Center for Strategic and International Studies

TRANSCRIPT

Event

"Lights Out? Wargaming a Chinese Blockade of Taiwan"

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FEATURING

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Col. Mark F. Cancian:

Good afternoon. I'm Mark Cancian, a retired Marine colonel and senior advisor at CSIS. Welcome to our program today on our recently released report on the blockade of Taiwan. The report is entitled "Lights Out? Wargaming a Chinese Blockade of Taiwan." The project was funded by the Smith-Richardson Foundation with additional support from the Diana Davis Spencer Foundation. We appreciate their support.

A blockade of Taiwan is important to study because the ensuing disruption of global trade would affect every inhabitant of the planet and could lead to a major conflict in the Western Pacific. Blockade is interesting from a military perspective because many of the scenarios engendered huge convoy battles, reminiscent of the great convoy battles of World War II, like Pedestal in the Mediterranean in 1942, the simultaneous and disastrous PQ 17 in the Bering Sea, and ONS 5 in the North Atlantic in May 1943.

Our event will have three parts. First, there will be a 10-minute presentation on the report itself. Then there will be a one-hour panel discussion on the general topic of a U.S.-China conflict over Taiwan. Both were taped last week when all the participants were available. Finally, there will be a live Q&A session with the three authors. So send in your questions.

Before kicking off the report and the briefing, I want to acknowledge that this was a team effort. There were three principal investigators – me, Dr. Eric Heginbotham, and Dr. Matthew Cancian. Eric is a codirector of a wargaming center at MIT and Matthew runs wargames at the Naval War College. We were supported by a highly talented staff, whom you see in this picture. Chris Park and Grace Deri deserve special recognition as coordinators of research and wargaming execution. The project was also supported by researchers Navy Lieutenant Alicia Clark, Emily Ezratty, Shoshana Gevelber, Calin Nolan, and Bridget Will.

Now let's turn to the 10-minute briefing on the report itself. Matthew and I are the briefers.

(Video presentation begins.)

Dr. Matthew Cancian:

Imagine the year is 2028. Xi Jinping, the leader of China, has decided to try to change the status quo on Taiwan, for whatever reason – long-held plans, internal pressures, or some provocative act by the Taiwanese. There's economic measures that he could take, or military ones.

The first thing that comes to mind is obviously invasion, but this is a very dangerous course of action with many pitfalls. He could try to seize some of the outlying islands on Taiwan, but in the middle is a blockade – an attempt by Chinese forces to physically interdict merchant ships going to Taiwan and apply coercion that way. The first vessels of the Chinese Coast Guard and the

People's Armed Forces Maritime Militia go out and start boarding and seizing vessels bound for Taiwan. What would happen? How could the Taiwanese react? And would the United States intervene? And if so, what would that look like?

Col. Cancian: To answer these questions, CSIS ran 26 iterations of a wargame looking at what would happen if China instituted a blockade of Taiwan. Looked at many different scenarios. The purpose was to inform both decision makers and the wider community about what the options were and what the consequences might be. The work was funded by the Smith Richardson-Foundation and the Diane Davis Spencer Foundation.

Dr. Cancian: As a blockade could take many different forms, we looked at it from two primary variables in order to shape our thinking. First is China's escalation level, where at a very basic level they could just try to board ships bound to Taiwan using the Chinese Coast Guard and the People's Armed Forces Maritime Militia. But the conflict could range all the way up to a wider war, where China is attacking any ships that go not just to Taiwan but also U.S. ships in the region and Japan. Conversely, there's many different ways that the coalition could respond.

First, the United States might not even be involved. If Taiwan is by itself, they could act in a circumspect manner and constrain their military forces to the area around Taiwan. Or they could be more assertive and try to stop Chinese military forces and nonmilitary forces that are conducting the blockade. When the United States gets involved, it could be involved in a more limited way, just trying to escort convoys to Taiwan. Or, again, there could be a wider war where the United States is striking Chinese forces outside of the declared exclusion zone and even on the Chinese mainland.

Combining these two variables together, we have a matrix of different scenarios that could constitute a blockade. In the upper left, you can see that we have a Chinese boarding effort that's met by a constrained Taiwan. In the lower right, there's a wider war by China where they're attacking U.S. bases in Japan. And that's met by a wider war by the United States, where they're even attacking the Chinese mainland.

We also wanted to look at how these scenarios would change if certain variables change and conduct sensitivity analysis in this way. Therefore, along the diagonals we have multiple different iterations looking at different changes to our variables to see how the outcome would change. The result is 19 iterations in these different scenarios where the escalation levels are fixed to look at what would happen if both sides were locked into a certain scenario.

Col. Cancian: To examine the dynamics of escalation, the project ran five free-play games. In those games, the two sides were not given an escalation level to begin at but could choose their own escalation level. In some games, the teams went to a high level of violence. In other games, they found an offramp to limit the level of escalation and violence.

Dr. Cancian: Whatever the format of the games, we used three basic modules in order to model the combat and the economic effects on Taiwan. The first answers the question of what shipping is available to try to go to Taiwan. Second, we move into what of that shipping that's sent to Taiwan makes it there, given both the Chinese efforts to stop it and the U.S. and Taiwanese efforts to push it through. Finally, we look at what the effects of that cargo arriving on Taiwan are, particularly looking at energy production. We would run those models for one week, get the results, brief them back to players, and the players would make decisions again for the next week, and continue through that cycle 20 times to get a look at 20 weeks of game play.

Col. Cancian: The project began by establishing a zero baseline. What would happen to Taiwan's economy and society if nothing got through the Chinese blockade. Here you see three futures. The middle one is what would happen if the blockade occurred with Taiwan's day to day posture. The upper one is what would happen if Taiwan increased inventories and made certain preparations for its economy and society. The lower one here is what would happen if Taiwan increased its efforts towards green energy.

The problem here, you can see, is that because that relies so heavily on natural gas and moves away from nuclear and coal, it's not very resilient and by week eight it is down to 20 percent, whereas the prepared level is at 80 percent. This gives a sense about what would happen to Taiwan's economy and society in a zero baseline. Week nine, when coal inventories are exhausted, electricity production goes down to 20 percent, which is only enough for emergency services. In week 26, food is not a problem but electricity production is down to 16 percent as oil inventories become exhausted.

Dr. Cancian: We'll now walk viewers through an example of one of these iterations and what the results look like. So this is a three-by-three scenario where China is using offshore attacks to try to stop ships from getting to Taiwan, and the U.S. and Taiwan are escorting convoys to try to push supplies through. Thus, in this way, both sides are sort of fighting with one arm tied behind their backs. If we look at the board, commercial shipping from around the world is going to Japan but continues no further as it knows that there's high risk if it tries to go to Taiwan. Those goods therefore are transshipped onto ships that are owned by the United States and Taiwan.

They go through the Nansei-shotō, this chain of Japanese islands, where they're afforded the political protection of being in Japanese territorial waters. Then they finally try to make the crossing from Yonagunijima, at the end of that, to Taiwanese water, carrying cargo, oil, and liquid natural gas in order to keep electricity production and the economy of Taiwan going. We see here now the results of running this for 20 weeks. At the top, electricity production at some point goes to 35 percent of Taiwan's peacetime levels. At the same week, no cargo is brought in. However, by the end of the 20 weeks Taiwan and the United States are able to restore electricity production and cargo flows to Taiwan.

However, this comes at great cost. Taiwan and the United States both lose over a hundred merchant ships, that are lost in the effort. And this is a steep cost to pay in such a scenario. However, it's necessary in order to keep the Taiwanese economy functioning. Both sides also lose hundreds of aircraft and dozens of warships. Now these losses are also occurring on the Chinese side, who are losing comparable amounts of men and materiel, Overall, both sides have thousands of casualties spread out amongst them.

Col. Cancian: This shows the effect on Taiwan's economy and society. You can see the dark blue line here. This is electricity production. Dips early on as convoys are intercepted, but builds up to 100 percent later on as the convoys were able to get through. The same thing with the import levels. They dip more deeply because they don't have as much inventory. But again, they build up to 100 percent. Here you can see the ship arrivals down here at the bottom. There's a dip here, which you can see here. That's the result of no convoys sailing in that week.

Dr. Cancian: Overall, we can look at the electricity production on Taiwan and the casualties that occur. As might be expected, casualties increase as both sides escalate more and more. Particularly important to note is that if China decides to go to maximum escalation and starts bombarding the electrical grid of Taiwan itself, then Taiwan will have a very hard time keeping electricity production up. In a similar way that Russia has attacked that of Ukraine, China could do that to Taiwan, except that Taiwan does not have the strategic depth of Ukraine and the land borders through Romania and Poland to bring supplies through.

