The Nixon Seminar on Conservative Realism and National Security

Space and the Future Frontiers of National Defense

March 7, 2023

PARTICIPANTS

Ambassador Robert C. O'Brien, Lanhee Chen, Elbridge Colby,
Mary Kissel, Matt Pottinger, Kimberly Reed, Alex Wong

Mary Kissel: Good evening and welcome to the Nixon Seminar on Conservative Realism and National Security. I'm your host, Mary Kissel, with Stevens. We're honored to have Ambassador O'Brien chairing tonight's discussion alongside our outstanding seminar members. Secretary Pompeo is off tonight. We're going to play some footage in the background here as I talk of that Chinese spy balloon that wafted over the United States from January 28th to February 4th.

Six decades after Sputnik, the space race is back and it's about much more than scientific advancement as America's national security hangs in the balance. It's a big topic. It's a topic that doesn't get much attention in the press until the spy balloon, and now we're going to tackle it. So, let's dive in. Ambassador O'Brien, I'm gonna start with you. You, Secretary Pompeo, and others were given a special briefing on that very spy balloon. What did you learn that you're allowed to discuss?

Ambassador O'Brien: Well, first, before addressing the briefing, the spy balloon was one heck of a provocation by the Chinese. It shows how little they think of us. They believe they're becoming the dominant power in the world and they have little to fear from the U.S. in their view. And so, they violated our sovereignty in an egregious manner and in a very open manner by floating a relatively slow spy balloon over the United States. What Secretary Pompeo and I learned in the briefing, and I do commend the Biden administration for bringing John Radcliffe and myself and Mike and Matt Pottinger into that briefing, was it the spy balloon lingered over our critical components, our nuclear triad.

You got the missile silos in Montana. It went down and covered Air Force bases and have our bomber fleet in Missouri. And then ended up taking photos of some sub

pens of our subs where our boom or high-class subs are in. So, they did this very deliberately, they had total control over where the balloon went. This is not a balloon that, as the Chinese initially said, that blew off course or it was a fortunate wind for the Chinese to blow it right over all of our nuclear sites across the width and breadth of America. The second thing we learned is that they've done this before and they've been doing this around the world. It's a very well-developed program.

The Chinese are looking at space and high Earth orbit, low Earth orbit, and the balloon and UAV space, excuse me, where you can get better video and more signals collection with the balloons. And the last thing is they did not do this during the Trump administration, there was nothing of this order of magnitude. They did have some balloons that skirted the continental United States and clip Florida and Texas but there's nothing so brazen in the Trump administration and they confirmed that we were not briefed or aware of it. So, this is a new development with the Chinese. It's brazen, it was meant to humiliate us, to collect on us, and to show the world that China is immune from any retaliation by the U.S.

And the fact is the only consequence to this brazen breach of our sovereignty was a canceled meeting in Beijing that was then rescheduled between Blinken and Wang in Berlin or in Munich a week or two later. It showed the Chinese that there would be very little consequence for taking this sort of action. And that's why we see the cranes that are coming in with collection devices on cranes going to our ports, it's why they continue to buy farmland next to our military bases, and it's why they continue to collect with cell phone towers in the U.S.

So, until there's a consequence for the Chinese for their actions or their collection activities, I think we're gonna see more and more of this and it's time for America to wake up. And I think that may be the silver lining of the balloon because it's hard to explain the cranes, hard to explain the cell towers, but every American understood exactly what happened when a balloon with three school buses full of collection equipment flew over our country and I think the American people are waking up to the threat posed by Communist China.

Mary Kissel: Well, certainly when we think about threats from the skies, during the Nixon era, you are thinking about intercontinental ballistic missiles, nuclear weapons, satellites collecting information on the United States, but you didn't really think about low-tech balloons or that kind of near space area. I see that we've got former deputy national security adviser Matt Pottinger on. Matt, just a big broad question, you know, we started with the spy balloon that I think woke a lot of Americans up to this threat. You know, can you give us a sense of the breadth of the threat from China when we're talking about things like space and near-space capabilities?

Matt Pottinger: Well, thanks, Mary. There are areas where China is moving ahead of the United States and it's primarily in technologies that were first pioneered by American scientists. You know, pilot tests of new capabilities that were then discontinued in our budgets but which China picked up on, you know, they sort of got a head start. They didn't have to imagine these capabilities, they were able to let us imagine them, to let us put the initial research and development dollars to work and then to take it and run with it. I remember talking with an American general who

had spent time in Beijing who told me the story of how he had heard that there was a symposium going on in southern China, where they were inviting Americans to come lecture on cutting-edge technologies, including hypersonics.

This wasn't all that long ago, this was sort of, you know, less than a decade ago, and there was, you know, a whole lineup of Americans presenting the latest information that they had and knew for things that they were testing theoretically. And so, you know, you've got a whole huge team of Chinese hosts who are carefully recording and taking notes and no doubt vetting these Americans. It reminds me of another US general who told me, who said, "Americans are a lot like golden retrievers, we're friendly, you know, if you ask us to go fetch something, we'll bring it and bring it to you."

And that's sort of been the attitude for the last 25 years. We've been providing things that probably should have been closely guarded secrets in the name of, you know, friendly exchange and in the interest of advancing science as opposed to thinking about our national security and who the other people were on the other side of the table and what their real goals were. So, anyway, you know, they're capable...I knew virtually nothing about China's near space program when I was sitting at the White House and, you know, have learned really just in the weeks that have followed the red Zeppelin that flew over Montana and our nuclear silos.

