Center for Strategic and International Studies

TRANSCRIPT

Schieffer Series

Nuclear Weapons: The Growing Risk

DATE

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FEATURING

Ernest Moniz

Former Secretary of Energy;
Co-Chair and Chief Executive Officer, NTI

CSIS EXPERTS

Sam Nunn

Chairman Emeritus, CSIS Board of Trustees, CSIS

Bob Schieffer

CSIS Trustee, CSIS

INTRODUCTION

H. Andrew Schwartz

Chief Communications Officer, CSIS

Transcript By
Superior Transcriptions LLC
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H. Andrew Schwartz

Good afternoon, and welcome to the Schieffer Series. We're very pleased today to have an amazing panel, hosted by our very own Bob Schieffer, who is the most trusted name in news and is a CSIS trustee as well.

We want to thank the TCU School – the Schieffer School of Communication at TCU, who's been our long-time partner. We also want to really thank the Stavros Niarchos Family Foundation for all of their support throughout the years. We also want to thank the Andreas Dracopoulos Ideas Lab. You're about to see a result of the Andreas Dracopoulos Ideas Lab right before you in this video. So let's take a look at the video, which will tee up this event.

(Video presentation begins.)

Narrator

There are more than 13,000 nuclear weapons scattered across nine countries in the world today. In most of these countries, the decision to launch a nuclear weapon rests upon one individual. With tensions growing between these countries, along with withering arms control and the risk of hacked weapons or warning systems, nuclear powers in 2021 face a host of new issues. And yet the last benchmark review of U.S. nuclear command-and-control systems was in the 1990s.

These present-day vulnerabilities could lead to nuclear war, whether from an erratic decision by a world leader, a misinterpreted signal from a faulty or hacked warning system, or a total breakdown of communication between states or inside one state's nuclear command-and-control system. And the consequences of this would likely look very different from what the world witnessed in Japan in 1945.

The world's nuclear powers must work together to eliminate this risk. In this episode of the Schieffer Series, our panel of experts will unpack the risks the world continues to face from nuclear weapons, opportunities and challenges from the nuclear-modernization programs of the U.S., Russia, China and other nuclear powers, President Biden's options for strengthening nuclear fail-safes in the U.S. and elsewhere, and how nations can find common ground to reduce the spread of nuclear weapons and decrease the possibility of nuclear calamity.

This is the Schieffer Series. Let's dive in.

(Video presentation ends.)

Bob Schieffer

And hello, everybody. Bob Schieffer here. And again, there's plenty of news to talk about.

President Biden's phone call to President Putin of Russia yesterday, China's launch of the hypersonic missile, were just reminders that COVID

is not the only thing that is making the world a dangerous place these days.

To discuss that, we're going to talk with two people who know what they're talking about, former Senator and CSIS Chair Emeritus Sam Nunn and former Energy Secretary Ernie Moniz, who are calling on President Biden to take an urgent review of our failsafe nuclear safeguards. And we're going to get to that.

As chairman of the powerful Armed Services Committee during his quarter of a century in the Senate, Senator Nunn, with Republican Barry Goldwater, authored landmark legislation, the defense reorganization, and with Richard Lugar the Cooperative Threat Reduction Act. When the Soviet Union came apart, it was that legislation that helped former Soviet states deactivate more than 7,600 nuclear warheads. I want to repeat that number, 7,600. That's a pretty good day's work.

So we're going to talk to Senator Nunn about that today, and also Dr. Moniz. Ernest Moniz is a nuclear physicist. He served as professor at MIT, founded the MIT energy initiative, currently serves with Senator Nunn as the c0-chair of the Nuclear Threat Initiative, which continues the work begun by Senator Nunn during his tenure in the Senate. And of course, he was also the secretary of energy during the Obama administration.

We're going to get to this extraordinary warning that your organization, NTI, issued telling the president it is time to review our failsafe process, the things that keep us safe from a nuclear attack – or, at least has done so for a long time now. But since the president did talk to President Putin yesterday, I thought to stay up with the news, Senator Nunn, let me just ask you, what did you make of the talks? What do you think really happened there?

Former U.S. Senator Sam Nunn

Well, only the newspaper reports – that's the only real reading that I've got of it. Except overall, I would observe any time that U.S. and Russian leaders talk about strategic matters and talk about dangers, possible confrontations like over Ukraine, I think it's a positive thing for the world. I think that dialogue is absolutely essential. United States and Russia control 90 percent of all the warheads in the world, all the nuclear weapons, and about 90 percent of all the nuclear materials, which we worry not just about countries. We worry about terrorist groups getting that nuclear material. So safeguarding nuclear material is a big deal.

So I hope they made some progress on Ukraine. I think it's a very dangerous situation. We don't know what President Putin's intent is, but he's mobilized about 70,000 troops, and the indication is more coming. And any time you have that kind of mobilization, even if he is just trying to create leverage, the Russians don't control all the folks that are supporting them in Ukraine. And certainly, the Ukrainian government

doesn't control everybody under their auspices. So that kind of buildup, that kind of mobilization in and of itself – whatever the intent – is very dangerous. You could have an accident, it could escalate, and so forth. So the fact they talked is good. I hope they made progress.