Col. Cancian: The project came to five overall observations. The first is that blockades almost always have casualties. They are not bloodless military operations. The second is that there are escalatory pressures at every level, sometimes on one side, sometimes on the other. Taiwan cannot face China alone. The disparity in economic and military power is too great. It needs U.S. help if it is to remain an autonomous and democratic entity. Energy and merchant ships are the critical factors for resilience because Taiwan does not produce very much energy on its own. It's reliant on imported energy. And, finally, a

blockade is not a low-cost, low-risk operation for China. There's the possibility of escalation, and also alienating the global community.

Dr. Cancian: As a result of these observations across the 26 wargames, we have a number of recommendations that we've binned into generally four categories. First of which is that Taiwan and the United States need to prepare their merchant fleets. In order to deter China, China must believe that it cannot succeed in this endeavor. One of those is by preparing the ships that will be needed to take cargo to Taiwan. Particularly important is the liquid natural gas carriers. These are specialized types of ships that keep liquid natural gas cool and densely packed. And that Taiwan is reliant on them in order to keep its electricity functioning.

Col. Cancian: Because energy is the weakest element in Taiwan's resilience, Taiwan needs to pay a special attention to that. One way to do it is to ensure that its energy sources are resilient. It can do that by extending the life on its existing nuclear power plant and also by hardening its electrical system. Allies and partners are critical to a U.S. military effort. Therefore, it needs to make joint plans with those allies and partners, particularly with Japan. Japan is critical both because of its potential as a transshipment point and also because of the U.S. military bases that are on Japan.

Dr. Cancian: Finally, the United States and its allies and partners need to prepare to counter and end the blockade. Most important among those steps is thinking about offramps to offer Beijing. Beijing can't feel like it's painted into a corner and that the only way out is continued escalation. Somehow this conflict needs to end, but without Taiwan making substantive concessions to China.

Col. Cancian: For more information, see the full report at CSIS.org.

(Video presentation ends.)

Now that we've given you a sense of the report itself, let's turn to the panel. Our panelists discussed the general topic of a U.S.-China conflict over Taiwan. Eric moderated the panel and introduced the panelists.

(Video presentation begins.)

Dr. Eric Heginbotham: Thank you. I'm Eric Heginbotham, a principal research scientist at MIT Security Studies Program, and codirector of the Wargaming Lab there. I'm one of three coauthors of the report breaking out of quarantine, "Wargaming a Chinese Blockade of Taiwan." And we're joined today by four great panelists, each of whom brings expertise to the issue, and all of whom have played at least an abbreviated version of the game.

Starting on my right, Admiral Scott Swift served as commander of the U.S. Pacific Fleet from 2015 to 2018, and previous to that served as director of the naval staff for the CNO's Office. Among his operational assignments was command of Carrier Wing 14 and his operational experience includes, among other things, participation in Operation Praying Mantis off Iran. He brings a wealth of relevant operational and regional experience.

Dr. Jennifer Kavanaugh is director of military analysis at Defense Priorities and teaches at Georgetown University. She previously worked at RAND and has published extensively on grand strategy and military issues, including work on Taiwan and an assessment of historical U.S. military interventions and their successes and failures. So thank you for being here.

Jacob Heim is a senior policy researcher at the RAND Corporation. He teaches at the RAND School of Public Policy. He served as an Analyst in the Office of the Deputy Assistant Secretary of Defense for Strategy. And he currently leads projects for RAND, and the Air Force, and others on a variety of Asia-related and net assessment issues and problems.

Mackenzie Eaglen is a senior fellow at the American Enterprise Institute, where she works on defense strategy, defense budgets, and military readiness. She previously served on congressional defense committees and at the Pentagon in the Office of the Secretary of Defense and the Joint Staff. She's written extensively on U.S. defense policy, budgets, and Asian security issues.

So I'll start by asking each of the panelists to make any general comments that they might have on the blockade problem and on the report itself. And I'll start by turning to Admiral Swift, and ask him to address, among other things, the differences between a quarantine and a blockade. For the sake of convenience in the report and here today, we generally use the term "blockade," but there's an important set of distinctions. So maybe we can start there.

Admiral Scott Smith: Yeah, thanks for that, Eric. And appreciate the work of CSIS and yourself in focusing on this important issue of blockade.

There's three points that I'd like to make. One is that the difference between a quarantine and a blockade. Really important to focus on blockade from the perspective of the objectives of what this wargame is about. And I think important to continue to focus on that from a military perspective. The quarantine element, I think, falls more in the policy domain. Equally important to do wargaming there, but it is a focus on policy. And I think it's a vulnerability – well, quarantines are a vulnerability as well. One of the reasons that this work is so important is the lack of work that has been done

on this, certainly in recent times and back further as well. And that's even more so for a quarantine.

So the difference between a quarantine and a blockade is based on international law and the legitimacy of action. So a quarantine is not an act of war. There's a series of elements of law within international law that describes the difference between the two. A blockade is an act of war. So if – there's a unique situation here, in my mind, between the relationship between Taiwan and PRC. That PRC makes the case that Taiwan is a part of China. If their approach was to characterize their actions that they take in the context of a quarantine, regardless of how militaristic they may be, to say this is a sovereign issue that we are covering down within our own country.

So, by definition, in their definition, it's not a blockade. And there are a number of mechanisms, triggers that could use – violation of Chinese law, whether it comes to chip making, or exporting, or control of those assets – that gives them more maneuver space in the policy areas. That's a really important point that I want to stress. Further activity to occur outside the context of this game. This game rightfully is focused on the blockade. But I think being here in D.C., as we record this, I think that element is really important.

The second point is this idea of escalation. And I think of it in the context of, most likely-least likely, most dangerous-least dangerous. And some of this is tied with a 2027 piece and the statements that Admiral Davidson rightfully made in public testimony to Congress about '27 being the year that Xi Jinping had laid out for the PLA to say, be ready by this time to execute the five joint campaigns, the joint island landing campaign being primary and what that focus was. My view is that, unfortunately, that put an undue focus on 2027. I've been as concerned about something happening today, you know, back when he did his testimony – if that was today – all the way through 2027.

So on that scale of most dangerous-least dangerous, I would put quarantine on the far side of least dangerous. That's why it's important to think about it, because if that is the approach that PRC took we need to deeply understand what those implications are to the United States and our allies and partners and friends. The next step up towards danger would be a blockade. And of course, the most dangerous, in my mind, would be the execution of any one of the five campaigns that China has laid out.

I think there's too much focus and too much time spent on determining the likelihood of any of those events occurring. It all depends on world events at the time. It depends on what's happening. So it's important that people understand the metrics of how you would measure that, but finding a precise point and saying the blockade falls at this point on the likely scale, and at this

point of the dangerous scale, I'm not sure that's useful. And that's another reason I commend this work.

And then the last point I want to make is on deterrence. We often talk about deterrence and how we've been successful with deterrence because X hasn't happened yet. And yet, I don't see the research being put into why X hasn't happened. Too oftentimes we attribute it to things that we've done from a strategy perspective with no science applied to it that that – was that really the reason, or did it just not happen? So I look at deterrence as a trust coin, that deterrence succeeds or fails based on trust. Trust in the word of those that are trying to deter an individual. One side of that coin is deterrence, and the other side is reassurance. So many of the things that countries do to deter another country, it's based on their own perceptions of what would deter us not on the assessment of what would deter them.

Likewise, oftentimes those actions are not assessed in the context of how would that affect negatively allies and partners and friends. So there's many actions that we take that actually distance ourselves from our allies, partners, and friends. We need to be thinking about that in a broader context. This study touches on those elements of deterrence. There's often reference to it, but more clearly defining what makes up those elements of deterrence are extremely important, because it's almost – it's baked into almost every strategy. We make an assumption we understand what it is, but oftentimes, in my view as a practitioner, from my practical experience, I've seen that it doesn't apply. Things don't happen just because we didn't expect them to.

Dr. Heginbotham: A good warning. So maybe I'll turn next to Jennifer.

Dr. Jennifer Kavanaugh: Yeah. Great. So I think – I also have three points. My first one I think, builds off Admiral Swift's point about the difference between blockades and quarantines. And I think it comes out really clearly in your report that blockade is not a low-cost, low-risk option for China. It's also a really difficult option for all the other players involved. For China, it requires expending a lot of military capabilities, especially at higher levels of escalation, for unclear gains. For the United States, it bridges legal categories. There's a question of when does the U.S. get involved, with what types of forces?

It's going to be really hard to build a coalition. It's not clear which players' interests are most – are directly affected. You know, the threat of China taking Taiwan has clear security implications for many players in the region and for the United States. Being forced to divert your ships a little bit further out into the ocean to get to your key ports, it's not clear that that's an existential threat for a lot of players in the region. So it's going to be hard to get other countries to participate. Australia is far away from this conflict. Japan, too, could be – could consider themselves isolated.

And for Taiwan, it's also very difficult to respond. You know, analysts have spent a long time coaching Taiwan through this porcupine strategy to deal with an invasion. But those aren't the capabilities you would need in a blockade. And even if they invested in sort of higher-end capabilities, aircraft, ships, missiles, that they might need in a blockade scenario, they're never going to be able to match the PRC. So they're always going to be operating from a deficit. And it's not clear they can even do enough to shift the military balance. So it's a really tricky and complicated situation for everyone. And I think that really comes out. There's this idea that the blockade would be easier but. in fact, it's much more difficult for everybody involved.

