

[H.A.S.C. No. 112-150]

**NONPROLIFERATION AND DISARMAMENT:  
WHAT'S THE CONNECTION AND WHAT  
DOES THAT MEAN FOR U.S. SECURITY  
AND OBAMA ADMINISTRATION POLICY?**

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HEARING

BEFORE THE

SUBCOMMITTEE ON STRATEGIC FORCES

OF THE

COMMITTEE ON ARMED SERVICES  
HOUSE OF REPRESENTATIVES

ONE HUNDRED TWELFTH CONGRESS

SECOND SESSION

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HOUSE OF REPRESENTATIVES,  
COMMITTEE ON ARMED SERVICES,  
SUBCOMMITTEE ON STRATEGIC FORCES,  
*Washington, DC, Wednesday, August 1, 2012.*

The subcommittee met, pursuant to call, at 3:11 p.m., in room 2118, Rayburn House Office Building, Hon. Michael R. Turner (chairman of the subcommittee) presiding.

**OPENING STATEMENT OF HON. MICHAEL TURNER, A REP-  
RESENTATIVE FROM OHIO, CHAIRMAN, SUBCOMMITTEE ON  
STRATEGIC FORCES**

Mr. TURNER. I call to order the hearing of the Strategic Forces Subcommittee.

With unanimous consent, we are going to dispense with our opening statements, having our written opening statements put into the record.

I am going to ask also unanimous consent that two articles of Scott Sagan and one letter by Chairman McKeon and myself be placed into the record concerning modernization and U.S. deterrent risk.

[The information referred to can be found in the Appendix on pages 91, 94, and 107.]

Mr. TURNER. I wanted to frame the issue before I get to our speakers.

We, unfortunately, are under the time constraints that votes are likely to occur in the middle of our hearing. So we can get the most opportunity to hear you, instead of us, we are going to dispense with the opening statements, other than to acknowledge that the title of our hearing today is Nonproliferation and Disarmament: What's the Connection and What Does That Mean for U.S. Security and Obama Administration Policy, the point being, obviously, that nonproliferation is others having nuclear weapons and disarmament is us giving up the weapons that we have. The point of the hearing is trying to delineate the differences there and the differences in the goals as we try to strengthen our deterrent to ensure that we are not at risk.

[The prepared statement of Mr. Turner can be found in the Appendix on page 33.]

Mr. TURNER. With that, I am going to turn to our panel members and ask that they take 5 minutes in which to deliver their opening statements. Their written statements will be admitted into the record.

We have The Honorable Stephen Rademaker, who is the former Assistant Secretary of State; Dr. Schake—is that correct—who is the Research Fellow at Hoover Institution, from Stanford University; and Ambassador Thomas Graham, who is the former Special Representative to the President on Arms Control, Nonproliferation and Disarmament for the Clinton Administration.

With that, I will go to Mr. Rademaker.

**STATEMENT OF HON. STEPHEN G. RADEMAKER, FORMER  
ASSISTANT SECRETARY OF STATE**

Mr. RADEMAKER. Thank you very much, Mr. Chairman. It is a real pleasure for me to be here today, and I welcome the opportunity to speak to the subject of today's hearing, which is the connection between nuclear disarmament and nuclear nonproliferation.

I think there is near unanimity—well, first, let me say I have prepared a written statement which I am not going to read to you. I am going to summarize some of the key points in the next few minutes.

I think there is near unanimity in Washington that nuclear proliferation is one of the gravest threats facing our country. There is a theory that is put forward by active proponents of nuclear disarmament that there is a connection between nuclear nonproliferation and nuclear disarmament, and essentially what is suggested is that if we move—if our Nation moves decisively in the direction of nuclear disarmament that that will translate somehow into greater success or at least additional progress in dealing with the problem of nuclear proliferation.

I wish that theory were true. If it were true, I would probably be a passionate supporter of immediate movement toward nuclear disarmament, because I think it would then help us solve what truly is one of the critical risks facing our country.

As explained in my testimony, however, I am skeptical that there is such a connection; and I make three principal points in my testimony which I will just touch on here.

The first is that I believe those who advocate the existence of such a linkage completely disregard the importance of U.S. nuclear weapons as a tool of nuclear disarmament[sic]. For the entire duration of the nuclear era for the last 65 years, the reason there hasn't been more nuclear proliferation, in my view, in large measure has to do with the reliability of the U.S. nuclear deterrent in the eyes of our allies and others who worry about the existence of nuclear weapons in the hands of some other countries, principally Russia and China. And I point out that we shouldn't let today's nuclear proliferation problems obscure the more fundamental proliferation problem that we faced over the nuclear era.

Today, the problem comes from countries like Iran and North Korea, which are relatively poor, relatively undeveloped. But that has not been the traditional nuclear proliferation risk. The traditional risk has come from wealthy, advanced countries that wonder why they didn't have nuclear weapons. And our policy throughout the Cold War—and I would argue into today—is to reassure those kinds of countries that they don't need their own nuclear weapons

because they can rely on America's nuclear weapons to defend them.

So our arsenal is actually, I would argue, the most powerful tool we have of nuclear nonproliferation. And so for those who advocate either abolishing that tool or moving decisively in the direction of abolishing it, they need to explain how we will deal with this problem that has existed throughout the Cold War era and since the Cold War in the absence of U.S. nuclear weapons.

The second major point I make is that the so-called obligation of the United States to engage in nuclear disarmament derives from the Nuclear Nonproliferation Treaty, Article VI of the NPT. I often like to go back and read that article to audiences because there is a lot of lore about what the NPT requires, much of it exaggerated, in my view.

When one goes back and reads the actual legal obligations set forth in Article VI, it quickly emerges that the NPT doesn't really require all of the things that we are told that it requires. Article VI is only one sentence long. I won't read it all, but I will parse it. Because I think if you parse the language, what emerges is the real legal obligation that we have under Article VI of the NPT.

When you parse the one sentence of Article VI of the NPT, what emerges is a legal requirement on the United States and the other nuclear weapon states to, quote, "Pursue negotiations in good faith on effective measures relating to nuclear disarmament."

And that is the obligation. And I would contend that we have more than complied with that obligation because we have had arms control agreement after arms control agreement negotiated between us and the Soviet Union and, more recently, us and Russia; and that fulfills the obligation to negotiate in good faith on effective measures.

Now, I go into some additional details about how under the language of the NPT the ultimate obligation to disarm, to get rid of nuclear weapons is actually tied to a separate obligation to bring into effect a treaty on general and complete disarmament, which is something that is profoundly aspirational but not on the horizon. And, of course, proponents of nuclear disarmament would immediately change the subject at the mention of a treaty on general and complete disarmament because, of course, that is not something that we will see anytime soon.

I think it is useful to recall a 1969 memo written by Dr. Spurgeon Keeny, who was then a member of the NSC staff, and he wrote a memo to Secretary—actually, then National Security Advisor Henry Kissinger describing article by article the requirements of NPT.

With respect to Article VI, which is the article that is pointed to as the requirement that we disarm, he said that, quote, "It is an essentially hortatory statement and presents no problems."

I think there are very few people who would even recognize that statement today, but that was the understanding at the time—

Mr. TURNER. If you can summarize. I am certain you will have—

Mr. RADEMAKER. My third point—and I am happy to go through it in greater detail in response to questions—but the notion that by giving up our nuclear weapons we are going to inspire others to do

more—to join us in doing more about the risk of nuclear proliferation in countries like Iran and North Korea and elsewhere, there is simply no evidence that this works. We have had, you know, 3½ years of the Obama administration, and I would argue there is no evidence during the Obama administration that this theory has worked. In fact, I can point to plenty of instances where we are getting less cooperation than we did in the past.

[The prepared statement of Mr. Rademaker can be found in the Appendix on page 42.]

Mr. TURNER. Thank you.

Dr. Schake.

**STATEMENT OF DR. KORI SCHAKE, RESEARCH FELLOW,  
HOOVER INSTITUTION**

Dr. SCHAKE. I would make four quick points.

The first is I agree with Steve's assessment that there is actually not evidence that reductions in the American arsenal precipitate reductions in other countries' arsenals. And that if you go case by case over countries that have crossed the nuclear threshold or considered to have active nuclear programs and that walked back from them, oddly enough, actually the main inhibitor to crossing the nuclear threshold is reliable security guarantees from the United States. And if you look at the 30-some cases of countries that have the scientific and the industrial and the engineering ability to be able to have active nuclear programs of their own, most of them are actually close American allies that have chosen not to.

There are a couple of interesting cases that fall outside that category—Sweden and South Africa, for example—in which there are other motivations that drove it. In the case of Sweden, a genuine belief that their security would be achieved more robustly without nuclear weapons because they believed that would actually make them a target in the time frame they were making their decision of Soviet forces. And in the case of South Africa, because of a pending regime change, that they did not want the arsenal to go into the hands of their successor regimes.

What I mean by that is my second point, which is that, actually, motivations are not simplistic. They vary widely by country. It is not simply the United States. It is not simply regional rivalries. It is not—it very often has to do with prestige, with factors that are unique to that country's history. So a sweeping generalization, a generalized conclusion that the size or structure of the United States arsenal is the determinant is actually not true.

Third, I actually think if we reduce the American strategic nuclear forces to levels that are being considered by some in the current administration—that is, 300 deployed nuclear weapons ourselves—that we are actually getting dangerously close to that line that would precipitate threshold countries to want to cross it.

Because, you know, China has—what—250 nuclear weapons, Pakistan 100 or so. You are getting close to the level at which other countries that might see a prestige value of having arsenals greater than the United States would, in fact, cross the threshold or increase the size of their arsenals; and I believe very strongly that that would diminish rather than increase American security.



And my last point is just a caution against making major force-sizing or force-structuring decisions on the basis that we understand other countries' motivations well enough to be able to determine what they are doing. Even in the historical cases where you can do the forensics, this is actually art, not science, and there are lots of reasons to believe that we actually don't know. And so assessing other countries' motivations and making major force sizing and structuring decisions on that basis I think is a bad set of choices.

[The prepared statement of Dr. Schake can be found in the Appendix on page 55.]

Mr. TURNER. Ambassador.

**STATEMENT OF AMBASSADOR THOMAS GRAHAM, FORMER SPECIAL REPRESENTATIVE TO THE PRESIDENT ON ARMS CONTROL, NONPROLIFERATION AND DISARMAMENT (CLINTON ADMINISTRATION)**

Ambassador GRAHAM. Thank you, Mr. Chairman. Thank you for the opportunity to be here.

Mr. TURNER. I am not certain your mic is on.

Ambassador GRAHAM. Mr. Chairman, I want to thank you for the opportunity to testify here today; and I commend the subcommittee for conducting this hearing, because this really is an important subject. It has been debated for years, and it is important to have these debates in the Congress, because that is our national legislature where these debates should take place.

First, let me comment on who are these people that are advocating zero nuclear weapons and the elimination of nuclear weapons.

The first on the scene, the primary organization to do that was the organization put together at the Hoover Institution in California. This group was led by former U.S. Secretary of State George Shultz, former U.S. Secretary of State Henry Kissinger, former U.S. Secretary of Defense William Perry, and former Chairman of the U.S. Senate Armed Forces Committee Sam Nunn. They were the ones who really began in recent years to debate about the importance of eliminating nuclear weapons as a threat to U.S. security.

They wrote several Wall Street Journal op-ed articles to advocate their position. In the first one they said, among other things, that unless urgent new actions are taken the U.S. will soon be compelled to enter a new nuclear era that will be more precarious, psychologically disorienting, and economically even more costly than was Cold War deterrence. They cite President Ronald Reagan and his comments on nuclear weapons and how strongly he believed that they should be eliminated, calling them totally irrational, totally inhumane, good for nothing but killing, possibly destructive of life on earth and civilization. And at the end of that article they close by saying, we endorse setting the goal of a world free of nuclear weapons and working energetically on the actions required to achieve that goal.

That is what got the recent movement toward the elimination of weapons begun. President Obama simply picked that up and advocated it himself. And it is certainly the case that every American

President has endorsed the goal in principle, but two have actually endorsed it happening, President Ronald Reagan and President Obama.

With respect to whether there is a connection between disarmament and nonproliferation, I would argue, yes, there is very much a connection. It is true that Article VI of the Nonproliferation Treaty, our central security instrument, is vague, but you have to look at the background behind it.

President John F. Kennedy greatly feared worldwide proliferation, calling it, in his view, the greatest possible danger and hazard. The nonproliferation treaties with the associated nuclear umbrella policies of the U.S. and the Soviet Union largely stopped that proliferation, but it was based on a strategic bargain.

It was very clear during the negotiations in the late 1960s and also when the treaty was made permanent in 1995 that the rest of the world was not giving us nonproliferation for the world as a gift. It was a bargain. It was a basic bargain based on nonproliferation for most of the world, disarmament and peaceful cooperation by the five nuclear weapon states mentioned in the treaty—or permitted by the treaty. That is U.S., France, Russia, China, and the U.K.

And first and foremost of these measures that those signing up to make themselves militarily permanently second class wanted as political balance for making this commitment was a comprehensive test ban. It is the only arms control agreement mentioned in the NPT, and it is of central importance to the bargain.

Forty-some-odd years later this basic bargain still is largely unachieved. There have been some advances, but many things such as the test ban and stopping the production of fissile material have not been achieved.

Well, first, before I close, let me just mention it is certainly true. I agree with what has been said about the threats of Iran and North Korea to the NPT, our central security document. Those threats must be dealt with. There is no question but that they are serious. There is no question in my mind that Iran is pursuing nuclear weapons, and of course North Korea has already achieved them. So they are very serious threats.

The elimination of nuclear weapons is a policy for the long term. Everyone recognizes that. The four statesmen who I mentioned, they recognized that. For that to ever happen, it is important that the NPT hold together in the interim; and unless the basic bargain is better observed, in my mind, there is a substantial possibility that it will not.

[The prepared statement of Ambassador Graham can be found in the Appendix on page 69.]

Mr. TURNER. If you could conclude.

Okay, thank you.

Just a few things to address.

Again, I think we struggle with this issue of nonproliferation versus disarmament. And we struggle with it. And I started the framing of it, as you know, disarmament is us and nonproliferation is the other guys. And I think the concern is that as we all talk with the issue of wouldn't it be great to live in a world that has

no nuclear weapons that there is no risk in making sure that we pursue nonproliferation.

In fact, we lessen risk from nonproliferation. There is a risk in disarmament. And so having that balance as to how that goes is how the discussion from a policy perspective plays out.

And in this issue that I think sometimes does get confused. I think there people who do believe that nonproliferation is our disarmament, as opposed to the other guys.

That discussion as you were all raising of the issue of the NPT and this CTBT, the test ban treaty and the nonproliferation treaty, on the issue of its language with respect to disarmament. But I think I heard from all of you an understanding that I want to lay down as a foundation. I think everyone agrees that the NPT and the CTBT, nonproliferation and the test ban, that neither one of those documents—one having been ratified, the other not, the test ban treaty not having been ratified—neither one of those documents require disarmament in the United States.

Mr. Rademaker, you said that in your opening statement, so I will take you as a yes on the NPT, but on the CTBT you would also agree?

Mr. RADEMAKER. The CTBT, by its terms, certainly does not require.

Mr. TURNER. That is what I want to make certain.

Dr. Schake, you also agree that neither the NPT nor the CTBT require disarmament of the United States.

Dr. SCHAKE. If Steve Rademaker says so, I believe it.

Mr. TURNER. Great.

And, Ambassador, you also agree, also, that the language, the terms of those NPT having been ratified, CTBT not having been, but if it was ratified, neither would require disarmament in the United States.

Ambassador GRAHAM. Yes, I agree.

Mr. TURNER. Excellent.

That then I think helps in the framing of this, also.

And then I wanted to go on to an issue of in our goal of nonproliferation, meaning the other guys, the issue of Iran, North Korea is of grave concern. Now there are those that would say as the United States disarms—and Mr. Rademaker, you were addressing this issue in part—that there are those that would say that as we go down in our numbers that we will discourage others from going down. Those would say, well, if the United States would eliminate 75 percent or 90 percent of our nuclear weapons, then Iran wouldn't pursue it. And you said there is no historical basis for that.

I would like to put up slide 7 to illustrate your lack of no historical perspective on that. The United States actually has reduced our nuclear weapons by 90 percent over the top period end, by 75 percent over the end of the Cold War, and those stars are time periods of others then pursuing nuclear weapons. And I believe that the last one of 2005–2008—2006 is North Korea, showing that they have been. And we all know that today it is our belief that as we continue to decline Iran continues to do—to seek nuclear weapons capability.

[The slide referred to can be found in the Appendix on page 115.]

Mr. TURNER. Now, Dr. Schake, I really appreciated your comments on that we don't really know why someone would—we can't ever tell someone else's motivations for seeking nuclear weapons. But we do know that there are bad people out there who have bad designs, who want to dominate other countries, invade other countries. We have seen that over even the most recent history. We have seen that there are countries that kill their own citizens. And certainly, there are those who would seek those nuclear weapons to continue or to strengthen their ability of those activities.

Similarly, the issue of, you know, with Iran, our concern is that they support terrorist organizations and how would that assist them in support of the terrorist organizations and would we see them support them with nuclear weapons.

One of the concerns that we had with the New START [Strategic Arms Reduction Treaty] was a desire by the administration in its U.S.-Russia cooperation policy to seek Russia cooperation to put pressure on Iran to dissuade them in their program.

I think we have slide 4 and 5.

[The slides referred to can be found in the Appendix beginning on page 112.]

Mr. TURNER. And these slides show that 4 days after the New START treaty entered into force, the Russian Foreign Minister Lavrov said at a press conference in London that, with the approval of resolution 1929 in June last year, practical possibilities to impose sanctions on those related even indirectly to the Iranian nuclear program have been exhausted, meaning they are done.

Again, this is 4 days after the New START treaty was ratified. And I would like to tip the question then to you guys.

Since we see that from the first slide that historically people are not dissuaded by our reducing our numbers and there is a risk in our reducing our numbers and since we see that Russia has not been persuaded even with New START to help us dissuade Iran, how do we stop others? How do we persuade others in nonproliferation to not pursue nuclear weapons?

Ambassador.

Ambassador GRAHAM. Well, you have to negotiate with them. And certainly I would agree that unilateral U.S. reductions, other than its effect on our own defense policy, would have no effect on other countries. There is a difference between drawing down weapons because you think you have too many, which is what we have done, and negotiating agreements on the basis of a bargain with other countries. We have tried with North Korea. We almost succeeded, and then we backed away from the negotiations and allowed them to build 10 to 12 weapons.

With Iran, we could sit here all day and argue about Iran policy. It is very complex. They have very complex reasons for wanting nuclear weapons, including prestige, fear of Pakistan, fear of the U.S., wanting to be a regional dominant player. So to negotiate with them, that is very difficult, and I am not certain that we can.

I think we can probably—we have, anyway, in the past, negotiated with North Korea. Other countries we have successfully negotiated. Russia has reduced their weapons under agreements. We have reduced our weapons under agreements. We should engage China on this when we get them in their—we still have far more

weapons and so does Russia than China does, but at some point we should try to engage them.

Mr. TURNER. Ambassador, I want to get to the other two for a moment. But, before I go on, you would agree that Iran's support of terrorist organizations makes it that much more of a concern as it seeks nuclear weapons?

Ambassador GRAHAM. I think that Iran is a direct—

Mr. TURNER. Your microphone is off, sir.

Ambassador GRAHAM. I am sorry. I keep turning it on and off. I think Iran is a direct threat to the survival of the NPT because of what an Iranian stockpile might mean. I think they certainly do support terrorist organizations.

It is difficult for me to imagine, however, Iran developing nuclear weapons and handing them over to terrorist organizations and thereby not having control over them anymore, because they might be used against them. They have some experience with that.

But I don't want to—

Mr. TURNER. I think there is a lot of people who could have mentioned that, and I know that is one of the concerns.

Dr. Schake.

Ambassador GRAHAM. I don't want to minimize that.

Dr. SCHAKE. I agree Iran is the real problem.

North Korea is a terrible danger crossing the nuclear threshold. They are predominantly a danger to themselves, first and foremost, to the South Koreans, to the Japanese.

Iran is a threat to everybody, and if Iran is allowed to cross the nuclear threshold then validity of the NPT will be so badly ragged that I think you are just going to see a cascade of proliferation throughout the Middle East.

And, Congressman Turner, I think you hit on the essential point, which is the nature of the regime really matters. We don't care if Sweden crosses the nuclear threshold, even though it would be a bad thing for the overall regime, because Sweden is not a threat to its own population. It is not a threat to its neighbors.

Iran is a real worry because it is a danger to the Iranian people. It is a danger to American allies in the region. It is a danger to the United States and to our regions—to our allies around the world.

I wish that we could find a way to turn a key in the lock and encourage the Iranians to do something different than they appear to have done over the course of the last 18 years. I don't see any evidence that we are making progress on that. They have had so many opportunities to take yes for an answer and get back into the good graces of the Europeans and the United States and come into the—like sort of mainstream of the international order. They keep saying no to that.

And so it seems to me that that limits the tools we have to credibly deny them nuclear weapons if they should acquire them. Constrain their activity and punish it.

Mr. TURNER. Dr. Rademaker.

Mr. RADEMAKER. Thank you.

First point I would make about Iran and North Korea is, I believe—and I think Ambassador Graham, I just heard him agree—there is no relationship between U.S. policy toward nuclear disar-

mament and what they are going to do with their nuclear weapons programs.

In other words, we could cut our nuclear arsenal in half. We could eliminate all of our nuclear weapons. It would not translate to diminished interest on their part in having nuclear weapons. So there is not that kind of correlation.

In fact, I would argue with North Korea, if we gave up our nuclear weapons they would want nuclear weapons even more passionately than they do today because then they could be one of the most powerful countries in the world. That is the kind of psychology that exists in Pyongyang.

On the question of what we do about Iran and North Korea, Ambassador Graham says we negotiate. Yes, of course, we negotiate; and every administration since these problems has emerged has tried to negotiate with these regimes. The problem is there has been a lack of interest on the other side in coming to a suitable solution to the problems, and so I think every administration has quickly come to the conclusion that negotiations alone are not a sufficient policy.

Negotiations have to be coupled with meaningful pressures being brought to bear on the governments in North Korea and in Iran. And when President Obama speaks today about Iran, he doesn't talk about the strength of his diplomatic option. He talks about the strength of the economic sanctions that he has tried to bring to bear. And what has manifested, try as we might, we have not yet brought sufficient pressure to bear because the Iranian nuclear program continues unabated.

Mr. TURNER. If I might go to the Ambassador for 1 minute, and then I will go to Mr. Langevin, but if you could summarize in a moment.

Ambassador GRAHAM. I just want to make it clear I am not in favor of giving up nuclear weapons. I am in favor of negotiations.

Secondly, Iran is really difficult. North Korea, we have negotiated successfully with them, and we did stop their program for a while, for about 8 years. But Iran is—I think we are going to have to—

Mr. TURNER. I am sorry. I am sorry. Could you back up? When did that occur?

Ambassador GRAHAM. 1994.

Mr. TURNER. In 1994, what occurred?

Ambassador GRAHAM. They renegotiated an agreed framework with them which stopped their plutonium program until 2002.

Mr. TURNER. Okay, I don't think everyone has the same confidence level that you do that that was effective.

Ambassador GRAHAM. Well, it did stop it. They didn't build any plutonium weapons during that period and they did afterwards.

But Iran is much more difficult. It may be we will have to play for time, try to drag it out as long as we can. Time is on our side.

Mr. TURNER. Ambassador, thank you.

Since you brought up the time period, Mr. Langevin, if I could, Mr. Rademaker, anybody want to respond to that time period of 1994 to 2002?

Mr. RADEMAKER. Yes, I would be pleased to.

I think what Ambassador Graham is referring to is the period of the so-called agreed framework which was negotiated during the Clinton administration between the United States and North Korea. He is correct that, pursuant to that agreement, North Korea did shut down their nuclear reactor and therefore they stopped generating spent nuclear fuel. They never surrendered their spent nuclear fuel, which was ultimately the source of plutonium, as they should have done under that agreement.

But, more importantly, I think it mischaracterizes the situation to say that from 1994 through 2002 there was no progress in Iran's nuclear weapons—I am sorry, in North Korea's nuclear weapons program. Because what happened toward the end of that period was they began work on uranium enrichment. And the reason it collapsed in 2002 was Ambassador James Kelly, who was the Assistant Secretary of State for East Asia, traveled to North Korea and confronted the North Koreans with evidence that they were cheating on the agreed framework by standing up an enrichment capability. They admitted it to him and then later backtracked and said, no, they hadn't admitted it.

Of course, now they admitted it again. So now it is clear that Kelly heard them correctly. They were in fact cheating, and the cheating began during the agreed framework. It is not something that began after 2002. The agreed framework collapsed due to North Korea cheating on it.

Mr. TURNER. Well, as I said, I think the dispute is over the effectiveness of it; and after Mr. Langevin we will probably return back to this. So don't forget what you were going to say, Ambassador, because I know this is important. It goes right to the heart of what we have done when we go to, well, what should we do.

Mr. Langevin.

Mr. LANGEVIN. Thank you, Mr. Chairman.

I want to thank our panel. I have enjoyed this discussion.

Let me go to this. On July 25th, 2012, in joint testimony to the Senate Energy and Water Appropriations Subcommittee, General Cartwright and Ambassador Pickering noted that, and I quote, "An arsenal shrunk to 900 total U.S. weapons matched by comparable Russian reductions would demonstrate a serious U.S. and Russian commitment to fulfilling their disarmament obligations in Article VI of the Nonproliferation Treaty, thereby help rally the anti-proliferation community to greater efforts to thwart would-be proliferators."

Furthermore, they added that, and I quote, "The idea is not that virtuous U.S. and Russian behavior in the form of steep nuclear arms reductions will inspire aspiring proliferators to abandon their quests. We do not subscribe to this naive notion. Rather, there are reasons to believe that such behavior could inspire the anti-proliferation partners to get tougher with recalcitrant states seeking the bomb."

So how do you respond to that statement? And our non—well, let's start with that. How do you respond to that?

Dr. Rademaker.

Mr. RADEMAKER. I am happy to respond to that.

I wish that statement were true. I wish it were true. I wish it were demonstrably true that deep U.S. nuclear reductions will in-

spire not the Irans and North Koreas to stop nuclear proliferation but inspire other countries in the world to do more against Iran and North Korea. I think that was the thrust of the statement you just read.

Regrettably, I see no evidence that this is true.

No one can fault President Obama for not being deeply committed to nuclear disarmament, to the global zero goal. He has taken meaningful steps. He negotiated a new arms control agreement. He made concessions at the NPT review conference a few years ago. His heart is in the right place. But international cooperation with U.S. policy towards Iran and North Korea, it has not increased. There has been one U.N. Security Council resolution adopted during the Obama administration ratcheting up sanctions on Iran. There were three such resolutions adopted during the Bush administration.

The one adopted during the Obama administration was a good resolution. But, unlike the previous three, it was opposed. It was actually voted against by two countries, Brazil and Turkey.

Now Brazil and Turkey are precisely the kinds of countries that one would expect to be inspired by U.S. leadership on nuclear disarmament. Whatever they were inspired to do, it backfired, because they voted against the resolution to ratchet up sanctions on Iran and North Korea.

And, you know, Congress is—I think in a few minutes you are going to be voting on the House floor on a new Iran sanctions bill. And, you know, what is that bill about? Fundamentally, it is like all of the other Iran sanctions bills over the past 10 years. It basically uses U.S. sanctions not against Iran and not against North Korea but U.S. sanctions against other countries to compel them to do more.

So I mean nuclear disarmament isn't compelling and isn't inspiring them to do more, and so in a few minutes you probably are going to vote to impose U.S. sanctions on other countries that don't do more. And it is regrettable that is the way we have to proceed, but U.S. leadership on nuclear disarmament is not producing the kind of reaction internationally that we would like to see.

Dr. SCHAKE. I agree with Steve's point.

I would just add that we have actually a terrific large-scale example from the end of the Cold War, which is that, with the end of the Cold War, the United States and the NATO allies reduced our non-strategic nuclear forces, our weapons deployed in Europe by 93 percent, almost 2,000 weapons, and that didn't precipitate greater cooperation on Iran sanctions. It didn't precipitate the Russians being more helpful on nonproliferation. It didn't even precipitate the Russians reducing their non-strategic nuclear weapons in Europe.

So I just don't think analytically there is a connection between those two things, as much as I wish there was.

Ambassador GRAHAM. Well, I agree with General Cartwright's statement. I have generally found in my work in nonproliferation and disarmament that senior military people of the United States have a very sound view of what reality is.

With respect to carrying out our nonproliferation obligations and eventually moving toward a situation where we can have a multi-



lateral disarmament negotiation involving China, Britain, and France, we do have to move to lower levels to get somewhere close to where they are. And I think if we were to move to that number that we would be going in the right direction.

We have far more weapons than we need in today's world as opposed to the Cold War. But I would certainly not argue that reducing the U.S. stockpile, in negotiation or not, with our other nuclear weapons state partners, the P5, would have any effect on Iran. They march to their own drummer.

And by the same token I think the jury is out on how much effect sanctions have had either on what Iran is doing. I mean, I have some ideas about what we might do, but they would be different from that.

Mr. LANGEVIN. Thank you.

Let me turn to, at the 2010–2012 Nuclear Security Summits numerous countries around the world made specific pledges to combat nuclear terrorism by securing and eliminating dangerous nuclear weapons, usable materials, ratifying nuclear terrorism conventions and treaties, strengthening export controls, countering nuclear smuggling, and more. To what extent has President Obama's leadership on nuclear security, arms control, and disarmament contributed to the willingness of other countries to take on greater responsibilities in the nuclear security arena?

Ambassador Graham, let's start with you.

Ambassador GRAHAM. Well, I think on that particular subject, the NSS, the Nuclear Security Summit, it has been decisive. It wouldn't have happened but for him.

Mr. RADEMAKER. I think President Obama has done a good job focusing attention on the risk of loose nuclear material and the need to bring them under control. I think these Nuclear Security Summits have been a good idea.

I don't think any of us should be deceived into thinking that this is some new idea, that this was some new problem that was discovered during the Obama administration and addressed during the Obama administration for the first time. There has been awareness of this problem for a long time.

Senators Nunn and Lugar showed great leadership two decades ago in spotting this problem and setting aside U.S. resources to attempt to get these kinds of materials under control. This has been an ongoing effort ever since the President George H.W. Bush administration to try and get these materials under control.

And you are correct. Progress has been made during the Obama administration, as has been made during the previous administrations.

Would that progress have been achieved but for President Obama's commitment—expressed commitment to global nuclear zero, to the greater progress towards nuclear disarmament? I don't believe so. I mean, I do not believe that that commitment on his part is what resulted in the progress that we have seen.

I think, you know, when Ukraine gives up HEU [highly enriched uranium] that it is using to fuel a research reactor it is not making a calculation based on, well, the Americans are moving forward with nuclear disarmament, so we will give up this HEU. They make a decision based on, you know, what is in their national in-

terest. And, you know, there is a transfer of resources involved. We facilitate this. We pay for this. And, you know, these are not unwilling partners. They are happy to do it. But it costs money. So the arrangements have to be made for the work to be done.

And President Obama has done a good job but so have his predecessors, and it really has little to do, in my opinion, with President Obama's commitment to the global nuclear zero agenda.

Mr. LANGEVIN. My final question is, why does the Comprehensive Test Ban Treaty matter?

Dr. Graham.

Ambassador GRAHAM. What is it about, Congressman?

Mr. LANGEVIN. Why does the Comprehensive Test Ban Treaty matter?

Ambassador GRAHAM. Why does it matter?

Well, as I was saying earlier, the NPT is based on a strategic bargain, nonproliferation for most of the world in exchange for disarmament and peaceful cooperation by the five nuclear weapon states.

The negotiators of the NPT made it very clear that, number one, that meant a comprehensive test ban. They understood that reductions during the Cold War and probably thereafter in nuclear weapons, which is what they wanted most, were extremely difficult and would take a very long time. But at least the nuclear weapon states could stop testing.

As I said, it is a strategic bargain. It is not a gift from all of these countries of the world. Just give up the weapons, because you are such nice guys. They are giving up—they have been asked by treaty, they are required by treaty to give up the most destructive weapons, to never have the most destructive weapons that have ever been produced. They bargained for that. And the principal provision, principal agreement that gives the necessary political balance to the NPT is the test ban. That has been clear for 45 years after the treaty was negotiated.

Review conference after review conference failed over the inability to agree to that. So I think personally that the test ban is in the national security interests of the United States for a number of specific reasons, and in particular it makes it difficult for other countries to develop sophisticated nuclear programs that don't now have them.

But, beyond that, it is the essential glue that holds together the NPT; and I am not sure, looking years into the future, whether the NPT can hold together without it. And if the NPT doesn't hold together, well, today's security situation will seem like paradise by comparison with what will happen after that.

Mr. LANGEVIN. Dr. Rademaker, would you comment, please.

Mr. RADEMAKER. In my opinion, Ambassador Graham seriously exaggerated the risks to the NPT in the event that the CTBT is not ratified.

The first point I make about the CTBT is it is not coming into force for decades, no matter what the United States does. There is a provision in the CTBT called Annex 2 that requires 44 states to ratify that treaty before it enters into force. So far, 7 of those 44 have not ratified.

One of them is the United States, and in Ambassador Graham's testimony he asserts that as soon as the United States moves forward most of the others will as well. He doesn't say all of the others will, because it is clear not all of the others will.

But I would actually argue that probably none of the others will, because the countries that are holding out have their own reasons for doing so. The CTBT will not enter into force until North Korea ratifies it. It will not enter into force until Iran ratifies it. It will not enter into force until India and Pakistan ratify. It will not enter into force until Israel and Egypt ratify. Egypt in some ways may be the hardest one of all of those cases for reasons that I could go into, but they have a very serious problem with that treaty under current circumstances. And until all of those countries ratify it, it will not enter into force. We are decades away from that being possible, in my opinion.

In the meantime, there is, in fact, a nuclear testing moratorium. The last major country—the last nuclear weapon state to test a nuclear weapon was France. The United States hasn't tested nuclear weapons for over 20 years.

I would predict this moratorium is going to continue. For the non-nuclear weapon states, existence of a moratorium is, in my opinion, more important than the existence of a treaty forbidding testing.

And so I think this dire prediction that the NPT will collapse if we don't ratify the CTBT better not be true. Because, as I say, we are decades away from it entering into force in the most optimistic scenario, and I think the United States is not on track to ratify it, either.

Mr. LANGEVIN. So you are arguing that even the fact that CTBT exists but hasn't been ratified, are you saying that that has absolutely no effect at all on proliferation issues?

Mr. RADEMAKER. I think bringing the CTBT into force will not slow down the Iranian or North Korean nuclear weapons programs.

You know, North Korea was a member of the Nuclear Non-proliferation Treaty. It had undertaken a solemn obligation not to process nuclear weapons. It went ahead and produced a nuclear weapon.

Advocates of the CTBT want us to believe that it is a hedge against nuclear proliferation because countries need to test a nuclear weapon before they can deploy it; and so, if they are forbidden to test it, they will never do that.

Well, you know, all of those countries are already forbidden to possess them. So, you know, if they are prepared to violate one treaty obligation in order to acquire nuclear weapons, what makes anyone think that they wouldn't be prepared to violate two treaty obligations, the NPT and the CTBT, in order to deploy nuclear weapons?

So, no, I don't see where it gives us much meaningful at all in the struggle against nuclear proliferation.

Mr. LANGEVIN. I know my time has probably expired, but Dr. Graham, if you do care to comment, respond, that would be okay.

Ambassador GRAHAM. Well, first, I would say that a treaty is better than a moratorium because you get verification with the treaty and some enforcement. And so, I hope that someday we can have

a treaty. With respect to who might join? Well, China, Israel, and India have all, at various times, said that they are waiting on us. Egypt, it is pretty clear, is waiting on Israel. Pakistan, it is pretty clear, is waiting on India. So we come down to Iran and North Korea, just where we are with everything else. We will have to deal with them. Whether we can or not remains to be seen.

Mr. RADEMAKER. I would be interested in your comment on Egypt.

Ambassador GRAHAM. What is that?

Mr. RADEMAKER. Comment on Egypt.

Ambassador GRAHAM. Egypt, as I said, is waiting for Israel.

Mr. RADEMAKER. In my experience, Egypt is not waiting on Israel to ratify the CTBT. Egypt is waiting on Israel to join the NPT, which is a radically different step than ratifying the CTBT.

Ambassador GRAHAM. Well, Egypt—of the countries of the world, Egypt and Indonesia were probably the two strongest ones to have a Comprehensive Test Ban Treaty. They were in the forefront for years. They have been committed to it for years. Maybe they have had a change of heart, but I doubt it.

Mr. LANGEVIN. With that, I yield back.

Mr. TURNER. I wonder what their communications were to North Korea when they began their testing. I was concerned about—I really appreciated Mr. Langevin's opening question with the issue of—which was framing really what we are trying to discuss here, of those that believe that our actions are going to dissuade others from pursuing nuclear weapons. And there was a statement in the quote that I would like to pursue for just a moment. Mr. Franks has allowed me to use a portion of his time for that.

In the statement that Mr. Langevin read, the words "anti-proliferation community" was in there. So I have a few questions about the anti-proliferation community. One, who is the anti-proliferation community? Second, do they have any influence? And the third thing is, if there is such an anti-proliferation community, by the definition, why is it that they would be more or less motivated to pursue others not seeking nuclear weapons based upon anything that we do with respect to our own arsenal?

Ambassador GRAHAM. Well, I guess I have to answer that one. Frankly, I have never heard of the anti-proliferation movement or community. It is usually called the nonproliferation community. So I assume that is what the group or community that the general was referring to. I think that—

Mr. TURNER. Either way. Who are they? Do they have influence? And if they are such nonproliferation community, why is it that their commitment to nonproliferation as the nonproliferation community would be lessened or strengthened based upon the accounting of the size or lack of size of our arsenal?

Ambassador GRAHAM. Well, if he is referring to the nonproliferation community in the United States, he is referring to various organizations that promote nonproliferation, such as the group I described at Hoover, and also, many NGOs [nongovernmental organizations] that operate at the U.N. and here in Washington. I guess they would—particularly some of the ones here in Washington perhaps were encouraged by his statement. But I don't think it would have any effect on their commitment to their objectives.

Mr. TURNER. That's what I think. Thank you for saying that, Ambassador Graham. It really has no effect on their commitment. Mr. Rademaker.

Mr. RADEMAKER. Mr. Chairman, I think you ask an excellent question. And it is precisely the right question. The whole premise of that assertion that was ascribed to General Cartwright and Ambassador Pickering that there is some group out there, group of countries that are waiting to do more but holding back because they need to see more progress on nuclear disarmament before they will do more to stop proliferation, that assumes a degree of calculation on the part of proliferation opponents that I don't believe exists. I don't believe there are a group of people out there, a group of countries out there opposed to nuclear proliferation but holding back, and by holding back, allowing, consciously allowing Iran and North Korea to make additional progress on their nuclear weapons programs because they are angry, they are angry at America for not disarming faster, they are angry at the other nuclear weapons states, and so they are letting Iran and North Korea to make progress, waiting for us to do more before they will do more. I don't believe that exists. I have never heard—

Mr. TURNER. It would be illogical and wrong.

Mr. RADEMAKER. Correct. I have never heard a single country identified as behaving in that manner. And all countries—who is the nonproliferation community? It is all of us. Because all of us care about the risk of nuclear proliferation. So America is part of it. Could America do more against nuclear proliferation? Absolutely. Why don't we do more? Because we have other priorities. We could go to war against Iran. If we wanted to stop the Iranian nuclear weapons program, we would invade, right? That would stop it. But that would come at a cost, and we are not prepared to pay that cost. And short of going to war, there is a long list of other sanctions we could impose, other measures we could adopt. But all of them would come at a cost. And we are not prepared to pay the cost.

So just as the United States makes a calculation based upon its national interests about how far it is prepared to go, every other country does the same thing.

Mr. TURNER. Dr. Schake, I am going to have to step out after your answer, and then Mr. Franks is going to chair the remainder of the hearing.

Dr. SCHAKE. I would just pile on that when we talk about the nonproliferation community, we are not just talking about states and their choices, we are talking about civil society groups that are part of the richness and the delightful texture of free societies. There aren't those groups with the freedom to activate in the kinds of countries we are worried about crossing the nuclear threshold.

Mr. FRANKS [presiding]. The second string has arrived here. I was particularly impressed, Dr. Schake, by your very straightforward conclusion that the nuclear weapons, as dangerous as they are, the real danger is in whose hands they are in. You know, I sleep fairly safe at night, fairly soundly at night, not too worried about my 4-year old twins knowing that England has nuclear weapons. But I am fairly nervous about Iran gaining nuclear weap-

ons. And Dr. Rademaker, I, again, appreciated your comments related to others somehow responding to our actions.

You mentioned, related to Iran's nuclear program, and I know that is on everyone's mind, sanctions. And I am going to build a premise and just ask you to respond, all of you, if you will. And that is that, you know, we have had economic sanctions against North Korea for 60 years. And in the last couple of decades, almost to starvation. And they have tested twice. And given Iran's, some of their leaders' commentary, which is pretty dramatic at times, I am just wondering what type of sanctions program do you think will dissuade them from pursuing a nuclear weapon?

It appears to me that if indeed their goal is to gain nuclear weapons, that I have the distinction of being one of the first Members of the House 7 years ago to suggest that and to call for them to be referred to the Security Council; if that is the case, then is there a diplomatic solution? Are sanctions going to be effective? I will stop there and ask you to respond.

Mr. RADEMAKER. First, to clarify, are you speaking about North Korea? Or North Korea and Iran, or—

Mr. FRANKS. I am talking about Iran in this particular case.

Mr. RADEMAKER. With regard to Iran, I have not despaired about sanctions because I believe there is more that can be done. But it is evident that all that we have done up to this point has not been enough. So the question is, is there more that we can do? And I think—the good news is that there is more that we can do. The problem is that it is hard. We have done a lot, but Iran remains vulnerable. Most importantly, Iran's economic lifeblood is its oil exports. And in the most recent—not the round of sanctions that you are going to be voting on in a few minutes, but the previous one adopted as part of the Defense Authorization Act last year, new sanctions were adopted, applied to the financial sector, but the object of those sanctions was to make it increasingly difficult for Iran to export oil by making it impossible for countries to pay for the oil that they might buy from Iran.

That was absolutely a step in the right direction. But I think the real linchpin of trying to bring enough economic pressure to bear on Iran for them to change their calculation has to involve pushing their oil exports down in the direction—much further down in the direction of zero. Because when that revenue stops, then I think their economy will be in such a situation that the regime will have no choice but to take steps with the nuclear program that would relieve the economic pressure. We haven't gotten there yet. We have taken some steps in the right direction, but we need to figure out how to drive Iranian oil exports towards zero and cut off that revenue.

Mr. FRANKS. Dr. Schake, I want to get to you, but my concern is if you listen to Iranian President Ahmadinejad, related to economic sanctions, his quote is, "If they want to continue with the path of sanctions, we will not be harmed. They can issue resolutions for 100 years."

Supreme Leader Ayatollah Khamenei said, "With God's help and without paying attention to propaganda, Iran's nuclear course should continue firmly and seriously. Pressures, sanctions, and assassinations will bear no fruit. No obstacles can stop Iran's nuclear

work.” That seems to me that there is a fairly strong intent there. And given what I just said related to 60 years of sanctions against North Korea, do you think that Iran generally, truly—I mean, some of us have suggested sanctions that would be so significant that a crow flying across Iran would have to pack a lunch. And yet those of course didn’t gain traction in this environment. But I am not sure that even they would be effective. And Dr. Schake, perhaps you would like to respond to that as well.

Dr. SCHAKE. I think Congress has been exemplary in pushing the sanctions issue, but obviously it is not working because the government of Iran is still saying the kinds of things that the government of Iran is saying, and they are continuing to pursue their nuclear weapons program. It does seem to me that sanctions may be approaching a point at which they force the Iranian leadership to deal with domestic pressure. And I think in authoritarian societies, punishing the society writ large for the choices of bad leaders raises ethical questions.

And one of the things I really like about the sanctions that Congress has pursued is that it is not just blanket punishment for Iranians, it targets the people involved with the program, it targets the people who are funding the program, it targets banks that—and secondary suppliers. That is terrific.

Nonetheless, I think the sanctions that are on Iran now begin to bite in a way that the leadership ought to be worried about regime change coming from within the country. And that argues for continuing to turn the screws on sanctions.

Mr. FRANKS. Well, you know, just for the record, I have certainly argued for sanctions and regime change in every way possible. I guess I have just begun—it has begun to occur to me that perhaps the administration’s lack of making it clear that the sanctions and the regime change efforts and all of those would be ultimately backstopped by a military threat if it became necessary—and I don’t know where that threshold is crossed—there doesn’t seem to be a backstop there.

And so I am just concerned whether the sanctions can be effective. I hope they can. No one argues for them more than I do. But ultimately, I am just not certain that that—and it seems to me that that is a pretty important question to be certain about, given that if Iran gains nuclear weapons, my own perspective is that we will need a new calendar because it will change our world that much. I think that they will give them to terrorists the world over. And I base that upon what they have done with explosively formed penetrators in Iraq and other places that they know that we know that they know will kill our troops. Three out of four of our casualties are connected to those kinds of things. So that is a concern. Let me shift gears—

Ambassador GRAHAM. Could I comment on that?

Mr. FRANKS. Please.

Ambassador GRAHAM. Well, in my view, Congressman, there is no evidence that sanctions have been successful in deterring Iranian behavior yet. And I am very skeptical that at least in the short-term foreseeable future, that they will. The problem is not that the sanctions aren’t good. They are well-written and sound. But they cheat on them with China and Russia. They manipulate

around them by selling oil through foreign banks and taking payment in gold. And there is lots of loopholes in them. There is exceptions for this organization and that organization.

I just am very skeptical that sanctions really will ever work as far as stopping Iran's program. I would like to see—I hope that I am proved wrong. I would like to see the program stopped. But I think it is unlikely through sanctions. And the military option, of course, is there, but our experts, like Secretary of Defense Gates tells us, that it would just slow down Iran for a few months unless we make it into a major war, I mean, a big-time war, with months of bombing and an invasion. That could happen. I don't think it is very likely in the aftermath of Afghanistan and Iraq. So my sense is that as important as this issue is, we may have to try to figure out some other way to stop them.

Mr. FRANKS. Well, I am all ears, Ambassador.

Ambassador GRAHAM. Well, I think one thing is we have had some success with sabotage, either directly through getting access to the equipment, or sending in computer worms, which did set them back some months. And I think the important thing here, Congressman, in the end this isn't going to be solved until there really is some kind of change of government there. They have a horrible government. And they have a public that is pro-west, middle class, well-educated, wants to live in a democratic state. Time is on our side.

