

CHINA'S ACTIVE DEFENSE STRATEGY AND ITS REGIONAL IMPACT

HEARING

BEFORE THE

U.S.-CHINA ECONOMIC AND SECURITY
REVIEW COMMISSION

ONE HUNDRED TWELFTH CONGRESS
FIRST SESSION

January 27, 2011

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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 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 No. 110-161 (December 26, 2007) (regarding responsibilities of the Commission, and changing the Annual Report due date from June to December).

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

The Honorable DANIEL K. INOUE
President Pro Tempore of the Senate, Washington, D.C. 20510
The Honorable JOHN A. BOEHNER
Speaker of the House of Representatives, Washington, D.C. 20515

DEAR SENATOR INOUE AND SPEAKER BOEHNER:

We are pleased to transmit the record of our January 27, 2011 public hearing on “*China’s Active Defense Strategy and its Regional Impact.*” The Floyd D. Spence National Defense Authorization Act (amended by Pub. L. No. 109-108, section 635(a)) provides the basis for this hearing.

At the hearing, the Commissioners heard from the following witnesses: Congressman Robert J. Wittman (R-VA), Dr. Roger Cliff, Ms. Oriana Skylar Mastro, Cortez Cooper, Dr. Martin C. Libicki, Dean Cheng, Dr. Balbina Y. Hwang, Jim Thomas, and Captain Stacy Pedrozo (U.S. Navy). In addition, Senator Daniel K. Inouye (D-HI) and Lt Gen (U.S. Air Force, retired) David A. Deptula submitted written testimony. The subjects covered during the hearing included China’s Active Defense military strategy, China’s ability to conduct anti-access operations in the Western Pacific, and how regional states, especially U.S. friends and allies, are affected by China’s anti-access and power projection capabilities.

We note that the full transcript of the hearing plus the prepared statements and supporting documents submitted by the witnesses can be found on the Commission’s website at www.uscc.gov, and that these can be searched by computer for particular words or terms. 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 other issues enumerated in its statutory mandate, in its 2011 Annual Report that will be submitted to Congress in November 2011. Should you have any questions regarding this hearing or any other issue related to China, please do not hesitate to have your staff contact our Congressional Liaison, Jonathan Weston, at 202-624-1487 or jweston@uscc.gov.

Sincerely yours,

William A. Reinsch
Chairman

Daniel M. Slane
Vice Chairman

cc: Members of Congress and Congressional Staff

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CHINA'S ACTIVE DEFENSE STRATEGY AND ITS REGIONAL IMPACT

THURSDAY, JANUARY 27, 2011

U.S.-CHINA ECONOMIC AND SECURITY REVIEW COMMISSION
Washington, DC

The Commission met in Room 2212, Rayburn House Office Building at 10:52 a.m., Chairman William A. Reinsch and Commissioners Carolyn Bartholomew and Larry M. Wortzel (Hearing co-chairs), presiding.

OPENING STATEMENT OF CHAIRMAN WILLIAM A. REINSCH

CHAIRMAN REINSCH: The hearing will come to order. Good morning. Welcome to the first hearing of the U.S.-China Economic and Security Review Commission's 2011 Annual Report cycle.

As this year's Chairman, I want to thank you all for joining us today. We appreciate your attendance, and we encourage you to attend our other hearings throughout the year.

At our next public event on February 25, we will hold a hearing and a roundtable discussion with a select group of expert witnesses. We'll examine the internal dilemmas and pressures faced by China's central government and the Communist Party in maintaining control. Among other issues, we'll look at the growing divide between the wealthier urban residents along the coast and the rural poor in China's interior.

Future hearing topics this year will include China's indigenous innovation policies, its overseas perception management efforts, its foreign investment policies, Beijing's efforts to develop high-tech industries, and

the implications of China's recent space-related advancements.

More information about the Commission, its annual report, and its hearings are available on the Commission's Web site at www.uscc.gov, and with that, I don't see Vice Chairman Slane here quite yet, so let's turn to today's hearing and today's co-Chairs, Commissioner Bartholomew and then to Commissioner Wortzel, for their opening statements.

OPENING STATEMENT OF COMMISSIONER CAROLYN BARTHOLOMEW HEARING COCHAIR

HEARING CO-CHAIR BARTHOLOMEW: Thanks very much, Mr. Chairman, and thank you to our audience particularly for showing up today, and your patience since things are running a little late.

Today's hearing, as the Chairman said, is going to examine "China's Active Defense Strategy and the Implications for East Asia." The topic is particularly timely.

Just prior to Secretary of Defense Gates' recent trip to Beijing, the Commander of U.S. Pacific Forces, Admiral Willard, noted that China will soon field an anti-ship ballistic missile capable of targeting U.S. aircraft carriers up to a thousand miles off of China's coast.

A few days later, while Secretary Gates was in meetings in Beijing, the Chinese military flight tested its first stealth fighter, allowing news of the test to "leak" out to the Internet.

These developments, along with others the Commission has described in recent years, appear to be manifestations of a concerted effort to develop capabilities that directly counter the U.S. military. Frequently referred to in the U.S. as an "anti-access strategy" intended to keep U.S. forces at bay, this strategy is being operationalized across all domains of war--land, sea, air, space and cyberspace.

More importantly, the PLA is attempting to integrate and synergize its capacities in those various domains in order to maximize its capabilities, similar in effect to how the U.S. military conducts joint operations.

The PLA is not simply developing and integrating traditional military capabilities, it is also experimenting with less traditional but very effective means. Methods such as offensive cyber operations and counterspace operations act as force multipliers for the PLA's growing anti-access capabilities.

U.S. military operations in the Western Pacific are heavily dependent upon the flow of information, be it through space-based, aerial or terrestrial systems. We should all take note of Secretary Gates' comments regarding China's advances in cyber- and anti-satellite warfare when he noted that those advances pose a, and I quote, "potential challenge to the

ability of U.S. forces to operate and communicate in this part of the Pacific."

China's growing anti-access capabilities do not just pose potential problems for the United States. Regional states, many of them long-time U.S. friends and allies, are also affected. Military means are often fungible, and the line between offense and defense is blurry, at best.

In many ways, China's anti-access strategy more accurately should be referred to as an "area control strategy." This difference is not lost on regional states. In recent months, Japan has announced a realignment of its forces in order to better observe and react to China's military developments, especially around Japan's southernmost islands. In Southeast Asia, a nascent maritime arms race is occurring, primarily driven by China's growing capabilities.

Today, we will focus on these and other questions.

Before I turn to my co-Chair for the hearing, Commissioner Wortzel, to deliver his remarks, I'd like to thank Congressman Wittman from Virginia who will be taking time out of his busy schedule to join us here today and to note for our audience and for the record that Senator Inouye from Hawaii has submitted written testimony for this hearing, which will be posted on our Web site shortly.

Also, I'd like to thank recently retired Lieutenant General Deptula, who we'll introduce later today, for his years of military service, and to the rest of our witnesses for all of their time and dedication, and finally I want to start out by thanking our terrific staff who put this hearing together, Dan Hartnett and Rob Sheldon, without whom we would be lost.

And with that, I defer to Commissioner Wortzel.

OPENING STATEMENT OF COMMISSIONER LARRY M. WORTZEL HEARING COCHAIR

HEARING CO-CHAIR WORTZEL: Thank you, Commissioner Bartholomew, and good morning. We thank all of you for braving the roads and making your way in here.

Ensuring freedom of navigation around the world has been a priority for our nation since its founding. A Coast Guard/Navy Department report, "A Cooperative Strategy for 21st Century Seapower," says that "The sea lanes and supporting shore infrastructure are the lifelines of the global economy," and therefore ensuring free transit along global air and sea lanes is vitally important to the United States and to the world.

Open lines of communication in global commons also enable U.S. military support for our friends and allies. In the Pacific, a continual U.S. military presence has ensured peace for decades. However, should our

allies or friends in Asia begin to doubt the U.S. military's ability to support its own interests in the region, an arms race could ensue.

China's recent actions and statements on freedom of navigation in the region, including claims of what activities are permitted in its exclusive economic zone, are at odds with established international norms. Beijing's unique interpretation of the Law of the Sea is increasingly backed up by the use of its growing maritime security forces.

China also makes excessive territorial claims in the South China Sea and East China Sea that conflict with the claims of its neighbors in the region. This assertive approach has led to clashes with its neighbors, including Japan, a U.S. ally.

The 2009 Impeccable incident where various Chinese ships harassed a U.S. surveillance vessel in international waters and a similar incident with the USNS Bowditch in the East China Sea demonstrate a more aggressive stance on the part of China.

This hearing will discuss China's military strategy of "active defense." The strategy has elements that meld traditionally defensive operations with offensive action, and that's acknowledged by China's own military thinkers.

The People's Liberation Army claims that in order to defend China from attack, it must be able to seize control across all domains of war. In view of the PLA's military thinkers, only by acting quickly and decisively in the early stages of a conflict can it hope to win a modern war, especially if that involves the United States.

Furthermore, to the extent that the PLA's "active defense" strategy allows for preemptive attacks, it is conceivable that the U.S. military could face a PLA attack in a conflict with little or no warning.

China's "active defense" strategy has a geographic aspect. In the event of a conflict, the PLA would seek to exert control over vast maritime territory within what China refers to as the "First Island Chain – a series of islands extending from Japan through Taiwan and the Philippines and into Indonesia.

The goal of area control is expanding. In recent years, PLA military literature appears to endorse extending its area of operations east of Taiwan and Japan, up to a "Second Island Chain," over 1,800 miles into the Pacific at its widest mark.

The PLA's growing ability to conduct operations and its doctrine on the use of missiles means that we must be concerned about offensive operations against all U.S. bases and supply lines west of Hawaii, to include the island of Guam.

Finally, we regret that although the Commission extended invitations to the Office of the Secretary of Defense, the U.S. Navy, Joint Forces Command, the Pacific Command, and Strategic Command to provide their

views on these issues, all declined to send representatives, but we have a very, very well-informed group of panelists for you today.

We expect Congressman Wittman, I think, in the next couple of minutes.

HEARING CO-CHAIR BARTHOLOMEW: I think what we're going to do is to start with our first panel in order to keep things moving, and then when Congressman Wittman comes, we'll interrupt you all in order to have him speak and then continue on.

So if we can have our first three panelists come up. In our first panel on anti-access, three leading experts will help us assess China's defense strategies, including area denial, active defense and joint operations.

Our first witness, Oriana Skylar Mastro, is a doctoral candidate in the Politics Department at Princeton University, where she focuses on military operations and strategy, war termination, and Northeast Asia. Today, she is going to provide context for understanding China's anti-access strategy.

And we now have the Congressman. The Congressman is here already so we'll go ahead and bring him up. Why don't you just move over and then we'll move on with our introductions of the panel. Thanks, everybody, for being so flexible.

Congressman Wittman, would you like to join us?

MR. WITTMAN: Okay. Glad to do that.

PANEL I: CONGRESSIONAL PERSPECTIVES

STATEMENT OF ROB WITTMAN A U.S. REPRESENTATIVE FROM THE STATE OF VIRGINIA

HEARING CO-CHAIR WORTZEL: Congressman Wittman represents Virginia's 1st Congressional District, and I live in his district.

Congressman Wittman has served the district since a special election in 2007. He's a graduate of Virginia Tech, has a Master of Public Health degree from the University of North Carolina, and a Ph.D. in public policy from Virginia Commonwealth University.

Congressman Wittman is a member of the House Armed Services Committee and has earned a reputation as an advocate for our men and women in uniform, and he's certainly known that way around our district. On the Committee, he serves as Chairman of the Oversight and Investigation Subcommittee, and sits on the Subcommittees on Readiness and Seapower and Expeditionary Forces.

In addition, as co-Chair of the Congressional Shipbuilding Caucus, he's a staunch advocate for a robust naval fleet and a healthy domestic shipbuilding industry.

The Congressman has got a deep understanding of how China's rise affects the United States. Soon after joining Congress, Congressman Wittman had to address the issue of defective Chinese drywall, which affected many people in our district, and he became a dedicated supporter of homeowners affected by toxic Chinese imports.

He's been a strong supporter of the Commission, and we thank him again for his help in securing this hearing room.

Congressman.

MR. WITTMAN: Well, thank you. Commissioner Bartholomew, Commissioner Wortzel, thank you so much for the invitation to join you today. I'd like to thank the other Commissioners, too, for your service to this nation. We really appreciate the time and effort that you're putting into what we all know is a significant issue and an emerging issue in many, many areas.

I look forward to giving you a little perspective today on the elements of how China's emergence on the defense side creates some concerns and then look forward to your questions.

As we assemble today to discuss China's active defense strategy and its regional impact, I think there are many things that we need to look at and look at carefully, and some of those are things that we on the House Armed Services Committee need to really be focused upon.

In 2008, the U.S. intelligence community warned that, "in terms of size, speed and directional flow, the global shift in relative wealth and economic power now underway--roughly from West to East--is without precedent in modern history."

And the question becomes--if you look historically, the 1700s were a time of French dominance, the 1800s were a time of British dominance, the 1900s were a time of U.S. dominance--the question becomes where will dominance occur in the 21st century? And if we are going to maintain I think where our presence is in the world, we need to be very, very thoughtful about what's happening around us, and obviously China is right there at the top of the list.

We all know that in 2010, China surpassed Japan and became the world's second-largest economy after the U.S. and is now the world's largest exporter, and we are one of their largest customers. So obviously some concern there.

At current growth, global financial strength to Asia will likely be larger than that of the United States by 2036, and some believe it will be larger by the year 2020. So on a pretty fast pace to catch up and surpass the United States.

China's military policies are aimed at translating the nation's growing economic resources into a world-class fighting organization, and we're

looking very carefully at how that is emerging. And the notion that China's growing prosperity means it should start acting like a status-quo military power has failed to find any support within the government there in Beijing. They are very mindful of where they are as a prominent power across the world.

Chinese military modernization has accelerated since the mid-to-late 1990s in response to central leadership demands to develop military operations that are able to meet what they see as a threat there in Taiwan. And the pace and scope of China's military build-up already puts regional military balances at risk, and we see that each and everyday in what happens there in the eastern area of Asia.

However, while China's military transformation has occurred at a faster rate than many had predicted, one must also consider the lack of direct modern combat experience and an elementary application of jointness.

It was interesting when the U.S. announced the closure of Joint Forces Command here, the next day the headlines in the Chinese newspapers were "America Abandons Efforts of Jointness." So they are very, very focused on our military operations and how we pursue military operations across service branches but also with our allies.

China's current anti-access strategies seek to deny outside countries the ability to project power into a region, and without dominant capabilities to project power, the integrity of U.S. alliances and security partnerships could be called into question, reducing U.S. security and influence and increasing the possibility of conflict. And we see with China's growing capability there--as you know, their anti-ship access capabilities of which the United States has no counter creates significant concerns for us, and that anti-access capability extends 1,200 miles off of their shores--very significant.

Current Pentagon threat analysis finds a widespread belief among leaders in Beijing that China's rise is unstoppable and America is on the decline.

The first step in that multi-decade process is for China to secure control of the eastern seas adjacent to its territory, and as you know, the eastern area of Asia is where we're seeing the most active Chinese presence and Chinese activities.

Some recent examples of China's growing military weight and might is in 2007 when they destroyed an aging weather satellite operating in an orbit similar to those used by U.S. photo-reconnaissance spacecraft. Again, another area of concern.

More recently, they tested the DF-21D maneuvering ballistic missile warhead capable of hitting U.S. aircraft carriers in the Western Pacific, a

very interesting weapon, parabolic rise, reentry, and then when it seeks its target, it zigzags into its target making it very, very difficult obviously to counter.

Flight tests of the F-20 stealth fighter and the retrofitting of a Soviet aircraft carrier, which is now close to initial deployment, are other areas of concern, not to mention initiatives to boost the number of surface combatants, submarines, anti-ship cruise missiles, electronic warfare and computer network attack capabilities, modernization of their early warning radar network, as well as maritime surveillance and targeting systems.

And due to China's economic global position, China now owns and operates a vibrant and globally competitive shipbuilding industry. China is now considered the second-largest shipbuilder in the world, which should be of concern to us on many levels, not just on the military side but also on the commercial side.

Shipyards expansion and modernization have increased China's shipbuilding capacity and capability, generating benefits for all kinds of military projects, and recent intelligence reports state that the PLA has three ballistic missile submarines, 59 various classes of attack submarines, 48 frigates, 26 destroyers, 40 mine warfare ships, one large deck amphibious ship, and 57 smaller amphibs, and soon one aircraft carrier, with another aircraft carrier in the design phase that they're looking to construct themselves, not one that they would purchase from another country.

If you compare that to the 286 battle force ships in the U.S. Naval Fleet, which is well under the 313 ships that everybody believes we should have as a floor for our Navy, we see that creates some concerns.

For the first time, if you look at China's total Navy, quantity wise, they outpace the United States. Now we would argue that the quality of our fleet is larger, but at some point quantity does overcome quality. And as long as China is a global economic leader, we know that these numbers are going to continue to rise. They're very aggressive along those lines.

My concern is whether we're making the necessary investments in our weapons platforms to deter or meet this emerging threat. Now the question becomes how are strategic and budgetary decisions being made at the Pentagon? Is strategic needs driving the budget or is the budget driving our strategic needs? And that's a question we continue to ask to say let's look at the strategy, and I know the Secretary has looked at what are the needs in front of us?

Obviously, we're engaged in Iraq and Afghanistan. Some of our concerns are not only meeting that need, but also what are some of the scenarios we look at farther out into the future? And we have to be able to come to good decisions in looking at both of those, and if we neglect the

longer-term issues, as you know, on the military side, it's very hard to press the button and say tomorrow, we can have that capability. It's a long-term commitment to make sure that we have that capability in hand.

The House Armed Services Committee met yesterday, and we heard testimony from the Pentagon on the Secretary's recently announced Efficiency Initiatives.

And after that hearing, I believe that we're no closer today than we were in August when the Efficiency Initiatives were first announced to understand how decisions are being made at the Pentagon, and we need to understand that because obviously strategy is intricately involved in making budget decisions, and I haven't seen any substantive data or analysis, let alone any kind of implementation plan, that shows the cost savings, strategic analysis, or consistent decision-making process to support these Efficiency Initiatives, and I want to emphasize that we absolutely have to look across budget areas to make sure we are using our dollars in the best way possible, and efficiency in the Department of Defense is an absolute, but we all need to understand how those decisions are being made and how we're positioning ourselves into the future.

We want to make sure we're doing the best job we have with the dollars we have, and we know there's not going to be an expanding pool of those dollars in the future. So we've got to make tough decisions, but we have to realize in the full context of the threats we face, how do we best make those decisions, and there will be things that we say, hey, we can't do that or we can't afford that, but we have to be confident that everybody, the Pentagon, the House Armed Services Committee, the Senate Armed Services Committee, the U.S. Congress, are involved in making those decisions.

One issue I believe for the Commission is to explore whether these Efficiency Initiatives take into account China's growing military might and the ability to flex and project its power. That I think is critical and what we look at in making our decisions there on the House Armed Services Committee.

In order to counter this emerging anti-access threat in Asia, our focus should be on force posture, maintaining alliances in the region, and maintaining the current footprint of strategically located bases in the Western Pacific.

In 2010, the Quadrennial Defense Review criticizes China for a lack of transparency about its military development plans and its decision-making processes. Continued military-to-military exchanges are going to be critical in reducing mistrust and misunderstanding.

Now, the other morning, I had breakfast with the Chief of Naval Operations, Admiral Roughead, and I spoke to him about his relationship

with his Chinese counterpart, and he sits down on a fairly regularly basis with his Chinese counterpart to communicate, to talk to him, and especially when there are things that happen there in China to make sure that there's that level of communication.

We have to continue that. We have to do more to make sure that there's that transparency there in that relationship, and we want to make sure that that is enhanced. That is the only way that I think in the future we will avoid any misunderstandings or anything that may happen that creates that mistrust or misunderstanding that ultimately ends up in potential conflict.

As we know, the Chinese government is aggressively investing in their own future, and certainly they're not going to sit idle. So we want to make sure that we are keeping pace and making sure we're understanding the challenges that they face and how we can positively interact with them.

The United States has to look at our own force structure, and we have to make the needed investments in areas like shipbuilding, and we have to take into account how shifting priorities within the Defense budget are going to affect our ability to counter a threat in the Pacific. And we know China is not the only scenario that we face there in the Pacific, but I would argue while not one that's making headlines everyday, every bit as significant as other threats there in that region.

I want to end my statement by again thanking the Commission co-Chairs for your invitation to speak. And this concludes my remarks, and I look forward to your questions.

[The statement follows:]¹

PANEL I: Discussion, Questions and Answers

HEARING CO-CHAIR WORTZEL: Thank you very much, Congressman Wittman.

I wonder if you would be willing to share your views on the security of the U.S. defense supply chain and the extent of our dependence on components or materials from China?

MR. WITTMAN: That's a great question. We have posed many questions to our analysts, and one is the necessity for rare earth elements, and as you know, China is a predominant force in the production of rare earth elements. The United States' ability there has waned. And as you know, China has recently cut back on the supply of those rare earth elements. Those are critical in many areas of our defense infrastructure on

¹ [Click here to read the prepared statement of Congressman Rob Wittman](#)

the manufacturing side. So I am deeply concerned about their control in many commodities that are critical to the things that we do.

Additionally, with those raw materials, also, the ability to be able to make sure that we're protecting information that we have on our systems. I get concerned, too, not only about how they control the flow of raw materials, but also how they may control or manipulate the flow of information about the things that we do to defend this nation.

So I would say that on a number of different levels, there are certainly concerns there, and as we know going forward, if they control either the supply or the pricing of many of those materials, it creates a high level of concern for us in what we can do to continue to not only maintain the defense industrial base but also to make sure that we maintain the capability to build those advanced systems when we need those critical elements like rare earth elements.

HEARING CO-CHAIR BARTHOLOMEW: Do you have time for another question?

MR. WITTMAN: Absolutely, yes, yes.

HEARING CO-CHAIR BARTHOLOMEW: Commissioner D'Amato.

COMMISSIONER D'AMATO: Thank you, Madam Chairman.

—Congressman, thank you for your very interesting testimony.

MR. WITTMAN: Sure.

COMMISSIONER D'AMATO: It was a very wide-ranging and interesting. The Commission is considering visiting PACOM in the near future. I wondered if you had had an opportunity recently to visit PACOM and whether PACOM is devoting the kind of wide-ranging attention and resources to analyzing this anti-access strategy that is needed?

MR. WITTMAN: I am planning a congressional delegation to visit there a little bit later on this year. It will hopefully be in the May or June timeframe of this year. We want to get there. We want to sit down with PACOM, make sure that we are understanding exactly what's going on, what their concerns are, where they believe we are currently there in that area of Asia, and obviously there are a number of different issues there, but the emerging issue obviously is the Chinese presence there, and especially, too, their relationships with other Asian partners in the area, whether it be Japan, whether it be their influence there in North Korea, and areas potentially that destabilize that whole region.

We need to understand what the emerging threats are, how they view that, and what they are doing to counter that, so we will be going there, leading a congressional delegation to get more information on that.

COMMISSIONER D'AMATO: Great. Thank you.