Mary Kissel: Well, Alex Wong, jump in here.

Alex Wong: Yeah, I mean, just to follow on what Matt said and what the Chinese are doing to, you know, steal our technology but make advances in their kind of space-based and cyber-based warfare capabilities. This really has to go back to what might be called, you know, the first, you know, space technology-enabled war, which was the Persian Gulf War. There, you know, we were using amazing technology, which was unknown to our enemies and really the world at the time called GPS technology to direct our troops and really, you know, in 100 hours, execute that war. The Chinese saw that. I mean, they say this, they saw that capability on the part of the United States military, and ever since they've been trying to build up their capabilities to execute what they call and what is acknowledged now as informatized warfare.

And going back to 2015, the Communist Party set up something called the Strategic Support Force. This was a centralized effort to bring together the capabilities of space and cyber, to enable their warfighting capabilities with information from space, not just GPS, but targeting information, communications among, you know, various elements of their military across vast spaces, ways to put at risk our space-based assets. You know, we've responded, as some of you know, with the Space Force created under the Trump administration and other effort to centralize our efforts. But this is a long-time effort on the part of the Chinese and on our part too, to really take advantage of space-based assets to enable informatized warfare. And that really is the next fight and that really is who can perfect this technology, who can utilize it, who can execute on the battlefield this technology, that will determine who has the upper hand.

Mary Kissel: Well, it certainly is a new era. I want to put up a quote from the 2022 National Defense Strategy and it reads, "In the cyber and space domain, the risk of inadvertent escalation is particularly high due to unclear norms of behavior and escalation thresholds, complex domain interactions, and new capabilities." Elbridge Colby, I'm going to come to you because, with that quote, it raises an important question, which is, you know, do we have rules of engagement? Does the United States know what to do when a Chinese spy balloon wafts over the middle of the nation at 60,000 feet or if you have North Korean cyber hackers hacking a U.S. private entity? Where are we in really thinking through, you know, how to fight in these new domains?

Elbridge Colby: Well, thanks, Mary. It's great to be on the Nixon seminar this evening, at least East Coast time. I mean, I think there were rules of the road actually set out, I mean, the Outer Space Treaty and other things during the Cold War in part under President Nixon's tenure. But I mean, space has just dramatically transformed. I mean, during the Cold War, the United States and the Soviet Union were really the only kind of entities or states but certainly, private companies were able to operate in space, and today, that's just totally different. As we all know, Elon Musk and Jeff Bezos and the list goes on. There's a whole lot going on in space and far less famous people, you know, putting smaller satellites into low Earth orbit and so forth.

You know, I mean, I think that the balloon crossing is, as Ambassador O'Brien I think rightly put it, that was a brazen act that is a clear violation of our territorial airspace and so forth, and then it was the right thing to bring it down. I just think it should have been done sooner. But I think what's different now is that space is really becoming almost a domain like...you know, obviously, people can't just live out in space, so it is different. But I mean, in terms of how much we rely on it, not only in the military domain but in the civil domain for communications, for surveillance, for all kinds of data processing, etc., I mean, this is a much different dynamic.

And what I would say in the context of China, is that space is critically important and people sometimes say that but it's not clear why, but think about it this way. I mean, God forbid, if there's a conflict, we, the American forces are going to be fighting 5,000 to 10,000 miles away from the lower 48. So, if we're going to be able to control those forces, to operate them, etc., we have to use space because essentially, a lot of things are limited by line of sight or the curvature of the earth. The Chinese, unfortunately, can operate largely from, you know, bases and entities on their home territory. So, that gives them a huge advantage.

So, up until a couple of years ago, it was said, "Well, the Americans would be more reliant on space and China would use more what's called air-breathing, you know, aircraft, radars, etc." Here's the troubling thing is that China's actually embarked on a massive, really, really, you know, formidable space build-up. And what that tells us, I think it's one of the most credible indicators of how China's ambitions are far greater than just Taiwan because the reason for China to build up those satellite infrastructures well, maybe it's to try to target an aircraft carrier.

But a lot of this is about they want to know what's going on far away, they want to be able to control military forces that can project and sustain over long distances.

Aircraft carriers, they're gonna have half a dozen or so by the end of the decade. That's one of the really important things. So, space is really going to be very important for both sides. And in fact, a conflict could all sort of start in space in ways we might not even appreciate, we might not...most of us might not even know about. So, that's one of the sort of really novel and, you know, very dangerous elements of what's going on.

Mary Kissel: I want to put another quote from General David Thompson. This is an interview...it's actually a summary of his comments with an interview with Josh Rogin and "The Washington Post." This is from 2021. The general said, and this is a summary, "Both China and Russia are regularly attacking U.S. satellites with non-kinetic means including lasers, radio frequency jammers, and cyber attacks." So, they're also not just building these capabilities, as Elbridge said, but they are also actively testing these capabilities. Kim Reed, you know, you served in the administration and had a particular focus on this topic. How serious do you see this threat? Elbridge is, you know, talking about the build-up and how it could be used. Do you agree with him?