And so I think we should play for time through measures like this and other measures. That is my best judgment, looking at what people say about what it is we are doing, either the military option or—or might do, military option, and what we have done with sanctions so far. If they work, great. I am all for it.

Mr. FRANKS. Well, let me, as I say, shift gears and play off of what you spoke of as the whole time frame. You know, oftentimes, as you know, when we predicted that North Korea was a decade away from testing their missile capability, they tested that year. And so our predictive timetables have often been a little off. And in this case, that seems to be a pretty significant implication. So Mr. Rademaker and Dr. Schake, all of you, what time frame do you suggest if Iran chose to move towards actually gaining a warhead? Just one or two, let's say. Because one or two warheads, how long would it take them to do that from this moment if they were serious about it? Your prediction. I know there are only two kinds of people who predict the future, those who don't know and those who don't know they don't know. But your prediction would be?

Mr. RADEMAKER. How quickly could they achieve a warhead from a decision to produce one?

Mr. FRANKS. Yes.

Mr. RADEMAKER. I think very quickly, actually. The key timeline, really, is their production of fissile material, which they are making enormous progress on. You know, Ambassador Graham talks about the Stuxnet virus and sabotage. And, you know, I have read the same reports, and it sounds like some good things were accomplished. Unfortunately, when the IAEA reports every quarter on the rate of production of enriched uranium in Iran, the graph has just continued straight upward.

Mr. FRANKS. Yes.



Mr. RADEMAKER. So maybe it would be an even steeper upward line, but it is a rate of progress that is bringing Iran increasingly close to where they would have ample fissile material to produce not one, not two, but multiple nuclear warheads should they choose to do so. The Obama administration has basically said for them—as I understand it, for them the red line is evidence that Iran has decided to actually produce a nuclear weapon.

I worry that by the time we receive persuasive evidence of that, it will be too late, that they will be so close that maybe they will even already have the weapon by the time we realize that they have made the decision. Because again, the critical path is the fissile material. And that tells us what their options are. And we need to stop their production of fissile material. You know, there is what I would consider a fairly dangerous theory afloat that Ambassador Graham may actually agree with it, a theory that we ought to allow Iran to continue enrichment, cut some diplomatic deal with them that allows them to keep producing enriched uranium under safeguards and measures designed to satisfy us that they are not turning that enriched uranium into highly enriched uranium that they could put in a weapon.

That has not been the policy of the international community up until now. It has not been what is required under U.N. Security Council resolutions. But there are still plenty of advocates in the diplomatic community and elsewhere saying that is the best we are going to achieve with Iran, we need to put this confrontation behind us, let's cut a deal that allows them to enrich uranium under safeguards. I think that is a scenario for Iranian nuclear breakout.

Mr. FRANKS. I couldn't agree with you more. It occurs to me that under the increased sanctions programs of the last few years, you know, Iran has tripled its uranium output, and it is moving enrichment facilities deep underground at Qom, and it is now restraining the IAEA from even inspecting weaponization facilities. So when I hear that time is on our side, I have a hard time embracing that. Dr. Schake.

Dr. SCHAKE. I want to pile on that very notion, because I agree with Ambassador Graham that Iranian society is changing in positive, vibrant ways that are really good for Iran's long-term future. I do not believe time is on our side for exactly the reason Steve Rademaker said, which is the graph of their uranium enrichment is off the charts. And what we are trying to play is the nexus of those two things, right, because the good outcome is an Iranian government that we don't fear taking these kinds of choices. And I don't think we are anywhere near that.

If I could just say one more thing about the timeline, because I agree that is exactly the right question. The most honest assessment I have ever seen of that is the one that the Rumsfeld Commission on ballistic missile defenses did in 1999, which was that they believed Iran had the capacity to build weapons within 5 years of the decision to do so, and we have no idea whether they have already decided to do so. My guess is that in the year 2012, they have already long decided to do so. And it is quite dangerous, I think, the way that both Secretary of Defense Panetta and the Director of National Intelligence, Jim Clapper, have both said with such blithe ease that Iran has not made that decision. I don't be-

lieve we know that. I don't believe that the burden of proof should be shifted to us to prove that they haven't done it, instead of them to prove that they haven't done it.

Mr. FRANKS. Well, I mean just an observation on my part, it seems like we had more evidence than the O.J. Simpson trial, because this notion—but let me ask one last question, and I will give you a chance to answer it, Ambassador, because I would love to continue here, but in the interests of time, and in respect to everyone else here. There are a lot of different little idiosyncrasies that we could analyze, but in your minds, what is the significance of Iran gaining nuclear weapons? And what is our best option, if you are each President of the United States—and in some cases that would—if you are each President of the United States, what would be your recipe for preventing Iran to gain nuclear weapons? Would you allow them to go ahead and gain the weapons, and we will pursue the delusional policy of containment? I mean, what would be your ultimate answer to being able to prevent this? Because I just, you know, people like me have had a very, very difficult time with this question because I think it is one of the most seminal national security questions in the world. So Dr. Rademaker—I keep calling you Dr. Rademaker. But Mr. Rademaker, go with you.

Mr. RADEMAKER. I am not a doctor or an ambassador. I am sorry.

Mr. FRANKS. Pretty bright guy either way.

Mr. RADEMAKER. There is time. Mr. Chairman, I like your question a lot because I think it really points up one of the problems inherent in the global zero agenda, or the world without nuclear weapons agenda that we hear so much about. I absolutely don't recommend allowing Iran to get nuclear weapons and then trying to deal with it down the road. I think we need to stop that. And I think there have been a lot of ideas thrown out today about what we need to do, what else we can do to stop that from happening. Regrettably, I think if you had to predict today are we on track to succeed? Are we going to stop Iran from achieving a nuclear weapon? The evidence that I see suggests no.

You know, we failed in North Korea. We tried for a long time, but we failed. North Korea got nuclear weapons. I hate to say it, but I think the likelihood is that we are going to fail on Iran. Certainly we are failing right now. And so your question then is what do you do when that happens? Well, as Dr. Schake said, if Iran gets nuclear weapons it radically transforms the Middle East. And there are a number of implications having to do with how aggressive they will be in doing all the bad things they are already doing, like supporting terrorism, and trying to disrupt the Middle East peace process, and those sorts of things. But more immediately for the nuclear weapons issue, is the risk that Iran's neighbors are going to feel profoundly threatened by an Iranian nuclear weapon.

And unlike in Northeast Asia, you know, where North Korea got a nuclear weapon but every other country in the region could kind of relax about that because they all either had their own nuclear weapons in the cases of Russia and China, or they lived under the U.S. nuclear umbrella. So for Japan and South Korea, they know that there are American nuclear weapons there to protect them in the event that North Korea uses nuclear weapons against them.

In the Middle East, there is really only one country in Iran's vicinity that is under the U.S. nuclear umbrella, and that is Turkey. There are a lot of countries that are going to feel deeply threatened, particularly the Arab countries. Because there are religious and ethnic differences between the Iranians and their Arab neighbors. These are serious countries, Saudi Arabia, Iraq, UAE. I mean, serious countries that are going to be deeply worried about their security. And they are all going to wonder the day after Iran tests a nuclear weapon—

Mr. FRANKS. Mr. Rademaker, I want you to know I am in violent agreement with every word that you said, but what would be the way to prevent this?

Mr. RADEMAKER. I think the formula—I don't think the day after that happens we are going to despair and say, well, I guess now every country in the Middle East is going to have a nuclear weapon, that is a pity, we failed, let's go home to America. I think the day after that happens, our policy will change, and it will become one of trying to persuade all of those countries that they don't need to deploy nuclear weapons in reaction to Iran. And how do you persuade them of that? Well, you know, throughout the Cold War, we confronted that problem. The way we dealt with it was through the policy that the experts called extended deterrence.

Mr. FRANKS. But I don't think I am hearing you—it sounds like you are saying after they get them.

Mr. RADEMAKER. I am sorry?

Mr. FRANKS. You are saying after they get them, we don't want everybody else to get them. That is a fine idea. But how do we prevent Iran from gaining nuclear weapons?

Mr. RADEMAKER. You are right, I was speaking to what I thought was the first part of your question, which was how do we respond if they get them?

Mr. FRANKS. If they get them, I think we all jump off the Capitol.

Mr. RADEMAKER. Using American nuclear weapons to deter them. Which is why unfortunately there is still a need for American nuclear weapons is the point that I was getting at. But how do you stop them from getting them in the first place?

Mr. FRANKS. Yes, sir.

Mr. RADEMAKER. I think a lot of the ideas that were suggested here, we have to try all of them. We have to ratchet up our sanctions, we have to bring to bear a credible threat that military force actually is on the table. I mean, Obama will sometimes say all options on the table, but I don't think the Iranians believe it. There are plenty of reasons why they think the administration—

Mr. FRANKS. Since they are thinking about bombing our own embassy here, I think perhaps you make a good point that they may not be as afraid of us as we would like them to be.

Mr. RADEMAKER. I think that is exactly right. We have to construct a series of measures that will force them to reconsider the course that they are on. And it is going to require greater exertions on our part.

Mr. FRANKS. Well, I agree with you, but I will have to tell you that your response is not that comforting to me. And with total respect. Dr. Schake, would you like to take a shot at how do we prevent Iran from gaining nuclear weapons?

Dr. SCHAKE. Yeah. I think the only way you prevent Iran from gaining nuclear weapons is to credibly convey that we will not permit it to happen. We will destroy it, we will advocate the overthrow of any Iranian regime that moves on the path to getting nuclear weapons. We have tried in so many different ways to cajole and persuade them that they shouldn't want what they think they want. And it looks to me like we make, again, no progress on this. The only time it looks to me the Iranians were serious about walking back from their nuclear program was the letter from the Iranians in the spring of 2003 after we had invaded Iraq.

Military force really matters. And if they think that they do not have the ability to get there without us taking it away from them, I believe that is the only thing that has demonstrated any ability to put a restraint on this program beyond their access to nuclear materials.

Mr. FRANKS. I am going to let Ambassador Graham respond here. I just want to throw in here that I think that really is the issue. You know, we are all nonproliferators, even those of us that advocate for a strong nuclear capability in America for all kinds of reasons. But the reality is that as much as we favor these other things, it occurs to me that the best way that we can prevent some military action against Iran is for them to know and believe that we will, indeed, respond militarily if that is necessary. And I do not think we are there. Mr. Ambassador.

Ambassador GRAHAM. Thank you, Congressman. First, let me just make a brief comment on what would happen if they did acquire nuclear weapons, the Iranians, in the Middle East, because that did come up. And I think that the proliferation, the spread of weapons would be quick. Many of us believe that all it takes for Saudi Arabia to acquire nuclear weapons is a phone call to Islamabad, and they will have the weapons because they paid for the Pakistani program. Saudis at very high levels have told me they will make that phone call if there ever is an Iranian stockpile. I think that is some deterrence for Iran, because the last thing they should want is for Saudi Arabia to have nuclear weapons. They are right next door.

So I myself have long believed that they won't ever take that final step to actual—an actual stockpile, that their objective is to get right close so they can build weapons quickly, a nuclear weapon capability, which, in itself, would be bad, but not quite as bad. But that is anybody's guess. But that is virtually a certainty, in my opinion.

Coming back to the question of how can we stop them? As I said earlier, there is no good evidence that sanctions will stop their program. Maybe, possibly if they are tightened up and some new sanctions are developed. I mean, I won't say it is impossible. But the track record is not good. And I don't think we should place much reliance on that, on sanctions.

Military options, as I said before, we are talking about probably being able to delay them a few months or maybe even a year unless we want to have an all-out war with 65 million people. And if it is that serious, I mean, if we take it that seriously, I am not saying that—I am not saying yes or no, but I think it is unlikely, after having fought two wars, that we are going to fight another

one in the near future. I think the Iranians are well aware of that. So I don't think that military threats are going to deter them very much either.

Mr. FRANKS. Let's see if I can. I would like to get to what your thought what will prevent it.

Ambassador GRAHAM. Well, I don't think anything will prevent it. I think we have got to try disrupt, sabotage, make it difficult for them to move forward through various under-the-table means, and try to drag it out as long as we can. And in terms of time being on our side, I meant long term, not how fast can they build weapons. But I don't think this regime will last forever. But I just don't really realistically see anything else than that that is likely. Yes, we could have a war. I think it is unlikely. It is possible. Unlikely. Sanctions might work. Unlikely. A brief military attack probably wouldn't work, but, of course, we could try it.

Mr. FRANKS. The Israelis tried it at Osirak. Let me, if I could then, without objection here, I am going to go to Mr. Langevin again. Without objection, the statement from Dr. Sagan will be included in the record of today's hearing. And hearing no objection, so ordered. And thank you for your patience, Mr. Langevin.

[The information referred to can be found in the Appendix on page 116.]

Mr. LANGEVIN. Thank you, Mr. Chairman. And again, thanks to our witnesses, their patience today as well, and the dialogue we have engaged in today. I wanted to turn back to the reset discussion that we are having with Russia. Obviously, despite disagreements in some areas, Russia clearly is an important partner on a range of critical security issues. And President Obama's pragmatic approach, many would believe, in engagement with Russia has yielded numerous benefits, including Russian logistical support for the U.S. mission and troops in Afghanistan, especially access to key transit routes; the security and elimination of hundreds of weapons worth of dangerous Russian-origin nuclear weapons usable material; and Russian support for the toughest U.N. Security Council sanctions against Iran to date; and withdrawal by Russia of its contract to sell advanced air defense weapons to Iran among other things.

So to what extent has the reset and the New START Treaty, which reduces the number of Russian deployed strategic nuclear weapons aimed at the U.S. homeland and gives the United States an essential window into their composition and location, help to strengthen U.S.-Russia cooperation in other areas central to U.S. security? And what would have been the impact on U.S.-Russian relations had the U.S. Senate rejected the New START treaty?

Ambassador GRAHAM. If New START had been rejected by the Senate, the effect on U.S.-Russian relations would have been very bad. They made that clear themselves. There was some talk that they wouldn't cooperate on Iran at all. Of course, I would not say that they have been exactly a stalwart in dealing with Iran, Russia, and China. It was just an essential step to maintain and develop decent relations with the one country, the one country in the world whose cooperation is absolutely utterly essential if non-proliferation is going to succeed. It cannot succeed without long-term, or even medium-term—without U.S.-Russian cooperation.

We, together, have 95 percent of the world's nuclear weapons, and we just must cooperate, as we always have, going back many decades into the Cold War. So I thought START was a valuable agreement. It essentially drew the line at where both sides are now. And that is a good thing. And it is very important to the relationship.

Dr. SCHAKE. I, too, was in favor of New START, because I believe that Russia is trending badly: president Putin's reelection. But even before that it was clear that the constraints on civil society and the Mafia nature of business in Russia is trending in a way that is dangerous for American interests as well as the interests of the Russians.

So I am very much in favor of locking the Russians into binding agreements on things like their strategic nuclear forces, and things like the World Trade Agreement. Russia joining the World Trade Organization actually creates the possibility of Russia's business practices being subject to scrutiny and to law. And I think that is very much in American interests.

Whether these things would have happened without the reset policy, I don't know. It seems to me that every new American administration tries to reset relations with Russia. I mean, I remember President Bush talking about looking into Putin's eyes and seeing his soul. And, but every new administration should try to reset relations with Russia. It matters in ways that are hugely important. But I actually think the constraint on the Russian-American relationship is the Russians, the Russian Government, and the bad way that it is trending.

Mr. RADEMAKER. You asked an interesting question, Congressman. The question really is what—of the things that have happened in the U.S.-Russian relationship since New START, how many of them are attributable to ratification of the New START treaty, and how many of them would have happened even without the New START treaty? Of course, that is an unknowable. There is a thing called the post hoc, ergo prompter hoc fallacy where you assume one thing happened and then another thing happened, therefore the first one must have caused the second one. We need to be mindful of that fallacy as we analyze some of these issues that you threw out.

I am reminded that Vice President Biden predicted—not just predicted, he asserted solemnly that one of the reasons the Senate needed to ratify New START was that this was important in the power struggle between then-Prime Minister Putin and then President Putin—I am sorry, then-President Medvedev, and that if we didn't approve New START, that would work badly for President Medvedev, and probably result in Prime Minister Putin returning as president of Russia.

Well, to the extent ratification of START was supposed to do something about that, it obviously failed. But on the issues that you alluded to, Afghanistan, and transit for our U.S. troops there, I personally believe that it is not in the interests of the Russian Federation for NATO to fail in Afghanistan. You know, the Russians will play games, they will try and bring some pressure to bear on us over that issue, but at the end of the day it is in Russia's interests for NATO to succeed in Afghanistan. And I don't be-

lieve they are going to take steps contrary to their interests that would contribute to failure by us and NATO in Afghanistan.

So I think transit is something that they have decided to allow because they made a calculation that it was in their interests.

Support for a U.N. Security Council resolution against Iran. I have commented on this already. The Russians supported three U.N. Security Council resolutions imposing sanctions against Iran during the Bush administration in the absence of a new arms control agreement. They supported one during the Obama administration. Now, if you go back and study the evolution of that resolution, it is quite evident that as in the case of the three previous ones, Russia did everything it could to water down that resolution. It was walked back on issue after issue. But that is the way things work at the U.N. But let's just say, Russia could have been a lot more helpful in putting together a strong resolution. Russia chose not to be helpful in making that resolution stronger.

Then, of course, there was the quote that the chairman put up on one of the slides earlier in the hearing, where 2 or 3 days after the resolution was adopted, the Russians announced that is it, no further U.N. Security Council sanctions measures against Iran. We are finished with that. And that is the line that has persisted since 2010. I mean, today, the reason the U.N. Security Council is not a venue where Iran sanctions resolutions are being considered is because Russia says no.

So, did our ratification of the New START cause Russia to take that position? Of course not. But you know, should we pat ourselves on the back over the one resolution adopted in 2010? I would suggest not. I mean, I think Russia supported what it supported in 2010 for reasons that had nothing to do with the New START treaty. And on the S-300s, you know, one of the interesting features of that Security Council resolution was they crafted it in such a way that the transfer of S-300 air defense missiles to Iran is permitted under the Security Council resolution.

So as a policy matter, they have announced they are not going to do it. But they made sure that the international law that follows from U.N. Security Council Resolution 1929 would permit them to make that transfer if they chose to. So again, less helpful than they could have been.

Mr. LANGEVIN. Thank you, Mr. Chairman. I yield back.

Mr. FRANKS. Thank you, Mr. Langevin. Without objection, a working paper by Dr. Matt Kroenig, "U.S. Nuclear Weapons and Nonproliferation: Is There a Link?" will be entered into the record.

[The information referred to can be found in the Appendix on page 148.]

Mr. FRANKS. And I just want to thank all of you. In terms of searching for that question on how to prevent Iran from gaining nuclear weapons, let me just suggest to you here in adjourning the meeting, that whatever the efforts that you make, or whatever the costs that we have as a Nation to implement that, it seems to me that it will pale in its significance compared to the costs of failing to prevent Iran from gaining nuclear weapons. So thank you all for what you do. This meeting is adjourned.

[Whereupon, at 4:43 p.m., the subcommittee was adjourned.]





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**A P P E N D I X**

AUGUST 1, 2012

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**PREPARED STATEMENTS SUBMITTED FOR THE RECORD**

AUGUST 1, 2012

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**Opening Statement for Chairman Michael R. Turner  
July 20, 2012, hearing of the Strategic Forces Subcommittee**

This hearing of the Strategic Forces Subcommittee will come to order.

I'm pleased to welcome you all today for our hearing on "Nonproliferation and Disarmament: What's the connection and what does that mean for U.S. security and Obama Administration policy?"

Before I start with the subject of today's hearing, I think it's important to state a rising concern of mine regarding information we were provided last week on the B61 LEP.

For the third time in two years, NATO reaffirmed recently that it wants U.S. forward-deployed tactical nuclear weapons to remain in Europe.

Yet, we are faced with the risk, of our own doing, that we may fail to honor that commitment. Why? Because the latest NNSA estimate is that this LEP, originally projected to cost \$4 billion is now going to cost at least \$8 billion, and, while it has already been delayed once by NNSA, from FY17 to FY19, there is a risk of further delay.

These schedule delays and cost increases have occurred despite the fact that STRATCOM has trimmed the military requirements to the bare minimum and increased the risk it is willing to tolerate to about as far as it can.

This is the latest evidence that NNSA is simply incapable of performing its basic mission, which is to provide the nuclear capabilities required by President Obama's 2010 Nuclear Posture Review and his November 2011 nuclear modernization funding promises.

It is past time for the President to step up and offer some solutions to fix the NNSA. This is the point that Chairman McKeon and I made in a letter to the Administrator earlier today: NNSA cannot continue to put the modernization of the U.S. deterrent at-risk.

Now, to the subject of today's hearing.

A central tenet of the Obama Administration's security policy is that, if the U.S. "leads by example" we can "reassert our moral leadership" and influence other nations to do things relevant to our nonproliferation goals.<sup>1</sup>

It is the way the President intends to advance his goal of working toward a world free of nuclear weapons and to deal with the stated twin top priorities of the Administration: nuclear proliferation and nuclear terrorism.

For example, in his December 2009 speech accepting the Nobel Peace Prize in Oslo, the President stated:

In the middle of the last century, nations agreed to be bound by a treaty whose bargain is clear: All will have access to peaceful nuclear power; those without nuclear weapons will forsake them; and those with nuclear weapons will work towards disarmament. I am committed to upholding this treaty. It is a centerpiece of my foreign policy.<sup>2</sup>

Obviously, if the theory that informs this "centerpiece" is wrong, we could be risking a lot.

It is important to note that we could be jeopardizing our own security and the nuclear umbrella that assures 31 other countries of their security by reason that, as our capacity is reduced, the propensity of other countries to build their own deterrent is increased – exactly the opposite of what we intend.

By agreeing to arms control agreements like New START or other agreements or unilateral actions like the U.S. statement on missile defense accompanying the START treaty, we are placing ourselves in a situation where we could be sacrificing our freedom to deploy the full range of missile defenses we need.

Were we to ratify the CTBT, we would forever legally give up our right to test weapons while not extending the same limitation to other states. That's a very serious limitation.

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<sup>1</sup> The preceding statement is attributed to U.S. Senator Jon Kyl, based on remarks he made at the National Policy Conference of The Nixon Center & The Richard Nixon Foundation on May 19, 2010. The attribution was unintentionally omitted by committee staff in Chairman Turner's original opening statement.

<sup>2</sup> President Barack Obama, Remarks by the President at the Acceptance of the Nobel Peace Prize. December 10, 2009.

Significant consequences could come from doing what the President suggests, and the question of whether the risks are justified looms heavily before us today.

Put another way: Is it true that if we lead by example, others will follow that lead, and nuclear weapons will cease to exist? And, does our nonproliferation credibility in the world depend on taking these actions suggested by the President?

One of the first places President Obama chose to “lead” was in his new Nuclear Posture Review, which set the top five priorities for the United States involving nuclear security:

1. Preventing nuclear proliferation and nuclear terrorism;
2. Reducing the role of U.S. nuclear weapons in U.S. national security strategy;
3. Maintaining strategic deterrence and stability at reduced nuclear force levels;
4. Strengthening regional deterrence and reassuring U.S. allies and partners; and
5. Sustaining a safe, secure, and effective nuclear arsenal.<sup>3</sup>

About this prioritization, the late Therese Delpech said it best:

"The [Obama] 2010 NPR gives top priority to nuclear terrorism and nuclear proliferation. Then the goal of 'reducing the role of US nuclear weapons in US nuclear strategy' is asserted. Maintaining strategic deterrence is third on the list. This order is weird."<sup>4</sup>

I have to agree. It is weird indeed that strategic stability with Russia and China and others comes third among the President's priorities.

Here's what we've done in disarmament already:

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<sup>3</sup> 2010 Nuclear Posture Review, Executive Summary, pg iii.

<sup>4</sup> Therese Delpech, "Nuclear Deterrence In The 21<sup>st</sup> Century." Rand Press.

- the U.S. has reduced its nuclear weapons stockpile by 75 percent since the end of the Cold War and 90 percent since the height of the Cold War (this doesn't even include the NEW START figures).
- The U.S. has not conducted a nuclear weapons test since 1992.
- It has not designed a new warhead since the 1980s nor has it built one since the 1990s.
- We have pulled back almost all of our tactical nuclear weapons, and in the new NPR, we will retire our sea launched cruise missile.
- The Administration negotiated a New START treaty, and forced it through a lame duck Senate, where only the United States had to reduce deployed nuclear weapons.

What has this “leadership” gotten us? Have Iran and North Korea been impressed enough to come into compliance with the NPT? Have they followed our lead?

Has it kept Russia, China, France, Great Britain, India, and Pakistan from modernizing (and in some cases growing) their nuclear weapons stockpiles?

Russia is, in fact, deploying a new multipurpose attack submarine that can launch long range cruise missiles with nuclear warheads against land targets at a range of 5,000 kilometers. What is even more incredible is that this new system was not “counted” by the New START treaty.

If you turn to the screen [see slide 1], you'll see that in fact, while President Obama has been reducing, Russia has been pouring money into its nuclear forces. This slide was provided by the Russian nuclear weapons laboratories to a recent delegation of U.S. officials. I would suggest that it shows that Russia is, in fact, preparing to break out from the INF treaty, and may be in violation of the CTBT and the Presidential Nuclear Initiatives.

In addition, Russia's President has said that “possessing nuclear weapons is crucial to pursuing independent policies and to safeguarding sovereignty.”

Russia is modernizing virtually every nuclear weapons capability it has. Russia clearly is not interested in following President Obama's lead.



Will Pakistan or North Korea ratify the CTBT just because the U.S. does? It is very unlikely that they would do so. In fact, both nations continued their nuclear weapons tests after the U.S. unilaterally stopped testing and even after the U.S. signed the CTBT.

Have these steps motivated our allies to be more helpful in dealing with real threats like Iran and North Korea and with nuclear terrorism?

Bottom line: there is no evidence our moral leadership in arms control and disarmament will convince countries to set aside their calculations of the impact of nuclear proliferation and nuclear terrorism on their national security, and help us address these threats.

Notwithstanding this reality, the President isn't done yet.

The Obama administration reportedly is weighing at least three options for reducing U.S. nuclear forces: cutting to roughly 1,000-1,100; 700-800 or 300-400.

The president may soon seek to have the U.S. make the deepest reductions to its nuclear forces in history.

Let me be clear, putting aside what I believe is a disproven theory on U.S. nuclear reductions at the heart of the President's theory, the idea of further reductions should be off the table, and for a simple reason: the President has broken his promise to modernize the deterrent, which is the only reason, and a fundamental part of the contract the president agreed to, when the New START treaty was ratified.

Case in point is the Chemistry and Metallurgy Research Replacement Nuclear Facility, the construction of which the President pledged a little more than a year ago to accelerate and which in this year's budget he deferred for five years, which may as well be a cancellation, which I understand the National Nuclear Security Administration and the Office of Management and Budget originally advocated.

The President may consider this leadership, but I consider it to be breaking his word.

I am pleased to welcome today the following experts:

- The Honorable Stephen Rademaker  
Former Assistant Secretary of State
- Dr. Kori Schake  
Research Fellow, Hoover Institution  
Stanford University
- Amb. Thomas Graham  
Former Special Representative to the President on Arms Control,  
Nonproliferation and Disarmament (Clinton Administration)

These witnesses are leading thinkers on issues of nonproliferation and disarmament.

I look forward to their views on the following questions:

- What are the United States' commitments under Article VI of the Nuclear Nonproliferation Treaty?
- Have past U.S. disarmament activity and any "dividends" for U.S. nonproliferation objectives, including preventing proliferation to and by states like Iran, North Korea, and Pakistan?
- What are the specific accomplishments, if any, in the past and by the current administration as a result of U.S. disarmament activity, including the New START treaty with Russia?
- What would be the likely accomplishments from future actions by the United States, including potential ratification of the Comprehensive Nuclear Test Ban Treaty or further U.S. nuclear force reductions, including pursuant to the Administration's pending Nuclear Posture Review implementation study?

Now, I turn to my Ranking Member, Ms. Sanchez, for her opening statement.

**Opening Statement**

**Strategic Forces Subcommittee Hearing on  
Nonproliferation and Disarmament: What's the connection and what does  
that mean for U.S. security and Obama Administration policy?**

**Ranking Member Loretta Sanchez  
August 1, 2012**

I would like to join Chairman Turner in thanking our witnesses, Mr. Rademaker, Dr. Schake, and Ambassador Graham, for being here today.

I would also like to thank Dr. Scott Sagan, and ask for unanimous consent that his testimony and his article "*Shared Responsibilities for Nuclear Disarmament*" be introduced for the record.

Chairman Turner, our Committee members and I agree that the proliferation of nuclear weapons represents one of the gravest threats to US and international security.

The nuclear programs in Iran and North Korea and the risk of other countries and terrorists acquiring nuclear weapons are among the most serious threats facing our country.

These are difficult problems, but so far we have avoided a world where many more countries have nuclear weapons. During the Kennedy Administration, there were predictions of dozens of nuclear weapon states by the end of the 1970s.

The reasons these predictions did not become a reality is US leadership and the 1968 Nuclear Nonproliferation Treaty (NPT).

With nearly 190 member states, the NPT remains a cornerstone of our security, ensuring that most states did not acquire nuclear weapons. Only a handful of states including North Korea and Iran remain either outside the treaty or in violation of commitments made under the treaty.

Under the NPT bargain, over 180 non-nuclear weapon states agree not to acquire nuclear weapons. And in exchange the 5 nuclear weapons states (United States,

Russia, China, United Kingdom and France) commit to pursue negotiations on nuclear arms control and disarmament. As Ambassador Graham notes in his testimony, the NPT was not a gift to the nuclear weapons states. It was a bargain.

This bargain is still relevant.

In 1995, US led successful efforts to indefinitely extend the Treaty -- and for this we owe a particular debt of gratitude to Ambassador Graham.

This was a bet in favor of the continued viability of the NPT, including that nuclear weapons would not spread and that progress would be achieved on nuclear arms control and disarmament.

This extension meant that most of the world gave up *forever* the right to acquire nuclear weapons. And as part of their commitment to maintaining a strong NPT, nuclear weapon states in 1995 made promises, which were reiterated in 2000 and which included among other steps: entry into force of Comprehensive Test Ban Treaty and progress on reducing the number of nuclear weapons.

Many of the promises made on arms control have not been realized. However, they remain necessary as we need progress on nonproliferation, including additional international pressure on Iran and North Korea, tougher nuclear inspections and reducing the use of nuclear bomb-grade materials for civilian purposes.

Beyond the problematic actions by North Korea and Iran, making progress on nonproliferation remains important as additional countries become interested in acquiring enrichment and reprocessing technology, which if unchecked could lead to a dangerous world where nuclear weapons-usable materials are readily available to countries and potential terrorists.

Allowing the NPT to unravel would have disastrous consequences.

It is in this context and to reduce the dangers from an outdated Cold War legacy that that President Obama sought to reduce the dangers posed by nuclear weapons in his 2009 Palm Sunday speech in Prague, in his 2010 Nuclear Posture Review and the pending implementation of the updated Nuclear Posture, and in the 2010 and 2012 Nuclear Security Summits.

The link between nuclear nonproliferation and arms control is widely recognized and continues to be meaningful.

The 2009 Commission on the Nuclear Posture of the United States, co-chaired by Former Secretaries of Defense William Perry and James Schlesinger, noted that *“nations may not show the nuclear restraint the United States desires or support nonproliferation efforts if the nuclear weapon states take no further agreed steps to decrease their reliance on nuclear arms.”*

Last year, Secretaries George Shultz, William Perry, Henry Kissinger and Senator Sam Nunn wrote in the Wall Street Journal that *“the realization that continued reliance on nuclear weapons as the principal element for deterrence is encouraging, or at least excusing, the spread of these weapons, and will inevitably erode the essential cooperation necessary to avoid proliferation.”*

And just last week General Cartwright and Ambassador Pickering, in joint Congressional testimony, explained *“The idea is not that virtuous U.S. and Russian behavior in the form of steep nuclear arms reductions will inspire aspiring proliferators to abandon their quests...Rather, there are reasons to believe that such behavior could inspire our anti-proliferation partners to get tougher with recalcitrant states seeking the bomb.”*

In conclusion, I look forward to your thoughts on the link between nuclear nonproliferation and disarmament and specifically:

- Do the NPT commitments, and associated promises, still matter? And can we risk losing the NPT?
- What kind of engagement do we need with our allies in Northeast Asia and in NATO to maintain extended deterrence guarantees?
- Has the reset with Russia helped nonproliferation efforts, including strengthened sanctions on Iran?
- What actions are needed to constructively engage with the Non-Aligned Movement to achieve further progress on nonproliferation?

Thank you Mr. Chairman.

STATEMENT OF STEPHEN G. RADEMAKER  
Principal, The Podesta Group

“Nonproliferation and Disarmament: What's the connection and what does that mean for U.S. security and Obama Administration policy?”

Committee on Armed Services  
Subcommittee on Strategic Forces  
U.S. House of Representatives  
August 1, 2012

Mr. Chairman, Congresswoman Sanchez, Members of the subcommittee, I thank you for inviting me to testify today about the connection between nuclear disarmament and nonproliferation.

The context for this discussion is, of course, the goal President Obama has articulated of achieving a world without nuclear weapons. It is not unusual, of course, for presidents and other political leaders to commit to ambitious goals like this. We can all recall, for example, previous presidential commitments to end poverty, cure cancer, and stop drug abuse. What sets President Obama's goal apart from these other examples is that he appears to really mean it. This is not a pious aspiration that he has embraced, knowing full well that it can never be fully achieved. To the contrary, he appears to believe his goal of global nuclear disarmament is achievable, and he is committed to using the power of his office to try to bring it about. Because he takes this goal seriously, we have to as well.

President Obama and other advocates of global disarmament offer a number of reasons for wanting to abolish nuclear weapons from the planet. The one that brings us here today is their oft-repeated contention that decisive movement in the direction of nuclear disarmament will better position America to prevent nuclear weapons proliferation. Because preventing proliferation is one of our nation's top national security concerns, they argue, nuclear disarmament is a small price to pay to protect ourselves against the risks attendant upon the spread of nuclear weapons, such as nuclear terrorism, regional instability, and nuclear war.

I have two principal quarrels with this line of argument. First, I think the proponents of nuclear disarmament seriously underestimate the value of America's nuclear arsenal as a tool of nuclear nonproliferation. By advocating that we abolish that tool, or at least move decisively in the direction of abolishing it, they are advocating a course that may actually increase the risks of nuclear proliferation.

Second, I know of no evidence to support the theory that nuclear disarmament by the United States will translate to increased leverage in the struggle against nuclear proliferation. I know of earnest assertions that are regularly made in this regard, but those assertions do not withstand rigorous analysis. This is a case where, regrettably, the wish is the father of the thought. I say regrettably because I also wish the vexing problem of nuclear proliferation could be solved by such a simple step as getting rid of our own nuclear weapons. Sadly, it cannot.

### Nuclear Weapons as a Tool of Nuclear Nonproliferation

Nuclear weapons have been with us for more than sixty-five years, and for most of that time the main reason more countries didn't acquire nuclear weapons was that they were confident they didn't need them thanks to America's nuclear umbrella. The proliferation problems we face today from countries like Iran and North Korea tend to obscure the fact that traditionally the risk of proliferation has been greatest in countries that are technologically and economically advanced. During the Cold War, countries like Germany, Japan and South Korea that feared nuclear attack from the Soviet Union and China gave serious thought to developing nuclear weapons. So did others like Sweden, Taiwan, and Australia.

The reason none of these countries developed nuclear weapons was that they concluded that they didn't need such weapons because they could rely on America to defend them. This has long been one of the declared goals of America's nuclear arsenal. Experts label this "extended deterrence". The concept is that America's nuclear weapons exist to deter not only attacks on the United States, but also to deter attacks on our friends and allies. The label is unfortunate, because only experts understand what it means. To the extent it is about reassuring potential nuclear powers that there is no need for them to realize that potential, a better label might be "active nonproliferation."

For proponents of nuclear disarmament, the historical success of extended deterrence is an inconvenient fact. They tend to dismiss it as an artifact of the Cold War, something that has become irrelevant in the 21<sup>st</sup> century. A good example is the report issued two months ago by a Commission of the Global Zero organization entitled "Modernizing U.S. Nuclear Strategy, Force Structure and Posture." This report airily dismissed the importance of extended deterrence with the assertion that

No sensible argument has been put forward for using nuclear weapons to solve any of the major 21<sup>st</sup> century problems we face—threats posed by rogue states, failed states, proliferation, regional conflicts, terrorism, cyber warfare, organized crime, drug trafficking, conflict driven mass migration of refugees, epidemics or climate change. A large standing Cold War-like nuclear arsenal cannot productively address any of these dangers—for instance, it is untenable to reliably deter or defeat terrorists with no return address, and its impact on proliferation may be largely counterproductive. Nuclear weapons have on balance arguably become more a part of the problem than any solution. For instance, our large nuclear stockpiles and infrastructures run risks of theft by non-state actors.<sup>1</sup>

This kind of "end of history" triumphalism has fallen out of favor in other areas, but not among supporters of nuclear disarmament. Sadly, there is no reason to believe that the end of the Cold War has changed the psychology that led countries facing nuclear threats during the Cold War to consider acquiring nuclear weapons of their own.

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<sup>1</sup> <http://dl.dropbox.com/u/6395109/GZ%20US%20Nuclear%20Policy%20Commission%20Report.pdf>, p. 2.

Consider the two cases that we worry about most today: North Korea and Iran. North Korea has broken out of the Nuclear Nonproliferation Treaty (NPT), but its two non-nuclear armed neighbors, South Korea and Japan, have so far resisted calls to deploy nuclear weapons of their own. The reason for this has little to do with the NPT, and everything to do with the confidence they have in our treaty commitments to them and in the reliability of America's nuclear arsenal. Notwithstanding this, there are periodic calls in both countries to match North Korea's nuclear weapons with nuclear weapons of their own. As a nation, we have every interest in discouraging such calls and reassuring our allies of the reliability of our defense guarantees. It would be perilous for us to take any steps with our nuclear arsenal that would lead them to question the reliability of those guarantees. The risk of "theft by non-state actors" of American nuclear weapons pales by comparison to the risks to the global nonproliferation regime that would follow from a decision in Seoul or Tokyo that America's nuclear umbrella was no longer reliable.

With regard to Iran, the experts tell us that one of the main reasons we have to worry about that country's nuclear weapons program is that if Iran follows North Korea in breaking out of the NPT, we will face a "cascade of proliferation" in the Middle East, which will result in the "unraveling of the NPT." Fundamentally what the experts are telling us is that the situation in the Middle East is different than in Northeast Asia. North Korea could break out of the NPT without triggering a cascade of proliferation in Northeast Asia because all of North Korea's neighbors either already have nuclear weapons (Russia and China), or live under the U.S. nuclear umbrella (South Korea and Japan). In the Middle East, by contrast, only one of Iran's neighbors lives under the U.S. nuclear umbrella (Turkey), and all of Iran's Arab neighbors will confront the question whether they need to match Iranian nuclear weapons with nuclear weapons of their own.

I do not believe that America will react to an Iranian nuclear breakout by saying "How regrettable. Now there's going to be a cascade of proliferation in the Middle East." To the contrary, I believe we will immediately go to work trying to persuade the Arab countries of the region that they do not need to deploy nuclear weapons of their own. How will we persuade them of this? We know of only one model for doing this, and that is the model we successfully employed during the Cold War of defense guarantees and extended deterrence.

Proponents of nuclear disarmament would have us believe that with our increasingly precise and powerful conventional weapons, America is today capable of providing extended deterrence with conventional rather than nuclear weapons. This theory overlooks the fact that Iran's nuclear weapons are not really warfighting weapons, but rather weapons of mass terror. Does anyone really believe that the Saudis, for example, will accept that they can relax about the potential obliteration of Riyadh because, should Iran do that, America will use its precise conventional weapons to surgically decapitate the Iranian leadership and wipe out Iran's key military and nuclear installations so that kind of thing can never happen again?

Nuclear breakout is not an improbable scenario with Iran, but rather the most likely one should events continue on their current trajectory. Again, it would be perilous to take steps today with America's nuclear forces that would render us incapable of stopping the cascade of proliferation in the Middle East that has been predicted should Iranian breakout occur.



Leverage to Combat Nuclear Proliferation

One of the principal claims offered by the Obama Administration in support of its disarmament agenda is that it will strengthen America's hand in seeking to prevent nuclear weapons proliferation. As stated in the Obama Administration's 2012 Nuclear Posture Review:

By demonstrating that we take seriously our NPT obligation to pursue nuclear disarmament, we strengthen our ability to mobilize broad international support for the measures needed to reinforce the non-proliferation regime and secure nuclear materials worldwide.<sup>2</sup>

The comment about "our NPT obligation to pursue nuclear disarmament" is, of course, a reference to Article VI of the NPT. Contrary to what many proponents of disarmament would have us believe, Article VI of the NPT does not impose on the United States and the other four nuclear-weapons states a free-standing obligation to eliminate their nuclear weapons. This Article consists of only one sentence, stating that:

Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and to a Treaty on general and complete disarmament under strict and effective international control.

If one parses this language, it is evident that it imposes no binding legal obligation to abolish nuclear weapons. Rather, the operative legal requirement is to "pursue negotiations in good faith on effective measures relating . . . to nuclear disarmament . . ." Further, Article VI imposes this requirement in parallel with an obligation on all parties to the NPT—those with nuclear weapons and those without—to "pursue negotiations in good faith on effective measures relating . . . to a Treaty on general and complete disarmament under strict and effective international control."

The treaty's eleventh preambulatory paragraph makes clear the understanding of the parties that these two obligations are linked, and that final "elimination from national arsenals of nuclear weapons" would take place not prior to, but rather "pursuant to a Treaty on general and complete disarmament." There is, of course, no treaty on general and complete disarmament, nor has there ever been a serious effort to negotiate one.

It is no wonder, therefore, that in a 1969 memo to then National Security Adviser Henry Kissinger, Spurgeon Keeny of the NSC staff stated that Article VI "is an essentially hortatory statement and presents no problems."<sup>3</sup>

Since then, however, the United States has acquiesced in increasingly aggressive interpretations of the obligations imposed on the nuclear weapon states by Article VI, to the point where few today would be able even to explain, much less publicly agree with, Mr.

<sup>2</sup> <http://www.defense.gov/npr/docs/2010%20nuclear%20posture%20review%20report.pdf>, p. 12.

<sup>3</sup> <http://2001-2009.state.gov/r/pa/ho/frus/nixon/e2/83203.htm>.

Keeny's assessment in 1969. As a result, it is certainly the case that expectations have been created in the international community going well beyond the actual requirements of Article VI of the NPT. Essentially what the Obama Administration is telling us, therefore, is that if the United States appears to be moving resolutely to satisfy those expectations, we will be rewarded by progress on the problem of nuclear proliferation.

It is fair to ask, however, how that reward will be delivered. One way it could be delivered is by the nuclear proliferators themselves. Perhaps countries like Iran and North Korea will be so inspired by the example we set that they will decide to join us in committing to nuclear disarmament. It would, of course, be nice if these countries were moved by the power of our example to abandon their nuclear weapons programs. This notion is so preposterous, however, that not even the most ardent supporters of nuclear disarmament would argue this with a straight face.

So if the theory isn't that proliferators will be inspired to follow our example, it must be that the rest of the international community will be inspired to reciprocate by stepping up their insistence on full compliance by other countries with the nonproliferation obligations set forth elsewhere in the NPT.

This is a plausible-sounding theory, but there is no evidence that the theory works in the real world. In order for the theory to be true, there would have to be members of the international community willing and able to do more to stop nuclear proliferation, but holding back out of frustration over the slow pace of nuclear disarmament by the United States. If this theory is true, it should be possible to name at least one or two countries that are acting in this manner. I am unable to do so, however, and I've never heard supporters of President Obama's theory identify the countries that will do more to stop proliferation in response to our doing more to eliminate our nuclear weapons.

There are, of course, plenty of countries that could do more to stop proliferation. Indeed, all countries, including the United States, could do more. But I know of no country that is doing less than it otherwise would do but for perceived foot-dragging by the United States on nuclear disarmament.

The reason the United States isn't doing more to combat proliferation isn't because we don't care about it, and it certainly isn't because we're angry with the other nuclear weapons states for not disarming faster. It's because we have other national priorities in addition to nonproliferation, and because we face political, economic, and diplomatic constraints on what we're prepared to do in confronting determined proliferators like Iran and North Korea. The same is true, in my opinion, of every other country in the world.

Not only can I not think of a country that would do more to help us stop the Irans and North Koreas if only we disarmed faster, I have a hard time thinking of a category of countries for which this might be true. Let's review the categories of countries when it comes to disarmament and nonproliferation.

First, there are the NPT-recognized nuclear weapon states—Russia, China, the United Kingdom, and France. Countries in this category are in fact the biggest obstacle to more concerted international pressure against Iran and North Korea. The reason international economic sanctions on Iran and North Korea are not more biting is because Russia and China stand prepared to veto any U.N. Security Council resolution that would tighten sanctions, and for most of the world, the Security Council's requirements define how far they are prepared to go in pressuring Iran and North Korea. And why are Russia and China blocking the imposition of tougher sanctions? In both cases there is a long list of reasons that boils down to a calculation of where their national interests lie. But in neither case are they holding back because they are worried that America isn't disarming fast enough.

Next there are America's close friends and allies, the countries that benefit most directly from the American nuclear umbrella. Some of these countries are in fact strong champions of nuclear disarmament—Germany and Japan in particular come to mind. A closely related category is passionately anti-nuclear non-allies, countries like Sweden, Ireland, Austria and New Zealand.

From countries in both of these categories there is certainly plenty of criticism of America's nuclear weapons policies. But there is also at least as much concern about nuclear proliferation, because these countries are acting out of genuine conviction that nuclear weapons are bad, not anti-American animus. So to suggest that they are holding back in their efforts to prevent nuclear proliferation in Iran and North Korea in order to pressure America to do more on nuclear disarmament ascribes to them a degree of tactical calculation that they likely would find offensive. These countries might well try to persuade us that there are other countries that would do more if America would disarm faster, but they themselves would never consciously allow Iran to inch closer to obtaining the bomb in order to pressure America on disarmament.

The final category is the nonaligned movement, or NAM, led on nuclear issues by such countries as Brazil, Egypt and South Africa. These are among the most outspoken countries in the world in favor of nuclear disarmament, so if anyone is holding back on nonproliferation in order to coax more progress on disarmament, it is most likely them.