MR. WITTMAN: Thank you.

HEARING CO-CHAIR BARTHOLOMEW: Congressman Wittman, do you

have time for one more?

MR. WITTMAN: Yes, indeed, I do.

HEARING CO-CHAIR BARTHOLOMEW: Commissioner Mulloy.

MR. WITTMAN: My time is at your avail.

COMMISSIONER MULLOY: Congressman, thank you very much for being here.

MR. WITTMAN: Thank you.

COMMISSIONER MULLOY: I thought you made a number of very, very important points, but I was struck when you talked about the transfer of wealth and power from West to East.

MR. WITTMAN: Yes.

COMMISSIONER MULLOY: I personally don't think this is just happenstance. I think the Chinese have a game plan.

MR. WITTMAN: Yes.

COMMISSIONER MULLOY: And part of that is to build their comprehensive national power through economic and trade incentives. We've run \$2 trillion worth of trade deficits with the Chinese since they entered the WTO.

MR. WITTMAN: Uh-huh.

COMMISSIONER MULLOY: So, I personally believe we have to rethink this whole globalization strategy of the United States, and I'm wondering is there some sentiment in the Congress and in the House, as you see it, to begin to really reexamine what we're doing here?

MR. WITTMAN: I think there is. I think there's a strong sense that we absolutely have to do that, and I think you're spot on with what's happening with that transfer. The Chinese are very methodical about capturing markets, making sure that other capacities around the world to manufacture and produce products wane, therefore, putting them in a position of dominance, and then knowing that it's very difficult to reconstruct that production capacity.

That's why I think for the United States and many of us in Congress, we are very, very concerned about waning production capacity, specifically in the areas of manufacturing here in the United States, and that we have to redouble our efforts to regain some of that.

You have to be strategic about it. You can't say we're going to manufacture everything, but I think there's a great opportunity here for us to look at those advanced products where we do the design, we do the innovation, we do the creation; there's no reason why we can't put forth the production elements here. And let's face it; we have come up with the innovation on the production side too.

So to be able to transfer that here, I think there's a strong sense in Congress that we have to redirect overall what we do here in the United

States as far as manufacturing and production capacity, and we need to look clearly at the policies that the Congress and the U.S. government put forward to level the playing field, so to speak, so that our companies and manufacturers can compete in this global marketplace.

So globalization, I think has to also look at how do we advance production and manufacturing capability here in the United States.

COMMISSIONER MULLOY: Thank you, Congressman.

We're going to be looking at a lot of these issues, as our Chairman announced, and we'd be very pleased to be of whatever assistance we can to you and your staff.

MR. WITTMAN: Well, that would be great, and we are intensely interested in this, as well as other members of Congress, who see this as a challenge for us to reposition ourselves in the global marketplace to make sure that we don't lose our predominance as an economic power.

COMMISSIONER MULLOY: Thank you.

HEARING CO-CHAIR BARTHOLOMEW: Thank you, Congressman Wittman, both for your time today and for your leadership on the Armed Services Committee, in particular.

MR. WITTMAN: Thank you.

HEARING CO-CHAIR BARTHOLOMEW: With the recent test of the stealth fighter in China, some of our leading military people said that they were surprised that China was as far along as it was, and I've said before and continue to say the only thing I find surprising is that we continue to be surprised when they make these advances.

So thank you very much. We really look forward to working with you as we move forward on these issues.

MR. WITTMAN: Commissioner Bartholomew, thank you so much. I appreciate the opportunity to come and testify. I look forward to continuing the communication, and I would agree that we should never be surprised by the things that are going on there and the commitment and resilience of the Chinese, and if we underestimate them, I'm afraid it's at our own detriment.

HEARING CO-CHAIR BARTHOLOMEW: Great. Thank you.

MR. WITTMAN: Thank you all so much.

HEARING CO-CHAIR BARTHOLOMEW: Thank you so much.

MR. WITTMAN: And stay in touch, and we will do the same.

PANEL II: CHINA'S ACTIVE DEFENSE AND ANTI-ACCESS STRATEGY

HEARING CO-CHAIR BARTHOLOMEW: Great. Thank you.

All right. We can have our panelists from the first panel come back

up, and thank you again for your patience with your flexibility.

I'll finish introducing Ms. Mastro, who is going to provide context for us today for understanding China's access strategy.

After she testifies, we'll have Dr. Roger Cliff, who is a repeat performer here in front of the Commission. He's a Senior Political Scientist at the RAND Corporation specializing in security issues involving China.

Among his many publications, Dr. Cliff was the lead author of the influential RAND study "Entering the Dragon's Lair," which takes a comprehensive look at China's anti-access strategy.

Finally, we have Cortez Cooper, who also has testified before us, who joined RAND in April 2009--I think RAND is heavily represented on our panels today--where he provides assessments of security challenges related to China for a broad range of U.S. government clients.

With extensive prior experience at the U.S. Pacific Command, Mr. Cooper will provide insights about China's ability to conduct joint operations in support of anti-access operations.

Each witness will have seven minutes to make their oral statement. Ms. Mastro, we'll go ahead and start with you.

Thank you.

**STATEMENT OF MS. ORIANA SKYLAR MASTRO
DOCTORAL CANDIDATE, PRINCETON UNIVERSITY,
PRINCETON, NEW JERSEY**

MS. MASTRO: Thank you, Commissioner Bartholomew, thank you, Commissioner Wortzel, for the opportunity to testify this morning.

In my testimony, I will discuss the Chinese concept of "active defense," how the United States is currently responding to these challenges, and what more can be done. But first I should note that while I have several professional affiliations, the views I express here are entirely my own and do not reflect the opinions of any organization or government agency.

The term "active defense" appears in the National Military Strategic Guidelines for the New Period. These are basically overall principles and guidance to plan and manage the development of the Chinese armed forces. Active defense is the operational component of these guidelines which posit that China will only engage in war to defend its national sovereignty and territorial integrity. In light of these goals, China is fielding capabilities designed to deter, deny, disrupt, and delay the deployment of U.S. forces into the theater in case of conflict. U.S. observers and strategists, therefore, conceptualize China's "active defense" strategy as an anti-access and area-denial strategy. This is all just to say that China's "active defense"

strategy covers a broad range of Chinese strategic thinking. I find it useful to conceptualize four interrelated pillars of the strategy:

First, political, exploiting perceived weaknesses in political support and resolve of U.S. allies and friends to keep the United States out.

Second, geographic. Increasing the distance and time required for U.S. forces to enter the theater.

Third, military. Degrading the U.S. military's ability to penetrate anti-access environments.

And fourth, for lack of a better term, self-restraint. Making involvement so costly that the United States opts out of responding in a given contingency.

For several years, U.S. analysts have focused mainly on the geographic and military aspects of anti-access. In terms of the geographic pillar, the focus of Chinese writings on network attack, as well as their 2007 anti-satellite (ASAT) weapon test, may imply an enhanced ability to delay U.S. forces.

Aspects of the military pillar have changed in recent years as well. Five years ago, China may have been solely focused on applying this asymmetric strategy to a Taiwan contingency, but it seems that they've recently extended the same logic to potential conflicts in the South or East China Seas.

Another major change in their military pillar is their military reach. The PLA now has systems that can reportedly engage adversaries up to 1,000 nautical miles from the PRC coast. Chinese missiles can now strike targets well beyond what Chinese strategists refer to as the "first island chain" and can even hold the second island chain at risk.

The current U.S. operational response to these developments relies heavily on the deployment of anti-ballistic missiles and the development of operational concepts such as AirSea Battle. We've also identified vulnerabilities in fixed basing. But to present a significant survivable crisis-stabilizing force posture given the enhanced threat environment, progress in hardening, dispersal, warning and active defense at our regional facilities is still required.

In general, while I agree that the United States should protect its personnel and assets against missile strikes, I fear we are too narrowly focusing on the military and geographic pillars of China's strategy.

This is problematic given that at the heart of China's strategy lays Sun Tzu's idiom, "To subdue the enemy without fighting is the acme of skill." This saying reveals a fundamental truth. While it is necessary to respond to PLA militarization by fielding new aircraft, ships and weapons or even employing new operational concepts, such as Air-Sea Battle, those are not sufficient to address these political and self-restraint pillars of China's

strategy.

I would go even further to say that these two pillars are the most important, given that China is willing to accept military defeat if it can achieve its political objectives anyway.

Ultimately, we need to accept that in a conflict with China we are never going to be able to fully protect U.S. forces and keep them out of harm's way. The global commons will continue to be a contested environment regardless of our ability to counter new Chinese weapons and platforms. We must decide whether we are willing to operate in a higher-threat environment, especially in the case of low-level provocations, or if unwilling to take the risk, then we voluntarily take ourselves out of the game.

I fear that by focusing the discussion too much on how to operate with low costs, we may give off the impression that the fourth pillar, access through compelling self-restraint, is highly effective. This greatly undermines deterrence and creates an environment where the incentive to preempt becomes a central destabilizing feature of any crisis.

This brings me to the first balancing act I think Washington must accomplish: the United States needs to learn to accept risk without being reckless. This is obviously easier said than done. China is masterful at chipping away at U.S. credibility through a course of diplomacy. It is, as Thomas Schelling writes, "the sheer inability to predict the consequences of their actions and to keep things under control that can intimidate." Because China introduces risk for exactly this reason, attempts to reduce the risk of escalation, though a necessary U.S. effort, are unlikely to produce a marked change in Chinese behavior.

This is where the second balancing act comes in: permit the possibility of escalation while promoting stability. To credibly signal to China that we will not opt out of a conflict, we must communicate the willingness to escalate to higher levels of conflict under certain conditions. Though it seems counterintuitive, only if a threat to escalate is credible will it be possible to stop armed conflict before it starts, or at the very least keep it at an acceptably low level.

We need to ensure that our attempts to increase force survivability do not feed into China's attempts to limit our political access. For example, if our response to the threat environment is to station our platforms and personnel farther from the theater, though this may reduce the effectiveness of China's military pillar, it puts our commitment to the region in question. However, if we take a tough stance, increasing our observable military presence and thus our vulnerabilities, China may react strongly by punishing American allies and partners, many of whom count on China as their number one trade partner.

This brings me to the third and final balancing act I think Washington must accomplish: engagement without encirclement. American strategists must reexamine our approach to regional basing to ensure it strengthens America's relationship with its allies and partners, reliably facilitates U.S. power projection, but also addresses China's concerns of containment.

In conclusion, in addition to new technology, new platforms, and new operational conflicts, we need to accept the risk without being reckless, permit the possibility of escalation while promoting stability, and promote engagement without encirclement if we are to counter China's active defense strategy. As Henry Kissinger wrote in his Washington Post op-ed, avoiding conflict implies subordinating national aspirations to a vision of a global order. But before this can be done, we need to have a frank discussion about what our vision of the global order is and for the United States, as a Pacific power, in particular.

The goal must be peace and stability in the region without sacrificing U.S. national interests. A coordinated diplomatic strategy which signals our resolve and improves our access to third parties is not only necessary to complement our military strategy, it's also more cost effective. As an American, I want the military to have the resources it needs to protect U.S. interests. However, as a part of the lost generation that is experiencing the highest rate of unemployment since the Great Depression, I also want the United States to get its domestic economic house in order. As a Mandarin speaker and acute China watcher, I am personally invested in ensuring that we stay away from conflict, but the rise of neo-isolationist urges given the current economic conditions may prove to be an even greater strategic challenge to our national interests in future years.

Thank you, again, for the opportunity to testify and thank you all for your service.

[The statement follows:]²

HEARING CO-CHAIR BARTHOLOMEW: Thanks very much.
Dr. Cliff.

**STATEMENT OF DR. ROGER CLIFF
SENIOR POLITICAL SCIENTIST, THE RAND CORPORATION, ARLINGTON,
VIRGINIA**

DR. CLIFF: Thank you.

That was an excellent presentation by Oriana to give us some background on China's active defense strategy. In my written testimony, I

² [Click here to read the prepared statement of Ms. Oriana Skylar Mastro](#)

discuss this in some detail, but in the interest of time, I'm going to focus here on those elements of the active defense strategy that have specific implications for U.S. access.

As we said in our 2007 publication to which Commissioner Bartholomew referred, the Chinese military publications that we analyzed at the time didn't really explicitly refer to an anti-access concept, but what they talked about were ways in which a militarily inferior country could defeat a militarily superior country, and we would probably group those under the rubric of asymmetric strategies, but a major subset of those are things that we recognize.

Even though they don't group them together as such, we would recognize as anti-access types of operations, and these can further be subdivided into three categories.

One is attacks on adversary airbases and aircraft carriers. A second is attacks on adversary logistic systems, and a third is attacks on adversary systems for the collection, processing and dissemination of information, or C4ISR systems, as we refer to them.

If we look at the first of those, damaging enemy airbases or aircraft carriers would have the effect of denying enemy combat aircraft the ability to operate within the theater. Even if they were, in fact, present in the theater, they could be trapped on the ground because the runways from which they need to operate are destroyed or because there's no fuel for them to use to fly, and so even though the aircraft might be in the theater, they would be denied access to it in a combat sense.

Moreover, successful attacks on either airbases or aircraft carriers would likely have the effect of deterring additional deployments of aircraft into the theater.

When we look at attacks on logistics facilities, they talk about a variety of things, including those logistics facilities which are at airbases, which I've already mentioned, such as fuel storage facilities, but they also talk about attacking the transport and aerial refueling aircraft, support facilities and personnel, also naval troop transports, cargo ships, tankers, underway replenishment ships, and so on, and naval ports and associated facilities, and other facilities for the storage of fuel, munitions and other types of supplies.

Also including attacks on ground transportation systems such as railroads, bridges, and trucks and trains and fuel pipelines. Again, these attacks could have the effect of either preventing forces from getting into the theater in the first place or from being able to operate effectively once they arrived in the theater if successful.

And the third category of types of operations that could potentially have anti-access effects is attacks on C4ISR systems although these, again,

wouldn't necessarily prevent forces from operating or deploying into the theater.

If the theater commander was not able to effectively communicate with his or her forces, was not able to provide them with early warning information, the commander might decide that it would be better to withdraw them from the immediate proximity of China and operate from farther distances where he could communicate, command and control, and so on, more effectively.

I should say that this analysis was based primarily on publications of the Chinese military, but it's clear that these are not just the academic musings of military theorists. If you look at what China has been doing over the past decade and a half, they've been systematically acquiring all of the types of capabilities you would need to implement these types of concepts.

These capabilities include ballistic missiles, cruise missiles, long-range strike aircraft, long-range surface-to-air missiles, quiet submarines, supersonic anti-ship cruise missiles, and, as we have recently discovered, stealth aircraft. "Discovered" is too strong a word--as China recently revealed to us. We were aware certainly of their attempts to develop a stealth aircraft, but this is the first time they gave us a good look at it, at least those of us operating in the unclassified realm.

When you look at the capabilities they've been developing over the past decade or so, you have to be impressed by the systematic and methodical way which they've gone about acquiring those capabilities. This is clearly a military that's focused and serious, that has explicit and clear operational goals in mind, and is going about doing its best to acquire the capability to achieve those goals.

Although we in the U.S. are going to be focused on the conflicts in Southwest Asia for the near future, and this is as it should be, we at the same time need to make sure that we don't neglect the rising capabilities of China and the potential threat they represent to U.S. interests.

I could say more, but I will yield the rest of my time to Cortez but look forward to any questions you may have.

Thank you.

[The statement follows:]³

**STATEMENT OF MR. CORTEZ A. COOPER
SENIOR INTERNATIONAL POLICY ANALYST, THE RAND CORPORATION,
ARLINGTON, VIRGINIA**

MR. COOPER: Thank you very much, Commissioner Bartholomew, and

³ [Click here to read the prepared statement of Dr. Roger Cliff](#)

to the other distinguished members of the Commission; thanks very much again for giving me the honor and pleasure to once again testify before you.

My oral testimony today will briefly examine three areas of concern regarding U.S. security and freedom of access and maneuver in the Asia-Pacific region.

First, China's perceived strategic imperative and objectives for developing anti-access, or, as they call them, "counter-intervention" capabilities.

Second, the People's Liberation Army's approach to developing doctrine to achieve anti-access objectives.

And finally, the design of technical and organizational frameworks to marry military capabilities to these objectives.

As a continental power with a number of border stability challenges, the People's Republic is faced with an extremely complicated peripheral security environment, both on the continent and in immediate seas. At the same time, its global presence and interests are growing in scope and importance. Chinese military strategists and security experts from at least the 1991 Gulf War forward have stressed the development of capabilities to adapt to this threat environment.

China's coastal economy and growing engagement in the global market feed a particular sense of vulnerability in the maritime domain. PRC leaders viewed the U.S. response to Beijing's coercion of Taiwan in the mid-1990s through this prism of inadequacy, particularly given the importance of the maritime domain and a perceived vulnerability in that domain for China, and especially given the perception that in regard to Taiwan, China's military had little capability to respond to a conflict that might involve a vastly superior U.S. military.

Most of China's civil-military leaders apparently believe that this places them at strategic loggerheads with the U.S., engendering a fundamental mistrust regarding Washington's position toward China's reemergence as a great power. For example, China's most recent Defense White Paper, "China's National Defense in 2008," is the first of six to date to assert that the U.S. exerts a negative influence on Asia-Pacific security, overlooking a half century of evidence to the contrary.

A major tenet of China's security strategy is to build anti-access capabilities to protect broader interests that it sees as threatened by a technologically dominant maritime power. Under Jiang Zemin's leadership, Party guidelines for the PLA prioritized information warfare and long-range precision strike capabilities to deter or delay U.S. intervention in a Taiwan conflict. In the transition from Jiang's administration to that of Hu Jintao, emphasis on developing anti-access concepts and capabilities has expanded. The operational advances that appear to have benefitted from the highest

priority of effort in Hu's tenure are those pertaining to anti-access objectives, particularly the fielding of precision strike and information warfare capabilities.

The PLA's authoritative modern work on military strategy, *The Science of Military Strategy*, refers to anti-access concepts as counter-intervention operations that organize all the services to jointly attack adversarial command, intelligence and communication systems and to disrupt an enemy's air sortie generation capability and wear down and contain his air forces. For the PLA, these concepts are translated to doctrine through the development of campaign guidelines, and these guidelines drive capabilities development. Missions pertaining to anti-access operations are found across various campaigns in China's doctrine, but the Joint Anti-Air Raid Campaign and the Joint Firepower Campaign provide the essential doctrine for counter-intervention operations.

The Joint Anti-Air Raid Campaign centers on the fielding and operation of an integrated air defense covering the mainland of China, attacks on adversary airbases and aircraft carriers, and extension of air defenses beyond China's borders through employment of fighters, anti-aircraft systems, shipborne surface-to-air missiles, and airborne early warning and command assets.

The Joint Firepower Campaign describes the concepts for integration of air and missile precision strikes required to support anti-air raid operations and other campaigns. The extension of these capabilities from peripheral waters out to as much as a thousand nautical miles from China's coast is becoming a reality as an over-the-horizon targeting network begins to take shape.

In modern warfare, a weapon and its wielder are inextricably tied to information, decision and fire control networks; a "system-of-systems," as both Western and Chinese strategists point out. The PLA system-of-systems approach appears to be focused on two key tenets: first, to develop and employ an integrated platform or network for rapid joint war zone information collection, fusion, dissemination and command decision; and secondly, to develop task-based organizations to conduct integrated joint operations enabled by this platform.

The PLA heavily prioritized the first of these two objectives in the recently completed five-year program, and accounts of recent training indicate that they have achieved some progress. Progress on the second objective is less evident. The integrated platform to which the PLA aspires and has reportedly begun to operate is more than just a compatible cross-service communications network. It reportedly seeks to provide advanced software and hardware to fuse a suite of battlefield operating systems pertaining to command and control communications, electronic warfare, a

common operating picture of friendly and enemy forces, targeting data, and logistics, providing commanders at all levels with an informational tool kit to make rapid decisions.

However, even with an advanced C4ISR and targeting network, joint operations will collapse unless officers, NCOs, and units are organized and trained for such operations. A review of Chinese military newspapers and other sources indicates that the PLA has not ultimately decided how to define and conduct integrated joint operations as part of an overarching system-of-systems approach--only that they do, in fact, plan to do it and have it in their priority plans for the next few years.

China's peacetime military region structure does not clearly reflect the command and control requirements for anti-access mission sets described in joint firepower and anti-air raid doctrine. These regional commands could transition to a joint theater or war zone headquarters in wartime, but Chinese writings indicate a potential desire to build joint organizations below the war zone or theater level, and to tie these organizations to specific joint missions to gain at least temporary information, air and sea superiority in a regional fight. There is little evidence that the PLA has formed and exercised such formations at this point.

In 2009, the General Staff Department of the PLA reportedly identified a set of major missions for military training that included mission-specific research and practice in campaign planning and joint command. For 2010, a PLA official stated that joint training on an advanced information system was a major goal for the year and for the five-year period to follow. These media reports and the documents they reference map out a still nascent but high priority effort to test hypotheses regarding joint command and operations and to adapt best practices pursuant to lessons learned. Based on previous information regarding the system-of-systems approach, this would require the PLA to exercise both joint command structures and the integrated command platform that enables joint operations.

The PLA appears to be on the way to employing a joint, automated battlefield management network and has fielded a suite of weapons systems capable of accomplishing the missions required by joint anti-air raid and firepower campaign doctrine. The PLA is less advanced in determining the joint force structure and lines of command to employ these capabilities but has established training goals for the next ten years to indicate a concerted drive to test and determine the best organizational approach.

PLA General Staff directed advances in integrated C4ISR and targeting, joint organization and joint training may well give the PLA by 2020 the capabilities needed to execute a comprehensive anti-access campaign against U.S. forces operating in Asia.

Thank you.
[The statement follows:]⁴

PANEL II: Discussion, Questions and Answers

HEARING CO-CHAIR BARTHOLOMEW: Thank you very much.
First question will be my co-Chair, Commissioner Wortzel.

HEARING CO-CHAIR WORTZEL: This is primarily for Ms. Mastro, but Dr. Cliff and Mr. Cooper, if you have anything to add to her response, I'd be happy to hear it.

How does the PRC execute and pursue what you describe as the political aspects of China's strategy of exploiting perceived weaknesses in political support for the United States and undermine the resolve of U.S. allies?

MS. MASTRO: I think a good example of this is to look at the 2009 Impeccable incident. One of the main things I'm concerned about is the fact that China takes these lower level exhibition-type of military actions, and the United States doesn't have a clear response to that.

So in 2009, you have what is ostensibly a Chinese fishing trawler engaging in aggressive behavior towards the Impeccable, a U.S. naval ship. What I've seen, at least in my experience with the military, is that there tends to be a focus on these great battle scenarios, and they're less adept at planning for and responding to these low-intensity conflicts that basically characterize much of Chinese coercive diplomacy.

And so in my discussions with representatives in the embassies of our regional allies, they're not completely assured by our responses to some of these lower-level provocations. The idea here is that at the lower levels we keep on stressing safety and crisis stability, through, for example, the MMCA talks. Though it is important for us to tell third parties that safety is our primary concern, we must keep in mind that China, as the weaker party, introduces risk on purpose to make it such that inadvertent escalation is possible.