Kimberly Reed: Absolutely. And, Mary, I come from this from an economic perspective. I was with Ambassador O'Brien on December 20th, 2019, at Andrews Air Force Base, when the creation of the Space Force happened and we've done very exciting things with our government since that time but it also takes private sector investment, I'm on the board of a great emerging growth space satellite company called Momentus and on that company is a former commander of the space station, Chris Hadfield. And we're very focused on the future of space and I really want to see America harness that private sector investment in every way possible, and I think working with our government is a way to do that.

Tomorrow is International Women's Day. And as we look at what needs to happen for our future, I think it's workforce development in the space industrial base and I really want to challenge all those young people who are watching this evening to think about space. Think about as World War Two began and the World Wars were fought in the ocean with battleships, and then all of a sudden, we introduced planes during World War Two and that changed the trajectory. And what we've just witnessed over the past few months with China and with other countries, we need to be upping our game in every way.

And so, I hope Congress is investing and I hope young people really think about this as a career. I also would like Ambassador O'Brien and others who are national security experts to give their thoughts on these international convening efforts and what are we doing internationally and globally to play out what China and Russia and other countries who might not necessarily have our interests at heart, how are they playing out the future? And are we thinking about that through our network as we head into things like the G7 in Japan? Thank you.

Mary Kissel: So, Kim, I'm so glad that you raised the Space Force. I encourage everybody to go to that website. It's pretty enticing. I mean, I'd like to join the Space Force if I could, but unfortunately, I'm probably a little too far down that career path. Alex Wong, you said you wanted to add to Kim's comments. Over to you.

Alex Wong: Right. Yeah, I want to chime in to emphasize what Kim said about the private sector. I mean, this is really an advantage that the United States has versus every other country in the world and in particular, China, that we have a vibrant private sector, industry focused on space launch, on putting cheaper, more numerous satellites into low Earth orbit. This was the result of a policy change to shift from a kind of centralized government-focused and asset-focused effort, but also, you know, the ingenuity of entrepreneurs. And Elbridge and Matt have named a couple that are very famous but again, there are many of these companies that are just proliferating. And this is really a stark contrast to what we see in China.

Now, China has made great investments in its space-based capabilities and technology and launch, but it's still very much centered on a government-dominated and owned and operated launch capability as well as satellite construction. And even to the extent that they have some "private sector" companies, they are answerable to the Communist Party and controlled by them. So, this is an advantage for us. If we do get into a situation where space-based assets are under threat if we're in a conflict, the fact that we have numerous actors putting up satellites into space, communication satellites into space, that they're doing it faster, that they're doing it cheaper, and they can do more of them, that's an advantage for us.

Now, there are some disadvantages to that too. It's hard to coordinate, it's hard to say that...you know, to take control in a complex situation of disparate private sector actors. There's questions of whether these private sector actors will have divided interests because they don't just want to sell to American companies and American government, they want to sell worldwide. These are all questions we can answer but in the main, we have an advantage because of our private sector ingenuity and it's something that the Chinese tried to catch up on, I'm not sure if they can.

Mary Kissel: Well, you're raising again this question of rules of the road that Bridge spoke to. You know, if we do have private sector actors, what are their do's and don'ts, who can and cannot they sell this technology to? Lanhee Chen, great to have you back with us on the seminar. Talk to us a little bit about how you and your institution are thinking about some of these issues.

Lanhee Chen: Well, it's great to be back, first of all, and I just want to echo what Alex and Kim said about the value really of what we're doing in terms of public-private partnership. That's an advantage that we have certainly over what the Chinese are doing. But, you know, one of the things I think it's important to recognize, and we've done some of this work in thinking about this at the Hoover Institution, is that this is not a new trend. China has been extracting technology since the 1990s. In fact, if you look back to the Cox report in 1998, there was a specific articulation of how China was extracting essentially technology-sharing that we have engaged in the commercial field and commercial sectors, to use it to advance their own military and space programs.

And so, you know, there's a tendency, I think, to view the threat from China as being a recent one. And that's certainly true, I think Alex raised a very good point, which is that their development with respect to the space program has been particularly robust over the last couple of years. You know, they've now developed the ability to

launch a rocket from a high-altitude helium balloon, not unlike the kind of technology we saw drift over the United States at the end of January. They have the ability to get things not just into low Earth orbit, but they can actually travel. They're engaging in interplanetary efforts now as well. So, a lot of this, our tendency to think of it as being recent, but the reality is this goes back many, many years. And the thing that's needed most, I think, is vigilance.

Our policymakers must be vigilant that this is a national effort that the Chinese are engaging in to continue to extract technology to build a native space sector. And they don't have the competitive advantage of private sector ingenuity, what they do have is the advantage of taking technology from around the world and using it on their own. And so, I think we need to be aware of that, we need to be attuned to that, and more importantly, we need to understand this in a historical context. This is not a recent development but something that has been going on for many, many years that we have the capacity and the ability to stop with the right vigilance and the right activity on our end.

Mary Kissel: You know, Lanhee, I have to smile when you said, "China is looking at interplanetary exploration." Of course, Nixon dealt with this too. Fun fact, the Soviets landed on Venus in 1972 during his tenure but not many folks remember that. But President Nixon and his team are also at that time thinking about another adversary and their efforts, both surveilling us from the skies, but as you say too, trying to travel the galaxy. Robert O'Brien, I think many Americans were surprised when they saw that spy balloon. But as Lanhee just so ably laid out, you know, this has been going on for a long time and there's a lot of stuff floating around up there.