The Obama Administration cannot be faulted for not doing enough to impress the NAM with the sincerity of its commitment to nuclear disarmament. Since taking office it has:

- Issued a Nuclear Posture Review disavowing the development of new nuclear weapons types and significantly limiting the circumstances under which America would use nuclear weapons.
- Negotiated and brought into force the New START agreement, mandating a one-third reduction in the number of strategic nuclear weapons deployed by the United States and Russia.
- Organized the first-ever Nuclear Security Summit, to which 47 nations were invited.
- Attended the 2010 NPT review conference, where it promised U.S. participation in regional nuclear-weapon-free zones.

- Prepared an implementation study pursuant to the Nuclear Posture Review, which press reports say will recommend a further one-third reduction in the number of strategic weapons deployed by the United States.

Speaking at the NPT review conference in 2010, Secretary of State Hillary Clinton clearly articulated the Administration's expectation that these steps toward nuclear disarmament will be reciprocated:

as we work to uphold our end of the basic bargain of the NPT, we are asking all signatories to do the same, to work with us to strengthen global nonproliferation rules and hold accountable those who violate them.<sup>4</sup>

So how has the world responded?

The Administration achieved no meaningful progress at the NPT review conference on any of the ideas it proposed for strengthening the NPT. And the conference issued a final statement criticizing Israel on nonproliferation grounds, but not Iran.

Later in 2010, the Administration persuaded the U.N. Security Council to impose a fourth round of economic sanctions on Iran. Not only were these sanctions watered down by Russia and China, as has happened in the past, but NAM member Brazil, along with Turkey, voted against the resolution imposing the sanctions. This was in stark contrast to the three previous Security Council resolutions imposing sanctions on Iran, all of which were approved unanimously.

Not only that, Brazil and Turkey brokered a deal with Iran prior to the vote with the express purpose of scuttling additional U.N. sanctions. In addition, they declared their flat-out opposition to the goal—formally adopted by the Security Council in 2006—of requiring Iran to suspend uranium enrichment. The word for this is not progress, but regress.

Since that time, additional progress has been achieved in tightening economic sanctions on Iran, but that progress is almost entirely attributable to mandates of the U.S. Congress and decisions of the European Union. Significantly, the aim of many of the new U.S. and E.U. sanctions is to pressure NAM members and others to do things in their relations with Iran that they have heretofore been unwilling to do on their own.

So it's fair to say that if President Obama was expecting additional cooperation on nonproliferation from the NAM or anyone else as a reward for picking up the pace of nuclear disarmament, he's still waiting.

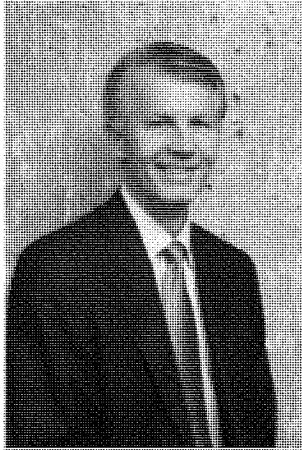
#### Conclusion

All of these facts demonstrate that nuclear disarmament affords no silver bullet solution to the continuing problem of nuclear proliferation. Perhaps there are other reasons for America to consider modest additional nuclear weapons reductions. And certainly we need to continue to

<sup>4</sup> <http://www.state.gov/secretary/rm/2010/05/141424.htm>.

fulfill our obligation under Article VI of the NPT to negotiate in good faith on effective measures relating to nuclear disarmament. But as we make decisions relating to these matters, we should not allow our judgment to be clouded by fanciful notions that our actions are going to be rewarded with stepped up cooperation by others in combatting nonproliferation.

We will make progress against proliferation as we always have, on the merits of the issue, by persuading others that it is in their interest to cooperate with us against nuclear dangers. By the same token, we need to make decisions about our nuclear force structure in the same manner, on the basis of a sober and objective assessment of our global defense requirements, not wishful thinking.



Stephen Rademaker

With wide-ranging experience working on national security issues in the White House, the State Department, and the US Senate and House of Representatives, Stephen Rademaker advises the Podesta Group's international clients. Among his accomplishments in public service, he had lead responsibility, as a House staffer, for drafting the legislation that created the US Department of Homeland Security.

Serving as an Assistant Secretary of State from 2002 through 2006, Stephen headed at various times three bureaus of the State Department, including the Bureau of Arms Control and the Bureau of International Security and Nonproliferation. He directed the Proliferation Security Initiative, as well as nonproliferation policy toward Iran and North Korea, and led strategic dialogues with Russia, China, India and Pakistan. He also headed US delegations to the 2005 Review Conference of the Parties to the Treaty on Nonproliferation of Nuclear Weapons, as well as many other international conferences.

Stephen concluded his career on Capitol Hill in 2007, serving as Senior Counsel and Policy Director for National Security Affairs for then-Senate Majority Leader Bill Frist (R-TN). In this role, Stephen helped manage all aspects of the legislative process relating to foreign policy, defense, intelligence and national security. He earlier served as Chief Counsel for the House Select Committee on Homeland Security of the US House of Representatives and as Deputy Staff Director and Chief Counsel of the House Committee on International Relations.

During President George H. W. Bush's administration, Stephen served as General Counsel of the Peace Corps, Associate Counsel to the President in the Office of White House Counsel, and as Deputy Legal Adviser to the National Security Council. After leaving government in 2007, Stephen continued to serve as the US representative on the United Nations Secretary-General's Advisory Board on Disarmament Matters, and he was subsequently appointed by House Republican Leader John Boehner (R-OH) to the US Commission on the Prevention of Weapons of Mass Destruction Proliferation and Terrorism. Stephen received the Officer's Cross of the Order of Merit from the government of Poland in 2009. He has a bachelor's, a Juris Doctor and a master's in foreign affairs from the University of Virginia.

**DISCLOSURE FORM FOR WITNESSES  
CONCERNING FEDERAL CONTRACT AND GRANT INFORMATION**

**INSTRUCTION TO WITNESSES:** Rule 11, clause 2(g)(5), of the Rules of the U.S. House of Representatives for the 112<sup>th</sup> Congress requires nongovernmental witnesses appearing before House committees to include in their written statements a curriculum vitae and a disclosure of the amount and source of any federal contracts or grants (including subcontracts and subgrants) received during the current and two previous fiscal years either by the witness or by an entity represented by the witness. This form is intended to assist witnesses appearing before the House Armed Services Committee in complying with the House rule. Please note that a copy of these statements, with appropriate redactions to protect the witness's personal privacy (including home address and phone number) will be made publicly available in electronic form not later than one day after the witness's appearance before the committee.

Witness name: STEPHEN RADEMAKER

Capacity in which appearing: (check one)

Individual

Representative

If appearing in a representative capacity, name of the company, association or other entity being represented:

**FISCAL YEAR 2011**

federal grant(s)/ contracts	federal agency	dollar value	subject(s) of contract or grant
NONE			

**FISCAL YEAR 2010**

federal grant(s)/ contracts	federal agency	dollar value	subject(s) of contract or grant
NONE			




**FISCAL YEAR 2009**

Federal grant(s) / contracts	federal agency	dollar value	subject(s) of contract or grant
NONE			

**Federal Contract Information:** If you or the entity you represent before the Committee on Armed Services has contracts (including subcontracts) with the federal government, please provide the following information:

Number of contracts (including subcontracts) with the federal government:

Current fiscal year (2011): 0 ;  
 Fiscal year 2010: 0 ;  
 Fiscal year 2009: 0 ;

Federal agencies with which federal contracts are held:

Current fiscal year (2011): \_\_\_\_\_ ;  
 Fiscal year 2010: \_\_\_\_\_ ;  
 Fiscal year 2009: \_\_\_\_\_ ;

List of subjects of federal contract(s) (for example, ship construction, aircraft parts manufacturing, software design, force structure consultant, architecture & engineering services, etc.):

Current fiscal year (2011): \_\_\_\_\_ ;  
 Fiscal year 2010: \_\_\_\_\_ ;  
 Fiscal year 2009: \_\_\_\_\_ ;

Aggregate dollar value of federal contracts held:

Current fiscal year (2011): \_\_\_\_\_;  
Fiscal year 2010: \_\_\_\_\_;  
Fiscal year 2009: \_\_\_\_\_.

**Federal Grant Information:** If you or the entity you represent before the Committee on Armed Services has grants (including subgrants) with the federal government, please provide the following information:

Number of grants (including subgrants) with the federal government:

Current fiscal year (2011): 0 \_\_\_\_\_;  
Fiscal year 2010: 0 \_\_\_\_\_;  
Fiscal year 2009: 0 \_\_\_\_\_.

Federal agencies with which federal grants are held:

Current fiscal year (2011): 0 \_\_\_\_\_;  
Fiscal year 2010: 0 \_\_\_\_\_;  
Fiscal year 2009: 0 \_\_\_\_\_.

List of subjects of federal grants(s) (for example, materials research, sociological study, software design, etc.):

Current fiscal year (2011): \_\_\_\_\_;  
Fiscal year 2010: \_\_\_\_\_;  
Fiscal year 2009: \_\_\_\_\_.

Aggregate dollar value of federal grants held:

Current fiscal year (2011): \_\_\_\_\_;  
Fiscal year 2010: \_\_\_\_\_;  
Fiscal year 2009: \_\_\_\_\_.

**Dr. Kori Schake****Does Reducing the U.S. Nuclear Arsenal Advance Non-Proliferation?**

The question is enormously consequential, for if reductions in our arsenal cause threshold states to back away from proliferation, or states whose possession of nuclear weapons threatens the United States and its interests to relinquish their nuclear weapons, then reducing U.S. nuclear forces could increase our security. There is, however, no evidence that reducing our nuclear deterrent has that effect.

**Variety of Motivations**

States choose to acquire nuclear weapons for a range of reasons. Deterring attack or denying an adversary military advantage are the obvious spurs to nuclear possession. But they are not the only rationales, in some cases perhaps not even the principal ones. Regional distributions of power, national pride, bureaucratic politics, the influence of military in government, and norms of behavior that accord with national identity all affect state choices.

The list is not comprehensive; we cannot truly know what is motivating proliferant behavior. States rarely openly and honestly give their reasons for acquiring nuclear weapons, since possession is often not an end in itself but a means to affect the choices of other states and organizations. Politicians mislead, mischaracterize, and perhaps even misrepresent to themselves their motivations. Historical forensics permit us to evaluate, imperfectly, a state's choices after the fact.

The Iranian government, for example, characterizes their nuclear programs in

terms designed to stoke national pride and a sense of injustice toward those who would interfere. Until recently, at least, that has succeeded domestically: there is widespread support in Iran for their nuclear programs. A RAND study in 2010 found that 97% of Iranians consider nuclear enrichment a national right, although only 32% would support Iran developing nuclear weapons. This gives the Iranian government enormous incentives to maintain the belief that national pride is their motivation, even if it is not their motivation.

It is clear, though, that motivations vary, and often do not remain constant over time. In the U.S. case, for example, preventing Nazi Germany from acquiring a war-winning advantage was the initial motivation for our nuclear program, but the program continued after Germany's surrender. Shifting motivations are the norm rather than the exception, because states find additional justifications, bureaucratic momentum propels a program once started, prestige of the state becomes engaged once the program begins, and compensating actions by regional rivals reinforce security concerns that may have been initial motivations.

In some ways this makes most interesting the cases of states that begin nuclear programs but decide against crossing the nuclear threshold. Two of those cases bear particular scrutiny: Sweden, and South Africa. The Swedish case is one of a country capable of developing nuclear weapons deciding its security was better served by foregoing the possibility: it serves as a virtuous example. The South African case appears to be one of a country developing nuclear weapons in order to preserve their domestic political practices from

outside intervention that disarmed as the result of change of governance.

Regime change precipitated denuclearization in South Africa, and there is considerable evidence to suggest the same dynamic was at work in Argentina and also Brazil when they walked back their nuclear programs. The types of governments and their relationship to their population matter.

The salient point about motivations is that they do not correlate to the size or composition of U.S. nuclear arsenal. In the past twenty years, the United States has made significant reductions to its nuclear forces, as have the United Kingdom, France, the NATO alliance, and even Russia; in that same period of time, China, India and Pakistan have increased their nuclear arsenals, North Korea crossed the nuclear threshold, and Iran has been engaged in suspicious nuclear activity for which it will not satisfy International Atomic Energy Agency concerns.

### **Supply Side Thinking**

Because assessing motivations is such an imprecise and fallible art, most non-proliferation efforts have concentrated on restricting access to nuclear materials, knowledge, weapons and delivery systems. The exception to this approach -- and it is an enormous one -- is the extension of nuclear guarantees to American allies and allowing their participation in nuclear missions and planning.

More than thirty countries have the industrial infrastructure and scientific knowledge to develop nuclear weapons. Most of those countries are American allies: Japan, Australia, most of NATO Europe. In some cases they have

lingering historical resonances that an assertive unilateral defense posture would accentuate (Japan, Germany). In other cases they have national identities associated with norms of cooperative international security (the Netherlands, Norway). In all cases except Britain and France, they concluded that sharing in the American nuclear guarantee served their purposes better than developing forces of their own. And even France and Britain would consider their independent nuclear deterrents affected by choices about the American nuclear arsenal.

Those same countries are also the most active and creative designers of non-proliferation ideas, the most assiduous in policing transgressions against the norm. They caught the idea from us and advanced it, because norms spread among communities that have broad commonalities of values and perspectives. It is much more difficult to gain traction where there is little societal commonality.

Reducing U.S. nuclear forces even has the potential to spur proliferation among U.S. allies who rely on the guarantee of our nuclear umbrella extending to their defense. We have committed to the defense of twenty seven NATO states, Japan, South Korea, Australia. They have chosen instead to rely on the promise of our country to protect them, including by use of nuclear weapons. So, ironically, the most effective prevention against nuclear proliferation is the existence of U.S. nuclear forces and extension of defense commitments.

Another argument that is often raised in connection with the non-proliferation effect of nuclear guarantees is that it inhibits proliferation to our friends, but encourages proliferation by their regional rivals. That is, a guarantee to Japan

would incentivize Chinese possession of nuclear weapons, a guarantee to Saudi Arabia would incentivize Iranian nuclear acquisition. This is likely true; what data exists seems to support that proposition. And if preventing proliferation as a universal good is the point of our policies, then the U.S. should withhold such guarantees. But the abstract good of non-proliferation is not, or should not be, the purpose of our policies; it should be subordinate to the concrete good of protecting our interests and our friends around the world.

We would not care particularly if Sweden developed nuclear weapons; we would care greatly if Iran did. We were much less concerned about India crossing the nuclear threshold than we were, and are, worried about Pakistan as a nuclear state. The nature of a state and its international behavior greatly affect our judgment of the consequences of it breaching the norm of non-proliferation. Fostering norms that reward responsible actors is a worthwhile endeavor, and ought to be high up on the list of American national security objectives. But it is no substitute for protecting our interests and our friends when the objectives come into conflict.

#### **Case Study: Post-Cold War Europe**

Questioning the validity of extended nuclear deterrence is, of course, a parlor game of long standing, especially among NATO experts. Europeans worried the U.S. would not trade New York for Paris, worried the U.S. would lose a conventional war rather than escalate to fight a nuclear war, worried the Soviets could succeed conventionally before NATO could make the decision to escalate, and many other permutations. More recently, the German Foreign Minister

advocated withdrawing NATO nuclear forces from Germany. Foreign Minister Westerwelle was encouraged in this by some in the Obama Administration who support the proposition that reductions in our nuclear forces would precipitate reductions by Russia.

Despite the Obama Administration's advocacy, NATO allies unanimously concluded they were best served by relying on the U.S. guarantee and sharing the burden of nuclear deterrence: allies believe that as long as nuclear weapons exist, NATO must remain a nuclear power. Three times in the past three years, NATO allies have had the opportunity to walk back their support for U.S. nuclear forces stationed in Europe. The NATO Experts Group led by Madeleine Albright, the Alliance Strategic Concept unanimously adopted, and the Defense Review to implement that strategy all endorse the importance of nuclear weapons in NATO strategy, the importance of U.S. nuclear forces stationed in Europe to "make our security indivisible," and the value of sharing in nuclear missions rather than relying on U.S. strategic nuclear forces alone. They believe our non-strategic nuclear forces stationed in Europe reinforce transatlantic solidarity and give them important ways to participate in nuclear deterrence.

Europe is perhaps the least persuasive case on which to base the argument that reductions in the U.S. arsenal cause reductions in the arsenals of other countries. Since the end of the Cold War, NATO has reduced its nuclear inventory by more than 90%. Intermediate-range nuclear forces were eliminated by treaty before the end of the Cold War; the entirety of reductions after the Cold War have been in sub-strategic, or tactical, nuclear weapons. Nearly 2,000 sub-



strategic nuclear weapons were redeployed away from NATO Europe. The Russian reaction, so hoped for by advocates of setting an example of restraint? Nothing. The Russians did not remove a single nuclear weapon from west of the Ural Mountains. Nor did they diminish the role of nuclear weapons in their doctrine (the incapacities of Russian conventional forces have given incentives for increasing reliance on nuclear weapons). The Russians claim their sub-strategic nuclear forces are essential for defending their long land border in Asia, but their deployments remain in Europe. Russian military exercises also routinely incorporate the use of nuclear weapons in Europe, and their leaders casually discuss deploying sub-strategic forces to Kaliningrad as a means of “balancing” the expansion of NATO to include the Baltic states.

History gives few clean test cases for theories of international behavior, but the choices of NATO and Russia about sub-strategic nuclear forces repudiate the idea that virtuous reductions by us will lead to comparable behavior by our adversaries.

#### **If You Carry An Umbrella, It Won't Rain**

Even states to which we have not committed formally or by treaty consider our nuclear forces important in their decisions about proliferation, but not in the way the question posed to this panel suggests. Countries of the Gulf, for example, believe that as long as regional adversaries do not attain nuclear weapons, the U.S. conventional guarantee is sufficient to ensure their security. Saudi Arabia, however, has made clear that if Iran crosses the nuclear threshold, a conventional guarantee will be inadequate. Other countries in region are also

likely to press for either weapons of their own or extension of the U.S. nuclear umbrella to cover them. By retaining robust nuclear forces of our own, we foster the understanding by allies and countries that share our interests that they may be able to rely on nuclear guarantees from us rather than developing their own weapons. There is a point at which a small U.S. nuclear arsenal would create skepticism it could bear the numerous claims upon it.

It is even possible that U.S. nuclear forces in the numbers being considered by the Obama Administration are small enough to provoke proliferation. That is, adversaries may be tempted to believe if they accumulate more nuclear weapons they could reach parity with or surpass the United States. And while it may seem an odd and empty boast to American ears, the dynamics of proliferation are complex and deeply embedded in national cultures and circumstances. Superiority over American military power would be a compelling claim, especially for countries that cannot compete with the dynamism of American society. The countries we are most concerned about acquiring nuclear weapons are countries that believe they deserve to be great powers but are not -- and those are precisely the type of countries that might see advantage in the claim of replacing the United States as the world's strongest power or foreclosing to it military options.

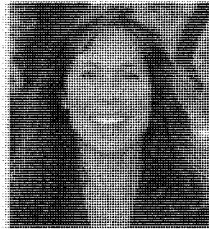
Nuclear weapons are existential -- their killing power is so destructive and the international norm against their use so deeply engrained that they are distinctive. Creating such devastation by other means would not carry the same psychological effect. The beliefs of policymakers early in the nuclear age, to

include President Eisenhower and Admiral Radford, that nuclear weapons were no more than increased yield explosives, has not proven true. The norms that have grown up around nuclear weapons are extremely powerful.

It is important to recognize that the United States is the main beneficiary of the norm against nuclear use. Having the strongest conventional military forces of any country gives us the ability to prevail in the non-nuclear domains. Whether we will continue to dominate as new arenas of action such as cyber warfare evolve is an open question, but tangential to whether nuclear reductions advance non-proliferation. The main warfighting purpose of nuclear weapons is to render any conventional war against the United States unwinnable. For in conventional wars, sometimes the most capable force loses.

The central argument for U.S. reductions is that it creates a norm of restraint, an example that will affect the choices of other states. To the extent that argument holds true at all, it applies principally to our allies, not to the countries we would be concerned about acquiring nuclear weapons. And yet, even our allies have repeatedly and recently sought to preserve the nuclear forces and commitments of the United States.

The soundest course of policy is to size and structure the U.S. nuclear arsenal to deter attack on the United States, to protect its friends and interests in the world. As in other military realms, sensible planning advocates a wide margin for error. In the nuclear realm specifically, that wide margin prevents any country from believing they could disarm our second strike capability or foreclose our military options.



## Kori Schake

RESEARCH FELLOW

**Expertise:** national security strategy, the effective use of military force, European politics

Kori Schake is a research fellow at the Hoover Institution and an associate professor of international security studies at the United States Military Academy.

During the 2008 presidential election, she was senior policy adviser to the McCain-Palin campaign, responsible for policy development and outreach in the areas of foreign and defense policy.

From 2007 to 2008 she was the deputy director for policy planning in the state department. In addition to staff management, she worked on resourcing and organizational effectiveness issues, including a study of what it would take to "transform" the state department so as to enable integrated political, economic, and military strategies.

During President Bush's first term, she was the director for Defense Strategy and Requirements on the National Security Council. She was responsible for interagency coordination for long-term defense planning and coalition maintenance issues. Projects Schake contributed to include conceptualizing and budgeting for continued transformation of defense practices, the most significant realignment of US military forces and bases around the world since 1950; creating NATO's Allied Command Transformation and the NATO Response Force; and recruiting and retaining coalition partners for operations in Afghanistan and Iraq.

She has held the Distinguished Chair of International Security Studies at West Point, and also served in the faculties of the Johns Hopkins School of Advanced International Studies, the University of Maryland's School of Public Affairs, and the National Defense University. She is on the boards of the journal *Orbis* and the Centre for European Reform and blogs for Foreign Policy's Shadow Government.

Her publications include *State of Disrepair: Fixing the Culture and Practices of the State Department* (Hoover Institution Press, 2012), *Managing American Hegemony: Essays*

on *Power in a Time of Dominance* (Hoover Institution Press, 2009), "Choices for the Quadrennial Defense Review" (*Orbis*, 2009), "Dealing with a Nuclear Iran" (*Policy Review*, 2007), "Jurassic Pork" (*New York Times*, 2006). She coauthored "How America Should Lead" (*Policy Review*, 2002), and coedited *The Berlin Wall Crisis: Perspectives on Cold War Alliances* (2002), and "Building a European Defense Capability" (*Survival*, 1999).

From 1990 to 1996, she worked in Pentagon staff jobs, first in the Joint Staff's Strategy and Policy Directorate (J-5) and then in the Office of the Secretary of Defense.

Last updated on March 1, 2012

**DISCLOSURE FORM FOR WITNESSES  
CONCERNING FEDERAL CONTRACT AND GRANT INFORMATION**

**INSTRUCTION TO WITNESSES:** Rule 11, clause 2(g)(5), of the Rules of the U.S. House of Representatives for the 112<sup>th</sup> Congress requires nongovernmental witnesses appearing before House committees to include in their written statements a curriculum vitae and a disclosure of the amount and source of any federal contracts or grants (including subcontracts and subgrants) received during the current and two previous fiscal years either by the witness or by an entity represented by the witness. This form is intended to assist witnesses appearing before the House Armed Services Committee in complying with the House rule. Please note that a copy of these statements, with appropriate redactions to protect the witness's personal privacy (including home address and phone number) will be made publicly available in electronic form not later than one day after the witness's appearance before the committee.

Witness name: KORI SCHAKE

Capacity in which appearing: (check one)

Individual

Representative

If appearing in a representative capacity, name of the company, association or other entity being represented:

**FISCAL YEAR 2011**

federal grant(s)/ contracts	federal agency	dollar value	subject(s) of contract or grant
none			

**FISCAL YEAR 2010**

federal grant(s)/ contracts	federal agency	dollar value	subject(s) of contract or grant
none			


**FISCAL YEAR 2009**

Federal grant(s)/ contracts	federal agency	dollar value	subject(s) of contract or grant
none			

**Federal Contract Information:** If you or the entity you represent before the Committee on Armed Services has contracts (including subcontracts) with the federal government, please provide the following information:

Number of contracts (including subcontracts) with the federal government:

Current fiscal year (2011): \_\_\_\_\_;  
 Fiscal year 2010: \_\_\_\_\_;  
 Fiscal year 2009: \_\_\_\_\_;

Federal agencies with which federal contracts are held:

Current fiscal year (2011): \_\_\_\_\_;  
 Fiscal year 2010: \_\_\_\_\_;  
 Fiscal year 2009: \_\_\_\_\_;

List of subjects of federal contract(s) (for example, ship construction, aircraft parts manufacturing, software design, force structure consultant, architecture & engineering services, etc.):

Current fiscal year (2011): \_\_\_\_\_;  
 Fiscal year 2010: \_\_\_\_\_;  
 Fiscal year 2009: \_\_\_\_\_;

Aggregate dollar value of federal contracts held:

Current fiscal year (2011): \_\_\_\_\_;  
Fiscal year 2010: \_\_\_\_\_;  
Fiscal year 2009: \_\_\_\_\_.

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Number of grants (including subgrants) with the federal government:

Current fiscal year (2011): \_\_\_\_\_;  
Fiscal year 2010: \_\_\_\_\_;  
Fiscal year 2009: \_\_\_\_\_.

Federal agencies with which federal grants are held:

Current fiscal year (2011): \_\_\_\_\_;  
Fiscal year 2010: \_\_\_\_\_;  
Fiscal year 2009: \_\_\_\_\_.

List of subjects of federal grants(s) (for example, materials research, sociological study, software design, etc.):

Current fiscal year (2011): \_\_\_\_\_;  
Fiscal year 2010: \_\_\_\_\_;  
Fiscal year 2009: \_\_\_\_\_.

Aggregate dollar value of federal grants held:

Current fiscal year (2011): \_\_\_\_\_;  
Fiscal year 2010: \_\_\_\_\_;  
Fiscal year 2009: \_\_\_\_\_.



Ambassador Thomas Graham Jr.

Nonproliferation and Disarmament: What's the Connection and What does it  
Mean for U.S. Security and Obama Administration Policy?

Subcommittee on Strategic Forces  
Committee on Armed Services  
U.S. House of Representatives  
Washington, DC

August 1, 2012

Mr. Chairman, Congresswoman Sanchez and Members of the  
Subcommittee.

It is as always an honor to appear before a distinguished Congressional  
Committee. Many of our important national debates are played out before  
committees of the Congress. In my personal judgment nuclear policy has  
received too little attention in open public hearings by the Congress. Thus I  
commend the Subcommittee for this hearing.

I am a substitute witness for Professor Scott Sagan so my testimony is  
additive to his. Scott has submitted an excellent paper to the Committee and I  
endorse it in its entirety. My objective will not be to repeat what Dr. Sagan has  
already said but to introduce some other thoughts.

First I have noticed that there is an impression among some that it was  
President Obama that first adopted the policy of seeking a nuclear weapon free

world. That is not the case. All during the Cold War and for years afterward one could not mention the concept of the elimination of nuclear weapons without being laughed out of the room. However, President Ronald Reagan made no secret of his passionate commitment to it. Perhaps no one believed that he really meant it yet he and General Secretary Gorbachev nearly negotiated such an agreement at the Reykjavik summit meeting in 1986.

As the years after the failure to achieve such an agreement at Reykjavik passed and world disorder and access to dangerous technologies became more threatening, concern about the mere existence of nuclear weapons began to increase. Finally, four senior American statesmen: former U.S. Secretary of State George Shultz; former U.S. Secretary of State Henry Kissinger; former U.S. Secretary of Defense William Perry; and former Chairman of the U.S. Senate Armed Services committee Sam Nunn decided to do something about this on the 20<sup>th</sup> anniversary of the Reykjavik meeting. This so called Gang of Four vigorously advocated/reviewing President Reagan's dream of nuclear disarmament in op-ed articles published in the Wall Street Journal in January, 2007 and January, 2008. In the 2007 Article the four authors said the following "Nuclear weapons were essential to maintaining international security during the Cold War because they were a measure of deterrence. The end of the Cold War made the doctrine of mutual Soviet - American deterrence obsolete. Deterrence continues to be a relevant consideration for many states with regard

to threats from other states. But reliance on nuclear weapons for the purpose is becoming increasingly hazardous and decreasingly effective.

....Apart from the terrorist threat, unless urgent new actions are taken, the U.S. soon will be compelled to enter a new nuclear era that will be more precarious, psychologically disorienting, and economically even more costly than was Cold War deterrence.

....Ronald Reagan called for the abolishment of all nuclear weapons, which he considered to be 'totally irrational, totally inhumane, good for nothing but killing, possibly destructive of life on earth and civilization'...The Non-proliferation Treaty (NPT) envisioned the end of all nuclear weapons....What should be done? Can the promise of the NPT and the possibilities envisioned at Reykjavik be brought to fruition? We believe that a major effort should be launched by the United States to produce a positive answer through concrete stages....Reassertion of the vision of a world free of nuclear weapons and practical measures toward achieving that goal would be, and would be perceived as, a bold initiative consistent with American's moral heritage....We endorse setting the goal of a world free of nuclear weapons and working energetically on the actions required to achieve that goal...."

The American president subsequently endorsed this policy. The Russian president also has endorsed this policy. A number of other world leaders have done the same. The entry into force of the New START Treaty and the two successful Nuclear Security Summits are significant, practical, concrete steps toward achieving the goal of the world-wide elimination of nuclear weapons of the type envisioned by the four authors.

President John F. Kennedy truly believed that there was a serious risk that nuclear weapons were destined to sweep all over the world. In March of 1963 in response to a reporter's question at a news conference, he said, "Personally, I am haunted by the feeling that by 1970 . . . there may be 10 nuclear powers instead of 4 and by 1975, 15 or 20. . . . I would regard that as the greatest possible danger and hazard." He spent much of his presidency pursuing the cause of nonproliferation. President Kennedy had been told by the outgoing Secretary of State, Christian Herter, in December of 1960 that nuclear weapons would spread to additional countries and that the most likely next nuclear weapon states were India and Israel. He took this very seriously.

If such anticipated proliferation had in fact happened, there could be significantly more than two dozen nuclear weapon states in the world today, with nuclear weapons integrated into their national arsenals. Dr. Mohamed El Baradei, the distinguished former Director General of the International Atomic

Energy Agency was quoted in 2004 in a speech in Washington DC, as follows, "The danger is so imminent...not only with regard to countries acquiring nuclear weapons but also terrorists getting their hands on some of these nuclear materials- uranium or plutonium." Director General El Baradei also stated in a presentation that year to the IAEA General Conference that more than 40 countries perhaps now have the capability to build nuclear weapons. Thus, if such proliferation had taken place, under the circumstances with that many nuclear weapon states in existence, potentially every significant conflict could have brought with it the risk of going nuclear, and it might have become extremely difficult to keep nuclear weapons out of the hands of terrorist organizations.

However, in 1965 the UN General Assembly took up the subject of nonproliferation. A Resolution was passed which over the next few years proved to be the blueprint of the Nuclear Nonproliferation Treaty, The NPT. Among other things this Resolution called for "balanced obligations" between nuclear weapon and non-nuclear weapon states in the treaty to be negotiated. The NPT was signed in 1968 and entered into force in 1970, and came to be recognized as the principal reason- along with the parallel extended deterrence policies of the United States and the Soviet Union- that President Kennedy's darkest nightmares have thus far not been realized. Beyond the five nuclear weapon states recognized by the NPT, to date, only four nations have acquired nuclear

weapons – two of them – India and Israel, were virtually there in 1970 – the date of entry into force of the NPT. This is far from what President Kennedy feared.

But the success of the NPT was no accident. It was based on a carefully crafted central bargain which incorporated the “balanced obligations” concept. In exchange for a commitment from the non-nuclear weapon states (today more than 180 nations, most of the world) not to acquire nuclear weapons and to submit to international safeguards to verify compliance with this commitment, the NPT nuclear weapon states pledged unfettered access to peaceful nuclear technologies and undertook to engage in nuclear disarmament negotiations aimed at the ultimate elimination of their nuclear arsenals. It is this central bargain that for the last four decades has formed the central underpinnings of the international nonproliferation regime.

However, one of the principal problems with all this has been that the NPT nuclear weapon states have never fully delivered on the disarmament part of this bargain. The essence of the disarmament commitment in 1970 and thereafter was that pending the eventual elimination of nuclear weapon arsenals the nuclear weapon states would: agree to a treaty prohibiting all nuclear weapon tests, that is a comprehensive nuclear test ban; negotiate an agreement prohibiting the further production of nuclear bomb explosive material;

undertake obligations to drastically reduce their nuclear arsenals; and give legally binding commitments that they would never use nuclear weapons against NPT non-nuclear weapon states. However much of these disarmament elements of the NPT basic bargain have not been accomplished forty years later.

But the NPT is essentially a strategic international political bargain which should be observed, it is not a gift from the non-nuclear weapon states. Therefore, few deny that today the NPT is in crisis. The question is how long can it remain viable as an unbalanced treaty with an important part of its basic bargain unrealized and a significant part unraveling as North Korea and Iran pursue the bomb. It is true that the norm of nonproliferation runs deep after forty years. It may be that the NPT can limp along for some years with only limited further proliferation or maybe not. But if the NPT ever fails today's security situation will seem like paradise by contrast.

Recognizing this vulnerability of the NPT, and with the end of the Cold War accompanied by the potential spread of nuclear weapon technology to failed and failing states and international terrorist organizations, serious efforts have begun to attempt to move toward the elimination of nuclear weapons, as called for in the NPT, led by the four authors as outlined above.

Since the mid-twentieth century almost all American presidents have placed arms control and nonproliferation policy high on their agendas. President Eisenhower considered his failure to achieve a nuclear test ban his greatest disappointment. The NPT, was signed on President Johnson's watch. President Nixon oversaw the negotiation of the SALT I Agreements and the beginning of the SALT II Treaty process. The SALT II process was continued under President Ford and concluded under President Carter. President Carter also attempted to negotiate a comprehensive nuclear test ban which was finally concluded under President Clinton's leadership. President Reagan advocated the abolition of all nuclear weapons and completed the medium range nuclear missile Treaty. The most successful arms control President was President George H.W. Bush. His Administration concluded four major arms control treaties during his four years as president: the START I Treaty, the START II Treaty, the Conventional Armed Forces in Europe Treaty and the Chemical Weapons Convention. No other president completed more than one. Thus, nuclear arms control, nonproliferation, and disarmament negotiations have been at the center of U.S. foreign policy for much of the last 50 years.

But explicitly prompted by the four authors, who met with him in 2009, no president has spoken out more eloquently and in such a comprehensive way as did President Obama in Prague last April. He declared his strong support for



a replacement START Treaty to be followed by deeper cuts in nuclear weapons leading to a multilateral nuclear weapon reduction negotiation involving all of the nuclear weapon states. He reiterated his support for U.S. ratification and entry into force of the Comprehensive Nuclear Test Ban Treaty (CTBT) and confirmed his support for a process leading to a nuclear weapon free world. He underscored his commitment to the strengthening of the NPT, along with measures to do more to safeguard fissile material around the world. And he urged the prompt negotiation of a fissile material cut-off treaty.

But of very great importance is the CTBT as an essential part of the basic bargain of the NPT. The NPT, the central international agreement underlying international peace and security in today's world, again is a strategic bargain built on a fundamental arrangement, nuclear nonproliferation for most of the world in exchange for peaceful nuclear cooperation and nuclear weapon disarmament to be undertaken by the five NPT recognized nuclear weapon states, the United States, the United Kingdom, France, Russia, and China. The principal quid for the quo of most nations of the world to never acquire nuclear weapons is the test ban. It is the only arms control agreement explicitly mentioned in the NPT, in preambular clause ten, and it is the most significant commitment made by the nuclear weapon states to bring the necessary political balance to the NPT. Such balance for the NPT was first called for by the General

Assembly Resolution in 1965, which was introduced by Sweden and India and, which led to the negotiation of the NPT. Thus, in 1968, at the time of NPT signature (Treaty entry into force was in 1970) as well as in 1995 when the NPT was made a permanent treaty, the undertaking of the nuclear weapon states to conclude a CTBT in the near future was essential to close the deal. Indeed without the commitment to the CTBT, permanent extension would not have been possible in 1995 and without it we could be faced with a possible NPT expiration in a few years. The non-nuclear weapon states understood in 1968, as well as in 1995, that, whereas nuclear weapon reductions are important and achievable, nuclear weapon elimination is a longer-term goal. But in exchange for their commitment never to have nuclear weapons, in their view at least, the NPT nuclear weapon states at least could stop the testing of nuclear weapons. The 1995 Statement of Principles which accompanied NPT indefinite extension and which the political price for NPT permanent extension explicitly called for the negotiation of a CTBT in one year, that is, by the end of 1996.

This deadline was met and the CTBT was signed in September 1996 with the United States as the first signatory. The Treaty provides by its terms that it will enter into force upon ratification by the 44 states that had nuclear facilities on their territory and were members of the Conference on Disarmament in 1996. Thirty-seven of those states have now ratified the CTBT and most of the rest are

waiting upon ratification by the United States. However, the U.S. Senate rejected the CTBT in 1999 and there has been no progress in the U.S. since. Yet this Treaty is essential to the long-term viability of the NPT, the existence of which is the principal reason that President Kennedy's nightmares of nuclear weapon proliferation have not happened. The NPT may not be able to survive as a viable regime without CTBT entry into force in the reasonably near future.

However, the debate today is to a large degree focused on the threats to the NPT and international security posed by nuclear programs of North Korea and Iran. They are both very serious. North Korea has withdrawn from the NPT, built in the range of 10-12 nuclear weapons, established programs of both plutonium reprocessing and uranium enrichment to achieve further nuclear weapon capability, conducted ballistic missile tests and carried out two nuclear weapon tests – one a failure and one partly successful. In the process of doing all this North Korea threatens both the viability of the NPT and its neighbors in Northeast Asia. Iran appears to be pursuing a nuclear weapon capability from within the NPT. This program has created a major security problem for the world community. Should Iran acquire a nuclear weapon stockpile likely the result would be the widespread proliferation of nuclear weapons in the Middle East thereby destroying the NPT and creating a truly grave and long-lasting international security crisis. It is important to exert a major effort to resolve these two problems.

The North Korean program stretches far back into history but by 2000 this problem was largely solved. The Agreed Framework, which had stopped the DPRK plutonium bomb program, was in place. North Korea had done virtually nothing with the uranium bomb technology acquired clandestinely from Pakistan's Great Proliferator, A.Q. Khan. The DPRK had offered to permanently halt its missile program and had suggested that a peace treaty formally ending the Korean War was possible. But the following year this progress was not pursued by the United States. The Agreed Framework was abandoned. North Korea began developing its uranium bomb capability. The missile deal was terminated. Soon, in 2003, the DPRK withdrew from the NPT, conducted two reprocessing campaigns for plutonium, and built 10-12 nuclear weapons and carried out two tests. In 2010 North Korea unveiled a brand new uranium enrichment plant, perhaps superior to anything Iran has. After the second test the DPRK declared it was a nuclear weapon state. Missile tests continued. After all of this it may be difficult for North Korea to give up its now acquired, in their eyes, nuclear weapon status.

The Iranian program also goes back many decades to the time of the Shah. But the West had its chances to bring it under control. First in 1997, after the liberal President Mohammad Khatami was elected there was a window when negotiations might have been possible. Three years later, the Clinton Administration did try by offering major trade concessions but apparently it was too little, too late.

The second chance came in the fall of 2001. On September 12, 2001 the whole world was with the U.S. It was a unique historic moment and opportunity. Iran believed it must respond to this, the Supreme Leader, Iran's President and others made statements to the effect that was no reason the U.S. and Iran could not work together and encouraged American investment in Iran. That fall Iran urged its Shia allies in Afghanistan to work with the Northern Alliance and the U.S.; Iran gave the U.S. a land supply route into Afghanistan across Iranian territory; it offered to return downed U.S. fliers; it helped greatly with the establishment of the Karzai government at the conference in Bonn and pledged \$350 million to the new government. But this came to naught.

The third and last chance came in April, 2003. After U.S. forces swept into Baghdad, Iran feared it might be next and decided to offer the U.S. a grand bargain, reportedly explicitly agreed to by the Supreme Leader. Iran offered to cease support of Islamic Jihad and Hamas and disarm Hezbollah, support the Saudi Palestine peace plan in the course of recognizing Israel and supporting the two state solution. Iran offered to open up its nuclear program to round the clock inspection and to permit direct U.S. involvement; there would be a united front against all terrorist organizations, especially Al-Qaeda. Iran would work with the U.S. to create a stable, democratic, secular government in Iraq. In return Iran wanted sanctions lifted, the right to claim war reparations from Iraq from the 1980-88 war, a recognition of their right to nuclear, chemical and biological technology consistent with existing treaties, and

acknowledgement of Iran's "legitimate security interests", all, as they said, in a "dialogue of mutual respect." It is not certain that this was a serious proposal but the U.S. never answered it to find out.

Iran's actions in negotiations, with various combinations of states, e.g., the EU Three (the U.K., France and Germany); the P-5 plus 1 (the U.N. Security Council permanent five with the addition of Germany), ever since probably has been tactical, not strategic. However, the negotiations presently going on between the P-5 plus 1 and Iran may hold promise only time will tell.

As the four authors indicated, the U.S. soon may enter a new nuclear era that will be more precarious, psychologically disorienting, and economically even more costly than was Cold War deterrence. As Paul Nitze indicated in his 1999 op-ed nuclear weapons would become a threat even to their possessors. The authors noted that President Ronald Reagan called for the abandonment of all nuclear weapons and they endorsed "setting the goal of a world free of nuclear weapons and working energetically on the actions required to achieve that goal..." But no one anticipates that this policy, called for by the four authors, however desirable, can succeed rapidly. The elimination of nuclear weapons is not a policy for the short-term; it is a policy for the long-term. In the interim it is of the utmost importance that the NPT be restored to viability and that it hold the line for the many years ahead. The North Korean and

Iranian threats must be effectively addressed and the NPT basic bargain set right in the eyes of the world community, thereby restoring the political balance of the NPT.

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***Ambassador Thomas Graham, Jr.*** is the Executive Chairman of the Board of Lightbridge Corporation, a company which develops new types of nuclear power fuel based on high power density metallic technology. These fuels are designed to improve the economics of existing and new nuclear power plants while enhancing safety characteristics and proliferation resistance and reducing waste. Lightbridge is a U.S. company located in McLean, Virginia, listed on the NASDAQ, which conducts its primary research and development work in the United States and in Russia.

In December of 2009, Ambassador Graham was appointed to the United Arab Emirates' International Advisory Board, helping to guide that country's nuclear energy program and hold it to the highest standards of safety, security, non-proliferation and transparency. Ambassador Graham is also Chairman of the Board of CanAlaska Uranium Ltd. of Vancouver, Canada a uranium exploration company.

Internationally known as one of the leading authorities in the field of international arms control and non-proliferation agreements designed to limit and to combat the proliferation of nuclear, biological, and chemical weapons. Ambassador Graham served as a senior U.S. diplomat involved in the negotiation of every major international arms control and non-proliferation agreement in which the United States was involved during the period 1970-1997. This includes The Strategic Arms Limitations Talks (the Interim Agreement on Strategic Offensive Arms, the Anti Ballistic Missile Treaty and the SALT II Treaty), The Strategic Arms Reduction Talks (the START I Treaty and the START II Treaty), the Intermediate Range Nuclear Forces (INF) Treaty, the Nuclear Non-Proliferation Treaty extension (NPT), the Conventional Armed Forces in Europe Treaty, and the Comprehensive Test Ban Treaty.

In 1993, Ambassador Graham served as the Acting Director of the U.S. Arms Control and Disarmament Agency (ACDA) and for seven months in 1994 served as the Acting Deputy Director. From 1994 through 1997, he served as the Special Representative of the President for Arms Control, Non-Proliferation, and



Disarmament, appointed by President Clinton and in this capacity in 1994-1995 led U.S. government efforts to achieve the permanent extension of the NPT. He also served for 15 years as the general counsel of ACDA.

He additionally served among other assignments as the Legal Advisor to the U.S. SALT II, START I, and START II Delegations, the senior arms control agency representative to the U.S. INF Delegation and the U.S. Conventional Armed Forces in Europe Delegation.

Ambassador Graham worked on the negotiation of The Chemical Weapon Convention and The Biological Weapons Convention. He drafted the implementing legislation for the Biological Weapons Convention and managed the Senate approval of the ratification of the Geneva Protocol banning the use in war of chemical and biological weapons.

Ambassador Graham is a widely published author in both scholarly journals and major newspapers for example publishing a major article on nuclear weapon proliferation in the National Strategy Forum Review in 2007. A comparable article in the Baker Center Journal for Applied Public Policy at the University of Tennessee also was published in 2007. In 2008 with Ambassador Max Kampelman, Ambassador Graham published an article on the elimination of nuclear weapons in the *Washington Times* and an article on the Test Ban in *Spectrum*, the magazine of the Comprehensive Test Ban Treaty Office. He also published an article with Russell Schweickart on asteroids, NASA and nuclear weapons in the March, 2008 issue of *Scientific American*. In the spring of 2012, the Baker Center Journal published a second article entitled the Nuclear Non-Proliferation Treaty Under Threat: Iran and North Korea. Ambassador Graham has authored six books. *Disarmament Sketches: Three Decades of Arms Control and International Law* (2002), *Cornerstones of Security: Arms Control and International Law in a Nuclear Era* (2003) with Damien LaVera, *Common Sense on Weapons of Mass Destruction* (2004), *Spy Satellites and Other Technologies that Have Changed the Course of History* (2007) with Keith Hansen, and *Endless Crisis: National Security Policy after 9/11* (2012), were published by the University of Washington Press. A second book with Keith Hansen, *Preventing Catastrophe: The Use and Misuse of Intelligence in Efforts to Halt the Proliferation and Use of Weapons of Mass Destruction* was published by Stanford University Press in 2009. He has taught at many prestigious universities, including the University Of Virginia School Of Law, the Georgetown School of Foreign Service, the Georgetown University Law Center, Stanford University, the University of California at Berkeley, the Jackson School of International Studies at the University of Washington and the University of Tennessee.

Ambassador Graham received an A.B. in 1955 from Princeton University and a J.D. in 1961 from Harvard Law School. He is a member of the Kentucky, the District of Columbia and the New York Bars and is a member of the Council on Foreign Relations. He chaired the Committee on Arms Control and Disarmament of the American Bar Association from 1986-1994. Ambassador Graham received the Trainor Award for Distinction in Diplomacy from Georgetown University in 1995. On May 2, 2007 Ambassador Graham received the 2006 World Order Under Law Award of the International Section of the American Bar Association. He twice received the Distinguished Honor Award, twice the Superior Honor Award and the Meritorious Honor Award from ACDA. He also received the Meritorious Honor Award from the Department of State.

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Witness name: THOMAS GRAHAM JR (AMBASSADOR - RET.)

