, is not the equivalent to strategic alignment, that Djibouti is not now a Chinese ally.

And, China is not now committed to the defense of Djibouti.

That this is a purely a business transaction and Djibouti continues to host other military facilities for other countries, including the United States.

So, to me, the answer to this, to limit China's options, we need to be able to play the business game well. And that, to me, means diplomacy. It means money. But foremost, it means proactive.

That it's much easier to limit China's options to build facilities abroad if we're proactive rather than trying to somehow roll them back.

And so, that to me, means, as I said, diplomacy and money.

And, you asked about resources, very quickly, the National Defense Strategy said that great power competition is our top priority, even above terrorism. Right?

The National Security Strategy also emphasized the importance of great power competition as a key part of our foreign policy. So, to me, that means it needs to be resourced.

If you look at how much we're spending on counterterrorism, if you look at how much we're spending on a wide variety of other issues, to me, the amount of money that would -- that I expect would be required to limit Chinese basing facilities, it's a lot of money. But, relatively, I think it's achievable.

COMMISSIONER WORTZEL: Well, I mean, to get specific, if you look at mechanisms, TPP would perhaps somehow challenge OBOR.

EXIM Bank funds that companies could draw on.

MR. DENMARK: There's a lot of mechanism, the BUILD Act, for example. There's, you know, trade agreements, diplomacy. You know, there's a lot of tools that we have in our handbook.

We're at an advantageous position in that we have a lot that we can offer these countries. And, we can, you know, limit China's military options for new facilities in that way.

But it requires -- that prioritization requires those mechanisms.

DR. MAHNKEN: In terms of recommendations, let me give you one that's very concrete and very affordable. And, this is in the context of Chinese political warfare and Chinese economic statecraft.

You know, that's not just occurring overseas, among our allies, among others. It's also occurring on U.S. territory to include the compact states of the Western Pacific.

Where, I think there's really been an alarming infiltration of Chinese influence. Why is that occurring? I think it's occurring because the territories, the compact states, look at the calendar. They realize the compact funding is going to run out. They realize that their economies are not self-sufficient and they're taking money, they're taking investment, maybe even a little bit of political influence from China.

The same pattern is being repeated in the island states of the South Pacific.

Providing, in the case of Congress, continuing the compact funding I think and providing a strong signal there that the United States continues to back the compact states and our Western Pacific territories I think would be a strong signal to counter malign Chinese influence.

Just as support to some of the states in the South Pacific whether it comes from the United States or it comes from Australia, New Zealand, would also be a bulwark against that type of infiltration.

COMMISSIONER LEWIS: Thank you very much.

Mike Wessel?

COMMISSIONER WESSEL: Thank you, gentlemen.

Let me go up for a bit of altitude which is spurred by your -- all your comments and to look at the architecture, to look at some of the current challenges we face where much of the public attention about U.S. China courses around trade conflict right now.

While there are always so many other -- while there are many other dimensions there is the articulation of great power competition without all the mechanisms to support it.

And, you know, earlier this year, late last year, there was some discussion about what was it, Letter X, the Long Telegram, and the need for a new recitation, new architecture that would help guide policy and create confidence.

You know, right now, I don't really know and I spend a lot of my time on this, I don't see a clear, consistent, comprehensive policy that I can articulate.

So, help me, you know, think through this and also because I assume both of you interact with a lot of foreign delegations of a, you know, broad basis.

You know, our headlines here, of course, you know, consumed by a lot of things that are day to day conflicts.

How do our allies look at this? Do they feel that we have the great power competition articulation? Is the sum and substance of the architecture what do you think needs to be done to put us on a better path forward where we see the parts and know how to invest in them?

MR. DENMARK: Very good question.

We are still looking for that Letter X. About every 18 months somebody comes up with something that they think could be it, and it doesn't quite get there.

But I actually -- I think it's okay. If you look at George Kennan's description of containment from 1948, I think it was.

COMMISSIONER WESSEL: '47, '48, yes.

MR. DENMARK: '47. Came 30 years after the Russian Revolution. It took us 30 years to figure out how to handle the -- what the Soviet Union represented and what it meant for us.

Of course, this was after the Second World War, it posed a different challenge than in 1917. But it took us a while to figure it out.

And, I think we have now identified that there's a problem. And, there's a general sense that we need to compete with China, but we're still struggling with identifying what are we actually competing over and what does success look like? We're still struggling to come to a consensus on that.

And, from what I've seen coming out of the Trump Administration, I think there's some good ideas, but I think they're still wrestling with these questions as well. And, I think it'll take us some time.

And, of course, I have my own ideas, but I would never try to describe it as a Letter X level of an idea.

How our allies and partners see this, I think they're, in some ways, glad to see the United States identifying competition with China. They've been seeing this trend for a long time and I think they're glad to see that we're taking it seriously.

I think they, some in the region, appreciate the aggressiveness and muscularity that's been demonstrated at least verbally by the Trump Administration. But I think there's also concerns that the United States is not doing what it needs to do in order to actually compete.

For many of our allies and partners in Asia, the number one item that you get on the list

from anybody you talk to would be TPP. But the decision to withdraw from TPP was a major setback in terms of U.S. efforts to compete with China.

Beyond that, I think looking at U.S. military interventions around the world, when we talk about -- when we -- when there's news about the United States looking Iran, at Venezuela, at Syria, Eastern Europe, and Russia, not commenting on the importance of these specific issues, but for our allies in the Indo-Pacific, they see us looking at -- they see news reports at considerations of intervention into these countries, a potential for conflict with these countries.

And, they ask the question, how can we be sure that you're actually committed to actually competing with the Chinese if you're looking at intervening in Venezuela, for example.

And, that's sort of a particular question is, are we making the investments? Do we have the attention? And, do we have the right sort of beyond the military, the right geopolitical approach?

The only other piece I'd mention, I realize I'm short on time, is how the administration has been handling and talking about U.S. allies and our alliance commitments.

Seeing them as or describing them as money ventures, describing them as unfair, I think really diminishes allied confidence in U.S. commitments.

I don't think it's a crisis point like Dr. Mahnken described before during the Cold War where our allies were concerned about this, but I think does speak to some lingering concerns that our allies have about commitment and will.

COMMISSIONER WESSEL: So, somewhat corrosive?

MR. DENMARK: Yes.

COMMISSIONER WESSEL: Dr. Mahnken?

MR. MAHNKEN: So, I think in my interaction with our allies, with our friends, first and foremost, they are looking for a sign of seriousness on the part of the United States.

And, I think they are seeing that. I think they are seeing now that we are serious about dealing with China.

First --

COMMISSIONER WESSEL: Comprehensively?

MR. MAHNKEN: Yes, and I'll get to that.

COMMISSIONER WESSEL: Okay, okay.

MR. MAHNKEN: And, first, we're willing to talk about China and we're willing to talk about competition and we're willing to talk about competition with China, not just in fora like this or in classified venues but in the National Security Strategy and National Defense Strategy.

So, and not even, you know, to resort to an unnamed near peer competitor which, of course, the Chinese have known it was them all along. Right? So, that's a sign of seriousness.

Second, a sign of seriousness is our willingness to endure pain in furtherance of our interests. And so, I would put the, you know, the trade war in that context where we're willing to sustain economic pain in to compete with China.

I think many allies in the past saw the United States suggesting that they endure pain while we stand back. So, I think that's very important.

The third thing I would say that I think really impresses our allies is the level of bipartisanship on China in the government, in the Congress. And, I'm not, you know, telling anybody anything they don't already know that, you know, those areas of bipartisan agreement are too few these days.

So, the fact that China is a bipartisan issue and that there is a bipartisan consensus behind our China policy I think is very powerful, speaks very powerfully to our allies.

COMMISSIONER WESSEL: Thank you.

COMMISSIONER LEWIS: Chairman Bartholomew, our Chairman of our Commission.

CHAIRMAN BARTHOLOMEW: Thank you very much and thank you to both of our witnesses.

I guess it seems fitting in some ways that while we've had a day talking about world class military, we're now getting to the point of sort of world class military for what? Right? What is this -- what are the political objectives?

I think one thing that hasn't come up is the sad attractiveness of the Chinese model in the number of countries around the world, the model of economic growth with authoritarianism.

And, Abe, I'll note particularly when you mentioned for most African and Latin American countries, the military modernization represents little more than an additional benefit, potential benefit on economics and things like that.

But I think it's important to include in there the potential political. Right? I mean, if they crack down on their population, their public, they're not going to get any push back from the Chinese.

And, in fact, the Chinese companies are selling equipment, surveillance state equipment. And, that's one of the trends that I find myself really concerned about is the export of the surveillance state, which is happening everywhere, right?

I mean, we have smart cities, people interested in smart cities. And, that's a portion of their surveillance state.

I had to call Chase Bank the other day and they made some comment on the recording that they were using voice identification. And, I thought, wait a minute, I never told you guys that I was comfortable with that.

So, I mean, it's sort of everywhere and we aren't really grappling with that. But what I'm particularly concerned about is in countries that are not allies and partners that might find this attractive.

And, what do we do to try to push back on that? That's one thing.

Another thing, you know, we were just in the region for a couple of weeks is, we did hear everywhere, of course, our economic relationship with China is so important, but our security relationship with the United States is also important.

But there's a little bit of irony in there which is the economic relationship, I mean, China built its economy under the protection of our security umbrella. And, I can understand some of the frustration.

I don't like the way it's being expressed, but I can understand some of the frustration which is, you want us to continue to pay the price for you to be able to have this economic relationship, which is -- it's a simple way of saying it, but that's some of it.

And then, one other thing is we certainly heard, and I agree with, Abe, that we need to be more present. You know, part of what the United States government needs to do is to show up at ASEAN and any of these meetings.

And, we don't even have an ambassador to Singapore. So, it's those kinds of things that we heard about that people were saying.

But I would like to -- for you guys, again, to address the concern about authoritarianism. But how does that fit into what you think Beijing's objectives are, right?

I mean, you build a world class military to some end.

MR. DENMARK: I -- a few reactions that, on your immediate question, I'll be brief.

And, I think China's ultimate objective is to make the world safe for the Chinese

Communist Party.