Mr. Schieffer — What do you think, Dr. Moniz?

Former U.S. Secretary of Energy Ernest Moniz — Well, I certainly agree with Sam on all of that. I would add a few points. Clearly there was a restatement of positions. President Biden emphasizing the economic and political actions that would be taken, presumably perhaps very strong ones, including Russia's engagement in the international financial system. President Putin presumably reemphasized his sensitivity to NATO expansion. But I would also argue—I mean, as Sam said, first of all, this is exactly the kind of complex situation that can lead to the miscalculations that we are so concerned about, and for which we need to build the safeguards around.

But I would also add, even in other dimensions it gets complicated. For example, we are heading into a winter in which there already have been some significant natural gas shortages. Well, we have Russia supplying a major part of Europe's natural gas. We have the new pipeline kind of ready to get going, Nord Stream 2. So this is very complex, very risky, very high chance of things going haywire if things get kinetic.

Mr. Schieffer — They seem to make, from what we're hearing from – not from the president himself but from other spokesmen – they seem to be laying out a message that says, look, we're not going to send troops or we're not going to engage in a ground war over Ukraine. We'll depend on sanctions. Will that be enough?

Sec. Moniz — Frankly, I think Putin has determined that his geopolitical interests trump the risks of sanctions, particularly since the sanctions that Russia is already under are proving less and less effective with time.

On the other hand, as I indicated, there could be a very substantial escalation to things like getting shut out of the international financial system entirely, which would, again, raise the stakes and raise the issues of miscalculation.

The one thing I would say on a positive note is at least our understanding is that they did manage to reinforce a positive outcome of their summit of, roughly, half a year ago in which they committed to starting strategic – or restarting strategic stability talks, including talks about cyber norms in the nuclear arena.

Some of those discussions did happen. The pace could be picked up very substantially, and so that is a, perhaps, at least one positive outcome of this new discussion.

Mr. Schieffer — I would think one of the things that Putin would have to think seriously about is that that pipeline that's going from Russia to Germany and furnishing most of their fuel – would you think that NATO would block that from happening if, say, the Russians did cross the line there?

Sen. Nunn — I think it would take the Germans because the Germans are the main mover there. I doubt that the NATO alliance would take that action, but the Germans, certainly, could stop it because it's coming – a whole lot of the consumption of that natural gas is Germany. And the other wrinkle here is that it bypasses the gas pipeline through the Ukraine and that was a revenue source for Ukraine.

So there are a lot of economic energy on both sides.

Mr. Schieffer — Certainly to be continued on that front.

Sen. Nunn — Yeah, absolutely.

Mr. Schieffer — I want to talk a little bit about what you all did at NTI. In this recent op-ed in the Washington Post, you sounded an ominous warning. You reminded us that there are more than 13,000 nuclear weapons in nine countries now and in most of those countries one person can order the launch of a nuclear weapon. You said the risk that a leader will make that terrible decision is one – or a terrorist could launch one is growing.

What led you, Senator Nunn, to call on the president to make an urgent review of our failsafe process that has played this major role in preventing nuclear war and what does that really mean?

Sen. Nunn — For a long time, the United States and NATO were very concerned about a nuclear confrontation growing out of an escalation. We did not have the same number of conventional forces after World War II that remained in Europe. The Soviets had huge advantages in conventional forces and we relied on nuclear weapons, and the danger was it was going to escalate and we were going to end up having to use nuclear weapons to prevent or to stop an attack.

But that shifted dramatically after the Soviet Union collapse. At that stage, alliances shifted. The Warsaw Pact disappeared as such that will align with the Soviet Union. And so the chances of a deliberate war or a war that came out of escalation went down dramatically. In my view, it's still down from where it was during the Cold War.

But we've got another whole set of problems and that is we've got much greater chance of some type of catastrophic terrorism because the know-how is out there to build a weapon. If you don't protect the materials, that's the long pole in the tent for a terrorist organization. And mutually

assured destruction, in my view, would not deter catastrophic nuclear terrorism by a group that doesn't mind giving up their own lives.

And now we have another dimension, which is we're in a world of cyber and new technologies, and the chances of some type of action or mistaken warning, some type of false warning, have gone up very dramatically, in my view, because the interference – possible interference with command and control and warning systems, some type of false warning coming about through the cyber world, and we are basically digitizing an awful lot of the nuclear systems. So the chances of a war by blunder or mistake have gone up I think very significantly, and we don't have any red lines. It's the Wild West on cyber. For instance, we need red lines; we don't want attacks on other countries' warning systems. That's not just U.S.-Russia; it's India, Pakistan, and others. We don't have any kind of rules of the road now; it's really the Wild West. So the chances of war by blunder or mistake have gone up dramatically. And mutual assured destruction, which is called MAD – (laughs) – that formula in the Cold War, in my view, doesn't address a mistake. How do you deter a blunder? That is what is much more likely.