Capacity in which appearing: (check one)

Individual

Representative

If appearing in a representative capacity, name of the company, association or other entity being represented:

**FISCAL YEAR 2011**

federal grant(s) / contracts	federal agency	dollar value	subject(s) of contract or grant

**FISCAL YEAR 2010**

federal grant(s) / contracts	federal agency	dollar value	subject(s) of contract or grant


**FISCAL YEAR 2009**

Federal grant(s) / contracts	federal agency	dollar value	subject(s) of contract or grant

**Federal Contract Information:** If you or the entity you represent before the Committee on Armed Services has contracts (including subcontracts) with the federal government, please provide the following information:

Number of contracts (including subcontracts) with the federal government: *NONE*

Current fiscal year (2011): *NONE* ;  
 Fiscal year 2010: *NONE* ;  
 Fiscal year 2009: *NONE* .

Federal agencies with which federal contracts are held: *NONE*

Current fiscal year (2011): *NONE* ;  
 Fiscal year 2010: *NONE* ;  
 Fiscal year 2009: *NONE* .

List of subjects of federal contract(s) (for example, ship construction, aircraft parts manufacturing, software design, force structure consultant, architecture & engineering services, etc.): *NONE*

Current fiscal year (2011): *NONE* ;  
 Fiscal year 2010: *NONE* ;  
 Fiscal year 2009: *NONE* .

Aggregate dollar value of federal contracts held: *NONE*

Current fiscal year (2011): NONE ;  
Fiscal year 2010: NONE ;  
Fiscal year 2009: NONE .

**Federal Grant Information:** If you or the entity you represent before the Committee on Armed Services has grants (including subgrants) with the federal government, please provide the following information: NONE

Number of grants (including subgrants) with the federal government:

Current fiscal year (2011): NONE ;  
Fiscal year 2010: NONE ;  
Fiscal year 2009: NONE .

Federal agencies with which federal grants are held:

Current fiscal year (2011): NONE ;  
Fiscal year 2010: NONE ;  
Fiscal year 2009: NONE .

List of subjects of federal grants(s) (for example, materials research, sociological study, software design, etc.): NONE

Current fiscal year (2011): NONE ;  
Fiscal year 2010: NONE ;  
Fiscal year 2009: NONE .

Aggregate dollar value of federal grants held: NONE

Current fiscal year (2011): NONE ;  
Fiscal year 2010: NONE ;  
Fiscal year 2009: NONE .

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**DOCUMENTS SUBMITTED FOR THE RECORD**

AUGUST 1, 2012

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COMMENT

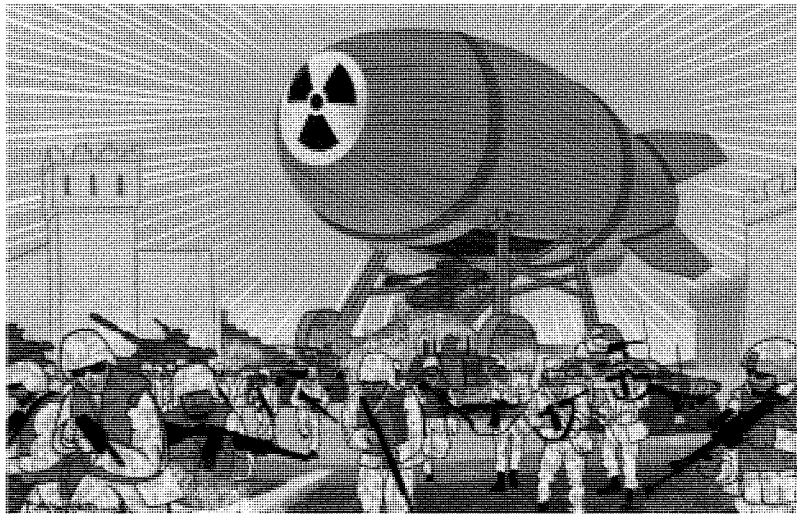


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## A call for global nuclear disarmament

Danger from nuclear weapons is mounting. It is time to take control of the nuclear fuel cycle and move towards a world without warheads, says **Scott D. Sagan**.

Declassified documents have revealed that the 1962 Cuban missile crisis was far more dangerous than anyone knew at the time. An American U-2 spy plane accidentally flew into Soviet airspace and US fighter jets armed with nuclear-tipped missiles entered the Bering Strait to rescue it. US Minuteman missile controllers jury-rigged their systems so that they could launch the nuclear missiles on their own if necessary. Pentagon planners began preparing for the possible invasion of Cuba, totally unaware that Soviet tactical nuclear weapons were already deployed on the island and that local commanders had the authority to use them<sup>1</sup>. US President John F. Kennedy and Soviet Premier Nikita Khrushchev avoided nuclear war in October 1962, but we now know how close they came to disaster<sup>2</sup> (see page 27).

Fifty years on, we live in a nuclear world that has not just two superpowers but nine nuclear-weapons states, with new ones looming on the horizon (see 'World of weapons'). The governments of these emergent nuclear states may not make the same mistakes that Russia and the United States made during the cold war, but they will make others.

We have entered a grave new world where governments believe that shielding themselves with their nuclear weapons will allow them to engage more safely in aggressive action, and increase nuclear proliferation by selling their technology to other governments. And it is a world where nuclear materials and weapons are becoming

increasingly vulnerable to theft and use by terrorists.

Looking at this prospect, some politicians and analysts have optimistically argued that new nuclear powers will behave cautiously and that a stable form of global nuclear deterrence is likely. For example, in 2007 Jacques Chirac, then president of France, told the press that it "would not be very dangerous" if Iran obtained nuclear weapons. If Iranian leaders ever used the bomb, he argued, Tehran would be destroyed immediately in retaliation<sup>3</sup>. Others are more pessimistic and insist that the only way to counter nuclear proliferators such as Iran is through preventive military operations. But such attacks are unlikely to be completely effective, could trigger wider wars and, over the long term, could actually

[NATURE.COM](http://NATURE.COM)  
More on scientific steps to nuclear disarmament:  
[go.nature.com/szcy9e](http://go.nature.com/szcy9e)

encourage the spread of nuclear weapons.

Neither passivity nor preventive war are likely to lead to a safer nuclear future. Given the gravity of the risks we face, careful and steady movement towards global nuclear disarmament should be our goal. The complex and global nature of emerging nuclear dangers will require complex and global solutions. Scientists, engineers and governments must work together to improve verification of nuclear disarmament and to strengthen international control of uranium enrichment and plutonium reprocessing technologies.

#### EMERGING DANGERS

The dangers of the emerging nuclear landscape can be seen clearly in Pakistan. Within months of testing its first nuclear weapon in May 1998, the Pakistani military sent soldiers disguised as *mujahedin* guerrillas into Indian-held Kashmir, a move that sparked the 1999 Kargil War and led to a series of nuclear threats between New Delhi and Islamabad. Pakistani nuclear scientist Abdul Qadeer Khan then established an infamous network that sold centrifuge technology to Iran, North Korea and Libya. Pakistan also highlights the risks of nuclear terrorism: the army is fighting internal Pakistani Taliban threats and has been penetrated by Islamist radical insiders<sup>4</sup>.

Islamabad is aware of these dangers and has strengthened security measures, some with US assistance, including steps to ensure the reliability of its personnel and to protect its nuclear arsenal from terrorists while the weapons are stored in bunkers at military bases<sup>5</sup>. Yet a dangerous 'vulnerability-involvement paradox' remains. In a future crisis with India, the Pakistani military is likely to place its nuclear arsenal on alert, mating the warheads with mobile missile launchers and moving the missiles outside its bases and into field positions. This operation would make Pakistan less vulnerable to attack by India, but make the weapons far more vulnerable to seizure by terrorists.

Similar nuclear dangers can be seen in Iraq, which tried and failed to develop the bomb. We now know, from documents captured after the fall of Baghdad in 2003, that Saddam Hussein abandoned his secret nuclear-weapons-development programme after UN inspectors discovered it in the wake of the first Gulf War. But we can learn important lessons about how new nuclear-weapons states might act by studying how Saddam envisioned using nuclear weapons as a shield for aggression towards other nations.

The captured documents reveal that before the invasion of Kuwait in 1990, Saddam predicted that Iraq would have nuclear weapons within five years. He asked his colleagues, rhetorically, "If the Arabs were to have a nuclear bomb, wouldn't

they take the territories that were occupied after 1967?"<sup>6</sup> In the late 1970s, Saddam told Iraqi leaders that owning nuclear weapons would permit Iraq to launch a conventional war against Israel without the fear that Tel Aviv would, in desperation, retaliate with its nuclear arsenal. The transcript of Saddam's secret speech is chilling: "We can guarantee the long war that is destructive to our enemy, and take at our leisure each metre of land and down the enemy with rivers of blood."<sup>7</sup> The world is fortunate that Saddam was forced to destroy his nuclear programme after the 1991 Gulf War.

North Korea poses a serious nuclear threat. Its government has behaved aggressively since conducting its first nuclear test in 2006, and a second in 2009. In 2010, it was accused of sinking a South Korean Navy vessel, the *Cheonan*, which killed 46 seamen. North Korean artillery shelled the South Korean island of Yeonpyeong in November that year, killing two marines and two civilians. In addition, North Korea is such an economic basket case that it seems willing to sell almost anything: from counterfeit currency, fake pharmaceuticals and illicit drugs to the more lucrative business of smuggling missile and nuclear technology. North Korean leaders may not sell actual nuclear bombs to other countries — they have only enough nuclear material for a handful of weapons for their own country's use — but they have shipped missiles without nuclear warheads to Pakistan and Iran. They were also caught secretly selling uranium hexafluoride (used to make nuclear reactor fuel, or a bomb) to Libya in 2004 and a plutonium production reactor to Syria in 2007.

#### IRAN'S NUCLEAR SHIELD

Why should we worry about a nuclear Iran? The gravest danger is not that leaders in Tehran will order a suicidal nuclear first strike on Israel or the United States. The real danger is that if Iran acquires nuclear weapons, leaders in Tehran will see them as a shield behind which they can engage in conventional and terrorist aggression.

Iran is already a major arms supplier to Hezbollah, the Lebanon-based Shi'a militia, and supports its attacks against civilian and military targets inside Israel and other Middle Eastern countries. Iran also covertly armed Iraqi Shi'a militia fighting US troops in Iraq. Moreover, the Islamic Revolutionary Guard Corps — responsible for running Iran's operations in support of terrorist organizations — controls the nuclear programme. To have nuclear command and terrorist ties within the same organization is a deadly mix. Saudi officials have declared that if Iran gets the bomb, they too will develop a nuclear arsenal, which would add one more to the list of dangerous new nuclear states.

Given how far Iran has already gone with

its nuclear programme, some politicians and analysts advocate air strikes — or even a preventive war — against the country. An attack, however, would have serious global economic costs, cause many Iranian civilian casualties and would be unlikely to solve the problem. Preventive attacks can invigorate rather than destroy a covert nuclear-weapons programme. We learned this in 1981, when Israeli jet fighters bombed Iraq's only nuclear reactor, and Saddam then started a better-funded and more covert nuclear-weapons

*"The choice is between a world free of nuclear weapons or one with many more nuclear states."*

programme based on secret uranium-enrichment facilities<sup>8</sup>.

Fortunately, we are not yet at the crisis point when the options are to attack Iran or live with a nuclear-armed Iran.

The global policy objective should be to push the day of reckoning over the distant horizon. We must create time for sanctions and cyber-sabotage to delay Iran's progress, raise the costs of its unwillingness to constrain its enrichment programme, and enable diplomatic initiatives to be effective. A potential negotiated settlement could include agreement for regular international inspections but allow Iran to keep the Natanz uranium-enrichment centre and a store of low-enriched uranium. This would not be ideal because it would leave Iran with a long-term nuclear break-out option. But it would be better than a preventive attack or blind faith in nuclear deterrence.

Nuclear weapons may have been a dangerous necessity to ensure the cold war stayed cold. But scholars and policy-makers who are nostalgic for the brutal simplicity of that era's nuclear deterrence do not understand how much the world has changed. The choice we face today is not between a nuclear-weapons-free world or a return to bipolar cold war deterrence, but between a world free of nuclear weapons or one with many more nuclear states.

#### ROAD TO DISARMAMENT

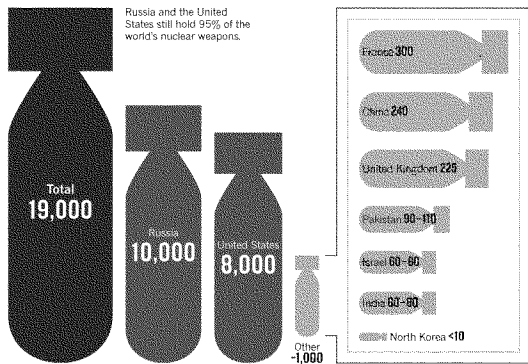
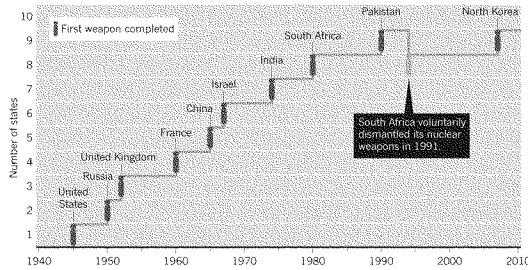
The technical and political challenges that confront proponents of nuclear disarmament are complex and serious. We lack adequate disarmament-verification technology, such as techniques to permit remote sensing of covert weapons-related activities. Some allies rely on extended nuclear security guarantees — US commitments to retaliate with nuclear weapons if the ally is attacked. And increasing numbers of countries are both developing nuclear power and demanding the right to build uranium enrichment and plutonium reprocessing facilities, which could be used for peaceful or nefarious purposes. It is by no means clear that the United States and



COMMENT

WORLD OF WEAPONS

Since the start of the cold war, the number of nuclear states has risen to nine, adding to regional tensions.



other nuclear-weapons states will overcome these challenges any time soon. What is clear is that existing nuclear-weapons states cannot disarm without the partnership of non-nuclear-weapons states<sup>1</sup>.

President Barack Obama, unlike previous US presidents, has correctly noted that the nation's membership in the Non-Proliferation Treaty (NPT) commits it to working towards nuclear disarmament<sup>10</sup>. By taking its NPT obligations seriously, his administration's 2010 Nuclear Posture Review argued, "we strengthen our ability to mobilize broad international support for the measures needed to reinforce the non-proliferation regime and secure nuclear materials worldwide"<sup>11</sup>. At the successful 2010 NPT Review Conference, most non-aligned countries praised the New START (Strategic Arms Reduction Treaty) US–Russian arms-control agreement, and supported the creation of nuclear-power inspection protocols. This shows that

progress on disarmament aids success in non-proliferation<sup>12</sup>.

It will be more difficult to achieve disarmament if there are many 'latent nuclear-weapons states' with their own uranium enrichment or plutonium reprocessing facilities that could produce fuel for nuclear power or weapons. It is imperative that governments work together to establish international control of such enrichment and reprocessing technologies — although they are used to produce nuclear fuel for power reactors, they could also be misused to build nuclear bombs. All such facilities should, in the future, be managed by an international agency and built under permanent safeguard agreements that ensure that if any country were to withdraw from the NPT, it could not then legally use the facility for a nuclear-weapons programme.

There are many important tasks for scientists and engineers on what will be, at best, a long and winding road towards nuclear

disarmament. We will need advanced verification technologies that can detect covert weapons-related activities remotely. As states move down the disarmament path, improved stockpile-stewardship programmes will be needed to ensure that nuclear arsenals remain reliable as they shrink, without the need for nuclear testing. We will also need to design advanced nuclear reactors that can produce energy for civilian purposes, but with less risk that this will lead to weapons proliferation or theft of nuclear materials by terrorists.

A nuclear-weapons-free world will not be a world without conflicts of interest or war. Nor will it be a utopia in which governments never feel tempted to cheat on their global obligations. Indeed, the maintenance of 'global zero' would require that conventionally armed major powers be prepared to enforce nuclear disarmament and non-proliferation commitments in a fair and vigorous manner. Potential proliferators may have to be 'forced' to comply.

The strategic challenges we face are daunting and we may end up with small nuclear arsenals rather than attain the global-zero landmark. But even that would be a much safer world than the one we live in now. If we fail to work together to achieve nuclear disarmament, the world we are heading towards — bristling with nuclear-weapons states, with more nuclear weapons, and the ever-present threat of nuclear terrorism — is even more fraught with danger. ■ SEE COMMENT P.27

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# Shared Responsibilities for Nuclear Disarmament

Scott D. Sagan

Interest in nuclear disarmament has grown rapidly in recent years.<sup>1</sup> Starting with the 2007 *Wall Street Journal* article by four former U.S. statesmen—George Shultz, Henry Kissinger, William Perry, and Sam Nunn—and followed by endorsements from similar sets of former leaders from the United Kingdom, Germany, Poland, Australia, and Italy, the support for global nuclear disarmament has spread.<sup>2</sup> The Japanese and Australian governments announced the creation of the International Commission on Nuclear Non-Proliferation and Disarmament in June 2008. Both Senators John McCain and Barack Obama explicitly supported the vision of a world free of nuclear weapons during the 2008 election campaign. In April 2009, at the London Summit, President Barack Obama and President Dmitri Medvedev called for pragmatic U.S. and Russian steps toward nuclear disarmament, and President Obama then dramatically reaffirmed “clearly and with conviction America’s commitment to seek the peace and security of a world without nuclear weapons” in his speech in Prague.

There is a simple explanation for these statements supporting nuclear disarmament: all states that have joined the Nuclear Non-Proliferation Treaty (NPT) are committed “to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament.” In the United States, moreover, under Clause 2 of Article 6 of the Constitution, a treaty commitment is “the supreme Law of the Land.” To

1. This essay was first published in *Daedalus* 138 (4) (Fall 2009).

2. George P. Shultz, William J. Perry, Henry A. Kissinger, and Sam Nunn, “A World Free of Nuclear Weapons,” *The Wall Street Journal*, January 4, 2007, and “Toward a Nuclear-Free World,” *The Wall Street Journal*, January 15, 2008; Douglas Hurd, Malcolm Rifkind, David Owen, and George Robinson, “Stop Worrying and Learn to Ditch the Bomb,” *The Times* (London), June 30, 2008; Alexander Kwasniewski, Tadeusz Mazowiecki, and Lech Walesa, “The Vanishing Bomb,” *The Moscow Times*, April 7, 2009; Helmut Schmidt, Richard von Weizsacher, Egon Bahr, and Hans-Dietrich Genscher, “Toward a Nuclear-Free World: A German View,” *International Herald Tribune*, January 9, 2009; Massimo D’Alema, Gianfranco Fini, Giorgio La Malfa, Arturo Parisi, and Francesco Calogero, “A World Free of Nuclear Weapons,” *Corriere Della Sera*, July 24, 2008; Malcolm Fraser, Gustav Nossal, Barry Jones, Peter Gratton, John Sanderson, and Tilman Ruff, “Imagine There’s No Bomb,” *The Age*, April 8, 2009.

affirm the U.S. commitment to seek a world without nuclear weapons is therefore simply promising that the U.S. government will follow U.S. law.

A closer reading of these various declarations, however, reveals both the complexity of motives and the multiplicity of fears behind the current surge in support of nuclear disarmament. Some declarations emphasize concerns that the current behavior of nuclear-weapons states (NWS) signals to non-nuclear-weapons states (NNWS) that they, too, will need nuclear weapons in the future to meet their national security requirements. Other disarmament advocates stress the growth of global terrorism and the need to reduce the number of weapons and the amount of fissile material that could be stolen or sold to terrorist groups. Some argue that the risk of nuclear weapons accidents or launching nuclear missiles on false warning cannot be entirely eliminated, despite sustained efforts to do so, and thus believe that nuclear deterrence will inevitably fail over time, especially if large arsenals are maintained and new nuclear states, with weak command-and-control systems, emerge.

Perhaps the most widespread motivation for disarmament is the belief that future progress by the NWS to disarm will strongly influence the future willingness of the NNWS to stay within the NPT. If this is true, then the choice we face for the future is *not* between the current nuclear order of eight or nine NWS and a nuclear-weapons-free world. Rather, the choice we face is between moving toward a nuclear-weapons-free world or, to borrow Henry Rowen's phrase, "moving toward life in a nuclear armed crowd."<sup>3</sup>

There are, of course, many critics of the nuclear disarmament vision. Some critics focus on the problems of how to prevent nuclear weapons "breakout" scenarios in a future world in which many more countries are "latent" NWS because of the spread of uranium enrichment and plutonium reprocessing capabilities to meet the global demand for fuel for nuclear power reactors. Others have expressed fears that deep nuclear arms reductions will inadvertently lead to nuclear proliferation by encouraging U.S. allies currently living under "the U.S. nuclear umbrella" of extended deterrence to pursue their own nuclear weapons for national security reasons. Other critics worry about the "instability of small numbers" problem, fearing that conventional wars would break out in a nuclear disarmed world, and that this risks a rapid nuclear rearmament race by former NWS that would lead to nuclear first use and victory by the more prepared government.

Some critics of disarmament falsely complain about nonexistent proposals for U.S. *unilateral* disarmament. Frank Gaffney, for example, asserts that there has been "a 17-year-long unilateral U.S. nuclear freeze" and claims that President Obama "stands to transform the 'world's only superpower' into a nuclear

3. See Albert Wohlstetter, Thomas A. Brown, Gregory Jones, David McGarvey, Henry Rowen, Vincent Taylor, and Roberta Wohlstetter, "Moving Toward Life in a Nuclear Armed Crowd?" *Report for the Arms Control and Disarmament Agency*, April 22, 1976; <http://www.npcc-web.org/Frameset.asp?PageType=Single&PDFFile=19751204-AW-EtAl-MovingTowardsLifeNuclearArmedCrowd&PDFFolder=Essays>.

impotent.”<sup>4</sup> More serious critics focus on those problems—the growth and potential breakout of latent NWS, the future of extended deterrence, the enforcement of disarmament, and the potential instability of small numbers—that concern *mutual* nuclear disarmament. These legitimate concerns must be addressed in a credible manner if significant progress is to be made toward the goal of a nuclear-weapons-free world.

To address these problems adequately, the current nuclear disarmament effort must be transformed from a debate among leaders in the NWS to a coordinated global effort of shared responsibilities between NWS and NNWS. This essay outlines a new conceptual framework that is needed to encourage NWS and NNWS to share responsibilities for designing a future nuclear-fuel-cycle regime, rethinking extended deterrence, and addressing nuclear breakout dangers while simultaneously contributing to the eventual elimination of nuclear weapons.

The NPT is often described as a grand bargain between NWS and NNWS. The NNWS, it is said, agreed not to acquire nuclear weapons in exchange for the “inalienable right,” under Article IV of the Treaty, to acquire civilian nuclear power technology under international nonproliferation safeguards and the promise by the NWS, under Article VI of the Treaty, to work in good faith to eliminate eventually all of their nuclear weapons. Wolfgang Panofsky, for example, argued:

Non-nuclear Weapons States were enjoined from acquiring nuclear weapons and Nuclear Weapons States were forbidden to transfer nuclear weapons and the wherewithal to make them to an NNWS. To compensate for this obvious discriminatory division of the world’s nations, NNWS were assured that they had an “inalienable right” to the peaceful application of nuclear energy, and the NWS obligated themselves in Article VI of the treaty to work in good faith toward nuclear disarmament.<sup>5</sup>

In his 2009 Prague speech, President Obama similarly maintained that “the basic bargain is sound: Countries with nuclear weapons will move towards disarmament, countries without nuclear weapons will not acquire them, and all countries can access peaceful nuclear energy.”

These statements correctly highlight the important linkage between nuclear disarmament and nuclear nonproliferation. But framing the linkage in this way—with NWS seen as responsible for disarmament and NNWS responsible for accepting nonproliferation safeguards on their nuclear power programs—is historically inaccurate and politically unfortunate. It is historically inaccurate because both Article IV and Article VI were written to apply *to both* the

4. Frank Gaffney, Jr., “Peace Through Weakness,” February 16, 2009; [http://www.centerforsecuritypolicy.org/p17891.xml?cat\\_id=120](http://www.centerforsecuritypolicy.org/p17891.xml?cat_id=120).

5. Wolfgang K. H. Panofsky, “The Nonproliferation Regime under Siege,” *Bulletin of the Atomic Scientists* (August 5, 2007); <http://www.thebulletin.org/web-edition/op-eds/the-nonproliferation-regime-under-siege>.

NWS and the NNWS. This common description of the Treaty is unfortunate because it limits the prospects for crafting a more comprehensive and more equitable implementation of the basic NPT bargains, based on shared responsibilities between NWS and NNWS, in the future.

Article IV of the NPT simply states, “Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II of this Treaty.” The expected global expansion of nuclear power, however, will lead to increasing demand for enriched uranium and reprocessed plutonium around the globe; a crucial question for future security therefore is whether the spread of nuclear power will lead to the spread of enrichment and plutonium fuel-production facilities. Mohamed ElBaradei has been particularly forceful in warning of the security risks inherent in such a world of multiple “virtual nuclear weapons states,” arguing for “a new international or multinational approach to the fuel cycle so as to avoid ending up with not just nine nuclear weapon States but another 20 or 30 States which have the capacity to develop nuclear weapons in a very short span of time.”<sup>6</sup> George Perkovich and James Acton agree, noting that the NWS are unlikely to take the final steps toward complete disarmament if there are many states that could quickly get nuclear weapons material from their own national uranium or plutonium production facilities. “If no acceptable form of regulation can be established for the proliferation-sensitive activities that many states which today promote disarmament are seeking to conduct,” they argue, “the abolition of nuclear weapons may not prove possible.”<sup>7</sup>

Many proposals exist for different forms of multinational fuel-cycle facilities (plants owned and operated by multiple states) or international facilities (plants owned and operated by an international organization). Governments of many NNWS, however, as well as some nuclear technology exporters, argue that creating any constraints on the national production of nuclear fuels would violate the “inalienable right” mentioned in Article IV. As Albert Wohlstetter once noted, it is as if some diplomats believe that all states have “a new natural right to Life, Liberty, and the Pursuit of Plutonium.”<sup>8</sup>

Three important points about Article IV become clearer if one probes a little more deeply. First, this “inalienable right” is in reality a conditional right, dependent upon the state in question being “in conformity” with Articles I and II of the NPT. It is too often forgotten in the debate over the Iranian nuclear program, for example, that a state that is not behaving “in conformity”

6. Mohamed ElBaradei, “Addressing Verification Challenges,” Statements of the Director General: Symposium on International Safeguards, October 16, 2006; <http://www.iaea.org/NewsCenter/Statements/2006/ebsp2006n018.html>.

7. George Perkovich and James M. Acton, “Abolishing Nuclear Weapons,” Adelphi Paper 396 (London: International Institute for Strategic Studies, 2008), 93.

8. Albert Wohlstetter, “Spreading the Bomb without Quite Breaking the Rules,” *Foreign Policy* (Winter 1976/1977).

with its Article II commitment “not to seek or receive any assistance in the manufacture of nuclear weapons” has at least temporarily sacrificed its rights to acquire civilian nuclear technology under Article IV. The Board of Governors of the International Atomic Energy Agency (IAEA) decides whether or not a state is in compliance with its specific safeguards commitments. But the IAEA does not determine the appropriate response to a safeguards violation that is not remedied in a timely fashion; instead, it reports any such case of noncompliance to the UN Security Council and the General Assembly—as it did in 2004 with respect to Libya and in 2006 with respect to Iran—and then the Security Council must decide on appropriate responses.<sup>9</sup>

Second, Article IV refers to “*all the Parties to the Treaty*,” not just the NNWS. This should lead to increased opportunities to share responsibility for nonproliferation and disarmament, for it suggests that as part of their Article IV commitment, the NWS should reaffirm that international safeguards can eventually be placed on all of *their* nuclear power plants and enrichment and reprocessing facilities. Indeed, such an agreement in principle, with an exception for facilities with “direct national security significance,” was in fact made by President Lyndon Johnson in 1967, as a major compromise during the NPT negotiations.<sup>10</sup> Reaffirming this commitment, as a responsibility under Article IV, should be easy to accept in principle; after all, if NWS are committed to working in good faith toward nuclear disarmament, at some point they would become, to coin an acronym, FNWS (former nuclear-weapons states), and the safeguard exceptions they currently maintain would no longer apply.

In practice, it would be helpful for NWS to go beyond reaffirmations and expressions of principle and pick one or more model facilities to place under advanced safeguards, to demonstrate future intentions and help create best practices. Strict safeguards on existing nuclear-fuel production facilities in the NWS are not really necessary *today* to ensure that the materials from the plants are not diverted for nuclear weapons, since NWS already have sufficient fissile materials from their military nuclear production programs. But placing new facilities under IAEA safeguards would signal equitable treatment and a long-term commitment to disarmament. Similar safeguards will also be needed if a Fissile Material Cut-off Treaty (FMCT), ending the production of materials for weapons, is successfully negotiated, though in this case the verification and safeguarding functions would be best handled (at least initially) by a new organization of inspectors from NWS, rather than the IAEA, so as to limit access into sensitive former weapons-material production facilities.

Third, responsibilities for sharing the financial support of IAEA international safeguards can be improved. Today, each IAEA member state pays into a regular budget of the Agency, from which the Safeguards Division draws funds for its inspection programs; but the Agency is strapped for funds to deal

9. Pierre Goldschmidt, “Exposing Nuclear Non-Compliance,” *Survival* 51 (1) (2009): 143–164.

10. See George Bunn, *Arms Control by Committee* (Stanford, Calif.: Stanford University Press, 1992), 101.

with the current level of inspections, and will be much more so if nuclear power continues to expand as expected and if the more intrusive regime required by the Agreed Protocol, which calls for advanced inspections, comes into force. One approach that has been advocated is to have states pay more into the IAEA safeguards budget in proportion to the number and kinds of facilities they have on their soil that are subject to inspection. This approach, however, places the financial burden only on the state that benefits from the nuclear power plant or fuel facility in question and ignores that the nonproliferation benefits of the safeguards are shared by all states. A better approach would be to have all governments—both NWS and NNWS, and both states with nuclear power programs and those without nuclear power—substantially increase their funding support for the IAEA, to enhance its future safeguards capabilities. Indeed, it would be possible to have private industry and even philanthropic organizations interested in promoting more safe and secure use of nuclear power also contribute to the IAEA safeguards budget.<sup>11</sup>

Article VI of the NPT states in full, “Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control.” Many diplomats from NNWS have complained at virtually every NPT review conference that the NWS have not done enough to meet their disarmament commitments, and the May 2009 NPT Preparatory Committee meeting was not unusual in that regard. The NNWS complaints are not without some merit, for the recent Bush administration did not follow through on some of the disarmament-related commitments (most specifically, seeking ratification of the Comprehensive Test Ban Treaty) that previous administrations had made at NPT review conferences.<sup>12</sup> In addition, some former U.S. government officials have unhelpfully claimed that the United States never really intended to keep its Article VI commitments. Former CIA Director John Deutch, for example, asserted in *Foreign Affairs* in 2005 that Washington was “unwise” “to commit under Article 6 of the Nonproliferation Treaty [NPT] ‘to pursue good-faith negotiations’ toward complete disarmament, a goal it has no intention of pursuing.”<sup>13</sup> The Bush administration’s 2001 U.S. Nuclear Posture Review was also widely interpreted to signal movement away from the NPT commitment to nuclear disarmament because the document declared that U.S. nuclear weapons “possess unique capabilities

11. For creative ideas on increasing the size and diversity of IAEA contributions, see Thomas Shea, “Financing IAEA Verification of the NPT,” November 2006; <http://www.npec-web.org/Essays/20061113-Shea-FinancingIAEAVerification.pdf>.

12. For differing views on this, see Christopher A. Ford, “Debating Disarmament: Interpreting Article VI of the Treaty on the Non-Proliferation of Nuclear Weapons,” *The Nonproliferation Review* 14 (3) (2007): 402–428, and Scott D. Sagan, “Good Faith and Nuclear Disarmament Negotiations,” in *Abolishing Nuclear Weapons: A Debate*, ed. George Perkovich and James M. Acton (Washington, D.C.: Carnegie Endowment for International Peace, 2009), 203–212.

13. John Deutch, “A Nuclear Posture for Today,” *Foreign Affairs* (January–February 2005): 51.

. . . to hold at risk targets [that are] important to achieve strategic and political objectives”; it called for the development of new nuclear warheads; and it outlined a strategy of “dissuasion,” the policy of maintaining such a large advantage in military forces, including nuclear, that other states would be dissuaded from even considering entering into a military arms competition with the United States.

Many diplomats and scholars have spoken about the specific arms-control and disarmament steps the United States and other NWS could take to demonstrate that they are pursuing their Article VI commitments more seriously. Missing from this debate is a discussion of what the NNWS can do to help in the disarmament process. Looking at shared responsibilities points to two specific ways in which the NNWS can better honor their Article VI commitments.

First, just as NWS and NNWS should share responsibilities for funding the increasingly advanced international safeguards necessary for nuclear power facilities, the NWS and NWS should both contribute significantly to funding the necessary major research and development effort for improved monitoring and verification technologies that will be needed if nuclear disarmament is to progress to very low numbers of weapons. In October 2008, the British government invited the governments of the other NPT-recognized nuclear states—the United States, Russia, France, and China—to participate in a major technical conference examining future verification challenges and opportunities. Even more importantly, the British government recognized that R&D for disarmament verification must not occur in “splendid isolation,” and so jointly sponsored test programs with the Norwegian government laboratories to identify promising technologies that would permit Norway and other NNWS to be more directly involved in implementing and monitoring future global nuclear disarmament.<sup>14</sup>

Second, focusing on shared responsibilities helps identify a more direct and stronger linkage between Article VI and Article IV of the NPT. Because NWS will be less likely to accept deep reductions to zero (or close to zero) if there are more and more states with latent nuclear-weapons capability because of the spread of uranium enrichment and plutonium reprocessing technologies, NNWS have both an individual interest and a collective responsibility to make sure that constraints are placed on sensitive fuel-cycle facilities. In short, the NNWS should recognize that entering into negotiations about international control of the nuclear fuel cycle is an essential part of *their* Article VI commitment “to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race.”

A third common criticism of the disarmament goal is that nuclear force reductions might backfire, inadvertently encouraging nuclear proliferation, by undercutting U.S. extended deterrent commitments. In September 2008, for

14. Des Brown, “Laying the Foundation for Multilateral Disarmament,” February 5, 2008; <http://www.reachingcriticalwill.org/political/cd/speeches08/1session/Feb5UKDefSecDesBrown.pdf>.



example, Secretary of Energy Samuel Bodman and Secretary of Defense Robert Gates declared that “the United States will need to maintain a nuclear force . . . for the foreseeable future,” basing this position in part on the need to protect U.S. non-nuclear allies:

The role nuclear forces play in the deterrence of attack against allies remains an essential instrument of U.S. nonproliferation policy by significantly reducing the incentives for a number of allied countries to acquire nuclear weapons for their own. . . . In the absence of this “nuclear umbrella,” some non-nuclear allies might perceive a need to develop and deploy their own nuclear capability.<sup>15</sup>

The term “nuclear umbrella,” however, should be deleted from the strategic lexicon used by government officials and scholars alike. It connotes a defensive, passive strategy—as if Japan, South Korea, and NATO countries were protected by some kind of missile defense shield—rather than the threat of retaliation with nuclear weapons against a state that attacks a U.S. ally. Even more importantly, the nuclear umbrella term does not differentiate between two very different kinds of extended deterrence policies: a U.S. commitment to use nuclear weapons first, if necessary, to defend an ally if it is attacked by an enemy who uses conventional forces, biological or chemical weapons, or nuclear weapons; and a more tailored U.S. commitment to use U.S. nuclear weapons in retaliation against *only* a nuclear attack on an ally. The first form of extended deterrence was the U.S. Cold War policy in NATO and in East Asia and remains largely intact today despite the end of the Cold War.

Adopting the second form of extended deterrence—maintaining commitments to joint defense but limiting the threat of nuclear weapons use to retaliation against nuclear attacks on allies—would not necessarily lead to the nuclear proliferation cascade that Gates and Bodman seem to fear. Indeed, a more targeted U.S. nuclear guarantee, if implemented properly after alliance consultation, could have a number of positive strategic effects. First, such a change might be welcomed by those allies who continue to value allied conventional military commitments, but feel that first-use nuclear threats encourage nuclear proliferation elsewhere in the world. A more targeted nuclear guarantee would also make U.S. nuclear weapons doctrine consistent with Negative Security Assurances (NSAs)—commitments not to use nuclear weapons against NNWS—which all five NPT-recognized NWS have made at past NPT review conferences and at the UN Security Council in 1995. In addition, abandoning U.S. threats to use nuclear weapons in response to another state using chemical or biological weapons against the United States or our allies could be followed by more credible deterrent threats to respond with devastating conventional military retaliation, and with a commitment to isolate and overthrow any leader

15. Samuel W. Bodman and Robert M. Gates, “National Security and Nuclear Weapons in the 21st Century,” September 2008; <http://www.defenselink.mil/news/nuclearweaponspolicy.pdf>.

who uses outlawed chemical or biological weapons. Finally, limiting the role of U.S. nuclear weapons to deterrence of other states' use of nuclear weapons would signal strong support for the eventual elimination of all nuclear weapons, for if such a no-first-use nuclear doctrine became universally accepted, the existing NWS could more easily coordinate moving in tandem to lower and equal levels of nuclear weapons on the road to zero.

Such a change in U.S. and other powers' nuclear doctrine will not be easily accepted by all allies, nor will it be easy to implement within military establishments. NATO official doctrine, for example, which has not been revised since 1999, continues to assert (though it does not prove) that nuclear weapons remain critical for a variety of threat scenarios: "[T]he Alliance's conventional forces alone cannot ensure credible deterrence. Nuclear weapons make a unique contribution in rendering the risks of aggression against the Alliance incalculable and unacceptable. Thus, they remain essential to preserve peace."<sup>16</sup> Interest in maintaining an expansive form of extended deterrence remains strong in East Asia as well. Ambassador Yukio Satoh, for example, correctly notes that the Japanese government's official "Defense Program Outline" states only that "to protect its territory and people against the threat of nuclear weapons, Japan will continue to rely on the U.S. nuclear deterrent"; but Satoh has also recommended that the United States should now threaten to retaliate with nuclear weapons if North Korea uses chemical or biological weapons in any future conflict.<sup>17</sup>

The major responsibility for reducing the roles and missions that nuclear weapons play in the doctrines of the nuclear powers clearly falls on the governments of those nations. President Obama called for precisely such doctrinal change in his 2009 Prague speech, promising that "to put an end to Cold War thinking, we will reduce the role of nuclear weapons in our national security strategy." This will require that U.S. politicians and military officers stop leaning on the crutch of nuclear weapons to shore up deterrence, even in situations in which the credibility of such threats is vanishingly thin. During the 2008 U.S. election primary campaign, for example, Senators Hillary Clinton and Christopher Dodd both criticized then Senator Obama for saying that he would not consider using U.S. nuclear weapons to attack al Qaeda targets inside Pakistan (a U.S. ally), arguing, in Clinton's words, "I don't believe that any president should make any blanket statements with respect to the use or non-use of nuclear weapons."<sup>18</sup> In May 2009, General Kevin Chilton, the commander of the U.S. Strategic Command, took the "all options are on the

16. "The Alliance's Strategic Concept" (NATO, April 1999); <http://www.nato.int/docu/pr/1999/p99-065e.htm>.

17. See "Are the Requirements for Extended Deterrence Changing?" Carnegie Endowment for International Peace Conference, April 6, 2009; transcript available at <http://www.carnegieendowment.org/events/?fa=eventDetail&id=1299>.

18. Reuters, "Obama, Clinton in New Flap over Nuclear Weapons," August 2, 2007; <http://www.alertnet.org/thenews/newsdesk/N02381100.htm>.

table” argument to a new level, threatening U.S. nuclear retaliation in response to cyber attacks: “I think you don’t take any response options off the table from an attack on the United States of America. . . . And I don’t see any reason to treat cyber any differently. I mean, why would we tie the president’s hands?”<sup>19</sup>

While the United States and other NWS should take the first steps to reduce their reliance on nuclear weapons, there is much that NNWS can do to encourage and enable new nuclear doctrines to be adopted, in the spirit of shared responsibilities for nuclear disarmament. First, NNWS that are members of U.S. alliances can stop asking to be reassured about noncredible military options. This is not a new problem. Indeed, although the global strategic context is different, Henry Kissinger alluded to a similar dynamic when he admonished the NATO alliance back in 1979:

We must face the fact that it is absurd to base the strategy of the West on the credibility of the threat of mutual suicide. . . . Don’t you Europeans keep asking us to multiply assurances that we cannot possibly mean; and that if we mean them, we should not want to execute; and that if we execute, we’ll destroy civilization. That is our strategic dilemma, into which we have built ourselves by our own theory and by the encouragement of our allies.<sup>20</sup>

Second, it would be helpful if the NNWS that are not members of U.S. alliances would spend as much time condemning states that are caught violating their commitments not to develop chemical or biological weapons as they do complaining that the NSAs offered at the NPT review conferences should be legally binding. Finally, those U.S. allies that remain concerned about conventional or chemical and biological threats to their national security should, as part of their Article VI disarmament commitment, help to develop the conventional forces and defensive systems that could wean themselves away from excessive reliance on U.S. nuclear weapons for extended deterrence.<sup>21</sup>

The final argument against nuclear disarmament concerns breakout scenarios and the challenge of enforcement. Harold Brown and John Deutch, for example, have argued that “[p]roliferating states, even if they abandoned these devices under resolute international pressure, would still be able to clandestinely retain a few of their existing weapons—or maintain a standby, breakout capability to acquire a few weapons quickly, if needed.”<sup>22</sup> The breakout problem, however, applies to both new potential proliferators and former

19. Elaine M. Grossman, “U.S. General Reserves Right to Use Force, Even Nuclear, in Response to Cyber Attack,” *Global Security Newswire*, May 12, 2009; [http://gsn.nti.org/gsn/nw\\_20090512\\_4977.php](http://gsn.nti.org/gsn/nw_20090512_4977.php).

20. “Kissinger on NATO,” *Time*, September 17, 1979; <http://www.time.com/time/magazine/article/0,9171,920653,00.html>.

21. George Perkovich, “Extended Deterrence,” Draft Paper Prepared for the Evans-Kawaguchi Commission, May 2009.

22. Harold Brown and John Deutch, “The Nuclear Disarmament Fantasy,” *The Wall Street Journal*, November 19, 2007.

NWS that have disarmed in a nuclear-free world. Thomas Schelling and Charles Glaser have made similar arguments about “the instability of small numbers,” fearing nuclear use would be more likely at the final stages of disarmament or after nuclear disarmament occurs, because states would engage in arms races to get nuclear weapons in any subsequent crisis and the winner in any such arms race would use its nuclear weapons with less fear of nuclear retaliation.<sup>23</sup>

These are legitimate concerns, and addressing the challenges of verification and enforcement of disarmament should be a high priority for future disarmament efforts. How can a vision of shared responsibility between the NWS and NNWS help address these vexing problems? First, NWS and NNWS should work together to punish the violators of currently existing nonproliferation agreements. North Korea violated its NPT commitments by secretly taking nuclear material out of the Yongbyon reactor complex in the 1990s and by covertly starting a uranium enrichment program with the assistance of Pakistan. Iran similarly was caught in violation of its NPT safeguards agreement in 2002, when the covert Natanz enrichment facility was discovered and evidence of nuclear-weapons-related research was later released by the U.S. intelligence community. Finally, Syria was caught violating its NPT commitments in 2007, when Israeli intelligence discovered a covert nuclear reactor under construction. More consistent pressure by all five permanent members of the UN Security Council (the P5 are the United States, Russia, China, France, and the United Kingdom) should be matched by more uniform support by the NNWS at the IAEA and in the UN Security Council to create stronger resolutions condemning these violations and imposing sanctions on the violators. Such a display of shared responsibilities would both help resolve these proliferation crises and set better precedents for future challenges.

Second, the NNWS and NWS need to work together more effectively to reduce the risks of nuclear weapons breakout in the future. To help deter withdrawal from the NPT, the UN Security Council could adopt a binding resolution stating that it would consider any case in which a state withdraws from the NPT, after being found to be in noncompliance with its safeguards agreements, to constitute a threat to international peace and security under the UN charter. The Nuclear Suppliers Group and the IAEA could also discourage future withdrawals from the NPT by making all future sales of sensitive nuclear facilities subject to safeguards agreements that do not lapse if a state withdraws from the NPT and including a “return to sender” clause in which the recipient state would be required to close down the facilities and return the sensitive technology and nuclear materials to the country of origin as soon as possible.<sup>24</sup>

23. See Thomas C. Schelling’s essay “A world without nuclear weapons?” in *Daedalus* 138 (4) (Fall 2009) as well as Schelling, “The Role of Deterrence in Total Disarmament,” *Foreign Affairs* (April 1962). See also, Charles Glaser, “The Instability of Small Numbers Revisited,” in *Rebuilding the NPT Consensus*, ed. Michael May (Stanford, Calif.: Center for International Security and Cooperation, 2008); <http://iis-db.stanford.edu/pubs/22218/RebuildNPTConsensus.pdf>.

24. See Pierre Goldschmidt, “Concrete Steps to Improve the Nonproliferation Regime,” Nonproliferation Program Paper 100 (Washington, D.C.: Carnegie Endowment for International Peace, April 2009).

It is often forgotten, however, that there is a logical link between Article VI and Article X of the NPT. It will be difficult for the existing NWS to take the final steps of nuclear disarmament without more confidence that NNWS will not withdraw from the Treaty in the future. It will also be difficult for the NNWS to accept constraints on their Article X rights without more confidence that the existing nuclear powers will actually implement disarmament in ways that are difficult for them to reverse. At future NPT review conferences, the NWS and NNWS should therefore address how best to promote increased verification and transparency and to reduce incentives for NPT withdrawal and disarmament reversal as part of their joint responsibilities to work in good faith toward a nuclear-free world.

Efforts to prevent cheating on NPT commitments or future disarmament agreements may fail, of course, and stronger enforcement mechanisms therefore need to be considered. There are, fortunately, strong logical reasons to be optimistic about the prospects for enforcement in a nuclear-free world: in such a world, the major powers, which would include both traditional NNWS and new former NWS, would take violations more seriously because small-scale cheating would pose an even greater risk to their security than is the case now. Today, the existence of large arsenals in the United States and Russia, and arguably in other NWS as well, encourages some leaders to be complacent about the spread of nuclear weapons to new nations. Faith in the strength of nuclear deterrence leads some policy-makers to believe that North Korea or Iran, for example, will be deterred from ever using their nuclear weapons if the current negotiations fail. In a nuclear-free world, however, such deterrence optimism would be far less likely, and all major powers would share deeper fears of the emergence of new nuclear states.<sup>25</sup> The temptation for buck-passing would remain, but the faith that nuclear deterrence would constrain a violator would not, and new institutional arrangements for coordinating decision-making on sanctions and conventional military operations, perhaps through the UN Security Council, could help produce more effective enforcement of nonproliferation and disarmament.