The second point has to do with some other recommendations that come out of your report. And I was really struck by the fact that some of the things you recommend as being really key, things like making sure that you have a big enough merchant fleet and that you know where those ships are, that you think about insurance issues and how the government is going to provide insurance, thinking about making sure you have enough tankers to run blockades, that you have seafarers who are capable to do this, that you have the ability to run convoys, which is something that the United States has not done – these are things that would have been really helpful in the Red Sea as well.

And as we see the ability to disrupt traffic, maritime traffic, at key chokepoints – like the Strait of Hormuz was in the news just recently, too. As it becomes easier to disrupt traffic at these chokepoints, these are the types of investments that all countries should be making. And so to me, these are no-brainers. Even if you're not worried about a blockade situation or you don't think it would be in U.S. interest to be involved, these are the types of investments you can make to prepare yourself for this broader set of maritime challenges that are emerging and that are increasingly common. So these are things, I would really underscore for policymakers, are things to start investing in. And it's not just a DOD issue here. It's DHS and other legal authorities. So it has to be through some sort of interagency process.

And then the final question, or the final point, is really a question that I have that I don't have, like, a full answer to, and maybe we can discuss in the panel. Is how much should the U.S. be investing in thinking about this problem? You know, it's not clear to me how vital the U.S. interests at stake would be if Taiwan were to be blockaded. I've argued elsewhere that I don't really see Taiwan as being an existential U.S. interest. That the costs of defending Taiwan, in my view, would be higher than the benefits that the United States would get, or the risks that it would face were China to take Taiwan. And so I would argue and advocate for policymakers not to get involved. For me, the risks or the interests at stake in a blockade are even lower, because I believe the United States could still access ports in Japan, and ports in South Korea, and other ports in the region.

So really, they're losing only access to ports in Taiwan. And that obviously has implications for semiconductors, but those are things that you can invest around. And that that maybe is where mitigation falls. So I think there's a really important question to ask, which is how vital U.S. interests are at stake in a blockade scenario, and what does that suggest about how much energy the United States military should be investing in thinking about this problem, beyond these kind of general purpose things that have broad applicability across theaters, like the merchant – making sure you have a merchant fleet, making sure you have enough seafarers. These are things that are broadly applicable. But how much extra effort should be invested specifically in blockade scenarios? And given that U.S. resources are scarce, I think it's an important question that we need to grapple with.

Dr. Heginbotham: Thank you. So I'm going to return to ask your question back to you momentarily. But first we'll move on to Jacob for his opening comments.

Jacob Heim: Thanks, Eric. And I'm going to keep the trend going by having three points to offer. The first being that I was struck, playing in the game, what a strong pol-mil element it had. I mean, obviously there's always a political context for any use of military force, but a lot of the questions, like the admiral brought up about how it's framed and how that framing affects other countries' reactions and what resources they bring to bear, I kept coming back to it during the game. It was central, load-bearing variables for the outcome of it. And that, in my experience, is sort of the inverse of the more canonical invasion scenario where there are absolutely pol-mil aspects but you can more rapidly just focus on the operational problems, and push those pol-mil things to the side. So that's thing one.

Thing two is that the blockade scenario plays out over a longer time frame than the opening phase, at least, of an invasion scenario. And it does not get, generally speaking, resolved decisively quickly. And that creates, I think, some interesting analytic challenges for us about the tools we use, the ways we design wargames. But I think it also brings up some interesting questions for the participants, as the admiral and both Jennifer mentioned, that it's not an easy operation because it's going to play out over an extended period. And that extended timeframe gives the opportunity for unexpected things to emerge.

And then the third point I want to make is that while we were focused on the blockade scenario, the possibility of a military invasion was casting a shadow, at least in our run of the game. And what I mean by that is I was playing on the red team. If we felt we had a strong invasion option, it gave us more options for escalation during the blockade, because if the blockade ultimately failed we had a branch plan we could exercise. Conversely, if we didn't feel confident in that, our team would have felt much more

constrained in what types of actions they took in the blockade, because we wouldn't feel advantaged if it escalated. So I think it's important, just like the admiral was mentioning on the spectrum of outcomes, to think about the relationship between those, and not artificially segment them into distinct possibilities.

Dr. Heginbotham: These are great points. And just to pick up on this common element of challenge that both sides would face in the games, unlike in the invasion scenario where one side often felt like it was winning and wanted to push the pedal to the metal, and sometimes both sides thought that they were winning, in the blockade scenario oftentimes all of the teams wanted an out, right? They all saw a risk. Even if they didn't think they were losing, they all saw risk on the horizon. So sometimes things did escalate, because there are military pressures to escalate, but there was also a real exploration of how can we get out of this and will the game controllers let us. So, anyways, that is, I think, borne out by the gameplay.

But, Mackenzie.

Mackenzie Eaglen: So you're hitting on an important point, which is, you know, the element of time, and how that plays – it changes over time how well it – how meaningfully it helps or hurts the players. And that shifts. So at some – depending on where you are on the time continuum – sometimes red is up and blue is down, and then it can shift. I mean, the American political societal attention span is so short, so going long – when the media, wherever you consume it, has moved on, it's good for China. Really, even whether it's low-risk, low-anything. I think that serves to – when it's off the headlines, I think that's beneficial to red almost always.

And then you overlay that with points we were talking about earlier today, that, you know, because this is sort of unchartered modern-day thinking territory, where we haven't spent time looking at all of the legal aspects and components – if this happens, we would do that, if that happens, we would do that, if the lines blur and we're not sure. You know, what's the case to the U.N.? What's the case to allies? What's the case internally to America's public? We have the tendency in Washington to tie ourselves in legal knots to figure out these important questions, maybe that our enemies may not care about.

And even though we said the game runs long, again you could see where the advantage is set early for red, while Washington's figuring out which one is what, is it really truly an act of war? There are many people that say all three – invasion, blockade, and quarantine are an act of war. That could be its own debate. And deciding when and how to react, with the constant concern that D.C. has for escalation, also, again, gives red advantages early on, because

they're not constrained by the same set of self – in many cases – self-imposed rules we are.

And then the last point, I'll stick to three since it's the theme, which is, I can see why the Pentagon – and, of course, invasion is a more purely military confined challenge set. And so – and it's also, arguably, the most pressing. So that's what we expect them to focus on. Think about the most complicated one, and then things below that are therefore somehow easier to manage or we'll figure it out on the fly.

But I think the blockade/quarantine scenarios demand a wider look at all of the military adjacent policy structures and changes that would have to happen in these scenarios that nobody wants to look at. So if you go back to the 2010 Defense Strategy Review Commission, they were talking about how the Defense Department needs to look at total mobilization, right. Not just individual ready reserve and, you know, strategic – selective service and that sort of thing. But, you know, sort of beyond that, you know, involuntarily civilian call ups, and then by what specialty, and then into the wider economy – Defense Production Act companies to help produce kit to sustain the long war, that sort of thing.

We talked about that, in this case, you know, sort of the mariner fleets, and flagging, and preparedness, and training, who will say yes. We have to do that across, you know, like – just like we do for the civil reserve air fleet. The Pentagon wants to do that maybe for munitions – or, actually, Congress wants them to do that for munitions, where you stand up sort of a munitions mobilization reserve. Similarly, again, the mariner set, which has so many domestic legal, not Defense Department-exclusive, considerations to take into account. Which really get into tricky areas like mobilization. And that's an area we all – the politicians, want to avoid. So it's easier to just not look at blockade and quarantine for that reason. And I think it's important that you did.

Dr. Heginbotham: So we're all interested in the details of blockade. And the study is really focused on the course that a blockade might take, and the various circumstances that might impinge on it. But I do want to sort of pause here for a moment, maybe turn to Jennifer and perhaps Mackenzie, to talk about U.S. national interests.

This is not a topic that we engage directly in the report. We do not take a position on whether the United States should intervene in the event of a Chinese blockade of Taiwan. But, that said, it's important context, obviously. And there's a very vigorous debate in the United States about foreign policy in general. On the academic side it's a debate between what we call restrainers and deep engagers. We see it in politics as well, about how

involved the United States should be in protecting allies and others and the global international order, or whatever else you want to call it.

So I'll turn to Jennifer first to maybe just say a little bit – something about that debate, where Taiwan fits into it. And maybe along the way you can speak to how a blockade might be seen in that context, as opposed to other types of contingencies, like an invasion. Would the U.S. public or U.S. political leaders view it the same way? It may have this – you know, it may represent a threat to Taiwan's sovereignty, but would it be viewed the same way?