(Laughter.)

MR. DENMARK: And, I think that involves all aspects of military power, all aspects of national power, and I think that's why you see some of -- many of the activities that Dr. Mahnken talked about in terms of foreign political influence, military expansion, expanding military capabilities, political engagements, infrastructure, I think all that is to advance the interest and defend the Chinese Communist Party.

I would note that the Chinese model is actually not terribly attractive unless you're already authoritarian. In that, it promises authoritarianism plus economic development.

But the vast majority of countries with the exceptions of some of the worst countries in the world I think would much rather engage with the United States if they have the chance.

And I think -- I have confidence that if we competed side by side with the Chinese that we would win more than we lost.

The only other point I would make is that the Chinese strategy with their economic infrastructure strategies has been that eventually economic entanglement would lead to strategic alignment.

And, I think what they're finding is that it doesn't work. And, if you look at China's top trading partners, they're all countries that are not well aligned with China. Right? Not only the United States, Japan, South Korea, Germany, India, all these countries are China's top trading partners. None of them are closely aligned with the Chinese.

And, I think that shows that strategic alignment is about more than economic or infrastructure connectivity. And, I think that's a sign of our built in inherent advantages in a competition.

And so, as you said, Madam Chairwoman, I think we're most -- we will win most competitions if we actually show up and we devote the amount of resources and attention that's necessary to be there.

CHAIRMAN BARTHOLOMEW: Dr. Mahnken?

DR. MAHNKEN: Yes, I think we need to show up and we also need to be able to provide an alternative. Right?

So, we need to be able to provide an alternative to Huawei when it comes to 5G. Right? We need -- the fact is that, you know, Asia has a tremendous deficit in infrastructure investment. We need to be able to provide an alternative.

And, if we do that, and I think I would agree with Abe that we have deep advantages, not just we, the United States, but we are allies have deep advantages there if we are able to provide anything close to, you know, an alternative to what the Chinese are offering. I think we'll have a lot of success.

But I would agree with you about the, you know, the sad attractiveness of the Chinese model to authoritarian states. And so, there, we need to be true to our country's values, not just our interests. And, we need to call it like we see it and stick by it.

CHAIRMAN BARTHOLOMEW: Thank you.

COMMISSIONER LEWIS: I have one more question and then Larry will go.

Can you, in light of what happened in Hong Kong recently where they backed down, although it's probably temporary, can you foresee any circumstances under which the Chinese would take a similar position on Taiwan?

DR. MAHNKEN: Take a similar position in terms of?

COMMISSIONER LEWIS: Backing off on Taiwan, under any circumstances?

DR. MAHNKEN: No, I mean, I think the -- no, I can't -- no.

COMMISSIONER LEWIS: No?

(Laughter.)

MR. DENMARK: I don't think you're going to see Taiwan take a step back.

COMMISSIONER LEWIS: Excuse me?

MR. DENMARK: Excuse me, I don't think you'll see China take a step back on Taiwan. But just a couple points in would make in addition to that.

I think we haven't seen the end of China's reaction to this?

COMMISSIONER LEWIS: You mean in Hong Kong?

MR. DENMARK: In Hong Kong.

COMMISSIONER LEWIS: Right.

MR. DENMARK: I think that they may wait, allow tempers to die down and then more slowly address things.

But I do think that one of the, you know, this is just my sense, I don't have a news article or analysis that I can point you to.

But my sense is that one of the reasons the Chinese have took a soft position on the protests in Hong Kong was because of Taiwan.

COMMISSIONER LEWIS: Was what?

MR. DENMARK: Because of Taiwan.

If you witnessed Taiwan's leading DPP recently went through a leadership challenge and the president, Tsai Ing-Wen. I think a lot of that was because politics in Taiwan, the attention turned from domestic affairs to foreign affairs in the last weeks before their vote.

And, I think a lot of that was because of what was happening in Hong Kong.

And, my sense, again, just my own take, is that Beijing saw that what was happening in Hong Kong was hurting their position with Taiwan. And so, I think they decided to back off in part for that reason.

But I don't think that ultimately their approach towards Hong Kong is going to change. I don't think they're going to suddenly take a different stance on Hong Kong and I don't think they're going to take an ultimately different stance on Taiwan.

COMMISSIONER LEWIS: So, you can foresee no circumstances under which they would ever back off on Taiwan?

MR. DENMARK: I think we could expect tactical changes. I think we could expect them increasing and decreasing pressure, depending on the political requirements at the moment.

But in terms of adjusting their overall approach, Xi Jinping described it last year. I don't think you're going to see significant deviations from that.

COMMISSIONER LEWIS: Thank you.

Larry?

COMMISSIONER WORTZEL: Yes, Chairman Bartholomew talked a little bit about this short trip, the trip we took.

One of the things that struck me while talking to the people from the American Chamber of Commerce, U.S. China Business Council, both here and there, is there is some let's call it decoupling because one of Xi Jinping's statements was we don't want to decouple.

But there is some decoupling by corporations on U.S. economic interdependence with China. And, they're diversifying their supply chains. I think that's a good thing.

There's actions in Congress to create better visibility over PRC, funding raising in U.S. financial markets. I think that's a good thing.

And so, I'd ask you, if there are advantages in corporate, industrial, and financial institution diversification in Asia, if you could strategically target it, where are the best places for it to go?

MR. DENMARK: That's a very interesting question.

I think I tend to be of the mind that the government should have a fairly limited say in where it goes. But, to my mind, a lot of where it should go is where it's going, Vietnam, Taiwan, Philippines, Malaysia, India.

These to me, these are the countries that so far are benefitting when companies diversify out of China, they're moving to those places.

I do think, though, however, there's some concern amongst some of the governments in these countries that the pace of diversification of the supply chains is not keeping pace with the pace of, sorry to say pace so much, of U.S. tariffs. That the amount of economic pain they're feeling because of the tariffs is more significant than the amount of benefit they're getting from companies shifting their operations from China to them.

And so, I think they would like this -- I think they are generally fine with the tariffs, they're benefitting from it. But I think they'd like it to be a little bit more predictable and a little bit more gradual if they could -- if they had a choice.

But overall, the countries that we're seeing in Southeast Asia, in South Asia, that's where I would hope they are going and that, so far, at least seems to be where they are going.

DR. MAHNKEN: I would agree and I think it's because, you know, whether we call it decoupling or something else, you know, in part, it's part of a conscious political strategy.

But to a large measure, it's just -- it's the result of long-term economic trends. Right?

COMMISSIONER WORTZEL: Right. The Chinese behaved terribly toward those corporations and they're looking out for their own interests.

DR. MAHNKEN: And, China becomes, for those reasons, for other, you know, economic reasons becomes less and less attractive to do business in China and conversely, relatively more attractive to do business elsewhere.

So, I think that's good. I think also, from, you know, from the Chinese side, real emphasis on consumption led growth as opposed to export led growth, there's decoupling on that side as well.

So, and that actually, to echo you, I think that's good news because it's not merely the result of a particular strategy that could change, it's a result of some deeper seated underlying economic trends that are likely to persist.

COMMISSIONER LEWIS: Thank you very much.

And, I'm going to ask my Co-Chair to end the meeting in a moment, but I just want to thank you both very much for coming and helping educate us.

COMMISSIONER MCDEVITT: The goal I set for myself coming into this series of hearings or this hearing, the series of panels, was to develop a better appreciation for what a world class military might look like.

And, recognizing that or worried that Americans, because it was such a slogany throwaway line and what have you that the government, in particular, was not paying close enough attention to what the implications of such an ambition might be, even though we heard, subsequently, that it may be empty rhetoric. It could be -- and who knows if it's real or not.

But during the course of the day, I'm going to enumerate some of the characterizations of world class military that I heard. And, since I trust your judgment very, very much, I would like very much for you, either of you, to yell foul or when I'm finished, say, no, you forgot X, Y, or

Z.

So, here's some of the characterizations or attributes, if you will, that I heard about a world class military.

The first one is one we talked about is the ability to predominate in the Indo-Pacific region.

A second one would be the ability to pose a threat to U.S. superiority and technology and innovation.

A third might be the ability to accomplish any assigned mission no matter where it was geographically, for example, sea land of communication protection.

The fourth was achieve political objective no matter where they might be. Or, obviously, if they have a military component.

Not be a Mini Me of the United States military, but to use the U.S. military as a yardstick or a benchmark for determining progress.

Or, when the Chinese scientific socialists do their sums and come up with a new number for comprehensive national power, they go eureka, our number is higher than the Americans.

Or, world class means information dominance.

Or, it is such a powerful military that it can deter by demonstrating that it can win no matter what the conflict.

So, those are the sorts of things that I've come up with based upon what we've heard today, over the course of the day, that characterize, perhaps describe, but characterize what experts like yourselves have thought as a world class military.

So, fire away.

DR. MAHNKEN: I think that's a great list of attributes. And, I think -- but I think there's one more, and I think you get to aspects of it, but let me just be very, very direct and this is the historian in me coming out.

World class militaries are eventually determined by performance on the battlefield. In 1870 Europe, France was seen as possessing the most capable army around.

We know that not just because of what the French thought and others thought, but countries across the world sought to emulate the French.

Japan, the Japanese Army, early Meiji period brought in French advisors. After France's defeat in the Franco-Prussian War, they kicked them out, brought in the Prussians.

COMMISSIONER MCDEVITT: And, the American Army had picklehaubes.

DR. MAHNKEN: Yes, a lot of Army officers don't like to be reminded of that, but thank you for doing so.

(Laughter.)

DR. MAHNKEN: Same thing, France, 1940. The fight where the French army was widely regarded as the best army in Europe.

So, one attribute of a world class military is its ability to defeat the then reigning world class military.

Now, I hope it doesn't come to that, and we should do everything in our power to prevent that. But the historian in me says that's ultimately how those judgments are written on that basis.

COMMISSIONER MCDEVITT: As a historian myself, I loved it. Thank you.

Abe?

MR. DENMARK: I think that all the definitions that you provided plus Dr. Mahnken's, somewhere in there is the right definition.

(Laughter.)