And so what Ernie and I have talked about is unilaterally – not arms control treaty, not a negotiation, but the United States having a real stake in this – in this problem. And of course, every nuclear country has a stake in it. Every nuclear weapon country has a real stake here – is having a unilateral view, looking at all the ways we could blunder, all the ways we could make a mistake, all the things that could go wrong. And basically, I call it a fail-safe review. And the fail-safe came out of an old movie but there's something to it. You need to have systems be able to fail without absolute catastrophe, and that kind of review we could challenge all the other nuclear weapon states to do the same thing, but it would be highly classified, it would not be verifiable, we would not be trying to have an agreement with another country, but we would take every possible step to make sure we do not ourselves blunder or that we are able to respond to any kind of mistake that could be made. And hopefully that would be a contagious-type review that other countries would undertake also.

Sec. Moniz — Can I just add to that?

Mr. Schieffer — Sure.

Sec. Moniz — Sam mentioned, quite appropriately, the cyber risks to command and control and early warning systems, but just to note that there are other technology developments as well, like AI, for example, where, frankly, we just don't know yet what the role is going to be in warfighting in general and specifically in the nuclear realm. There are other new developments that we hope to avoid, but, for example, what about militarization of space? The basic point – and it's what Sam said – is that it's a different world from the world in which the last fail-safe review was made. It was

made roughly a quarter century ago, before the collapse of the Soviet Union.

Mr. Schieffer — Dick Cheney. Didn't he head up that?

Sec. Moniz — Dick Cheney as secretary of Defense and Jeane Kirkpatrick actually led the review. But the point is we are living off of policies, we're living off of a fail-safe review all of which were developed in a completely different world from what we have today. It's time – (laughs) – to uptake this, and the fail-safe review, we believe, is a central part of that.

Mr. Schieffer — Well, anybody that owns a television set knows how – (laughs) – technology continues to change about what is streaming, what is cable, and all of that, which I'm mystified by all of that.

Talk about some of the advances in this technology. What's different now than in those days?

Sec. Moniz — Well, one major driver, for better or worse, has been the issue of developing missile defenses. That has been very, very contentious, particularly in the European theater. We often forget that the past administration, President Trump's administration, also was party to ending the intermediate nuclear forces treaty, which was a major stabilizing element along what used to be the Iron Curtain, in effect, and consequently, that leads to development of weapons to avoid these defenses; among those are the often-discussed hypersonic weapons, which, again, we should always make clear: Hypersonic is not what's new; it's combining hypersonic with evasive capabilities, again, driven by defenses. Whether those defenses are actually capable or not of protecting us, it doesn't change the fact that they are driving major technological developments that just add more risk.

Mr. Schieffer — Well, that was my next question was about this hypersonic missile that the Chinese have put into space. How does that change the situation now?

Sen. Nunn — Well, the hypersonic, of course, gives – as Ernie said, it gives them the maneuverability so that they could evade defenses. That's probably the motivation. The danger is China has always had a small force. And I've said, somewhat facetiously but not completely, that I hope the United States and Russia gets more like China, with a small nuclear force, before China gets like us.

But guess what. They're getting more like us now. They're going to build up forces. Again, the U.S. and Russia have about 90 percent of all the forces. China has a small nuclear force, but they're on a real building program now. And the danger is they may be trying to have a second-strike capability; in other words, being able to survive and have some deterrence. That may be what they're seeking. But they are being

perceived as developing a first-strike force. And those perceptions themselves are very dangerous. So you add another country into equation.

Now, you've also got other nuclear powers, but there's nothing that is as formidable as the U.S. and Russia now. We're the big guys on the block. But China increasingly is going to have to be part of this discussion. If they're going to build another thousand warheads or whatever they have in mind, then they're going to have to assume the responsibility of – the U.S. and Russia share that responsibility, because all of us have a mutual existential common interest. All the nuclear-weapon states do, but particularly the U.S. and Russia. And China, if they move in that direction, which apparently they are, they're going to have to step up to their responsibility also.

Mr. Schieffer — Dr. Moniz, I'm going to go back. Explain to me exactly why the hypersonic missile poses a new kind of threat, because – is it that it can go all the way around the world and then be maneuvered to attack us from the south rather than from over the North Pole is what most of our defenses are set up for now. Is that basically what happens?

Sec. Moniz — Well, I would just classify that as one more – that is, the ability to come from different attack angles – as one more manifestation of evasive capability, whether it's a cruise missile that, you know, can maneuver or it's coming from a different direction, as China apparently demonstrated with their recent test. It's all about being able to evade defenses.

And that then couples to policy issues. For example, the whole issue of launch on warning is a policy that deserves to be questioned in this modern time. We certainly have – the United States certainly has plenty of what Sam just talked about, second-strike capability, for example. We would need to have the appropriate arrangements in place should there be a strike against the United States.

But launch on warning is a very, very dangerous situation. And China has always talked about a no-first-use policy, which is not the same thing, but talked about that. We just don't know what's going to happen as they go from a stockpile that more resembles the size of that of France and Britain to more resembling the size of the United States and Russia.

And another issue I'll just raise in this set of issues is that if China does get to a thousand weapons, many, many more – nuclear weapons – many, many more launchers, hypersonics, the whole thing, it's going to complicate – our traditional, certainly, arms-control discussions with Russia will be extremely difficult.