Dr. Kavanaugh: Well, I think it's a great question, and it's an important debate. I think for a long time there's been this narrative that Taiwan is sort of the linchpin of U.S. power in Asia and globally. And that if Taiwan is seized by China, it marks, you know, sort of a catastrophic outcome for the United States. It would be economically devastating. It would allow China to project its military power across the region. And would be the end of the U.S. alliance network, at least in Asia. I think restrainers push back on all pieces of those arguments. And I would put myself in that camp.

I think – you know, I won't necessarily spend time on our panel on blockades detailing all the specific arguments, but I think there are reasons to be skeptical of how much military advantage China would gain from seizing Taiwan. I think there are reasons to question the economic benefits. Certainly semiconductors are an issue, but the United States is working with domestic investment to address that. And I think if you talk to allies in the region, there's really no reason to think that their response to China taking Taiwan would be to abandon their relationship with the United States. If anything, they would invest more heavily in their own defense and balance against what they see as a looming Chinese threat.

So I think, at least among the restraint community, the idea is that defending Taiwan would be incredibly costly for the United States militarily, economically, in terms of loss of life. And it is not – Taiwan's strategic value does not merit that cost. And therefore, the United States might try to provide military aid, as they have to Ukraine. That would be very difficult because you don't have a nice Polish border to drive across. You've got to somehow figure out how to get stuff to the island. There are lots of ways you could get small amounts of stuff. Not a lot of ways you can get, like, HIMARS and other types of big munitions that Taiwan might need.

So I think, you know, on the invasion scenario, it's pretty clear that U.S. interests – at least in my view – U.S. interests are protected better by staying out of a conflict, investing elsewhere in the region, doubling down on the alliance with Japan, investing in U.S. infrastructure on the second island chain. Even better would be to find some kind of diplomatic offramp and demilitarize, decenter the Taiwan issue in the relationship with China, and

try to maintain the status quo. The status quo is our friend. The longer we can maintain it the better, in my view.

I think blockade falls even lower in terms of, like, the U.S. interests at stake. For restrainers, I think certainly, and also probably for the general public. I think an invasion seems very dramatic. And there will be lots of people who will rally to Taiwan's side. As you know, we must protect this democracy. For a lot of people, the blockade will sort of pass under the – under the under the radar. As Mackenzie said, it maybe will be on the front page of the paper for a week, and then maybe falls off, at which point it becomes much more difficult to rally public opinion for something that will, as your game shows, be very costly militarily, be bloody, be long lasting, and be quite messy along the way.

And I think, from a U.S. interest perspective, my assessment is, you know, it's not a good way to take over the island. It's a bad way to start an invasion. You spend all your military stuff, military equipment, military munitions. You expend a lot of this stuff before you even start, and you alert the international community to your aggression. So I guess it would be even – I wouldn't be that concerned that it would lead immediately to a seizure of the island. And I think the United States could protect its economic interests.

We've seen in the Red Sea how quickly and easily maritime traffic reroutes. And I think that would happen here. The U.S. is also protected by having oceans on both sides. It's not totally dependent on Asian markets. It has other options. And so if I were a policymaker and it were my decision, I would find ways to support Taiwan that would keep the U.S. military out. If we can get supplies to them, if we can support diplomatic responses, those are things that I would recommend. But I would keep the U.S. military out. I don't see the interest at stake as warranting the costs that your report suggests would be incurred.

Dr. Heginbotham: Economic threats or economic action against Taiwan are included in the Taiwan Relations Act, but I agree it would be a more difficult sell to the American public to explain why we were intervening in the event of a blockade. But I don't know, Mackenzie, or either of our other panelists, do you want to add anything on that? Or?

Ms. Eaglen: Yeah. Those are great points. I would be brief, though, and say, you know, you could make the case for Taiwan exclusively, you know, and how the freedom-loving, democracy-loving countries around the world are under assault in many cases. But I would actually turn it around. And I would look at it through the lens of, what is the region like, and later on, you know, the world, including key and global institutions, if China's allowed to just sort of freely walk past this redline into the endzone, and stake a new claim on – and rewrite the rules? And so it's not necessarily about the value of Taiwan, per se, to us or our economy, but it's about what happens as a consequence when

the CCP feels that they can operate with impunity to redraw – rewrite the rules, redraw the maps, reclaim things, disrupt the status quo in this case?

And the consequences of that are harder to see immediately, but certainly bear out over the longer term. It's not just trade. Obviously, we care very much about maritime commerce and key chokepoints. There's really only eight maritime ones in the world. It's bigger. You know, we've seen this Chinese leadership – slowly, like the silkworm, they're very good at re-norming over time what's acceptable, and constantly shifting the goalposts against our – what I think are our interests and what we have said were the rules everyone should play by. Not just the rules we and they, the whole world. When you re-norm over time and you get to a new status quo, that's what I worry about greatly, and all of the consequences that waterfall from that for decades to come. Now, it's partly unknowable so you can't – it's not meant to be a fearmongering thing, but it's meant to be a longer view of the challenges.

Dr. Heginbotham: Right? So this is a debate. I'm glad we got sort of both positions on the table, at least. It's absolutely a debate we're not going to resolve today. So I'll move on. And obviously Admiral Swift or Jacob can chime in on this later. But I'll turn to Admiral Swift now, as one of the few people in the world whose day job might have been to implement a blockade or break a blockade, and ask him to sort of put his China hat on for the moment, right? And if you were tasked with implementing a blockade, what are the pieces that you would want to put in place? And what are the challenges to integrating those pieces and sustaining those pieces over time? So what does this look like, from a Chinese perspective?

Adm. Swift: Yeah. So I'm not – you may have mentioned this already. I think the pieces are the same, whether it's a blockade or it's a – or it's a joint landing campaign or joint fire campaign, whatever the – you know, the other five campaigns as well. So that the pieces, from a military perspective, are the same. They change a little bit when you transition, as I mentioned before, if your first approach is one of quarantine it's more of a policy piece than the blockade, which is more of a military piece. But the problem is escalation. So you have to consider all those elements of one of the five campaigns if you're going to pursue a blockade, from a red perspective.

I think that the resources that are required for a blockade are less than what you need for one of the five campaigns that the PRC talks about. But in order to cover escalation, you have to have those pieces in place. It is a more subtle approach. There are leading indicators that if you're – if China is moving towards executing one of the five campaigns, that are telltale signs that that's the area they're moving in. But I think on a blockade you can move out much more quickly. But you've got to put those pieces in place.

I will make – put my blue hat back on. And I hear a lot of discussions – first of all, not enough discussion on blockade. I can't stress that enough. But the other thing is that we talk about convoys. Convoys was a specific World War II tactic based on submarine warfare that required the U-boats to be in position to intercept within 2,000-3,000 yards. So the zigzag tactic was only to get a 5,000-yard offset. So as a commander of blue forces, I would take a very different approach of getting resources to Taiwan than just a convoy. Another reason why studies like this are so important, to get the military minds thinking in a broader context of, if this were to come about, and we were asked by – you know, the military provides options – of the government to help break that campaign, how is it you should get resources to Taiwan? Because that's the number one issue. It's not just the military approach. It's the how do you support those resources going to Taiwan?

Dr. Heginbotham: Just a very quick follow-up on this. You've said it's not convoy, per se, but assuming that you have to protect those merchant ships from, for example, missile attack, you need to get the interceptors to within range. So you're talking about – you're still talking about merchant ship protection, active protection, but not the same –

Adm. Swift: Correct, but we live in a much more sophisticated world, with many more resources. We have cyber resources. We have other resources. So it's distributed maritime operations, which I think is the correct operational approach, the one the Navy is pursuing now of distributing those forces. Centralizing effects but distribute the forces. We do it with distributed logistics, so why wouldn't you take that distributed logistics model and apply it to those commercial ships that are transiting those resources to Taiwan? At some point, they hit a chokepoint. But it's much easier to defend those chokepoints than it is to put all those resources defending them in transit across the Pacific, or wherever it may be, when they may be actually at less kinetic risk in those domains than they are when they're proximate to Taiwan.

Dr. Heginbotham: Got it. OK. Jacob, you've done a lot of net assessment work, especially on the invasion scenario. So I'll turn to you next and ask you a little bit more about what you see as the key differences. You mentioned the time dimension earlier. AI think the time dimension has spillover into a bunch of different areas as well. Do you think it's possible to say which one is a harder problem? And then just, sort of, what other differences do you see in the way that this plays out across time?

Mr. Heim: Yeah, Eric. So the biggest difference I want to emphasize here is that in the blockade scenario there's not a time-sensitive operational center of gravity, like in the invasion scenario. In the invasion scenario, once the Chinese actually put that force at sea, there's a very intense time pressure on them to get it safely across, and on the United States and the coalition to try to

interdict it. And that has cascading effects on how the entire campaign plan on each side is designed, because red needs the information, maritime, and air superiority to get it across, and the coalition, of course, is trying to break that. And that's not at play with a blockade.