MR. DENMARK: To my mind, it's the term world class is very, as you said, very slogany. I suspect that the Central Military Commission has put less thought into that we have. And that the objective -- the -- to me, what I think what they're looking for, what I would suspect they're looking for, is the ability of the Peoples' Liberation Army to achieve the CMC's political objectives.

COMMISSIONER LEWIS: To achieve what?

MR. DENMARK: The Central Military's Commission's or the Standing Committee's political objectives, especially in the face of significant armed resistance by the current reigning champion, as Dr. Mahnken said.

I don't think they're looking to fight any conflict against any foe anywhere on the planet at any time the way we do, the way we talk about.

I think they're looking at a much smaller set of contingencies, they have a much more constrained set of objectives. But, within those parameters, I think their objective is to be the unrivaled or unsurpassed military, have the unsurpassed military advantage on those specific contingencies and objectives.

COMMISSIONER MCDEVITT: Thank you.

Are there any comments from my fellow Commissioners?

(No audible response.)

COMMISSIONER MCDEVITT: Well, in that case, let me say that this panel and the hearings today are concluded. And I want to thank you both very, very much for really marvelous discussion points and insights.

Adjourned.

(Whereupon, the above-entitled matter went off the record at 4:34 p.m.)

Statement For the Record

**PREPARED STATEMENT OF ELBRIDGE COLBY, DIRECTOR, DEFENSE
PROGRAM, CENTER FOR A NEW AMERICAN SECURITY**

**THE IMPLICATIONS OF CHINA DEVELOPING A WORLD-CLASS MILITARY:
FIRST AND FOREMOST A REGIONAL CHALLENGE**

**Testimony by
Elbridge A. Colby**

**to the
U.S.-China Economic and Security Review Commission**

**Hearing on
A “World-Class” Military: Assessing China’s Global Military Ambitions
June 20, 2019**

Chairmen Lewis and McDevitt, Distinguished Members of the Commission, it is an honor to testify to the Commission. Thank you for the invitation to discuss the implications of China developing a world-class military.

It is increasingly well and widely understood that China presents a global challenge. China's economic influence and activity as well as its political activities are more and more being felt and their implications understood across the globe, from Europe and Africa to South America and Oceania. Indeed, as the Department of Defense reports, China's long-term goal is "global preeminence."¹ China is thus, indisputably, a global challenge.

But it is first and foremost a regional one, and this is of crucial importance, especially but not exclusively for the Department of Defense. This is for a simple reason: China must first dominate its own, critical, Indo-Pacific region before it can hope to attain global preeminence. If it can gain hegemony over the Indo-Pacific, it will have a commanding position from which to become the globe's primate power; if it cannot dominate its own region, however, such mastery will be beyond its grasp.

There is much discussion in some quarters today that all defense challenges are global in nature. But this misconstrues the problem. The primary immediate geopolitical challenge China poses is its ability to establish hegemony over the Indo-Pacific region or some substantial fraction of it. With regional hegemony, China will be secure in its own territory, dominate the regional economy, and be able to project power outward from there. Nor is this merely theoretical speculation; as the Department of Defense has frankly recognized, Beijing is quite clearly intent on achieving this aim and has already laid much of the groundwork for making it a reality.²

The reason why this is significant is that the Indo-Pacific is by far the world's most economically important region, a reality that will only become more the case over time as it continues to grow at a differential rate from the rest of the world.³ Economic productivity and scale lie at the root of all other forms of state power in the contemporary world, including military power. Accordingly, if China is able to establish suzerainty over the Indo-Pacific, it will have commanding power over the world's most important region.

China's goal, to be clear, is almost certainly not to conquer the rest of Asia. But it does not need to do this to have the region do what it wants. China clearly understands that, in the modern world, economic success comes from intensive rather than extensive growth. As a consequence, China has spent the last forty years growing its economy at a bewildering rate. China is also an enormous country that has little need for more land.

Rather, what China increasingly evidently appears to want is to ensure that the international environment in which it operates suits its preferences – that is, at a minimum makes it richer and more secure but also supports and perpetuates the Chinese political system and accords deference and homage to China. China does not need to become an empire to do these things;

¹ Department of Defense, *Indo-Pacific Strategy: Preparedness, Partnership, and Promoting a Networked Region*. June 1, 2019, 8.

² Department of Defense, *Indo-Pacific Strategy*, 8.

³ Department of Defense, *Indo-Pacific Strategy*, 2.

instead, it can pursue a “hegemonial” rather than direct imperial form of control. There are a number of definitions of hegemony (or its cognate “suzerainty”), but basically it is a situation in which a state is dominant over but does not directly control other states. In this model, states under the hegemon’s shadow must ensure that their important decisions, especially those relating to military, large economic, and key international political matters, meet the approval of the hegemon. This can be done directly, by routing decisions through the hegemon, or indirectly and implicitly, by accommodation and deference that is tantamount to the same thing.

This kind of hegemonial rather than imperial mastery would allow China, at a minimum, to decisively shape the economic and trading system of the world’s most important regional market. China would no doubt continue its past practice and set up a regional trading system that favors the Chinese market and disfavors others – not least the United States. Over time, this would corrode Americans’ prosperity. More significantly, it would allow China more and more influence, including within the United States itself. Chinese preferences for how the world should trade and interact would become ascendant, and China would have the leverage to insist that its preferences be served. With the upper hand, Beijing’s policies on data privacy, surveillance, free speech, legal processes, and every other facet of life that is substantially influenced by the international environment – which is increasingly almost everything – would increasingly prevail. It is hardly necessary to emphasize that this is a very different world from what Americans – or most Asians or Europeans – would want.

Even worse, China might use this newfound power to begin to project direct political influence outward. If Russia’s interference in our elections has justifiably worried us, imagine what a far, far more powerful China would be able to do. And this future leaves out the possibility of China using its hegemony to project serious military power into our environs. Accordingly, the United States and many other states have the greatest possible interest in denying China hegemony over the Indo-Pacific.

China’s development of a world-class military is a crucial part of any bid by Beijing to establish such hegemony. It is often said that China primarily poses an economic and political challenge, not a military one, because China has little interest in sparking a war with the United States or others. This is partially true but misleading. It is true in the sense that China’s most attractive course of action is to grow as strong as possible through its own intensive development and ultimately become so strong that it can overwhelm its region without having to resort to force. Better to simply grow to dominate rather than have to fight wars to acquire such wealth and power.

The problem with such a growth-only strategy, however, is that it is vulnerable to the natural response of states that do not want to see China establish such hegemony – which is to check and balance such an effort. In particular, states in the region and those out of it that are invested in its fate have the most powerful incentive to coalesce together to check China’s bid for regional suzerainty. This is the most basic kind of response in the international arena (and in the domestic sphere as well – checks and balances are, after all, the basis of our political system). In the Indo-Pacific, states such as the United States, Japan, India, Australia, and others can come together to form a coalition to deny Beijing the ability to achieve the suzerainty over the region that it seeks.

To become the regional hegemon, then, China has to prevent such a coalition from forming or undermine its effectiveness or dissolve if it has formed. This is China's primary strategic quandary. A state with the power and reach of China has an enormous quantum of power and a myriad of implements through which it can attempt to achieve these goals. Today, we see in so many respects China's effort to undermine or deny the formation of any such coalition through political pressure, economic leverage, cultural allure, and many other aspects of state activity.

China's military plays an absolutely central role in any such strategy, however. This is fundamentally because many states have a very great and deep interest in checking China's bid for hegemony and thus in an effective balancing coalition. To emphasize, this interest is very strong; any state that wants to prevent Chinese hegemony and the dominance of Chinese interest that would indubitably follow has a most powerful incentive to promote the efficacy of such a coalition. This means there must be an equivalently real disincentive to outweigh this great attraction if China is to succeed in aborting or counteracting such a coalition. States that might participate in such a coalition, in other words, must see costs and risks that outweigh the manifest benefits of joining or aiding such a coalition.

The military instrument is crucial for providing such a disincentive. While cost can be imposed through a wide variety of mechanisms, there is nothing quite like the threat of physical violence for coercive leverage. Economic sanctions are perhaps the closest, but even these are a far cry from force in their coercive efficacy, as the decidedly mixed record of U.S. attempts at compelling states through economic sanctions shows. And China would be demanding far more than the United States has often demanded through economic sanctions – in reality acknowledgment of its hegemony over the state in question.

China does not need just any kind of a military to do this, however. Rather, China needs its military instrument to do certain things if it is to succeed in this way as part of a broader strategy. Because China remains weaker than the United States at this stage – and certainly weaker than the United States alongside Japan, India, and others – and because its future appears rosier if current growth projections continue, China has an incentive to wait and continue to build its strength, gaining on those arrayed against it and, it hopes, eventually overtaking them. Thus China does not want to precipitate a war with a fully-mobilized coalition.

Instead, what it wants to do is short-circuit or dissolve the coalition by sufficiently intimidating states that might consider joining or staying in it. It can best do this by isolating such states and subjecting them to such force or pressure that they elect not to follow through on the positive interest they have in aiding the coalition. In other words, China is best positioned if it can credibly demonstrate that it can fight and win a *limited and focused war* that, in concert with its economic and other forms of leverage, isolates and penalizes a member (or potential member) of such a balancing coalition. If this strategy is effective, it would show in the clearest possible terms that such a coalition is a hollow force, and the enormous downsides to bucking Beijing's will. This could change the calculus of states so that, even though they have a strong positive interest in the success of a balancing coalition, the individualized costs and risks to them of joining or aiding it are simply too great to countenance.

Done well, this could cause any such coalition to be stillborn because states will be too afraid that they will be sliced off and subjected to such treatment. This in turn, coupled with China's manifold and deep sources of additional leverage, could allow China to divide the region and establish hegemony over it. This is the major risk of China developing a world-class military. Thus the foremost danger we face is that China has a *world-class* military that it can put to regional uses, not a global one. The only way for China to dominate globally is for it first to dominate the world's most important region.

How the Department of Defense Should Respond

This strategic reality sets a clear focus for how the United States, its allies, and any states that want to resist Chinese domination of the Indo-Pacific should respond. Our response must be oriented on defeating China's strategy, which is designed to achieve regional suzerainty as a stage on the way to global preeminence. It must also be sensible and credible, meaning that the American people and our allies would follow through on it, both now and over the long-term.