I think we are trying to convey to the region and to our allies and to potential friends is that in a bigger maneuver, such as a sinking of an aircraft carrier, there will be a U.S. response. But, they may believe that over time due to anti-access measures and increasing the threat environment, we'll move platforms a little farther out to Guam; we will perhaps not engage in exercises in certain areas that we know are higher risk.

By giving in to some of those demands either explicitly or implicitly, I

⁴ [Click here to read the prepared statement of Mr. Cortez Cooper](#)

think this might signal to our allies that if the costs are high, in many perhaps lower-level situations, we will not respond.

For example, the Chinese taking of one of the rocks of the Spratly Islands, are we going to send the majority of our Pacific fleet over to deal with that? Now, that might be our plans. I'm not sure. But that sort of maneuver is not credible, at least to me sitting from the outside, and I don't think it's credible to the Chinese, and so I think our allies are concerned that if we don't respond to some of these lower-level provocations, that over time it's just going to become the status quo, and we won't respond to higher ones as well.

HEARING CO-CHAIR WORTZEL: When we lost the Pueblo to the North Koreans, we switched all our ship-based signals intelligence collection to combat ships. Should we do similar things with our maritime reconnaissance?

MS. MASTRO: I think the issue of how we should deal with reconnaissance and surveillance is an important one. Part of it, of course, is operational, that we want to be sure that we can continue to operate in these regions, but just like you might have the question of what information do we actually gain, I would say that even if we don't gain good intelligence from some of these or if this isn't our primary source of intelligence, the fact that the United States continues to operate in the regions is a sign to the allies, and it's also training and practice for our forces there.

So in terms of the operational components of what we should do--should we switch over our comms to combat--that's not something that I personally am qualified to comment on, but I do think that we should be giving some more thought to these lower-level provocations and to how we can credibly signal our resolve to remain a Pacific power in the future.

HEARING CO-CHAIR BARTHOLOMEW: Okay. Commissioner Wessel.

COMMISSIONER WESSEL: Thank you, all--Ms. Mastro, for your first appearance; gentlemen, for your return appearances--and your continuing help and policy advice information to this Commission.

I unfortunately am coming away confused from this panel, and not necessarily by your testimony, but confused as to what U.S. strategies are. Ms. Mastro, your integrated assessment of China's policies leaves me wondering whether the U.S., in fact, has an integrated approach?

You talked about engagement without encirclement. At times it appears that our engagement is yielding empowerment, if you will, for the Chinese, that they view our goal of minimizing conflict as a corrosive opportunity for them to enhance their own power at the cost of U.S. interests. We talked about, and we've all discussed over time, cybersecurity and other issues, and the fact is that we are integrating Chinese equipment into our own networks and therefore creating problems.

We at a national level have failed to address the question of increasing U.S. foreign direct investment into China, and as we have looked at somewhat, with the help of some of the panelists, the question of what's happening in aerospace, the leakage from the commercial to the military sector that probably helped them field the stealth fighter, how would you assess U.S. policy?

Do we have an integrated approach that addresses, if you agree with Ms. Mastro's integrated assessment, do you see an integrated response or policy vis-a-vis China from the U.S. government?

Each of the panelists, please.

MS. MASTRO: I know there's a lot of really great people that have been in the field and focused on China much longer than I have, and so I mean no disrespect when I say no, I don't think there is an integrated approach. I think primarily the problem right now is we focus too much on the bilateral relationship. For me, right now, third parties and access to third parties is key either in the diplomatic realm when we're dealing with regional institutions or the U.N., but also in the military realm.

If you think of a lot of the contingencies that perhaps military planners are thinking about beyond Taiwan or protecting freedom of navigation in the South China Sea, access is also about basing, and it's also about third party supporting freedom of navigation and supporting the U.S. position.

So I think the first thing I would say is that we need to focus more on the third parties, and also in terms of the encirclement strategy, China has been more aggressive since 2008, and some people have referred to this as being beneficial to the United States because it does open up the eyes of some of our allies and friends, and it's brought them to the United States, but personally I think it's important for U.S. allies and friends to have better relations with China, this is part of countering the political access pillar. What I see China doing much more than conducting offensive military actions is that they very much engage in bilateral coercion.

I can imagine that they limit our access to the region by, for example, using missiles more as terror weapons to signal to countries that might allow us to base or deploy or use their facilities in a contingency, that the United States cannot protect them, and so if China has better relationships with its neighbors it might be less likely, even in a situation in which those neighbors are supporting the United States in certain contingencies, to engage in offensive aggressive actions against them.

So the first thing I would say is I think our approach needs to focus more on third parties, their reactions, how the South Koreans are thinking about this anti-access threat, how the Japanese are, how the Australians are.

And, lastly, I would just say that outside of the realm of overt conflict, the coercive diplomacy that China engages in, they prefer these bilateral sort of private tactics. The Impeccable incident is a perfect example. They prefer that third parties in the region do not know what they are doing, in other words that it stays bilateral so they can simultaneously promote this strategy of reassuring their neighbors.

They've overplayed their hand in the past two years, but I think what the United States needs to do is not allow them to pursue their preferred method of coercion, which is bilateral private signaling of resolve.

We need to make it clear that we're going to make these incidents public, and also we need to tell our allies and friends in the region, if you support the U.S. freedom of navigation at sea, and you want to counter this Chinese message that it's only benefiting U.S. hegemony and doesn't benefit anyone else, which is obviously not true, but is a message they're trying to promote, then they need to come out as well and support the U.S. position on UNCLOS and support some of our initiatives.

COMMISSIONER WESSEL: Dr. Cliff or Mr. Cooper?

DR. CLIFF: Let me just focus on the defense piece of that puzzle. I think Oriana handled the broader U.S. strategy towards China fairly well.

If we look just within the defense sector, I would say that we have not been focused on--I talked about how focused and serious the Chinese modernization effort has been. We have not had a focused and systematic effort to counter the capabilities that China is acquiring.

In my opinion, there is no reason why--I understand that we are focused on the wars in Southwest Asia right now, and you know I think a lot of credit has to go to Secretary Gates for at least getting the Defense Department to focus on that, starting in 2006. But there seems to be a lot of programs in the U.S. Defense Department that are based on concepts that were developed a couple of decades ago that continue on auto-pilot and aren't really relevant either to the types of counterinsurgency operations we're fighting in Southwest Asia nor to a high-end military conflict like we're fighting or not fighting with China and hope never to fight with China, but what we might potentially encounter.

We spend about \$150 billion a year on acquisition if you combine both R&D and procurement. By my own estimates, China probably spends about \$30 billion a year. We should have within that \$150 billion enough room, without increasing defense spending, without necessarily increasing defense spending, to redirect some of those resources to programs that are optimized towards countering the types of capabilities that China is developing.

And I know there are some things going on under the radar and so on, but when you look at the major muscle movements of the U.S. Defense

Department, my personal opinion is we have not yet turned this ship around and headed it in the right direction that it needs to be, given the rapidity with which China's military capabilities are increasing.

MR. COOPER: Just briefly; I guess it falls to me to be a little bit more optimistic. I believe that in most areas, both on the political side of the ledger, which Oriana gave a great account of, and in some of the systems and capabilities--specific defense areas that Roger mentioned, we are, I think, making some headway. And we perhaps have made more over the past couple of years, gaining a better understanding of the capabilities that China has been developing. In some cases we've been surprised--but I also don't find it very surprising, having a better understanding across the board of what that is and responding to it.

I think that U.S. responses to some of the coercive and aggressive posturing that we've seen from China as they begin to figure out their role in the region and globally have been very beneficial. To make them understand that there will be a U.S. response to anything that would challenge our freedom of access for maneuver in the region is very critical.

I know there have been many both in the government and outside of it who have made a great deal of hay about China's strategic imperative being based on a fear of containment, and on the surface sometimes our alliance structure might appear that way to the Chinese. I think we make far too much of that sometimes. We do not have a containment policy, but we must be very clear that that doesn't mean we're going to back away from protecting our interest in the region.

And I think both politically and in the security realm we've done a bit better job of that; but there are certainly areas that I think have been covered well here that indicate we obviously we need to refine our approach a bit more.

COMMISSIONER WESSEL: Thank you.

HEARING CO-CHAIR BARTHOLOMEW: Commissioner Shea.

COMMISSIONER SHEA: I want to thank all three of you for being here.

Ms. Mastro, your concept of these three balancing acts seems highly sophisticated and very nuanced to me, and I just question whether people in the United States government are capable in acting in such a sophisticated and nuanced way across departments. So I would encourage you to think about going into government service so we could have someone who could sit there and work it all out.

In terms of the question that was asked about what the U.S. response to China's active defense policy or anti-access policy, I've heard the concept of Air-Sea Battle, and I was wondering if any of you could, for a lay person, describe what the AirSea Battle concept is?

And, two, this notion of the U.S. imposing a distant blockade in

response to aggressive acts. Does the U.S. have the capability of imposing a blockade in the Strait of Malacca, and is that possibly an appropriate response to Chinese anti-access activities?

DR. CLIFF: I'll take the one about the blockade. Although I'm not an expert in this area, I have seen some analysis that was done by Bill Murray, not of Hollywood, but of the Naval War College.

[Laughter.]

DR. CLIFF: And it's not funny either.

COMMISSIONER SHEA: No.

DR. CLIFF: Which says basically, yes, trying to board and inspect every ship that passes through the Strait of Malacca is actually logistically impossible.

There are more ships passing through them than the entire U.S. Navy could stop and inspect. Moreover, I don't know what happens after a ship passes through the Strait of Malacca. In fact, many times, cargoes change hands while the ships are en route so just because an oil cargo was say headed for Japan and then a Chinese bidder buys it from the Japanese buyer and now all of a sudden it's headed towards China. So that kind of distant blockade is considered probably infeasible.

A near blockade is another matter, and now you're back into my anti-access world of, okay, you can try to do that, but you're going to have to fight the Chinese military, which has been systematically acquiring capabilities to try to counter U.S. air and naval capabilities within about a thousand miles of Chinese territory over the past decade and a half.

So I haven't seen any good analyses of a more near blockade, but the distant blockade appears to be a difficult one.

And on the AirSea Battle, unfortunately, I'm not well-enough informed to answer that one.

MS. MASTRO: Before I talk about Air-Sea Battle, I just want to make a quick comment about the blockade and more the strategic implications. I would just say that before the United States considers such an action, we have to consider the consequences and whether or not that's a path we want to go down.

I think lessons from World War II and oil embargoes might demonstrate that pushing a country into the corner leads to escalation of conflict in a way that is not beneficial for the United States. AirSea Battle, from my understanding, is an operational concept that hopefully will help the U.S. to counter Chinese efforts to undermine our precision and our mass in a certain contingency.

The idea is that the Air Force and Navy want to go beyond jointness; though they can operate together, there are many situations in which we can improve our effectiveness at mass and precision. If certain platforms

can communicate with others, this will increase our military effectiveness. Currently many platforms cannot, which is actually quite surprising to people that don't focus on this concept, you might think that a surveillance aircraft that's taking information about, for example, where missile launchers are can then communicate back to a submarine so it can launch a strike against some of these systems, but that's actually not the case right now as far as I understand it.

And so I think the concept of AirSea Battle is trying to make it such that we increase certain redundancies so if our cyberspace is attacked, a lot of these contested environments, cyberspace, C4ISR networks, that we have the networks and the strengths of both the Navy and the Air Force to counter these threats.

COMMISSIONER SHEA: Thank you.

MR. COOPER: Like Roger, I don't have any specific knowledge of or comments to add on AirSea Battle or really even on the distant blockade. I agree with both of the other panel members.

But I think in looking specifically at anti-access capabilities that the Chinese have developed and are developing with great success, at both the operational--and I think we've talked a little bit about the strategic level, the political level, if you will--but at the operational and the tactical level, it's not difficult to identify the specific key capabilities that the Chinese are developing.

They look at our reliance, especially as we have to deploy over long distances, on advanced C4ISR capabilities in order to command and control a battle or any operation that we conduct as we respond to a regional crisis, and they believe and recognize that as a vulnerability. But as they develop the systems required to conduct joint operations between Second Artillery, PLA air forces, PLA naval forces in an anti-access/area-denial sea control operation, they develop these same vulnerabilities.

And our understanding at both the operational and the tactical level of the specific Chinese capabilities that we need to hold at risk, we can identify those; and I think that in areas like integrated air and missile defenses, we absolutely have to be very, very technologically advanced and maintain technological edges in developing those. And I don't just mean some of the standard missile defense systems that we have now, but the ability to integrate those with C4ISR networks that connect with our allies, the ability to employ systems that aren't thought necessarily as specific missile defense or air defense systems, but might be used in that role.

Some other things are very important. Anti-submarine warfare, counter-mine warfare falls into this category. So these are things that operationally you can do to make sure the Chinese know that they're not going to dominate the information sphere in a fight; and then tactically

based on the specific systems that they come to rely on, they create their own vulnerabilities.

COMMISSIONER SHEA: Thank you.

HEARING CO-CHAIR BARTHOLOMEW: Thanks.

Commissioner D'Amato.

COMMISSIONER D'AMATO: Thank you, Madam Chairman, and I thank the panel for an interesting and sophisticated discussion on these perceptions.

I want to pursue the third of the balancing acts that Ms. Mastro mentions on this, engagement without encirclement, and the question of addressing Chinese concerns of containment. I'm just concerned about how one would do that and whether or not that's a realistic proposition.

I remember when this Commission was first created, I had lunch with an officer of the Chinese Embassy named He Yafei. He was in charge of the U.S. desk there, and he announced to me as we sat down that they were deeply concerned and opposed to creation of our Commission because they regarded that as a threat to the Chinese; an investigation of the Chinese was totally inappropriate.

In that respect, I'm afraid that what you've done this morning is participate in encirclement position against the Chinese, and it would be tainted that way by Mr. He Yafei, but it seems to me that the Chinese are very practical. They know and are pursuing methodically the building of national power and have participated themselves in the kind of overreaching aggressive strategy we've seen, maritime strategy we've seen, and even a kind of embargo position that they've taken on minerals to Japan and the rest of us as a mechanism of displeasure and as a mechanism of foreign policy. The withholding of minerals is sort of the same thing as withholding of oil.

So my question is whether or not it is realistic to make a proposition that we need to address Chinese concerns over encirclement or containment because it seems to me everything we do is in a sense encirclement to them, and therefore that's a proposition that may not be possible.

I just thought I would put that out and see whether or not the panel had any further comment, Oriana, because we've had this all along. We've had this whole question of whatever we do is encircling the Chinese. So do you give up or do you just continue down that path? How would you address containment under those circumstances when they have that kind of perception?

MS. MASTRO: I would first say I agree with Mr. Cooper's comments about not taking this a step too far. When I first started learning Chinese, the word "baowei" is one of the first you see everywhere. That's a sort of encirclement mentality, and this has been something that they've been

putting out since Mao's time before the Korean War.

The majority of it is a part of a narrative strategy; they probably don't actually believe it, but regardless of what we do, they're going to bring up this containment logic, which, as we all know, there's nothing similar about our relationship with the Chinese to our relationship with the Soviet Union.

We're constantly trading with them. The fact that I can go hang out in China whenever I feel like it, implies the U.S. strategy is not a containment strategy, but what I would say is when I say that we need to address the Chinese concerns, I think I'm looking more at how we deal with third parties. We need to make it clear that it's not a choice, it's not an us against them. It's not a zero sum situation, in which our allies have to side with us on certain things against the Chinese.

So I think the Bush administration approach in its last two years especially was very effective at this, in that they would take a stance and they would say these are the United States' positions, our allies such as with Japan and South Korea especially are very important, but that we want China to be a participant in the region. We don't want China to be isolated; we don't want China to be by itself. We want China to be more involved in the institutions. We want China to have better bilateral relations with a lot of its neighbors. We want China to play an active role in ASEAN.

So I agree it is very nuanced. I think engagement, what it means for some people in Washington is we improve our relations with these countries overtly, explicitly, at the expense of their relations with China, and this can lead to a backlash. It's very difficult that's why it's called a balancing act. But I think it is possible.

But your point about not catering so much to the narrative strategy of the Chinese that we're constantly encircling them is definitely a good point.

COMMISSIONER D'AMATO: Mr. Cooper, do you have any?

MR. COOPER: Just one addition. I agree completely with that. I would say, and, this sounds very egocentric as an American, but I believe that because we're talking about the U.S. position as the preeminent power in the Asia-Pacific and China's rise as a re-emergent power and determining what that means for the bilateral relationship, for the region as a whole, and for the globe, that this really requires more focus on what China's responses and actions and behaviors are rather than on ours--because we have for decades through our alliance structure guaranteed stability in the Asia-Pacific.

So to attempt in some way to change behaviors that are based on historic and traditional successes and stabilizing effects would be a mistake. It doesn't mean that we don't grow and evolve, but it means that as China grows, there has to be behavior that illustrates a drive to develop capabilities in the military sphere that provide more stability in the region

in terms of response to natural disasters, which certainly is part of their Party guidance to military now. That's a good thing, and it offers a lot of opportunities for development.

I think there are a lot of behaviors that would be extremely helpful-- and we have to understand those will in some cases involve the development of military capabilities do wider humanitarian assistance, disaster relief operations, to help with sea lines of communication security in the region, things like that.

So we can't be allergic to all defense developments, but at the same time I believe it's far more incumbent upon the Chinese to show us where that's going than it is for us to change any behavior in order to try to change a perception, as Oriana said, that's been there for so many years.

DR. CLIFF: If I can just throw in a brief anecdote. In early 2006, I was in Shanghai, and I met with an American University professor who was spending a semester at Fudan University, which is the premier university in Shanghai. She was teaching a class in international relations, and she said not one of her students, as far as she could tell, didn't think that the U.S. invasion of Iraq in 2003 was part of a grand plan for encircling China.

So, with those types of deeply imbedded suspicions even amongst the most educated and worldly of Chinese, I agree, I don't think there is much we can do to convince them that our motives are pure and that we have no intention of encircling or containing China because they are not going to believe us.

But as has been pointed out, the fact is we aren't doing that. We trade and invest with China to an incredible degree, and so the Chinese have a stake in maintaining that good relationship with us. So I think it's kind of futile to try to convince them that our motives are pure and good, and I think we need to not restrain ourselves in terms of developing military capabilities and deployments and force postures and so on that counter their perceptions that we are weakening and withdrawing from the region.

I think what Secretary Clinton, her announcement of the U.S. intention to help mediate the disputes in the South China Sea was an excellent move in that regard. There is still a lot of belief in China that the U.S. is in the decline, which kind of surprises me. Yes, we did go through a recession and it certainly hurt us worse than it hurt you, but the U.S. is by no means in decline, and we need to reinforce that to them, that, no, we're not a declining power.

We're still the dominant power in the region, and to make sure that it is clear to them that we are not conceding the region to them, and again I'm concerned by understanding we've had a lot of other things on our plate for the past decade, that we have let the past decade go by and not responded until very recently in the last couple of years, as Cortez said, to the types of

capabilities that China is acquiring.

HEARING CO-CHAIR BARTHOLOMEW: Thanks.

I'm going to take my turn. I think, Ms. Mastro, that this issue of self-restraint, like self-censorship, is an interesting one, and it's sometimes kind of intangible. But what I find myself thinking, as we're going through this, is we have this balancing act so we're on the seesaw or the teeter-totter. Some of you are probably too young to even have played on these things, but trying to maintain that balance, but sometimes it seems that the Chinese government is playing capture the flag on a completely different playground.

And so how much of that, as we try to maintain that balance, is restraining us in ways that are disadvantageous and how do we reconcile the fact that sometimes it seems that there are two different games going on on two different playgrounds?

MS. MASTRO: I guess the first thing I would say about the self-restraint aspect is there's this idea that was very prevalent in Chinese writings for a period of time, which was, this is especially after interventions in Somalia, that the United States was casualty averse, and the way to keep the United States out of a conflict, was to just go out and sink an aircraft carrier, I hope our mil-to-mil exchanges before and hopefully our future mil-to-mil exchanges will get rid of this idea in their head.

I think, it's so destabilizing for the Chinese to believe that if they take preemptive actions, offensive actions, against the United States, and especially against military personnel, that we're not going to respond. And so I think a lot of our behavior at times, if we focus, for example, on only operating in this region if it's low-cost, uncontested, can be destabilizing.

Cyberspace has never been uncontested, for example. We've never had a situation in which there are no leaks, we can fully protect our information in cyberspace, and the maritime environment is becoming increasingly contested.

So I think that this idea that they can preempt with force and that we're going to back down is something that's very destabilizing and falls into the self-restraint pillar.

In terms of the balancing act, China does, knowing that we are constantly trying to balance global interests while they are dealing primarily with domestic and regional interests, they try to take advantage of this and throw us off balance, and this is again why I think third-parties are so key.

A lot of times our response to Chinese actions should not be direct bilateral responses. In many cases, as Dr. Cliff mentioned, these are things we can't control. I think many people in D.C. suffer from misattribution bias. We like to believe that everything the Chinese do is somehow in a

response to something we've done or our policy or our behavior, and as you've mentioned, in many cases, they're doing something for other reasons. They're playing capture the flag on a completely different playing field.

And so if we don't like the Chinese behavior, sometimes if we feel like we cannot shape it, we cannot affect it, the best way is to take the situation as is and look to third-parties about better ways to protect our national interests and shape the environment in which China must make decisions.

HEARING CO-CHAIR BARTHOLOMEW: Dr. Cliff, Mr. Cooper, anything?

MR. COOPER: Just one thing, and that is that I think in order for us to better understand whether those behaviors are actually occurring-- if, in fact, we're engaging in one approach to the relationship with China and what it means to the region, where the Chinese are going in an entirely different direction--is to have a better understanding politically and bureaucratically of how the Chinese system is working, how policy is being formulated for the Chinese.

I think to look at the capabilities developments in the military sphere, to look at some of the bilateral and multilateral relationships that the Chinese have developed and in some cases have manipulated or exploited through coercive measures, whether economic or otherwise--that to simply regard each of those as though they're targeting the current geostrategic architecture at the top of which resides the U.S. is a mistake.

I'm not saying it's always wrong, but I think to respond that way is a mistake. What we perhaps lack, and I think we're getting better at as more young people in America are taking an interest in Chinese politics, policy, and defense developments, is to better understand. The coming generations of Chinese leadership for the Chinese, their political philosophies, policy inclinations, how they're responding to, the shifting of global power structures, and then to really be able to engage them on a more sophisticated basis because of that.

HEARING CO-CHAIR BARTHOLOMEW: I think this is a really important point, which is we all want this to be peaceful, but as you say, Ms. Mastro, essentially as the Chinese government is pushing the boundaries to see what is acceptable and what we will respond to, the whole fact of the matter, that there's a body of literature on area of control and anti-access. The whole fact that we're holding this hearing, I think, reflects some discomfort that this is not necessarily a benign activity that's taking place.

Okay. Vice Chairman Slane.

VICE CHAIRMAN SLANE: Thank you. Thanks very much for taking the time to come.