Moreover, the Chinese aren't just using these things to surveil us and our friends and partners. They have done things like, you know, tried to shine lasers from the ground up at our satellites, they have attacked satellites up there that they could potentially physically drive into our satellites. I mean, if you're talking to, you know, someone who's never really looked at this before, you know, what are the key areas that you think that the American people should really know about and then our media should start, you know, really covering and talking more about? I think you're on mute.

Ambassador O'Brien: That's a great question, Mary. Thank you. And, look, I want to go back to something Kim said about the formation of the Space Force. That was the first new branch in the military services, in the armed forces since...in 73 years. And at the time, there was bipartisan support for the NDAA and there were some Democrats that had some vision and understood how important Space Force was. But for the most part on the left and the mainstream media, the Space Force was ridiculed as a fantasy of the Trump administration, in the same way, I'll point out because I'm one of the few people on the call old enough to remember, the way that SDI or Star Wars was pejoratively labeled.

And when Ronald Reagan announced the Strategic Defense Initiative, I remember watching his announcement on TV and immediately the news media branded it Star Wars and they talked about the Space Force as being Star Trek. Well, now, the Space Force looks very visionary. And I think 50 years from now, when the heat of the partisan polarization that we're seeing in the country now dissipates and real

historians and serious men and women take a look at the accomplishments of the Trump administration, the launch of the Space Force on December 20th, 2019 at Andrews, it was a great event, is going to be remembered as one of the signal accomplishments of the Trump administration. And it's so critical because the new high ground in the next war, it's not gonna be trenches, it's not gonna be aircraft carriers.

You know, those will be important still but it's gonna be cyber and space. And one of the things we have to think about going to your question is, what did the Space Force inherit? Right now, the Space Force is primarily focused on ISR, surveillance reconnaissance, which is important, maintaining our GPS satellite system, which is critical, and launching satellites. What it's not so much focused on is offensive capabilities. And as you pointed out, the Chinese have extensive...and the Russians have extensive capabilities as the general pointed out in the article you summarized. I'm not gonna say anything about it.

Based on my personal knowledge as well as if you refer to what the general said in that article, there have been significant operations against U.S. satellites and against U.S. assets in space by our great power adversaries, China and Russia. And we need to make sure that Space Force not only continues doing a great job with launch and with surveillance and reconnaissance and maintain the GPS system, but that we get our own offensive capability so that when the shooting starts...and as General Minihan said recently, that could happen as early as 2025, it could happen as early as 2024 with the narrative window in Taiwan.

We need to be prepared to adapt offensively in space, not just defensively and not just as a surveillance platform. So, that's one of the challenges that Space Force will have going forward, I think it'll be met. But we got to take that challenge seriously and we need to get on it. As Churchill used to say on things that were important needed a stamp that said, "Action this day," on the memo or on the paper and send it back to the ministry, this is an action this day item. You know, Bridge pointed that out and you did as well, Mary, but the question about the rules of the road that Kim raised and that you raised, we know how that's gonna play out because we've seen it.

In some ways, the space treaties and space law is based on something called the Law of the Sea, which has been a customary law since even pre-Roman times. We've developed this body of law, some of it is treaty-based but most of it is customary. And the seas are, for the most part, international waters and we see how the Chinese act. They go into international waters, they've done this in the South China Sea, which is a massive, you know, portion of the Pacific Ocean, and they built islands there and they said, "First of all, this will be for civilian use, this will be for search and rescue, it's going to help fishermen."

And what did they promptly do? They put landing strips on for jet aircraft, for bombers, for fighter jets, they put missiles on, they militarized them. They not only went into international waters and did this, but they went to the exclusive economic zones and territorial waters of other countries in the region. So, when the Chinese said that they're gonna go to the moon for scientific purposes and they'll respect treaties, we know what will happen. When they get a base on the Moon, they'll

militarize it just like they've done in the South China Sea and what they've probably done in the Arctic.

We really don't know on the South Pole but it's likely that they've militarized their bases in the South Pole, totally contrary to international law. And they're gonna do the same thing in space because they're gonna follow the pattern of behavior they've engaged in from the start. So, the U.S. and our allies and even countries that aren't allied with the U.S. but are concerned about man's inheritance in space, need to watch very carefully how the Chinese behave and we need to be prepared immediately to counter anything they attempt to do on the moon, which we did not do in the South China Sea.

We turned a blind eye to what happened in the South China Sea, we turned the other cheek and we thought...again, it was this idea of if we just let the Chinese commit genocide against the Uyghurs, if we just ignore what they did to Tibet, if we just ignore what happened in the South China Sea, if we just let them steal a little bit more of our intellectual property, they'll get rich and as they get rich, they'll become more liberal and they'll become more like us and they'll want to be like us and it's going to be a great partnership. And that was a naive view of however many administrations, Republican and Democrat, for the last 40-50 years, and we can't have that same attitude going into space where we're gonna lose the moon to the Chinese and that will be the ultimate strategic high ground if there's ever a conflict here terrestrially on earth.

Mary Kissel: Well, it's such a scary prospect and again, I'm just amazed that it doesn't get more attention in our public square and in our press. One thing that you raised, Ambassador, is the Chinese building things in international spaces, international waterways, the South Pole, potentially the moon, but they also have partners around the world that help them build facilities that augment their near-space and space capabilities. Matt Pottinger, I'm gonna put you a little bit on the spot maybe to address that question, because just as the United States has, you know, space partnerships with NATO and other friendly nations, so too does China, right? Shouldn't we be talking about that too?