Fortunately, the United States – and increasingly its allies and partners – have an approach suited to dealing with China's focused and limited war strategy in just this way. That is the approach laid out by the 2018 National Defense Strategy.⁴ Briefly, this approach is designed specifically to undermine and, if necessary, defeat China's ability to leverage its world-class military to dominate Asia. This is because it is a strategy that is designed to sustain and help protect U.S. allies and Taiwan in a way that is credible and correlates the degree of risk and sacrifice with the interests at stake. The Strategy is specifically oriented on defeating any Chinese theory of victory against these states – and thus to enabling them to exercise their free choice to resist Chinese dominance of the Indo-Pacific. The Strategy is further developed in the Department's excellent recent Indo-Pacific Strategy for a free and open region.⁵

The most pointed form of such a Chinese theory of victory, as the Department has rightly made clear, is the *fait accompli*.⁶ The NDS is focused on denying the *fait accompli* by blunting and ideally denying any Chinese aggression against a U.S. ally or Taiwan at the beginning of hostilities, and then on forcing China to bear unfavorably the burden of escalation should it choose to pursue such a war further.

⁴ For an outline of the National Defense Strategy and its implications, see Elbridge Colby, Testimony Before the Senate Armed Services Committee, January 29, 2019, available at https://www.armed-services.senate.gov/download/colby_01-29-19, and Elbridge Colby, "How to Win America's Next War," *Foreign Policy*, Spring 2019 issue, available at <https://foreignpolicy.com/2019/05/05/how-to-win-americas-next-war-china-russia-military-infrastructure/#>. For an outline of the military challenge the NDS focuses on, see Christopher M. Dougherty, *Why America Needs a New Way of War*, Washington, D.C.: Center for a New American Security, 2019, available at www.cnas.org. For an outline of the implications of the NDS for the size and shape of the Joint Force, see Jim Mitre, "A Eulogy for the Two War Construct," *The Washington Quarterly*, Winter 2019 issue, 7-30, available at https://twq.elliott.gwu.edu/sites/g/files/zaxdzs2121/f/downloads/Winter%202019_Mitre.pdf.

⁵ Department of Defense, *Indo-Pacific Strategy*, 1.

⁶ Department of Defense, *Indo-Pacific Strategy*, 17-18, and Acting Secretary of Defense Patrick Shanahan, Testimony before the House Armed Services Committee, March 26, 2019, 3, available at <https://armedservices.house.gov/cache/files/5/f/5fe93125-5cbc-4f1f-b630-9aba61a01a69/C4273A8E7D721F62BAA72B57D811880D.2019-03-26---shanahan-hasc-written-testimony---final.pdf>. See also his testimony before the House Appropriations Committee – Defense, May 1, 2019, 3, *inter alia*.

The Indo-Pacific Strategy Report frames this threat very well and how the Department is seeking to deal with it, in line with the NDS: “The National Defense Strategy implicitly acknowledges the most stressing potential scenarios will occur along our competitors’ peripheries. If our competitors decide to advance their interests through force, they are likely to enjoy a local military advantage at the onset of conflict. In a fait accompli scenario, competitors would seek to employ their capabilities quickly to achieve limited objectives and forestall a response from the United States, and its allies and partners. DoD initiatives on force employment, crisis response, force and concept development, and collaboration with allies and partners are aimed to help address this critical challenge. The National Defense Strategy directs the Department to posture ready, combat-credible forces forward – alongside allies and partners – and, if necessary, to fight and win. This approach intentionally presents competitors with a dilemma by ensuring they cannot quickly, cheaply, or easily advance their aims through military force. Competitors are compelled to advance their interests through other, more benign means – which are often subject to internationally recognized rules or widely accepted state practices.”⁷

Effectively resourcing and implementing this Strategy is crucial to meeting the challenge posed by a rising China – and its world-class military. It is also vital that our allies and partners align to this Strategy. Fortunately, key U.S. allies and partners in the Indo-Pacific region such as Japan and Australia see this and are beginning to do so by aligning their own defense postures and broader national efforts toward this shared goal. Japan’s recently revised National Defense Planning Guidelines deserve special plaudits in this regard.

Importantly, this approach is radically different from one relying on horizontal escalation to defeat China’s limited and focused strategy. This is key because relying on horizontal escalation to deter and if necessary defeat China appears to be in vogue among some circles in the defense establishment today. Horizontal escalation in this context is a strategy that would seek to impose costs and risks on China beyond the immediate conflict zone sufficient to compel it to relent on the issue at hand. Crucially, horizontal escalation as a primary strategy would rely on cost infliction; it is therefore distinct from asymmetric or other forms of operational maneuver that, for instance, seek to turn a flank or suppress an adversary’s ability to execute operations in the primary theater. Inchon, for instance, was not horizontal escalation; it was an asymmetric means of defeating Communist forces in Korea.

In the context of China and the Indo-Pacific, *horizontal escalation can play a supporting role, but it cannot be our primary effort. Indeed, relying on horizontal escalation as the basis of our strategy is probably the worst possible approach to pursue in response to China’s.*⁸ Horizontal escalation strategies would not work in this context for a number of reasons:

- It is very likely that China would be willing to trade its interests far afield – for instance throughout the Indian Ocean area or in Europe or the Western Hemisphere – for success in a near contingency like Taiwan or, if Taiwan were to fall, the Philippines. China simply and rationally cares much more about the great prizes near to it, in the world’s

⁷ Department of Defense, *Indo-Pacific Strategy*, 17-18.

⁸ David Ochmanek and I develop some of these arguments further in a forthcoming article.

most important region, rather than peripheral interests far afield that the United States might be able to hold at risk.

- China is very likely to adapt to a strategy focused on horizontal escalation militarily in ways that will diminish its efficacy for the United States. If China sees that the United States is developing a force and strategy focused on horizontal escalation, China could focus its efforts on prevailing in limited and focused wars in its near abroad in the Indo-Pacific. This would almost certainly increase Chinese leaders' confidence in their ability to win quickly and cheaply at a low risk, in turn undermining deterrence and precipitating the grand coercion of our allies or armed conflict we seek to prevent. Since the United States would have taken its eye off the ball in the key region, China would then very likely prevail. Once China consolidated its regional gains, the global balance of power would tilt against the United States. China could then focus its even greater military resources toward contesting U.S. global military advantages. A primarily global response to China's limited and focused strategy, in other words, is precisely like to undermine our global advantages; a regional strategy is much more likely to retain them. In simple terms, a globally rather than regionally-oriented strategy will open the United States and its allies up to a salami-slicing approach.
- China is also very likely to adapt to a U.S. strategy focused on horizontal escalation in ways that diminish Beijing's own vulnerabilities to it. If China knows the United States will pursue such a strategy, for instance by relying primarily on a distant blockade, it will adapt its economy, consumption patterns, trading relationships, and logistics networks to diminish the effect of such a strategy. Indeed, the Belt and Road Initiative and China's overseas investments more broadly may in part be about doing just this. The price China will pay to ensure its ability to resist such a strategy will be high, and there are plenty of countries along its periphery and beyond that would gladly sell critical goods that the United States would need to prevent China from accessing for such a price. Just to take one example, growing alignment between China and Russia suggests Moscow would be willing to provide such support to Beijing during a conflict.
- A too great reliance on horizontal escalation undermines the U.S. position on the actual center of gravity in resisting China's strategy, which is the other states in the region, especially U.S. allies and potential allies. Horizontal escalation is a strategy that, notionally, operates by imposing costs on China beyond its environs. Yet U.S. allies and partners in the region, which are absolutely essential to effectively balancing China, are precisely within those environs. Since under such an approach the United States would give up the meaningful ability to help its allies resist such focused attacks directly, horizontal escalation asks them to bear up under at a minimum bombardment and blockade and quite possibly invasion in hopes that U.S. pain infliction will work in the long term. In addition to leaving them directly vulnerable to direct Chinese attack, it would ask them to partake in a contest of endurance against China, a contest in which they are likely to suffer a great deal, given their degree of economic interdependence with China. Just laying this strategy out makes clear how unpalatable it would be to U.S. allies

and partners since it would ask them to hope for relief in the face of Chinese regional military dominance and to endure a harsh economic war – all without any realistic prospect for how such deliverance would work. The United States adopting such an approach, which allies would be able to detect in U.S. force development and posture, is almost perfectly designed to impel allied defection toward accommodation of China.

- Finally, horizontal escalation is basically a strategic approach that seeks to impose costs sufficient to induce the opponent to relent on the issue in question. Yet China has abundant ways of imposing costs on the United States as well, not to mention U.S. allies and partners. If the United States *were the one to start* a broad cost-imposition campaign against China in response to a focused Chinese attack on, for instance, Taiwan or the Philippines, China would very likely seem reasonable and proportionate in responding in kind. This would basically turn a contest over a distant archipelago into a society-wide struggle for Americans and their allies – but it would almost certainly seem that the United States, not China, was the one that precipitated such a broader war. Basically, such a strategy would volunteer the American people and the populations of U.S. allies for a contest of pain tolerance with the Chinese people over something right next to China and far distant from the United States. This is about the worst possible arrangement for the United States. And, given that it is not necessary since the United States could pursue a denial strategy through the National Defense Strategy approach, it would be totally unreasonable to weigh such a burden upon the American people. The American people spend well over \$700 billion per year precisely to avoid having this be their first-order response to distant contingencies; it is the obligation of the defense establishment to be more solicitous of their interests and willingness to risk and sacrifice.

It is for these kinds of reasons that there are few, if any, historical examples of strategies reliant on horizontal escalation succeeding. Instead, the record is largely one of sad failure.

The Congress and Executive Branch should therefore implement and resource the National Defense Strategy and avoid the siren call of alternative approaches such as relying on horizontal escalation. Above all, the Congress should:

- Ensure the Department of Defense is fully and rigorously implementing the National Defense Strategy. Congress should prioritize the NDS and press the Department to show concrete progress in its realization.