Mr. Cooper, you talked about maintaining our technical advantage, and Mr. Cliff talked about the 150 billion that the Defense Department is

doing on R&D, and yet we have General Electric turning over their avionics to the Commercial Aircraft Corporation. We have our optoelectronics industry turning over their sensors and lasers through the R&D. We have Microsoft and Intel heavily involved with the Chinese on R&D.

Does any of this give you any cause for concern?

DR. CLIFF: Let's see. I guess I'm the deer in the headlights here. Yes, it does. This is, to use Oriana's analogy of a balancing act, this is a real balancing act that we're faced with. I would just say obviously the commercial technology that's being transferred to China, not just by U.S. corporations, of course, but by corporations throughout the world, is, first of all, aiding the commercial development of China's industry, and, second of all, is probably having some spillover effects in terms of improving its military technology, and in some areas this is more obvious than others.

The dilemma that we're faced with is, first of all, if we were to, for example, totally cut off trade and investment with China or cut off trade and investment in high-tech goods even, now we are sort of edging towards a policy that really does start to look more like containment and encirclement to China, and likely to put us in a more confrontational stance with them, and thereby increase the likelihood of actual military conflict.

That's one consideration. I'm not saying what the right balance is. I'm just saying you have to strike a balance.

A second consideration is that if we don't sell it to them, well, maybe the Europeans or the Japanese or Koreans will, and so we have to be careful that we're not just denying U.S. companies business opportunities in China that benefit businesses from other countries.

The third point I would make is, in many cases, once you burrow under the surface a little bit, you'll discover that these companies that are engaged in, you know, might even have R&D facilities in China or engaged in production operations in China, in many cases, what's going on in China is not cutting edge.

A great example perhaps is the transfer of Spey engine technology to China in 1975, I believe it was, mid-'70s, let's say, and it took China probably 25 years to master that technology, which was already obsolete at the time it was transferred to China, that Rolls Royce had discontinued that particular engine.

These Western companies are smart enough not to give away in many cases their own competitive advantage, and a lot of what they're doing in China is, it may sound high tech, but in many cases actually fairly low-tech assembly operations of high-tech pieces of equipment.

It's something that we need to watch carefully. It's something that the U.S. government needs to monitor and make sure that the best technologies, especially those with potential military applications, are not

being transferred to China. But at the other end of the spectrum, it's impossible to maintain a normal sort of trade and investment with China without some technology transfers occurring. I really think the emphasis for U.S. policy should not be in preventing technologies from escaping the U.S. but investing in our own technologies, both military and civilian, so that we can maintain our advantage over the long run because eventually if China doesn't develop these technologies, other people will and they will transfer them to China.

I really think the emphasis of U.S. policy should be on maintaining our technological edge over China.

Sorry I used so much time answering that question.

MR. COOPER: I would just add one thing; I agree with Roger, you know, as the technological leader, we're going to be a target; and in many cases, it would be to our own detriment to overprotect, to not engage with the Chinese in certain areas of scientific cooperation. But I think what we have to do, and this may be happening, but we need to make sure we are making a formal effort to identify--our government needs to formally identify--those specific scientific and technological areas that are absolutely critical to U.S. national interests, that have to be protected, and then to determine what the threats are to do a threat analysis of that.

I think the cyber realm is probably the one area where if we don't specifically identify where we need to stay ahead and how we have to protect that from cyber intrusions by others, by the Chinese, among others, then we're doing ourselves a great disservice. Those areas need to be formally identified, to recognize the threats and develop the mitigations for them and those mitigations have to be resourced.

HEARING CO-CHAIR BARTHOLOMEW: Okay. With the concurrence of our panelists--it's 12:30--we wondered if you could stay for another ten minutes and answer yet another question? Thanks very much.

Commissioner Mulloy.

COMMISSIONER MULLOY: Thank you, Madam Chairman. I want to thank the panelists for being here and for their testimony.

I want to follow up on questions that were raised by Commissioner Slane and Commissioner Wessel. As I was reading all this testimony for this hearing last night, focused on the military and China's abilities growing in those areas, I was struck that we are the U.S.-China Economic and Security Review Commission so we're trying to integrate and understand how this is all happening.

I was delighted when Congressman Wittman came in here today, and part of the first thing he talked about was the tremendous transfer of wealth and power that's going across the Pacific Ocean from the West to the East. And then, Ms. Mastro, the last paragraph of your testimony, you talk

about the "lost generation," the high unemployment among our youth, the lack of growing opportunities, and you quote Lou Uchitelle, who writes about these issues for the New York Times.

And then, Mr. Cliff, you talk about China's growth in advanced technology over the last ten years, and that surprised you. You mentioned that.

It's very clear to me that China has a strategy; we've run \$2 trillion worth of trade deficits with China since 2001, since they joined the WTO. Much of that imbalance is because foreign-invested companies are producing in China and shipping to the West.

I think we have a problem here, and I don't hear the national security community engaging in this debate. People who raise these issues are always talked about as isolationists and protectionists. I don't think so. I think we got a huge problem. China has a strategy, and we don't.

I think it's really not working out the way we hoped to. I think the imbalance in this relationship is just stupendous, and I think a lot of Americans are very concerned about it, not only in terms of the national security but the economic, and why we have 17, 18 percent real unemployment in this country.

So I just wanted to hear, is there any discussion in the national security community that the way we are running this economic relationship is detrimental to our national security in the long run?

Ms. Mastro, why don't I start with you.

MS. MASTRO: Sir, I think the problem is, at least my experience, those that have extensive military or security expertise aren't trained economists, and so for a lot of people, this is the hardest question.

I personally worked at a Chinese valve manufacturing company as their translator and got to see how Chinese businesses operate, and I decided that the economic realm was too difficult for me to maneuver in and switched to security and defense.

And so I think your question is important, and I agree that the basis of power is economic, and so the United States really needs to start focusing on that. But I'm also a little more optimistic. President Obama said in his State of the Union that, in the United States, we don't memorize equations, we ask the questions of why and how, and from my basic Econ 101, what makes a country grow, what shifts out that production curve is not your ability to make Barbie dolls, it's about innovation and technology. And I still see the Chinese education and training lacking in that.

In terms of the trade deficit, I personally don't find it as threatening because I do agree with the position that this is a mutually assured destruction position. Right. The Chinese could sell off the assets that they have, the bonds that they have. This would harm the United States, but this

would harm them just as much, and I tend to believe the Chinese leadership is pretty pragmatic and pretty long-term in their thinking so they would not go down that path.

But obviously the United States needs to focus more on innovation and technology and hopefully create more jobs. As I mention in my testimony, the New York Times says that apparently my generation now lacks self-confidence because of our inability to get employment. I'm going to be looking for a job myself in two years, and so I really hope the economy takes a turn, but I'm not qualified to advise anyone about how to do that.

DR. CLIFF: First of all, I would say your concern is well-founded. The trade that China enjoys with the U.S., particularly the trade imbalance, which basically represents a difference between consumption and investment, and the Chinese are investing much more, reinvesting much more of their economy every year than we Americans are, and that's a big reason behind the trade deficit that we have with China. So this is a country that is very focused under its leadership through an exchange rate that favors exports and discourages imports, which again discourages domestic consumption and encourages domestic investment.

All this is leading to growth rates in China that are much higher than those in the U.S. where we have a much more consumption-based economy.

So our trade with China certainly contributes to China's overall economic growth and to the improvement of its military capabilities. In 2001, I published a monograph about the military potential of China's commercial technology. That was now ten years ago, but this was a concern that I had identified even ten years ago. As China's commercial technology becomes increasingly integrated in the world trade system, that that's going to contribute to improvements in military capabilities.

And that is happening too. Even 25-year-old or 35-year-old turbofan engine technology, even if it's 20 or 35 years out of date by Western standards, if you haven't gotten to that level yet, then it's still good and new technology to you, and all these things are helping China climb up the technological ladder and the development ladder.

I am just perhaps pessimistic about what we can do about it. First of all, conflict with China may never come, in which case all we would have done is deprive ourselves of huge opportunities for the improvement of the U.S. economy, and as China's economy develops in the future, it's likely to become not just a source of exports to the U.S., but also a market for our exports, as Chinese consumers get wealthier--first of all.

Second of all, if we don't trade with them, other people will. I just returned from London, actually yesterday at a conference on European defense and security, and nobody there is worried about a military threat to China. They're worried about a competitive threat from Chinese defense

industries, and they're trying to figure out how to counter the rising Chinese defense industry, but they're not worried about an invasion or military force from China, and so they don't have the same level of concern that we do in the U.S. about China's improving military capabilities.

I just think within the international trade and investment system, there are limitations on what the U.S. can do in terms of preventing China from having access to the best and most advanced technologies.

HEARING CO-CHAIR BARTHOLOMEW: And I'm going to move on to our final question, last but not least, our Chairman, Commissioner Reinsch.

CHAIRMAN REINSCH: This is just more of a comment. First of all, Ms. Mastro, when you're looking for a job, send me your resume. I'd very much like to be helpful.

On this other issue, I wasn't going to say anything, but this line of questioning compels me. I spent a lot of time in the Clinton Administration interacting with people in the national security sector, and I learned they think about this question a lot, and I think their degree of sophistication is very high.

I spent some time with the Joint Forces Command at one point, and I thought they were thinking about this a lot more incisively and thoughtfully than anybody on the civilian side was thinking about it, which is not a comment on whether getting rid of the Joint Forces Command is a good idea or not. That's not my field.

There's a lot of thought going on, a lot of creative thought. It's not all thought that Commissioner Mulloy would agree with, which may be part of the problem here, but I particularly want to commend the witnesses for making two extremely important points.

One came from Dr. Cliff, which is when you think about this question, you have to think about what the other guys are going to do as well. It's a third-party situation in a slightly different way. It's not just us and the Chinese. It's the British, it's the French, it's the Germans and the Japanese. We're all operating in an economic sphere.

What we choose to do or to not do is going to affect what they do, and we need to think about that as well, and there's a real risk here that we will engage in policies that end up being self-defeating because they're self-abdicating. We take ourselves out of the competitive situation and hand that competitive situation over to somebody else, which not only hurts us economically in the short run but hurts us from a security perspective in the long run, which is what particularly worries me.

I also thought that both Dr. Cliff and Mr. Cooper made a very important point, which is that the real issue is to focus on what we can do and not what they do. What we can do is what we do for ourselves, and the question is how we stay ahead in precisely the sectors that you're talking

about.

I think you have hit that point directly on the head. What we really need to focus on is how we can continue to be better than they are by coming up with new technologies, new systems, and new devices, if you will, that can outmatch whatever they're coming up with.

It's not a question. If you want to comment, feel free, but I just couldn't resist. Thank you.

MR. COOPER: Do we have time? Just one comment. I do believe--not being an economist, I think it's wise for me to agree with my fellow panelists on the previous points--but I think this applies to both this latest comment and to the question earlier. While there is certainly a Chinese economic strategy for maintaining the level of economic growth that the Chinese have determined they need for their domestic stability and their internal economic growth, that strategy's got to change.

That won't hold in perpetuity for the Chinese, and I think that we need to understand that and see evidence for ways in which that strategy will and has to change; and look at how we can potentially cooperate in certain areas, and in other areas approach it as a competition...whatever is best for our interests. But it's going to change, and the Chinese will have to respond to many of the same transnational threats that we've had to respond to.

As they become a power, they're not going to be immune from problems in countries in which they have significant investments. They may have entered those countries with a great strategy--very pragmatic, don't care about the political situation in that country, whatever the case may be--but if the regime collapses in that country or transnational threats emanate from there, the Chinese economy is potentially going to be at risk.

And I think remembering that part of it also helps to frame the debate.

HEARING CO-CHAIR BARTHOLOMEW: Great. Thank you.

COMMISSIONER WESSEL: Was Bill looking for comments from other Commissioners or just the panelists?

COMMISSIONER WESSEL: Okay.

HEARING CO-CHAIR BARTHOLOMEW: As we close out, I am just simply going to say, Dr. Cliff, the Europeans, of course, don't have the same global security role as the U.S. has, and I think that they have benefitted quite significantly from the security umbrella that we have provided. So on the security front, there are certainly some questions there.

I want to thank all of our panelists, again, both for your flexibility and for your very thoughtful comments and for your time, and associate myself actually with Mr. Cooper's comment about the importance of having a younger generation engaged in these issues. We get a lot of benefit out of

it.

I'm also particularly pleased to see talented young women going into some of these security issues. So thank you very much to our panelists.

We will break for lunch, and we'll be back here at 1:20. Thanks.

[Whereupon, at 12:42 p.m., the hearing recessed, to reconvene at 1:25 p.m., this same day.]

AFTERNOON SESSION

PANEL III: CHINA'S NON-TRADITIONAL ACCESS CONTROL STRATEGIES

HEARING CO-CHAIR WORTZEL: Our next panel today will discuss the nontraditional components of China's anti-access or area denial strategy, counter-intervention strategy, as we got from the last panel, including cyberspace, space and the three warfares among other things.

We have two panelists. Dr. Martin Libicki is a Senior Management Scientist at the RAND Corporation and the author of numerous monographs including "Cyberdeterrence and Cyberwar" and "Who Runs What in the Global Information Grid." He'll talk about China's ability to use cyber war as part of its anti-access strategy.

Dean Cheng serves as the Heritage Foundation's Senior Research Fellow on Chinese political and security affairs. He specializes in China's military and foreign policy. He'll provide testimony on China's "3 warfares" doctrine, and how this might support an anti-access strategy.

I should add that Dean has done a lot of work on space and will probably extend his remarks for a few minutes to include some comments on space.

We had a third panelist. He wasn't able to make it in. General, Retired, Lieutenant General (Ret.) Dave Deptula. He provided some great written testimony, and we understand he's going to provide his oral testimony to us, too, but unfortunately he wasn't able to make it in because of the weather.

So with that, Dr. Libicki, we'll turn it over to you.

STATEMENT OF DR. MARTIN C. LIBICKI SENIOR MANAGEMENT SCIENTIST, THE RAND CORPORATION ARLINGTON, VIRGINIA

DR. LIBICKI: Good afternoon,
Commissioners. Thank you for inviting me here.
I'm Martin Libicki from the RAND Corporation. I've been thinking

about cyberwar and strategy for most of the last 20 years on and off, on the basis of which I want to offer two scenarios to illustrate some of the differences between strategic warfare and operational warfare.

First scenario. Taiwan sort of edges towards independence. China decides that they want to do something about it militarily, but China does not want the United States to intervene--for obvious reasons.

So a crisis starts when China hacks into the U.S. power supply and turns off power and lights to the Midwest as if to make the statement, look, if you folks are going to go and intervene in a war in our backyard, bear in mind that all the casualties and all the harm, all the pain, is not going to take place on our side of the water.

You, the American citizens are going to suffer. Knowing this, do you want to intervene in Taiwan?

Now, the question I would ask is: is this a good strategy on China's part? In other words, is the use of coercion in cyberspace such a smart idea? And I would offer no, and I would offer no primarily from this point of view:

If you take a look at the narrative that China puts out over Taiwan, it's what you would expect: Taiwan is a Chinese province. Taiwan is properly part of China. Taiwanese are Chinese. It is only an artifact of history, perhaps imperialism, that Taiwan is not part of China today. If we go rectify this historical mistake, this does not necessarily mean that tomorrow we're going to go after Korea or Japan or Southeast Asia or the Philippines. It's really a very, very local issue.

But once China would try an act of coercion against the United States, that narrative flies out the window because that's not the narrative we hear anymore. The narrative we hear is now we, China, have posed a strategic challenge to the United States. We are a rising power and you are declining power. At that point, the conflict over Taiwan ceases to become a local and regional issue, and it becomes imbued with international and strategic significance.

And if the Chinese understood this, and they understand a great many things, I would have to believe that they would conclude that such an act of coercion under the circumstances is not in their interest.

Let me change the scenario a little bit. There may be a crisis in Taiwan or there are not. But China decides that it has the Taiwanese problems that it has to solve militarily. China concedes that the United States is going to come to Taiwan's defense. So at that point in which the United States would embark over to China, China carries out a very large scale cyber attack on the military databases, military systems that the United States needs to go to war.

My former colleague, Jim Mulvenon, had talked about an attack on the

TPFD, the Time-Phased Force Deployment System. Let's then use that for a proxy. It's probably good enough.

Take a look from the U.S. point of view. First of all--actually from the Chinese point of view. First of all, does this make sense from China? The answer I would argue is it makes a good deal more sense if you think you're going to engage the United States in warfare because if such an attack could, in fact, delay the United States, it gives China more time to get troops across to Taiwan and allows them to either present the United States and rest of the world with a fait accompli, or at least allows China to have a fairly secure lodgment in Taiwan, making it much more difficult for the United States to prevail in a conflict of that nature.

Furthermore, since we're talking about the nature of a conflict in which blood is likely to be shed, the fact that military databases are also destroyed does not have the same narrative impact. In fact, it may be completely a mystery to most Americans that, in fact, China had done this because the workings of our military databases are just not a matter of public comment.

So, in other words, there's no narrative that gets in the way. It becomes a military and operational cyber attack, and if it makes sense at all from a military and operational point of view, I would argue it would also make sense from a strategic point of view.

Let's take a look from our perspective. We wake up one morning and our logistics databases are in tatters. What's the first question we should ask ourselves? It is not: who did it? The first question we should ask ourselves is, is anybody going to war with us in the next few days?

Why do I mention in the next few days? Because it's the nature of cyber attacks that they're temporary, that is to say you damage a database, and people realize that it's damaged, they go through tremendous amount of effort to try to restore it--not necessarily by cleaning it up completely but at least make it functional and trustworthy And usually, in a relatively small time window. If I took down the database in January thinking I would support an invasion in December, it would be a foolish act on my part because by the time December came around, the databases would not only be cleaned up, but they will also be a lot harder to get at for the lesson having been disrupted in the first place.

So that's your first question, is when is the war coming?

Second question is, if an entity is powerful enough to mess up a database, it's also probably powerful enough to put in a listening post in the database. So you want to appear to whoever is looking around in your database that, in fact, your operations are unaffected.

The third question, of course, is how best do I restore my systems as rapidly as possible?

And the fourth one, only the fourth one is, now what do I do about it? And that only really becomes a question if people don't go to war because if people do go to war, you have a lot bigger fish to fry than just simply worrying about retaliation for acts in cyberspace alone.

But if people don't go to war, that's the only context in which you can say this cyber attack was a very unfriendly act. Who did it? Why did they do it? What does this mean? And you work out the logic from there.

But let me try a variant on that scenario because I think it illustrates a point. Let us say, in fact, China is unsure about whether an attack on the military database is going to succeed. So what they want to do while revving up their military, on the one hand, is at least take a look at the after-effects of the attack to make sure that in fact it changed the correlation of forces, which gets back to the point about looking as if it hadn't, looking as if the correlation of forces hadn't changed, but it touches on another point that I want to get into.

When we talk about war, we always talk about things such as deterrence. How can we convince the other side that, in fact, they don't want to do it? How can we convince the other side that the correlation of forces, if they do it, is unfavorable?

Normally, when you do a correlation of forces, you count things. How many of this? And how many of that? In cyber, you don't have that basis for comparison, and so you have to find ways, and I don't have an easy answer for that, to try to make it look as if your ability to carry out your missions are not affected by your cyber weaknesses that you might have, which got me to the conclusion on this case: I don't know the extent to which our cyber weaknesses are going to become a case in which it got in the way of our mission effectiveness.

But I think it is incumbent upon us to find out, and find out accurately and find out soon. I if, in fact, it is a problem (and again, I'm saying that I don't know that it is or not) I think we need to fix it, and I think it's a high priority, particularly so we don't give people the notion that it could be a problem.

And then last, if we had that confidence, if we've earned that confidence, we want to have some way of being able to project it.

Thank you very much.

[The statement follows:]⁵

HEARING CO-CHAIR WORTZEL: Thank you. Mr. Cheng, go right ahead.

⁵ [Click here to read the prepared statement of Dr. Martin C. Libicki](#)

**STATEMENT OF MR. DEAN CHENG
RESEARCH FELLOW, THE HERITAGE FOUNDATION
WASHINGTON, DC**

MR. CHENG: Good afternoon. I'd like to express my thanks to the various Commissioners for the opportunity to speak to you this afternoon.

I was asked to speak about how the Chinese might pursue a strategy of non-traditional anti-access or area denial, but I would like to suggest that that is in some ways perhaps a little too detailed a question.

I would suggest that the Chinese approach--oh, sorry about that--fortunately I'm not doing cyberwar high tech.

[Laughter.]

MR. CHENG: I would suggest that their approach focuses on how to deal with an opponent who engages in warfare that the Chinese themselves describe as non-linear, non-contact and non-symmetrical.

By non-linear, the Chinese are referring to the ground and air operations that have characterized our last several conflicts. Rather than establishing battle lines with neat unit boundaries and methodical advances or retreats, the Chinese see American forces engaging the enemy throughout the length and breadth of the battle space.

One is reminded of the German officer's observation after World War II: the reason the American Army does so well in wartime is that war is chaos, and the American Army practices chaos on a daily basis.

By non-contact, PLA writers are referring to the use of long-range, precision-guided munitions to engage targets deep in the enemy's strategic rear. Just as the forces are no longer arrayed in neat formations, their effects can now be felt far from the front lines. An important consideration of both of these two elements, non-contact and non-linear, is that it brings the civilian population into the conflict, not in the sense that they are the physical targets, as the residents of Hamburg or Nagoya were in World War II, but that their point of view may now be influenced and directly affected, perhaps violently, without there necessarily having to be an occupation army on their doorstep, and perhaps without even the visible sight of flights of B-17s or B-24s overhead.

Most important for today's comments is, however, the idea of non-symmetric warfare. It is common for Western analysts to think of China as pursuing an asymmetric set of strategies, whether it's anti-ship ballistic missiles or ASATs.

But from the Chinese perspective, it is the United States that has long pursued asymmetric strategies. After all, previous Chinese assessments of how future wars would be fought are consistently then disrupted by the Americans when they go and wage their next war.

In the 1980s, when the Chinese were introducing combined arms operations and mechanized forces into the PLA, the United States goes ahead and introduces precision-guided munitions, making something of a mess of the whole "Local Wars under Modern Conditions" concept.

In the 1990s, when the Chinese had begun to incorporate their own more advanced weapons to fight local wars under modern high-tech conditions, the U.S. was exploiting information technology to fight these new non-linear, non-contact wars.

It should, therefore, not be surprising that the PLA is now preparing for "Local Wars under Informationalized Conditions" but is also thinking about the possible next form of conflict, and, in fact, is going to now try and play the asymmetric card itself.

This may well be especially pressing since from their perspective, their current military is still only half-mechanized, half-informationalized, and this would leave them at a distinct disadvantage. So, in order to deny the U.S. the ability to fight in its comfort zone, so to speak, the PLA would seek to engage in non-traditional anti-access or area denial operations.

Now what do we mean here by "non-traditional"? I would suggest that in addition to the ideas of cyberwarfare and space conflict, that also there is the political warfare aspect, and my remaining comments will therefore focus on how the Chinese would seek to deny us the ability to dictate the strategic terms of the conflict by influencing domestic Chinese opinion, American support for the conflict both at the popular and decision-maker level and third-party support.

This involves the so-called "three warfares"--psychological warfare, public opinion warfare, and legal warfare.