So there are some benefits to the red side of this difference. Because there's no joint island landing campaign to protect, red can be more patient. Red does not have to, for example, conduct an extensive joint firepower strike campaign to seize that information, maritime, and air superiority. Also, because there's not that amphibious assault, red doesn't have the danger of quickly losing, and catastrophically losing, at the outset of the conflict. And I think those are both positives, from the point of view of a red planner. But there are cons to the red planner as well.

The first is that the theory of victory here is a little bit fuzzy, but it fundamentally depends upon Taiwan deciding to capitulate. And it's unclear about where Taipei's thresholds are. And that's fundamentally unknowable. It would emerge during the course of this process, about how much political will Taiwan had, and how it responded to the challenge. And so that puts red in the awkward position of needing to maintain this operation for an indefinite time horizon while it waits to find out where Red's threshold is. Which is why I emphasize in my opening comments the importance of whether or not red thinks it has an invasion option in its back pocket, because that gives red more options if things develop during the blockade, Taiwan displays more resolution and staying power, for example. It gives them more options to manage it.

In terms of which is harder, I'm not sure I want to put one harder because I think there's some distinct challenges the two scenarios represent. I don't think – you were sort of bringing up the lesser included case, Mackenzie. And I do think your work illustrates how there are some unique challenges the blockade presents, where it might not be fully a lesser included case. So I wouldn't want to say one's harder than the other. I think there are some worthy military planning challenges that both offer.

Adm. Swift: Can I jump on a quick point? I think there's one point in particular I want to call out. And that is I think the blockade – from a military planning perspective and a military response perspective – I think a blockade at the entry point is clear. So entry point is really important to understand, from a military planning and execution perspective. So PRC declares a blockade. The end state is less clear, to your point. And the note that I just wrote down is the economic element is much more centric. And that's difficult to measure from an end state, because it depends on how Taiwan responds to that. And so it all adds up to an end point that's much more elastic. And that makes it very difficult to plan to, from a military perspective. The span of outcomes is so much broader of what you're being asked to do, it makes it very difficult.

Dr. Heginbotham: And I'm glad you both brought up this issue of pain thresholds. I mean, we've seen historically a very wide distribution of pain thresholds, and with some targets of blockade or siege literally being willing to starve before surrender. So there is a range. And it is unknowable before the fact.

A couple of benefits are said to sort of follow from a blockade. One is that, you know, the country that implements blockade can deescalate more easily than they could from, say, invasion. Another might be that it puts the onus of escalation on the targeted country, right? So China puts its ships out. It begins to board merchant ships. Then it puts the onus of firing the first shot onto the Taiwanese. And I'll throw this out to anyone who wants to respond, but to what extent do you think those benefits are real? Or might they be more illusory, with more graduated steps in this escalation chain?

Dr. Kavanaugh: It seems to me like they might exist, but they might not. Like, your last point there where puts the onus of – or, the burden of escalation on, like, the blockaded country. Well, so what if Taiwan just decides to run the blockade? Then China is the one that has to escalate. It has to decide, is it willing to, like, attack a merchant ship? Or is it just going to try to divert it? So that one – that seems to me like you could easily flip it. And then, on the, you know, easier to deescalate – yes, to a point. But it depends how far you've gone up, right? Like, at some point you pass a point, a threshold where it's not so easy to deescalate.

Once you start to use kinetic means, you started to fire missiles at Taiwan or shoot merchant ships or fight with the U.S. Navy, you can say, OK, we're done, we'd like a ceasefire. But things never go back to the way they were before. Number one, you've expended military capabilities. Number two, everyone will now look at – you know, be much more wary of Chinese military aggression. And so you'll never have the same aspect of surprise that you might have had originally. So it seems to me like they could exist, but you would have to play your cards right and have a little bit of luck to take advantage of them.

Mr. Heim: There's also the danger, I think, for the one imposing the blockade that there are always surprises when one goes to war. There's a danger they might find out that their forces are not as capable as they had hoped. I mean, the Russian invasion of Ukraine in 2022 is an obvious example of this. And that is a situation where even if China successfully deescalated, that could have far-reaching consequences for the credibility of other threats they want to make that I think they have to worry about. Because they are ultimately the ones trying to change the status quo here.

Adm. Swift: Yeah, I would say I don't think it makes any difference, from a war fighting – from a competition perspective. I think it's a self-assessment of winning or losing, and what's your timeline that you can tolerate getting to that point of losing. And I think the only option here is to escalate. Otherwise, it's huge risk. If the decision of the PRC is to deescalate because they're not achieving whatever their objectives are, or they can't achieve them on an acceptable timeline, I think that puts them in a very difficult position. It's very difficult to deescalate.

And the other is the resiliency of the target. The target here being Taiwan. And I think that's very difficult to understand. I mean, look at what's going on in Ukraine. Look at what's going on in Gaza. Look at what's going on in the Red Sea and with the Houthis. You know, the resiliency – it's very difficult to do a predictive analysis of when they're going to hit that point of they no longer have that resolve. I would be very cautious about anybody that suggests they have a calculus that can say with any level of certainty, we're confident of the outcome of a blockade or any other military operation.

Ms. Eaglen: To some extent – briefly, on that point – to some extent, resiliency is partly linked to the extent of preparations, I think, before anything launches. And I think it was Jennifer who made the point earlier, it's not exactly the same set of capabilities and preparation and training and thinking and answering the tough political questions for all the five scenarios under armed force, invasion, and the other two. And so if we're overpreparing for one, which we are – I think the panel is actually kind of agreeing on that, and the report highlights why we shouldn't – well, then it makes the other, blockade, more likely, I would argue, because, right, that's what – your enemy is watching everything you're doing, and recalculating over time what they're going to do in response to that. Which can fray deterrence if you're not adjusting in real time to their own calculations. You also – the deterrent point you mentioned earlier. But we have to be thinking about the preparation and what's not the same for blockade versus invasion.

Dr. Heginbotham: Yeah, that's exactly where I wanted to go next. So that's great. And both of you have written about procurement priorities for Taiwan and for the United States. So maybe I'll turn to you both first on this question. But, you know, coming back to this point that preparations to counter invasion are not the same preparations that you need to make to counter a blockade. So probably all of us, I'll say, with some confidence, have advocated that Taiwan should pursue more of a porcupine strategy, with distributed munitions and capabilities that are more survivable. So, you know, ground-based air defenses, ground-based anti-ship missiles that can be driven out on trucks and deployed from hides.

Those systems don't travel well over maritime areas. And a blockade can be run at some distance beyond the range of those systems. So in those cases,

maybe frigates and aircraft are more useful. But how do you draw a balance? And is there a way to square the circle? Taiwan's economy is a 20th the size of China's. So you've talked about, you know, Taiwan needs to increase its defense budget to 4 percent of GDP. The current administration has talked about 10 percent of GDP. But even 10 percent of Taiwan's GDP is 0.5 percent of China's GDP. So that highlights the need for priorities and making tough decisions. So how do you square this circle? If you're Taiwan – I'll start with you on Taiwan, and then maybe turn to Mackenzie for U.S. priorities. But if you're Taiwan, you know, where do you draw the balance? And how do you, kind of, square that circle?

Dr. Kavanaugh: I mean, I still think I prioritize the porcupine strategy capabilities. I think, you know, it's important to have these asymmetric capabilities to protect against some kind of an invasion threat. I don't think those capabilities are irrelevant in a blockade scenario, for a couple of reasons. One is, if you have things like drones and other types of, you know, autonomous capabilities, those could be useful anti-ship missiles are not irrelevant because they could be used if the Chinese ships got too close to the island, or tried to encroach in. It would at least, like, enforce some kind of buffer around the – around the island.

If a blockade were successful and Taiwan decided to capitulate, having all these asymmetric capabilities distributed across the island could make Chinese – the Chinese life pretty unpleasant. You know, I was going to ask, you know, what does capitulation look like? So they give up politically, and then they take over an island filled with people who hate them? Like, with a real insurgency threat? Those porcupine capabilities could be useful for making that insurgency threat quite real. So I don't think they're irrelevant.

That said, you do have to invest in other types of capabilities. No country can have, like, only porcupine – only these, like, small – lots of small things. So you would need to invest in some aircraft and probably some frigates. But I think the investment there can be limited, or should be limited, because I'm not sure what the goal of those capabilities would be, or how much difference they would make. Yes, they could potentially harass Chinese forces trying to blockade the island. But are you ever going to be able to match them one to one in a way that's actually going to impose costs? Probably not. So I think there would have to be careful strategic planning and thinking about what are we going to use these capabilities for, and how many do we actually need.

Even if you're buying these higher-end capabilities, you're going to be using them in an asymmetric way. You're not going to be trying to match China one-to-one, or head on. So how are you going to use them? And what's the best types of investments, and how many things you need? I think one that you could rule out probably is tanks. You know, Taiwan is waiting for a big

number of tanks. I don't think tanks are relevant. In an invasion scenario, they're not going to survive. And they're irrelevant to a blockade scenario. So that's one thing you could cut out. So that's kind of how I would – I would try to balance it. But I think it does require – it is a tricky balance. It does require more defense spending, total. And it does require thinking about asymmetric ways to use these more – higher-end capabilities.