The START Treaty, the New START Treaty, has deployed weapons limits for the U.S. and Russia of 1,550. Well, if China's got a thousand – (laughs) –

roughly speaking, it's going to be hard to discuss any further reductions for sure. In fact, the discussions may be about going in the wrong direction.

Mr. Schieffer

You know, one of the interesting things here – and I'm just sitting here listening to both of you here – have we ever had arms discussions with the Chinese? I mean, for all our problems with Russia along the way, we've signed some very important agreements, and so far they've held. We've never talked to China.

Sen. Nunn

We've tried to. We've tried to have those kind of discussions. But the Chinese have taken the view that they had so few weapons and we had so many that part of their, quote, deterrence was not to be transparent and not to talk about how many launchers they had, and certainly not to talk about where they are, because they felt, as I mentioned a moment ago, they're not survivable. We basically – they had fixed siloes and that sort of thing. And so that's why I say they may be moving into a whole 'nother dimension.

And Ernie mentioned a minute ago that launch on warning was very dangerous. And one of the reasons it is is because the warning can be a false warning. And that gets back to the cyber. And so if you have a force that is not survivable, a nuclear force not survivable, you obviously are very worried about being hit first and not having anything left, so being devastated.

So what are you going to do? Well, you're going to fire quickly so you don't lose all your force. And that means a mistake is much more likely. And blunder is much more likely. False warning is much more likely. And cyber interference with command and control and warning systems poses a real threat to every country that has nuclear weapons.

Sec. Moniz

It may be worth emphasizing, for at least some of the views, some of the participants, that, you know, this idea of a false warning is not speculation. It has happened. It's happened in the United States. It's happened in Russia. And I think – by the grace of God, I think, have we managed to avoid the use of nuclear weapons.

On China, I think it is worth going back to the Biden-Xi virtual summit in which one of the outcomes, perhaps the only concrete outcome, was an agreement to, in fact, start those strategic discussions between the United States and China. Now, we hope that that is followed up on, because that would be a big breakthrough, because, as Sam said and you implied, we have not had those discussions. China has had no interest.

It was to me quite a surprise that President Xi put that forward. I think it's up to us now to aggressively pursue that opportunity.

Mr. Schieffer — Another facet that probably we weren't thinking very much about back when the last time we kind of reviewed our failsafe system is Iran. What's the story there now? There are talks. We pulled out of that agreement, which seemed to be working. Do you think that's going to be reconstructed in some way? I'd like to hear what both of you think might happen on that front?

Sec. Moniz — Well, first of all, I think that we still have high confidence that Iran does not possess a nuclear weapon, although their activities since the United States pulled out of JCPOA, or technically since one year after the United States pulled out of the JCPOA, clearly have moved them much closer.

When we negotiated the JCPOA, one of our absolute red lines given to us by President Obama was that, no matter what Iran did, even if it was overt, it would take them at least one year to assemble the nuclear materials for a first weapon. And that's quite a cushion in order to be able to react. Now that's down to probably weeks. Now, there are other issues which would make it impractical to have a weapon in three weeks, in my view, but much, much shorter time.

Now, the discussions – first of all, I think that we never should have agreed, in my view, to have had only these indirect discussions through the European interlocutors. It appears that the idea that only signatories to the JCPOA could be in the room I find peculiar, since I think, by almost any sensible definition, Iran is not a signatory either to the JCPOA. They're violating just about every part of it. But anyway, that's what it is.

My concern is that – and my reasons for thinking that we may not be able to converge on restoring or reframing or extending the agreement is that, frankly, Iran never realized the economic benefits that it anticipated when the JCPOA was agreed to. I think their expectations were unrealistic at that time. But I think now they understand that. (Laughs.)

And so that's why I think they are being so insistent on the sanctions being lifted not only for nuclear-related reasons but for other reasons as well – missiles, human rights, regional conflict, and the like.

So I think that we would have to find a politically acceptable formula – I mean, acceptable in the United States – in which Iran would see at least some of those economic benefits. For example, they were very eager to purchase passenger airplanes. I'm not saying what has to be reactivated. But I think without addressing, in one way or another, some of those economic dimensions, it's going to be very difficult to get them to go back to full compliance with the nuclear and verification issues.

Mr. Schieffer — Do you have anything to add to that, too?

Sen. Nunn — I'd defer to Ernie on that. He's the real expert on Iran.

Mr. Schieffer

I cannot recall a time in my life, and I have lived a long life, when this country has been more divided than it seems to be now. Does that have any impact on our national security? Is there a chance that other countries, allies and enemies, might think that we are so distracted with the internal problems we have in this country right now that we just are not focusing on national security or that we have sort of lost the will to take on tough issues?

Sen. Nunn

I think the answer is yes, yes, on the first two questions. I think on the lost will, I don't – I think it'd be very dangerous for countries to believe we've lost our will. I don't think that's true. And that's how countries make profound mistakes.