I would liken this Chinese effort to the creation of a defense in depth against the United States, operating not at the physical level, as would be typical for, say, defense of a carrier battle group, but at the political and temporal level.

Politically, the Chinese hope to raise doubts about the viability, popularity and legality of American actions. Temporally, they would seek to begin these operations before the conflict begins, in effect, extending the battle time beyond the opening of the conflict, just as we have extended the battle space beyond the linear part of the battlefield.

The three warfares each contribute in different ways:

Psychological warfare is the effort to undermine an opponent's will to resist, such as by raising questions of whether resistance is futile or cost effective? Psychological warfare is aimed at three audiences:

First, the opponent's political and military leaders, as well as their broader population.

Second, one's own population and leadership cohort in order to

strengthen the will to fight.

And finally, it also targets the third-party leaders and populations in order to encourage support for one's own side and discourage or dissuade them from supporting an opponent.

Very briefly, PLA descriptions of how space deterrence can be effected would be consistent with this. The idea that, for example, space systems are very expensive and, therefore, if they were to be destroyed, they would cost a great deal of money to replace them. Now, is the issue of deterrence, say, over a small island a hundred miles off their shores worth the cost of replacing the satellite networks?

But there are second order effects from destroying satellites, which is to say the extended absence of command and control networks, the impact on global financial markets. Those two would be factors that might weigh in on a decision to intervene or not, and so that is also a psychological part--this is an aspect of psychological warfare.

Public opinion warfare, of course, refers to the use of various mass information channels--the Internet, television, radio, newspapers--to transmit selected news and other materials to the intended audience, and that seeks to mold public perceptions to previously established conclusions, generating again public support at home and abroad for one's own position and creating opposition to one's enemy.

In this regard, the Chinese see public opinion warfare as a constant ongoing set of operations, and they suggest that Western media outlets--CNN, Fox News, et cetera--have been exploited, if not outright complicit, in American efforts at public opinion warfare.

And in this regard, it is worth recalling that China recently established their own global English-language 24-hour news service, also that Xinhua is perhaps the world's largest news gathering organization, run, of course, by the state with more bureaus and more journalists assigned to more out-of-the-way places than Agence France-Presse, Reuters, AP, and therefore that the news from various corners of the world often may only be reported either by stringers of uncertain origin or by Xinhua.

Finally, legal warfare, the use of domestic law, the laws of armed conflict, and international law in arguing--and this is from the Chinese themselves--that one's own side is obeying the law, the other side is violating the law, and making arguments for one's own side in cases where there are also violations of the law. Legal warfare provides ammunition for public opinion warfare and strengthens psychological warfare.

The Chinese have taken very concrete steps towards implementing legal warfare. One example is the 2005 Anti-Secession Law, which was passed to make it very clear that China legally is entitled to intervene in the event of Taiwan declaring independence.

Another example of Chinese implementation of legal warfare is their treatment of foreign--that is U.S.--naval activities in their exclusive economic zone. The Chinese argument is that the U.S. should not operate ships such as the Impeccable and the Victorious in their EEZs, and this rests in large part on their rather idiosyncratic readings of the U.N. Convention on the Law of the Sea, but it is made as a legal set of arguments.

With that, I thank the U.S.-China Commission for inviting me to speak with you today about these three warfares.

Co-Chair Wortzel was kind enough to offer a couple of minutes on space so if you folks--

HEARING CO-CHAIR WORTZEL: Yes. Love to hear it.

MR. CHENG: Very briefly, China's views of space fall into the following concept. As I noted earlier, China is thinking that the next war will be what they term "Local Wars Under Informationalized Conditions." Therefore, the key aspect here is the ability to dominate information, to be able to gather it, transmit it, exploit it, faster, better than your opponent, and to do so, and to deny an opponent the ability to do so.

Essential to this, based on their observations of U.S. past military activity, has been our space infrastructure because we are so very heavily reliant on space systems for the gathering of information, for its transmission, for its exploitation.

Chinese writings about our various wars, be it the first Gulf War, through the Balkans, Afghanistan, and the march to Baghdad, consistently have lists of all of the satellites that we have used, the percentage of various types of information derived from space systems. When the Chinese talk about establishing information dominance, they therefore also talk about the inherent need to establish space dominance, or "zhitian quan" in Chinese

Consistent with that, it is important to note here that this is not simply a discussion of the ability to attack satellites. Their 2007 ASAT test was very flashy; it was very showy. That's only a small part of it. To them, space is a holistic aspect. You have the satellites in space, you have the terrestrial infrastructure, launch facilities, tracking telemetry and control facilities, and the data links that bring the whole structure together.

So inherently cyberwarfare is included in any concept of establishing space dominance and information dominance.

Within this, Chinese writings talk about four broad mission areas: provision of information support through space systems, reconnaissance, imaging, weather, geodesy, hydrographics, and communications.

It's interesting to note that all of China's satellite systems, which are nominally civilian, currently provide that range of capabilities. So being a dual use set of space systems does not mean you cannot for them fulfil

military requirements.

Second of all, space offensive operations, the ability to engage in opponent's space capabilities, again, terrestrial data and space. Defensive, which includes passive measures--camouflage, concealment, deception. And active defense measures, defending launch sites, defending space facilities.

And finally space deterrence. I mentioned that very briefly in the other part. The idea of engaging in activities that will persuade an opponent through the use of space measures not to go further in a conflict.

There does seem to be an embryonic space deterrence ladder, which includes at the lowest rung the testing of anti-satellite weapons, which again brings us back to the 2007 ASAT test, the holding of space military exercises, which interestingly the Chinese may well think that we have been engaging in space deterrence, given such things as the Schriever wargames; deployment or reinforcement of space assets; and finally use of space weapons as an act of deterrence in the midst of a conflict.

I'm sure I've gone over my time limit here so again I thank the Commissioners for your indulgence.

[The statement follows:]⁶

PANEL III: Discussion, Questions and Answers

HEARING CO-CHAIR WORTZEL: I appreciate both of you taking the time to submit that thoughtful testimony.

I have a question for Dr. Libicki, but I'm going to take a second because I suspect a lot of people here don't know what a Time-Phased Force Deployment List is. Time-Phased Force Deployment Lists are preplanned lists of what forces and logistic support must move in what order to support a specific military operation, and they are generally included in contingency plans and warplans, and unfortunately they are generally transmitted on the unclassified parts of our Department of Defense networks.

So having taken a second to lay that out, Dr. Libicki, I wonder if you could describe the vulnerabilities in the just-in-time logistics system on which the United States depends because if cyber war, as you describe it, may not be effective for coercion, you make a strong case in your second scenario that it affects U.S.--or could you describe how you think it might affect U.S. sustainment capabilities?

The second part of that is you laid out a scenario where a cyber attack, an operational cyber attack, becomes an intelligence indicator of impending conflict. And can you comment on that?

DR. LIBICKI: Well, let's see how far I get. Just-in-time logistics

⁶ [Click here to read the prepared statement of Mr. Dean Cheng](#)

basically means that you don't have any slack in the system, and that things in the system have to move at pretty much within fairly narrow time windows to get to where they're going. If you get into the logistics databases badly enough, not for the large things, which I think people will keep track of in their head, but for a lot of the small things with which, for instance, you do repair with, you have a lot of confusion as to what is, in fact, coming into the theater.

At that point, you either have to clarify the confusion or you're going to end up with basically a lot of bottlenecks. There is a tendency, I think, to have a conflict between your desire for efficiency in any system and your desire for a certain amount of slack that can withstand the hazards of war.

There's also a risk that if you design too much for efficiency, in fact, you will not be ready for the various hazards of war, and of course one of the biggest hazards of war is things get blown up, things get lost, human beings go into the system and human beings aren't perfect.

And one of the things, of course, you have to worry about now is the cyber component. And thus what you want to think about is not only can you keep these folks out of the system, but what kind of mechanisms do you have in the system to compensate for errors? How do you essentially adopt reasonableness tests on your system so you can see when it's going askew?

My hunch--and it's only a hunch--is that, in fact, there's a little more slack in the system than we think about because people who depend on logistics sometimes have a way of making sure there are a few other supplies just in case, sort of the "Milo Minderbinders" of this world, as it were.

But I don't know if that's going to be good enough in the face of cyber war, which is another way of saying we have to take this stuff extremely seriously.

Now, you had asked a second question.

HEARING CO-CHAIR WORTZEL: Well, the second question is you've really laid out a scenario where if there's a serious cyber attack--

DR. LIBICKI: Right.

HEARING CO-CHAIR WORTZEL: --without conflict starting, that attack itself, in your second alternative--

DR. LIBICKI: Right.

HEARING CO-CHAIR WORTZEL: --becomes an indication of impending conflict.

DR. LIBICKI: That's true. Not because you won't have attacks that are not. I mean something could be an accident; somebody could want to test something. Let me sort of make a broad statement. We in the nation have a lot of cyber vulnerabilities, and one of the reasons we have cyber vulnerabilities is because we haven't been attacked. So we've adopted a

tradeoff between security and efficiency that reflects our recent benign history.

Now maybe that's a smart idea and maybe it's not a smart idea, but if somebody gets through the system, it will not look like such a smart idea. I can't guarantee that. That's the nature of improbability.

But think about how people would react to things like the Stuxnet. Before Stuxnet, people had this notion that an air-gap system was pretty invulnerable. And then whoever put together Stuxnet showed that under certain circumstances, it wasn't. And, in fact, the Department of Defense had learned as much 14 months ago in another incident in Afghanistan.

So it prompts people to say "hold it; let's look at this all over again." We have unprotected USB ports all over the place. We've got people sticking devices in from one to the other. Is this a habit we can allow?

As a general rule, when something dramatic happens, people close the door. They close the door after the horses get out, but in fact there are tons of horses, and I don't want to go too far in farmyard analogies because I'll get confused. But the general point I'm trying to make is hitting a system and its being public creates what might be likened to an immunological response: it makes it harder to do the next time.

So if you're really serious about this, and you're going to attack something that's going to get a lot of publicity, you really want to make sure that it's not wasted effort.

Now if you attack it, and you find it doesn't work, you don't necessarily go to war as if it were going to work. You might reevaluate your opportunities, but on the other hand, you don't attack it now thinking, oh, this worked well so therefore it will work in the future.

This is different from missile testing. In missile testing, you do a lot of tests. Aha, it went 200 miles; it landed within ten feet of the target. This is good. It's going to do that in wartime.

Cyber is completely different. In cyber, the second time doesn't look like the first, and the third time doesn't look like the second. And that leads to the question, well, how do you know you're going to be good at this sort of stuff? And the answer is you can simulate it, but you really are never going to know exactly what the other guy's vulnerabilities are until you poke them, and by the time you poke them, it's too late.

There's a lot of paradox in cyberwar, and the notion that it looks like other war because it's just medium number five, and we take all of our old precepts and we walk them over just doesn't work very well. It's a different logic.

HEARING CO-CHAIR WORTZEL: Thank you very much.

Commissioner Shea.

COMMISSIONER SHEA: Thank you both.

Quick question for you, Dr. Libicki, then a couple questions for Mr. Cheng. So I'll speak fast. It's a lot in five minutes. Dr. Libicki, you talk about strategic use of cyber warfare, pulling down the grid in the Midwest in the United States. You think that that would not be a successful activity.

Have you examined the idea of the Chinese trying to take down the power grid in Japan as a way of sending a signal to Japan that they should not intervene in a Taiwan scenario or maybe using strategic cyber warfare vis-a-vis some of its neighbors in Southeast Asia, like Vietnam, take down the grid there, as a way to signal that you should not push back on certain activities in the South China Sea?

And, Mr. Cheng, for you, you talk about the three warfares. I know China has the position of being against the militarization of space. Are they developing some legal arguments for the use of offensive weapons in space as part of legal warfare?

I was wondering if you could also talk about whether China is developing a space force?

DR. LIBICKI: Let me address that relatively quickly. The effect of an attack on other states is going to depend on national political cultures in these other states. We have a history of Pearl Harbor and 9/11 that shows that attempts to coerce the United States don't really work out that well for the other side.

Whether they work out for Japan or Vietnam is harder to say. Bear in mind a lot of places in the world, the power is almost as reliable as Pepco is, and I say that, of course, having come from a cold house this morning.

And it may not have the same psychological effect.

COMMISSIONER SHEA: Right.

DR. LIBICKI: The other thing is that once you loose a weapon out on this world, you legitimize it, and once you legitimize it, you legitimize a lot of other things at the same time.

There's a sort of a tradeoff in coercion. The lights go out in Tokyo. Who done it? Well, if China says "I did it," "I did it," "I did it," you not only get the credit but you get the blame. And if Japan would basically say now this changes my opinion of China, that becomes very, very important given the trade relationships and all the other relationships between Japan and China.

If you don't say, and you leave it a mystery, the next question is do you have a coercive effect at all? And if you leave it a mystery, what, in fact, is going to be the story that comes out? Is the story going to be the violence of the attack or is it going to be the fecklessness of the operators?

You have to throw all that sort of stuff in the mix. All I'm basically saying is it's a real crap shoot.

COMMISSIONER SHEA: Got it. Thank you.

MR. CHENG: With regards to your two questions, let me address the space force one first. At this time, we have not seen any evidence of the creation of a dedicated space force although it is very interesting that the Chinese cite both the Russians as creating a space force and still regularly refer to the creation of Space Command in the U.S. even though Space Command, of course, has now been disestablished and folded back into Air Force Space Command under STRATCOM.

So they clearly are paying attention to this aspect. There is also a very interesting question as to who would have operational control within the PLA of any space capabilities because at the present time, the space infrastructure seems to be run basically by the General Armaments Department. The PLA, of course, is run by four general departments more than by their services--General Staff Department, General Political Department, General Logistics Department, and the General Armaments Department, which is responsible for weapons development.

So it would be the equivalent of their space infrastructure, launch sites, TT&C facilities, et cetera, being run by a combination of DARPA, Air Force Research Labs, Navy Research Labs, and perhaps some bits of NASA thrown in. So that's already a very different organizational construct.

With regards to legal warfare and non-militarizing space, it is very interesting to note that prior to the 2007 ASAT test, the Chinese had tabled several proposals at Geneva under the Committee on the Peaceful Use of Outerspace and the Prevention of an Arms Race in Outerspace talks, trying to ban space weapons, and in looking at those proposals and subsequent proposals, they're all very consistent because they would ban ASATs.

ASATs are defined as weapons in space that would destroy other space weapons, other space systems. So a ground launch system would not fall under that, under their provisions. So from a legal perspective, it would be sort of like saying that their weapons would be perfectly legal because, of course, it's not based in space.

And at this point what we are seeing, which is a very basic approach of almost "gotcha." The aspect here is that China, of course, has a very large population, and as the saying goes, if you are one in a million, there are 1,300 of you in China.

[Laughter.]

MR. CHENG: China has the wherewithal to produce quite a few lawyers. China also, of course, has very large currency reserves to hire well-trained Western lawyers. So with regards to the aspect of legal warfare, one suspects that if it came down to it, they would be able to field more than enough lawyers of whatever nationality to make the arguments that would serve the lawyers' clients' interests.

COMMISSIONER SHEA: Well, many things come to mind in response to

that comment, but I'm not going to say anything. Thank you very much.

HEARING CO-CHAIR WORTZEL: Commissioner Wessel.

COMMISSIONER WESSEL: Many of those come to my mind as well, but I'll also not pursue that line of questioning. Thank you, gentlemen, for being here today.

Your comments have raised a lot of questions with me. I want to raise a couple of them and then have you respond to as many as you feel that time allows.

Dr. Libicki, we are an advisory commission to Congress so one of the issues that your comments raised with me that Dr. Wortzel and I had some meetings on last year, was the question of the War Powers Act because the question of authorization for the use of force for going to war probably, cyber war raises serious questions about attribution rules and many other things.

So does that law need updating? How can we look at the use of force? I recognize the grimace on your face. How do we deal with force because we've been dealing with attribution rules on, you've read about Titan Rain and other intrusion sets that have been multi-month, if not, several year investigations. How do we deal with that? How do we know that, in fact, an attack has occurred. That's number one.

Number two, cyberwar raises a lot of issues about risk mitigation. Late last year there were questions about Sprint utilizing Huawei equipment on its network upgrade, and I think of the potential for foreign Chinese equipment being, if you will, behind enemy lines under the way that you would deal with a conflict. Should we be thinking about global supply chains differently if you believe that cyber warfare is going to be part of any next potential conflict?

And Mr. Cheng, you raised the question of, as one of the nodes, temporal issues. Because the Chinese appear to have an integrated strategy, should we be viewing what is occurring now in certain areas as part of the temporal approach to preparing for future conflict? And, there I think of the major efforts of President Hu this past week to reach out to our business community, who is integrated into their economy.

Do we need to update all of our thinking I guess is the question?

MR. CHENG: Let me take the first shot at this. Yes.

COMMISSIONER WESSEL: Okay.

MR. CHENG: Let me note here that the issue is integrated strategy as a complement to what the Chinese term "comprehensive national power," which means that the Chinese are assessing nations not based upon simply the number of missiles or even the size of their economy, but writ large, political power, diplomatic pressure, cultural aspects. The fact that it is American movies and television and radio and rock music that creates the

slang and other things is part and parcel comprehensive national power.

So from the Chinese perspective, are they engaging in warfare? Perhaps we need a different vocabulary. They are engaged in a competition. They are engaged in a large extent in some ways in conflict with the United States. Where our interests do not mesh, they are prepared to use the various tools and expect us to use those same tools. Just as if they are appealing to our businessmen, they expect that we are going to play economic cards as well.

They look at how we affected Iraq long before the tanks were rolling to Baghdad, with economic pressure, diplomatic and public opinion. They marvel at the fact that while we could not get the U.N. to authorize the 2003 invasion, Iraq more glaringly failed to attract anyone's support despite the fact that the U.S. action was illegal.

So in that regard, in the U.S.-Chinese competition, yes, that was a card that they were playing and they expect us to play our hand, which they think is quite impressive, at least as well.

DR. LIBICKI: As for the first question on the War Powers Act, I'm not a lawyer, and I'm not going to pretend to be one, but I'm going to suggest that a lot of what looks like cyber war can also be covered in covert action. And the laws that cover covert action are different than the laws that cover military conflict. So let me just stop there.

Attribution, I think, is a matter of confidence. How confident are you that this was done by that? Actually it's a two-part test. One, what you don't see is a cyber attack. What you see is a computer system that doesn't work well. Only later can you say, well, I think that was because of a cyber attack, and then you have to ask yourself a question, if it was, who did it?

The question about attribution is not a legal question. It's a strategic question. And the question you have to ask yourself is if I had high confidence that--I'll use Paraguay--that Paraguay did it--am I in worse trouble if I respond to Paraguay and I'm wrong, multiplied by the odds that, in fact, I could be wrong, or am I in worse trouble if they did it, and I don't respond?

That's inherently a strategic question. It's not a question for a court of law. It's a question of how confident are you in your attribution.

There's a secondary question. Am I willing to make a public case about the attribution if I wish to respond in a public manner? And that becomes a question of sources and methods. When I stand up in the United Nations, what, in fact, evidence do I adduce before whatever the crowd is and how credible is it going to be? That in many ways is a political question so let me stop over there.

Then you ask the question how do we know that a war has begun? That's actually two questions. The first question is how do we know that

something else isn't going to take place? And that's an empirical one, and it's very context specific.

But the next question is, is this an act of war? And you get lots of people in the Pentagon start talking about cyber, and they're always asking themselves is this an act of war? And my answer is always the same: would you like it to be an act of war? In other words, is it your interest to treat it as an act of war? Is it in your strategic interest? Can you make the case that it is an act of war?

Or alternatively, is this something you would like to respond to using covert means? Is it something you would like to just ignore? Is it something that you want to use to build into a narrative of the other side? I would maintain it's not a legal question; it's a question of choice.

Finally, you raise supply chain attacks, and that's a really, really tricky issue, and let me just say a couple things about that. First of all, the Chinese worry about it as much as we do and perhaps more because the thing you worry about a supply chain attack is not who makes the hardware but who makes the software.

Now when you take a look at Huawei, there's hardware and there's software so there's a basis for fear. But bear in mind, they're looking at Google, at Microsoft, at Apple, and all these other companies because we are still the world's leading power in software. So they themselves have to be worried about that.

The second issue is a much more tentative issue, and "tentative" is probably the wrong word, but that has to do with fears. I think that event, though a supply chain attack would be a very insidious way of going to war, it also has a 20-year penalty associated with that.

If you start convincing yourself or particularly if the rest of the world starts convincing itself that another country is selling queered products all over the place, it's going to be hard to maintain an investment position in that.

You might get one advantage from a supply-chain attack but you pay for it for a long, long time, and there's economic theory that basically says that if you fall off the horse in that chase, you never get a chance to get on because, in fact, you set up a dynamic in which you're not the leader. So there's a lot of temptation in supply chain attack, and I don't think there should--let's see if I get the double negatives right--there should be people in DoD who worry about it, but you really have to put it in perspective.

COMMISSIONER WESSEL: Thank you.

HEARING CO-CHAIR WORTZEL: Commissioner Slane.

VICE CHAIRMAN SLANE: Mr. Cheng, I think I speak for the entire Commission when I say to you that working with Commissioner Wortzel has been extremely difficult, and I'm wondering what your experience with him

has been at the Heritage Foundation?

[Laughter.]

VICE CHAIRMAN SLANE: I withdraw the question. No, my real question to you is the Chinese have said that whoever controls space controls the world, and we have to make certain recommendations to Congress at the end of the year. My question to you is do you think we're focusing enough resources on space?

MR. CHENG: Let me just note here for the record that Commissioner Wortzel and myself did not actually overlap at the Heritage Foundation.

[Laughter.]

VICE CHAIRMAN SLANE: You're off the hook.

MR. CHENG: With regards to who controls space controls the world, it's interesting that you cite that because the Chinese cite it all the time--as a comment from President Kennedy. And, in fact, that goes to one of the great misconceptions, which is that somehow our national space policies and our national space statements differ from president to president, and therefore this President's new national space policy will constitute a reset.

When you look at how the Chinese look at our national space policies, they don't look at a particular presidential one. They say, "umm," what are the consistencies between this one and all the previous statements back to President Kennedy's comment, "He who controls space will control the world"? And they find a great consistency in it. And so from their perspective, the United States has always sought space dominance and has not given it up, no matter the sort of flourishes upon the edges of any particular one.

Now, that being said, the reality is that if we are going to fight the wars that we are accustomed to fighting, which is to say heavily reliant on exquisite technologies, exquisite sensors, then we are at this point in time absolutely reliant on space, which is hideously expensive, and we have seen an array of satellite systems go through the birthing process and come out stillborn, whether it was TSAT, whether it was some of the military weather satellites, et cetera, because the costs were simply too high.

So we are confronted with the reality that we need a new model for space systems, whether it's the development or the manufacturing of it.

The other aspect here, and again this also goes partly to the cyber issue, is that when we are this reliant on space, it is a single point of failure. The number of different military programs that are reliant on not just the navigational but the timing aspect of GPS should lead one to worry about whether, not just GPS jamming, about whether a JDAM goes off course, but whether or not our communications will necessarily work correctly so that when we are synchronizing all of these units that are moving across half the globe, that we are controlling UAVs over Helmand

from an airbase in Arizona over communication satellites that may or may not be American, that should be something that leads us to also rethink whether or not we want to retain this reliance on space.