Matt Pottinger: Yeah. Well, look, we now have...between China, Russia, and Iran, we now have a proper axis. You might argue that the axis of evil that we heard about before was evil enough but not axis enough. We've got a real axis now. The other countries that are really close into that in the orbit might include Pakistan as well as North Korea, although they're a bit of a loose cannon even for the Chinese. I've been alarmed to see the degree to which South Africa has been...you know, I think that it really betrays some of the traditions of South Africa that they've aligned themselves so closely.

Right now, their military is training together with Russia and China as Russia prosecutes the largest war in Europe since 1945, perhaps soon with Chinese munitions and weaponry. And then there are countries that are simply not aligned with China but also not willing to stand up on principle, even the principle of sovereignty, and sometimes are willing to advance China's interests even though they run counter to the rule of law and to sovereignty.

Mary Kissel: Yeah, and it's interesting, the nations that get caught up in this that you wouldn't necessarily think about. Remember that we did a treaty with Luxembourg during the Trump years on space cooperation and pooling our resources, and you don't really necessarily think of Luxembourg as a place where, you know, you need to think about space, but actually, it's quite important. Bridge Colby, to Matt's point...

Ambassador O'Brien: Mary, let me just jump in there and I agree with everything Matt just said. But Argentina has a massive space tracking station for the Chinese, for the PRC, and many, many Chinese scientists and military officers are based in Argentina. They're in places like Namibia. They're garnering, you know, advanced rocket technology from South Africans, which had quite an impressive rocket and missile program in the old South Africa. So, Matt is correct and you're correct that this is...the Chinese are relying on One Belt One Road to make inroads here on the earth terrestrially that are going to help them celestially.

And so, we need to really keep track of these countries and many of them are...again, as you point out and Matt points out, are counterintuitive. You wouldn't think that South Africans with Nelson Mandela who fought, you know, such a tremendous fight for freedom, that they would turn a blind eye to what's happened to the Uyghurs in China, for example, and open up, you know, to the Russians and the Chinese with open arms. So, you know, this is a fight that's taking place in space but it's also taking place here on the earth.

Mary Kissel: Yeah, it is ironic. I was speaking to a friend of mine who studies China and she said to me, you know, "The South Africans and others saw Mao as, you know, supporting their liberation from the oppressors." But you're right, it's completely counterintuitive that they would side with the communist regime today. Bridge Colby, I was gonna go to you but the National Security Adviser gazumped you. So, next over to you.

Elbridge Colby: Always a pleasure to be one up by Robert, truly. So, no, I think this is a great session. I was going to just sort of add in on the technology. I mean, one of the things that I think is worth considering that I think Lanhee Chen sort of referred to, you know, is clearly the United States has enormous advantages in terms of the sort of creativity of our society and our system. You know, on the other hand, the Australian Strategic Policy Institute, many of us have worked with them over the years, a very highly regarded Australian think tank, has released a technology sort of assessment or kind of net assessment, and they found that China is ahead.

I think they had a couple...I don't know, something on the order of magnitude of almost 50 different areas and the Chinese were ahead in a very substantial fraction in maybe two-thirds or something like that, maybe even more. Now, one can quibble with the methodology but I think it gives us a sense of, you know, what we're dealing with. I mean, you know, clearly, the United States has the ability with our indigenous population and also sort of skilled immigration to be able to get these centers of excellence stays in the sort of Northern California, Texas, increasingly Florida, I think.

But, you know, the Chinese are producing just, I think, orders...you know, several multiples as many, you know, trained scientists and engineers every year. And, you know, when you talk about scale, I mean, you look at the diversification that some of the companies are trying to move towards India or the ASEAN countries, but it's very difficult, almost impossible to replicate the kind of combination of sort of engineering capability and scale that the Chinese can produce, say, for Apple. And I'm not an expert on this. I know, Alex, I'm sure, for instance, knows a lot more about this than I do.

But I think there's a real question about...you know, I guess my view is I don't think we can take for granted that our system will out-compete the Chinese. You know, I mean, if you look at the history of the Cold War and the arms race and the space race, Soviet technology development was very impressive. There was stuff, say, on the atomic bombs but Soviet, you know, rocket production, I mean, we were just mentioning and Robert was mentioning, very capable. You know, again, and a lot of our capability was also from people that, you know, generally voluntarily but some of them, Wernher von Braun, involuntarily, we were able to take advantage of. But I think the Chinese have a scale and also sort of capability across...you know, the Soviets and Russians have always concentrated on sort of the military elements of technology.

I mean, they've always been relatively...less today, obviously, as we're seeing, fortunately, but, you know, missiles, aircraft, space satellites, these kinds of things, but the Chinese have clearly been able to make a lot of progress. And I think my impression is that we've moved beyond the period where they're relying on theft. I think theft is still part of the equation but it's the minor key. There's enough, you know, indigenous sort of capability in the Chinese system. And I think, Mary, you lived in Hong Kong too. I mean, as a kid, I live there. I know, Matt lived...I'm pretty sure lived in Hong Kong. I mean, there's an immense amount...I mean, that's a less of a technological as much as a financial center but it gives you a sense of the sort of creativity. Now, obviously, the CCPs rule is going to put a cold hand on that.