In specific furtherance of this, the Congress could productively focus in on:

- Making it clear that it expects the Department of Defense to pace to the Taiwan scenario in the Indo-Pacific. The best way Congress can do so is by consistently demanding progress from the Department on how the Joint Force would perform in a Taiwan contingency.
- Making clear to the Department of Defense that it expects the Joint Force to use horizontal escalation only as a secondary method for dealing with Indo-Pacific contingencies against China, not a primary one.

- Ensuring that documents subordinate to the National Defense Strategy, such as the National Military Strategy, clearly and closely follow the NDS logic and materially contribute to its realization. Where there is divergence, insist that the Department rectify any misalignment.

Statement For the Record

**PREPARED STATEMENT OF DEREK GROSSMAN, SENIOR DEFENSE ANALYST,
RAND CORPORATION**

Envisioning a “World-Class” PLA

Implications for the United States and the Indo-Pacific

Derek Grossman

CT-514

Testimony submitted on July 1, 2019, to the U.S.-China Economic and Security Review Commission as a statement for the record for the hearing on June 20, 2019.



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Testimony of Derek Grossman¹
The RAND Corporation²

Statement for the Record for the U.S.-China Economic and Security Review Commission

Submitted July 1, 2019

During his address to the 19th Party Congress in October 2017, Chinese President Xi Jinping raised eyebrows in the West when he stated that the People’s Liberation Army (PLA) needed to attain the status of “world-class forces” [*shijie yiliu jun*, 世界一流军] by midcentury.³ The timing of the speech was obviously meant to coincide with the 100th anniversary of the founding of the People’s Republic of China in 1949, but the precise meaning of “world-class forces” remains less clear. In this testimony, I offer several thoughts on the likely components of a future world-class PLA. I then briefly assess the implications of such a development on the United States and the Indo-Pacific region.

How the PLA Fits Into Xi’s “China Dream”

Xi’s announcement that the PLA would become a world-class military by 2050 is hardly an aberration when viewed within the context of his “China Dream.” Xi envisions “the building of a wealthy, powerful, democratic, civilized, and harmonious socialist modernized nation.”⁴ In support of these objectives, Xi has stated that China must become “a strong country with a strong military.” Xi wants PLA modernization to be “basically completed”—a vague goal—by 2035; by 2050, the PLA should be “fully transformed” into “world-class forces.”⁵ In a discussion I had with a Chinese defense official in October 2018, I asked what Xi specifically meant by the term

¹ The opinions and conclusions expressed in this testimony are the author’s alone and should not be interpreted as representing those of the RAND Corporation or any of the sponsors of its research.

² The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest.

³ “Full Text of Xi Jinping’s Report at 19th CPC National Congress,” *Xinhua*, November 3, 2017.

⁴ “Xi Jinping Addresses Exhibition on China’s Renaissance,” *Xinhua*, November 29, 2012. As of June 17, 2019: http://news.xinhuanet.com/politics/2012-11/29/c_113852724.htm

⁵ “Full Text of Xi Jinping’s Report at 19th CPC National Congress,” 2017; and Wang Shibin [王士彬], An Puzhong [安普忠], and Kuang Zhenjiang [褚振江], “Xi Jinping Visits National Defense University and Gives Important Speech” [“习近平视察国防大学并发表重要讲话”], *Liberation Army Daily*, March 23, 2016. As of June 17, 2019: http://jz.chinamil.com.cn/n2014/tp/content_6973814.htm

“world-class forces.” The official responded that Xi seeks to elevate the PLA’s quality to parity with the U.S. military.⁶ This is likely a gross underestimation of what is actually happening. Xi appears to be more interested in leapfrogging the U.S. military by 2050 through the development of disruptive military technologies. In other words, Beijing probably plans to achieve the “Third Offset” strategy before the U.S. military can do so, thereby enabling Xi’s world-class PLA to defeat the United States in a conventional regional conflict and to protect Chinese interests worldwide.⁷ Xi’s plans are audacious: Their goals might simply be impossible to accomplish between now and 2050, especially since Washington is concurrently driving toward the Third Offset and is already significantly more advanced in conventional operations.⁸

Whether he succeeds in his goals, Xi has clearly directed the PLA to set its sights high. In addition to building offset capabilities, Xi has emphasized the importance of the PLA’s ability to conduct joint operations, improving China’s power projection capabilities from a regional to a global level, and professionalizing the PLA through strengthened oversight and discipline. Xi probably expects most offset capabilities to mature in the long term—that is, by 2050. However, his other critical objectives might be attainable between now and 2035, at which time I assess Xi expects the PLA to be capable of defeating any adversary—including the United States—within the Second Island Chain.

Enhancing Joint Operations

As a traditionally land-centric power, for decades, China prioritized the development of its ground forces, the PLA Army (PLAA). However, as exemplified by China’s last Defense White Paper, published in 2015, Beijing has concluded that the maritime domain—including Taiwan and the South and East China Seas—is now of paramount importance.⁹ Both the PLA Navy (PLAN) and PLA Air Force (PLAAF) have received additional attention, and the PLA now must coordinate operations across the PLAA, PLAN, and PLAAF.¹⁰ In early 2016, Xi implemented a

⁶ Author’s discussion with authoritative Chinese interlocutor, Washington, D.C., October 2018.

⁷ The Third Offset is an official Pentagon military strategy to invest in key innovative technologies, such as robotics, machine-human cooperation, or artificial intelligence (AI), to gain asymmetric advantages in great power competition. The First Offset occurred in the 1950s, when the United States relied on miniaturized nuclear weapons to make up for the Soviet Union’s conventional superiority in Europe, and the Second Offset took place in the 1970s with the U.S. military’s development of precision-guided munitions (PGMs) for conventional operations. For more on the Third Offset, see Kathleen H. Hicks, Andrew Hunter, Jesse Ellman, Lisa Samp, and Gabriel Coll, *Assessing the Third Offset Strategy*, Washington, D.C.: Center for Strategic and International Studies, March 2017.

⁸ For an in-depth discussion of how the U.S. military overall is superior to the PLA (but China is narrowing the gap), see Eric Heginbotham, Michael Nixon, Forrest E. Morgan, Jacob L. Heim, Jeff Hagen, Sheng 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, Calif.: RAND Corporation, RR-392-AF, 2015. As of June 26, 2019: https://www.rand.org/pubs/research_reports/RR392.html

⁹ “China’s Military Strategy (Full Text),” *State Council Information, The People’s Republic of China*. As of June 19, 2019: http://english.gov.cn/archive/white_paper/2015/05/27/content_281475115610833.htm

¹⁰ See “China’s Military Strategy (Full Text),” 2015, for more on the importance of jointness. For more on the PLA’s weaknesses in conducting joint operations, see Michael S. Chase, Jeffrey Engstrom, Tai Ming Cheung, Kristen Gunness, Scott W. Harold, Susan Puska, and Samuel K. Berkowitz, *China’s Incomplete Military Transformation: Assessing the Weaknesses of the People’s Liberation Army (PLA)*, Santa Monica, Calif.: RAND Corporation, RR-893-USCC, 2015. As of June 26, 2019: https://www.rand.org/pubs/research_reports/RR893.html

major reorganization—perhaps the most substantial ever—of the PLA. In fact, Western experts have likened the reorganization to China’s own version of the U.S. Goldwater-Nichols Department of Defense Reorganization Act of 1986, which broke down bureaucratic stovepipes and created the Joint Force.¹¹ Under China’s reorganization, the four general departments—staff, political, logistics, and armaments—were abolished, which struck at the very heart of the PLAA’s power base, as it previously ran these departments.

The PLAA was further diminished in stature by the conversion of the seven Military Regions (MRs) to five Theater Commands (TCs). This conversion offered additional opportunities for commanders from services outside of the PLAA to lead the development of joint operational concepts of warfighting within the TCs.¹² For example, the Southern TC is led by PLAN Commander Yuan Yubai. What is unique about the TCs concept is that it places all forces, regardless of service, under one commander, in effect requiring joint operations. Separately, the Central Military Commission (CMC) was reduced from 11 to seven members, and the position of Joint Staff Department Director was added, underscoring the importance of integrated joint operations. Xi also promoted PLAAF Commander Xu Qiliang to Senior Vice Chairman—a clear signal of the growing importance of air operations within joint operational concepts.

In another indication of Xi’s interest in achieving a joint PLA, in late 2015, he established a new military organization, the PLA Strategic Support Force (PLASSF), to facilitate the collection, processing, and dissemination of cyber, space, and electromagnetic information within the PLA.¹³ From Beijing’s perspective, a truly joint force must be able to control the information environment through information-networked forces—in the words of the last Defense White Paper, ensuring that the PLA is capable of “winning informationized local wars [打赢信息化局部战争].”¹⁴ But Xi’s interest in networked warfare actually extends much deeper. Indeed, Beijing is building a “system-of-systems” model of waging warfare after observing how the post–Cold War United States has employed similar concepts.¹⁵ By midcentury, Beijing seeks to connect its system-of-systems to AI technologies, creating what it calls the era of the “intelligentization” (智能化 *zhineng hua*) of warfare.¹⁶ Intelligentization will enable faster and smarter decisions. AI, coupled with enhanced military interconnectivity, makes Chinese leaders increasingly confident they can win a future “system-of-systems confrontation.”

¹¹ Philip C. Saunders and Joel Wuthnow, “China’s Goldwater-Nichols? Assessing PLA Organizational Reforms,” *Joint Forces Quarterly*, No. 82, 3rd Quarter, July 2016. As of June 17, 2019: <https://ndupress.ndu.edu/JFQ/Joint-Force-Quarterly-82/Article/793267/chinas-goldwater-nichols-assessing-pla-organizational-reforms>

¹² The five TCs, in priority order for Beijing, are the Eastern, Southern, Western, Northern, and Central TCs.

¹³ Kevin L. Pollpeter, Michael S. Chase, and Eric Heginbotham, *The Creation of the PLA Strategic Support Force and Its Implications for Chinese Military Space Operations*, Santa Monica, Calif.: RAND Corporation, RR-2058-AF, 2017. As of June 26, 2019: https://www.rand.org/pubs/research_reports/RR2058.html

¹⁴ “China’s Military Strategy (Full Text),” 2015.