Finally, it should be noted that in a nuclear-weapons-free world, former NWS will retain the option of withdrawing from any disarmament agreement. The possibility of rearmament, however, is both a potential problem for stability, if a conventional war or deep crisis occurs between two latent nuclear states, and a potential source of stability, for each latent nuclear state will know that if it rushes to rearm, others may do so as well. "Irreversibility" is often cited as a key objective in any nuclear disarmament agreement (for example, this goal was cited in the 13 Practical Steps agreed to at the 2000 NPT Review Conference). Yet in a world without nuclear weapons, the former NWS would be "more latent" than others who did not have their technological expertise or operational experience, and an objective in the final negotiations in

25. This argument was first made by Charles L. Glaser, "The Flawed Case for Nuclear Disarmament," *Survival* 40 (1) (Spring 1998).

the global disarmament process must be to create stronger verification and monitoring capabilities to provide confidence that one state could not start the rearmament process without others observing such actions. Nuclear deterrence would still exist in a nuclear-weapons-free world, but it would be of a much more recessed and latent form than exists today.

Some are pessimistic about the prospects for latent nuclear deterrence, believing that it is inherently less stable than the current form of active nuclear deterrence. Sir Michael Quinlan, for example, argued that “it is sometimes suggested that the very fact of this reconstitution risk would serve as a deterrent to war—weaponless deterrence, it has been called, a sort of deterrence at one remove. But that implies a worldwide and long-sighted wisdom on which it would surely be imprudent to count.”<sup>26</sup> Quinlan was certainly correct to remain skeptical about the degree we can ensure that “worldwide and long-sighted wisdom” will exist in the future world without nuclear weapons. But surely the same argument holds true, and in spades, for a future world with many states holding nuclear arsenals. We cannot design an international system in which wisdom and prudence are guaranteed. A nuclear-free world would, however, reduce the consequences of individual failures of wisdom and prudence.

The technical and political challenges that confront proponents of nuclear disarmament are complex and serious. It is therefore by no means clear that the NWS will be able to overcome these challenges to achieve the goal of complete nuclear disarmament. What *is* clear, though, is that the existing NWS cannot reach the summit of a nuclear-free world without the active partnership of the current NNWS. The NWS and NNWS have a shared responsibility for nuclear disarmament in the future, and will share a common fate if they fail to cooperate more effectively.

26. Michael Quinlan, “Abolishing Nuclear Armouries: Policy or Pipedream?” *Survival* 49 (2) (Winter 2007–2008): 12.

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ROBERT L. SIMMONS, R, STAFF DIRECTOR

July 26, 2012

The Honorable Thomas P. D'Agostino  
 Administrator  
 National Nuclear Security Administration  
 1000 Independence Ave., SW  
 Washington, DC 20585

Dear Administrator D'Agostino:

Thank you for your July 2 response to our May 18 letter to President Obama requesting his Administration present its own ideas for fixing the long-standing, well-documented problems with governance, management, and oversight of the nuclear security enterprise. We regret that your response does not address the fundamental problem: that NNSA and DOE are allowing cost and delay—driven largely by administrative and structural problems—to threaten the President's own nuclear modernization objectives. As you and other Administration officials have recognized in repeated testimony, these nuclear modernization efforts are critical to U.S. and allied national security, especially as the President considers further U.S. nuclear arms reductions. We do not see how the actions outlined in your letter solve this problem.

The many independent, bipartisan national commissions and study groups who have investigated this problem have all reached strikingly similar conclusions and recommendations. In short, these groups have all made clear that the system is "broken," that "science and engineering quality is at risk" at the nuclear weapons labs, and that "it is time to consider fundamental changes" to the entire organization and construct.

Your response contains a litany of efforts that you indicate will fix these problems—but many of these efforts have been tried in the past or are now several years old. We do not see in your response evidence of a coherent strategy with a vision of the expected end-state, nor do we see mention of how the individual efforts you outline will help achieve that end-state.

We also are concerned that your response to our letter to the President is overwhelmingly focused on the National Nuclear Security Administration (NNSA). As the many studies and commissions have documented, significant parts of the problem lay outside of NNSA—with the non-NNSA portions of DOE and with external oversight agencies. As Administrator, these problems are outside your ability to control or fix. As our May 18 letter did, we encourage you to ask the President to offer a *comprehensive* reform package that addresses all of these elements, as H.R. 4310 does.

Administrator D'Agostino  
July 26, 2012  
Page 2

Based upon your response, we must strongly disagree with your assertion that NNSA's "ongoing efforts will be more effective at addressing those issues than prescriptive legislation." The lack of a comprehensive strategic vision or plan for decisive action is why we continue to believe that Congress has no choice but to once again act, as it did in 1999 when it created NNSA to fix what the President's Foreign Intelligence Advisory Board then called "a dysfunctional bureaucracy that has proven it is incapable of reforming itself." We have seen no action or plan of action by the President to convince us to the contrary.

During the past several years, it has become clear to us that NNSA is not delivering what the military needs. We have heard from multiple senior Department of Defense (DOD) officials that, despite the military's willingness to dramatically down-scope military requirements and slip schedules, NNSA is still not delivering what the military needs at a reasonable cost. Further, through the deferral of the Chemistry and Metallurgy Research Replacement Nuclear Facility, we see NNSA failing to fulfill the President's own policy (as in the 2010 Nuclear Posture Review report) to create a responsive nuclear weapons infrastructure. The recent cost escalation in the B61 life extension program is only further evidence that NNSA cannot deliver on its primary mission at a reasonable cost.

We repeat the request that concluded our previous letter: "We encourage [the] Administration to offer a comprehensive reform package as the House of Representatives has— in time for conference on this year's national defense authorization bill. Let's work together to find the right solution." We believe that we share the same goal: a nuclear weapons enterprise capable of delivering the nuclear deterrent this country relies upon as its ultimate security guarantee.

Sincerely,



Howard P. "Buck" McKeon  
Chairman  
Committee on Armed Services



Michael R. Turner  
Chairman  
Subcommittee on Strategic Forces

cc: The Honorable Barack Obama, President of the United States  
The Honorable Steven Chu, Secretary of Energy  
The Honorable Leon Panetta, Secretary of Defense  
Mr. Jeffrey Zients, Acting Director, Office of Management and Budget

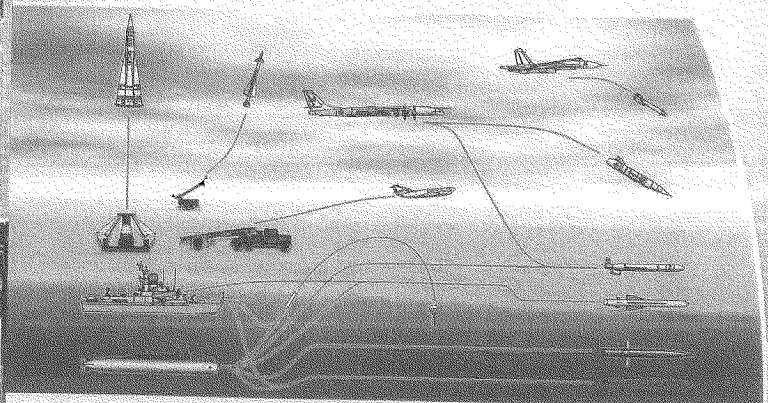


## Defense Sphere

The most important defense areas of VNIA are developments of:

- ❖ Nuclear weapons for the strategic and tactical platforms;
- ❖ Firing and neutron initiation systems for the nuclear weapons;
- ❖ Non-nuclear components and automatics for the nuclear weapons;
- ❖ Nuclear explosion monitoring equipment;
- ❖ Unified test & measurement equipment;
- ❖ Hardware and methods for measurement of the nuclear charge parameters during the experimenting activities.

According to the State Armament Program, VNIA together with the other Rosatom facilities of the nuclear weapons complex is providing the scientific and technical support of the National nuclear stockpile, first of all, maintaining the safety and reliability of the weapons.



Platforms that carry the nuclear weapons designed at VNIA

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 E.O. 12958, as amended  
 August 6, 2007

international body and that negotiations on this subject will commence as soon as possible after the treaty enters into force. Although Treaty continues to insist on the sovereign right to develop nuclear explosives for peaceful purposes, this article appears to have taken care of most of the earlier objections on this point by other states. Nevertheless, this article may create future problems since the nature of the international agreements and the indicated international body are not agreed upon and will present some complex technical and political problems. The report of the Senate Committee on Foreign Relations was particularly concerned about the apparently open-ended obligation assumed by the US to provide these services to all countries on a highly subsidized basis. Nuclear excavation projects which will probably be of principal interest to most countries will require an amendment to the Limited Test Ban Treaty. Finally, this commitment to the further use of nuclear explosives for peaceful purposes almost certainly rules out the possibility of a tenable comprehensive test ban treaty.

Article VI commits all parties to pursue negotiations in good faith relating to a cessation of the arms race and to nuclear disarmament. This is an essentially hortatory statement and presents no problems.

Article VII makes clear that the treaty in no way affects the right to establish regional nuclear free zones. This is essentially a bow to the achievement of the Latin America Nuclear Free Zone Treaty (Treaty of Tlatelolco) and presents no problems.

Article VIII establishes procedures for amending the treaty and provides for a review conference five years after the treaty enters into force and each five years thereafter at the request of the majority of the parties to the treaty.

Article IX designates the US, UK, and USSR as depositary governments and provides that the treaty shall enter into force upon the deposit of instruments of ratification of the depositary governments and 40 other signatory states. This procedure could permit the treaty to enter into force without

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 E.O. 13526, as amended  
 August 6, 2007

International body and that negotiations on this subject will commence as soon as possible after the treaty enters into force. Although Brazil continues to insist on the sovereign right to develop nuclear explosives for peaceful purposes, this article appears to have taken care of most of the earlier objections on this point by other states. Nevertheless, this article may create future problems since the nature of the international agreements and the indicated international body are not agreed upon and will present some complex technical and political problems. The report of the Senate Committee on Foreign Relations was particularly concerned about the apparently open-ended obligation assumed by the US to provide these services to all countries on a highly subsidized basis.

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**Article VI commits all parties to pursue negotiations in good faith relating to a cessation of the arms race and to nuclear disarmament. This is an essentially hortatory statement and presents no problems.**

\* \* \* \* \*

Article VII requires nuclear free zones. This is essentially a copy of the achievement of the Latin American Nuclear Free Zone Treaty (Treaty of Tlatelolco) and presents no problems.

Article VIII establishes procedures for amending the treaty and provides for a review conference five years after the treaty enters into force and each five years thereafter at the request of the majority of the parties to the treaty.

Article IX designates the US, UK, and USSR as depository governments and provides that the treaty shall enter into force upon the deposit of instruments of ratification of the depository governments and 40 other signatory states. This procedure could permit the treaty to enter into force without

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Russia

### Russia can no longer support future sanctions against Iran - Lavrov (Update 1)

Topic: Iran's nuclear program



**Russia will not support future sanctions against Iran, Russian Foreign Minister Sergei Lavrov said in London on Tuesday.**

"With the approval of Resolution 1939 in [June] last year, practical possibilities to impose sanctions on those related - even indirectly - to the Iranian nuclear program have been exhausted," Lavrov said at a news conference with his British counterpart William Hague.

The Iran Six, which comprises Russia, the United States, China, Britain, France and Germany, has been trying since 2003 to convince Iran to halt its uranium enrichment program.

The UN Security Council passed a resolution imposing sanctions on Iran on June 9, 2010, after Tehran announced its plans to enrich uranium to

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Slide 4

The image is a screenshot of a news website, RIA NOVOSTI, dated 15/02/2011 at 16:39. The main headline reads: "Russia can no longer support future sanctions against Iran - Lavrov (Update 1)". Below the headline is a large black and white photograph of Sergei Lavrov, the Russian Foreign Minister. To the right of the main article is a sidebar with several smaller news items, including "Pilots Train for Russian Air Force Centennial: Video", "Tajikistan Protesters Attempt to Attack Russian Patriarch: Video", and "Kim Jong-il's Likely Fiances: Photos".

**16:39 15/02/2011**

**Russia will not support future sanctions against Iran, Russian Foreign Minister Sergei Lavrov said in London on Tuesday.**

Spain, China, Britain, France and Germany, has been trying since 2003 to convince Iran to halt its uranium enrichment program.

The UN Security Council passed a resolution imposing sanctions on Iran on June 9, 2010, after Tehran announced its plans to enrich uranium to nuclear discussion (Update 1)

- UN lifts major sanctions against Iraq

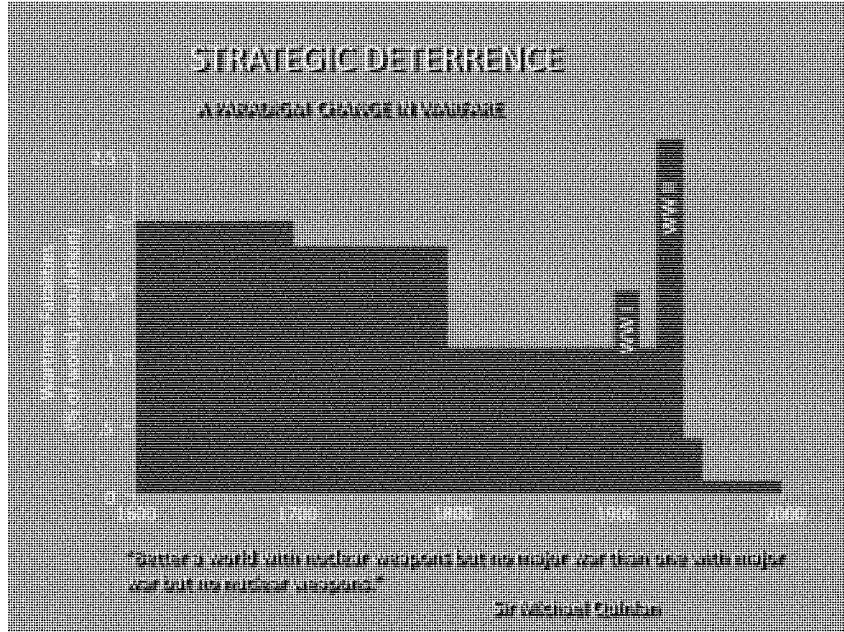
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How the nuclear weapons era

**Russia Beyond the Headlines**

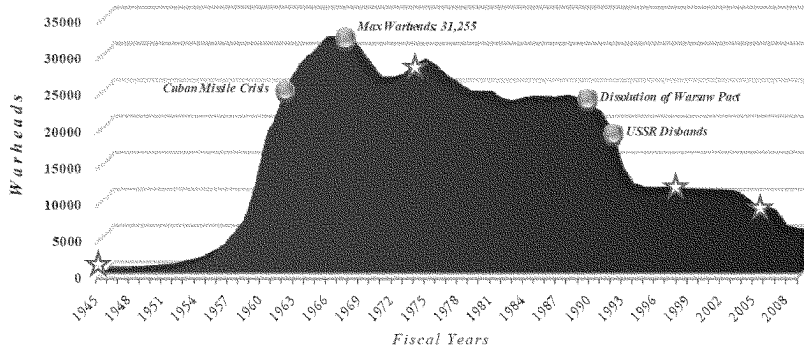
- Media could join "energy agents"

Slide 5



Slide 6

*U.S. Nuclear Weapons Stockpile, 1945-2009\**



*\*Includes active and inactive warheads. Several thousand additional nuclear warheads are retired and awaiting dismantlement.*

India - 1974  
 Pakistan - 1998  
 North Korea - 2006

July 20, 2012

Scott D. Sagan  
Caroline S.G. Munro Professor of Political Science  
Senior Fellow at the Center for International Security and Cooperation (CISAC)  
Stanford University

TESTIMONY BEFORE THE HOUSE COMMITTEE ON ARMED SERVICES  
SUBCOMMITTEE ON STRATEGIC FORCES  
HEARING ON

“NONPROLIFERATION AND DISARMAMENT:  
WHAT’S THE CONNECTION AND WHAT DOES THAT MEAN FOR U.S. SECURITY  
AND OBAMA ADMINISTRATION POLICY?”

Mr. Chairman and members of the committee, it is an honor to testify today regarding the linkages between nuclear disarmament and nuclear nonproliferation. The connecting relationships between these two nuclear policy agendas are complex and subtle, but real. I will be making three central observations about these linkages, historically and today, and present the evidence supporting these arguments.

First, I will outline the strong legal and logical connections between nuclear disarmament efforts and nuclear nonproliferation efforts. The legal requirements are outlined in Articles VI and IV of the nuclear Nonproliferation Treaty (NPT) and the logical links between them can be seen in the bargains that have been debated and struck between nuclear weapons states and non-nuclear weapons states in diplomatic negotiations and treaty review conferences.

Second, I will present the evidence demonstrating that the Obama Administration’s effort to work in good faith toward eventual nuclear weapons disarmament has positively influenced the behavior of other states regarding three important goals of nonproliferation: reducing the role of nuclear weapons in the national security strategies of some states, strengthening the nonproliferation regime by creating consensus on stricter rules regarding nuclear safeguards and technology exports in the future, and by encouraging progress toward the entry into force of the Comprehensive Test Ban Treaty (which is properly seen as both a disarmament and a nonproliferation measure).

Third, I will outline ideas for how the linkages between nuclear nonproliferation efforts and nuclear disarmament efforts can be managed more effectively. Specifically, it is important to increase appreciation in the U.S. and internationally of the fact that both Article VI and Article IV apply to nuclear weapons states and non-nuclear weapons states alike. There is, in short, “a shared responsibility” for nuclear weapons states and non-nuclear weapons states to work



together in good faith toward a world without nuclear weapons and toward a future with much deeper international control over civilian nuclear power facilities to reduce the risks of nuclear proliferation. I will spell out the policy implications of that argument in the conclusions.

Article VI, Article IV and the Bargains of the NPT

Contrary to popular impression, Article VI of the NPT does not commit the nuclear weapons states to reach the ultimate goal of complete nuclear disarmament. Instead, it commits “each of the Parties to the Treaty”... “to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament.” The NPT negotiation history reveals that this “good faith” language was in fact a compromise position between non-aligned movement leaders who wanted time-bound disarmament commitments and the U.S. and Russia who wanted no constraints on their nuclear programs whatsoever. Without this compromise, Washington and Moscow officials feared that there would be no treaty agreement.<sup>1</sup>

In April 2009, President Obama reaffirmed “clearly and with conviction America’s commitment to seek the peace and security of a world without nuclear weapons” in his speech in Prague. In the United States, since under Clause 2 of Article 6 of the Constitution, a treaty commitment is “the supreme Law of the Land,” to affirm the U.S. commitment to seek a world without nuclear weapons is therefore simply promising that the U.S. government will follow U.S. law and abide by our treaty obligations. President Obama’s Prague reaffirmation of the U.S. Article VI commitment was, nevertheless, important. It is true that all recent presidents, including Presidents Clinton and Bush, have stated that they support the NPT including Article VI, and all recent presidents, including President Obama, have resisted the calls from many non-aligned NPT member states to set a timetable for nuclear disarmament. It is also important to note that both Senators John McCain and Barack Obama explicitly supported the vision of a world free of nuclear weapons during the 2008 election campaign.<sup>2</sup> But during previous administrations, many statements by lower level officials led to skepticism on the part of leaders from many non-nuclear weapons states about whether the U.S. commitment to Article VI was serious and sincere. For example, former Clinton Administration official, CIA Director John Deutch, asserted in *Foreign Affairs* in 2005 that Washington was “unwise” “to commit under Article VI ‘to pursue good-faith negotiations’ toward complete disarmament, a goal it has no intention of pursuing.”<sup>3</sup> Similarly, the George W. Bush administration’s 2001 U.S. Nuclear Posture Review (NPR) was widely interpreted to signal movement away from the Article VI

<sup>1</sup> Mohamed Shaker, *The Nuclear Non-Proliferation Treaty: Origin and Implementation 1959-1979*, vol. 2, (London: Oceana Publications, 1980), 568-571.

<sup>2</sup> Elisabeth Bumiller, “McCain breaks with Bush on nuclear disarmament,” *The New York Times*, May 28, 2008. <http://www.nytimes.com/2008/05/28/world/americas/28iht-28mccainbush.13289423.html> (Date Accessed: July 16, 2012), and Alexander Mooney, “Obama says time to rid world of nuclear weapons,” *CNN*, July 16, 2008. [http://articles.cnn.com/2008-07-16/politics/obama.speech\\_1\\_nuclear-weapons-nuclear-terrorism-nuclear-policy?\\_s=PM:POLITICS](http://articles.cnn.com/2008-07-16/politics/obama.speech_1_nuclear-weapons-nuclear-terrorism-nuclear-policy?_s=PM:POLITICS) (Date Accessed: July 16, 2012).

<sup>3</sup> John Deutch, “A Nuclear Posture for Today,” *Foreign Affairs* (January–February 2005): 51.

commitment to work in good faith toward nuclear disarmament because the document reportedly declared that U.S. nuclear weapons “possess unique properties” to deter U.S. adversaries, called for the development of new nuclear warheads, and outlined a “dissuasion” strategy of maintaining such a large advantage in military forces that other states would not even considering entering into a military arms competition with the United States.<sup>4</sup>

The perception that the U.S. was renegeing on its Article VI commitment was widely shared among many non-nuclear weapons states delegates to the 2005 NPT Review Conference. This perception, valid or not, was a contributing factor to an unfortunate outcome: a failure to come to any consensus document in 2005 outlining the nature of challenges to the treaty and means to address those challenges. The Obama Administration’s efforts to recommit the U.S. to work in good faith toward eventual nuclear disarmament is therefore best seen as a concerted effort to reverse that wide-spread belief that the U.S. was behaving in a hypocritical manner: asking non-nuclear weapons states to accept constraints on their behavior, while not accepting any constraints on U.S. behavior.

What about Article IV? Contrary to the wide spread impression that Article IV of the treaty provides an “inalienable right” for civilian nuclear energy technology, in fact that right is explicitly made conditional on the honoring of other NPT commitments, most importantly the Article II obligation “not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices; and not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices.” Article IV clearly states, “Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II of this Treaty.” This conditionality clause was also the product of compromises made between nuclear weapons and non-nuclear weapons states during the original NPT negotiations.<sup>5</sup>

It is too often forgotten in the debate over the Iranian nuclear program that a state that is not behaving “in conformity” with its Article II commitments “not to seek or receive any assistance in the manufacture of nuclear weapons” has at least temporarily sacrificed its rights to acquire civilian nuclear technology under Article IV. The Board of Governors of the International Atomic Energy Agency (IAEA) is responsible for ruling on whether or not a state is in compliance with its specific safeguards commitments. But the IAEA does not determine the appropriate response to a safeguards violation that is not remedied in a timely fashion; instead, it reports any such case of noncompliance to the UN Security Council—as it did in 2004 with

<sup>4</sup> See Keith B. Payne, *The Great American Gamble: Deterrence Theory and Practice From the Cold War to the Twenty-First Century* (Fairfax, VA: National Institute Press, 2008), 391-392 and 434-435 and Hans M. Kristensen, “Nuclear Posture Review Report [Reconstructed],” *Federation of American Scientists*, January 8, 2002. [http://www.fas.org/blog/ssp/united\\_states/NPR2001re.pdf](http://www.fas.org/blog/ssp/united_states/NPR2001re.pdf) (Date Accessed; July 16, 2012).

<sup>5</sup> George Bunn, *Arms Control by Committee: Managing Negotiations with the Russians* (Stanford, CA: Stanford University Press, 1992), 90.

respect to Libya and in 2006 with respect to Iran—and then the Security Council must decide on appropriate responses.<sup>6</sup>

The linkages between nuclear nonproliferation and nuclear disarmament were highlighted in the 1995 NPT Review Conference in which the member states agreed to an indefinite extension of the treaty. Ambassador Thomas Graham, President Clinton’s Special Representative for Arms Control, Nonproliferation, and Disarmament, made this linkage clear in his reflection on the 1995 NPT Review Conference: “In July of 1993, the United States fortunately took a major step toward the achievement of indefinite NPT extension when President Clinton announced that the United States was prepared to negotiate a CTBT and would continue the existing nuclear testing moratorium. The CTBT had been the main NPT-related objective of non-nuclear weapon states parties since the entry into force of the NPT.”<sup>7</sup> Jayantha Dhanapala, the President of the 1995 NPT Review Conference, reached a similar conclusion about the bargain that produced indefinite extension and echoed Ambassador Graham’s warnings about future dangers:

The many supporters for indefinite extension clearly worked assiduously to achieve their goal. For their part, the nuclear weapons states did not by any means take the extension decision for granted and some of their initiatives probably did help them to win votes. Though some of such support may have resulted from the “pressure” that was allegedly exerted upon numerous states parties, it is important also to recall that the nuclear weapons states (the United States in particular) had been moving steadily in those years to a strong stance of support for the CTBT and, pending its conclusion, a moratorium on nuclear testing. Given the high priority that past Review Conferences had attached to the CTBT, such gestures were welcome to say the least. Similarly, the nuclear weapons states also got the message that something more was expected of them when it comes to security assurances; so, on 11 April, the Security Council adopted a resolution on the subject (however short it may have fallen from a binding legal obligation). ...I therefore believe Thomas Graham got it exactly right when he wrote after this event, “it is important to understand that a failure to meet the obligations of the Statement of Principles and Objectives—especially reductions in nuclear weapons—will endanger the permanent status of the NPT or even the NPT regime itself.”<sup>8</sup>

<sup>6</sup> Pierre Goldschmidt, “Exposing Nuclear Non-Compliance,” *Survival* 51, 1 (2009): 143–164.

<sup>7</sup> Thomas Graham, *Disarmament Sketches: Three Decades of Arms Control and International Law* (Seattle, WA: University of Washington Press, 2002), 261–262.

<sup>8</sup> Jayantha Dhanapala with Randy Rydell, *Multilateral Diplomacy and the NPT: An Insider’s Account* (Geneva, Switzerland: United Nations Institute for Disarmament Research, 2005), 57–58.

### Disarmament and Nonproliferation

The Obama administration's April 2010 Nuclear Posture Review (NPR) made the most explicit claim about the effect of U.S. nuclear weapons disarmament efforts on the nuclear nonproliferation policies of other states: "By demonstrating that we take seriously our NPT [Treaty on the Non-Proliferation of Nuclear Weapons] obligation to pursue nuclear disarmament, we strengthen our ability to mobilize broad international support for the measures needed to reinforce the non-proliferation regime..."<sup>9</sup> President Obama expressed a similar view about the potential influence of U.S. nuclear doctrine on other states' nuclear weapons doctrines in his April 2009 Prague speech: "To put an end to Cold War thinking, we will reduce the role of nuclear weapons in our national security strategy and urge others to do the same."<sup>10</sup> To what degree have these claims been borne out by the evidence?

### **Nuclear Posture**

The 2010 NPR elevated the goals of nonproliferation, counterterrorism, and disarmament to higher prominence compared with past posture reviews, which focused primarily on how best to maintain nuclear deterrence against a range of potential threats. Under the 2010 NPR, deterrence of nuclear attacks on the United States and its allies was deemed "the fundamental role of U.S. nuclear weapons, which will continue as long as nuclear weapons exist." Furthermore, it stated that "The United States will continue to strengthen conventional capabilities and reduce the role of nuclear weapons in deterring non-nuclear attacks, with the objective of making deterrence of nuclear attack on the United States or our allies and partners the sole purpose of U.S. nuclear weapons. ...Indeed, the United States wishes to stress that it would only consider the use of nuclear weapons in extreme circumstances to defend the vital interests of the United States or its allies and partners."<sup>11</sup>

The 2010 NPR also presented a considerable shift in the language and criteria for applying negative security assurances to non-nuclear weapon states. Previous negative security assurances promised that the United States would not use nuclear weapons against non-nuclear members of the NPT except "in the case of an invasion or any other attack on the United States, its territories, its armed forces or other troops, its allies, or on a state towards which it has a security commitment, carried out or sustained by such a non-nuclear weapon state in association or alliance with a nuclear-weapon state."<sup>12</sup> The 2010 NPR removed these specific reservations and linked nonproliferation and nuclear posture policies by shifting the yardstick for judging

<sup>9</sup> Department of Defense, "Nuclear Posture Review Report," April 6, 2010, 12. [www.defense.gov/npr/docs/2010%20nuclear%20posture%20review%20report.pdf](http://www.defense.gov/npr/docs/2010%20nuclear%20posture%20review%20report.pdf).

<sup>10</sup> Barack Obama, "Remarks by President Barack Obama," Prague, April 5, 2009. [www.whitehouse.gov/the\\_press\\_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/](http://www.whitehouse.gov/the_press_office/Remarks-By-President-Barack-Obama-In-Prague-As-Delivered/).

<sup>11</sup> Department of Defense, "Nuclear Posture Review Report," April 6, 2010, 16-17. [www.defense.gov/npr/docs/2010%20nuclear%20posture%20review%20report.pdf](http://www.defense.gov/npr/docs/2010%20nuclear%20posture%20review%20report.pdf).

<sup>12</sup> "U.S. 'Negative Security Assurances' at a Glance," Arms Control Association, Fact Sheet, 2010, [www.armscontrol.org/factsheets/negsec](http://www.armscontrol.org/factsheets/negsec).

applicability of the assurance to a state's record of compliance with its nonproliferation obligations: "The United States is now prepared to strengthen its long-standing 'negative security assurance' by declaring that the United States will not use or threaten to use nuclear weapons against non-nuclear weapons states that are party to the NPT and in compliance with their nuclear non-proliferation obligations."<sup>13</sup> Under the new formulation, if a non-nuclear weapons state that falls under the assurance—because it is in compliance with its NPT-related obligations—attacks the United States or its allies with conventional weapons, it would face a conventional, not nuclear, response and, in the case of a chemical or biological weapons attack, a conventional threat to the existence of the regime: "In making this strengthened assurance, the United States affirms that any state eligible for the assurance that uses CBW against the United States or its allies and partners would face the prospect of a devastating conventional military response—and that any individuals responsible for the attack, whether national leaders or military commanders, would be held fully accountable."<sup>14</sup>

The "not in compliance" label refers to Iran, North Korea, and possibly Syria, as was pointed out in briefings by Obama administration officials in April 2010.<sup>15</sup> However, by not delineating a broader set of threats from particular states—as was the case when the 2001 NPR which reportedly explicitly listed North Korea, Iran, Iraq, Libya, China, and Syria as threats to the United States—the 2010 version of the negative security assurance both limits the number of threatened states and suggests a path by which states can regain the guarantee. In other words, if the governments of Iran or North Korea were to abandon their nuclear ambitions and come back into compliance with the NPT, then the U.S. negative security assurance would apply to them as well.

It is important to note that the 2010 NPR does not say that the United States gives the power to judge another state's nonproliferation compliance to any international organization, as some critics erroneously suggested.<sup>16</sup> The NPR does not detail precisely how compliance will be

<sup>13</sup> Department of Defense, "Nuclear Posture Review Report," April 6, 2010, 15. [www.defense.gov/npr/docs/2010%20nuclear%20posture%20review%20report.pdf](http://www.defense.gov/npr/docs/2010%20nuclear%20posture%20review%20report.pdf). I interpret "nuclear nonproliferation obligations" as referring to those obligations arising from NPT membership. This interpretation is consistent with comments on the NPR negative security assurance by Obama administration officials. For example, at the NPR rollout event in April 2010, Secretary of Defense Robert Gates articulated the assurance as: "If a non-nuclear-weapon state is in compliance with the nonproliferation treaty and its obligations, the U.S. pledges not to use or threaten to use nuclear weapons against it." Robert Gates, remarks at "DOD News Briefing with Secretary Gates, Navy Adm. Mullen, Secretary Clinton, and Secretary Chu," Pentagon, Washington DC, April 6, 2010, [www.defense.gov/transcripts/transcript.aspx?transcriptid\\_4599](http://www.defense.gov/transcripts/transcript.aspx?transcriptid_4599).

<sup>14</sup> Department of Defense, "Nuclear Posture Review Report," April 6, 2010, 15. [www.defense.gov/npr/docs/2010%20nuclear%20posture%20review%20report.pdf](http://www.defense.gov/npr/docs/2010%20nuclear%20posture%20review%20report.pdf).

<sup>15</sup> Robert Gates, remarks at "New Nuclear Posture Review Briefing," Pentagon, Washington, DC, April 6, 2010, [www.jcs.mil/speech.aspx?id\\_1355](http://www.jcs.mil/speech.aspx?id_1355). On Syria being a case of noncompliance that has not been resolved, see Samore, remarks at "International Perspectives on the Nuclear Posture Review," 5.

<sup>16</sup> For example, Keith Payne, a former Department of Defense official, said: "The new NPR appears to place the UN's IAEA and its Board of Governors at the heart of determining U.S. nuclear deterrence strategy options," quoted

assessed in each case, but U.S. officials have clarified that the United States reserves the right to judge the NPT compliance of non-nuclear weapon states. White House Coordinator for WMD Counterterrorism and Arms Control Gary Samore has said that, “in compliance with their nuclear nonproliferation obligations’ is intended to be a broad clause and we’ll interpret that—when the time comes—we’ll interpret that in accordance with what we judge to be a meaningful standard. ...On the question of who determines, that’s a U.S. national determination.”<sup>17</sup>

Have other states followed suit? Regarding the impact on nuclear weapons states, the glass of U.S. influence is positive, but only half full. On the one hand, the U.S. effort to encourage other governments to reduce the role of nuclear weapons in their doctrine has been successful in two important cases: the government of the United Kingdom adopted a nuclear posture remarkably similar to that of the United States, and the Russian government’s 2010 nuclear doctrine moved closer to the U.S. position and did not adopt the expansive roles and missions that had been anticipated prior to the 2010 U.S. NPR. On the other hand, the new 2010 U.S. nuclear posture has had minimal direct influence with respect to France, China, India, and Pakistan.

Regarding the UK, in October 2010, the British government issued its own “Strategic Security and Defence Review,” which contained nuclear positions similar, and indeed at times virtually identical, to those outlined in Obama’s Prague speech and in the NPR. The UK government restated both its NPT Article VI commitment and its reliance on nuclear deterrence as long as other states have nuclear weapons: “As a responsible nuclear weapon state and party to the NPT, the UK also remains committed to the long term goal of a world without nuclear weapons. ...It is right that the United Kingdom should retain a credible, continuous and effective minimum nuclear deterrent for as long as the global security situation makes that necessary.”<sup>18</sup> The UK government also presented new negative security assurances and a new posture regarding deterrence of chemical and biological weapons that was essentially identical to the positions laid out in the U.S. NPR: “We are now able to give an assurance that the UK will not use or threaten to use nuclear weapons against non-nuclear weapon states parties to the NPT. In giving this assurance, we emphasize the need for universal adherence to and compliance with the NPT, and note that this assurance would not apply to any state in material breach of those nonproliferation obligations.”<sup>19</sup>

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in Bill Gertz, “Inside the Ring: U.N. Nuclear Control,” *Washington Times*, April 8, 2010.

[www.washingtontimes.com/news/2010/apr/08/inside-the-ring-49434836/](http://www.washingtontimes.com/news/2010/apr/08/inside-the-ring-49434836/).

<sup>17</sup> Gary Samore, remarks at “International Perspectives on the Nuclear Posture Review,” Carnegie Endowment for International Peace, Washington, DC, April 22, 2010, [www.carnegieendowment.org/files/0422carnegie-samore.pdf](http://www.carnegieendowment.org/files/0422carnegie-samore.pdf).

<sup>18</sup> UK Ministry of Defence, “Securing Britain in an Age of Uncertainty: “The Strategic Security and Defence Review,” October 19, 2010, 5 and 37.

[www.direct.gov.uk/prod\\_consum\\_dg/groups/dg\\_digitalassets/@dg/@en/documents/digitalasset/dg\\_191634.pdf](http://www.direct.gov.uk/prod_consum_dg/groups/dg_digitalassets/@dg/@en/documents/digitalasset/dg_191634.pdf).

<sup>19</sup> *Ibid.*, 37-38.

Regarding the Russian doctrine, the policies set before and during the 2010 NPR consultation process deeply influenced the Russian government's perception of its security environment and strengthened the hand of moderates in Moscow in the ensuing domestic debate over Russia's nuclear weapons posture and nonproliferation policy. These dynamics paved the way for the New START, for significant changes in Russian arms sales to and support for sanctions against Iran in 2010, and for modest changes in Russia's national nuclear weapons posture. These new positions in Moscow stand in stark contrast to the confrontational attitudes that were dominant in 2007, when President Vladimir Putin publicly complained that the lack of progress on arms control was a threat to international security and Russian sales of advanced air defense systems to Iran (the S-300 system) were moving forward.

Most significantly regarding nuclear weapons posture, as Pavel Podvig compellingly demonstrates in his article in the 2011 special issue of *The Nonproliferation Review*, the final version of the Russian nuclear doctrine, released in February 2010, outlined a modestly reduced role for nuclear weapons, a shift from the more assertive Russian draft doctrine that had been publicly discussed in October 2009.<sup>20</sup> At that time, Russian officials suggested that a new flexible nuclear doctrine would be adopted that included a wide range of potential uses of nuclear weapons, including "a preventive nuclear strike on the aggressor" and "to repel an aggression with the use of conventional weapons not only in a large-scale but also in a regional and even a local war."<sup>21</sup> While the final 2010 Russian posture document maintains that nuclear or other WMD aggression would still justify a nuclear response, it did not mention preventive strikes. It also restricted the use of nuclear weapons in response to conventional aggression to those attacks that were "imperiling the very existence of the state"—a much more limited set of circumstances and one closer to the U.S. government's "defending vital interests" criterion than earlier Russian positions.<sup>22</sup>

France, China, India, and Pakistan, however, have maintained their preexisting nuclear weapons doctrines with no signs of movement in directions that the United States would like to see.<sup>23</sup> The limited effectiveness of the shift in U.S. nuclear doctrine on these nuclear weapons states is especially disappointing with regard to India, since strategic relations between New Delhi and Washington have clearly improved over the past five years and U.S. doctrine has had significant impact on Indian doctrine in the past. For example, in its 1999 Draft Nuclear Doctrine, India adopted a similar negative security assurance to that made by the U.S. and other

<sup>20</sup> Pavel Podvig, "Instrumental Influences: Russia and the 2010 Nuclear Posture Review," *The Nonproliferation Review* 18 (March 2011), 47.

<sup>21</sup> Nikolai Patrushev, as quoted in Dmitry Solovyov, "Russia Reserves Pre-emptive Nuclear Strike Right," *Reuters*, October 13, 2009.

<sup>22</sup> "The Military Doctrine of the Russian Federation," February 5, 2010. [www.sras.org/military\\_doctrine\\_russian\\_federation\\_2010](http://www.sras.org/military_doctrine_russian_federation_2010).

<sup>23</sup> Thomasingar, "Worrying about Washington: China's Views on the U.S. Nuclear Posture," *The Nonproliferation Review*, 18:1 (March 2011), 51-68, and Harald Müller, "A Nuclear Nonproliferation Test: Obama's Nuclear Policy and the 2010 NPT Review Conference," *The Nonproliferation Review*, 18:1 (March 2011), 219-236.

nuclear weapons states.<sup>24</sup> In 2003, New Delhi also added caveats to their traditionally strict No-First-Use policy, regarding possible nuclear responses to biological or chemical weapons attacks, following the lead of the Clinton and Bush administrations' "calculated ambiguity" policy.<sup>25</sup> Given this past history of influence, and the improved relations with India, it is particularly disappointing that the Obama Administration has apparently made little effort and has had little influence on Indian nuclear doctrine encouraging New Delhi to return to its strict No-First-Use policy.

### **The 2010 NPT Review Conference**

The Prague Speech, the 2010 NPR, and the successful completion of the New START agreement created incentives and space producing a positive outcome at the 2010 NPT Review Conference. Harald Müller, a scholar who served on the German delegation, presents strong evidence for this test case of the positive effect of the Obama Administrations nuclear disarmament position on nonproliferation policy. Müller's content analysis of the speeches given at the 2010 NPT Review Conference demonstrates that only Iran and Cuba made negative references to the Obama administration's nuclear initiatives. In contrast, one third of the NPT parties made positive references to the NPR, two-thirds made positive references to the 2010 Nuclear Security Summit, and virtually all states surveyed mentioned the New START in positive terms, with Iran being the sole exception. Most importantly, the Obama Administration isolated Iran at the conference with the crucial assistance it should be noted, of Brazil and Egypt. According to Müller:

The most impressive moment of the 2010 NPT Review Conference occurred toward the end of the third week, when Iran tried to derail the conference by demanding that the work of the three main committees should continue. Since it was obvious by that time that the committees could not achieve agreement, this was a showstopper—without the committee reports, the conference would have had a hard time, procedurally, reaching a final declaration. Egypt had already struck a compromise with Ambassador Libran Cabactulan (the conference president), the United States, and others that the last week should belong to the plenary and the drafting committee. In a heated NAM ad hoc consultation on the floor, the Egyptian delegation leader reined in Iran, assuring NAM consent to Ambassador Cabactulan's procedural proposal. It was

<sup>24</sup> For more analysis see Scott D. Sagan, "The Evolution of Pakistani and Indian Nuclear Doctrine," in Scott D. Sagan (ed.), *Inside Nuclear South Asia* (Stanford, CA: Stanford University Press, 2009), 219-263.

<sup>25</sup> "The Cabinet Committee on Security Reviews operationalization of India's Nuclear Doctrine." *Ministry of External Affairs, Government of India*, January 4, 2003. An unidentified member of the NSAB was quoted in the press making a similar argument tying Indian policy to that of the P-5 nuclear powers: "All five nuclear weapon states...reserve the right to launch nuclear weapons first. Then why should India not do so?" Elisabeth Roche, "India Evaluating, Fine-Tuning Nuclear Doctrine, Experts Say," *Hong Kong Agence France Press*, January 14, 2003. <http://toolkit.dialog.com/intranet/cgi/present?STYLE=739318018&PRESENT=DB=985,AN=165050958,FM=9,SEARCH=MD.GenericSearch>.



also telling that there was no significant NAM support (apart from Cuba and Syria) for Iran's two most urgent demands—namely, deleting positive language on the Nuclear Security Summit, and the Iranian allegation that the Obama administration's nuclear doctrine was even more threatening to non-nuclear weapon states than the Bush administration's (a position that led Iran to call for the exclusion from the International Atomic Energy Agency of nuclear weapon states that threatened non-nuclear weapon states). Egypt ensured that this radical demand did not find its way into the NAM position. In the end, the Egyptians apparently joined Brazil in a direct approach to Tehran to overcome the Iranian government's last minute resistance to adopting the final document.<sup>26</sup>

Overall, the 2010 NPT Review Conference resulted in a consensus document in which all 189 states “welcomed the reductions announced by some nuclear weapons states in the role of nuclear weapons in their security doctrines,” “encourages all State parties that have not yet done so to conclude and bring into force an additional protocol,” which is the IAEA's tougher safeguard regime that includes no-notice inspections, and “underlined the importance” of future discussions to create multinational control of the nuclear fuel cycle (by mechanisms like a uranium fuel bank).<sup>27</sup> Müller's “insider” study of the NPT Review Conference strongly suggests that the U.S. would not have gotten this positive outcome (remember that the Bush Administration was unable to produce any kind of final consensus agreement at the 2005 NPT Review) without the Obama Prague speech, the 2010 NPR, and the New Start agreements. Getting a positive NPT final document still required the U.S. to agree to support the 2012 Middle East nuclear-weapons-free-zone conference (the price to get Egyptian cooperation), but without the major changes in U.S. policy many other non-nuclear weapons states (including Brazil and South Africa) would not have supported accepted a final statement encouraging steps to strengthen the nuclear nonproliferation regime.

#### **The Nuclear Suppliers Group**

The NPT, like most international treaties, includes a withdrawal clause. Article X, paragraph 1 states:

Each Party shall in exercising its national sovereignty have the right to withdraw from the Treaty if it decides that extraordinary events, related to the subject matter of this Treaty, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to all other Parties to the Treaty and to the United Nations Security Council three months in

<sup>26</sup> Harald Müller, “A Nuclear Nonproliferation Test: Obama's Nuclear Policy and the 2010 NPT Review Conference,” *The Nonproliferation Review*, 18:1 (March 2011), 219-236.

<sup>27</sup> “2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons: Final Document,” NPT/CONF.2010/50, New York, NY, 2010. <http://www.un.org/en/conf/npt/2010/> (Date Accessed: July 17, 2012).

advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

This creates a significant danger because a government can legally develop a nuclear power infrastructure, uranium enrichment and plutonium reprocessing facilities, and nuclear reactors and produce nuclear materials while a member in good standing, and then use the technology and resulting materials, if it legally withdraws from the treaty, to build nuclear weapons later. There is no shortage of proposals to revise Article X of the NPT—the withdrawal clause—to make it more difficult for states to leave the Treaty. For example, an international agreement to have an automatic IAEA referral of any state that withdraws from the treaty to the UN Security Council for discussion and potential punitive action would provide a disincentive for invoking Article X. Requiring some form of multilateral ownership or international control of all fuel cycle facilities in the future would be a further constraint on unilateral withdrawal. Most importantly, an international consensus requiring that all future transfers of nuclear technology or materials be subject to the recipient state accepting a legal commitment to maintain permanent safeguards would decrease the incentives and increase the costs for any future decision to withdraw from the NPT. Such reasonable proposals, however, are unlikely to be approved within the NPT review conferences, because the NPT operates by consensus and has a number of members states opposed to such reforms, like Iran, Cuba, Venezuela, and Syria. Moreover, any legal amendment to the NPT – such as the idea of lengthening the withdrawal notification time from three months to one year – would require that all member states take back the new draft treaty for ratification debates, with highly uncertain outcomes. A major responsibility to strengthen the regime, address the withdrawal problem, and restrict the transfer of nuclear technologies, falls therefore on the Nuclear Suppliers Group (NSG), which also operates by consensus, but has only 46 member states, all of which export nuclear technology.