But, you know, my view is I think in the space race, the cyber race, computing, biotechnology, I mean, I think it's indicative, actually, that the administration has put on these restrictions, I think that's actually a relatively strong signal that the administration is concerned. I think the technology sanctions are one of the areas where the administration deserves the most applause. I mean, I think they've moved forward and I don't want to speak for Robert and Matt, but I imagine you would agree that they've done a good job on that relative to where we were even a few years ago. But that, to me, actually signals a rightful concern about the pace of Chinese production.

And I mean, one of the things I've been thinking...I mean, many of us are friends, Neil Ferguson has pointed out that we may be in a sort of 1941 scenario with China, where, you know, of course, we put an oil embargo on Japan and that helped sort of precipitate Japan's decision. One of the reasons I'm actually less concerned about that is I'm not sure how concerned the Chinese are about our ability to hold back their semiconductor production. I am not an expert on that. I mean, while I think we're all becoming a little bit an expert on semiconductors but there are many who know more.

But I mean...so, it's hard to say but I guess my bottom line here is, I mean, taking a look at the technology arms race, I mean, I think one of the things that made us so successful, and I'll kind of conclude on this point, during the Cold War was never taking for granted that we would out-compete the Soviets. And yes, you know, in things like Strategic Defense Initiative and the Second Offset Strategy, there was always sort of a righteous and sort of advisable fear that we were going to get out-competed and I think that's the right attitude to take today.

Mary Kissel: Yeah, thank you, Bridge. To your point, you know, of the severity of the threat, just to give our viewers a taste of this, and this is what's so neat about the Nixon Foundation and the library, they have these wonderful documents from the Nixon era. And one of them that was recently declassified in recent years was a national intelligence testimony about the Soviet space program and it contains a list of missile tests that the Soviets conducted during the Nixon era. And it's remarkable, you know, like missile tests, you know, almost every other day. So, if they were doing it back then, then you really have to wonder what the tempo is of those launches and tests today. Lanhee Chen, I know that we're going to lose you in a couple of minutes, so I wanted to throw it over to you to give a last word before you have to drop off.

Lanhee Chen: No, I appreciate that, Mary. I just wanted to validate an element of what Bridge raised, which I think is very important. And that is the Chinese have an ability to use the power available to them to engage in the infrastructure investments they need to advance various programs. So, if you look, for example, at all of the different facilities they've developed over the last couple of years around China, they have these space and technology parks across the country, they have a number of suborbital launch sites, I think two or three, they've got a number of satellite launch sites separate from that, they continue to develop entire technology corridors that are dedicated to space and near-space technology.

They have the ability to deploy it in a way that, frankly, in the United States, we have a challenge. You know, here in California, we have an environmental impact review process that ties up any infrastructure development for decades. We can't even build water infrastructure let alone space infrastructure. And so, if you look at China, I'd venture to guess, and others are more expert on this than me, I don't think they have an environmental impact review study process.

I don't think they have any study review process, I think they just do. And I think that gives them an advantage in some ways and I think Bridge is very right to point out the fact that we can't take for granted that our public-private partnership is necessarily an advantage. I think there are elements of it that are advantageous for us but the Chinese ability to develop and grow native sectors that are national champions is something that we cannot take for granted. And that's an area where I do fear, unfortunately, our own systems, our own political and regulatory systems stand in the way of being more competitive.

Ambassador O'Brien: And Mary, if I could just jump in on something Lanhee just said, and I think he makes a great point and he made it earlier, the Chinese are relentless. And as Bridge pointed out, they've got thousands of scientists coming out of the STEM [inaudible 00:43:13]. They're not worried about transgender studies in

China, they're working on STEM subjects, and they're turning out thousands of engineers and scientists every year out of their universities. And what they're able to do with that scale is pursue an all-of-the-above approach.

So, when we think about what happened with the balloon, you know, Lanhee mentioned that they could launch a rocket from the balloon, one other thing they could do from the balloon very easily with the size of the balloon that flew over the U.S. just recently is put an EMP device on it that would create an electromagnetic pulse conventionally short of a nuclear explosion and operate, you know, below the nuclear threshold and you'd have the same effect on us that a nuclear explosion in the atmosphere would have. And so, that gives them...you know, they're going to be coming at us with UAVs that are solar powered, they're gonna be coming at us at a high orbit or at high altitude, they're gonna come at us with high altitude balloons, they're gonna have low Earth orbit satellites, they're gonna have high Earth orbit satellites.

And as Lanhee pointed out, their entire industry is built around these things in China, whereas for the most part, we focus on one type of technology and figure out what the best is and try and perfect it and spend time polishing it and making sure it's great and they're going to come at us with scale and quantity. Stalin once said, "In a war, you know, quantity has a quality all of its own," and the quantity of weapons that the Chinese are gonna be able to throw at us in various different, you know, configurations is gonna be quite astounding and it's gonna present a tremendous challenge for Space Force and the rest of our armed forces and as American civilians, if heaven forbid, we're ever in a war with China.

So, I think we got to really take what Lanhee and Alex and Bridge have pointed out about the scale of the Chinese efforts. I mean, they're hard-working, they're clever as they can be, they're motivated, and they're nationalistic. We cannot underestimate China as an adversary. We've never faced...even with the Russians at their peak and they had obviously huge scientific prowess as you point out with their space program but even Russia at its peak doesn't come close to what China is throwing at us. Now, I'm convinced we can win but we got to get on it if we are...