But there's a danger it could be perceived that way and that increases the dangers in the world. And does – your first question, does it affect our national security, obviously, I think it does very detrimentally. We've seen that with the COVID problem. We've seen the split in the country, the distrust of authority, the distrust of science, the distrust of –

Mr. Schieffer

Everything.

Sen. Nunn

– everything, the leadership, and so forth, and the result is – I mean, our organization is in the biological dangers also. We deal with all the dark side, Bob. (Laughs.) But we published an index two years ago before the COVID broke out saying America was the best prepared. No country was fully prepared. Everybody had problems, including the U.S.

But we had the greatest capacity to deal with a pandemic. Well, it turns out that we didn't do very well, and the reason is pointed out in the second index we released, as a matter of fact, today, where we, basically, said, the index can't measure political will and it can't really measure leadership. And when there's not cohesion, when there's not trust, definitely, affected us in the last two years.

An awful lot of people have suffered and died because we did not have cohesive capability. We had the capability but we didn't have the cohesiveness as a country to really fully utilize the capability we had. We did not mobilize it. We did not follow science. And, hopefully, we've learned from that.

I think now there's encouragement that we're getting more vaccinations and we're getting a lot of progress. But this is not the last pandemic we're going to have, and if – no matter how prepared you are, if you don't have strong leadership and if you don't trust in science, you have an extremely difficult time dealing with a contagious disease.

Sec. Moniz — I would just add to that, just to connect the dots on one issue, is that the index really emphasizes that mistrust in government just undercuts so many things, like, for example, willingness to take vaccines is a good example of that. And on the mistrust of science – I'm going to now revert to my scientific, you know, posture – that once one has that mistrust of science kind of pervading society and therefore, in effect, disputing facts, I believe that is what creates the fertile ground for polarization, because if there's no facts, then anything can be turned into a political divide – things that should not be in the political divide. Climate change would be another example, global warming. So this issue of the – reducing the traditional American commitment to science and facts I think is extremely corrosive. We have to find a way out of this.

Mr. Schieffer — It's almost as if we were just sort of hit with a triple whammy. All of this takes place in the midst of a communications revolution, where every facet of how we get information, how we talk to each other, how we talk to our neighbors, the introduction of things like Facebook and all of that. Two thousand newspapers have closed in the last 15 years and I think one of the reasons we find ourselves in the mess that we're in today has a lot to do with that. You know, there was a time when we were growing up where every town had probably three television stations, they had a newspaper – some were good, some were really good, some were OK – but it was from those sources of information, along with maybe a Life magazine and The Saturday Evening Post – we all got our facts from the same sources of information.

Sec. Moniz — Bob Schieffer. (Laughs.)

Mr. Schieffer — (Laughs.) And as a result of that, we formed our opinions based on the data, the information we got from those sources of information. Well, now we're getting our sources of information from 7,000 television things. You go to the television dial and there's all these places. Everybody now brings their own facts to the argument.

Sen. Nunn — That's right. And that's what Senator Moynihan, you know, was famous for having said everybody's entitled to their opinion but everybody's not entitled to their own set of facts.

Mr. Schieffer — But that's what happened.

Sen. Nunn — Yeah.

Mr. Schieffer — We've now – and so the result is nobody believes anything. Nobody – people ask me every day, what's a good source of news? And I say, well, there are some good sources of news, you know, and there are some accurate things. And just because it's not written down on a piece of paper doesn't mean that stories are not well researched. I mean, you look at The Washington Post and The New York Times – they're no longer

newspapers; they're media centers. I mean – (laughs) – you know, The Washington Post has its own video producer now, and they're reaching people in many different ways. But trying to help people understand that I think is one of the real problems that we have today.

Sen. Nunn — I agree. Totally.

Mr. Schieffer — And I think places like CSIS or the places where we can work on ways to do that, but we're a long way from getting that done.

What – I'd like to ask both of you: You're saying we need to take these actions; we need to review our whole fail-safe system and encourage others to do so. What do you all think is the thing that worries you most? Is it that someone will – some terrorist organization will get hold of one of these weapons or that somebody will make a mistake, misinterpret something that's happened and it will be done by a state? What do you think the thing is we need to be most concerned about right now, Senator?

Sen. Nunn — I'm worried about catastrophic nuclear terrorism because I don't think you can deter a terrorist group of people who are bent on self-destruction and not worrying about their own lives and they don't have a return address so there's no threat for retaliation, that sort of thing. And I'm worried, as I mentioned, about mistake and blunder, and particularly in the cyber age. And I worry about countries like India and Pakistan and I still worry about escalation coming out of a Russian-U.S. confrontation. It's very important that we not have any kind of war with Russia – (laughs) – because any kind of war with Russia could escalate. They've got to understand that; we've got to understand that.

So with Russia, and with China increasingly, I think we have to understand that certain existential common interests that are mutual have to be addressed, even when we disagree fundamentally on a lot of other things, including values. And we've got to carve out those areas, but we've got to have public support for that. And right now I don't think we have that kind of understanding. So it's got to take place in Russia too – it's not just United States – and it's' got to take place in China. The leadership has to, I think, carve out and say, look, folks, on things like climate change, on things like pandemics, on things like nuclear terrorism, on things like nuclear weapons in general, we have got to communicate with each other. The way I terminate it – or, the way I use – the terminology I use is that we're in a race between cooperation and catastrophe, and I really do believe that's true, particularly in these areas of existential interest.