An important improvement in the broader nuclear nonproliferation regime occurred in June 2011, when the NSG voted on new guidelines on the transfer of sensitive enrichment and reprocessing technologies. These changes have been underappreciated and warrant closer inspection. Before June 2011, the existing NSG guidelines simply called for all member states to “exercise restraint” in making sensitive transfers. The new guidelines are more precise and add useful restrictions. First, the guidelines state that any state wishing to receive a transfer of sensitive nuclear technology must have “concluded an inter-governmental agreement with the supplier including assurances regarding non-explosive use, effective safeguards in perpetuity, and retransfer.”<sup>28</sup> Second, the guidelines call for exporters to “avoid as far as practicable, the transfer of enabling design and manufacturing technology” associated with uranium

<sup>28</sup> The Nuclear Suppliers Group, “Communication Received from the Permanent Mission of the Netherlands regarding Certain Member States’ Guidelines for the Export of Nuclear Material, Equipment and Technology,” (emphasis added) INFCIRC/254/Rev.10/Part 1, July 26, 2011. <http://www.nuclearsuppliersgroup.org/Leng/PDF/infcirc254r10p1.pdf> (Date Accessed: July 13, 2012).

enrichment.<sup>29</sup> Third, the guidelines state that “suppliers should authorize transfers...only when the recipient has brought into force a Comprehensive Safeguards Agreement, and an Additional Protocol based on the Model Additional Protocol or, pending this, is implementing appropriate safeguards agreements in cooperation with the IAEA, including a regional accounting and control arrangement for nuclear materials, as approved by the IAEA Board of Governors.”<sup>30</sup> These new NSG guidelines represent a significant tightening of the international rules governing the transfer of sensitive nuclear technologies.<sup>31</sup> Moreover, the new NSG guidelines demonstrate an additional way in which leaders among non-nuclear weapons states—most notably Brazil and South Africa—are cooperating more in the strengthening of the international nonproliferation regime than they were in the recent past.

### **The Comprehensive Test Ban Treaty**

The Comprehensive Test Ban Treaty (CTBT) should be seen as both a nonproliferation effort and a disarmament effort. It supports nonproliferation by placing extra legal and political barriers against testing on any non-nuclear weapons state that chooses to withdraw from the NPT in the future. The treaty, once it enters into force, also supports disarmament limiting the ability of less technologically capable nuclear weapons states to thermonuclear weapons or smaller tactical nuclear weapons. Here there is also direct evidence of the positive effects of the Obama Administration’s disarmament efforts. For example, Marty M. Natalegawa, Indonesian Minister of Foreign Affairs, announced that his government would seek ratification of the CTBT during general debate at the 2010 NPT Review Conference:

After so many years during which the cause of nuclear disarmament lay inert, today, as we hold this NPT Review Conference, there *are* some positive signs. Countries appear awakened to the urgency for nuclear disarmament. The first steps in the right direction have been taken. The United States and the Russian Federation have signed a new Strategic Arms Reduction Treaty (START). We are also cognizant of some positive aspects of the United States’ Nuclear Posture Review. We welcome these developments and what we expect will be the further marginalization of nuclear weapons. Every step forward, no matter how small, should give U.S. new momentum toward the next step so that we advance inexorably to our final goal of complete nuclear disarmament... Indonesia, Mr. President, wish [sic] very much to contribute to such positive *milieu*. Hence, I wish to inform the present august assembly that

<sup>29</sup> The Nuclear Suppliers Group, “Communication Received from the Permanent Mission of the Netherlands regarding Certain Member States’ Guidelines for the Export of Nuclear Material, Equipment and Technology,” (emphasis added) INFCIRC/254/Rev.10/Part 1, July 26, 2011.

<http://www.nuclearsuppliersgroup.org/Leng/PDF/infcirc254r10p1.pdf> (Date Accessed: July 13, 2012).

<sup>30</sup> The Nuclear Suppliers Group, “Communication Received from the Permanent Mission of the Netherlands regarding Certain Member States’ Guidelines for the Export of Nuclear Material, Equipment and Technology,” INFCIRC/254/Rev.10/Part 1, July 26, 2011. <http://www.nuclearsuppliersgroup.org/Leng/PDF/infcirc254r10p1.pdf> (Date Accessed: July 13, 2012).

<sup>31</sup> For an excellent analysis of the NSG see Mark Hibbs, “The Future of the Nuclear Suppliers Group,” *The Carnegie Endowment for International Peace*, 2011. [http://carnegieendowment.org/files/future\\_nsg.pdf](http://carnegieendowment.org/files/future_nsg.pdf) (Date Accessed: July 13, 2012).

Indonesia is initiating the process of the ratification of the Comprehensive Nuclear Test Ban Treaty. It is our fervent hope that this further demonstration of our commitment to the nuclear disarmament and non-proliferation agenda will encourage other countries that have not ratified the Treaty, to do the same.<sup>32</sup>

Indonesia's Parliament directly linked U.S. disarmament to nonproliferation when it ratified the CTBT on December 6, 2011 and its instruments of ratification were formally submitted on February 6, 2012.

The most important benefit of the U.S. ratifying the CTBT would be the effect of increasing pressure on India and Pakistan not to test again. Both nations would need to test in order to develop thermonuclear weapons or tactical nuclear weapons.<sup>33</sup> Indian government officials have linked ratification of the treaty to the U.S. ratification, saying that India "won't stand in the way" of the Treaty coming into force, and observers believe that the Pakistani government would ratify the CTBT after India did so.<sup>34</sup> U.S. ratification could turn the current Indian and Pakistani moratorium on testing into a legal treaty commitment. This is important to hold off Pakistani development on tactical weapons and both states' development of thermonuclear weapons.<sup>35</sup>

#### Conclusions: Shared Responsibilities

The United States should recognize that from the perspective of the governments of many non-nuclear weapon states, the Obama administration's recommitment of the United States to work in good faith toward nuclear disarmament is a necessary, but by no means sufficient, condition for them to take what they consider costly steps to strengthen the nuclear nonproliferation regime. Many governments identified the Prague speech, President Obama's support for the CTBT, and the New START agreement as genuine indicators of the United States taking its Article VI commitments more seriously. But they also are very aware that the United States committed itself to bringing the CTBT into force as part of the 1995 NPT Review Conference decision to extend the treaty in perpetuity, and they are deeply reluctant to make what they see as concessions regarding their civilian nuclear power interests and potential security interests based on what they fear might be broken promises in the future. Many foreign

<sup>32</sup> Statement by H.E. Dr. R.M. Marty M. Natalegawa, Minister for Foreign Affairs Of the Republic of Indonesia to the General Debate of the 2010 NPT Review Conference, New York, May 3, 2010. [www.un.org/en/conf/npt/2010/statements/pdf/indonesia\\_en.pdf](http://www.un.org/en/conf/npt/2010/statements/pdf/indonesia_en.pdf) (Date Accessed: July 13, 2012).

<sup>33</sup> Sanjoy Majumder, "India nuclear test 'did not work,'" *BBC News*, August 27, 2009. <http://news.bbc.co.uk/2/hi/8225540.stm> (Date Accessed: July 17, 2012).

<sup>34</sup> "India links CTBT with disarmament," *Thaindian*, March 30, 2009.

[http://www.thaindian.com/newsportal/uncategorized/india-links-ctbt-with-disarmament\\_100173358.html](http://www.thaindian.com/newsportal/uncategorized/india-links-ctbt-with-disarmament_100173358.html), and Jonathan Medalia, "Comprehensive Nuclear-Test-Ban Treaty: Background and Current Developments," *Congressional Research Services*, December 7, 2011. <http://www.fas.org/sgp/crs/nuke/RL33548.pdf>, and "Panel asks India, Pakistan to ratify CTBT," *The Hindu*, June 3, 2006. <http://www.hindu.com/2006/06/03/stories/2006060305131400.htm>

<sup>35</sup> Pakistani Inter-Services Public Relations (ISPR) Press Release, April 19, 2011. No PR94/2011-ISPR. [http://www.ispr.gov.pk/front/main.asp?o=t-press\\_release&id=1721](http://www.ispr.gov.pk/front/main.asp?o=t-press_release&id=1721) (Date Accessed: July 13, 2012).

governments are therefore clearly waiting to see progress on future arms control agreements and the ratification of the CTBT before they commit themselves to further actions regarding disarmament and nonproliferation.

The governments of these reluctant non-nuclear weapons states, however, should also recognize that their refusal to approve progressive nonproliferation measures – such as the Additional Protocol, multilateral control mechanisms for fuel cycle facilities such as the IAEA fuel bank program, and permanent safeguard arrangements – not only create concerns about their intentions by their regional neighbors, but also inevitably will reduce the willingness and ability of the nuclear weapons states to move safely toward lower numbers of nuclear weapons on the road toward disarmament. The potential spread of national uranium enrichment facilities and reprocessing facilities, both of which could be misused for building weapons, creates particularly understandable concerns about the future. For if nuclear states fear that new nuclear proliferators are just over the horizon no matter what they accomplish in the disarmament sphere, they will have fewer incentives to continue to work toward nuclear disarmament.

We seem to be stuck in a situation where some non-nuclear weapons states are waiting for nuclear weapons states to do more before moving forward themselves on nonproliferation steps. And some nuclear weapons states are waiting for non-nuclear weapons states to do more before moving forward on disarmament steps. What can be done to break out of this nonproliferation logjam? A conceptual change is necessary to encourage a stronger understanding that nuclear and non-nuclear weapons states have a shared responsibility to work together toward both a world without nuclear weapons and toward a future in which the expansion of global nuclear energy use takes place with stronger and more permanent safeguards to prevent potential weapons proliferation.<sup>36</sup> A careful look back at the key NPT articles should encourage such a vision of shared responsibility in two important ways.

First, contrary to the common claim that Article VI applies only to the nuclear weapons states, it is important to remember that the treaty text explicitly states that “each of the Parties of the Treaty undertakes to pursue negotiations in good faith” toward the goal of nuclear disarmament. Given the inevitable linkage between stricter and permanent safeguards and future disarmament steps, the non-nuclear weapons states should treat multilateral efforts to control the fuel cycle and to institute permanent safeguards as part of their Article VI commitment. Under this logic, the non-nuclear weapons states cannot legitimately be told exactly what kinds of safeguards on the facilities will be needed in the future or exactly what kinds of reforms of the NPT regime should be initiated. But they should be reminded, often, that they also play an essential role in providing the conditions that could lead to a safer world without nuclear

<sup>36</sup> For further analysis of these issues see Scott D. Sagan, “Shared Responsibilities for Nuclear Disarmament: A Global Debate,” *American Academy of Arts and Sciences*, occasional paper, 2010, and Stephen E. Miller, “Nuclear Collisions: Discord, Reform, and the Nuclear Nonproliferation Regime,” *American Academy of Arts and Sciences*, occasional paper, 2012.

weapons and that good faith requires constant attention and negotiations now, not in a distant future, toward a strengthened nuclear nonproliferation regime.

Second, it is equally important to note that Article IV refers to “all the Parties to the Treaty,” not just the non-nuclear weapons states. This should lead to increased opportunities to share responsibility for nonproliferation, for it suggests that as part of their Article IV commitment, the nuclear weapons states should reaffirm that international safeguards can eventually be placed on all of their nuclear power plants and enrichment and reprocessing facilities.<sup>37</sup> Reaffirming this commitment, as a responsibility under Article IV, should be easy to accept in principle; after all, if nuclear weapons states are committed to working in good faith toward nuclear disarmament, at some point they would become, to coin an acronym, FNWS (former nuclear-weapons states), and the safeguard exceptions they currently maintain would no longer apply. In the near term, it would be helpful for the U.S. to go beyond reaffirmations and expressions of principle and pick more new facilities to place under advanced safeguards, to demonstrate future intentions and help create best practices.

#### **Final Observations**

The Obama Administration’s reaffirmation of the U.S. willingness to honor its Article VI commitment to work in good faith toward nuclear disarmament, and its subsequent nuclear posture changes and arms control efforts, have created valuable dividends by leading to reductions in the role of nuclear weapons in other states’ postures, by creating increased cooperation in setting more strict rules for nuclear technology exports, by encouraging improved global safeguard mechanisms, and by bringing the CTBT closer to entry into force. These efforts have not been a panacea, however, to all nuclear proliferation challenges. It is clearly disappointing that China and Russia and some non-aligned states have not supported deeper sanctions on Iran for its failure to honor previous UN Security Council resolutions. It is alarming that North Korea has moved forward with a uranium enrichment program and that Pakistan appears interested in developing tactical nuclear weapons. But the failure to achieve all U.S. nonproliferation objectives should not blind us to the successes that have been achieved.

Indeed, even if the goal of global nuclear disarmament is someday achieved, our nonproliferation challenges would not be eliminated. A nuclear weapons-free world would not be a world free of conflicts of national interest; nor would it be a utopia in which governments never feel tempted to cheat on their international obligations. A world without nuclear weapons would not be a world without war. Indeed, the maintenance of a world without nuclear weapons would require that conventionally armed major powers be prepared to enforce nuclear

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<sup>37</sup> Indeed, such an agreement in principle, with an exception for facilities with “direct national security significance,” was in fact made by President Lyndon Johnson in 1967, as a major compromise during the NPT negotiations. See George Bunn, *Arms Control by Committee: Managing Negotiations with the Russians* (Stanford, CA: Stanford University Press, 1992), 101.

disarmament and nonproliferation commitments in a fair and vigorous manner. Potential proliferators may have to be “forced” to be free.

Nuclear weapons may have been a dangerous necessity to keep the Cold War cold. But scholars and policy makers who are nostalgic for the brutal simplicity of that era’s nuclear deterrence do not understand how much the world has changed. The real choice we face is not between a nuclear weapons-free world or a return to bipolar Cold War deterrence; it is between working carefully to create constant progress toward a nuclear weapons-free world and stricter nonproliferation rules or living in a world in which there are more nuclear weapons states, more nuclear weapons, and more opportunities for their use.

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- "Reducing the Risks: A New Agenda for Military-to-Military Talks," *Arms Control Today* (July-August 1991), pp 16-21. [Reprinted in *Reducing the Risk of Dangerous Military Activities* (Center for International Security and Arms Control, Stanford University, 1991), pp.27-39.]
- "History, Analogy, and Deterrence Theory: A Review Essay," *Journal of Interdisciplinary History* (Summer 1991), pp. 79-88.
- "Change and Continuity in U.S. Nuclear Strategy" in Michael Mandelbaum (ed.), *America's Defense* (Holmes and Meier, 1989), pp. 279-317.
- "Origins of the Pacific War," *Journal of Interdisciplinary History* (Spring 1988), pp. 893-922. [Reprinted in Robert I. Rothberg and Theodore K. Rabb (eds.), *The Origin and Prevention of Major Wars* (Cambridge University Press, 1989), pp.323-352.]
- "SIOP-62: The Nuclear War Plan Briefing to President Kennedy," *International Security*, (Summer 1987), pp. 22-51.
- "Correspondence: The Origins of Offense and the Consequences of Counterforce," *International Security* (Winter 1986-87), pp.193-198. An exchange of letters between Jack Snyder and Scott D. Sagan.
- "1914 Revisited: Allies, Offense and Instability," *International Security* (Fall 1986), pp. 151-175. [Reprinted in Steven E. Miller, Sean M. Lynn-Jones, and Steven Van Evera (eds.) *Military Strategy and the Origins of the First World War* (Princeton University Press, 1991), pp. 109-133 and Richard K. Betts (ed.), *Conflict After the Cold War: Arguments on Causes of War and Peace* (Macmillan, 1994), pp. 330-343 .
- "Nuclear Alerts and Crisis Management" *International Security*, (Spring 1985), pp.99-139. [Reprinted in Sean Lynn-Jones, Steven E. Miller, and Steven Van Evera (eds.), *Nuclear Diplomacy and Crisis Management* (MIT Press, 1990), pp. 159-199.]
- Contributor to *Strategic Survey 1982-1983* (International Institute for Strategic Studies, 1983).
- "Lessons of the Yom Kippur Alert," *Foreign Policy* (Fall 1979), pp. 160-177.
- "Congressional Demands for American Troop Withdrawals from Western Europe," (with Phil Williams), *Journal of the Royal United Services Institute for Defence Studies*, (September 1976).
- "Senator Mansfield and the NATO Alliance," *Royal Air Forces Quarterly* (Summer 1976).

**CURRENT RESEARCH PROJECTS:**

*The Spread of Nuclear Weapons: An Enduring Debate*, co-authored with Kenneth N. Waltz (3<sup>rd</sup> edition with new chapters on Iran, North Korea, and Global Zero, W.W. Norton, expected 2012)

*Testing the Nuclear Taboo and Commitment Trap*, with Daryl Press and Benjamin Valentino (using experimental survey results to determine public attitudes about the use of nuclear weapons in certain scenarios)

*Detering Rogue Regimes: New Dimensions of Deterrence in Theory and Practice* (using recently captured and translated documents from Saddam Hussein's palaces)

*The Insider Threat: Protecting Nuclear Materials*

**BOOK REVIEWS:**

*American Political Science Review, Arms Control Today, Contemporary Sociology, Journal of Contingencies and Crisis Management, The New Republic, Political Science Quarterly, Proceedings of the U.S. Naval Institute, Survey, Survival, and The Washington Post Book World.*

**PROFESSIONAL ACTIVITIES AND MEMBERSHIPS:**

Member, Herbert Scoville Jr. Peace Fellowship Advisory Council, 2012 – Present.

Member, Committee on Improving the Assessment of the Proliferation Risk of Nuclear Fuel Cycles, National Academy of Sciences, 2011 – Present.

Board Member, Federation of American Scientists, 2010 – Present.

Expert Advisor, Congressional Commission on the Strategic Posture of the United States, 2008-2009.

Member, American Academy of Arts and Sciences (AAAS) Committee on International Security Studies, and Co-Chair (with Steven Miller) of the AAAS Initiative on the Global Nuclear Future, 2007 – Present.

National Intelligence Council "Global Expertise Reserve" Consultant, 2006 – 2009

Member of Steering Committee, American Assembly, 2006 – 2008

Member, Visiting Committee, Department of Political Science, University of California, Berkeley, November 2006.

Member, Distinguished Advisory Panel for Non-Proliferation and Arms Control, Sandia National Laboratory, 2000 – Present.

Member, Undergraduate Advisory Council, Stanford University, 2000 – Present.

Member, CAC Subcommittee on Analysis and Policy Formulation, Council on Foreign Relations, 2003-2005.

Member, Visiting Committee, Department of Government, Harvard University, 2003.

Member, Advisory Panel on Investment Responsibility, Stanford University, 1999-2000.

Member, National Board of Directors of the Lawyers Alliance for World Security (LAWS), 1999-2005.

University Fellow, Stanford University, 1996-1998.

Member, Asia/Pacific Scholars Program Faculty Committee, Stanford University, 1996-1997.

Co-director, NATO Advanced Research Workshop: "Improving Nuclear Weapons Safety and Security in the Post-Cold War Era," Summer 1994.

Member, 1995 Selection Committee for the MacArthur Foundation's Research and Writing Grants on Peace and International Cooperation.

American Association for the Advancement of Science, Member of the Committee on Science and International Security, 1995-1996.

Consultant to the Los Alamos National Laboratory, 1989-1995.

Consultant to the Office of the Secretary of Defense, 1987-1991.

Consultant to the RAND Corporation, 1987-1991.

Member of Advisory Group to the Joint Chiefs of Staff on the Future of U.S.-Soviet Military Relations, 1989-1990.

Member of Program Committee for Stanford in Washington, 1992-present.

Member of Steering Committee, Eliminating Weapons of Mass Destruction Project, Henry L. Stimson Center, Washington DC, 1994-1997.

Member of Advisory Board, Nuclear Weapons History Project, National Security Archives, Washington DC, 1995-2000.

Book Manuscript Reviewer: Cambridge University Press, Princeton University Press, The Brookings Institution, Cornell University Press, University of Michigan Press, University of South Carolina Press, State University of New York Press, University of Georgia Press, University of Chicago Press, Stanford University Press.

Grant and Fellowship Proposal Reviewer: The National Science Foundation, The John D. and Catherine T. MacArthur Foundation, The Ploughshares Fund, The Smith Richardson Foundation, and the Woodrow Wilson Center.

Article Manuscript Reviewer: *International Security*, *International Organization*, *American Political Science Review*, *Journal of Peace Research*, *Political Science Quarterly*, *Political Behavior*, *Journal of Conflict Resolution*, *Security Studies*, *The Nonproliferation Review*, *Armed Forces and Society*, *Journal of Interdisciplinary History*, *The European Journal of International Relations*.

Editorial Board Member: *International Security*, *Security Studies*, *International Studies Quarterly*, *Journal of Contingencies and Crisis Management*, *The Nonproliferation Review*.

Memberships: American Academy of Arts and Sciences, American Political Science Association, Council on Foreign Relations, Mayo Smith Society, International Institute for Strategic Studies, and International Security.

#### **AWARDS AND HONORS**

Recipient of the Monterey Institute for International Studies' Outstanding Contribution to Nonproliferation Education Award, December 2009.

Honorary Doctor of Laws, Ohio Wesleyan University, May 2008.

Fellow, American Academy of Arts and Sciences, Elected 2008.

Recipient of the International Studies Association's 2008 Deborah Misty Gerner Innovative Teaching Award.

Recipient of Stanford University's 1998-99 Dean's Award for Distinguished Teaching.

Recipient of Stanford University's 1996 Laurance and Naomi Hoagland Prize for Undergraduate Teaching.

#### **TEACHING EXPERIENCE:**

Co-Director, Interschool Honors Program in International Security, Stanford University, 2000-



2002, 2003-2005, 2007-2008.

Department of Political Science, Stanford University (1987-present): PS 014 "Ethics and War," PS 034 Interschool Honors Program in International Security, PS 110B "Strategy, War, and Politics," PS 114S "International Security in a Changing World," PS 143H "Strategic Studies," PS 145J "American Foreign Policy," PS 243A "International Relations Theory," PS 243B "Theoretical Issues in International Security," PS 142S "Managing Hazardous Technologies," PS 138A "Advanced Study in International Security," PS 332 "Decision-Making," PS 301 "Case Studies, Comparative Methodology, and Theory Development," PS 310A, B, and C "International Relations Theory (Parts I, II, and III)," SC (Sophomore College) 220 "The Face of Battle."

Department of Government, Harvard University (1986-1987):

Gov 1790 "U.S. Foreign Policy," Gov 1745 "Strategy, Politics and Arms Control," Gov 90 "The Makers of Modern Strategy."

#### **PHD DISSERTATION COMMITTEES CHAIRED (OR CO-CHAIRED)**

1. John Arquilla - *Theory of Interstate War*, 1991
2. Nora Bensahel - *The Coalition Paradox: The Politics of Military Cooperation*, 1999
3. Tanisha Fazal - *Born to Lose and Doomed to Survive: State Death and Survival in the International System*, 2001. Winner of the 2002 Helen Dwight Reed Award.
4. Taylor Fravel - *The Long March to Peace: Explaining China's Settlement of Territorial Disputes*, 2003
5. Ron Hassner - *The Path to Indivisibility: The Role of Ideas in the Resolution of Intractable Territorial Disputes*, 2004
6. Alexander Montgomery - *Social Action, Rogue Reaction: US Post-Cold War Nuclear Counterproliferation Strategies*, 2006
7. Todd Sechser - *Winning Without a Fight: Power, Reputation, and Compellent Threats in International Crises*, 2007
8. Jacob Shapiro - *The Terrorist's Challenge: Security, Efficiency, Control*, 2007
9. Bryan Price - *Removing the Devil You Know: Unraveling the Puzzle Behind Decapitation Effectiveness and Terrorist Group Duration*, 2009.

#### **GRANTS RECEIVED AND MANAGED**

5/1/12 – 4/30/14	Japan Foundation Center for Global Partnership	Principal Investigator
	"Improving Nuclear Safety and Security After Disasters"	\$135,029
1/1/12 – 3/1/13	Naval Postgraduate School	Principal Investigator
	"Deterring Rogue Regime: Rethinking Deterrence Theory and Practice"	\$200,000
9/1/11 – 8/31/15	MacArthur Foundation	Principal Investigator
	"Nuclear Security in a Changing World"	\$2,000,000

10/1/10 – 9/30/12	Carnegie Corporation	Co-Principal Investigator
“Knowledge to Make a More Cooperative World”		\$750,000
5/1/10 – 9/30/11	Hewlett Foundation	Principal Investigator
“The International Impact of the 2010 Nuclear Posture Review”		\$250,000
10/1/08 – 9/30/10	Carnegie Corporation	Co-Principal Investigator
“Knowledge to Make a More Secure World”		\$750,000
9/1/08 – 2/28/10	MacArthur Foundation	Principal Investigator
“Disarmament: Rethinking Deterrence, Enforcement, and Defense”		\$295,000
10/01/06 – 9/30/08	Carnegie Corporation	Principal Investigator
“Knowledge to Build a Safer World”		\$1,000,000
9/1/06- 10/14/07:	Naval Postgraduate School	Principal Investigator
“Terrorist Strategies”		\$76,550
9/15/06 – 9/14/07	Department of the Navy	Principal Investigator
“Explaining Variation in Terrorist and Insurgent Strategies and Tactics”		\$76,550
1/15/06 – 10/14/06	Department of Homeland Security	Co-Principal Investigator
“State and Local Government Coordination and Preparedness Program Assessment and Evaluation.”		\$156,959
1/01/03 – 12/31/06	Compton Foundation, Inc.	Principal Investigator
“Global Arms Control Summit: Training the Next Generation in Diplomacy”		\$91,701
10/01/04 – 09/30/06	Carnegie Corporation	Principal Investigator
“International Security in a World of Emerging Threats”		\$1,450,000
10/01/04 – 08/31/06	Nuclear Threat Initiative	Principal Investigator
“Ballistic Missile Defense and Nuclear Security in South Asia”		\$150,000
05/01/04 – 03/31/06	The William and Flora Hewlett Foundation	Principal Investigator
“Strengthening Collective Security for the Twenty-First Century: Assisting the Work of the UN High Level Panel”		\$100,000
1/1/04 – 12/30/05	Dept. of Homeland Security	Co-principal Investigator
“Making a Difference: Facilitating Organizational Learning and Change Through the National Exercise Program”		\$1,650,000
9/30/03 – 9/29/04	US Army War College	Principal Investigator
“South Asia and the Nuclear Future”		\$40,000
	Carnegie Corporation	

10/01/02 – 9/30/04		Co-principal Investigator
“International Security in a Changed World: Opportunities and Challenges”		\$1,605,200
7/01/02 – 6/30/03	Compton Foundation, Inc.	Principal Investigator
“The Challenge of Cooperation on Counter-Terrorism and Nuclear Security”		\$30,000
9/01/99 – 8/31/02	W. Alton Jones Foundation	Co-Principal Investigator
“Strategic Stability: China and South Asia”		\$300,000
9/01/00 – 8/31/01	Ploughshares Fund	Principal Investigator
“Security Issues in the Middle East”		\$40,000
6/01/01 – 10/31/01	Nuclear Threat Initiative	Principal Investigator
“Nuclear Safety, Security and Stability in South Asia”		\$67,269
6/01/00 – 1/01/01	Compton Foundation, Inc.	Principal Investigator
“CISAC Workshop on Nuclear Safety and Security in South Asia”		\$60,000
10/01/98 – 9/30/00	Carnegie Corporation	Co-Principal Investigator
“International Security in a Changing World”		\$1,901,132
7/01/98 – 6/30/01	Smith Richardson Foundation	Co-Principal Investigator
“The Future Role of Nuclear Weapons”		\$213,774
9/01/97 – 8/31/00	The Ford Foundation	Principal Investigator
“Implementation of Peace Agreements in Civil Wars”		\$250,000
6/01/95 – 3/01/97	W. Alton Jones Foundation	Principal Investigator
“Reducing the Demand for Nuclear Weapons”		\$44,567
3/01/94 – 12/31/94	NATO Grants:	Principal Investigator
“Advanced Research Workshop: Nuclear Weapons Safety After the Cold War”		\$46,698
9/01/90 – 8/31/91	Carnegie Corporation	Principal Investigator
“Accidents at the Brink”		\$20,000

**PERSONAL DATA:**

Born: March 5, 1955.

Birthplace: Dearborn, Michigan.

Family: Married to Sujitpan Bao Lamsam. 3 children: Samuel, 15; Charlotte, 18; and Benjamin, 21

**DISCLOSURE FORM FOR WITNESSES  
CONCERNING FEDERAL CONTRACT AND GRANT INFORMATION**

**INSTRUCTION TO WITNESSES:** Rule 11, clause 2(g)(5), of the Rules of the U.S. House of Representatives for the 112<sup>th</sup> Congress requires nongovernmental witnesses appearing before House committees to include in their written statements a curriculum vitae and a disclosure of the amount and source of any federal contracts or grants (including subcontracts and subgrants) received during the current and two previous fiscal years either by the witness or by an entity represented by the witness. This form is intended to assist witnesses appearing before the House Armed Services Committee in complying with the House rule. Please note that a copy of these statements, with appropriate redactions to protect the witness's personal privacy (including home address and phone number) will be made publicly available in electronic form not later than one day after the witness's appearance before the committee.

**Witness name:** Scott D. Sagan

**Capacity in which appearing:** (check one)

Individual

Representative

**If appearing in a representative capacity, name of the company, association or other entity being represented:** N/A

**FISCAL YEAR 2012**

<b>federal grant(s)/ contracts</b>	<b>federal agency</b>	<b>dollar value</b>	<b>subject(s) of contract or grant</b>
Defense Threat Reduction Agency via the Naval Postgraduate School Project on Advanced Systems and Concepts for Countering WMD (PASCC)  NPS Award Number: N00244-12-1-0025	DOD, Defense Threat Reduction Agency	\$197,637.00	"Deterring Rogue Regimes: Rethinking Deterrence Theory and Practice"

Sandia National Laboratories Distinguished Advisory Panel	DOE, Sandia National Laboratories	\$25,000.00	"Distinguished Advisory Panel for Nonproliferation and Arms Control"
Sandia National Laboratories Nuclear Explosive Safety Workshop Keynote Address	DOE, Sandia National Laboratories	\$3,000.00	Keynote Address at Nuclear Explosive Safety Workshop on "The Limits of Safety"

**FISCAL YEAR 2011**

federal grant(s)/ contracts	federal agency	dollar value	subject(s) of contract or grant
Sandia National Laboratories Distinguished Advisory Panel	DOE, Sandia National Laboratories	\$25,000.00	"Distinguished Advisory Panel for Nonproliferation and Arms Control"
Blue Ribbon Commission Paper Contract Number: DE-AD07-07ID60679	DOE, Blue Ribbon Commission on America's Nuclear Future	\$14,906.25	Paper on "The International Security Implications of U.S. Domestic Nuclear Power Decisions"

**FISCAL YEAR 2010**

Federal grant(s)/ contracts	federal agency	dollar value	subject(s) of contract or grant
Sandia National Laboratories Distinguished Advisory Panel	DOE, Sandia National Laboratories	\$26,000.00	"Distinguished Advisory Panel for Nonproliferation and Arms Control"

**Federal Contract Information:** If you or the entity you represent before the Committee on Armed Services has contracts (including subcontracts) with the federal government, please provide the following information:

Number of contracts (including subcontracts) with the federal government:

Current fiscal year (2012): 2 \_\_\_\_\_;  
 Fiscal year 2011: 2 \_\_\_\_\_;  
 Fiscal year 2010: 1 \_\_\_\_\_.

Federal agencies with which federal contracts are held:

Current fiscal year (2012): DOE, DOE \_\_\_\_\_;  
 Fiscal year 2011: DOE, DOE \_\_\_\_\_;  
 Fiscal year 2010: DOE \_\_\_\_\_.

List of subjects of federal contract(s) (for example, ship construction, aircraft parts manufacturing, software design, force structure consultant, architecture & engineering services, etc.):

Current fiscal year (2012): Consulting services, conference lecture \_\_\_\_\_;  
 Fiscal year 2011: Consulting services, academic research paper \_\_\_\_\_;  
 Fiscal year 2010: Consulting services \_\_\_\_\_.

Aggregate dollar value of federal contracts held:

Current fiscal year (2012): \$28,000.00 \_\_\_\_\_;  
 Fiscal year 2011: \$39,906.25 \_\_\_\_\_;  
 Fiscal year 2010: \$26,000.00 \_\_\_\_\_.

**Federal Grant Information:** If you or the entity you represent before the Committee on Armed Services has grants (including subgrants) with the federal government, please provide the following information:

Number of grants (including subgrants) with the federal government:

Current fiscal year (2012): 1 \_\_\_\_\_;  
 Fiscal year 2011: 0 \_\_\_\_\_;  
 Fiscal year 2010: 0 \_\_\_\_\_.

Federal agencies with which federal grants are held:

Current fiscal year (2012): DOD \_\_\_\_\_;  
 Fiscal year 2011: \_\_\_\_\_;  
 Fiscal year 2010: \_\_\_\_\_.

List of subjects of federal grants(s) (for example, materials research, sociological study, software design, etc.):

Current fiscal year (2012): Academic research project \_\_\_\_\_;  
Fiscal year 2011: \_\_\_\_\_;  
Fiscal year 2010: \_\_\_\_\_.

Aggregate dollar value of federal grants held:

Current fiscal year (2012): \$197,637.00 \_\_\_\_\_;  
Fiscal year 2011: \_\_\_\_\_;  
Fiscal year 2010: \_\_\_\_\_.

Date: July 31, 2012  
Word count: 9,167

U.S. Nuclear Weapons and Nonproliferation: Is there a Link?

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Abstract

Is there a relationship between U.S. nuclear posture and nonproliferation? Using a new dataset on U.S. nuclear arsenal size from 1945 to 2010, this paper examines the relationship between the size of the U.S. nuclear arsenal and a variety of nuclear nonproliferation outcomes. I find that there is no relationship between the size of the U.S. arsenal and: the exploration, pursuit, or acquisition of nuclear weapons by other states; the provision of sensitive nuclear assistance to nonnuclear weapon states; and voting on nonproliferation issues in the United Nations Security Council. These findings are robust to alternate conceptualizations and measurements of U.S. nuclear weapons and in various subsamples of data. This article contains important implications for international relations theory and U.S. nonproliferation policy.



Current U.S. nonproliferation policy rests on the idea that reducing the size of the U.S. nuclear arsenal and other arms control measures can reduce the incentives for other countries to engage in proliferation-related behavior. As U.S. President Barack Obama proclaimed, “To stop the spread of nuclear weapons...we will work aggressively to advance every element of our comprehensive agenda—to reduce arsenals, to secure vulnerable nuclear materials, and to strengthen the NPT.”<sup>1</sup> Deepti Choubey (2008, 3) explains, “A renewed debate on the desirability and feasibility of nuclear disarmament has emerged among U.S. policy makers and influential people on both sides of the political aisle. The notion that preventing the spread of nuclear weapons is much harder without also reducing their number seems to be motivating much of this interest.” According to this line of thought, the maintenance of a large nuclear arsenal by the United States increases the likelihood that other countries will seek nuclear weapons and will complicate efforts to secure international cooperation to prevent the spread of nuclear weapons. If this is correct, therefore, reducing the number of warheads in the U.S. nuclear arsenal is a necessary step toward strengthening international nonproliferation efforts.

Indeed, the Treaty on the Nonproliferation of Nuclear Weapons (NPT) enshrines into international law a formal link between arms control and nonproliferation.<sup>2</sup> One of the grand bargains of the NPT is the promise by nonnuclear weapon states not to acquire nuclear weapons in exchange for the nuclear weapon states’ pledge in Article VI “to pursue negotiations in good faith on effective measures relating to cessation of the

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<sup>1</sup> Statement by President Barack Obama on the Release of Nuclear Posture Review, White House Press Release, Office of the Press Secretary, April 6, 2010)

<sup>2</sup> Treaty on the Nonproliferation of Nuclear Weapons, April 22, 1970, available at <http://www.iaea.org/Publications/Documents/Infcircs/Others/infcirc140.pdf>.

nuclear arms race and nuclear disarmament.”<sup>3</sup> Again, according to President Obama, “The basic bargain is sound: countries with nuclear weapons will move toward disarmament, countries without nuclear weapons will not acquire them.”<sup>4</sup> Beliefs about the U.S. arsenal posing an obstacle to international nonproliferation efforts are supported by anecdotal evidence from U.S. diplomats who report that foreign governments’ unwillingness to support international nonproliferation measures are the result of the United States’ failure to make meaningful progress on its Article VI commitments.

Other policymakers, analysts, and politicians contest the idea, however, that the U.S. nuclear arsenal has a meaningful effect on proliferation (e.g., Brown and Deutsch 2007). They claim that state decisions on nuclear proliferation issues are driven by other considerations and that the details of the U.S. nuclear arsenal are irrelevant to proliferation decisions in other states. According to this view, foreign governments’ rhetoric about Article VI is merely a convenient cover under which to conceal more self-serving reasons for not adopting specific nonproliferation policies. Moreover, some go so far as to claim that, if anything, there might be a negative relationship between U.S. arsenal size and nuclear proliferation because a robust U.S. nuclear arsenal reduces the incentives for U.S. allies to pursue independent nuclear weapons capabilities (ISAB 2007).

Despite widespread and heated policy debates about a possible arms control-proliferation link, and a large academic literature on nuclear proliferation, scholars have not systematically examined this relationship. Scholars have identified a pressing need for a systematic study on the relationship between U.S. nuclear weapons and nuclear

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<sup>4</sup>President Obama, Prague Speech, April 6, 2009.

proliferation, but the academy has not yet filled this lacuna. As Christopher Chyba (2008, 27) writes, “there has been too little empirical work dedicated to understanding what role U.S. nuclear weapons policy actually plays in...states’ nonproliferation decisions.”

This article seeks to advance our scholarly understanding of nuclear proliferation by examining the relationship between U.S. nuclear force posture and nonproliferation. I begin by developing a logic, grounded in international relations theories on international institutions and norms, linking U.S. nuclear weapons to nuclear proliferation. I then develop a competing explanation, derived from power and interest-based theories of international politics, which suggests that state proliferation and nonproliferation policies are driven by narrower strategic, political, and economic interests and that the U.S. nuclear arsenal should have little effect on nuclear proliferation decisions in other states.

Using a new dataset on U.S. nuclear arsenal size from 1945 to 2010, this article examines the relationship between the size of the U.S. nuclear arsenal and a variety of nuclear nonproliferation outcomes. I find that there is no relationship between the size of the U.S. arsenal and: the exploration, pursuit, or acquisition of nuclear weapons by other countries, the provision of sensitive nuclear assistance to nonnuclear weapon states; and voting on nonproliferation issues in the United Nations Security Council (UNSC). I find some evidence to suggest that the larger the U.S. nuclear arsenal, the less likely U.S. non-allies are to explore nuclear weapons, but U.S. arsenal size appears to have no bearing on non-allied pursuit or acquisition of nuclear weapons. These findings are robust to alternate conceptualizations and measurements of U.S. nuclear weapons, including annual changes in the size of the U.S. arsenal, the natural logarithm of U.S. arsenal size,

whether the United States is cutting the size of its arsenal, and the arsenal size of the five permanent members of the UNSC, and in various subsamples of data, including among both U.S. allies and U.S. non-allies, and in various historical time periods, including the Cold War and the post-NPT eras.

This article makes several contributions to scholarly understandings of nuclear proliferation and to nuclear nonproliferation policy. First, it develops two new theories of the relationship between nuclear force posture and proliferation outcomes. Second, it provides the first systematic, empirical examination of the relationship between nuclear posture and proliferation. Third, it contains important implications for U.S. foreign and defense policy. There is no evidence to suggest that cuts in the size of the U.S. nuclear arsenal will result in a noticeable decrease (or increase) in other states' desire to pursue nuclear weapons or to an increase (or decrease) in international cooperation on nuclear nonproliferation issues. This does not necessarily mean that Washington should not make further nuclear reductions, but it does suggest that future nuclear force sizing decisions should be based on other considerations and that nuclear nonproliferation strategy should rely on other, more proven, policy tools.

#### *Explaining Nuclear Proliferation*

There is a voluminous literature on the causes of nuclear weapons proliferation. Studies on why countries explore, pursue, and acquire nuclear weapons have examined the causal role played by: security threats, domestic politics, and international norms (Sagan 1996/1997, Rublee 2009); levels of economic development (Singh and Way 2004, Jo and Gartzke 2007); the receipt of sensitive nuclear assistance (Kroenig 2009b); civilian

nuclear cooperation agreements (Fuhrmann 2010); economic development strategies (Solingen 1994, 2007); proliferation rings (Bruan and Chyba 2004, Montgomery 2005); national “myth makers” (Lavoy 1993); state institutions (Hymans 2012); the psychology of individual leaders (Hymans 2001, 2006); complementarities with chemical and biological weapons (Horowitz and Narang this issue); security assurances (Bleek and Lorber); IAEA technical cooperation (Kaplow and Brown this issue); and international inspections regimes (Benson and Wen this issue). Gartzke, Kaplow, and Mehta (this issue) have explored the determinants of force posture, but none of these scholars have systematically examined the effect of U.S. nuclear weapons on nuclear proliferation.

Scholars have paid less attention to the determinants of states’ nonproliferation policies, but there is a growing literature on this subject, explaining why states vary in the degree to which they are willing to help or hinder nuclear programs in other states. Using deductive logic to analyze U.S. nonproliferation policy, Feaver and Niu (1996) maintain that U.S. nonproliferation policy should depend on the political relationship between Washington and the proliferator, concluding that the United States should more vigorously oppose nuclear proliferation to enemies than to friends. Kroenig (2009a, 2010) asks why states provide sensitive nuclear assistance to nonnuclear weapon states. He argues that the spread of nuclear weapons imposes greater constraints on powerful states than weak states and that this leads to three strategic conditions under which states are most likely to provide sensitive nuclear assistance. States are most likely to provide nuclear assistance to states: over which they lack the ability to project power, with which they share a common enemy, and when the supplier’s own security does not depend on a superpower security guarantee. Similarly, Fuhrmann (2009) examines why countries

sign nuclear cooperation agreements and finds that states are more willing to cooperate with friends and with states with which they share common enemies. In an analysis of the determinants of state compliance with UNSC resolution 1540, Stinnet et al. (2011) argue that economically developed states are more likely to institute rigorous nuclear export control policies. Fuhrmann and Kreps (2010) explore why states conduct preventive military strikes on nuclear facilities and find that states are most likely to attack proliferators that are governed by autocratic regimes and with which they share a history of past conflict. Explaining great power nuclear nonproliferation policy more broadly, Kroenig (forthcoming) argues that the better able a state is to project military power globally, the more committed it will be to preventing the spread of nuclear weapons and finds support for this argument in an analysis of NPT signature and ratification, the provision of nuclear assistance, and responses to Israel's nuclear program in the 1950s and 1960s.

Scholars have not, however, systematically examined the relationship between the character of the U.S. nuclear arsenal and nuclear proliferation or other states' nonproliferation policies.

#### *The Arms Control-Nonproliferation Link*

Drawing on the major theoretical approaches to the study of international relations, I extract implications about the impact of U.S. nuclear posture on nuclear proliferation. From these insights, I develop hypotheses about the relationship between U.S. nuclear posture and proliferation decisions in other states.

Neo-liberal institutionalists (e.g., Keohane 1984) argue that international institutions can facilitate international cooperation by providing information about the behavior of other states, reducing transaction costs, and generating expectations of cooperation among members. The NPT facilitates cooperation between nuclear and nonnuclear states, providing an institutional mechanism to secure the nuclear weapon states' interest in preventing further nuclear proliferation and the nonnuclear weapon states' objective of bringing about eventual global disarmament. The maintenance of large nuclear arsenals by nuclear weapon states could be interpreted by the nonnuclear weapon states as a signal that the nuclear weapon states do not intend to comply with their disarmament commitments. Facing likely defection and not wanting to receive the sucker's payoff, nonnuclear weapon states may be more likely, therefore, to defect on their nonproliferation obligations when nuclear weapon states maintain large arsenals. Contrariwise, the possession of smaller nuclear arsenals by nuclear weapon states could be a signal of intent to meet their NPT obligations. Nonnuclear weapon states in this state of the world may be more likely to expect cooperation and may be more likely to reciprocate by complying with their NPT obligation not to acquire nuclear weapons.

Sociological approaches to international relations also suggest that U.S. nuclear posture could have a profound impact on the proliferation behavior of other states. Constructivist scholars (e.g., Finnemore and Sikkink 1998) maintain that states behave according to a "logic of appropriateness," rather than a "logic of consequences." That is, state behavior is heavily shaped by ideas, norms, and identities. Before setting policy, leaders ask themselves what kind of a state are we and what type of behavior is appropriate for a state like us. According to this conception of international politics, the

behavior of powerful states can set an important example for other states. For example, Eyre and Suchman (1996) have pointed out that developing states procure expensive conventional arms and maintain national airlines, despite a lack of need and insufficient financial resources, due to international norms about the necessary accoutrements of modern statehood. As it relates to nuclear policy, therefore, the United States might shape international ideas about the utility and appropriateness of nuclear weapons possession through its nuclear posture. The maintenance of a large nuclear arsenal by the United States contributes to the idea that the possession of nuclear weapons provides a model of what it means to be a powerful and modern state and, therefore, encourages other states to acquire nuclear weapons. On the other hand, the maintenance of a smaller nuclear arsenal devalues nuclear weapons as a symbol of modern statehood and bolsters states' nonnuclear positions. The above logics give rise to our first hypothesis:

Hypothesis 1: The larger the U.S. nuclear arsenal, the more likely nonnuclear weapon states are to explore, pursue, and acquire nuclear weapons.

There are other states, however, for which a large U.S. nuclear arsenal might be a source of reassurance. In a series of multi and bi-lateral treaties, including the North Atlantic Treaty Organization (NATO) charter, Washington commits itself to come to the defense of its allies in the event of armed attack. The U.S. nuclear arsenal, therefore, is intended to deter attacks, not only against the United States, but also against its allies. At present,



there are 63 states under the U.S. nuclear umbrella.<sup>5</sup> By extending deterrence to allied states, Washington hopes to convince these states that they can forgo independent nuclear capabilities and rely on the U.S. nuclear umbrella to provide for their defense. The maintenance of a large nuclear arsenal assures these states that the United States can credibly extend the nuclear umbrella and still maintain a large enough nuclear force to provide for its own security. A smaller nuclear arsenal, however, could be interpreted as a signal that Washington is not serious about meeting its alliance commitments. If allied states question the credibility of the U.S. security guarantee, they could be tempted to pursue independent nuclear capabilities. This logic leads us to our second hypothesis:

Hypothesis 2: The larger the U.S. nuclear arsenal, the less likely U.S. allies are to explore, pursue, and acquire nuclear weapons.

It is possible, however, that U.S. nuclear posture, whether or not it influences state decisions to explore, pursue, or acquire nuclear weapons, affects state decisions to cooperate on international nonproliferation measures in order to prevent other states from acquiring nuclear weapons. As Choubey (2008, 22) laments, too many analysts focus:

narrowly on what influence the United States (posture) directly has on the decision making of a government considering proliferation. It fails to include a key to successful nonproliferation strategy, which is the behavior of other nations to shape the context in which states embarking on proliferation deal with pressures to desist and, moreover, on the willingness of other states to join in enforcement.

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<sup>5</sup> According to *Correlates of War*, the countries in a formal defense pact with the United States include: the thirty-two Latin American countries party to the 1947 Rio Treaty; twenty-seven members of NATO; South Korea, Japan, Philippines, and Australia.