The development of various information technologies, the development of UAVs, the development of other alternatives, has generally not preceded as far as it could, in part because of expense and in part because no one has ever challenged us in space.

The same way that we have not confronted a cyber war openly, we have not had, whether it was Iraq or Serbia or certainly Afghanistan, an opponent who was anywhere near up here in space. The last time it was the Soviets, and that was long ago, and that was a very different sort of confrontation.

So I would submit, sir, that we are not thinking hard enough about space and alternatives. We are not thinking hard enough about alternative procurement and development strategies. As a result, we are probably not spending enough on space survival, hardening space situational awareness.

But that last part is third and perhaps the least important of the three aspects of failure that I'm seeing with regards to our competition with the Chinese.

VICE CHAIRMAN SLANE: Thank you.

HEARING CO-CHAIR WORTZEL: Commissioner Bartholomew.

HEARING CO-CHAIR BARTHOLOMEW: Thanks very much and thanks to both of you gentlemen. This is a very thought-provoking panel.

I have a couple of questions. One, Dr. Libicki, when you talk about cyber attack as an act of war, it seems that you were also talking about it as a step in a sequencing of other activity, in other words, is it followed by a more traditional attack?

Do you think that it has to be followed by what we would call more traditional military action in order to be an act of war?

DR. LIBICKI: You've asked a very good strategic question because the obverse of the question is can you envision a cyber conflict that takes place without any military component ever? I would also say yes, I can, but it's really difficult to try to think through that sort of thing strategically because essentially what happens is you have a competition, in irritation-- I've taken down your banking system, you've taken down my banking system, I've made life worse for you, you've made life worse for me, and at some point which one of us is going to cry uncle?

The broader question is, is anything you can do in cyberspace going to be bad enough to reach a level at which nations, in fact, cry uncle? And it's possible entirely that the answer is no. Once you achieve initial dramatic effects, you get lots of headlines, people start buttoning up their systems. They end up trading off convenience for security in such a way that they're

worse off, but they're not necessarily worse off in any broad global "oh-my-god, we got to surrender to the other guy" sort of way. It ends up becoming a contest of mutual irritation.

HEARING CO-CHAIR BARTHOLOMEW: I guess I'm just envisioning that these are not so much irritants, but that these are acts that have serious consequences. The financial system is one, but if, for example, I can take down the electrical grid of your five major cities and I essentially can then say we're not going to untake those down unless and until you do something that we want you to do or you stop doing something we don't want to do. I mean that's pretty serious stuff.

DR. LIBICKI: It's pretty serious, but the question then becomes is it possible? Look, people talk about cyberspace is a manmade medium--right--air, airspace, all that sort of stuff God made. Cyberspace, we humans happen to make, but there's an important corollary. Cyberspace is made by its defenders. You know--it's your computer, your system, your routing, your protocols, your configuration management, your software, your access policies, your personnel policies.

And so it's very difficult to envision a kind of attack under which the operators of the electric power system cannot bring it under control one way or the other.

I don't know if you're familiar with Cyber ShockWave. It was one of those exercises that was done about a year or so ago. It starts off in which the entire phone system grinds to a halt because of a virus on a cell phone. When I looked at this thing, I said there's something not right about this scenario. What wasn't right about the scenario is at no point did any of the participants in the National Security Council say to one another, did you ever think of calling Verizon and ask them what's going on?

And the same thing would be true. If the power goes down, it's not a presidential thing, it's not a DHS thing, it's a concern of the guys who run the power plants and to a certain extent the ISOs that connect the power plants. They're the guys you talk to and say, guys, you have a problem; fix it.

My hunch is that most of them will be able to fix it one way or the other. Now, how do you get the virus out of the system? What kind of tradeoffs do you make, et cetera, et cetera? But in general, if you got a power company that can't keep itself up to a cyber attack, you've got a really feckless power company.

HEARING CO-CHAIR BARTHOLOMEW: Thanks.

HEARING CO-CHAIR WORTZEL: Commissioner Mulloy.

COMMISSIONER MULLOY: Thank you, Mr. Chairman, and thank you both for being here.

I have a short question for Mr. Cheng. You were talking about the

proposed space treaty and the Chinese interpretation of that treaty is that if they launched the vehicles from the ground to take out satellites, that that's not prohibited by the treaty, but if you knocked them out from other vehicles in space, that is prohibited by the treaty. Is that correct?

MR. CHENG: Yes, that's the treaty that they have proposed.

COMMISSIONER MULLOY: Do we have the capability of knocking out satellites from land-based missiles?

MR. CHENG: We have not tested a kinetic-kill anti-satellite vehicle since the mid-1980s. Certain U.S. anti-missile systems can serve in an anti-satellite mission, such as the use of the SM-3 missile to bring down USA193 in 2008.

There are, of course, other ways to affect satellites, including the use of lasers to dazzle them, the use of jammers.

COMMISSIONER MULLOY: From the earth?

MR. CHENG: With regards to lasers, yes. Jamming, it depends on what it is you're trying to do, but, yes, there are ground-based jammers. Often, those are more effective with regards to the signals that are being sent from the satellite to the ground, and so there are a variety of such programs either in research and development or at least conceptually confirmed.

COMMISSIONER MULLOY: So that's not in the law yet, and that's just a proposal that they're making.

MR. CHENG: Yes. The treaty that I mentioned was a proposed treaty jointly put forth by the Russians and the Chinese to ban anti-satellite weapons that would define ASATS, anti-satellite weapons, as those that are based in space only.

COMMISSIONER MULLOY: My second question is to Mr. Cheng, and it's this whole business of lawfare.

MR. CHENG: Yes.

COMMISSIONER MULLOY: You were talking about the Chinese interpreting the Law of the Sea Treaty and the treaty's provisions dealing with exclusive economic zones that would permit them to keep out intelligence-gathering vessels from their exclusive economic zone.

We are not signatories to the Law of the Sea Treaty, but I think we've said that we adhere to it and interpret it as customary international law now; is that correct?

MR. CHENG: Yes, that's my understanding, sir.

COMMISSIONER MULLOY: One of our witnesses in a later panel, who is with the United States Navy, Captain Pedrozo, says in her testimony on page nine that the U.S. should ratify the Law of the Sea Treaty, and that she thought that it made good sense for the United States to do that, and I know there is some controversy about this.

What is your own view on whether the United States should join in and sign the Law of the Sea Treaty and get it ratified? I think we've signed it; haven't we? Just haven't ratified it; is that correct?

MR. CHENG: I'm not sure on that, sir, whether we have signed it and not ratified or whether we have neither signed nor ratified it.

My understanding is that one of the great controversies regarding the Law of the Sea and the main reason for the U.S. choosing not to accede to its provisions at this time fully is that there are actually provisions in there that are antagonistic to issues of property rights and exploitation of the resources under the seabed, and that is the main reason why the U.S. has not signed on, and those aspects have not been addressed satisfactorily to a large segment of Congress.

So in that regard, however, that aspect of provisions is not really, to my mind--the issue of the Law of the Sea and the Chinese interpretation versus our interpretation does not rest upon whether or not we have ratified the treaty. The Chinese position is one that basically argues that EEZs--which are at this point, for better or worse, customary international law, and our coming on board the treaty or not will make no difference there--should be essentially treated as territorial waters. And that is the aspect that is the problem.

The Chinese basically make the argument that while ships may transit through, they should for all intents and purposes turn off their radars, turn off their sonars, not engage in any sort of information gathering because the EEZ should, for those purposes, essentially be treated as territorial waters, and that clearly flies in the fact of the long-standing American commitment to freedom of the seas.

COMMISSIONER MULLOY: Yes. That's very helpful. We'll be sure to ask the next panel about that.

Thank you.

HEARING CO-CHAIR WORTZEL: I have one and Commissioner Bartholomew has one. We have ten minutes left, and then I will probably wrap up this panel.

Neither of you really addressed the commercial aspects of space and cyber networks as they might be affected by warfare. How would it affect banking, finance and trade to engage in a cyberwar? What would it do to China, which is heavily dependent on banking, finance and trade? And what would it do to Europe? Both of you can make a few comments on that.

DR. LIBICKI: I guess I'll start. A lot would depend on whether there was a general opinion that banking sectors are going to be subject to cyber war. I don't know if there is an official U.S. policy, but I think there's a considerable consensus that that's something the United States doesn't want to touch.

There's traditionally been a reluctance upon the United States to mess with banks at all, even in wars. We were, for instance, extremely reluctant to counterfeit currency because we know where that will lead. I don't know if Chinese feel the same way. They very well might. And there might be just a tacit agreement not to go after certain things because, bear in mind, there's a lot of mutual assured destruction within the banking system.

Did that answer your question?

HEARING CO-CHAIR WORTZEL: I think that addresses it. In other words, we're both mutually dependent on that. And if one acts, the other one is equally affected.

DR. LIBICKI: I think we would both be worse off and rather quickly.

MR. CHENG: With regards to the commercial aspects of space, that's actually an enormous and growing area of concern. Commercial operators are, in fact, larger than many nations with regards to the number of satellites held. Intelsat, Inmarsat, Eutelsat together basically run the vast majority of the world's communication satellites and have it within their power then to both deny satellite communications--that would go very far--or alternatively, to side with one side or the other.

They are, of course, bound by contract, including contingencies in conflict. So with that regard, this plays a particularly large role, given our reliance on UAVs and other various communications aspects because so much communications and so much bandwidth, in general, flows that our military communication satellites are insufficient to do all the things that we would want them to do.

Now, obviously encrypted information, nuclear command and control, all that is fine, but if you are going to be passing pieces of TPDF, if you're going to be updating logistics requests, all these sorts of things, many of them are flowing over commercial satellites, often third-party commercial satellites.

It's sufficiently important that this is one of the reasons why the Chinese themselves write that it is incumbent upon both sides to be very careful about using anti-satellite weapons that generate debris--kinetic kill vehicles--because you may well affect third-parties, and those third-parties, one may take umbrage if their satellite, which costs a great deal of money, should be destroyed.

And two, post-conflict, you may be seen as the party that was responsible for polluting outerspace, which is why for anti-satellite operations, there seems to be an implicit interest in soft-kill techniques, jamming, turning the system off, simply pointing the satellite away so that the transponders aren't receiving signals rather than firing up a missile and destroying it in outerspace.

Now, you might ask them why did they test a 2007 ASAT? Again, I

would submit that that had as much to do with demonstrating a capability for deterrent effect as it did simply to kill a satellite and show it could be done.

HEARING CO-CHAIR WORTZEL: All right. Commissioner Bartholomew, you'll get the last question.

HEARING CO-CHAIR BARTHOLOMEW: Thanks.

One comment first and then a question. Dr. Libicki, I'm not as sanguine as you are on supply chain attacks. You think that the fact that there are long-term consequences might serve as a disincentive, but I would just say there are ways that people can mitigate for that: first, by denial; second, by the concept that our markets are so big and so important, we can get away with this; and third, if there are no alternatives.

Each of those, to me, are a factor, as I think about it. Traditional economic theory I think is being turned on its head in a lot of ways in the U.S.-China relationship.

But I want to get to economic theory or economic warfare, and these three warfares that you talk about, Mr. Cheng. Is there any evidence that economic warfare is factoring into thinking about the positioning? And I say that because Oriana Mastro this morning made reference to the Sun Tzu idea that "subduing the enemy without fighting is the acme of skill."

There are so many aspects of this economic relationship that in some ways really seem like tools of warfare. I know I'm taking this to a real extreme. But I just wondered how economics fits into these three warfares?

MR. CHENG: Well, let me note to begin with that if some of the reporting out of the China-Japan debate over the Senkaku/Diaoyutai is correct, and that China specifically chose to restrict the export of rare earth minerals as opposed to there were private companies that chose not to, that in that case, this would be an example of economic warfare, if you will.

I think, again, that the term "warfare" often obscures as much as it reveals. Clearly, the Chinese understand that economics constitutes a lever that can be used, a lever that can be a bludgeon as much as it can be a crowbar.

With regards to the three warfares, public opinion warfare would be one aspect where how do you influence the other side's public opinion? The focus is generally on media, but very clearly sanctions were a means of public opinion warfare, interestingly aimed at third parties.

That is to say when the U.S. imposed sanctions on Iraq, it was able to persuade other countries to join in, thereby showing a global willingness to engage in economic warfare against Iraq, to show, again, that Iraq had no public support. So economics as a tool to be applied.

Legal warfare is, in the sanctions regime, a use of economics in the legal context.

Psychological warfare, the lack of a working company or economic denial, again, sends a message to that population, you are isolated--topple your leader. He is the one who is bringing about all of these problems. So I would suggest that economic, the economic tool is implicitly present in all of these. We haven't seen at this point writings along these lines, but let me also note that these three warfares were developed by the PLA, and so in that regard, the military may or may not be thinking as explicitly about economic warfare at this time.

But there are plenty of folks, economists out there, who will note that China is also pursuing a neo-mercantilist strategy, and in that regard, it, therefore, is pursuing economic warfare, if you will, but that's not necessarily contained within this particular rubric.

HEARING CO-CHAIR BARTHOLOMEW: Right. And I think that was the piece of it that was thinking about rather than sanctions or something like that, but how about the we are going to continue buying lots and lots and lots of your debt, and that gives us some sort of leverage over you. We disabused that notion in our report that came out in November, but that kind of idea. Would you fit that into a psychological warfare or?

MR. CHENG: I would say the following: that if and when the Chinese prominently note that they hold much of our debt--

HEARING CO-CHAIR BARTHOLOMEW: Which they have.

MR. CHENG: --and reiterate it to our public in order to influence be it elections or public policy, then, in that case, that would be political warfare with an economic tool.

On the other hand, I sometimes wonder if we aren't providing both the tool and its wielding rather than the Chinese. Just this morning, I was reading a very interesting Global Times article about this controversy regarding a particular piece of music played at the recent White House dinner, and it was a Chinese article that said the greatest problem here is that the Americans have lost their self-confidence because apparently a piece of music is enough to arouse huge controversy and debate in their polity.

You look at this and you wonder is the holding of debt a weapon that the Chinese are wielding or is it a weapon that we have in a sense conjured in our minds that affects us whether the Chinese wield it explicitly or not?

HEARING CO-CHAIR BARTHOLOMEW: I'm going a little over my time, but one more piece of this, and one of the things I've been trying to think about, and I understand that there's not a whole lot of writing about this, the sort of the role of the PLA and the development of like Chinese foreign policy and other policy aspects.

Is there any evidence that the thinkers in the PLA are thinking about these economic issues? Writing about these economic issues? Thinking of

using them in some way?

MR. CHENG: Well, we have certainly seen writings about retired PLA officers and some on the verge of retirement who have thrown around things like we own "x" amount of American debt; we should just sell it, sell it all, and that will show the Americans.

Needless to say, both Chinese economists and American economists point out that if you did that, you would basically be cutting the Chinese economic throat to no great effect. Highlighting that, at this panel here you have someone who is not a lawyer and who is not an engineer, and in the PLA, you have many people who are not economists. There are many, many nationalists, some in uniform, some not, many of whom throw these ideas around, and so far those who are in charge of the economic levers, who have a much better understanding of why some of these ideas could, like turning off the East Coast power grid, get you something in the very short run with enormous consequences afterwards, they have been held at bay.

Whether that will continue to be the case is something that I'm not sure anyone can predict.

HEARING CO-CHAIR BARTHOLOMEW: Thank you.

HEARING CO-CHAIR WORTZEL: Well, gentlemen, I appreciate very much your time and your thoughtful testimony, written and oral. It's been enlightening. Thanks again, and we're going to take a ten minute break and then start the next panel.

[Whereupon, a short break was taken.]

PANEL IV: IMPLICATIONS FOR EAST ASIA

HEARING CO-CHAIR BARTHOLOMEW: In our final panel of the day, we're going to try to tie together information from our panels, which might be a challenge, and discuss implications for the U.S. and East Asia.

Our panelists are Dr. Balbina Hwang, who is currently Visiting Professor at the National Defense University and Georgetown University where she teaches courses on Northeast Asian security, East Asian politics, and Asian political economy. She'll provide views from Northeast Asia on China's military strategy, and if I remember correctly, Dr. Hwang worked with Dr. Wortzel. We seem to be very represented by Heritage here today as well as by RAND.

Jim Thomas is the Vice President for Studies at the Center for Strategic and Budgetary Assessment, where he recently completed work related to Southeast Asia. He'll testify about views from the region on China's defense strategies.

And Captain Stacy Pedrozo is a military fellow at the Council on

Foreign Relations, who was most recently assigned to the U.S. Naval War College. She's also worked on China-related issues at the U.S. Pacific Command. Captain Pedrozo will testify today about the maritime and legal aspects of China's territorial claims and their implications for the U.S.

Thank you, again, for joining us today. Please keep your remarks to seven minutes, and with that, Dr. Hwang, please begin.

**STATEMENT OF DR. BALBINA Y. HWANG
VISITING PROFESSOR, GEORGETOWN UNIVERSITY,
WASHINGTON, DC**

DR. HWANG: Thank you very much. It's an honor for me to be here. And Larry actually taught me everything I know. So if I say something amiss, you can blame it on your honorable co-Chair.

[Laughter.]

DR. HWANG: I'm very honored to have the opportunity to share with you my thoughts on how the topic of Chinese active defense strategy is impacting its regional neighbors in Northeast Asia.

It seems almost a given that the new East Asian dynamic is one of a rising China and a declining America. Now, I for one do not accept this view. I personally refuse to believe that the United States either as a country or world power is on the decline, much less in East Asia. But I am willing to concede that this perception is pervasive, and unfortunately a dominant one.

The problem in East Asia then is that, in fact, it's changes in the regional status quo that are the cause of security anxieties in the region, and it's because history shows us that wars and conflicts arise among nations, not necessarily when there is a hierarchy or differentials in power, but when the states are dissatisfied with the changes in the distribution of power.

China's rapidly increasing economic wealth combined with its increased willingness to assert these capabilities is, I believe, a cause of concern for its neighbors and in the region precisely because its future intentions are uncertain, and I would note perhaps even for the Chinese people and the leadership themselves.

At the core of the Japanese and South Korean anxieties, and one could even argue anxieties within North Korea as well, are fears that China is challenging the dominance of a U.S.-centric order in Northeast Asia, and this fear is that the increased capabilities will lead Beijing to establish a modern version of the ancient Sino-tributary system.

This is a system which was dominant for thousands of years and one in which hegemonic power is wielded through nominal equality but substantive

hierarchy. And, of course, in the Sino-tributary system, this was quite formalized. Today in the modern era, it's inconceivable that China would reject the international standards and norms certainly, but it is this more substantive hierarchy that I think is of concern.

The increasingly assertive Chinese maritime behavior we are witnessing today may be part of a broader strategy to exercise authority over its smaller neighbors in the near term by pushing U.S. forces away from its maritime borders, to demonstrate rights over the entire South and East China Seas.

Under such Chinese dominance these, quote-unquote, "lesser" powers will not necessarily have to give up their independence or even have to emulate China ideologically. But they will have to show due respect and if necessary even provide appropriate concessions.

One necessary concession in China's view will be, I believe, the reduction of U.S. influence in the region. So now I would like to briefly turn to the reactions by regional neighbors which have been quite interesting in the last 12 months.

In the case of South Korea, it's clear that South Korean anxieties about China are far more deeply imbedded and intertwined with its very complex relationship with North Korea, and we have witnessed a sea change--excuse the pun--in attitudes and policies in this past year. Of course, they were building up for quite awhile.

But when President Lee Myung-bak was inaugurated in early 2008, many had expected him to completely change South Korean orientation and South Korean policy, especially towards the North. In fact, he was not able to do that, precisely because he was met with a public that was quite skeptical of embracing or returning to a very confrontational attitude with North Korea. And so, in fact, it was these two quite splashy provocations that North Korea made last year, the sinking of the Cheonan and the attack on the Yeonpyeong Island, that really caused a sea-change in the public attitudes.

Interestingly, it was not just towards North Korea. It was the Chinese reactions to these incidents that I believe were even more shocking and much more profoundly disturbing to South Korea.

So what you see is this remarkable and quite almost aggressive change in attitude by the South Korean government. They have released their new Defense White Paper. It acknowledges North Korea as the enemy--by the way, not done since 2004. Some said, oh, why isn't North Korea the main enemy, as it was in the 1990s? I think actually the omission of the word "main" is interesting because what it says by not saying it is that there are other enemies besides North Korea.

Since I'm running out of time, I'll quickly turn to Japan. 2010 was a

very bad year for Japan. Economically, it's actually bucking the trends of all of the rest of Asia, and not just economically. It's the one country that really cannot manage to revive its economy. Politically, its lack of leadership is very disappointing, and the society is turning much more insular, and that's very surprising because the rest of Asia is not, including China.

Japan is suffering an existential anxiety, and what's fascinating is for the first time, you're actually hearing even average Japanese, but Japanese intellectuals, leaders, talk about being possibly a "middle power." Now, that's very fascinating, and it's the first time I think we've heard this since the defeat of Imperial Japan.

Who do we have to thank for this? Well, it's really China. Much of Japanese anxiety about China, I think, is really imbedded in their own uncertainties and insecurities about not being able to turn around their economy and their country.

But, of course, the Senkaku incident and Chinese shocking behavior, at least as far as Japan was concerned, really woke them up. And I think combined with North Korean provocations, what they did was allow a kind of wakening up of the Japanese bureaucracy that we haven't seen in years, and they seem to be incapable of getting their act together in most other areas, including their economy, except in very surprising ways in their national defense.

And so they released their much-awaited National Policy Defense Guidelines, which I believe is the most significant since the end of the Cold War, in several decades, because it shifts the focus away finally from acknowledging that the Cold War is over and that the real threat is not from a land invasion in the north, i.e., the Soviets, the Russians, but, in fact, much more maritime-based and from the South.

So the focus is to rehabilitate and to reinforce the defenses along the Nansei chain, which are the islands that run from the Kyushu Island, main island Japan, all the way down to Taiwan, and finally it's allowed the Japanese to be a little more proactive about opening previously taboo subjects, such as finally eliminating their export ban control, which has been a significant issue, and also, too, in their cooperation with South Korea, which has actually been quite astonishing.

We would hope for more, but I think that they've gone a long way, and so the irony is that we actually have to thank China for its behavior last year because what it's finally done is given the impetus for South Korea and Japan to actually start acting like real partners with the United States and real allies.

Thank you.

[The statement follows:]⁷

HEARING CO-CHAIR BARTHOLOMEW: Captain Pedrozo.

**STATEMENT OF STACY A. PEDROZO, U.S. NAVY MILITARY FELLOW, COUNCIL
ON FOREIGN RELATIONS, NEW YORK, NY**

CAPTAIN PEDROZO: Thanks to the Commissioners for inviting me.

One thing that I have to preface before I begin my remarks is that I'm here in my personal capacity and as a visiting fellow at the Council on Foreign Relations, not as a member of the Department of Defense or Department of the Navy, and the views therefore are my own and not those of the Department of Defense. So thank you for that disclaimer time.