¹⁵ Jeffrey Engstrom, *Systems Confrontation and Systems Destruction Warfare: How the Chinese People’s Liberation Army Plans to Wage Modern Warfare*, Santa Monica, Calif.: RAND Corporation, RR-1708-OSD, 2018. As of June 26, 2019: https://www.rand.org/pubs/research_reports/RR1708.html

¹⁶ Elsa B. Kania, “Battlefield Singularity: Artificial Intelligence, Military Revolution, and China’s Future Military Power,” *Center for a New American Security*, November 28, 2017.

From Regional to Global Power Projection

Xi has also prioritized the modernization of PLA weapons systems that can identify and attack targets at farther distances from Chinese shores, with the intent of denying adversarial force deployments from regional staging areas as well as preventing additional adversarial forces from entering the theater of operations. In real terms, this means the PLA is actively seeking to develop counterintervention and antiaccess/area denial (A2/AD) forces (although Beijing does not refer to them as such) that can deliver precision strikes out to at least the Second Island Chain, if not beyond. This is, of course, no surprise, as the United States has many military bases and other sensitive facilities scattered throughout the region out to and including in the Second Island Chain, most notably on Guam and Okinawa.¹⁷ The PLAAF's H-6K bomber training missions are highly visible examples of Beijing's rising power projection capabilities.¹⁸ These flights have circumnavigated Taiwan and the South China Sea several times in the last few years and have threatened Japan as well. H-6Ks can now be armed with air-launched cruise missiles, which, if fired off the east coast of Taiwan, would put Guam within standoff range of PLAAF attack. Moreover, the PLAAF is rumored to be in the process of perfecting aerial refueling operations with a different version of the bomber (H-6N) with a significantly longer range than the H-6K.¹⁹ Regardless, Beijing is developing the next-generation H-20 bomber, which may be available by the mid-2020s; the H-20 could put Australia, Hawaii, and even the continental United States within range of attack by both conventional and nuclear weapons.²⁰

There are many other examples of the PLA's rising power projection profile. China has one operational aircraft carrier, the *Liaoning*, which has conducted several patrols through the Taiwan Strait and in the South China Sea. It is planning to build a second and maybe even a third and fourth carrier, partly for prestige but also to benefit from additional power projection advantages.²¹ The PLAN is increasing its number of landing platform dock vessels (Type 071) and modern guided missile destroyers (Type 055), both of which will significantly enhance long-range combat operations and maritime power projection.²² The PLAN is also increasing the

¹⁷ The growing PLA threat to U.S. military facilities has prompted much consideration about future U.S. military posture in the region. For RAND analysis on this topic, suggesting Washington invest in base hardening and dispersal, see Michael J. Lostumbo, Michael J. McNerney, Eric Peltz, Derek Eaton, David R. Frelinger, Victoria A. Greenfield, John Halliday, Patrick Mills, Bruce R. Nardulli, Stacie L. Pettyjohn, Jerry M. Sollinger, and Stephen M. Worman, *U.S. Overseas Military Posture: Relative Costs and Strategic Benefits*, Santa Monica, Calif.: RAND Corporation, RB-9708-OSD, 2013. As of June 26, 2019: https://www.rand.org/pubs/research_briefs/RB9708.html

¹⁸ For a detailed analysis of China's H-6K bomber flights, see Derek Grossman, Nathan Beauchamp-Mustafaga, Logan Ma, and Michael S. Chase, *China's Long-Range Bomber Flights: Drivers and Implications*, Santa Monica, Calif.: RAND Corporation, RR-2567-AF, 2018. As of June 26, 2019: https://www.rand.org/pubs/research_reports/RR2567.html

¹⁹ "H-6N Able to Do Aerial Refueling: Chinese Air Force Will Have a True Strategic Bomber" ["能空中加油的轰6N: 中国空军将拥有真正的战略轰炸机"], *Phoenix*, December 7, 2017. As of June 19, 2019: http://news.ifeng.com/a/20171209/54003568_0.shtml

²⁰ Grossman et al., 2018.

²¹ Kyle Mizokami, "Naval Power: China's Navy Could Have 4 Aircraft Carriers (And Soon)," *The National Interest*, March 29, 2019. As of June 19, 2019: <https://nationalinterest.org/blog/buzz/naval-power-chinas-navy-could-have-4-aircraft-carriers-and-soon-49662>

²² Andrew Tate, "China's Eighth Type 071 in Advanced Stage of Construction," *Jane's 360*, May 14, 2019. As of June 23, 2019: <https://www.janes.com/article/88529/china-s-eighth-type-071-in-advanced-stage-of-construction>

number of PLA Marine Corps forces as its disposal, thereby improving PLA expeditionary capabilities for contingencies throughout the South and East China Seas, as well as for operations against Taiwan.²³

Beijing is separately developing longer-ranging A2/AD capabilities. For instance, the DF-21D, an antiship ballistic missile dubbed the “carrier killer” by the Pentagon, could threaten U.S. surface assets at a range of 1,500 kilometers or farther.²⁴ From a broader perspective, China leads the world in missile development of all types, including both ballistic and cruise missiles. The ever-increasing range of these missiles strongly suggests that Beijing plans to eventually range the entire Pacific Ocean with conventional PGMs, effectively eliminating Washington’s sanctuary as its forces approach the Second Island Chain. Significantly, in early 2016, Xi changed the name of the PLA’s nuclear forces, the Second Artillery, to the PLA Rocket Force (PLARF) and elevated it to the service level. Xi further expanded the PLARF’s role into the conventional domain, once again signaling senior-most leadership’s deep interest in finding ways to increase the risk to opposing forces deploying to the theater of operations.

Another important aspect of PLA power projection is the establishment of bases across the globe and the signing of port access agreements along sea lines of communication. China only has one “official” base, which is located in the African nation of Djibouti alongside U.S. forces. It established the base to support PLAN counterpiracy deployments to the Gulf of Aden; these deployments began in 2008, ostensibly to protect China-bound shipping in the Strait of Hormuz. However, the PLAN has continued annual deployments long since the threat dissipated, clearly to take advantage of the opportunity to improve blue-water seafaring capabilities without raising major international concerns.

Rumors persist about other unofficial Chinese bases and places with port access agreements that could later become bases. China appears to have deep interest in many ports, including Haifa, Israel; Hambantota, Sri Lanka; Gwadar, Pakistan; Koh Kong, Cambodia; and Luganville, Vanuatu.²⁵ Regardless of what happens in these cases, it is often lost on Western analysts attempting to count Chinese bases that for all intents and purposes, Beijing already has air and naval bases on artificial islands throughout the South China Sea’s disputed Paracel and Spratly Islands. These militarized locations feature three runways that can accommodate military aircraft, along with hangars, antiship cruise missiles, and other military-related infrastructure. If Beijing can protect these sites during combat, it can extend the range of PLA weapon systems

²³ Dennis J. Blasko and Roderick Lee, “The Chinese Navy’s Marine Corps, Part 1: Expansion and Reorganization,” *China Brief*, Vol. 19, Issue No. 3, February 1, 2019. As of June 23, 2019: <https://jamestown.org/program/the-chinese-navys-marine-corps-part-1-expansion-and-reorganization>. Also see Franz-Stefan Gady, “China’s Navy Showcases New Type 055 Guided Missile Destroyer in Naval Parade,” *The Diplomat*, April 25, 2019. As of June 24, 2019: <https://thediplomat.com/2019/04/chinas-navy-showcases-new-type-055-guided-missile-destroyer-in-naval-parade>

²⁴ Office of the Secretary of Defense, *Annual Report to Congress: Military and Security Developments of the People’s Republic of China*, Washington, D.C., May 2019.

²⁵ See Ron Kampeas, “U.S. Senate Warns Israel Against Letting China Run Haifa Port,” *Times of Israel*, June 14, 2019; Jonathan E. Hillman, “Game of Loans: How China Bought Hambantota,” *Center for Strategic and International Studies*, April 2, 2018; Gurmeet Kanwal, “Pakistan’s Gwadar Port: A New Naval Base in China’s String of Pearls in the Indo-Pacific,” *Center for Strategic and International Studies*, April 2, 2018; Charles Edel, “Hiding in Plain Sight: Chinese Expansion in Southeast Asia,” *War on the Rocks*, May 9, 2019; and David Wroe, “The Great Wharf from China: Raising Eyebrows Across the Pacific,” *Sydney Morning Herald*, April 11, 2018.

even farther. For example, if the H-6K bomber took off from the Paracel Islands (in May 2018, China landed an H-6K on Woody Island in the Paracels), then the PLAAF could range the entire South China Sea and possibly even all of Southeast Asia.²⁶

Finally, Beijing needs sufficient numbers of assets to deploy to theater in order to project power on a global, or even just regional, scale. Beijing's navy, coast guard, and fishing militia together "form the largest maritime force in the Indo-Pacific," according to the Pentagon. Beijing can also boast the largest number of air force and naval aviation assets in the region.²⁷ The PLA, in conjunction with its militia forces, can easily threaten and overwhelm regional opponents by "flooding the zone" of any conflict.

Cleansing the PLA

Much debate surrounds the intent behind Xi's ongoing anticorruption campaign. Xi's campaign is primarily a Maoist-style purge of Xi's political opponents,²⁸ but the anticorruption campaign undoubtedly also is an effective means of cleaning up actual graft within the PLA.²⁹ According to credible numbers from July 2018, Xi's campaign has swept up some 2 million individuals, and the number of investigations has been steadily rising by hundreds of thousands of new cases each year for the last several years.³⁰ Since coming to power in 2013, Xi has investigated, arrested, and/or sentenced at least 2,447 individuals.

The effect on the PLA has been nothing short of chilling. Under Deng Xiaoping, the PLA had more or less been left to its own devices, enabling corruption to become a pervasive feature of the military. In 1998, Jiang Zemin ordered the PLA to get out of the state-owned enterprise business and focus on improving its professionalism and combat capabilities, but he had very little leverage. His successor, Hu Jintao, lacked any real military experience, and PLA corruption flourished. With the rise of Xi, things changed quite dramatically. In 2014, Xi took the unprecedented steps of arresting former CMC vice chairman Xu Caihou for participating in a "cash for ranks" scheme.³¹ In 2015, Xi arrested another former CMC vice chairman, Guo Boxiong, on similar charges.³² The arrests were unprecedented because they marked the first time the PLA's highest-level retired officers faced corruption charges. In early 2016, as part of

²⁶ Asia Maritime Transparency Institute, "China Lands Bomber on First South China Sea Island," *Center for Strategic and International Studies*, May 18, 2018.