Nuclear is in a different category. Einstein supposedly once said that I know not with which weapons World War III will be fought, but World War IV will be fought with sticks and stones.

Mr. Schieffer (Laughs.) I like that.

Sec. Moniz I would just add to what Sam said that to kind of go loop back to what you were just talking about, Bob, that the political polarization just doesn't allow the political space for a lot of the things that we need to happen happen. So, for example, with Russia, that Sam just talked about. (Laughs.) The political space isn't exactly great for someone to start having the kinds of ongoing discussions that we did. In fact, when we had the problems with Ukraine – let's say, starting in 2014 – the reaction was to shut down exactly the communication channels between NATO and Russia that had been set up. Well, they were set up for hard times, not for good times. Political space for dealing with China now with, of course, all of our tensions, political space for dealing with Iran – it's just very, very difficult in this polarized political world to even have the kinds of discussions that we need and that we feel are absolutely essential.

Sen. Nunn That's back to your question about whether the division in America affects our national security – those are all examples of why the division in America does very much affect our national security.

Mr. Schieffer Well, I think I certainly agree. I think it does. I mean, you know, we go back to World War I, we still can't figure out how that happened; it – just the trains started rolling down the tracks and nobody could stop them. And once they recognized what was happening, it was too late to stop them. And I think the idea now is we have to find some way that we can all kind of – I mean, if we can't figure out some way to agree on even minor things – I mean, to me, when we get to the point where potholes become a political issue – I mean, how did that happen? You know, when we're reaching that point, we're getting to the point where we can't agree on anything. And I think if that continues I think – I'm sad to say, I think we're going the way of the Russian Empire. I mean, it just – there's no guarantee in any democracy. We're the oldest one right now, the oldest surviving one, and I think we're at a very dangerous point in this country.

Sen. Nunn Let me give a little bit of hope here.

Mr. Schieffer We need some.

Sen. Nunn Young people. And CSIS – the most encouraging times I've spent at CSIS, when I was on the board and I still am emeritus, have been dealing with young people. They have a way of looking at things on the bright side. And the communications capabilities we have – we've got to get young people in Russia and China communicating with each other. We can do that virtually now. We can have classes where the courses are taught about the nuclear dangers, the biological dangers. We can have Russian professors and Chinese professors and American professors teaching various classes in all of the countries. You know, eventually we've got to have that. We're going to have to have that younger generation understand these dangers

and take the leadership and, as you said, Bob, build a common set of facts. It's going to have to take the young people to do it, I think.

Mr. Schieffer — I think they do, because, I mean, I think we've left them – (laughs) – in a mess.

Sen. Nunn — Our generation is leaving, you know, a barrel full of worms here for the next generation. But I've got confidence they're going to be able to do it.

Mr. Schieffer — Well, when I think about our whole political system now, it seems to me I think one of the things we don't think about very much that's had something to do with all of this and kind of – Donald Trump did not invent this kind of chaos that we're in now. He exploited it.

But the beginnings of this – these are chickens that are just now coming home to roost, because when you go and look at our campaigns over the last 20 years or so, if an alien came to this world and all that alien knew about our politics was what he got from television commercials, he'd think that no one of any worth ever sought office, that they were all either crooks or deviants or, you know, something weird and totally awful. And you just have one campaign after another after another after another.

Sen. Nunn — Well, you take hundreds of millions and billions of dollars in advertising.

Mr. Schieffer — Yes.

Sen. Nunn — What if Coca-Cola and Pepsi, instead of advertising the virtues of their own product, spent billions of dollars talking about how bad the other product was? It would destroy the whole category. They would destroy the category.

Mr. Schieffer — Absolutely. You remind me of my favorite –

Sen. Nunn — They're destroying the category. (Laughs.)

Mr. Schieffer — – my favorite story, and I think it was Tom Friedman that told me this one time a long time ago, and it may be even just apocryphal. Somehow or another he had either gone to or was told about a convention, and people were talking about – it was Burger King or somebody wanted to take over and become the number one seller of hamburgers and they wanted to overtake McDonald's. And somebody spoke up and said, well, you know, these negative ads, there's no question that they work in politics. Why don't we adopt negative ads? Why don't we say that McDonald's has rat droppings or poison or something like that –

Sen. Nunn — Right. Right.

Mr. Schieffer – in the meat? And somebody else spoke up and said I don't think that'd work. We just want to sell more hamburgers. We don't want to destroy people's appetite for hamburgers.

Sen. Nunn That's right. (Laughs.)

Mr. Schieffer We don't want to destroy the whole industry.

And I wonder if we have, with these –

Sen. Nunn We're doing that.

Mr. Schieffer – ads –

Sen. Nunn We're doing that.

Mr. Schieffer – over and over again. We're destroying people's attitude and appetite for politics.

Sen. Nunn Yeah.