Dr. Heginbotham: Mackenzie, you've written about U.S. procurement priorities with regard to, you know, these contingencies in East Asia. Presumably, I don't want to put words in your mouth, but thinking mostly about the invasion scenario. But maybe you can summarize some of your points about that, and whether those priorities might differ if you were optimizing against a blockade as opposed to an invasion.

Ms. Eaglen: They could differ, depending on, again, this sort of temporal dimension that we're talking about, the allied involvement – which I like Jennifer's points. You know, depending on how this goes some are going to see no interest at all, or no reason to get involved, and depending in other ways how it escalates they may very well need to, whether they want to or not. I do often think about the capabilities that, you know, whether this administration wants to balance and keep a status quo in three theaters at all – at the same time. They argue they don't.

But things don't move that fast on the ground globally. And so I do think about often what might you need to support Ukraine, to support Israel, to try and keep the Red Sea open, if that's in fact what we're going to do now after the last few weeks, and then support allies in Asia, particularly Japan, South Korea, Australia, Philippines, and Taiwan. And I'm most interested in the overlap, you know, the where the three circles meet. There is some overlap between all of those. And those are obviously our most critical capabilities. And we're in the terrible '20s, where our conventional and strategic forces need to be recapitalized at the same time.

Not in the same way as they always have been in the past, not necessarily on one to one, and not without taking into account modern warfare and how technology is changing – everything from drones to space. But, you know, your most critical assets, like I said, where the three theaters overlap, in some risk and capability and temporal domains, we're pretty much short across board in all three of those. And so, you know, it's the obvious choices. Working out from there, if you're truly pivoting and you're trying to shift to Asia, it should free up some space, if you want to take risk in other theaters, to then balance the invasion investments that are required. But then you also add in some new ones that may be blockade specific only.

Dr. Heginbotham: Admiral Swift, I don't know if you want to add anything on that, but I'll also throw in, having asked you to put your China hat on earlier, to put your U.S.

hat back on and talk a little bit about – you know, not to put you on the spot too much – but if you were commander of PAC Fleet, which you once were, or commander of INDOPACOM, what sort of measures you would be recommending at different stages of conflict. So at the point at which this is a sort of policing action, blockade, it's not yet gone kinetic. And then as it becomes – you know, as China moves to higher levels of violence and there has been shooting, what might you be recommending, if you were asked to counter the blockade?

Adm. Swift: Yeah. So I would start with the first point, to say that if you're talking about procurement of military power, it's very difficult to do that in run. You pretty much have to fight with what you have. And so this idea – I completely agree with your characterization of the three theaters or the three scenarios. And it's the Venn diagram that meets in the middle of how do you manage that. And I'll keep my focus on the Indo-Pacific, on that element. And I think Admiral Paparo has been clear with what the concerns are with respect to the amount of ordnance that's gone to Ukraine, from his perspective, absent – you know, he's rightfully looking at it from an Indo-Pacific perspective. And there's risk associated with that. How quickly can you, reestablish those stockpiles of ordnance and materiel that's going in support of Ukraine? So that's one point.

To the second point, of preparation, I think Admiral Paparo has been clear here as well. He often talks about the importance of a whole-of-government approach. I do think there is a difference in starting off from a blue – a U.S. perspective with a blockade. Because with a blockade, that is much more heavy, from a whole-of-government approach and the response, than it is with a military response. The military is a fairly light response. It's really important that policy step out. That's why I made those earlier comments about a quarantine as opposed to a blockade. That is obviously full a policy issue. And there I have concerns about how rapidly policy can turn in this country in the context of how rapidly things can escalate in a kinetic and non-kinetic way, from a military perspective.

So I do think that Admiral Paparo and his commanders are thinking deeply about this. Admiral Koehler just spoke about this at a conference in Manila, for instance, on his perspectives. But the implications of this dialogue more specific to the South China Sea than Taiwan. But I think it's that shift. It's that moving from diplomacy and policy to more of a military-centric approach, that you get that with a blockade. And, as others have talked about here, if that blockade is not successful, if there's a necessity to escalate, then you're escalating into one of the five campaigns – joint fire campaign, joint landing campaign, whatever it may be. And now it becomes much more of a military-centric perspective. That's what's been missing.

I wouldn't say that we're planning too much on the high-end, kinetic end. I would suggest that we actually need to do more wargaming there. But that is the center of focus. And we're not doing ourselves any favors by not focusing on the blockade piece, the left of bang, those policy issues, those whole-of-government issues. And I'm not saying that's the demand – that's the area that DOD needs to take on themselves. I think that's more of a whole-of-government approach.

Look what CSIS is doing right here. How many games have just – have you and your team done?

Dr. Heginbotham: Twenty-six.

Adm. Swift: Twenty-six games. I mean, it's incredible. In interwar years at the War College, there was 300 games that were done from 2019 to – I'm sorry – from 1919 to 1941. So you can't have enough of these wargaming, modeling, simulation, and exercises to really understand this problem set, to make sure that you can cover it down from a national perspective. To say nothing about where the population is. How supportive is the population going to be in a competition like this, that turns kinetic?

Dr. Heginbotham: Thank you. Well, and I'm glad you mentioned, you know, the need for wargaming. And I agree. We ran 26 wargames, which felt like a lot, over the last year. But I also felt, and I think the whole team felt, like in many ways we were just scratching the surface. So, yeah, I think we need many more series of wargames, exploring different assumptions, and sort of structured in different ways.

But we're beginning to run out of time here, but I'd be remiss if we didn't at least raise the issue of de-escalation and offramps. So in some of our games violence escalated to the highest levels, and we wound up in a situation of wider war. In other cases, there was de-escalation. In some cases, Taiwan was forced to make significant political concessions. But I will say, even in those games that escalated I think it's safe to say that teams were considering offramps, or at least thinking about whether there were offramps.

That isn't guaranteed to be true in the real world, China may embark on this hard over, you know, with some sort of do or die philosophy. But it's also not unreasonable to suppose that both sides may be looking for offramps. So I'd be interested in getting your views on, you know, how we prepare offramps, how we think about offramps, how we might wargame better so that – so that wargames are a part – I'm sorry – so that offramps are a part of our gaming and simulation. But if you have any thoughts about, you know, how we can do this with fewer casualties than we wound up with in many of our games, I think those would be quite valuable.

Adm. Swift: So I'll jump in. There's three points I'll make. One is, I don't like red lines. I think we would be much better served if we talk about red zones. And I use Syria as an example. When the U.S. made a policy statement from the president at the time – and I'm not being critical of any president – but when the comment was made, the use of chemical weapons in Syria was a red line, I took a breath when I heard that. Because I thought, if I was Putin I would move to test that red line. Now, he did in a smart way. It took him a long time to get there, because he was smart in walking up to it slowly. But eventually crossed it and used chemical weapons against civilians and called the U.S.'s bluff.

Then I think that was detrimental to the U.S. position on the global stage, which reduced our ability to work deterrence and other de-escalatory measures, to your point of de-escalation. But if the comment had been made that that was a red zone, the use of chemical weapons, and the U.S. would choose to take a position based on the events and the time that that occurred, I think puts you in a much stronger position. So my first point would be, let's not talk about red lines. Let's talk about red zones. The second point I would make is, if you pass an offramp you can't go back. There is no reverse flow. You may take lessons from that and apply it to the next offramp. That's why escalation is so difficult to control. It's so easy to escalate. It's so hard to de-escalate.

And the third point is that if you decide to use military force, it is – it is useful to think of that in the context of I've given up on diplomacy. That it's very difficult to keep that diplomacy fire burning. But you have to. So it may be through a third party, it may be back door, but there's got to be a mechanism to keep that dialogue going, to explore what those acceptable offramps may be to both sides. Too oftentimes we think of an offramp as a blue offramp or forcing red down a red offramp. These are purple off ramps. They're offramps that are acceptable to both parties. And I think we're seeing that play out in Ukraine. We're seeing it playing out in Gaza. We're seeing it playing out in Yemen. We're seeing it playing out in Iran right now as we speak. So we need to think about what are those offramps that are acceptable to the parties that are in competition?

Dr. Kavanaugh: I will go next, because I would like to just maybe echo or build on a couple of these points. The first is about the diplomacy. You know, we're seeing now in Ukraine, and we know from historical conflicts, how long it takes to reach peace or to reach de-escalation. It can take multiple rounds of talks. It can take years to actually come to some kind of conclusion. And in a blockade scenario, you'd obviously like it to not take years. So having these channels of diplomacy open and, like, exercised already, so that they are ready when you need them, I think is a really important lesson to take from what we've seen

over the past, you know, a couple years in the world, and more generally. And trying to build trust, once you – once you blow up trust, it's really hard to get it back. And then it's harder to get back to diplomacy.