²⁷ Office of the Secretary of Defense, 2019.

²⁸ Derek Grossman and Michael S. Chase, "Why Xi is Purging the Chinese Military," *National Interest*, April 15, 2016.

²⁹ For an overview of the pervasive extent of corruption within the PLA before Xi taking the helm, see John Garnaut, "Rotting from Within," *Foreign Policy*, April 16, 2012. As of June 24, 2019: <https://foreignpolicy.com/2012/04/16/rotting-from-within>. For past RAND testimony related to Xi's anti-corruption campaign, see Timothy R. Heath, *The Consolidation of Political Power Under Xi Jinping: Implications for the PLA and Domestic Security Forces*, Santa Monica, Calif.: RAND Corporation, CT-503, 2019. As of June 26, 2019: <https://www.rand.org/pubs/testimonies/CT503.html>

³⁰ ChinaFile, "Visualizing China's Anti-Corruption Campaign," August 15, 2018. As of June 20, 2019: <http://www.chinafile.com/infographics/visualizing-chinas-anti-corruption-campaign>

³¹ Bo Zhiyue, "The Rise and Fall of Xu Caihou, China's Corrupt General," *The Diplomat*, March 18, 2015. As of June 19, 2019: <https://thediplomat.com/2015/03/the-rise-and-fall-of-xu-caihou-chinas-corrupt-general>

³² "Chinese Gen Guo Boxiong Sentenced to Life in Prison," *BBC*, July 25, 2016.

his military reforms, Xi created the “CMC Chairman Responsibility System,” which works through a disciplinary committee to monitor and punish corrupt PLA officials.³³ Most recently, in 2017, Xi pushed investigations against Joint Staff Department Chief Fang Fenghui and Political Work Department Director Zhang Yang, both sitting CMC members.³⁴

With these dramatic moves, Xi’s intent is not merely to demonstrate that he is unquestionably in charge. He has drawn a clear connection between maintaining unswerving PLA loyalty to the party and the competency of PLA commanders to lead the military into armed conflict. As Dennis J. Blasko has testified before this commission, the party slogan from 2014, called the “Three Whethers [三个能不能],” asks

(1) Whether our armed forces can constantly maintain the party’s absolute leadership, (2) whether they can fight victoriously when needed by the party and the people, and (3) whether commanders at all levels are competent to lead forces and command in war.³⁵

A key commentary on Three Whethers, cited by Blasko, further asks: “When the party and the people need it, can the army always uphold the absolute leadership of the party? Can you pull up and win the battle, can commanders at all levels take troops to fight and command war?”³⁶ Xi’s anticorruption campaign is about more than simply eliminating corruption (or eliminating Xi’s political opponents). It is designed to eliminate corruption *in order to* elevate military professionalism through developing core competencies. In 2014, Xi said “Fighting capacity is the sole criterion for testing the troops and military officers’ assessment, and promotion will focus on their ability of leading soldiers to fight and win battles.”³⁷ In the context of building a world-class PLA, which must exude the highest level of professionalism like the U.S. military, Xi’s anticorruption campaign plays a very prominent role.

Beating the United States to the Third Offset

Everything I have discussed up to this point contributes to PLA modernization, which, in Xi’s words, will be “basically completed” by 2035. In addition to these areas of development, Xi has also prioritized the acceleration of programs to develop disruptive military technologies that offer China asymmetric advantages against the United States. These technologies are being indigenously researched and developed to advance the construction of next-generation weapon systems, with the intent of leapfrogging Washington by midcentury. According to a recent report by former Deputy Secretary of Defense Robert O. Work, Beijing is attempting to achieve its own

³³ James Mulvenon, “The Cult of Xi and the Rise of the CMC Chairman Responsibility System,” *China Leadership Monitor*, Hoover Institution, Winter 2018, No. 55, January 23, 2018. As of June 20, 2019:

<https://www.hoover.org/research/cult-xi-and-rise-cmc-chairman-responsibility-system>

³⁴ Charles Clover, “Xi Takes Aim at Military in Anti-Graft Drive,” *Financial Times*, February 11, 2018. As of June 20, 2019: <https://www.ft.com/content/3dbaf32-0c2a-11e8-8eb7-42f857ea9f09>

³⁵ “破解一支军队所向披靡的脉动密码” [Crack an Army’s Password], *PLA Daily*, July 28, 2014, cited in Dennis J. Blasko, “PLA Weaknesses and Xi’s Concerns about PLA Capabilities,” testimony before the U.S.-China Economic and Security Review Commission, February 7, 2019.

³⁶ Blasko, 2019.

³⁷ “Xi’s Stresses CPC’s Absolute Leadership Over Army,” *China Daily*, November 2, 2014. As of June 19, 2019: http://www.chinadaily.com.cn/china/2014-11/02/content_18843109.htm

offset with “Chinese characteristics.”³⁸ I agree with this assessment, and it is the component of the PRC’s military strategy that Xi hopes will put the PLA over the edge in terms of becoming world-class—that is, eclipsing U.S. battlefield capabilities.

There are many different examples of disruptive military technologies, and China is developing virtually anything that might come to mind. Retired Senior Colonel Fan Gaoyue, who served as a director and chief specialist at China’s Academy of Military Science, noted that Beijing might be researching offsetting capabilities in aerospace, cyberspace, unmanned systems, and underwater warfare.³⁹ Other areas, at a minimum, include robotics, autonomous weapons, nanotechnology, 3-D printing, big data analytics, advanced manufacturing, AI, quantum computing, biotechnology, human-machine cooperation, cloud computing, and hypersonics. Beijing seeks to leverage its growing expertise in one or more of these or other areas to develop next-generation weapon systems that will challenge U.S. military capabilities by the 2050s. Xi, along with other senior Chinese leaders, believes that the next five to ten years will be the “decisive period” in U.S.-China technological competition.⁴⁰ Beijing almost certainly believes that the PLA successful intelligitization of warfare and system-of- systems construct will better position it to prevail in future armed conflicts.

Implications for the United States and the Indo-Pacific

Xi’s pursuit of a world-class PLA, if realized by 2050 in all the dimensions detailed here, will represent perhaps the most destabilizing geostrategic development of the 21st century. Although nuclear deterrence may remain undisturbed, steep advances in the PLA’s conventional capabilities, along with additional boosts to power projection and offsetting technologies, could, for the first time in modern history, pit the United States against a militarily superior adversary. The impact of this development will only be magnified if Washington allows its current technological and military edge over China to decline further. China is already militarily superior to all Indo-Pacific neighbors except, perhaps, Japan. China fielding a world-class military would not change the risk of going up against the PLA for the vast majority of Indo-Pacific residents.

However, there are three critical points the United States and the region must consider with the entrance of a world-class PLA onto the world stage. First, the PLA may conclude that it needs to test its improving capabilities to prove not only to Xi, but to itself, that its time has arrived.⁴¹ The PLA has virtually no real combat experience—especially in the air and maritime warfighting domains, where tomorrow’s conflicts are most likely to take place. Indeed, the last time China went to war was in 1979 against Vietnam; that conflict was predominantly, if not exclusively, a ground-forces engagement. The PLA would likely view Vietnam once again as the

³⁸ Robert O. Work and Greg Grant, “Beating the Americans at Their Own Game: An Offset Strategy with Chinese Characteristics,” *Center for a New American Security*, June 6, 2019.

³⁹ Fan Gaoyue, “A Chinese Perspective on the U.S. Third Offset and Possible Chinese Responses,” Study of Innovation and Technology in China, Institute on Global Conflict and Cooperation, University of California San Diego, January 3, 2017. As of June 20, 2019: <https://escholarship.org/uc/item/5wh2v87n>

⁴⁰ Tai Ming Cheung and Thomas Mahnken, eds., *The Gathering Pacific Storm: Emerging U.S.-China Strategic Competition in Defense Technological and Industrial Development*, Amherst, N.Y.: Cambria Press, 2018.

⁴¹ Derek Grossman, “Vietnam is the Chinese Military’s Preferred Warm-Up Fight,” *The Diplomat*, May 14, 2019.

ideal opponent for a limited war between now and 2035. China and Vietnam have the most overlapping sovereignty claims in the South China Sea, and Hanoi does not have a security alliance with the United States, meaning there would be no expectation of U.S. support. China could also test its power projection capabilities from its bases on the Paracel and Spratly Islands. A limited war would be eminently winnable from Beijing's perspective, and it would allow it to test some of the key capabilities it has been developing for many years. I certainly do not argue that the PLA is in the position to make such a decision, but if given a choice, it would prefer a limited exchange of this nature over beginning with a larger-scale armed conflict that would involve the United States, whether over Taiwan or the Senkaku-Diaoyu disputes involving Japan. There are simply some things that a military can only learn through real experience, and Xi's anticorruption campaign and improvements to the realism of PLA training can only build core competencies so far.⁴²

The second point is that as China modernizes the PLA, and particularly as it begins to rely on autonomous vehicles within a system-of-systems approach to warfare, Beijing is likely to perceive the risk of escalation to decline. In other words, attacking unmanned drones or the computer systems they rely upon will not pose an immediate risk to human life, and thus will be contextualized simply as robotic warfare. This has serious implications for the future of warfare that I believe are insufficiently explored, especially in the context of Chinese decisionmaking. As I wrote this statement, U.S.-Iran tensions were extremely high following Tehran's decision to shoot down a U.S. drone in the Strait of Hormuz. Although all of the facts are yet to be known, Iran almost certainly calculated that the destruction of an unmanned U.S. system was less provocative than attacking a human-piloted aircraft. Beijing is likely to face similar considerations.