Mr. Schieffer I mean, you know, when I was – and I've told this story many times – but when I was a little boy, and it's true, my grandmother thought I was going to grow up to be president of the United States. Well, do you know why? Because that's what every grandmother thought about her grandson, that someday he'd grow up to be president of the United States. And I always say how long has it been since you've run into anybody who says, boy, I sure hope my kid gets into politics?

Sen. Nunn Yeah. Yeah.

Mr. Schieffer You just don't hear that anymore. And the result is – and this is the core problem – our best and brightest are too often not becoming involved in politics. They just don't want anything to do with it. And I think that's the core problem.

Sec. Moniz And that's the whole issue of distrust in government.

Mr. Schieffer Yes.

Sec. Moniz I mean, it's coming from that.

I would just add – I mean, I certainly agree with Sam's statement about the younger generations. I would also like to add specifically how important historically scientist-to-scientist exchanges have been in terms of getting us past difficult times and providing a foundation for helping to work together when the opportunity is presented. I mean, the fall of the Soviet Union was a classic example of that.

And once again, we have had, unfortunately, knee-jerk reactions that have – and frankly, the United States has been the one who has stopped a lot of the scientist-to-scientist exchanges, with Russia in particular. And now it's happening with China. We have, with all of the obvious tensions with China – and they're real – I mean, but this is seeping into how the academic world can accept or not accept Chinese students. Can Chinese students work on various problems? Can they work on AI and quantum computing? Well, the Department of Commerce just sanctioned Chinese companies working in quantum computing, et cetera. So it's really creating – again, it's one more – one more polarization that happens that does not help us have a toolbox to lower the tensions and solve some problems.

Mr. Schieffer — I want to ask you both, I want to talk a little bit about NTI. This is a unique – what would you call it? A think tank? A –

Sec. Moniz — No. (Laughs.)

Mr. Schieffer — No.

Sen. Nunn — Well, we plead guilty to thinking, but that's not – we are much more action-oriented. We basically look at problems, we try to describe those problems in a way that can produce ideas about how you go about solving them. And then when we can, and is feasible, we do demonstration-type projects. And we actually do real projects too. For instance, we – Warren Buffett put up $50 million for an international fuel bank through us, if matched two to one. And it took 12 years to do it, but we now have an international fuel bank, where there is uranium that has been partially enriched for civil nuclear power, so countries around the world don't feel like they have to have their own enrichment.

Because you do your own enrichment, you go to 4 percent for civil power. You go to 80 percent, you got an atomic bomb. And so discouraging the proliferation of enrichment is a big idea that was here for a long time, but it took a catalyst from the outside to get that done. It is in Kazakhstan now. It is operational. Twelve years it took. So that's the kind of thing that we do. We also established an organization called the World Institute of Nuclear Security. Operators of nuclear plants all over the country, civil power, working together.

Sec. Moniz — Over the world. Across the world. Across the world.

Sen. Nunn — All over the world. All over the world, working together on best practices and so forth. So there are things that we really – we really can't do. The analytical part of it is absolutely essential, but we go much further than that. And we also have an international board, which is a real strength. We

have two Russians on the board and we have two Chinese on the board, and we have a lot of Europeans, Middle Easterners, and so forth. So –

Mr. Schieffer: And this grew out of the Nunn-Lugar Act, and the things that you all did on helping the states destroy those nuclear weapons.

Sen. Nunn: Well, that background was a big factor. Ted Turner had the original concept, because Ted said: I thought the Cold War was over, but lo and behold we still have huge nuclear dangers. So he came to me, and that's how we started this organization. And then Warren Buffett has played a huge role here, in coming in and putting in funds and helping us a great deal with various projects, like the fuel bank. And it's all about risk reduction.

Warren has a good way of expressing that. And I like the way he calculates it. And it tells us an awful lot about what we do. He said: If there's a 10 percent chance in a given year that a nuclear weapon could be exploded, or any other event, and that chance of 10 percent persists for 50 years, that becomes a 99 ½ percent chance it will happen during that 50-year period. But if you can reduce the 10 percent to 1 percent, and it persists, that 1 percent, for 50 years, there's a 60 percent chance it will not happen. That is dramatic soft of statistical fact that basically tells us about how you've got to reduce risk. And it's not just in the nuclear area. It's in other areas also.

Mr. Schieffer: Well –

Sec. Moniz: Could I – could I just add to that?

Mr. Schieffer: Yes, please.

Sec. Moniz: Bob, that the examples that Sam gave, and there are others as well, but what we like to say is that in our hierarchy of activities, ultimately we are aiming to stimulate systemic change. And there are many examples that Sam was part and parcel of in the past. I'll give you one right now where we are hoping for systemic change. It's in the bio area. We have an initiative going on – International Biological Initiative on Safety and Security, IBISS. But the point is to help form an international organization, not too dissimilar in the sense of what Sam mentioned on winds, where there will be things like international standards for screening of DNA that is ordered, for establishing norms for how research is carried out, et cetera, that this would not interfere with legitimate research, which clearly is very, very important in this – in this age of synthetic biology, but that would establish these norms internationally that would make us all safer.