Mary Kissel: Well, Ambassador, you're painting, frankly, a deeply frightening portrait of the future of warfare and the future of a potential conflict between the free world and China. Kim Reed, you know, we've spent most of the discussion tonight in the seminar talking about China. But of course, I believe it was pointed out earlier, you have others...Matt Pottinger, in fact, laid them out, Russia, Iran, Pakistan, with these kinds of capabilities. Should we also not forget the Russias of the world even as we focus on China?

Kimberly Reed: Absolutely, Mary. And Ambassador O'Brien, I believe, just said the word painting. And so, since this is a seminar, we have friends at the Nixon Foundation and the Nixon Library, I was on a Zoom earlier today with the Heritage Foundation expert, Dr. Ted Bromund of the Margaret Thatcher Center for Freedom. And we were talking about a wonderful book that Winston Churchill did in his retirement called "Painting as a Pastime." We know that he became an artist, but I want to just read this passage to you when we think about grand strategy from this book.

"To make a plan, thorough reconnaissance of the country where the battle is to be fought is needed. Its fields, its mountains, its rivers, its bridges, its trees, its flowers, its atmosphere," and I underscore atmosphere, "all require and repay attentive observation from a special point of view." And so, the United States does that. We do the best in the world at that, but we always need to do more and better. And that, as I mentioned, takes harnessing the beauty of our free enterprise system in the private sector. Just a few days ago, it was reported that a Chinese spacecraft...so we talk about balloons that just happened across our country from China, and so just a few days ago, a story appeared, Chinese spacecraft has been checking out U.S. satellites high above the earth.

The Chinese satellite, TJS-3 has been inspecting other countries' assets in geostationary orbit. So, like Winston Churchill said, we need to be looking at what's happening everywhere and it's not only with China, it's with our partners and allies and our adversaries. I also want to commend one of our participants here, Matt Pottinger. A week ago, he testified in primetime before another member of our Nixon seminars, hearing, the very first debut hearing of the new House China Select Committee. And Chairman Mike Gallagher did a great job but Matt, I just want to say thank you for taking the points you raise here to global audience and we really appreciate that.

And I know that this select committee on China is looking at this and I know that other committees are considering this because it's not only national strategy and security but it's economic. And as we mentioned with South Africa, I look every day at where China is investing and it is in so many countries, I'm stunned every day I see it. And our country really needs to be matching this and defeating this in strategic ways with our partners and allies. I know we did a lot on this on 5G and we're working on this in space and satellite, but so much more needs to happen. Thank you.

Mary Kissel: Thank you so much for raising that Select Committee and Matt's testimony there. I'd commend it to everyone. It is free to read up on the House website. Matt, let's go there to the Select Committee and to the politics of this a little bit. Robert O'Brien earlier raised the pushback that Reagan had when he wanted to implement a space-based anti-missile system, Star Wars so to speak. Are we seeing a coming together here in the United States, a realization that this threat is not partisan? And is the Select Committee a good first step forward? Is there something positive we can say here?

Matt Pottinger: I definitely think it's a good step forward. One of the best things about that evening was that if I had closed my eyes, most of the questions from members of Congress would have been indistinguishable whether it was Republican or Democrat asking the questions. And a lot of the statements that those congressmen made were very much focused in a very serious way on our national security interest, not trying to score for the most part, you know, partisan shots. And so, you know, that doesn't mean that the whole Congress is in the same place but what it means is that you've got this almost sort of self-selected group of people who are putting the country first, people who are aware that we're facing the most significant national security challenge and challenger that we've ever faced.

And so, there you have...you know, some of the words that people used to describe the hearing in the days that followed, particularly referring to the members, not to the witnesses, was that it was professional, it was bipartisan, it was serious. "The Washington Post" wrote a great editorial. Most of the criticism that I read was none of it could find a substantive thing to criticize, it was more sort of criticism of the idea that we're overinflating or, you know, that we're inflating the China threat. And so, that's a small beltway group that's getting lonelier and lonelier I think. People from outside the beltway who took the time to watch that hearing provided a lot of great feedback. So, I think it's really important. This is a really important group of elected representatives of our country right now from both parties.

Mary Kissel: I love those adjectives of professional, bipartisan, and serious. It's not really words that you think of when you think of the United States Congress these days. So, that's terrific to hear, Matt. This seminar was advertised as talking mainly about space, but also other emerging areas of warfare including near-space, but also cyberspace, which probably deserves a seminar all on its own. But I do want to touch on that. Alex Wong, you dealt a little bit a lot with the threats from places like North Korea, which is a cybersecurity issue not just for the United States government but as we've learned, for private actors. Are we getting our arms around that? And is this another area that, you know, really deserves more public attention?

Alex Wong: Well, thanks, Mary, for bringing it up. You know, you mentioned cyber and we've been talking a lot about space, but they are connected. You know, the space-based assets enable a lot of cyber capabilities, information capabilities, whether in warfare or kind of gray zone activity or sub-warfare activities. You know, you mentioned North Korea and the cyber threats out there are all different and they operate at different levels. You know, North Korea, a lot of our chief concerns were the ability of their cyber actors, their hackers to evade sanctions and, you know, basically steal from banks, whether it was cryptocurrencies or whether it was actually just actual currency that they would then launder in order to evade sanctions. That was one level of it.