The second is that, just like – I don't think – I agree that red lines aren't helpful. Neither are deadlines. Like, once a conflict has started, something, like, you know, you have 24 hours to back down, or you have 48 hours, or 50 days, you know, to throw out another number, I don't think those types of things are useful. And they actually end up backfiring on the person who made the threat, because then you reach the end of 50 days, or 24 hours, or two weeks, and nothing has changed. And suddenly your options are shrinking, and you either have to escalate or look weak, because you made a commitment that you can't honor. And so I think that staying away from that and trying to leave things open is important.

And the third point is, like, this idea that de-escalation is not necessarily weakness. Like there's this thing, you know, that the only way to be strong is to be ambivalent about the risk of escalation and to keep pushing up and up and up. And that's the only way to get what you want, is to show strength. And I disagree. Your decision about whether to escalate or not should be based on the risks, what U.S. interests are at stake, and, like, the dynamics at the moment. And deescalating, can be the right choice if it means that you walk away from a disaster. It doesn't have to be a signal of weakness if you buttress it with the right types of messaging. Which brings us back full circle to the importance of having open channels of diplomacy, even with countries that we have adversarial or negative relationships with.

Mr. Heim: I'd like to make a few broader points about managing escalation in the context of fighting a major nuclear-armed power. I've published some work on U.S. theories of victory for a Taiwan invasion scenario and escalation risks created by them, but I think there's some implications for the blockade scenario as well.

The first point I just want to emphasize, which is foundational to both comments we just heard, is that this has to be a limited conventional war for limited ends. If it's an existential war, the incentive for restraint on both sides goes away because the two options are win or die. But if it's a limited war for limited ends, that means there's other intermediary outcomes. But that means the other regime is going to survive. Hence, you need to negotiate with them. But that needs to shape your planning because it's going to constrain what types of options are going to – what military options will be acceptable and consistent with that kind of theory of victory.

Now, I think the good news from the point of view of this, is I think a blockade scenario has a larger potential space of these offramps than a Taiwan invasion scenario. That's a hypothesis for me. I can't prove that. I only

did one run of the game. I've done a lot more time on the invasion. But I'll just explain a little bit more about why I have that hypothesis. A China that has overtly attempted to militarily seize Taiwan is a China that has put a lot more chips on the table, if you will. And therefore, the cost to them of them backing down from that is higher. I'm not one who believes that any time Beijing goes to do that the regime is automatically at risk.

I think it's entirely possible to imagine a situation where they could fail to take Taiwan but the regime survives. But there's nowhere near as many chips, if I continue that metaphor, being put on the table in this blockade scenario, especially if it starts in a fairly small way, perhaps with a quarantine. And therefore, the cost to Beijing of backing down – maybe not even backing down, finding an offramp, de-escalating, is lower. And so I think there's a positive opportunity here. But you need the right people in the room.

So the red team I was on did try to negotiate a resolution in our wargame. But we rapidly reached a point where we told you, basically, we needed people from State Department there because we were aware there were very deep historical and diplomatic contexts to the types of things we were talking about, but I'm a de-skilled mathematician and the person who's representing Taiwan was a physicist. And so we are not the right ones to represent how that negotiation would play out.

Dr. Heginbotham: One of the things we've advocated in wargames is to bring other players to the game, like State Department and other parts of the government that would have a stake in this and have a say in it. So yes. Couldn't agree more.

Mackenzie, I'll give you the last word.

Ms. Eaglen: Great. I'll be brief, because I like the – you know, our discussion about – well, this discussion all across Washington. Just kind of, what does Operation Rising Lion, or Spider Web, or Grim Beeper, or Midnight Hammer – all of these unique sort of once in a generation, I would argue, kind of military events, what they mean for the changing nature of warfare. But I think Washington is less focused on – not necessarily the DIME and the whole of government. That's always important., I think we all agree. But how deterrence is changing potentially in real time. Because the goal, of course, is to avoid any of these scenarios, and to keep this sort of unsteady status quo peace.

And colleagues like, at AEI, Zach Cooper have thought about, you know, the shifting allies and partners have new definitions, perhaps, in the 21st century. Where, again, it's shifting constantly over time, with its matrix of four things – technological, economical, military, and – I forget what the other one is. And some things -d you know, India, three of the four boxes will

fit that scenario, and they're with you. And on others, zero, and they're with America. And it depends on the scenario, depends on the event, depends on what happened in the world that day. It depends on which of the, you know, matrix of issues is affecting them directly as a country.

And it's no more just we have this thing – insert, you know, NATO, or Article Five, or any, sort of, even bilateral security agreement – and that's how deterrence will be upheld or lost. No longer, I think, is this calculation – not that it was ever simple; I would say the Cold War was anything but – but I don't think we've thought through extensively the competition deterrence as well as the warfare deterrence adequately for the modern globe and all the digital economy, information economy, and how to update those models and thinking to help prevent all of this in the first place. So thanks for having us.

Dr. Heginbotham: Well, thank you all so much for taking time out of your schedules both to be here today and to familiarize yourself with the game and the report. We're extremely grateful. You've put a tremendous amount on the table for us and our audience to think about. So, again, thank you very much. And congratulations on a great discussion.

Adm. Swift: Thank you.

Dr. Kavanaugh: Thank you.

Mr. Heim: Thank you, Eric.

Ms. Eaglen: Congrats on a great report.

Dr. Heginbotham: Well, thank you.

(Video presentation ends.)

Col. Cancian: Well, finally we've arrived at the part of the event where you, the audience, can ask questions. To do that, you can hit the link on the event page. Before jumping into the questions though, I want to reintroduce my colleagues on this project. We have joining us, Dr. Eric Heginbotham, who's a senior scholar at MIT and codirector of a wargaming lab there. And we have Dr. Matthew Cancian, who runs wargames at the Naval War College.

One of the first questions we received was about quarantine versus blockade, which was discussed at length with the panel. It's important to note that China would regard an action against Taiwan as an internal matter. They would not regard it as a blockade but rather covered by domestic law. There's a section in the report that discusses that. But because of this confusion about an internal matter, quarantine, blockade, we actually

changed the title of the report from "Breaking out of Quarantine" to "Lights Out?" to avoid this legal question.

Let's turn to our next question, which will go to Matthew here. What do you think of Eugene Gholz's analysis on the ability of China to blockade Taiwan via missiles by repeatedly and continuously striking Taiwan's port? I thought he put together a strong argument and wondered if it played out in your analysis.

Dr. Cancian: I've had the privilege of seeing Eugene's work evolve here. And I think it does a great job of emphasizing the dangers of bombardment in conjunction with blockade, where when we say "blockade," people's natural thoughts turn to the shipping, which is an extremely important part of it in many of the scenarios. But at higher escalation levels, at higher risk tolerances, China could directly attack Taiwan, and has probably tens of thousands of close-range ballistic missiles that it has built in order to do that. So I think that it's – a critical part of this report is to not just focus on the shipping element, but also the hardening of Taiwan, particularly energy infrastructure. But part of that also could be port infrastructure.

And I think it will be very good for people to look at Eugene's forthcoming work and analyze how Taiwan might look forward to protecting not just the electrical grid, as we emphasize in our report, but also all elements in order to build this resilience, that would show China that they can't just bombard Taiwan into submission. Because right now, if China sees – in the future if China see believes that this is very doable and that they could severely disrupt Taiwan's economy and infrastructure to the point where Taiwan would be willing to make concessions, then that would greatly weaken deterrence.

Col. Cancian: Great. The next question I'm going to send to Eric. And that relates to other countries in the region. Would a blockade stop all shipping from Asia to the United States? And then, the related question, what would it do to China's shipping and economy?

Dr. Heginbotham: That's a great question. I mean, I think the first point here is that there would be no normal here, right? There's no normal shipping at this point. So, you know, all shipping, all trade would really be heavily affected, starting with supply chains. So if you take Taiwan out of the international economic system, a lot of those supply chains begin in Taiwan, they go through China. Now you've decoupled those economies, at a minimum, and then the kinetic conflict, assuming that it goes kinetic, then blocks trade elsewhere as well. So China may be blockading Taiwan, but if you have a kinetic conflict around Taiwan, that's likely to mean that no normal shipping, in other words, commercial shipping that is insured through commercial means, is going to a large subset, or possibly all, of the Chinese ports.

Potentially the U.S. could impose a counter blockade, countering China's blockade of Taiwan. But even without that, a lot of Chinese shipping would be heavily affected. Japanese shipping, if Japan became a combatant, for example, if China chose to attack U.S. bases in Japan and it then became a combatant Chinese – Japanese shipping, rather, might also be affected. Korean shipping could potentially be affected. Most of Korea's shipping, about 90 or 95 percent, goes through the Ryukyu Chain, which would be in the middle of this thing. So I think, you know, profound effects on all shipping coming in and out of Northeast Asia.

Col. Cancian: And a follow on to that, also for Eric, how would this affect Korea, North and South, specifically?