Scholars (e.g., Kroenig 2009a) have recognized that nuclear proliferation has a “supply side.” In other words, states can take a number of steps to assist or impede other states as they attempt to acquire nuclear weapons. At one extreme, states can provide sensitive nuclear assistance to aspiring proliferators to help them construct nuclear weapons. At the other extreme, states can engage in technology denial, launch preventive military strikes, levy international sanctions, vote in international bodies, and adopt additional policies that make it more difficult for other states to acquire nuclear weapons.

The United States often seeks international cooperation to bring international pressure to bear on proliferators and prevent nuclear proliferation. There are both institutional and normative reasons to believe that U.S. nuclear posture could affect its ability to secure international nonproliferation cooperation. In Article I of the NPT, states pledge “not in any way to assist, encourage, or induce any non-nuclear weapon State to manufacture or otherwise acquire nuclear weapons.”<sup>6</sup> If the United States, however, is not seen to be honoring its Article VI commitments, other states might be less likely to maintain cooperation through strict adherence to Article I. Similarly, in the normative realm, if the United States, the most powerful state in the international system, maintains a large nuclear arsenal to provide for its own security, other countries might be less able or willing to articulate what could be perceived as a hypocritical idea that nuclear proliferation is an illegitimate option for other states. This leads to the third hypothesis:

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<sup>6</sup> Treaty on the Nonproliferation of Nuclear Weapons, April 22, 1970, available at <http://www.iaea.org/Publications/Documents/Infcircs/Others/infcirc140.pdf>.

Hypothesis 3: The larger the U.S. nuclear arsenal, the less likely states will be to adopt policies that prevent other countries from acquiring nuclear weapons.

There are reasons, however, to be skeptical that U.S. nuclear force posture has a significant effect on the proliferation behavior of other states. Realist theories (e.g., Mearsheimer 2001) of international relations maintain that state behavior is driven by power and interests and that institutions and ideas have little independent causal effect on international political outcomes. Applied to nuclear proliferation, these theories would predict that state decisions on proliferation would be the result of calculations about how nuclear weapons would affect a state's strategic interests defined more narrowly.

Leaders in proliferant states might consider: how nuclear weapons could help them deter conventional or nuclear attack from hostile states; whether they have the ability to produce nuclear weapons indigenously; whether they can obtain sensitive nuclear assistance from other more advanced states; the possibility that other states could levy international sanctions against them, or conduct a preventive military strike against their fledgling nuclear facilities. In other words, state decisions to launch nuclear weapons programs are determined by factors other than the size of the U.S. nuclear arsenal.

It is possible that states would consider the size of the U.S. nuclear arsenal to the degree that they expect nuclear war with the United States, but for the vast majority of states in the international system, threat perceptions are much more likely to be determined by the capabilities of regional rivals (Sagan 1996/1997). Moreover, even states directly threatened by the United States are more likely to confront, and therefore fear, America's conventional, as opposed to its nuclear, capabilities (Chyba 2008). In

addition, for nonnuclear weapon states, the fact that the United States possesses nuclear weapons at all might be threatening regardless of the precise size of the U.S. arsenal. In sum, there is good reason to believe that the size of the U.S. nuclear arsenal, if considered at all, would be peripheral to states' proliferation decisions.

For example, at the time of writing in 2012, Iran was making steady progress on its nuclear program and the international community, led by the United States, was bringing pressure to bear on Tehran designed to convince it to give up its nuclear program. It is likely that Iran's leaders were seriously considering a variety of questions including: would nuclear weapons improve Iran's security, had Iran's uranium enrichment capability advanced to the point that Iran possessed the technical capability to produce nuclear weapons, could Iran withstand the economic hardship caused by the economic sanctions imposed by the international community, would the United States or Israel conduct a military strike to prevent Iran from acquiring nuclear weapons, or to overthrow the regime? When considering these pressing issues, it is hard to imagine that Iran's leaders seriously weighed the size of the U.S. nuclear arsenal in their calculations, or to believe that if Washington had agreed to possess only 1,000 strategic, deployed nuclear warheads instead of the actual 1,550 warheads, that Iran would have abandoned its nuclear ambitions.

When considering these more pragmatic issues, therefore, it is likely that the size of the U.S. arsenal would be a peripheral factor in states' proliferation decisions if it is considered at all. This discussion gives rise to our fourth hypothesis:

**Hypothesis 4:** There is no relationship between the size of the U.S. nuclear arsenal and the probability that other states explore, pursue, and acquire nuclear weapons.

Similarly, there is reason to believe that the size of the U.S. nuclear arsenal might not have much bearing on other states' nonproliferation policies. Rather, strategic theories of nuclear proliferation (e.g., Kroenig 2010) would predict that when formulating a nonproliferation policy vis-à-vis another state, leaders would assess how the adoption of particular nonproliferation policies would affect their strategic, political, and economic interests more narrowly defined. States likely consider the security threat posed by a state's potential nuclear acquisition; whether the state's nuclear acquisition would disproportionately constrain other enemy states; how their allies or the international community would react to their choice of proliferation policy; whether the imposition of sanctions on a proliferant state would greatly harm their own economic interests; and how their political relationship with the proliferant state could be strengthened or damaged by their choice of nonproliferation policy.

For example, at the time of writing in 2012, Washington was in negotiations with South Korea to convince Seoul to join an international embargo on Iranian oil. Getting South Korea's cooperation was critical to the success of the embargo because South Korea was the world's fourth largest importer of Iranian oil after China, India, and Japan. While Seoul was eager to cooperate with its ally in Washington, it was wary about joining the embargo that threatened to cut off 9.4% of its oil supplies, which were imported from Iran. In deciding whether to put more pressure on Iran, it is likely that South Korea's leaders assessed: the threat posed by a nuclear-armed Iran; how much the addition of South Korean pressure would marginally increase the probability that Iran abandoned its nuclear ambitions; the extent to which Seoul would jeopardize its relationship with Washington if it refused to join the international embargo on Iranian oil

and the amount of good will it could garner with the White House by signing up; and how much economic dislocation would be caused to the South Korean economy if it were weaned off Iranian oil. In relation to these important and pressing issues, it is unlikely that South Korea's leaders stopped to consider the size of the U.S. nuclear arsenal, or that the size of the U.S. arsenal was an important factor in Seoul's decision.

Again, when considering this panoply of factors, it is unlikely that the details of U.S. nuclear posture would be a decisive, or even a relevant, consideration. This logic leads to our fifth hypothesis:

Hypothesis 5: There is no relationship between the size of the U.S. nuclear arsenal and the probability that other states adopt policies that prevent other countries from acquiring nuclear weapons.

There are of course a number of factors, other than U.S. nuclear posture, that can shape state proliferation and nonproliferation policies. I discuss these in the next sections in which I describe the data and examine the evidence for the previous hypotheses.

### **Empirical Analysis**

To examine the effect of nuclear posture on nuclear proliferation, I explore the relationships between the size of the U.S. nuclear arsenal and a variety of proliferation-related outcomes. I first examine the determinants of state decisions to explore, pursue, and acquire nuclear weapons. Next, to study nonproliferation policy, I analyze the correlates of state decisions to provide sensitive nuclear assistance to nonnuclear weapon states and voting patterns on nuclear proliferation issues in the UNSC.

*Nuclear proliferation*

In this section, I analyze the relationship between U.S. nuclear weapons and whether other countries explore, pursue, or acquire nuclear weapons. The unit of analysis is the country year and the relevant universe of cases is all nonnuclear weapon states in the international system from 1945 to 2000, the final year for which data on many of the control variables are available. The dependent variables measure whether countries *Explore*, *Pursue*, or *Acquire* nuclear weapons, respectively. These variables are drawn from a study by Christopher Way and Sonali Singh (2004), which analyzes the correlates of nuclear proliferation. A list of states engaged in these various levels of proliferation behavior is available in Table 1.

(Insert Table 1 here)

The key independent variable is *U.S. Arsenal*. Drawing on newly declassified data released by U.S. President Barack Obama in May 2010, it measures the size of the U.S. nuclear arsenal in number of warheads in every year from 1945 to 2010.<sup>7</sup> I count all nuclear warheads in the U.S. arsenal, including tactical and strategic nuclear weapons.<sup>8</sup> This variable ranges from a low of six in 1945 to a high of 31,255 in 1967.<sup>9</sup> Information on the size of the U.S. nuclear arsenal from 1945 to 2010 is displayed in Figure 1.

<sup>7</sup> [http://www.defense.gov/npr/docs/10-05-](http://www.defense.gov/npr/docs/10-05-03_fact_sheet_us_nuclear_transparency__final_w_date.pdf)

[03\\_fact\\_sheet\\_us\\_nuclear\\_transparency\\_\\_final\\_w\\_date.pdf](http://www.defense.gov/npr/docs/10-05-03_fact_sheet_us_nuclear_transparency__final_w_date.pdf)

<sup>8</sup> I assess that aggregate stockpile counts provide the best indicator of U.S. nuclear arsenal size. Moreover, due to data limitations, I am unable to produce separate counts of tactical and strategic weapons, or of deployed and non-deployed weapons, for each year.

<sup>9</sup> In order for numbers of U.S. nuclear weapons to affect proliferation decisions in other states, leaders in other states must have accurate information about the size of the U.S.

(Insert Figure 1 here)

I control for other factors thought to influence the probability that a country engages in proliferation-related behavior including: levels of economic development, gauged by both *GDP per capita* and *Industrial capacity*; the intensity of a state's security environment, measured by whether a country is engaged in a *Rivalry*; whether the country has a *Security guarantee* from a nuclear-armed state; domestic political *Regime type*; *Openness* to the international economy; and *Liberalization*, or movements toward greater levels of economic openness. I also include a measure to gauge the *Year* of the observation to account for the fact that many states began pursuing the nuclear option at the beginning of the nuclear era. More detailed information on the definition and measurement of these variables can be found in Singh and Way (2004). In the models assessing nuclear acquisition, I also control for whether the country has ever received *Sensitive nuclear assistance* from a more advanced nuclear state as recommended by Kroenig (2009b).

I employ Cox proportional hazard models and cluster robust standard errors by country. The results are presented in Table 2.

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nuclear arsenal in each year. While the precise number of U.S. nuclear weapons was a state secret until recently, there is good reason to believe that foreign leaders possessed accurate information about the approximate size of the U.S. arsenal. Indeed, the newly released data reveal that previous estimates by outside organizations, like the National Resources Defense Council (2011), are strikingly similar to the true figures.



As we can see in Table 2, there is no relationship between the size of the U.S. arsenal and the probability that countries explore (model 1), pursue (model 2), or acquire (model 3) nuclear weapons.<sup>10</sup> *U.S. arsenal* is not statistically significant in any of the models. There is no support for the idea that the size of the U.S. arsenal is correlated with the probability that other countries proliferate.

Commenting briefly on the control variables, we can see that countries with a security rival are more likely to explore, pursue, and acquire nuclear weapons. Similarly, countries above a certain level of industrial capacity are more likely to engage in all three levels of proliferation. The receipt of sensitive nuclear assistance increases the probability that a country acquires nuclear weapons. *Year* is negative and statistically significant in every model, demonstrating that states were more likely to begin nuclear activity early in the nuclear era. There is some evidence to support the idea that openness to the international economy and liberalization affect proliferation. The sign on the coefficient for *Openness* is negative and statistically significant in model 1, while the sign on the coefficient for *Liberalization* is positive and statistically significant in model 2.

The analysis of U.S. nuclear weapons on the proliferation behavior of all states, however, is only the first step. It is possible that U.S. nuclear weapons affect proliferation behavior differently in different categories of states, cancelling each other out in the aggregate data. Next, therefore, I explore the relationship between U.S. arsenal

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<sup>10</sup> Censoring observations according to whether the state engaged in lower levels of proliferation as a prerequisite for engaging in higher levels of proliferation and rerunning the analysis, produced similar results.

size on nuclear proliferation in two sub-categories of states: U.S. allies and U.S. non-allies.<sup>11</sup>

The results of the statistical analysis are presented in Table 3. In model 4, we can see that there is no relationship between the size of the U.S. arsenal and the likelihood that U.S. allies explore the nuclear option.

There are too few instances of formal U.S. allies pursuing or acquiring nuclear weapons to conduct meaningful statistical analysis. To probe the relationship between U.S. arsenal size and allied pursuit and acquisition, therefore, I compare the average size of the U.S. arsenal for country-years in which allies decided not to pursue or acquire nuclear weapons to country-years in which allies decided to pursue or acquire nuclear weapons. The average size of the U.S. nuclear arsenal for country-years in which U.S. allies did not pursue nuclear weapons is 17,920. The four instances in which formal U.S. allies decided to pursue nuclear weapons (France 1954, South Korea 1970, Argentina 1978, Brazil 1978), the average size of the U.S. nuclear arsenal was slightly larger at 19,167.<sup>12</sup> This finding is inconsistent with the idea that allies are more likely to pursue nuclear weapons, the smaller the size of the U.S. nuclear arsenal. Turning to *Acquire*, the average size of the U.S. arsenal for country years in which U.S. allies refrained from acquiring nuclear weapons was 17,935 compared to an average arsenal size of 10,720 for the two country years (UK 1952 and France 1960) in which U.S. allies acquired nuclear weapons. The difference in average arsenal size is quite large, but with only two

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<sup>11</sup> I drop *Security guarantee* from these tests because there is no variation for U.S. allies and scant variation among U.S. non-allies.

<sup>12</sup> The United Kingdom's pursuit of nuclear weapons begins in 1945, a year in which the United States and the United Kingdom were not part of a formal alliance according to *Correlates of War*.

observations of U.S. allies acquiring nuclear weapons, we cannot draw any meaningful conclusions from this difference without further study. Indeed, existing studies of British and French decisions to acquire nuclear weapons do not mention insufficient U.S. nuclear arsenal size as a possible motivation.<sup>13</sup> While it is possible that London and Paris would have been less likely to acquire nuclear weapons if Washington had possessed a larger nuclear arsenal, establishing this causal relationship would require additional study. In sum, this study does not allow me to conclude that a larger nuclear umbrella provides a more effective nuclear assurance to U.S. allies.

Turning to the effect of U.S. nuclear weapons on the proliferation decisions of U.S. non-allies in Table 3, we do not find support for the idea that greater numbers of U.S. nuclear weapons encourages proliferation. Indeed, *U.S. arsenal* does not reach statistical significance in model 6 and, in model 5, the sign on the coefficient is negative and statistically significant, suggesting that, contrary to expectation, non-allies were more likely to explore nuclear weapons the smaller the size of the U.S. arsenal.<sup>14</sup> The estimated substantive effect of this unanticipated finding, however, is small. An increase in the size of the U.S. nuclear arsenal by 1,000 warheads is associated with a 09% decrease in the risk that U.S. non-allies explore the nuclear option.<sup>15</sup> Moreover, as I

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<sup>13</sup> See, e.g., Gowing 1974 and Scheinman 1965.

<sup>14</sup> For a similar finding, see Tago and Singer 2011.

<sup>15</sup> The states that explored nuclear weapons while not in a defense pact with the United States include: the Soviet Union and Great Britain (1945); France and Switzerland (1946); Israel (1949); Yugoslavia, Sweden, and India (1954); China (1955); North Korea (1965); South Africa (1969); Libya (1970); Pakistan (1972); Iraq (1976); Algeria (1983); Iran (1984); Romania (1985). France and Great Britain are not coded as formal allies of the United States in 1945, according to *Correlates of War*, because the World War II alliance ended in that year and NATO was not created until 1949. Coding Great Britain and France, and even Israel and Sweden, as U.S. allies and rerunning the analysis did not

report below, this finding is not robust to alternative measurements of U.S. nuclear posture.

If there is indeed a relationship between these variables, it could possibly be explained by the concept of dissuasion. According to U.S. defense strategists, dissuasion is achieved when the United States discourages adversaries from developing a specific military capability by convincing the adversary that the United States possesses such an overwhelming level of superiority with respect to that specific military that the adversary has no hope of ever competing with the United States (Department of Defense 2005). According to this perspective, America's non-allies may have been more likely to explore nuclear weapons when the United States had a small arsenal because their leaders believed that they had an opportunity to achieve nuclear parity with the United States. When the United States possessed a large arsenal, on the other hand, their leaders concluded that they would never be able to compete with the United States in a nuclear arms race and channeled their resources toward other military capabilities.

There are too few observations of U.S. non-allies acquiring nuclear weapons to conduct regression analysis. Instead, I compare the average size of the U.S. arsenal for the 4,930 country-years in which U.S. non-allies did not acquire nuclear weapons to the seven country-years in which U.S. non-allies did acquire nuclear weapons. These numbers, 18,444 and 18,912, respectively, are nearly identical, suggesting that the acquisition of nuclear weapons by America's non-allies is not significantly affected by the size of the U.S. nuclear arsenal.

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change the results. The negative relationship between U.S. arsenal size and non-allied pursuit is not the result of questionable codings of U.S. alliance relationships.

In sum, there is no support for the idea that U.S. allies are less likely, or U.S. non-allies more likely, to explore, pursue, or acquire nuclear weapons, the larger the size of the U.S. nuclear arsenal.

*Nuclear Nonproliferation Policy*

Next, I turn to nuclear nonproliferation policy. To begin, I analyze the relationship between the size of the U.S. nuclear arsenal and state voting behavior on nonproliferation issues in the United Nations Security Council (UNSC). When states are found to be in noncompliance with their NPT obligations by the International Atomic Energy Agency (IAEA) Board of Governors (BOG), their case is referred to the UNSC for consideration. UNSC members can enforce violations of the NPT by, for example, passing UNSC resolutions to impose sanctions on NPT violators. Other nuclear proliferation issues can also be taken up by the UNSC independent of a BOG recommendation. If the maintenance of a large nuclear arsenal complicates U.S. efforts to get cooperation on international nuclear nonproliferation efforts, we should expect to find a negative relationship between the size of the U.S. arsenal and whether countries vote “yes” on UNSC resolutions related to nuclear nonproliferation.

To conduct the analysis, I construct a new dataset on votes in the UNSC on nuclear proliferation issues from 1945 to 2010. The dataset contains information on 375 votes by 75 countries in 25 separate UNSC resolutions. Data on UNSC votes are drawn from the United Nations’ official website.<sup>16</sup> The unit of analysis is the country-vote.

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<sup>16</sup> <http://www.un.org/depts/dhl/resguide/scvote.htm>

The dichotomous dependent variable is *UNSC vote*. It is coded “1” if a country votes yes on the nonproliferation resolution and “0” if the country votes no or abstains.<sup>17</sup> The key independent variable is *U.S. arsenal*. I control for other factors that might affect state voting on nonproliferation issues in the UNSC. We might expect militarily powerful countries to be more threatened by the spread of nuclear weapons and thus more likely to support nonproliferation measures in the UNSC (Kroenig 2010). To account for military power, I include *Capabilities*, a composite index containing information on total population, urban population, energy consumption, iron and steel production, military manpower, and military expenditures. Data for this variable are drawn from the Correlates of War composite capabilities index, version 3.02, and extracted using EUGene (Singer, Bremer, and Stuckey 1972; Bennett and Stam 2000).<sup>18</sup> I include *Regime type* to account for the fact that democratic countries may be more likely to cooperate with international institutions, including the IAEA and the UNSC.<sup>19</sup> To gauge the effect of economic development on UNSC voting patterns, I include *GDP per capita*. Finally, because NPT member states might be more likely to enforce violations of the NPT than nonmembers, I include *NPT*, which measures whether a state was a member of the NPT at the time that the vote was taken.<sup>20</sup> To test the correlates of UNSC voting

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<sup>17</sup> Estimating a multinomial logit on a trichotomous variable (yes=1; 2=abstain; 3=no) and rerunning the analysis produced nearly identical results.

<sup>18</sup> Data on this variable are currently available through 2007. I extrapolated the 2007 score for each country through 2010 to prevent listwise deletion of observations due to missing data. While the capabilities scores from 2008 to 2010 will not be precise, they provide a more than adequate proxy of each state’s military power at the time of each vote.

<sup>19</sup> Data on regime type for Bosnia-Herzegovia in 2010 and 2011 are unavailable, resulting in five missing observations.

<sup>20</sup> Information on membership in the NPT is from the Institute for Defense and Disarmament Studies, accessed online at [www.idds.org/issNucTreatiesNPT.html](http://www.idds.org/issNucTreatiesNPT.html).

behavior, I employ Logistic regression. Robust standard errors are clustered by country.<sup>21</sup> The results are presented in Table 4.

(Insert Table 4 here)

Turning to Table 4, we can see that there is no relationship between U.S. arsenal size and state voting in the UNSC on proliferation issues. *U.S. arsenal* does not reach statistical significance in a fully-specified (model 1) or a trimmed (model 2) model. This test provides no empirical support for the idea that the maintenance of a large arsenal complicates U.S. efforts to garner international cooperation on nuclear proliferation issues.

Focusing on the control variables, we can see that *NPT* is positive and statistically significant, meaning that NPT member states are more likely to vote to enforce nonproliferation measures in the UNSC. This finding supports the intuition that non-member states, such as Israel, India, and Pakistan, might be less willing to support nonproliferation enforcement for fear that they themselves might become the targets of such measures. The other variables do not reach statistical significance. Military power, domestic political regime type, and levels of economic development do not appear to influence UNSC voting.

As the final test of the link between U.S. nuclear weapons and other states' nonproliferation policies, I explore the determinants of sensitive nuclear technology

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<sup>21</sup> Clustering by UNSC resolution did not change the core findings.

transfers.<sup>22</sup> Providing sensitive nuclear assistance is the most direct way in which a country can aid another country's pursuit of a nuclear weapons capability (Kroenig 2010). If the size of the U.S. nuclear arsenal complicates U.S. efforts to get cooperation on nuclear nonproliferation, we should expect to find a positive relationship between the size of the U.S. nuclear arsenal and the probability that other countries provide sensitive nuclear assistance. If, on the other hand, state decisions to provide sensitive nuclear assistance are driven by other factors, we should expect to find no relationship between these variables.

To conduct these tests, I repeat the analysis of Kroenig (2009a) on the correlates of sensitive nuclear assistance after including *U.S. arsenal*. The dataset contains yearly information for all capable nuclear suppliers and potential nuclear recipient dyads in the international system from 1951 to 2000. Since the hypotheses explored in this research deal with the relationship between the nuclear posture of the United States and the proliferation behavior of nonnuclear weapon states or nuclear states outside the NPT, I include in my analysis only nuclear suppliers that lack nuclear weapons or are not members of the NPT.<sup>23</sup> In other words, I exclude from my analysis nuclear suppliers that joined the NPT as recognized nuclear weapon states. The unit of analysis is the directed dyad-year.

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<sup>22</sup> I do not assess the relationship between U.S. nuclear weapons and peaceful nuclear cooperation (Fuhrmann 2009) because the provision of peaceful nuclear assistance is consistent with the letter and the spirit of the NPT, has been found not to contribute to the proliferation of nuclear weapons (Kroenig 2009b, 2010), and existing measures of peaceful nuclear cooperation suffer from measurement problems, such as not adequately distinguishing between which agreements actually resulted in nuclear technology transfers and which did not (Bluth et al. 2010).

<sup>23</sup> Capable nuclear suppliers include nuclear weapon states, like the United States, and states that possess sensitive nuclear technology, but that have not yet produced nuclear weapons, such as Brazil.



The dichotomous dependent variable is *Sensitive nuclear assistance*. It measures whether a capable supplier state provided sensitive nuclear assistance to a potential nuclear recipient in a given year. Detailed information on the definition and measurement of this variable can be found in Kroenig (2009a).

The key independent variable is *U.S. arsenal*. I also control for the other factors demonstrated to affect patterns of sensitive nuclear assistance including: the *Relative power* between supplier and recipient; the presence of a common *Enemy* between the supplier and recipient; whether the supplier is in a defense pact with a superpower (*Superpower pact*); the economic circumstances of the supplier, measured by *GDP per capita*, levels of *Economic growth*, *Openness* to the international economy, and *Trade dependence* with the potential recipient; domestic political *Regime type*; whether the supplier is a member of the *NPT* or Nuclear Suppliers Group (*NSG*); *Distance* and *Distance squared* between supplier and recipient; the security environment of the recipient (*Disputes*); the *GDP per capita* and economic *Openness* of the recipient; and whether the recipient is a member of the *NPT*. For more information on each of these variables, see Kroenig (2009a).

I employ Logistic Regression to test claims about the correlates of sensitive nuclear assistance. Robust standard errors are adjusted for clustering by dyad. The results are presented in Table 5.

(Insert Table 5 here)

Table 5 reveals that there is no relationship between the size of the U.S. nuclear arsenal and the probability that other countries provide sensitive nuclear assistance. *U.S. arsenal* is not statistically significant in a full (model 1) or trimmed (model 2) model. There is no support for the idea that the smaller the size of the U.S. arsenal, the less likely other countries are to engage in sensitive nuclear transfers.

Consistent with the findings of Kroenig (2009a), I find that strategic factors, namely the relative power between supplier and recipient, the presence of a common enemy, and the dependence of the supplier on a superpower patron are correlated with sensitive nuclear assistance. I also find that *Trade dependence*; *NSG*; *Distance*; *Distance squared*; and *Openness (recipient)* are statistically significant correlates of *Sensitive nuclear assistance*.

#### *Robustness Checks*

This section presents the results of a number of robustness tests. First, to assess whether the findings are sensitive to conceptualizations of the key independent variable, I create a number of alternate measures of U.S. arsenal size. I create variables that gauge: the natural logarithm of the U.S. arsenal, an ordinal categorization of U.S. arsenal size (<100, 100 – 1k, 1k-10k, > 10k), annual changes in U.S. arsenal size, whether the United States cuts the size of its arsenal in any given year, and the combined size of the arsenals of the P-5 nuclear powers. Next, I assess whether the findings depend on historical time. It is possible that any relationship between U.S. nuclear weapons and proliferation only came into existence after the establishment of the NPT in 1969. Similarly, it is possible that the relationship varies in the Cold War and Post-Cold War periods. To test for these

possibilities, I divided my sample by historical time period and conducted regression analysis on the resulting sub-samples of data.

All of these tests produced similar results. I did not find statistically significant links between U.S. nuclear posture and proliferation. There were two exceptions to this general finding. First, I found that U.S. allies were more likely to explore nuclear weapons when the United States was cutting the size of its nuclear arsenal, suggesting that U.S. allies might doubt the reliability of the U.S. nuclear umbrella when Washington engages in nuclear reductions, leading them to explore an independent nuclear option. Second, after 1968, there is a negative and statistically significant relationship between U.S. arsenal size and patterns of sensitive nuclear assistance, suggesting that, after the establishment of the NPT, states were less likely to provide nuclear assistance the larger the U.S. nuclear arsenal. These findings are interesting and might deserve further investigation. In sum, however, the overall pattern revealed in this study through dozens of statistical tests is that there is scant evidence of any statistically significant relationships between U.S. nuclear arsenal size and the proliferation behavior of other states.

#### *Discussion and Conclusion*

This article examined the relationship between U.S. nuclear posture and nuclear proliferation. It found that there is no relationship between the size of the U.S. nuclear arsenal and a variety of nuclear proliferation outcomes, including whether other states engage in nuclear proliferation themselves and whether they adopt policies designed to prevent the spread of nuclear weapons to additional countries. Theories that suggest that

the size of the U.S. nuclear arsenal is an important determinant of the proliferation behavior of other states, therefore, do not find empirical support. We cannot definitively conclude that there is not an association between these sets of variables, but this study did not provide any evidence of such an association. In contrast, the findings of this research support the idea that state behavior on nuclear issues is determined by calculations about how nuclear proliferation outcomes affect their security, economic, and political interests narrowly defined, and that the details of U.S. nuclear posture are largely irrelevant to these calculations.

Despite the null findings of this research, or rather because of them, this article contains important implications for U.S. national security policy. In his 2012 annual report to Congress on the projected threats to the national security of the United States of America, Director of National Intelligence James R. Clapper assessed that the prospect of nuclear proliferation in various countries constitutes a major threat to U.S. national security.<sup>24</sup> The 2010 Nuclear Posture Review announced that the United States would work to prevent the spread of nuclear weapons to state and non-state actors by de-emphasizing the role of nuclear weapons in U.S. national security policy. De-emphasizing nuclear weapons would be achieved, in part, by reducing the number of nuclear weapons in the U.S. nuclear arsenal. The research presented in this article demonstrates, however, that alterations in U.S. nuclear posture may not have a meaningful impact on the proliferation behavior of other states. U.S. officials are correct to recognize nuclear proliferation as a threat to international peace and security, but,

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<sup>24</sup> James R. Clapper, "Worldwide Threat Assessment of the U.S. Intelligence Community for the Senate Select Committee on Intelligence," January 31, 2012, unclassified Statement for the Record.

given the findings of this research, there is reason to believe that Washington's efforts to use disarmament as a means of advancing nonproliferation goals might not be met with success.

It is possible, of course, that Washington has not yet gone far enough and, at some point in the future – perhaps complete nuclear disarmament– nuclear reductions will eventually result in nonproliferation breakthroughs. The findings of this research, however, should give us pause. Lacking evidence of a tight correspondence between U.S. arsenal size and proliferation behavior in the past, there is little reason to believe that additional cuts will produce cooperation on nonproliferation issues in the future.

It may also be the case that the measures employed in this article are too crude to capture the hypothesized dynamics and, rather than a measurable correlation between nuclear numbers and objective proliferation outcomes, we should expect the arms control-nonproliferation link to manifest itself more subtly in the realm of norms, ideas, and diplomacy. According to this line of thought, U.S. attitudes toward disarmament might have an important effect on the negotiating climate in international meetings, such as the NPT Review Conference (RevCon) held every five years. Some have claimed, for example, that perceptions about a lack of U.S. commitment to disarm contributed to the failure to produce a final consensus document at the 2005 RevCon. It is possible that these nuanced links exist and the search to uncover them could make an interesting avenue for future study. Yet, at the end of the day, scholars and practitioners are most concerned about tangible outcomes, such as whether nuclear weapons spread to additional countries or not. While it might be interesting to know whether U.S. nuclear posture leads to frosty receptions for U.S. diplomats in international fora, one might

question the significance of this outcome for international relations theory and for U.S. national security policy.

In short, this research suggests that the United States should place less weight on adjustments to the size of its nuclear arsenal as a nonproliferation tool and emphasize more proven methods of preventing nuclear proliferation, such as denying states the technology required to produce nuclear weapons and addressing the threat environments that motivate states to desire nuclear weapons in the first place.

The findings of this article do not necessarily imply that the United States should refrain from making additional cuts to the size of its nuclear arsenal. There might be advantages to further nuclear reductions, but the evidence does not suggest that increased international cooperation on nuclear nonproliferation measures is among them. As U.S. officials think about sizing the nuclear arsenal they should consider how U.S. nuclear posture affects the United States' ability to deter enemies and assure allies, the defense budget, and many other factors. Given the lack of support for a link between U.S. nuclear weapons and nonproliferation, however, it would be unwise to base future nuclear force sizing decisions on hopes that cuts to the U.S. arsenal can prevent the spread of nuclear weapons.

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<b>Table 1. Nuclear Proliferation, 1945-2000</b>			
Country	Explore	Pursue	Acquire
Algeria	1983-1991		
Argentina	1978-1990		
Australia	1956-1973		
Brazil	1966-1990	1975-1990	
China	1956-	1956-	1964-
Egypt	1955-1980		
France	1945-	1954-	1960-
Germany	1957-1958		
India	1948-	1964-1966, 1972-1975, 1980-	1987-
Indonesia	1964-1967		
Iran	1974-1979, 1984-	1989-	
Iraq	1976-1991	1976-1991	
Israel	1949-	1955-	1967-
Italy	1955-1958		
Japan	1941-1945, 1967-1970		
North Korea	1962-	1980-	2006-
Norway	1947-1962		
Libya	1970-2003	1970-2003	
Pakistan	1972-	1972-	1987-
Romania	1978-1989		
Russia	1945-	1945-	1949-
South Africa	1969-1991	1974-1991	1979-1991
South Korea	1970-1975	1970-1975	
Sweden	1945-1970		
Switzerland	1945-1969		
Taiwan	1967-1976, 1987-1988		
United Kingdom	1945-	1945-	1952-
United States	1945-	1945-	1945-
Yugoslavia	1949-1962, 1974-1987	1953-1962, 1982-1987	

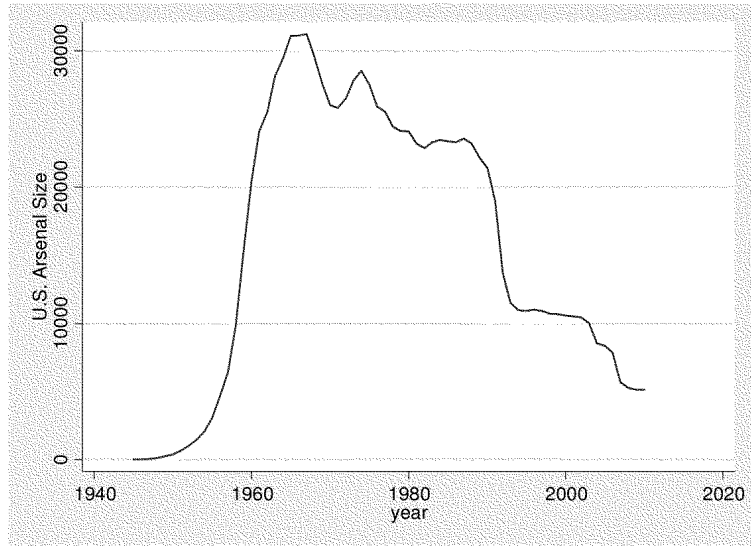
<b>Table 2. Hazard Models of Nuclear Proliferation, All States, 1945-2000</b>			
Independent variable	1 (Explore)	2 (Pursue)	3 (Acquire)
U.S. arsenal	-0.060 (0.042)	-0.020 (0.049)	-0.075 (0.063)
Security guarantee	-0.899 (0.615)	-0.917 (0.652)	
Sensitive nuclear assistance			1.683** (0.753)
GDP	3.24e-03 (0.055)	-0.019 (0.051)	
Industrial capacity	2.245**** (0.544)	2.201*** (0.750)	34.234**** (2.888)
Rivalry	1.435**** (0.426)	2.197*** (0.758)	2.476** (1.075)
Regime type	-0.007 (0.031)	0.016 (0.031)	
Openness	-0.013* (0.012)	-0.022 (0.014)	
Liberalization	-0.042 (0.025)	0.054* (0.026)	
Year	-0.087*** (0.031)	-0.097**** (0.028)	-0.166* (0.098)
Log likelihood	-69.513	-47.226	-25.018
Number of countries	157	157	187
Total observations	5,317	5,665	7,239
NOTE: Statistically significant parameter estimators are denoted by * ( $p < 0.10$ ) ** ( $p < 0.05$ ), *** ( $p < 0.01$ ), **** ( $p < 0.001$ ). Coefficients are estimates for Cox proportional hazard models; robust standard errors, adjusted for clustering by country, are in parentheses. GDP=gross domestic product.			

Independent variable	4 (U.S. Allies Explore)	5 (Non-Allies Explore)	6 (Non-Allies Pursue)
U.S. arsenal	0.054 (0.103)	-0.097** (0.040)	0.010 (0.051)
GDP	-0.155 (0.245)	0.032 (0.048)	6.50e-03 (0.067)
Industrial capacity	3.001* (1.418)	2.274**** (0.675)	2.005*** (0.748)
Rivalry	0.157 (0.882)	2.151*** (0.707)	3.189** (1.415)
Regime type	-0.096* (0.056)	0.054 (0.045)	0.060 (0.049)
Openness	-0.059 (0.043)	-0.013 (0.015)	-0.019 (0.018)
Liberalization	0.022 (0.050)	-0.045 (0.028)	0.058** (0.026)
Year	0.281 (.215)	-0.089** (0.040)	-0.110*** (0.035)
Log likelihood	-11.943	-40.911	-26.415
Number of countries	46	126	126
Total observations	1,765	3,552	3,792
NOTE: Statistically significant parameter estimators are denoted by * ( $p < 0.10$ ) ** ( $p < 0.05$ ), *** ( $p < 0.01$ ), **** ( $p < 0.001$ ). Coefficients are estimates for Cox proportional hazard models; robust standard errors, adjusted for clustering by country, are in parentheses. GDP=gross domestic product. There are too few observations of U.S. allies pursuing or acquiring nuclear weapons and of non-allies acquiring nuclear weapons to conduct regression analysis. These models do not include <i>Security guarantee</i> because there is no variation on this variable for U.S. allies and scant variation among U.S. non-allies.			

<b>Table 4. Correlates of UNSC Voting on Nuclear Proliferation Issues, 1945-2010</b>		
Independent variable	1	2
U.S. arsenal	-9.42e-03 (0.017)	-0.011 (0.017)
Capabilities	1.837 (1.573)	
GDP per capita	4.35e-03 (0.011)	
Regime type	0.009 (0.020)	
NPT	0.985*** (0.330)	1.060*** (0.336)
Constant	0.911** (0.425)	1.016** (0.431)
Log likelihood	-51.713	-52.286
<i>N</i>	370	375
NOTE: Statistically significant parameter estimators are denoted by * ( <i>p</i> 0.10) ** ( <i>p</i> 0.05), *** ( <i>p</i> 0.01), **** ( <i>p</i> 0.001). The dependent variable is UNSC voting coded from 0 (abstention or no vote) to 1 (yes vote). Robust standard errors are in parentheses and are adjusted for clustering by country. Data on regime type for Bosnia-Herzegovia in 2010 and 2011 are unavailable, resulting in five missing observations.		

<b>Table 5. Correlates of Sensitive Nuclear Assistance, 1951-2000</b>		
Independent variable	1	2
U.S. arsenal	-0.013 (0.034)	-8.77e-03 (0.021)
Relative power	-25.585** (11.298)	-33.959**** (9.853)
Common enemy	1.793**** (0.518)	2.084**** (0.571)
Superpower pact	-2.167**** (0.631)	-2.223**** (0.612)
GDP per capita	0.069 (0.106)	
Economic growth	2.870 (3.368)	
Openness	-0.002 (0.009)	
Trade dependence	28.929** (11.657)	30.214** (11.871)
Regime type	-0.049 (0.046)	
NPT	-0.415 (0.910)	
NSG	2.389** (1.042)	2.419**** (0.713)
Distance	20.451** (8.079)	18.280** (7.844)
Distance squared	-1.304*** (0.505)	-1.163**** (0.498)
Disputes (recipient)	0.155 (0.152)	
Superpower pact (recipient)	0.528 (0.837)	
GDP per capita (recipient)	0.020 (0.018)	
Liberalization (recipient)	0.009 (0.024)	
Openness (recipient)	-0.017*** (0.006)	-0.015*** (0.006)
NPT (recipient)	-0.135 (0.702)	
Constant	-83.450** (32.652)	-74.726** (30.850)
<i>N</i>	65,263	65,263
NOTE: Statistically significant parameter estimators are denoted by * ( <i>p</i> 0.10) ** ( <i>p</i> 0.05), *** ( <i>p</i> 0.01), **** ( <i>p</i> 0.001). The dependent variable is sensitive nuclear assistance coded from 0 (no assistance) to 1 (assistance). Robust standard errors are in parentheses and are adjusted for clustering by dyad. The model is estimated after including spline corrections for temporal dependence (Beck, Katz, and Tucker 1998).		

Figure 1. Size of the U.S. Nuclear Arsenal, 1945-2010.







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**QUESTIONS SUBMITTED BY MEMBERS POST HEARING**

AUGUST 1, 2012

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## QUESTIONS SUBMITTED BY MR. TURNER

Mr. TURNER. What are U.S. obligations under the NPT? I ask this because the President has explained his view that there is a bargain, for example, his Prague speech: “The basic bargain is sound: Countries with nuclear weapons will move towards disarmament, countries without nuclear weapons will not acquire them, and all countries can access peaceful nuclear energy.”

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. In a memo from Spurgeon Keeney to incoming National Security Advisor to President Nixon, Henry Kissinger, explained that the negotiators’ view of the treaty suggests that Article VI is “an essentially hortatory statement.”

Was Mr. Keeney, recently deceased, wrong?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. What’s more, the article clearly refers to “an end to the arms race . . . and complete and general disarmament.”

Isn’t the arms race over?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. I don’t seem to recall a great and abiding concern each time the U.S. builds an aircraft carrier, only a nuclear weapon. Why is only part of the article important?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. When the Secretary of State appeared before the Senate during the process to obtain ratification of the New START treaty, she said the following:

“Moreover, by bringing the New START Treaty into force, we will strengthen our national security more broadly, including by creating greater leverage to tackle a core national security challenge—nuclear proliferation. Now, I am not suggesting that this treaty alone will convince Iran or North Korea to change their behavior. But it does demonstrate our leadership and strengthens our hand as we seek to hold these and other governments accountable, whether that means further isolating Iran and enforcing the rules against violators . . . A ratified new START treaty would also continue our progress toward broader U.S.-Russia cooperation. We believe this is critical to other foreign policy priorities, including dealing with Iran’s nuclear program . . .” (Testimony by Hillary Rodham Clinton, Secretary of State. Opening Remarks Before the Senate Committee on Foreign Relations, May 18, 2010.)

Yet, four days after the New START treaty entered into force, the Russian Foreign Minister, Sergei Lavrov said at a press conference in London that, “with the approval of Resolution 1929 in [June] last year, practical possibilities to impose sanctions on those related—even indirectly—to the Iranian nuclear program have been exhausted.”

Again, this was four days after the New START treaty was ratified. Was the Secretary of State wrong? Did she over promise? Did Russia care about U.S. disarmament in terms of “strengthening our hand” and continuing “our progress toward broader U.S.-Russian cooperation . . . including dealing with Iran’s nuclear program”?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. Ambassador Graham stated in his prepared statement that, “the NPT may not be able to survive as a viable regime without CTBT entry into force in the reasonably near future.”

He also stated that “should Iran acquire a nuclear weapon stockpile likely the result would be the widespread proliferation of nuclear weapons in the Middle East thereby destroying the NPT.”

i. Which is likely to happen first, the NPT being destroyed by the failure to ratify the CTBT or an Iranian nuclear weapon?

ii. How do you propose to get Iran and North Korea to ratify the CTBT to assure its entry into force?

iii. Which states are Iran’s principal supporters right now? Is it true that Russian and China are blocking further U.N. Security Council Resolutions? Please explain to me what interest these states have in letting Iran go nuclear just because the CTBT hasn’t entered into force?

iv. What interest do the non-nuclear weapons states have in taking on the expense of building nuclear weapons, and risking the instability of further proliferation, just because CTBT hasn't entered into force.

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. Can you state your views on the desirability a world of nuclear disarmament? Was the last world without nuclear weapons a pleasant one? A peaceful one? According to former STRATCOM Commander Admiral Rich Mies, the last world without nuclear weapons was an incredibly violent one with World Wars that claimed tens of millions of lives. With strategic deterrence, the great powers no longer fight each other. The Perry-Schlesinger Commission stated that a world without nuclear weapons would require a fundamental transformation of the world political order. Has that happened yet? Or is the pursuit of nuclear abolition really just an example of fighting the symptom and not the disease?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. Should all sides to the CTBT have the same obligation? Should the administration make unequivocally certain there are no side deals, no special P5 deals? If there are any, the admin should release them? Are you aware of any P5-only agreements incident to the CTBT?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. Acting Under Secretary Gottemoeller, while the Assistant Secretary of State for Verification, stated in a speech titled "The Long Road from Prague" that,

"The second major arms control objective of the Obama Administration is the ratification of the Comprehensive Nuclear Test-Ban Treaty (CTBT). There is no step that we could take that would more effectively restore our moral leadership and improve our ability to reenergize the international nonproliferation consensus than to ratify the CTBT."

When did the United States lose its moral leadership? Why?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. Ambassador Graham stated in his testimony that,

"And first and foremost of these measures that those signing up to make themselves militarily permanently second class wanted as political balance for making this commitment was a comprehensive test ban. It is the only arms control agreement mentioned in the NPT, and it is of central importance to the bargain."

If the CTBT was so important, why was it merely a preambular reference? Why wasn't it made a legally binding commitment? Do you assert it is legally binding on the U.S.?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. Ambassador Graham also stated regarding the CTBT that, "Well, Egypt of the countries of the world, Egypt and Indonesia were probably the two strongest ones to have a Comprehensive Test Ban Treaty." Please state what actions Egypt and Indonesia will take to deal with nuclear terrorism or the Iranian nuclear weapons program if, but only if, the U.S. ratifies the CTBT.

Is there any evidence they will walk away from the NPT if the U.S. does not ratify the CTBT?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. Traditionally, a President has directed his military advisers to determine, chiefly, what level of our nuclear force is needed to deter a potential adversary from attacking us or our allies. The answer to that question should be what drives the strategy—not a President's political ideology.

For example, here's how Secretary Powell stated President Bush looked at the issue:

"President Bush gathered his advisers around him and he instructed us as follows: Find the lowest number we need to make America safe, to make America safe today and to make America safe in the future. Do not think of this in cold war terms, don't think in terms of how many more weapons do we have to have in order to make the rubble bounce even more." (Testimony of Secretary of State Colin Powell. Senate Foreign Relations Committee hearing on "Treaty on Strategic Offensive Reductions: The Moscow Treaty." July 9, 2002.)

The House Armed Services Committee has been asking questions, holding briefings with the administration and even hearings in my subcommittee—all without any detailed explanation from the administration of what exactly is being discussed in its review.

All we know about it is from press reports, which indicate that the President, in PPD-11 and other instructions, has directed the Administration to consider possibly unilateral reductions down to levels of 1,000, 700 and 300 deployed warheads.

What are your views about proceeding to U.S. nuclear force levels of 1,000 or lower, before even the New START treaty has been implemented?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. How would our allies respond? Would advanced, resource and technology capable states continue to feel comfortable relying on U.S. guarantees at such low levels? Could such reductions in fact stimulate proliferation?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. At what level would China build up to become a peer competitor? As a tangent, recently, arms controllers on a State Department Advisory Board have urged the United States to publicly declare “mutual vulnerability” with China. Could you please comment on whether you think this is a good idea? Why or why not?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. The New York Times (Mark Landler, “Obama, on the trail, plays for time on foreign policy.” The New York Times. July 19, 2012) recently reported that, “The casualties of the calendar include a presidential decision on how deeply to cut the stockpile of strategic nuclear warheads, even below the levels in the New Start treaty with Russia. The administration has all but completed a review of options for Mr. Obama’s consideration, officials said, but the announcement has been delayed for months.”

Are you aware of an Administration ever playing politics with a nuclear targeting review in this manner?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. Former Secretary of State Rice stated in December of 2010, “Nuclear weapons will be with us for a long time. After this treaty, our focus must be on stopping dangerous proliferators—not on further reductions in the U.S. and Russian strategic arsenals, which are really no threat to each other or to international stability.”