But North Korea, China, and Russia as the main adversaries in the cyber area, we worry about their ability to get at our critical infrastructure and we worry about the ability, from a military standpoint of cyber and information warfare, compromising our warfighting systems if we actually get into a conflict. So, this is operating at multiple levels. Now, what I've been surprised by, shifting from China to Russia, Russia has considerable cyber offensive, cyber capabilities, hacking capabilities, but very surprised that we haven't really seen that come to bear in a very effective way in Ukraine. And perhaps that was because we've built up our defenses, we've worked with the Ukrainians to build up their defenses, we have ways in which they haven't been able to neutralize the Ukrainian's ability to utilize space-based and cyber-based capabilities in warfare, but I am surprised by that.

So, I'm curious to see what China is learning from this, what other maligned actors around the world are learning from the Russian example, and whether they have to beef up their cyber capabilities for a warfare scenario. But we should always be looking at our cyber defenses on critical infrastructure, forming better relationships between the private sector and the government, as well as these...whether, you know, you're a dam or you're a gas distribution company, these critical nodes of our

infrastructure, we need to have a better and closely linked relationship between them and our government to make sure that they are not vulnerable to cyber-attacks from our adversaries like China or Russia or North Korea.

Mary Kissel: That's such an important point, Alex, and it just raises something that I think Ambassador O'Brien, you very eloquently explained, which is that the U.S. homeland is under threat. And just to go back to where we started with the Chinese spy balloon, I think that became very obvious when Americans from Montana to the Carolinas looked up in the sky and said, "Well, what's that thing floating over us? My goodness." I just don't think that we as Americans are accustomed to thinking that sitting here in our homes that we could be under threat. Ambassador O'Brien, I want to go back to you on that topic because we have spent decades in this country feeling very, very safe. Is that time over? And are we acting urgently enough if it is over? I think you're on mute, sir.

Ambassador O'Brien: Look, we've been very blessed, Mary, by having two great oceans separating us from most of the rest of the world and having good neighbors in Mexico and Canada, and that has given us a complacency, especially since the end of the Cold War, and we now have space and cyberspace that are the new high grounds that we're facing. But look, we've got to be taking this threat seriously, we have to show urgency and act with dispatch, but we also have to be optimistic and I'm optimistic for a number of reasons about our future and how this ultimately plays out.

Number one, I think as Matt pointed out, there's a new emerging bipartisan consensus about the threat we face and as Americans come together, I'm convinced that as we're united, we can't be defeated by the Chinese or others. Number two, I think you're seeing the caliber of people and, look, I look at this seminar, I look at Alex and Kim and Matt and Bridge and Lanhee and Mike Gallagher and Mike Wallace and yourself and the others who are involved in this, all of you are going to be senior officials in the next administration, whether that's in two years or six years.

And we've got a great group of people in this country that understand the threats we're facing and are gonna guide our policy as we, you know, address those threats and rise to the challenges we face from Communist China. But I think there's a third thing that we're not focusing on, and that's the Chinese people. You know, they're an amazing people. Our concern is with the Communist Party of China, this totalitarian regime that keeps them under their thumb and we saw the longing for freedom in Tiananmen Square, we saw it with the brave people of Hong Kong, you know, Chinese in Hong Kong coming out with their blank papers. I mean, we've seen the Tank Man and others.

And when we think about the relentlessness and the cleverness and the hard-working nature of the Chinese people, and we're concerned about it now, I also want to think about the time when they're liberated and when they have freedom and how great that's gonna be for humanity as a whole. I mean, can you imagine a free China contributing all the things that they have to offer not for evil, but for good? And so, I think one of the things we need to do as Americans is remain, you know, that shining city on the hill that Ronald Reagan talked about, that beacon of liberty, for

the Chinese people who...look, they're the worst recipients of the totalitarian-controlled society.

You know, they're walking around with credit scores and under surveillance 24/7 under lockdowns, they're the ones who are the biggest victims of the Communist Party of China. You know, the CCP would love to do a test if they could. They're not going to be able to because it's more Americans. But one day China will be free and, you know, when we think about interplanetary travel and quantum computing and AI and all the great things that can happen in this world, think about China being a force for good. So, I'm optimistic, I think we're going to win these things in the end and win this adversarial competition in the end, and I think we've got great things to look forward to.

But going back to your question, there is a sense of urgency. We have to act now and we have to take action this day, and I think we will. I'd like to see more action out of the administration, but like Bridge, I'll compliment them where they've done some good things on the CHIPS Act and the sanctions but we need to do more and we need to do it on a bipartisan basis. And that's gonna be good, not just for America, but it's gonna be good for China and the Chinese people. And I look forward to seeing that day when the promise of Tiananmen Square which we all watched as younger people is fulfilled and the Chinese do get their freedom and liberty and that's to me a great day for humanity as a whole.

Mary Kissel: Well, that's a great way to close. I do want to thank our chair, Ambassador O'Brien, tonight, all the seminar members who participated, the Nixon Foundation team, and of course, all of you for watching. Please follow us across social media, podcasts, or on TV or on radio, we'd love to hear from you. That's it for this month's Nixon Seminar on Conservative Realism and National Security. I'm Mary Kissel, goodnight.