Dr. Heginbotham: Right. So that depends on a lot of things. I mean, we're already – you know, we've already run through this matrix, right, of rules of engagement. So potentially a blockade could be limited to relatively narrow geographic area. Assuming that it's not, and that it becomes a somewhat wider conflict, then anything coming through the Ryukyu Chain is probably no longer going to be commercially insurable. So almost all commercial insurance contracts now have what's called a five power clause, which means that it does not cover insurance for shipping affected by war between any two of the five members of the U.N. permanent – you know, permanent members of the U.N. Security Council. So China and the United States. A war between China and the United States is not insurable.

So Korean shipping might be able to divert north, but that northern route is, you know, not much used by Korea during peace time. It's heavily affected by weather in the winter. Presumably, anything that leaves Korea would take that route. And if Korea did become a combatant, it is a U.S. ally. It's not obligated to join this fight. But if it did become a combatant, shipping out of Korea would be a real problem.

Col. Cancian: Thanks. There were a series of questions related to the Berlin Airlift, and the possibility of an airlift. When people hear about blockades they often remember the example of the Berlin Airlift of 1948-1949, when the Soviets shut down ground transportation into the city of Berlin. We did look at that extensively. As part also of a broader look at other ways to get materials to Taiwan, for example, submarines or what we call narco-logistics, using semi-submersibles, and airlift.

None of them were adequate to keep the island supplied. If the United States made a massive effort on an airlift, it could keep the Taiwanese people alive and supplied with the very basics of life. But the economy would collapse. It's important to note that the challenge is very great. Berlin, during the airlift,

had about 2.3 million people in it. Taiwan has 10 times as many. In the report there's a detailed discussion of this.

Turning to another question, this is about cyber. And I'm going to send that to Matthew. And the question is about whether cyber could lead to a Taiwanese collapse. And how that was included in the wargames that we ran.

Dr. Cancian: An interesting point that's brought up a lot of times, right, where a lot of the civilian infrastructure that underpins modern life is vulnerable to cyber disruptions. Unclear what penetrations China has on Taiwan or what penetrations then, conversely, the U.S. or Taiwan has on China, right? That it sort of cuts both ways. I think there was a great study, and they're still looking at it, from CIPI, the Cyber and Innovation Policy Institute at the Naval War College – Nina Kollars, Mike Pozansky, Jay Vogt looking at this, and trying to really pull the thread of what's the most – what are the most vulnerable things, and how those could be reinforced. So absolutely it's part of the larger range of issues. And our wargames focus mostly on the kinetic side of it. And it's – like any wargame – it's not the end-all and be-all, but, rather one part of an important puzzle that other people are going to have to take up and knit together in order to make the best advice for policymakers in the future.

Col. Cancian: And I might add that in the wargame we used for the high-end conflict there is a cyber component there, based on what we've seen in Ukraine, for example, and other examples. But very hard to predict.

All right. We have another question here. And that is about the Europeans. Could the U.S. involvement in Europe be a factor that influences the U.S. decision to intervene in the case of a blockade of Taiwan? And how do you see the European countries acting in the event of a blockade of Taiwan?

Well, the first part is, yes. If the United States were involved in another action, another major operation, that would affect the availability of forces to thwart a blockade of Taiwan. In our invasion wargame we looked at a distracted U.S. And that was reflected in reduced reinforcements coming into the Pacific. In terms of our assumptions about Europeans, and other countries, and what they would do in the event of a blockade, we have a section in the report that talks to that specifically. But the bottom line is that most European countries would not get involved in a blockade. They would likely provide some diplomatic support for Taiwan. Only the U.K. and France really have the ability to send military forces. They've practiced that in the past. In our base case we assumed that both of them would send small squadrons to participate in freedom of navigation operations.

Another question here about, would China engage in a blockade without having the ability to successfully invade Taiwan? It seems difficult to

deescalate once a blockade is enacted. So let me send that out to Eric first, and then to Matthew.

Dr. Heginbotham: Sure. So a blockade is often discussed as a better alternative, effectively, for China. It does have limited lift capability. Lift would become a, you know, critical vulnerability for China, potentially. Certainly a center of gravity for it in an invasion. Here it doesn't have that particular vulnerability. So this is regarded by many as a better option. I'd make two points here.

First of all, there are challenges on both sides that don't exist in the invasion. A lot of those grow out at the duration of the campaign. So to force a capitulation of Taiwan, assuming that the United States gets actively involved, we're talking about a long campaign. And that imposes a lot of stress on the Chinese military, a lot of attrition on the Chinese military, if the U.S. is operating against it. So there are other disadvantages. There are other risks that China runs here. Obviously the, you know, risks on the U.S. side as well.

But a lot of times, the blockade is discussed on a continuum. And the assumption is made that one could begin with a blockade and move to an invasion, or begin with an invasion and move to a blockade. I think our conclusion on that is that that's actually a very difficult proposition. So if you engage in the high-end warfare in either one of these scenarios – you know a general war, a blockade that becomes a general war, or an invasion – both sides are going to take severe losses. China is going to lose the assets that it needs for the other options. So in other words, if there's a high-end war surrounding a blockade, it will lose many of the assets that it really needs for the invasion, and vice versa. So moving from one to the other is probably not going to happen.

Col. Cancian: Matthew, anything you'd like to add?

Dr. Cancian: I'd just add that just as important as looking at the military elements, as we do, and how that shapes escalation, is then thinking through the steps of how we deescalate in a conflict. And that the way that you would deescalate – the levers that you could pull – or, the carrots and sticks you would offer to China in an invasion scenario are different than those that you would have available to you in a blockade scenario. And not necessarily easier or harder, but that that is, I think, the – one of the important next steps for the U.S. policy research agenda is, if one of these scenarios comes to pass, what does our negotiations – what do our negotiations with China look like? What are the offramps? And how do those change in various scenarios, in addition to the military deterrence side.

Col. Cancian: Great. Well, we're coming to the end of our time. So I'm going to ask one last question. And that is, what was your biggest surprise as a result of doing this

project? And I'll start here by saying that when I looked at Taiwan and its vulnerabilities, food was not one of those. Taiwan produces some food on its own. It has large inventories. And the amount that's needed to import to keep the population alive is relatively small. That was not the great problem. Energy was the problem. So let me turn then to Eric.

Dr. Heginbotham: Great question, and great points, Mark. So I'm not sure I would call these surprises, but two things that really struck me. One is on the political side and the other is operational. But on the political side, this isn't anything that I can say is a definitive conclusion because it's really based mostly on the free play games. We had a limited set of those, five of them. But I was quite struck by the fact that several of the U.S. teams, I think in three out of five cases – actually, probably more. I think all of the U.S. teams were very reluctant to risk escalation.

Now, some ultimately did take the risk and engaged in higher-end warfare, but none of them wanted to. And three of them successfully avoided escalation. But that raised for me the question of whether we, the United States, might be a lot more reluctant to engage in warfare, right, to really intervene in the case of a blockade than in the case of an invasion. Again, we can't really compare. We don't have large Ns, so I can't say this definitively. But, I mean, the outcome could very well be the same. Taiwan could be forced to capitulate. Blockade is covered under the Taiwan Relations Act, and yet there may be more reluctance. This may be a harder sell for the American public, or political leaders may be more reluctant to get involved in it if it is a blockade.

So that was something that certainly struck me. And that, I suppose, I would call a blockade. And then, again, on the military side, I already said it, but both sides face real challenges. They differ from some of the specific challenges that we face in the blockade. But from a Chinese perspective, this is definitely a high-risk proposition. This is not an easy lift for them. If it does go high-end kinetic, they face some real problems. Submarines have to operate in very dangerous waters. They have to get out there beyond the first island chain and operate for months in a hostile environment. The Air Force has to be able to engage in very high-intensity warfare, again, for months, and survive against, you know, really superior U.S. air-to-air capabilities. So, again, not a great scenario, very high-risk scenario, for China.

Col. Cancian: Matthew.

Dr. Cancian: My prior belief was that this was going to be a lot worse for Taiwan, particularly in scenarios – even where they had prepared. And so one of the main things that I was surprised in doing the background research for this was how much the preparations that Taiwan could feasibly do could improve

their situation. So I think that that is the number-one thing that could come out of this to improve deterrence.

The other big surprise is from the free play games, where when you have Taiwan playing the game and playing as Taiwan, they don't make concessions. And that should really make decisionmakers in Beijing second guess any idea they have that morale on Taiwan is weak and that this would be an easy course of action. This could be very, very difficult. You could not get the offramps that – and a lot of the things about – it's unclear where this ends. I think Jacob spoke very well to that. And we saw that. And that it is better for the U.S. and China to maintain the status quo and to reassure each other, rather than getting into one of these conflicts.

Col. Cancian: Great. Well, online at CSIS.org are five products that discuss the project and its findings. Both the 10-minute video and this event will be online. There's the report itself, which runs 150 pages. For those who don't have quite 150 pages of endurance, it begins with an eight-page executive summary. There's a dazzling three-minute video. And, finally, there's a four-minute audio. This concludes our event. Thanks for watching.

(END)