Maritime security is really a national security imperative, and I think China has begun to recognize that. When you look at China's 1982 maritime strategy, that came out from then Vice Chairman, who unfortunately passed away last week, you can see that China is on pace with implementation of that strategy, taking over the first island chain, moving out into the second island chain, and beginning to put out feelers to send a carrier into the fleet and reaching out to Brazil to actually get some training for that aircraft carrier.

There is no doubt that China is flexing its muscles, and quite frankly sometimes acting unreasonably and irrationally in its guarded and arguably inappropriate reaction to North Korean sinking of the Cheonan, the shelling of Yeonpyeong Island, and its demands for the apology after the Chinese fishing boat captain was arrested for ramming into the Coast Guard vessels in the East China Sea.

Its declaration of the South China Sea as a core interest got a reaction throughout Asia, and quite frankly, recently, we've seen some of the Chinese leaders back off of that as they realize that it resulted in unintended consequences and reactions from that declaration.

China's recent statements when you view them with increasing maritime surveillance and military exercises in the South China Sea have really put many Asian nations on edge and Southeast Asian nations on edge. Rather than increasing the stability throughout the region as it gains its military capability, the incidents have created more strategic mistrust.

China's bold assertions regarding its maritime claims have also coincided with many actions in the South China Sea, East China Sea and Yellow Sea that have sparked this backlash of reactions.

Recent Chinese military developments, rhetoric and actions reflect

⁷ [Click here to read the prepared statement of Dr. Balbina Y. Hwang](#)

implementation of their strategy. In 2010, they held an unprecedented joint military exercise with all three of their fleets in the South China Sea. So this military show of force, in conjunction with their rhetoric and assertions, has really created a reaction among, as my colleague says, the Japanese, the South Koreans and others in the region, including the United States.

In particular, their objections to U.S. military exercises in the Yellow Sea, which aren't unique or unusual but, quite frankly, have been going on for years, was a more public assertion that they want to combine their anti-access strategy with this public rhetoric and try and use this notion of legal warfare as an underpinning for their actions.

China's actions regarding the Korean Peninsula and their significant military developments that have recently been announced and discussed, quite frankly, by the Pacific Commander Admiral Willard and others, have everybody else wondering what they're up to.

Maritime law enforcement vessels have recently been fielded in both the East China Sea and the South China Sea. Larger vessels, 2,000 ton vessels, that they've now sent up to the East China Sea, and an increased fleet of helicopters and smaller vessels that they've sent to the South China Sea have us wondering whether their increased maritime law enforcement presence is actually going to be at the heart of the next confrontation.

When you listen to most scholars discuss the real rift between the United States and China, they often blame it on the lack of a sophisticated military-to-military reaction between the United States and China, but when you peel back the layers of the incidents that have caused this, it's more often than not the political machinations that follow any announcement to sell arms to Taiwan, something that the Chinese are well aware of, as it was part of the Taiwan Relations Agreement, Taiwan Relations Act and the Three Communiques.

In reality when you look at the incidents that have occurred over the past few years, it's not the Chinese military actions that are usually the basis for this conflict and confrontation. More often than not, you see it's the interaction of maritime enforcement vessels, commercial vessels, and recently fishing vessels that have acted either on their own without any supervision from the Chinese government or as proxies of the Chinese government if you want to be a little more cynical about it.

So, in reality, what is the greatest threat for a tactical confrontation that could lead to a strategic consequence and change and shape the region? I believe it's China's either inability or unwillingness to control these maritime law enforcement vessels and other vessels that are flying their flag. In accordance with their responsibility under Article 94(3) of the Law of the Sea Convention, they must ensure that all vessels flying the

Chinese flag act in accordance with the coalition regulations and safety at sea procedures.

When you view the most recent incident in the East China Sea, a recent incident in the South Korean exclusive economic zone, you'll see that these fishermen and other commercial vessels have been acting without any supervision and, in fact, when you look at China's reaction, really with the endorsement of the Chinese government.

So this, I think, is where we should all be concerned. When you look at what that brings in terms of a recommendation, in my opinion, the Chinese government may have exceeded its capacity perhaps to control these five arms of its government that have maritime law enforcement vessels, and recently we've seen the development in both the regional and provincial law enforcement activities such that not only do we have concerns about the interrelationship between the PLA and the central government, but we have some concerns about how far their reach can go in terms of command and control over those local, regional and state maritime law enforcement vessels.

In particular, I've been asked to talk about one of the recommendations in my paper, which is to ratify UNCLOS. My arguments for ratification of UNCLOS differ slightly than some of my other colleagues, probably based on my experience in the Pacific Fleet in dealing with the Chinese.

One of the most important provisions from my perspective is the provision that provides for sovereign immunity of warships, sovereign immune vessels, from application of coastal nation environmental regulations in the exclusive economic zone.

I believe when you look at China's legal warfare and how they've iterated their legal arguments as to why they object to our activities in the EEZ, you can see that they have turned to the most recent argument, first espoused in 2007 at Military Maritime Consultative Agreement, that our military activities are interfering with their marine mammals, in particular, our use of sonar.

For those of you that are familiar with the case that went all the way to the Supreme Court of the United States, the Supreme Court held that the national security interests that we had in conducting sonar training activities were not addressed at all by the Federal District Court, and therefore the United States Navy did prevail in that ruling.

When you look at international law as it relates to activities in the exclusive economic zone, our vessels are exempt from coastal nation regulations and our obligation is to act with due regard for the environment, which when you view the number of marine mammal mitigation measures that we have in place for our vessels, they're

applicable both domestically, and they're applicable in the EEZs of other governments, and provide sufficient protection for the marine mammals in the marine environment domestically and overseas.

So, therefore, not only do I think the freedom of navigation provisions in UNCLOS reflect a very thoughtful and prolonged negotiating history to balance coastal rights in the exclusive economic zone, which only extend to resources, fish, natural gas and oil, but they also reflect the fact that for years, there was no exclusive economic zone, and all nations enjoyed freedom of navigation on the high seas.

So that careful balance between freedom of navigation, which extends to the exclusive economic zone through the plain language at the Convention, and the balance between coastal nation rights to resources like fish is critically important.

Where does that bring us? Getting back real quickly to the regional reactions, I think the most significant developments that we have seen are the things that my colleague, Dr. Hwang, just brought up in terms of the Japanese shift in their defense posture, the shift to be willing to interact with both the United States' military and the South Korean military as observers in two recent exercises, and, in particular, one reaction that has not been mentioned yet, which is India and Indonesia's closer cooperation on defense matters.

This truly is unique and reflects an understanding that perhaps they think that China has moved on to the second prong of their maritime strategy: to extend their reach into the second island chain, which would reach down into Southeast Asia and close to Indonesia.

This concern of India and Indonesia has prompted some verbal--defense minister, Indonesian Defense Minister--pressure for the South China Sea Code of Conduct to become a binding code of conduct, something that China acknowledged they would attempt to discuss in December, and quite frankly it didn't go very far.

So we see this acknowledgement of efforts to engage in a multilateral solution but yet no action from the Chinese government. Therefore, I really think it's incumbent on the U.S., in a unilateral way, to continue some of our assertions to maintain freedom of navigation, which includes military action in the exclusive economic zone without permission.

I think it's critical that we look at the benefits of UNCLOS and the legal underpinnings and arguments that might provide us more legitimacy, if you will, by being a party, and I think we need to look at multilateral organizations and mechanisms that they might put in place in terms of providing fora for those people to complain about the violations of international law conducted by China, whether it's Chinese flagged vessels, fishermen, commercial vessels, or the Chinese government itself.

Thank you.
[The statement follows:]⁸

HEARING CO-CHAIR BARTHOLOMEW: Thank you.
Mr. Thomas.

**STATEMENT OF MR. JIM THOMAS
VICE PRESIDENT FOR STUDIES, CENTER FOR STRATEGIC AND BUDGETARY
ASSESSMENTS, WASHINGTON, DC**

MR. THOMAS: Thank you for inviting me to testify at today's hearing. I'll briefly outline elements of recent Chinese behavior that I think are cause for concern in Southeast Asia and summarize the reactions of Southeast Asian states.

Then what I'd like to do is turn to some of the implications, particularly for the United States, and propose some measures that the United States might consider moving forward to help the states in the region bolster their defenses and their ability to ensure their sovereignty while simultaneously preserving a stable military balance in the region.

This is obviously an incredibly important region. As you all know, more than a third of the world's seaborne trade flows through the South China Sea. Its fisheries are an important source of revenue for the countries that adjoin it, and while its potential oil and gas reserves that lie underneath it are difficult to quantify, they're likely to be very significant.

But the interests on the part of the United States extend beyond the shorelines of the South China Sea. We have an interest in ensuring the continued independence and sovereignty of all of the countries of Southeast Asia.

In the last year, however, China has made a series of provocative moves that when coupled with the continuation of its arms build-up and its development of naval power projection capabilities, in particular, have raised concerns throughout the region about its intentions and its potential expansionist designs in both the East and South China Seas.

A brief overview of some of China's statements and actions suggest the need for a more proactive U.S. approach to the region. To just briefly recount, over the past year, China imposed a unilateral fishing ban in April of 2010, which encroached on Vietnam's territorial waters.

There has also been a spike in Chinese seizure, harassment and detention of Vietnamese fishing boats over the past year, as you may know.

On the military side, China has developed a naval doctrine of what it

⁸ [Click here to read the prepared statement of Capt. Stacy A. Pedrozo](#)

calls "Far Sea Defense" for the projection of power far from its shores, and building on Commissioner Wortzel's remarks, this really is an extension of its thinking about active defense and the expansion of its strategic areas and strategic scope.

We also know that China over the past year has declared almost the entire South China Sea to be in its core interests. As was noted earlier, there's been some backtracking from this statement given the negative consequences in terms of China's diplomatic efforts, but, nevertheless, you've had repeated statements by PLA officials since that time reasserting that it is a core interest and going further to say that this is an area in which it would exercise indisputable sovereignty.

I think no action perhaps makes more evident China's expansionist aims than its planting of a flag on the seabed of the South China Sea last August, which not only demonstrates its territorial ambitions but also its growing competence in undersea warfare and undersea capabilities.

Coupled with this, there have been a number of naval exercises conducted over the past year. The most recent one in November of 2010 focused on showcasing the PLA's growing ability to seize islands and projecting power far beyond its shores.

As you can imagine, the reactions throughout Southeast Asia have been very strong, but they have been very quiet. And one of the reasons for this is that all of the countries in the region face what I would call the "Goldilocks" dilemma. In the absence of convincing actions by the United States that it intends to meet China's challenge, the countries of the region want to hedge against China's growing military might without antagonizing their powerful neighbor.

And in taking this Goldilocks approach, these states in the region really have found that there's safety in numbers, and so therefore it's very important that you have fora such as ASEAN and other regional institutions through which the states in the region can express their concerns about China.

The countries in the region also have been putting greater emphasis on extra-regional partnerships, particularly with the United States. Columnist Tom Friedman has called this desire on the part of the region "containment-lite." He said that it's nice to have a friend who, to paraphrase, when you run into a problem with a neighbor, you can say don't even think about parking in my space because if you do, I have a friend in from Washington, and he has a really big pickup truck or a tow truck, and he can pull you away.

But there are still going to be some limits on how reliant the countries in the region are willing to become on the United States to defend their interests. Given China's growing anti-access and area denial capabilities

and its pursuit of an active defense strategy, there will be questions about our continued ability, America's continued ability, to project power into the region.

If the credibility of our ability to project power wanes over time, regional states may perceive a shift in the regional balance, and they'll have a stark choice: either develop their own defensive capabilities or to bandwagon with their large, militarily assertive neighbor.

The real question then for U.S. policymakers is this: how can the United States help the countries in the region maintain stability in the face of China's expansionist aims and military build-up?

What I'd offer are five potential steps that the United States should consider as it faces this problem. The first is that the United States and its allies might encourage the Southeast Asian countries to emulate China, in fact, and develop their own versions of miniature anti-access and area denial capabilities for defending their sovereign land frontiers, airspace and maritime areas.

The second is that the United States should support efforts through ASEAN and the Five Power Defense Arrangements and other regional security institutions to increase defense coordination and promote transparency in armaments and defense planning.

Third, the United States should facilitate greater sharing of intelligence, surveillance, and reconnaissance data among the countries of the region.

Fourth, the United States should undertake a long-term regional engagement plan aimed at broadening military-to-military exchange programs, military assistance, combined training exercises, as well as undertake a long-term strategy for gaining access to critical air and airbases and naval ports throughout the region on a routine basis, not as permanent U.S. bases, but rather having routine access for shared training opportunities and other things that will strengthen crisis stability and deterrence in the region.

These proposed measures would be defensive in their nature and pose no threat to a peaceful China. They're instead prudent steps to hedge against further provocations that China might pursue. One can think of the development of many anti-access and area denial complexes throughout the region as a loose, interlocking defensive chain, one that would remain slack in normal times of peace or in the absence of threats, but that nevertheless could be pulled taut should it be warranted by China's future behavior.

The United States and the countries of Southeast Asia need to take steps now and bolster their defense capabilities to hedge against a more aggressive and expansionist China in the future.

Thank you.

[The statement follows:]⁹

PANEL IV: Discussion, Questions and Answers

HEARING CO-CHAIR BARTHOLOMEW: Thank you very much. Interesting testimony from all of you. We're going to start our questions with Commissioner Wortzel.

HEARING CO-CHAIR WORTZEL: First, a comment prompted by Mr. Thomas' testimony. This idea of indisputable sovereignty over the South China Sea is not limited to the People's Liberation Army. We heard exactly the same term from a foreign ministry bureau chief in Beijing last August.

Captain Pedrozo, one of my concerns is that the body of Chinese legal arguments could begin to frame the international community's understanding of the issues--sort of a common law.

So should the United States military services and the Department of Defense mount their own legal counteroffensive against Chinese legal warfare by encouraging U.S. legal scholars to offer a series of counter arguments to those put forward by Chinese scholars about the Law of the Sea and global commons like space? And I guess--maybe I'm ignorant, but is there already such a U.S. body of literature because if there is, I really haven't seen it?

CAPTAIN PEDROZO: Thanks, Commissioner Wortzel.

That's a great question. There are significant attempts by United States' scholars and like-minded legal scholars to counter China's arguments. There are only about 20 to 25, depending on how you count, excessive claims, about 20 to 25 nations that claim either excessive exclusive economic zones or excessive territorial seas that amount to exclusive economic zones because they're that expansive or purport to restrict military activities in an exclusive economic zone--between 20 and 25.

Only two of those nations have ever used force to try and interfere with activities in their exclusive economic zone. That being China and Peru.

What we have seen in the international legal community is that the majority of legal scholars agree with the plain language of UNCLOS because when you look at what's behind the plain language of UNCLOS, it's clear that there was a raging debate about the rights of the coastal nation versus the rights of the territorial, I mean of the maritime nations, and those legal arguments have been made repeatedly at international law conferences throughout Europe, throughout Asia.

At the Naval War College, there's an annual conference where

⁹ [Click here to read the prepared testimony of Mr. Jim Thomas](#)

generally there's a Law of the Sea panel. At the Pacific Command Military Law and Operations Law Conference, it's always a topic on the agenda including the maritime disputes.

So I think there's a fairly active campaign among legal scholars to espouse the arguments and to try and counter China's version of the arguments. What I really think is more interesting is to look at China's legal scholars, and some of them in off-the-record conversations have admitted to me what I believe will ultimately be a legal argument that doesn't support what they want to do as a maritime nation.

So as they increase their blue water capability and want to conduct surveys in Japan's exclusive economic zone, when they want to send a submarine to circumnavigate Guam, as they did in 2004, or when they want to challenge some of Vietnam's claims in their exclusive economic zone, their legal arguments against U.S. military activities are going to backfire on them because obviously they're not going to want to give advance notification or request permission to conduct any of those activities in other economic zones.

HEARING CO-CHAIR WORTZEL: Thank you.

HEARING CO-CHAIR BARTHOLOMEW: Okay. Commissioner Shea.

COMMISSIONER SHEA: Thank you all for your testimony.

Mr. Thomas, I have good intelligence that you are one of the originators of the Air-Sea Battle concept, and I know you mentioned it briefly in your testimony. Could you please explain what that means?

MR. THOMAS: Sure. As a precursor, as you may recall, back in the late 1970s and early 1980s, the Army and the Air Force worked to come together and develop a concept for the growing conventional superiority of the Warsaw Pact forces on the central front in Europe.

They developed a concept that was called Air-Land Battle, and it could really be summarized in one statement: the idea of look deep, shoot deep, that instead of focusing on the first echelon of Soviet forces, there would be this focus on the follow-on forces and going and attacking rear areas to essentially isolate the first echelon of forces that could then be destroyed.

We've been doing a number of wargames over the past decade or more looking at military problems and operational problems, particularly in the Western Pacific. This is obviously an air-maritime theater principally. That's not to say that you won't have ground forces and other forces that are involved, but it really is principally one in which air and maritime power is used intensively.

And so we were thinking by way of analogy about what might be a similar operational concept today, and just like Air Land Battle, looking for a concept that might inform our investment choices over the next decade or more. If you think about all of the great capabilities that the United States

brought to bear in Desert Storm, things like JSTARS, Patriot batteries, ATACMS and others. These were all things that really stemmed from this concept of Air-Land Battle.

And so having a conceptual framework for thinking about investment decisions that we're going to make in the future is very important.

In a nutshell, we posited a scenario in our work looking at Air-Land Battle at CSBA where you had a very robust attack that would consist of a very large missile salvos against our bases, both in the first and even out to the second island chain, as well as against our maneuvering naval and amphibious forces that might be in the region.

At the same time, there would be attacks on our space assets, as well as our networks, and our command and control and logistics systems.

In thinking about how we would deal with these challenges, I think it can really be summed up in three parts:

The first is thinking about how to deflect the blow. You have essentially this massive missile salvo that's being arrayed against you. How do you deflect it through a combination of active and passive defenses, and this requires things obviously like ballistic missile defense, but it also places great emphasis on the diversification of your bases and the hardening of those bases throughout the region so that you're less vulnerable to preemptive attack.

The second element is what we called blinding the cyclops. It involves a blinding campaign against the opponent's intelligence, surveillance and reconnaissance (ISR) systems. With conventional ballistic missiles you have this huge asymmetry – they have lots of them while we have none-- as you all are well aware. We were looking for how you could essentially achieve a systemic effect in terms of degrading or defeating that capability, and the one that we were most drawn to was this idea of being able to deny the effective use of ISR for targeting by that missile force.

And the last element that we talked about was slaying the archer, and that would involve conducting a missile suppression campaign. Here we felt that this was important for essentially inducing the adversary to operate in ways that would be more inefficient in how they might employ their missile forces, while at the same time if we've diversified our bases and if we've hardened our bases, we could play a shell game with some of our forces. And if we've conducted this blinding campaign, we buy back some freedom of maneuver for our naval forces.

I would just, in closing, point out that this concept was not designed as a war-winning concept. It really is designed as a concept on how not to lose a war.

COMMISSIONER SHEA: This is a CSBA concept, not a Defense Department concept?

MR. THOMAS: That's correct. This is what CSBA was developing, and it really was intended as intellectual grist for the department. Thanks.

COMMISSIONER SHEA: Thank you.

I have another question.

HEARING CO-CHAIR BARTHOLOMEW: Go ahead. I think we've got time.

COMMISSIONER SHEA: Okay. For both Dr. Hwang and Captain Pedrozo, for all three witnesses. Earlier today, and you alluded to this concept, Dr. Hwang, one of our witnesses said that the alliance structure has guaranteed peace and security in the Pacific. And as China's power, ability to project power at least regionally grows, we would assume that the deterrent effect of the alliance structure is lessened. Would you agree with that?

I guess what I'm driving at is, is there a need to beef up our alliance partners? Do they need more military hardware, like does Japan need F-22s? What does South Korea need? Is it your view that those types of steps are necessary?

DR. HWANG: Oh, yes, absolutely. There is no doubt that one of the strongest messages I think you could send to Beijing is exactly beefing up sort of the hardware. I think that certainly sends the strong signal.

But I had initially misunderstood your question. What I find fascinating about your question was that to me what sort of lessened the overall deterrence or effectiveness, if you will, of the alliance over the last ten, 15 years, are frankly changes in South Korea and in Japan as well.

And, again, I think what's very interesting is these events of the past year have, as I used the phrase, you know, "wakened up" the publics in both countries and turned them back to finally appreciating once again the importance of the alliance.

But for a long time, given the growing importance of China economically and how closely, integrally they are tied with South Korea's prosperity and also Japan's, I think many of the public sort of lost this notion, and in fact began to view the alliances as actually a problem, and the alliances as actually destabilizing, and this is what I think China has been very effective at essentially marketing this idea, that somehow it's the alliances that are causing the instability, and so it's really--

COMMISSIONER SHEA: But your testimony is that 2010 kind of changed that.

DR. HWANG: That's right. Now I'm not sure how long this will last, and I so I think given this more permissive environment to be able to make advances and improvements in the actual alliances and hard capabilities, I think we should certainly take advantage of them.

But you are correct, and, in fact, I believe our Defense Department is

talking--I think Captain Pedrozo might know more--but talking specifically to Japan about purchasing F-35s; isn't that one of the--maybe not. But also working to shore up the anti-missile defense capabilities as well. And it's all tied in with Japan's domestic laws as well, the export ban.

COMMISSIONER SHEA: Right. Okay. Thank you.

HEARING CO-CHAIR BARTHOLOMEW: Captain Pedrozo, do you have something you would like to add?

CAPTAIN PEDROZO: I only want to add one thing. I agree with what my colleague said, and I'll defer any questions specifically on Department of Defense actions since I'm not here speaking for them.

But I would say that there are two important concepts that we've discussed with some of our Chinese colleagues. One is that we do have these mutual defense treaty obligations which shape the way that we interact with partners like Japan, the Philippines and Korea. So these are mutual defense obligations that do shape our policy, our foreign policy, because of our treaty obligations. So that's a different situation than China finds itself in in the region. So I think that's important when you look at our foreign policy versus their foreign policy.

The second aspect that I think is important is to look at how China's tactical missteps combined with their rhetoric has caused our alliance partners to relook at their entire defense strategy, and why I think that's important is that for a long time I think they were overreliant on the United States' military to provide their own defense and somewhat apathetic about pushing their own defense department systems and their own governments to maintain a robust defense.

What I see as the dilemma is that now we face a huge deficit and a huge budget problem for the Department of Defense and the nation, which will impact our funding for the Department of Defense, thereby impacting the number of assets that we can place in the region, and we need to look at it more holistically in terms of developing these alliances and having our alliance partners take some more responsibility for their own defense.

COMMISSIONER SHEA: Thank you.

HEARING CO-CHAIR BARTHOLOMEW: Commissioner Mulloy.

COMMISSIONER MULLOY: Thank you, Madam Chairman, and thank all three of you for spending time putting together your written testimony and then appearing here today.

The first question I have is to Captain Pedrozo. Earlier today, we had a witness who testified about the Chinese lawfare and the exclusive economic zone under the Law of the Sea Treaty and the harassing of U.S. ships that might be engaged in intelligence gathering, which I think we think is permitted in the exclusive economic zone, under the Law of the Sea Treaty.