Third, and finally, China's deep interest in AI has serious implications for the future of warfare against the PLA. Xi has noted his intent to make China the global center for AI by 2030.⁴³ In the coming years, China hopes to have mastered the stepping stone to achieving AI known as big data analytics, to control or even dominate the informationized warfare environment against great powers. Beijing is likely to then seek to attain a state of intelligentization as central to the PLA's ambitions as a world-class military. Although China is unlikely to allow AI to replace human operational commanders completely, its military leaders do seem to believe that it can act as a "digital staff officer," capable of gathering and presenting intelligence on the enemy, identifying enemy intent, and monitoring operations.⁴⁴ Such an arrangement might allow human commanders the ability to increase the speed and accuracy of their decisions, along the lines of the Defense Advanced Research Projects Agency's "Deep Green" program.⁴⁵ Of course, the trouble in all this is the notion that the human factor—common

⁴² Timothy R. Heath, "China's Untested Military Could Be A Force—Or A Flop," *Foreign Policy*, November 27, 2018. As of June 23, 2019: <https://foreignpolicy.com/2018/11/27/chinas-untested-military-could-be-a-force-or-a-flop>

⁴³ "Full Text of Xi Jinping's Report at the 19th CPC National Congress," 2017.

⁴⁴ Yuan Yi [袁艺], "人工智能将指挥未来战争？[Will AI Command Future Wars?]," 中国国防报 [*Defense Daily*], January 12, 2017. As of June 20, 2019: http://www.mod.gov.cn/jmsd/2017-01/12/content_4769771.htm

⁴⁵ "DARPA Commander's Aid: From OODA to Deep Green," *Defense Industry Daily*, June 3, 2008. As of June 20, 2019: <https://www.defenseindustrydaily.com/darpa-from-ooda-to-deep-green-03497>

sense, emotion, morality, and ethics—might be replaced by cold mathematical computations—increasing the likelihood for miscalculation and war escalation.

Recommendations for the U.S. Congress and Federal Government

Going forward, the U.S. Congress and the broader U.S. government might consider the following:

- **Prioritize predictive analysis—both unclassified and classified—on the disruptive technologies China is likely pursuing most aggressively, and determine appropriate countermeasures.** Although it is very challenging to examine Beijing’s next moves out to 2035, let alone to 2050, U.S. intelligence and defense analysts must strive to get a better handle on these trends. Doing so will improve the U.S. response, both in terms of offsetting technologies developed, and, perhaps more importantly, the overall formulation of a coherent military strategy against the PLA.
- **Improve understanding and targeting of future PLA “system-of-systems” constructs and reliance on automation.** If Beijing plans to rely on this approach in the future, the Department of Defense and Intelligence Community should actively research these concepts to support U.S. military exploitation of PLA vulnerabilities prior to and during warfare.
- **Encourage the Pentagon to communicate with the Chinese Ministry of Defense on the need to develop a code of conduct for automated warfare.** Such “rules of the road” already exist for certain interactions that Washington has with Beijing in contested areas. The two countries, for example, have negotiated and signed the Code for Unplanned Encounters at Sea for interactions between their forces at sea. These types of agreements could serve as a blueprint for future agreements.
- **Encourage a whole-of-government approach to working with U.S. allies and partners that will be impacted by China’s growing regional military power.** The National Security Strategy, National Defense Strategy, and the recently released Indo-Pacific Strategy all hit the right notes, but dedicated attention to the region—in the form of working across the diplomatic, intelligence, military, and economic spectrum—is absolutely necessary to demonstrate a sustained U.S. commitment to the Indo-Pacific.
- **Ensure the U.S. military retains the scientific, mathematical, and technological edge in growing U.S.-China competition.** Losing the edge may result in China achieving the next offset, not the United States. Determining which disruptive military technologies should be funded and at what level will remain an important role for Congress.

Statement For the Record

**SUBMITTED STATEMENT OF CHRISTOPHER D. YUNG, PH.D., DONALD BREN
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ADDITIONAL QUESTION FOR PANEL III

COMMISSIONER KAMPHAUSEN: What are some of the metrics that could be used to make a judgment about whether the PLA is a near-peer competitor of the U.S. military?

DR. YUNG:

What Metrics Might be Used to Assess the PLA as a “Near Peer” Competitor to the U.S. Military?

By Christopher D. Yung, PhD

Donald Bren Chair of Non-Western Strategic Thought, Marine Corps University

The US-China Economic and Security Review Commissioners asked during my June Testimony on “China as a World Class Military” to provide some additional thoughts on the potential metrics used to evaluate the PLA in comparison with the U.S. to determine if the former had arrived at or were getting close to a “Near Peer Competitor”. The term “Near Peer Competitor” which in my mind emerged during the early 1990s to compare emerging economic and military powers with that of the United States had originally focused on the large scale measures of power: GDP, population, size of the military, number of certain types of weapons systems and platforms, and science and technology base. While China has achieved a number of these broader metrics listed here, the question of whether China’s military has attained this status requires a refinement of the definition of a “military near peer competitor”. I argue this point because a military may be characterized by its sheer numbers both of personnel and of platforms and weapons systems, but this by no means allows for a truly meaningful comparison with the United States military. I make this assertion because as Williamson Murray, one of the country’s most eminent military historians, has written military effectiveness can only be truly evaluated based on what the military has been asked to do given its current political and historical context. In turn, Wic Murray argues that the researcher can divide the military’s task along the familiar categories of tactical, operational, strategic and political.

If we start with the last category listed, the PLA has attained “world class status” as a military that has effectively planned and executed the missions defined by Chinese Communist Party’s political objectives. The PLA was asked to address the Taiwan mission and it has gradually evolved a force that has raised the cost of U.S. intervention, through its missile development has put at risk Taiwan’s airfields and ability to attain air superiority, its naval surface combatant and submarine capabilities has put at risk Taiwan’s ability to attain maritime superiority, and the PLA is gradually developing a capability which will eventually permit a full scale amphibious assault of the island. The PLA was tasked with protecting “far seas” interests and the PLA has put in place capabilities to deal with piracy, threats to citizens abroad, and projecting limited power into areas far from China. The Party has put foremost of the PLA’s missions as guarding against internal instability, terrorism, and mass incidents, and the PLA along with the People’s Armed Police and the People’s Armed Police Force has put in place measures to keep internal dissension and mass incidents under control. Finally, the Party has asked the PLA to address the perceived threats from the United States either generated from American social media or softpower, or from American hard power illustrated by its nuclear force and its forward presence in the Asia-Pacific. Although it can hardly be said that the PLA can fully meet head on these challenges posed by the

U.S., it can be said that the PLA has effectively reorganized itself, developed its force structure, and has developed the personnel to address many of these challenges posed by the U.S.

If we measure PLA capabilities against the Chinese Communist Party strategy, we also conclude that the PLA may have attained “world class status”. If the Party’s strategic objective is to attain a certain level of economic development by 2025 and by 2049, to attain it slowly, and to do so without suffering from the serious collateral damage inflicted on China from a large scale conflict with the United States, then I am also inclined to give the PLA “World Class status” because for the past twenty six years or so, the Chinese military has successfully developed its force structure, has developed pockets of extremely modern capability, and poses some serious threats to the U.S. military under certain types of scenarios. And yet the PLA has done this without the two countries sliding into war. This attainment of Chinese strategic objectives was accomplished through a combination of military diplomacy, deft acquisition, an extensive use of its propaganda organs to shape the message, and a curious combination of challenging (to the US) and cooperative foreign policy behavior. If Chinese strategic objectives are to create new markets, develop a stable periphery, create assured access for China’s imported raw materials and energy, assure the flow of trade from China and potential customers, and create a calm and stable security buffer around China’s periphery, and then develop military capabilities to address threats to such a large scale economic endeavor, then the PLA is largely in the process of developing the capabilities to meet these strategic objectives. The PLA then may not have fully accomplished its mission of protecting these strategic objectives but it is on its way.

The PLA has developed the operations to support both the Party’s political and strategic objectives. It has secured a facility in Djibouti to assist with its efforts to counter piracy and to operate in the Far Seas. It is securing additional ports and facilities through “debt trap” diplomacy and cooperative arrangements with host nation countries who need Chinese investments. It is creating security organizations and makeshift coalitions (Shanghai Cooperation Organization) which permits the creation of initial organizations of interoperability and then possible coordination of military efforts to respond to internal security problems in SCO related countries. The PLA is developing the training and personnel pipeline to continuously provide ships and personnel for overseas operations. If operations are to be measured against the strategic intent of the highest national security decision makers then again, the PLA has accomplished “world class status” owing to the success in this effort as well.

Interestingly, where the PLA has not attained “world class status” using the metrics defined above by Professor Murray, is in the tactical realm. Here a military must be measured against its most likely adversary and in tactical engagements with a U.S. adversary, the PLA most likely falls short in a number of areas. First and foremost, the PLA Navy has not developed the power projection capability necessary to assert maritime dominance in the Asia Pacific or anywhere else for that matter. For all the effort the PLAN is undertaking to develop its navy it is unclear that it has developed the doctrine to actually fight off of an aircraft carrier—still developing flight control operations on a flight deck, little experience loading ordinance in a high intense environment, almost no experience logistically supporting a carrier strike group. During high intensity engagements with the US Air Force it is unclear that PLAAF pilots have had the number of flight hours and tactical engagement training experiences to truly give USAF pilots a run for their money. Dennis Blasko’s research on the “Five Incompatibles” highlights the PLA’s own doubts about

their own effectiveness in ground combat against a really good ground force. Lastly, although joint reform in the PLA has gotten the most attention from China watchers it is unclear that the PLA services have individually worked out some of the thorniest doctrinal problems associated with their own domain of operations. For example, it isn't clear to me that the PLAAF has sorted out how to do effective close air support; it is far from clear whether the PLA Navy has sorted out the vexing command and control issues associated with amphibious operations. Have they ever wrestled with "CATF-CLF" or "Supporting-Supported"?

To summarize, if we define military effectiveness as Williamson Murray does, then the PLA may have attained "World Class Status" in the political, strategic and operational realm; however, the PLA does not appear to have accomplished such a stature in the tactical realm. This is ironic because the conventional wisdom would be that militaries should first become competent in tactics and then build on that expertise to become good at operations which then can be refined to address strategic and political objectives. In the case of the PLA it would appear that they have tackled these issues in reverse.