Mr. Schieffer: Well, I think we all owe you. I think what you have done is remarkable. You know, Senator, I remember when you retired as chairman of the

Armed Services Committee. The Pentagon did a rare thing. They had a parade and review for you out at the Pentagon and you made some brief remarks. But one of the things you said was I never accomplished anything without help from the other side.

Sen. Nunn — That's right.

Mr. Schieffer — And you don't hear that much anymore. And we also don't get much done anymore, it seems like to me.

Sen. Nunn — Well, and it's absolutely true. Barry Goldwater, partner on the defense reorganization. John Warner, partner on risk reduction. Dick Lugar, partner on cooperative threat reduction, the nuclear weapons. Pete Domenici, a huge, huge part of that. You know, Republican colleagues. And there are no big problem in the United States today that can really be solved or at least have a sustainable approach without both parties participating. Otherwise, it's not sustainable even if you pass it. And so we've got – we've got to come back to that.

I must have – add this, Bob. You are the most trusted figure in journalism now and television, so I mean, you've got a lot to be proud of in your career. You set the –

Mr. Schieffer — Well, you can fool some of the people some of the time. (Laughter.)

Sen. Nunn — You've set an example for an awful lot of young people, and I think that's to be noted.

Mr. Schieffer — Well, thank you for that thought.

Sec. Moniz — And I would just add the passing, of course, of Bob Dole a few days ago –

Mr. Schieffer — Yes.

Sec. Moniz — – where it kind of brought back the memory of working across the aisle and getting hard things done.

Mr. Schieffer — You know, I – there are many things that I disagreed with Bob Dole on, but until John McCain came along he appeared on "Face the Nation" more than any other single politician. And I got the biggest kick out of him. He never talked to you; he barked at you, you know? (Laughter.) And it was fun to cover him on Capitol Hill, but I think – I think the part that I most liked about him and admired was long after he – after he left the Senate. And he was well into his 90s, but without fail every election day about 3:00 in the afternoon I'd get a call: "What do you hear? What do you know?" (Laughter.) How's this look? I mean, he knew. He was still interested. And it was a sincere interest; it wasn't something he did for the peanut gallery. I mean, he really liked politics. He really liked getting

things done. He did so many good things for people with physical disabilities.

Sen. Nunn — Mmm hmm. He did, he did.

Mr. Schieffer — And the American disabilities act would never have passed without him.

Sen. Nunn — And he partnered – he partnered with people like George McGovern to get – to get things done.

Mr. Schieffer — Yes.

Sen. Nunn — Bob Dole knew that you could disagree and fight like mad on one issue, and the next issue you could agree on something. And that's what we forget. You don't have to fight on everything. You are always going to have disagreements. That's what politics is all about. That's what democracy's all about. But you've got to come together on things that are vital, and Bob knew that. In fact, he started – I don't know when he started, but I got a call from him about a year or a year and a half ago, and it was his way of sort of saying enjoyed our tenure together, and we had a great conversation. He was saying goodbye. And if he called me, he called, I'm sure, no telling how many members of the Senate that he served with. And then a great conversation with he and Elizabeth. And she was a real, real force, too, and still is.

Mr. Schieffer — Yes. Yeah, very much so.

Sen. Nunn — Yeah. So it was a big part of his life and big part of the leadership.

Mr. Schieffer — Well, we're about at the end of the road here. Ernie, any final word from you?

Sec. Moniz — No, I think these were very appropriate last words. (Laughter.) But again, I would just repeat the statement we've got to get this kind of activity going again to create the political space to generate serious solutions to our – to our risks.

Mr. Schieffer — No argument is the same when you're arguing with a stranger.

Sec. Moniz — Right.

Mr. Schieffer — When you know the person you're arguing with, you can have – as Sam underlined, you can have disagreements without concluding there's a difference in character.

Sec. Moniz — And I might add that since Sam has been talking about, obviously, those activities across the aisle in the Senate, that also, you know, when I as in the administration as secretary, Republican Congress, and it was so

important to go up there when you weren't asking for anything. That would – that would come in time. But it was just so important. It's all we said, relationships are so – are so critical. And it's true.

Mr. Schieffer

Well, it was – covering the Congress was my favorite beat. People used to say, well, what's your favorite beat? I bet it was the White House. And I'd say, well, you get nice luggage tags and things like that – (laughter) – and somebody to take care of your bag when you're traveling. But to me, there was nothing like Capitol Hill, and going up and down those corridors, and meeting those senators, some of whom were real characters. And the most interesting people I met in my career when I was the night police reporter at the Fort Worth Star Telegram. You saw a side of life you didn't see, that most people never saw. And then when I got to the Congress. Those people were giants. And I loved every minute of it.

Sen. Nunn

Bob, I have to add, CSIS plays a huge role in all of this, in bringing people together. They bring people together from different camps on Capitol Hill, and have been doing it for a long, long time. So this organization and what you're doing with CSIS, what you and Andrew are doing in terms of these programs that you're having, this is really all about bringing folks together. So thank you for doing that.

Mr. Schieffer

Well, thank you all, both. And I thoroughly enjoyed our conversation. I hope others did too.

We'll see you next time from CSIS.

(END)