The question I asked was would it strengthen our legal position if we ratified that Convention? I understand we've signed it; we've not ratified it. And I wanted to ask Captain Pedrozo because you, on page nine of your testimony, you talk about that very issue. I wanted to get that on the record. What is your view? Would it strengthen us--our legal position--and why?

CAPTAIN PEDROZO: Yes, sir. It's my opinion that it would strengthen our legal position, particularly with regard to us trying to make these arguments in an international community, as I discussed earlier with Commissioner Wortzel. We have more credence as a party to the Convention than we do if we're standing outside the Convention.

In basic principles of treaty construction, that which is not prohibited is permitted, and when you look at the provisions of the treaty, intelligence gathering is specifically prohibited in the territorial sea. No such provision exists in the provisions of the exclusive economic zone, which by basic treaty construction means that it is permitted in the exclusive economic zone, and when you look back at historical examples, the Russians routinely collected intelligence with both ships and aircraft in our exclusive economic zone during the Cold War, and we did nothing other than to intercept them, see who they were, and wave at them or conduct whatever antics we did at the time.

So, certainly, historically, despite what some of my Chinese colleagues assert, we historically have seen other foreign nations engage in intelligence gathering in the U.S. EEZ and have not done anything about it, much less used force to intercept it.

COMMISSIONER MULLOY: Do either of you want to opine on that recommendation that she made?

DR. HWANG: I will say not about this treaty but what does concern me about relying too much on international agreements is my question about how we're able to enforce them once they or implement them once they've been agreed to?

For example, the recent, the fishing incident--the Chinese call it "fishing incident"--with the South Korean Coast Guard off their coast, eerily similar to the Senkaku issue. You had 50 Chinese fishing vessels, ostensibly commercial, who were very clearly violating the EEZ, and in fact the South Koreans, the Republic of Korea, and the PRC had signed an agreement in 2001, a bilateral agreement, which had authorized their respective maritime patrols to inspect foreign vessels fishing inside the EEZs and to pursue those that flee to neutral waters.

This is exactly the incident that you had. You had this melee. The Coast Guard was reacting, and, in fact, the fishermen attacked them with metal rods and so on. One died, and the Chinese reaction was to demand

not only their release but also compensation for damages. No mention whatsoever of this bilateral agreement.

COMMISSIONER MULLOY: Let me ask a follow-up on that very issue, Captain Pedrozo, and then others. My understanding is if you get into interpreting the Law of the Sea Treaty, they'll rely on the Vienna Convention on the Law of Treaties, which tells you how to interpret a treaty; right?

My understanding is we're not party to that treaty either, although we say it's customary international law.

Is that correct and do you know why we're not a party to that Convention?

CAPTAIN PEDROZO: No, sir, I can't answer that specifically, but I will say that basic principles of treaty construction are customary international law, which we recognize.

And going back to Dr. Hwang's comment about the South Korean incident, I would wrap that into my examples of assertive or aggressive actions that have been taken by vessels that are flagged under the Chinese flag and the need for some sort of regional or multi-national approach to these violations of the collision regulations, to which all of these countries are a party, customary international law principles of due regard for safety of mariners, which is customary international law, as the underpinnings and the reason why we need some sort of navigational safety subcommittee at either ASEAN or at the IMO or--at the International Maritime Organization, the IMO-- or some other regional body to address these incidents very publicly because we have seen public reaction shape some of China's foreign policy in the past.

COMMISSIONER MULLOY: Thank you very much.

HEARING CO-CHAIR BARTHOLOMEW: Okay. Commissioner D'Amato.

COMMISSIONER D'AMATO: Thank you, Madam Chairman, and the witnesses, thank you for coming and very fine testimony.

I'm happy to hear the news about how the United States is emerging, reemerging in the Japanese bureaucracy and in the South Korean bureaucracy, and I think that 2010 is very good news for the U.S., in my opinion, for our alliance structure and structure of relationships in the region.

Now, the question I have is, it's quite obvious that this is happening and that the Chinese are causing it. My question is--I don't want to let the cat out of the bag, you know--but do the Chinese know this is happening, and what is the reaction? Are they blinded to it because of their own whatever fixations or do they understand that there are trends working against them that they have caused them here? Are they taking actions to mitigate them; do you think? Have you seen anything like that?

Either one. Dr. Hwang, Captain Pedrozo.

CAPTAIN PEDROZO: The most recent reactions I've seen is some more bilateral cooperation between China and South Korea trying to walk back a little bit from their lack of reaction about the Cheonan and the Yeonpyeong incidents. I think their recent bilateral discussions were public because they wanted everybody to know that they were engaging South Korea again.

I think they've made similar efforts with the Japanese, but then in the middle of the talks with the Japanese, bilateral discussions with the Japanese, they got upset about something, and suddenly the Japanese minister was not met with as high a level of official as he had anticipated.

So I think they do realize it, and I think they're trying to engage with some of our alliance partners, but again their reactions are mixed because they tend to react very tactically to certain events, and then this causes more strategic mistrust in the region.

COMMISSIONER D'AMATO: The old adage, when you're in a hole stop digging, that has not been applied yet?

CAPTAIN PEDROZO: I'm not sure, sir. I don't think so.

[Laughter.]

COMMISSIONER D'AMATO: Did you have a comment on that?

DR. HWANG: Well, I think what makes the current dynamic quite different from the Cold War certainly is that although you have the security interests of our alliances aligned against or contrasting, I suppose you better say, China, in fact, of course, we can't forget about the incredible interaction, economically, socially, culturally, everything else that happened, which we certainly did not have with the Soviet Union, and the Soviet Union did not have that kind of interaction with any of our allies.

And so when China is beginning to assert itself, as I said, perhaps much of their confidence has come precisely because of their increased economic capability. They clearly seem to have misjudged, and I think they are walking back from that.

I would also quite carefully point out that Japan and South Korea, I think, ought to be differentiated because Japan, I think, is in a different position slightly. First of all, Japan is feeling a lot more isolated. Its spat with Russia also I think sort of stunned them. They're completely isolated diplomatically, even economically, in a way that I don't think they've felt in the entire 60 years since their defeat in World War II.

South Korea is in a very different place. They're actually quite confident, and if you saw their recent special ops naval operation off the Gulf of Aden, that was quite stunning. They went, they basically smacked the Somali ship, seized it, you know, they killed off a bunch of guys, and they saved the entire crew. It's really astonishing.

By the way, that must have really caught the Chinese attention.

[Laughter.]

DR. HWANG: Because the Chinese, despite all their bravado in the Gulf of Aden, it's my understanding that that sort of all fizzled. So Japan and South Korea are actually going in different trajectories.

So I would expect that even though we're in a very similar place vis-a-vis our alliances, you might see them reacting slightly differently as we move on in the future. So I think we need to be cautious.

COMMISSIONER D'AMATO: Thank you, Madam Chairman.

I do have one quick other question. This is a different area but in some ways a little bit the same. This two island chain thing sounds really kind of interesting and dangerous, and you can see them coming, but they're not really looking over their shoulder. Their shoulder has the Straits of Malacca. You've got the Vietnamese buying warships, and then you've got this India-Indonesia cooperation. So it strikes me that the Chinese are vulnerable to a large extent because of their importation of oil through the Straits of Malacca.

I don't see any real commentary on their part. They're not doing much about this; is that--this is happening, but the focus seems to be on one island chain and then over to the next island chain, you know, but back here is where they're vulnerable. So is there anything that they're putting into place or seem to be putting into place to mitigate against forces that are starting to work against them in that region; do you think? Or am I accurate in my assessment of that?

MR. THOMAS: I guess what I would say is they are developing a new naval doctrine, "Far Sea Defense." So they are thinking not only about the first and second island chain, but they're thinking about their extended sea lines of communication, extending through and beyond the Strait of Malacca. It is a strategic concern given how much of their trade, access to markets, as well as their need for imported materials, particularly energy resources, comes through Malacca.

And so this is, I think, a source of concern, particularly for the PLA Navy, that they're trying to address. I think from the standpoint of the countries in the region, I think that not all is a woeful story when it comes to thinking about the strategic balance.

One of the things that the United States through its alliances and its partnerships in the region has is a tremendous geographic advantage over China, that if you think about whether it's the first and the second island chains or whether you think about the key chokepoints along the southern periphery of the South China Sea, it's very, very difficult for the PLA Navy to get to open blue water.

And one of the things that a good strategy, I think, would try to do is think about how to utilize the geography of the region to limit the PLA Navy's options for military power projection. We certainly have an interest

in freedom of navigation for peaceful purposes, but at the same time militarily this is an area, an advantage, that we can use to limit the growth of their capabilities farther out either into the Pacific Ocean or into the Indian Ocean over time.

COMMISSIONER D'AMATO: Captain, did you have a comment?

CAPTAIN PEDROZO: Just briefly, I wanted to add on that China has engaged quite deliberately with all of the Southeast Asian nations, both militarily and commercially, with both hard power and soft power. We see increased cooperation with Singapore, increased cooperation with Malaysia, although as you know, Malaysia is one of the nations that has disputed claims with it in the South China Sea.

Obviously, they still have a lot of disagreement with Vietnam, and both Vietnam and Indonesia have publicly protested their 9-Dash line in the South China Sea. But I do think they're trying to make some inroads militarily with their cooperation with Southeast Asia.

COMMISSIONER D'AMATO: Thank you.

HEARING CO-CHAIR BARTHOLOMEW: Thanks.

Vice Chairman Slane.

VICE CHAIRMAN SLANE: Thank you.

I have always been astonished at why the Chinese did this, and I keep coming back to what were they thinking? They have stirred up the Japanese; they have stirred up the Koreans; they're driving the Vietnamese into our camp. And many other negative reactions. Can you shed any light on it? Were these the unintended consequences or is there some method to their madness here?

MR. THOMAS: If I could maybe comment, and I'll turn it over to people who probably know more about this than I do, but it seems to me that not only in Washington but in many allied capitals throughout the Western Pacific, we tend to criticize the PLA for a lack of transparency, that we don't understand what's going on.

But I really think that the lack of transparency may be as much internal as it is external, and I think this may be at the heart of the issue. I'm not sure that there's always the level of civil-military relations and civilian control over the military that you have in other capitals, and sometimes I think that can lead to a disconnect and to doing things that from an external perspective, from an American perspective, look like they'd be counterproductive, and I share your view.

CAPTAIN PEDROZO: I'd just build on my earlier point that I'm not convinced it's the PLA that's behind some of the tactical incidents that have created this strategic backlash. I think there is a problem with coordination and communication, command and control, and I think it goes to state agencies other than the PLA, maritime law enforcement agencies, and it's

driven by this sort of rush and concern over resources, in particular, fish, in the past year that's caused some of these incidents.

And I don't think that China has yet figured out to get better command and control over that. They have a strategy called the Four Coordinations Strategy, and one component of that strategy is to increase the command and control over the five maritime surveillance agencies and to try and get better control of it. The problem is, as they add more maritime law enforcement vessels and aircraft, then their problem gets exponentially harder, not easier.

So, again, I think a lot of this, these reactions, are unintended consequences, but you can't point to one decision-maker as to why they occurred.

HEARING CO-CHAIR BARTHOLOMEW: All right. I'll take the opportunity first, again, to thank you all for interesting testimony and thoughtful answers to the questions.

Dr. Hwang, you mentioned economics, and it seems to me that there is some answer I think to some of these questions when you look at the economic relationships that exist between the countries and the region and China. We've traveled some in Southeast Asia. It was very interesting in Vietnam last year. As people were expressing concern about the Chinese, some of the Chinese actions, both having to do with the Mekong and the South China Sea, there's also the current of but we have this growing economic relationship, and it's very important to our economic growth, and I think you see it everywhere along the way, and I wondered if the Chinese government perhaps thought that the economic relationships would prevail over all of these other concerns, if they gave that level of thought to any of this?

But, Mr. Thomas, I want to start with you really and delve into this suggestion that you have about encouraging the Southeast Asian countries to develop their own mini-anti-access/area denial postures because China is really the 800-pound gorilla on the block over there. And I find myself having some difficulty conceiving how these much smaller countries, much poorer countries, money-poorer countries, would actually be able to pull something like that off.

So can you talk about it a little bit more?

MR. THOMAS: I'd be happy to. I think to start, normally countries in their military development processes, when they don't have a lot of resources, adopt anti-access/area denial postures, and certainly when the PLA started this, this is where they were.

As they've grown in resources and as they've matured their capabilities, now they're thinking beyond that, and so it goes further. I think it's important to remember, this isn't about just one particular area of

the world. The United States and the U.S. Army, in particular, built up a very robust anti-access/area denial complex in the 19th century, aimed at making sure that we could keep the Royal Navy out and that they were never going to once again steam up the Chesapeake Bay and try to sack Washington or Baltimore.

And this really was the driving philosophy for the U.S. Army and its doctrine for probably the first hundred years of the nation. So this is, I think, a normal evolution.

When it comes to the states in Southeast Asia, some of the capabilities that I'd have in mind would be things like anti-ship cruise missiles, and you already see these countries in the region procuring certain systems which can be very effective in this role--triple-digit SAMs--such as the S-300, S-400 series--for air defenses. Again, you already see such procurements being made. Additionally, countries are procuring diesel-powered submarines throughout the region, as well as fast-attack craft.

So I think that in terms of the capabilities, it may be a little bit of emulating what China is doing in terms of its anti-access capabilities, but it also may be a little in terms of emulating other countries, such as Iran, so you may see them develop swarming techniques and the use of fast-attack craft with guided naval rockets and anti-ship missiles, or even precision grenade launchers in the future off of fast-attack craft.

I think the purpose here is that they're not going to be able to control the domain, but they can have very significant sea-denial capabilities, and I think that this is really the fundamental shift that's occurring in warfare today. You can almost think of the 20th century as being a contest for control of domains. I think the 21st century is going to be far more about denial, and I think that there really is the shift from control to denial.

We see it today with China in terms of its ability to deny us access and the loss of some of our control, but that does not mean reciprocally that we lose our ability to deny, and, in fact, we may have competing architectures where, you know, our ability to deny targets in a certain area versus their ability to deny targets in a certain area creates virtual no-man's lands. I think the South China Sea could potentially be the perfect example of that where you have these islands, they would be very difficult for anyone to control because you could constantly harass them and you could harass the logistics supply routes to them, but these denial complexes could essentially proliferate throughout the entire region.

HEARING CO-CHAIR BARTHOLOMEW: Either of our other witnesses have any comments on that? No. Okay. Thank you.

Second round. Commissioner Wortzel.

HEARING CO-CHAIR WORTZEL: I have two relatively short questions. Dr. Hwang, weren't Chinese Navy ships caught gathering intelligence in

Japan's territorial waters, and if so, what was the Japanese reaction?

And then for Mr. Thomas, have you seen any reaction from ASEAN nations, Southeast Asian nations, to this concept of cooperative mini-area denial capabilities, if you've had a chance to talk to them about it?

DR. HWANG: Yes, that is correct, and, in fact, interestingly, Japan's reaction was one of the cooperative agreements that the defense minister made on his recent trip to Seoul.

Two agreements that didn't catch that much attention, but one of them was an agreement between the ROK and Japan to share intelligence data. Now, I'm not quite sure exactly how well it's going to be implemented given all the sensitivity of this issue.

Notably, it was essentially phrased as so "in order to further information about North Korea," so--because North Korea, of course, is always the easy target, and it makes it much less politically sensitive than to say "against China."

But I believe that this is an area in which Japan could begin to extend its cooperation, especially on intelligence issues, with the United States and ROK.

HEARING CO-CHAIR WORTZEL: Captain Pedrozo.

CAPTAIN PEDROZO: Just to add to what she just said, it was the first defense agreement they ever had, and it had three components: the intelligence sharing agreement; the acquisition and cross-servicing agreement, which is fairly significant, and something the U.S. has with quite a few other countries, as you know; and then third was a call for more ministerial level discussions on defense issues, which I think is very interesting and some potential for defense cooperation.

MR. THOMAS: I think that you've seen inklings of growing so-called anti-access capabilities in the region in certain terms particularly if you look at just the armaments that countries are buying. Vietnam is acquiring the Bastion coastal defense system, which is a fairly capable system, and is acquiring air defenses from Russia.

A number of the countries in the region are purchasing diesel submarines, including Malaysia's purchase of the Scorpene and Agosta class submarines. Across the region overall I think the number of submarines will more than double over the next ten years. So it's going to be a significant increase in terms of undersea warfare capabilities.

And I think the other part of this that's interesting is some of the military-to-military cooperation. We mentioned earlier cooperation between India and Indonesia. India, I think, is very keen on thinking about some armaments cooperation on programs like the BrahMos cruise missile system, that could be submarine-launched, air-launched, or launched from land as an anti-ship system.

So, overall, I think that there are inklings. I don't think that--what we haven't seen is a really coherent approach, either on a national basis or on a collective regional basis yet.

And I think this is one where, I think with a very light hand, there are things that the United States could do, but there are also things that other extra-regional partners, such as India and Australia and perhaps others, could do as well to essentially provide some of the connective tissue that might link some of these systems together.

In particular, ISR and data links and systems that would serve as enablers, providing targeting information, and be very critical.

HEARING CO-CHAIR BARTHOLOMEW: Interesting. Okay.
Commissioner Mulloy.

COMMISSIONER MULLOY: Thank you, Madam Chairman.

I'm not really an expert on these military-type issues, but I focus a lot on the economic, trade and finance, but I was at a dinner the other night, and it was associated with some of these officials that were in town with President Hu, and there was a Chinese general who was involved in this dinner, and the issue was raised, the people have said in China the tradition has been the Party controls the military; the military don't control the Party.

I think the Party controls the gun; the gun doesn't control the Party. And the former Chinese general really was making a point, no, no, we're under the control of the Party, and I thought someone said earlier something that kind of intrigued my thought. Is that your impression? Or is the army getting more control in China than previously? What's your take on that whole issue?

Maybe we'd start with Dr. Hwang and take it across.

DR. HWANG: I do think that's a very interesting question. I certainly can't, I'm not an expert on this topic, so I wouldn't be able to surmise on exactly if the PLA is getting more control.

Related to North Korea, I think what we are seeing is clearly there is very open division between the way the PLA thinks and the rest of the Chinese leadership about North Korea. So I think what that reveals is that there are schisms.

Now, the schisms may be over specific issues. I don't know if it's really about this control, but I do think Captain Pedrozo's point earlier was a very important one where you were saying that it's important for us to try to understand who exactly in the leadership is or has control, for example, over these commercial entities?

I bring this up because of this rare earth mineral issue. Now, Commissioner Bartholomew, I think you were trying to get at this as well. What we saw in the aftermath of the Senkaku/Diaoyu incident was suddenly

this export ban. Now, as they claim that it was unrelated, what is actually interesting about this is, in fact, there are very strong economic reasons for why they did it. Now, of course, the timing is quite suspicious.

But, in fact, China implemented these domestic laws that if foreign companies invest in manufacturing facilities that use these rare earth, so flat-panel screens, cellphones, et cetera, within China, then they actually become exempt from these bans.

So, in fact, it's actually a very effective way for China to get the Japanese and South Korean companies to move their manufacturing facilities into China, which was already happening anyway, but this sort of is a very effective way to speed this up.

Now, who gains more then? You know, of course, the state does, but it is a little bit unclear on where that directive came from. I mean did it come directly from the PLA or right after this incident? So I think that's a very important question.

COMMISSIONER MULLOY: And you don't have a good sense of it yet?

DR. HWANG: I don't. I'm sorry.

CAPTAIN PEDROZO: Unfortunately, neither do I. I think what we've seen this year, though, is a more affirmative assertion similar to the one that you heard at your dinner, that the PLA, is not in charge, that the PLA is not running off on its own. So I think we've heard very verbal assertions from senior leaders that have visited the United States from China that the Party certainly controls all the decisions with regard to foreign policy.

I think the actions and the timing of some of these things are what's more interesting. To try and figure out whether the timing is being driven by the PLA being a little more independent or whether this in some way is some lack of coordination by the Party and the PLA.

I think, again, the more sort of pertinent question is how do some of these economic machinations come back to help certain interests within China and hurt other interests? So with rare earth minerals, it may have helped their economic interests, but yet hurt their strategic position in the region, particularly with regard to some folks in the United States.

Same thing with some of their pressure that they put on BP--I think it was BP--and Exxon in the East China Sea. That was an effective way of keeping them from investing in Vietnam-claimed islands, but did that backfire by raising more suspicion about their economic activity vis-a-vis American companies? So I think that's something that needs more thought.

HEARING CO-CHAIR BARTHOLOMEW: Mr. Thomas, do you have any comment on that, too?

MR. THOMAS: I think it was actually Chairman Mao who said that the Party controls the gun originally.

The real answer is I don't think anyone really knows the degree of

civilian control over the military, and that's the honest answer, but I think that there have been enough incidents over the past decade that give us pause to think about what is the level of civilian control over the military, whether it's the 2007 ASAT test, which seems to have caught the Foreign Ministry off guard, the 2009 Impeccable incident, dealings over North Korea, the 2010 Senkaku.

HEARING CO-CHAIR BARTHOLOMEW: The 2011 stealth fighter.

MR. THOMAS: The rollout of the J-20, you know, on the eve of Secretary Gates' visit, and again the timing seems unusual, and so I think it makes you wonder about competing bureaucratic interests inside of China, not only civil-military, but even within the PLA, between the PLA Navy, the PLA Air Force, the Second Artillery Force, and the Army, as they're going to compete for resources in the future.

And I think coupled with all of this are two other things. One is the growth of nationalism, not only in China as a whole, but particularly within the PLA, which may be a very strange variant of that nationalism, and I think the last is the coming leadership succession in China, and that you have a generation of leaders that are emerging who are technocrats.

They've grown up as political bosses in cities like Shanghai without a lot of military experience. So this is not like the political leadership of the past that was kind of steeped in military tradition.

COMMISSIONER MULLOY: Thank you all. That was very helpful.

HEARING CO-CHAIR BARTHOLOMEW: I just want to add one thought on the "who's in charge," which is sort of the question that we're really asking, but to note that Charter 08 had a call for state control over the military and for the Party not to be in control over the military.

So some people think that that was one of the reasons it was shut down so quickly. It's an interesting dynamic, but I want to thank all of you very much on behalf of all of us for your time. We look forward to continuing discussion as we go through the course of our annual report cycle and thanks for appearing.

DR. HWANG: Thank you.

CAPTAIN PEDROZO: Thank you.

HEARING CO-CHAIR BARTHOLOMEW: With that, we're done for the day.

[Whereupon, at 4:05 p.m., the hearing was adjourned.]

ADDITIONAL MATERIAL SUPPLIED FOR THE RECORD

STATEMENT OF DANIEL INOUYE, A U.S. SENATOR FROM THE STATE OF HAWAII¹⁰

STATEMENT OF LT. GENERAL (Ret.) David A. Deptula¹¹

¹⁰ [Click here to read the statement submitted by U.S. Senator Daniel Inouye](#)

¹¹ [Click here to read the statement submitted by Lt. Gen. \(Ret.\) David A. Deptula](#)