Was she right? Should President Obama follow her advice?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. The Obama Nuclear Posture Review stated that progress toward disarmament by the United States will enhance its leadership position to deal with threats to its security:

“By reducing the role and numbers of U.S. nuclear weapons—meeting our NPT Article VI obligation to make progress toward nuclear disarmament—we can put ourselves in a much stronger position to persuade our NPT partners to join with us in adopting the measures needed to reinvigorate the non-proliferation regime and secure nuclear materials worldwide.” (2010 Nuclear Posture Review)

The question follows, has this policy worked?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. North Korea continues to build nuclear weapons and ballistic missiles and the six party process is defunct, with North Korea walking away from its most recent deal in record time.

How has U.S. disarmament action through, for example, the New START treaty helped to deal with North Korea?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. Iran recently announced that it plans to build a nuclear navy and it may enrich nuclear fuel to as high as 90%, even talking about nuclear-powered oil tankers. Russia announced four days after the New START treaty entered into force that it would block further U.N. Security Council Resolutions.

Who precisely became more willing to help us adopt “the measures needed to reinvigorate the non-proliferation regime” to deal with Iran’s nuclear program because of the New START treaty or the NPR’s emphasis on reducing the roles and numbers of nuclear weapons?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. The 2010 NPR announced the U.S. would not build new nuclear weapons. In that same time, Pakistan, India, Russia and China have all announced the deployment of new nuclear weapons capabilities.

What benefit did the U.S. get from the NPR decision constraining U.S. nuclear weapons development?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. The U.S. ceased underground nuclear testing in 1992. Yet, France, China, India, Pakistan, and North Korea all tested after that decision.

Why didn’t they follow our example, our moral leadership, and stop testing when we did?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. Libya announced it was giving up its weapons of mass destruction in 2007 as the Bush Administration was pressing for Congress to approve the Reliable Replacement Warhead and the Robust Nuclear Earth Penetrator.

Why didn't Libya choose to hang on to those capabilities in the face of U.S. efforts to develop new nuclear capabilities?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. Mr. Rademaker, can you briefly relate to the Subcommittee what are the Presidential Nuclear Initiatives, the so-called PNIs?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. While serving as Assistant Secretary of State, you stated that:

"At the same time President Yeltsin committed to similar reductions in Russian tactical nuclear weapons, but considerable concern exists that the Russian commitments have not been entirely fulfilled. I can assure you that when European audiences talk about the problem of tactical nuclear weapons in Europe, their concern is directed toward the Russian tactical nuclear weapons and what countries they might be targeted on rather than the relatively small number of tactical nuclear weapons that remain in the NATO arsenal." (Press Roundtable at Interfax. Stephen G. Rademaker, Assistant Secretary of State for Arms Control. Moscow, Russia. October 6, 2004.)

Was this a nice way of saying that the Russians were not complying with the PNIs?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. As you know, the Congressional Commission on the Strategic Posture of the United States, the so-called Perry-Schlesinger Commission, stated that, "Russia has not shown the transparency that its neighbors and the United States desire on such matters. It has repeatedly rebuffed U.S. proposals for NSNF transparency measures and NATO's requests for information. And it is no longer in compliance with its PNI commitments."

Do you agree with that judgment? I ask because, Administration statement about the so-called NPR Implementation Study have suggested the Administration may try to avoid the cumbersome treaty process, and perhaps simply make reductions by political commitment. What are your views on that?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. In 2007, the State Department's International Advisory Board released a report, "Discouraging a Cascade of Nuclear Weapons States." In that report, President Kennedy was quoted expressing a concern of his about nuclear proliferation following a classified briefing by his Secretary of Defense, Robert McNamara:

"I see the possibility in the 1970s of the President of the United States having to face a world in which 15 or 20 or 25 nations may have these weapons."

As we know, thankfully, that didn't come to pass.

Why?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. In 1968/69, the U.S. reached a high point of about 30,000 nuclear weapons. At that point there were five nuclear weapons states. The U.S. began reducing and the number of nuclear weapons states increased. For example, when the U.S. decreased to approximately 25,000 weapons, India went nuclear. At 10,000 weapons, Pakistan. At 7,000 weapons, North Korea. We're about to go below 5,000 weapons and Iran is about to go nuclear. What lessons should we draw from this trend?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. Do you agree China is in violation of Nuclear Suppliers Group requirements because of its support for Pakistan's nuclear reactor programs, specifically the Chasma 3 and 4 reactors it is building for Pakistan?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. What steps should the U.S. take in response?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. TURNER. What are U.S. obligations under the NPT? I ask this because the President has explained his view that there is a bargain, for example, his Prague speech: "The basic bargain is sound: Countries with nuclear weapons will move towards disarmament, countries without nuclear weapons will not acquire them, and all countries can access peaceful nuclear energy."

Dr. SCHAKE. U.S. obligations are not to transfer nuclear weapons or their technologies to non-nuclear weapons states, and to pursue good-faith negotiations toward effective disarmament under strict and effective international control.

Mr. TURNER. In a memo from Spurgeon Keeney to incoming National Security Advisor to President Nixon, Henry Kissinger, explained that the negotiators' view of the treaty suggests that Article VI is "an essentially hortatory statement."

Was Mr. Keeney, recently deceased, wrong?

Dr. SCHAKE. My read of the historical record is that the Nixon Administration and the Congress would have been unlikely to support the treaty if the disarmament commitments applying to the U.S. were considered more than hortatory.

Mr. TURNER. What's more, the article clearly refers to "an end to the arms race . . . and complete and general disarmament." i. Isn't the arms race over?

Dr. SCHAKE. Our arms race with the Soviet Union is clearly over, as the Soviet Union is over. The Russians currently don't seem interested in restarting it, but nuclear weapons have become a more important part of Russian military power as their conventional forces have collapsed, and the Russians seem to be defining their national interests mostly in opposition to ours, so it's not out of the question they could again seek to assert national power through a build up of their nuclear forces. We may also in the coming decade begin to worry about the size and characteristics of Chinese nuclear forces. I wouldn't rule out that the U.S. could again be faced with a nuclear arms race in which our own security depends on preventing nuclear superiority by another country.

Mr. TURNER. I don't seem to recall a great and abiding concern each time the U.S. builds an aircraft carrier, only a nuclear weapon. Why is only part of the article important?

Dr. SCHAKE. That's an excellent question, although I wouldn't want to encourage arms control advocates to expand their scope to limiting our conventional forces. My interpretation of that section of the Treaty is to emphasize that only in the context of complete and general disarmament ought the U.S. to eliminate its nuclear arsenal.

Mr. TURNER. When the Secretary of State appeared before the Senate during the process to obtain ratification of the New START treaty, she said the following:

"Moreover, by bringing the New START Treaty into force, we will strengthen our national security more broadly, including by creating greater leverage to tackle a core national security challenge—nuclear proliferation. Now, I am not suggesting that this treaty alone will convince Iran or North Korea to change their behavior. But it does demonstrate our leadership and strengthens our hand as we seek to hold these and other governments accountable, whether that means further isolating Iran and enforcing the rules against violators . . . A ratified new START treaty would also continue our progress toward broader U.S.-Russia cooperation. We believe this is critical to other foreign policy priorities, including dealing with Iran's nuclear program . . ." (Testimony by Hillary Rodham Clinton, Secretary of State. Opening Remarks Before the Senate Committee on Foreign Relations, May 18, 2010.)

Yet, four days after the New START treaty entered into force, the Russian Foreign Minister, Sergei Lavrov said at a press conference in London that, "with the approval of Resolution 1929 in [June] last year, practical possibilities to impose sanctions on those related—even indirectly—to the Iranian nuclear program have been exhausted."

Again, this was four days after the New START treaty was ratified. Was the Secretary of State wrong? Did she over promise? Did Russia care about U.S. disarmament in terms of "strengthening our hand" and continuing "our progress toward broader U.S.-Russia cooperation . . . including dealing with Iran's nuclear program"?

Dr. SCHAKE. The New START treaty had no effect whatsoever on other countries' willingness to hold proliferating governments accountable, nor does it appear to have facilitated broader U.S.-Russia cooperation.

The only one of the Secretary's assertions that has proven true is that the treaty did not convince Iran or North Korea to change their behavior. I think it's just not true that the current size and composition of the U.S. nuclear arsenal has any effect on threshold nuclear states.

The only way in which I could imagine U.S. nuclear force structure affecting threshold states is if we reduce our arsenal to such low numbers that they consider parity or supremacy within their reach—and that would foster proliferation, not restrain it.

Mr. TURNER. Ambassador Graham stated in his prepared statement that, "the NPT may not be able to survive as a viable regime without CTBT entry into force in the reasonably near future."

He also stated that "should Iran acquire a nuclear weapon stockpile likely the result would be the widespread proliferation of nuclear weapons in the Middle East thereby destroying the NPT."

i. Which is likely to happen first, the NPT being destroyed by the failure to ratify the CTBT or an Iranian nuclear weapon?

ii. How do you propose to get Iran and North Korea to ratify the CTBT to assure its entry into force?

iii. Which states are Iran's principal supporters right now? Is it true that Russian and China are blocking further U.N. Security Council Resolutions? Please explain to me what interest these states have in letting Iran go nuclear just because the CTBT hasn't entered into force?

iv. What interest do the non-nuclear weapons states have in taking on the expense of building nuclear weapons, and risking the instability of further proliferation, just because CTBT hasn't entered into force.

Dr. SCHAKE. I do not believe the CTBT has any bearing on the NPT; I do, however, agree with Ambassador Graham that Iran acquiring nuclear weapons could very likely set off a cascade of proliferation throughout the Middle East that would destroy the NPT.

Mr. TURNER. Can you state your views on the desirability a world of nuclear disarmament? Was the last world without nuclear weapons a pleasant one? A peaceful one? According to former STRATCOM Commander Admiral Rich Mies, the last world without nuclear weapons was an incredibly violent one with World Wars that claimed tens of millions of lives. With strategic deterrence, the great powers no longer fight each other. The Perry-Schlesinger Commission stated that a world without nuclear weapons would require a fundamental transformation of the world political order. Has that happened yet? Or is the pursuit of nuclear abolition really just an example of fighting the symptom and not the disease?

Dr. SCHAKE. Desirable as a world without nuclear weapons might be, I don't see how we uninvent them; and if we give ours up, it will only strengthen the incentive to acquire them for those countries and organizations that mean us harm.

I agree that nuclear weapons have so far served to inhibit the strongest states from fighting each other; but they have not prevented wars, and they have not prevented wars even among states with nuclear weapons (Pakistan and India, for example). I would also caution that we have only a relatively small sample set from which to draw conclusions, so I'm uncomfortable making sweeping claims about the deterrent effects of nuclear weapons.

It's a really interesting question whether the weapons are just a symptom of the disease; my sense is the political objectives for which countries fight are the root cause, not the weapons themselves. The answer to your specific question is that we're nowhere near the kind of transformation of world political order envisioned by the Perry-Schlesinger Commission as justifying a disarmed United States.

Mr. TURNER. Should all sides to the CTBT have the same obligation? Should the administration make unequivocally certain there are no side deals, no special P5 deals? If there are any, the administration should release them? Are you aware of any P5-only agreements incident to the CTBT?

Dr. SCHAKE. I wouldn't object in principle to side agreements among the P5, but any agreements impinging on or resulting from the Treaty must be subject to Congressional review. I am not expert enough on the CTBT negotiations to know if any side deals have been entered into.

Mr. TURNER. Acting Under Secretary Gottemoeller, while the Assistant Secretary of State for Verification, stated in a speech titled "The Long Road from Prague" that,

"The second major arms control objective of the Obama Administration is the ratification of the Comprehensive Nuclear Test-Ban Treaty (CTBT). There is no step that we could take that would more effectively restore our moral leadership and improve our ability to reenergize the international nonproliferation consensus than to ratify the CTBT."

When did the United States lose its moral leadership? Why?

Dr. SCHAKE. I do not agree with Rose Gottemoeller's statement that the United States has lost its moral leadership, nor do I believe the CTBT is central to that leadership.

Mr. TURNER. Ambassador Graham stated in his testimony that,

"And first and foremost of these measures that those signing up to make themselves militarily permanently second class wanted as political balance for making this commitment was a comprehensive test ban. It is the only arms control agreement mentioned in the NPT, and it is of central importance to the bargain."

If the CTBT was so important, why was it merely a preambular reference? Why wasn't it made a legally binding commitment? Do you assert it is legally binding on the U.S.?

Dr. SCHAKE. I disagree with Ambassador Graham's assessment.

Mr. TURNER. Ambassador Graham also stated regarding the CTBT that, "Well, Egypt of the countries of the world, Egypt and Indonesia were probably the two strongest ones to have a Comprehensive Test Ban Treaty." Please state what actions Egypt and Indonesia will take to deal with nuclear terrorism or the Iranian nuclear weapons program if, but only if, the U.S. ratifies the CTBT.



Is there any evidence they will walk away from the NPT if the U.S. does not ratify the CTBT?

Dr. SCHAKE. I do not see a connection between U.S. ratification of the CTBT and adherence by us or other countries to the NPT.

Mr. TURNER. Traditionally, a President has directed his military advisers to determine, chiefly, what level of our nuclear force is needed to deter a potential adversary from attacking us or our allies. The answer to that question should be what drives the strategy—not a President's political ideology.

For example, here's how Secretary Powell stated President Bush looked at the issue:

“President Bush gathered his advisers around him and he instructed us as follows: Find the lowest number we need to make America safe, to make America safe today and to make America safe in the future. Do not think of this in cold war terms, don't think in terms of how many more weapons do we have to have in order to make the rubble bounce even more.” (Testimony of Secretary of State Colin Powell. Senate Foreign Relations Committee hearing on “Treaty on Strategic Offensive Reductions: The Moscow Treaty.” July 9, 2002.)

The House Armed Services Committee has been asking questions, holding briefings with the administration and even hearings in my subcommittee—all without any detailed explanation from the administration of what exactly is being discussed in its review.

All we know about it is from press reports, which indicate that the President, in PPD-11 and other instructions, has directed the Administration to consider possibly unilateral reductions down to levels of 1,000, 700 and 300 deployed warheads.

What are your views about proceeding to U.S. nuclear force levels of 1,000 or lower, before even the New START treaty has been implemented?

Dr. SCHAKE. I'm deeply skeptical nuclear forces of that size are an adequate deterrent, but I absolutely agree with you that we should have a strategy to guide the size and structure of the force, and I have not seen strategic guidelines that would justify a force of 1,000 warheads or less.

Mr. TURNER. How would our allies respond? Would advanced, resource and technology capable states continue to feel comfortable relying on U.S. guarantees at such low levels? Could such reductions in fact stimulate proliferation?

Dr. SCHAKE. Many American allies would be concerned that a U.S. decision to reduce arsenals that low would be an American disengaging from forward defense of allies and protection of the global commons. Even allies that purport to want to reduce non-strategic nuclear weapons base that on having a strong U.S. strategic nuclear force. So, German Foreign Minister Guido Westerwelle, an advocate of removing U.S. non-strategic nuclear weapons from Europe, argued it was only possible in the context of relying on the U.S. strategic nuclear deterrent.

What we saw in the debate within NATO about reducing non-strategic nuclear forces was a rush by allies to reaffirm three times in the past few years their desire for close nuclear cooperation and stationing of nuclear forces in Europe.

Allied concerns would be magnified by an Administration that, as the Obama Administration has, been stingy with military assistance and political support during military conflicts. Allies want reassurance of our commitments from us, and reducing our nuclear arsenal will not be reassuring to them. Absent confidence in our extending nuclear deterrence, it could well precipitate some countries capable of building nuclear forces of their own to do so.

Mr. TURNER. At what level would China build up to become a peer competitor? As a tangent, recently, arms controllers on a State Department Advisory Board have urged the United States to publicly declare “mutual vulnerability” with China. Could you please comment on whether you think this is a good idea? Why or why not?

Dr. SCHAKE. China is a long way from having the military capability to win a sustained conventional war against the United States. But they look to be investing substantially in asymmetric means like cyber that have the potential to eliminate dominant U.S. advantages. I believe they are building up militarily in order to chip away at U.S. military dominance and at U.S. political influence, especially with countries in the Asia-Pacific.

The declaration and preservation of mutual vulnerability is a terrible strategic posture, far less stabilizing than a defense-dominant order. Mutual vulnerability may be a fact of life, but it ought not be our objective.

I also doubt a declaration of mutual vulnerability would benefit us. This Chinese government would likely take it to mean the U.S. intends to sacrifice any interests we have that conflict with China's, and that would only encourage the irredentism China is already inclined toward and frighten U.S. allies relying on our willingness to preserve the status quo in Asia against assertive Chinese claims.

Mr. TURNER. The New York Times (Mark Landler, "Obama, on the trail, plays for time on foreign policy." The New York Times. July 19, 2012) recently reported that, "The casualties of the calendar include a presidential decision on how deeply to cut the stockpile of strategic nuclear warheads, even below the levels in the New Start treaty with Russia. The administration has all but completed a review of options for Mr. Obama's consideration, officials said, but the announcement has been delayed for months."

Are you aware of an Administration ever playing politics with a nuclear targeting review in this manner?

Dr. SCHAKE. It is not clear to me whether the Administration has been withholding the conclusions or has genuinely been unable to complete the "90 day review".

Mr. TURNER. Former Secretary of State Rice stated in December of 2010, "Nuclear weapons will be with us for a long time. After this treaty, our focus must be on stopping dangerous proliferators—not on further reductions in the U.S. and Russian strategic arsenals, which are really no threat to each other or to international stability."

Was she right? Should President Obama follow her advice?

Dr. SCHAKE. I agree with Secretary Rice that our priority in arms control should be on reversing progress in the most dangerous proliferating states. We should be more concerned presently with Iran and North Korea than we are with Russia.

But I am, perhaps, more concerned than she is (or was) about Russia's reversion to authoritarianism and I would favor a treaty limiting non-strategic nuclear forces because of the way Russia has tried to intimidate European countries with suggestions of their use. Since the end of the Cold War, the NATO alliance has unilaterally reduced its non-strategic nuclear forces by 90% and it precipitated no change at all in Russian non-strategic holdings; bringing Russian NSNF under treaty limits would be beneficial.

Mr. TURNER. The Obama Nuclear Posture Review stated that progress toward disarmament by the United States will enhance its leadership position to deal with threats to its security:

"By reducing the role and numbers of U.S. nuclear weapons—meeting our NPT Article VI obligation to make progress toward nuclear disarmament—we can put ourselves in a much stronger position to persuade our NPT partners to join with us in adopting the measures needed to reinvigorate the non-proliferation regime and secure nuclear materials worldwide." (2010 Nuclear Posture Review)

The question follows, has this policy worked?

Dr. SCHAKE. No, it has not worked.

Mr. TURNER. North Korea continues to build nuclear weapons and ballistic missiles and the six party process is defunct, with North Korea walking away from its most recent deal in record time.

How has U.S. disarmament action through, for example, the New START treaty helped to deal with North Korea?

Dr. SCHAKE. It has not helped.

Mr. TURNER. Iran recently announced that it plans to build a nuclear navy and it may enrich nuclear fuel to as high as 90%, even talking about nuclear-powered oil tankers. Russia announced four days after the New START treaty entered into force that it would block further U.N. Security Council Resolutions.

Who precisely became more willing to help us adopt "the measures needed to reinvigorate the non-proliferation regime" to deal with Iran's nuclear program because of the New START treaty or the NPR's emphasis on reducing the roles and numbers of nuclear weapons?

Dr. SCHAKE. I see no evidence the New START Treaty or reducing the roles and numbers of U.S. nuclear weapons has had any effect on Iran's nuclear program or other countries' willingness to assist in containing and reversing the Iranian nuclear programs.

Mr. TURNER. The 2010 NPR announced the U.S. would not build new nuclear weapons. In that same time, Pakistan, India, Russia and China have all announced the deployment of new nuclear weapons capabilities.

What benefit did the U.S. get from the NPR decision constraining U.S. nuclear weapons development?

Dr. SCHAKE. I see no evidence the constraints on U.S. nuclear weapons development have had any effect on other countries' decisions about nuclear weapons.

Mr. TURNER. The U.S. ceased underground nuclear testing in 1992. Yet, France, China, India, Pakistan, and North Korea all tested after that decision.

Why didn't they follow our example, our moral leadership, and stop testing when we did?

Dr. SCHAKE. I believe the countries named considered the robustness of their nuclear arsenals or the political significance of conducting tests to be much more important than any action taken by the United States.

Mr. TURNER. Libya announced it was giving up its weapons of mass destruction in 2007 as the Bush Administration was pressing for Congress to approve the Reliable Replacement Warhead and the Robust Nuclear Earth Penetrator.

Why didn't Libya choose to hang on to those capabilities in the face of U.S. efforts to develop new nuclear capabilities?

Dr. SCHAKE. I see no evidence of a robust connection between the numbers or types of warheads in the U.S. nuclear arsenal and the decisions of other countries about their nuclear programs. In the case of Libya, their renunciation of WMD programs was motivated by a desire to change their relationship with the United States, foster greater economic openness, and concern that we had overthrown another dictator we believed working assiduously to develop such weapons.

Mr. TURNER. Dr. Schake, please describe Russian and European reactions to the over 90% reductions to U.S. forward-deployed nuclear weapons in Europe.

Dr. SCHAKE. Russia's long-standing position has been that both the United States and Russia should remove all nuclear weapons from Europe (they do not acknowledge a NATO role in assessing threats, conducting planning, and participating in nuclear missions). Yet the dramatic reduction in NATO's nuclear arsenal did not precipitate any reductions in the numbers or deployment patterns of Russian nuclear forces. None.

European reaction to the 90% reductions has been both positive and deeply appreciative. Our allies were appreciative President Bush's leadership in considering reductions, grateful to be included in a NATO process of analyzing alliance threats and determining a nuclear and conventional force posture that deters potential aggressors and assures allies of our continuing common purpose and common defense. Our country continues to benefit from the solid alliance management that produced the NSNF reductions, as demonstrated by NATO allies three times in the past few years reaffirming the continuation of those decisions.

Our European allies keep reaffirming the status quo: they believe we have made the right strategic decisions about alliance nuclear forces and their role in our defense, and they want to maintain them. We will have difficult decisions to make about modernization of nuclear-capable delivery systems in a time of great budget austerity on both sides of the Atlantic, but allies have agreed that NATO needs to have nuclear forces deployed in Europe, and that wide participation in nuclear missions is important to the deterrent.

Mr. TURNER. In 2007, the State Department's International Advisory Board released a report, "Discouraging a Cascade of Nuclear Weapons States." In that report, President Kennedy was quoted expressing a concern of his about nuclear proliferation following a classified briefing by his Secretary of Defense, Robert McNamara:

"I see the possibility in the 1970s of the President of the United States having to face a world in which 15 or 20 or 25 nations may have these weapons."

As we know, thankfully, that didn't come to pass.

Why?

Dr. SCHAKE. I think there are lots of reasons. The Kennedy Administration was perhaps projecting its fears, given that it had weathered nuclear crises with the Soviet Union over Berlin and Cuba. The Kennedy Administration wasn't actually very good at assessing other countries' motivations, either. And predicting the future tends very often to rely too heavily on extrapolating near term trends. It's entirely possible they overestimated the number of countries that wanted nuclear weapons, or those that had the indigenous scientific and engineering capacity to produce them, or those that perceived marginal advantage from attaining them. I do think the Non-Proliferation Treaty has played an important role in fostering a norm against proliferation, and that has changed the trajectory. Control of nuclear materials through the Suppliers Group has been hugely important in preventing countries that want the inputs from attaining them. I also think countries that acquired nuclear weapons found they didn't perhaps solve as many problems as they might have wished. But perhaps the most useful constraint on proliferation has been U.S. security guarantees. Most of the countries that have the scientific and economic resources to have crossed the nuclear threshold are American allies: Germany, Japan, South Korea. Our willingness to extend the deterrence of our conventional and nuclear arsenals to their defense has prevented them choosing to build arsenals of their own. And lastly, we should not underestimate the importance of diplomacy. The U.S. and its allies have put an enormous amount of effort into identifying countries approaching the nuclear threshold and affecting their decisions. That has had a very important effect in raising the costs to potential proliferators.

Mr. TURNER. In 1968/69, the U.S. reached a high point of about 30,000 nuclear weapons. At that point there were five nuclear weapons states. The U.S. began reducing and the number of nuclear weapons states increased. For example, when the U.S. decreased to approximately 25,000 weapons, India went nuclear. At 10,000 weapons, Pakistan. At 7,000 weapons, North Korea. We're about to go below 5,000 weapons and Iran is about to go nuclear. What lessons should we draw from this trend?

Dr. SCHAKE. I don't believe there is a robust correlation between the size and structure of U.S. nuclear forces and proliferation. I don't see evidence that either Pakistan or North Korea believed the reductions in our arsenal were relevant to their decisions to cross the nuclear threshold.

The only instances in which I am concerned other countries may see a connection are:

- if the U.S. arsenal is reduced to such a low level that a country, or a collection of countries, saw the ability to destroy our nuclear force; or
- countries or organizations believed there was political value in surpassing the numbers of U.S. forces.

It may seem counterintuitive, but it is quite possible that further reductions in U.S. nuclear forces could precipitate proliferation rather than prevent it.

Mr. TURNER. Do you agree China is in violation of Nuclear Suppliers Group requirements because of its support for Pakistan's nuclear reactor programs, specifically the Chasma 3 and 4 reactors it is building for Pakistan?

Dr. SCHAKE. I do not consider myself knowledgeable enough to make a judgment on that.

Mr. TURNER. What steps should the U.S. take in response?

Dr. SCHAKE. I do not consider myself knowledgeable enough to make a judgment on that.

Mr. TURNER. What are U.S. obligations under the NPT? I ask this because the President has explained his view that there is a bargain, for example, his Prague speech: "The basic bargain is sound: Countries with nuclear weapons will move towards disarmament, countries without nuclear weapons will not acquire them, and all countries can access peaceful nuclear energy."

Ambassador GRAHAM. The NPT Basic Bargain is that most of the world, now more than 180 countries, agreed not to acquire nuclear weapons. In exchange for this the five nuclear weapon states recognized by the NPT (the United States, the United Kingdom, the Soviet Union/Russia, France and China) agreed to share the technology for the peaceful use of nuclear energy (Article IV of the Treaty) and to pursue negotiations in good faith on ending the arms race (long since ended) and nuclear disarmament (Article VI of the Treaty). The United States NPT obligations with respect to the Basic Bargain are the provisions contained in Articles IV and VI. Article IV is straightforward; Article VI on its face is a commitment to engage in good faith nuclear disarmament negotiations. But the negotiating record makes clear that it was the intent of this Article to ultimately achieve the end point of the negotiations—the complete elimination of nuclear weapons worldwide. However, it was recognized by the nonnuclear weapon states that this would take a long time and in the meantime the nuclear weapon states were expect to achieve interim measures, such as the comprehensive test ban treaty, referred to paragraph 10 of the preamble to the NPT.

Mr. TURNER. In a memo from Spurgeon Keeney to incoming National Security Advisor to President Nixon, Henry Kissinger, explained that the negotiators' view of the treaty suggests that Article VI is "an essentially hortatory statement."

Was Mr. Keeney, recently deceased, wrong?

Ambassador GRAHAM. Article VI was a hortatory statement in the sense it did not call for a specific result at a specific time. It obligates the U.S. to "good faith" negotiations on nuclear disarmament. But as the World Court has said "good faith" does imply a result at some point.

Mr. TURNER. What's more, the article clearly refers to "an end to the arms race . . . and complete and general disarmament."

Isn't the arms race over?

Ambassador GRAHAM. Yes, the arms race is over. But of course nuclear disarmament has not been achieved. And in the Final Document of the 2000 NPT Review Conference all NPT parties, including the United States, agreed to "An unequivocal undertaking by the nuclear-weapon States to accomplish the total elimination of their nuclear arsenals leading to nuclear disarmament to which all states parties are committed under Article VI" States understood that eliminating nuclear weapons would take a long time but that the nuclear weapons states should take interim steps sooner, such as a comprehensive test ban. The objective of achieving a test ban is set forth in an NPT preambular clause. And when the NPT was indefinitely

extended in 1995 the nuclear weapons states, including the United States, in the accompanying Document, “Principles and Objectives for Nuclear Non-Proliferation and Disarmament”, pledged themselves to a series of interim steps including the test ban again and a fissile material cut off treaty.

Mr. TURNER. I don’t seem to recall a great and abiding concern each time the U.S. builds an aircraft carrier, only a nuclear weapon. Why is only part of the article important?

Ambassador GRAHAM. The NPT Article VI commitment to “general and complete disarmament” was interpreted to be separate from that to “nuclear disarmament”, in the Final Document of 2010 NPT Review Conference by the consent of all NPT parties.

Mr. TURNER. When the Secretary of State appeared before the Senate during the process to obtain ratification of the New START treaty, she said the following:

“Moreover, by bringing the New START Treaty into force, we will strengthen our national security more broadly, including by creating greater leverage to tackle a core national security challenge—nuclear proliferation. Now, I am not suggesting that this treaty alone will convince Iran or North Korea to change their behavior. But it does demonstrate our leadership and strengthens our hand as we seek to hold these and other governments accountable, whether that means further isolating Iran and enforcing the rules against violators . . . A ratified new START treaty would also continue our progress toward broader U.S.-Russia cooperation. We believe this is critical to other foreign policy priorities, including dealing with Iran’s nuclear program . . .” (Testimony by Hillary Rodham Clinton, Secretary of State. Opening Remarks Before the Senate Committee on Foreign Relations, May 18, 2010.)

Yet, four days after the New START treaty entered into force, the Russian Foreign Minister, Sergei Lavrov said at a press conference in London that, “with the approval of Resolution 1929 in [June] last year, practical possibilities to impose sanctions on those related—even indirectly—to the Iranian nuclear program have been exhausted.”

Again, this was four days after the New START treaty was ratified. Was the Secretary of State wrong? Did she over promise? Did Russia care about U.S. disarmament in terms of “strengthening our hand” and continuing “our progress toward broader U.S.-Russian cooperation . . . including dealing with Iran’s nuclear program”?

Ambassador GRAHAM. The Secretary of State was not wrong. Ratification of New START will help progress to continue toward broader U.S.-Russian cooperation. But it won’t solve everything at once. Iran is very difficult for Russia; Iran has never aided the Islamic rebels in Chechnya and helped Russia overcome the violence in Tajikistan. But slowly it will improve.

Mr. TURNER. During a recent event with the Obama Administration’s Acting Under Secretary for Arms Control, you told a gathering of the American Bar Association that CTBT ratification was an essential step toward eventual nuclear disarmament. (Zach Toombs, “U.S. Arms Control Official: Test Ban Treaty Faces ‘Uphill’ Fight In Senate.” The Center for Public Integrity. July 23, 2012.)

Do you stand by that statement? Is the CTBT a key step towards eventual nuclear disarmament?

Ambassador GRAHAM. I stand by that statement because I do not think that the NPT can remain viable for the long term without CTBT entry into force. It is an essential part of the Basic Bargain. Nuclear disarmament in the long run will not be possible if the NPT falls apart.

Mr. TURNER. Ambassador Graham, perhaps you could help me with something. You state in your prepared statement that, “the NPT may not be able to survive as a viable regime without CTBT entry into force in the reasonably near future.”

You also state that “should Iran acquire a nuclear weapon stockpile likely the result would be the widespread proliferation of nuclear weapons in the Middle East thereby destroying the NPT.”

Which is likely to happen first, the NPT being destroyed by the failure to ratify the CTBT or an Iranian nuclear weapon?

Ambassador GRAHAM. That is a difficult question to answer. But if I must choose I would say an Iranian nuclear weapon—if Iran decides to build one—could happen first.

Mr. TURNER. How do you propose to get Iran and North Korea to ratify the CTBT to assure its entry into force?

Ambassador GRAHAM. That of course will be difficult. With respect to Iran, if it is only Iran and North Korea that are left to ratify before the CTBT would come into force and Iran does not ratify that would unequivocally expose their program

as a weapons program. So that concern might be persuasive to them. North Korea will probably require bribery or threats of some sort.

Mr. TURNER. Which states are Iran's principal supporters right now? Is it true that Russian and China are blocking further U.N. Security Council Resolutions? Please explain to me what interest these states have in letting Iran go nuclear just because the CTBT hasn't entered into force?

Ambassador GRAHAM. Iran and China are Iran's principal supporters, but it has nothing to do with the CTBT. China wants Iran's oil. With Russia it is more complicated. Iran has never aided the Chechen rebels, but if they did given their proximity to Chechnya, the Russian position there might become untenable. Iran also aided Russia in controlling violence in Tajikistan. Iran is in addition a large Russian trading partner.

Mr. TURNER. What interest do the non-nuclear weapons states have in taking on the expense of building nuclear weapons, and risking the instability of further proliferation, just because CTBT hasn't entered into force?

Ambassador GRAHAM. It's more a question of national pride than anything. The nonnuclear weapon states gave up forever the world's most powerful weapon. As things presently work in the world community that makes them a second class state. The great powers are the five NPT nuclear weapon states, (the U.S., the U.K., Russia, France and China), the P-5. The non-nuclear weapon states want political cover for agreeing to accept second class status. That cover is the Basic Bargain, particularly the CTBT. If it is never delivered some of them will think about no longer remaining a second class state, and become a state whose views countries listen to by acquiring nuclear weapons.

Mr. TURNER. Lastly, Ambassador Graham, your prepared statement includes the following line, which I found curious: "the Clinton Administration did try by offering major trade concessions but apparently it was too little, too late." Is it really your position that we didn't offer enough to Iran to entice it to give up its illegal nuclear weapons program?

Ambassador GRAHAM. When President Clinton did that, the reform leader in Iran Mohamed Khatami had been in power three years; the conservatives had had time to undermine him. If the offer had been made by the Clinton administration in 1997 when he was just elected and was reaching out to the West, rather than 2000, he might have been sufficiently strengthened to go for real reform.

Mr. TURNER. Should all sides to the CTBT have the same obligation? Should the administration make unequivocally certain there are no side deals, no special P5 deals? If there are any, the administration should release them? Are you aware of any P5-only agreements incident to the CTBT?

Ambassador GRAHAM. Yes all sides to the CTBT should have the same obligation. The administration should be sure that there are no side deals, or special P-5 deals, this is a zero yield treaty and it applies to everyone. I am not aware of any P-5 only agreement related to the CTBT.

Mr. TURNER. Acting Under Secretary Gottemoeller, while the Assistant Secretary of State for Verification, stated in a speech titled "The Long Road from Prague" that,

"The second major arms control objective of the Obama Administration is the ratification of the Comprehensive Nuclear Test-Ban Treaty (CTBT). There is no step that we could take that would more effectively restore our moral leadership and improve our ability to reenergize the international nonproliferation consensus than to ratify the CTBT."

When did the United States lose its moral leadership? Why?

Ambassador GRAHAM. The United States was seen by many NPT parties at the time of the 2005 NPT Review Conference as disavowing important previous commitments that it had made to all NPT parties.

Mr. TURNER. Ambassador Graham, you stated in your testimony that,

"And first and foremost of these measures that those signing up to make themselves militarily permanently second class wanted as political balance for making this commitment was a comprehensive test ban. It is the only arms control agreement mentioned in the NPT, and it is of central importance to the bargain."

If the CTBT was so important, why was it merely a preambular reference? Why wasn't it made a legally binding commitment? Do you assert it is legally binding on the U.S.?

Ambassador GRAHAM. A preambular reference was the best that the non-nuclear weapon states could get at the time, 1968. In 1968 near the close of the negotiations the U.S. and the Soviet Union promised the nonnuclear states that a comprehensive test ban treaty would be worked out in the Review Conferences. That never happened indeed was never attempted until the 1995 timeframe. A preambular clause is not legally binding on anyone.

Mr. TURNER. Ambassador Graham, you also stated regarding the CTBT that, “Well, Egypt of the countries of the world, Egypt and Indonesia were probably the two strongest ones to have a Comprehensive Test Ban Treaty.” Please state what actions Egypt and Indonesia will take to deal with nuclear terrorism or the Iranian nuclear weapons program if, but only if, the U.S. ratifies the CTBT.

Ambassador GRAHAM. In 1995 at the time of NPT extension Egypt and Indonesia were the two states most active in arguing for a comprehensive test ban treaty. But many, many others wanted it. This issue had to do with the NPT and the nuclear arms control structure and nothing to do with terrorism or Iran. Should the U.S. ratify CTBT that doesn’t mean those two states would do anything specific about terrorism or Iran. Indonesia isn’t even much of a player in the Iran debate.

Mr. TURNER. Is there any evidence they will walk away from the NPT if the U.S. does not ratify the CTBT?

Ambassador GRAHAM. Egypt and Indonesia have not said that they would walk away from the NPT if the CTBT is not ratified. Egypt possibly might acquire nuclear weapons if Iran does. The CTBT relates to the long term viability of the NPT, whether it is a balanced treaty or not which can stand the test of time.

Mr. TURNER. Traditionally, a President has directed his military advisers to determine, chiefly, what level of our nuclear force is needed to deter a potential adversary from attacking us or our allies. The answer to that question should be what drives the strategy—not a President’s political ideology.

For example, here’s how Secretary Powell stated President Bush looked at the issue:

“President Bush gathered his advisers around him and he instructed us as follows: Find the lowest number we need to make America safe, to make America safe today and to make America safe in the future. Do not think of this in cold war terms, don’t think in terms of how many more weapons do we have to have in order to make the rubble bounce even more.” (Testimony of Secretary of State Colin Powell. Senate Foreign Relations Committee hearing on “Treaty on Strategic Offensive Reductions: The Moscow Treaty.” July 9, 2002.)

The House Armed Services Committee has been asking questions, holding briefings with the administration and even hearings in my subcommittee—all without any detailed explanation from the administration of what exactly is being discussed in its review.

All we know about it is from press reports, which indicate that the President, in PPD-11 and other instructions, has directed the Administration to consider possibly unilateral reductions down to levels of 1,000, 700 and 300 deployed warheads.

What are your views about proceeding to U.S. nuclear force levels of 1,000 or lower, before even the New START treaty has been implemented?

Ambassador GRAHAM. I think that it should be a Pentagon decision based on their best judgment of what size force is desirable. And I also do not think that it should be a unilateral decision, we should negotiate with the Russians to the levels we want. It seems to me an agreement with Russia to jointly reduce to 1000 weapons would be a good follow on to New START. Some believe that this is the level required to persuade the other nuclear weapon states to be involved in the process and negotiate reductions of their stockpiles.

Mr. TURNER. How would our allies respond? Would advanced, resource and technology capable states continue to feel comfortable relying on U.S. guarantees at such low levels? Could such reductions in fact stimulate proliferation?

Ambassador GRAHAM. I don’t favor unilateral reductions. If they are negotiated levels our allies as well as other states would be very positive about such an effort.

Mr. TURNER. At what level would China build up to become a peer competitor? As a tangent, recently, arms controllers on a State Department Advisory Board have urged the United States to publicly declare “mutual vulnerability” with China. Could you please comment on whether you think this is a good idea? Why or why not?

Ambassador GRAHAM. I think it is most unlikely China would wish to build up to become a peer competitor. China is not our friend; they will compete with us but not with nuclear weapons. Cultural, economic and technological weapons (cyber) are their preferences. I do not support the idea of declaring “mutual vulnerability” with China.

Mr. TURNER. The New York Times (Mark Landler, “Obama, on the trail, plays for time on foreign policy.” The New York Times. July 19, 2012) recently reported that,

“The casualties of the calendar include a presidential decision on how deeply to cut the stockpile of strategic nuclear warheads, even below the levels in the New Start treaty with Russia. The administration has all but completed a review of options for Mr. Obama’s consideration, officials said, but the announcement has been delayed for months.”

Are you aware of an Administration ever playing politics with a nuclear targeting review in this manner?

Ambassador GRAHAM. I hate to sound cynical, and I am taking the question seriously, but I do not recall an administration that did not play politics with issues such as this.

Mr. TURNER. Former Secretary of State Rice stated in December of 2010, “Nuclear weapons will be with us for a long time. After this treaty, our focus must be on stopping dangerous proliferators—not on further reductions in the U.S. and Russian strategic arsenals, which are really no threat to each other or to international stability.”

Was she right? Should President Obama follow her advice?

Ambassador GRAHAM. I do not think that the U.S. and Russia should retain large nuclear weapon arsenals which serve no purpose. I do not agree with former Secretary of State Rice on this.

Mr. TURNER. The Obama Nuclear Posture Review stated that progress toward disarmament by the United States will enhance its leadership position to deal with threats to its security:

“By reducing the role and numbers of U.S. nuclear weapons—meeting our NPT Article VI obligation to make progress toward nuclear disarmament—we can put ourselves in a much stronger position to persuade our NPT partners to join with us in adopting the measures needed to reinvigorate the non-proliferation regime and secure nuclear materials worldwide.” (2010 Nuclear Posture Review)

The question follows, has this policy worked?

Ambassador GRAHAM. Little progress has been made toward nuclear disarmament, and no decision has been made to reduce the U.S. stockpiles below the New START levels, so it is too early to determine whether this policy has worked. I strongly favor further reductions but not unilateral ones.

Mr. TURNER. North Korea continues to build nuclear weapons and ballistic missiles and the six party process is defunct, with North Korea walking away from its most recent deal in record time.

How has U.S. disarmament action through, for example, the New START treaty helped to deal with North Korea?

Ambassador GRAHAM. All of this happened between 2003 and 2009, before New START. It took place because the U.S. in the 2001–2003 timeframe did not pursue an agreement which was possible at the time to prevent the expansion of the North Korean arsenal. New START is unlikely to have an effect on this fait situation.

Mr. TURNER. Iran recently announced that it plans to build a nuclear navy and it may enrich nuclear fuel to as high as 90%, even talking about nuclear-powered oil tankers. Russia announced four days after the New START treaty entered into force that it would block further U.N. Security Council Resolutions.

Who precisely became more willing to help us adopt “the measures needed to reinvigorate the non-proliferation regime” to deal with Iran’s nuclear program because of the New START treaty or the NPR’s emphasis on reducing the roles and numbers of nuclear weapons?

Ambassador GRAHAM. The Nuclear Posture Review asserted that meeting our NPT Article VI commitments to reduce the role and numbers of nuclear weapons will put us in a stronger position, and it has. That did not and does not mean that Russia will automatically agree with us on sanctions. We now have a better relationship and that was all that was meant.

Mr. TURNER. The 2010 NPR announced the U.S. would not build new nuclear weapons. In that same time, Pakistan, India, Russia and China have all announced the deployment of new nuclear weapons capabilities.

What benefit did the U.S. get from the NPR decision constraining U.S. nuclear weapons development?

Ambassador GRAHAM. The NPR did not make decisions on U.S. nuclear weapon development. It announced a reduction in the role of nuclear weapons and supported meeting our NPT commitments. India and Pakistan are not NPT members so it did not affect them. Russia in 2010 did agree to New START which we wanted, China remains far behind the U.S. in numbers.

Mr. TURNER. The U.S. ceased underground nuclear testing in 1992. Yet, France, China, India, Pakistan, and North Korea all tested after that decision.

Why didn’t they follow our example, our moral leadership, and stop testing when we did?

Ambassador GRAHAM. France and China ceased testing in 1996. India and Pakistan tested in 1998 and have announced they will not test again so they did follow our moral leadership. North Korea does not follow anyone’s moral leadership.



Mr. TURNER. Libya announced it was giving up its weapons of mass destruction in 2007 as the Bush Administration was pressing for Congress to approve the Reliable Replacement Warhead and the Robust Nuclear Earth Penetrator.

Why didn't Libya choose to hang on to those capabilities in the face of U.S. efforts to develop new nuclear capabilities?

Ambassador GRAHAM. Libya announced it was giving up its WMD programs, nuclear and chemical in 2003. They made that decision in order to rejoin the world community; this was unrelated to anything that the U.S. did in its nuclear program.

Mr. TURNER. In 2007, the State Department's International Advisory Board released a report, "Discouraging a Cascade of Nuclear Weapons States." In that report, President Kennedy was quoted expressing a concern of his about nuclear proliferation following a classified briefing by his Secretary of Defense, Robert McNamara:

"I see the possibility in the 1970s of the President of the United States having to face a world in which 15 or 20 or 25 nations may have these weapons."

As we know, thankfully, that didn't come to pass.

Why?

Ambassador GRAHAM. President Kennedy repeated this concern in public at a news briefing in March of 1963. It didn't happen because of the entry into force of the NPT in 1970 and the associated extended deterrence policies of the U.S. and the Soviet Union.

Mr. TURNER. In 1968/69, the U.S. reached a high point of about 30,000 nuclear weapons. At that point there were five nuclear weapons states. The U.S. began reducing and the number of nuclear weapons states increased. For example, when the U.S. decreased to approximately 25,000 weapons, India went nuclear. At 10,000 weapons, Pakistan. At 7,000 weapons, North Korea. We're about to go below 5,000 weapons and Iran is about to go nuclear. What lessons should we draw from this trend?

Ambassador GRAHAM. No lesson should be drawn from this history. The United States, as long as nuclear weapons exist, should possess the number of nuclear weapons needed to deter the use of a nuclear weapon by anyone else. President George W. Bush ordered the number of nuclear weapons unilaterally reduced by 50 percent from roughly 10,000 to 5,000 because he concluded that was all that we needed. He was right to do this but it would have been better if it had been done pursuant to a treaty with Russia to bring them down as well. In 2010 the U.S. for the first time released the actual number of weapons in its nuclear weapon stockpile, around 5100. India probably has in the range of 100 to 120 nuclear weapons, Pakistan perhaps a few more. North Korea is estimated to possess 10-12 nuclear weapons and Iran, at present, has zero. Would anyone argue that 5100 weapons cannot deter 120 or 10-12? If the Department of Defense concludes that a somewhat lower total number than 5100 serves the interest of the U.S. Government better then we should move to that number.

Mr. TURNER. Do you agree China is in violation of Nuclear Suppliers Group requirements because of its support for Pakistan's nuclear reactor programs, specifically the Chasma 3 and 4 reactors it is building for Pakistan?

Ambassador GRAHAM. If China is transferring sensitive nuclear equipment or materials to Pakistan without the approval of the Nuclear Suppliers Group then it would be acting in violation of NSG rules. However this is a difficult case to make since the U.S. pressured the NSG to make such an exception for India just a few years ago.

Mr. TURNER. What steps should the U.S. take in response?

Ambassador GRAHAM. The U.S. should of course complain but our complaints will not persuade many because of our insistence a few years ago that an exception for this activity be given to India by the NSG.

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#### QUESTIONS SUBMITTED BY MS. SANCHEZ

Ms. SANCHEZ. Why does the continued viability of the NPT matter? What is the impact of the NPT unraveling?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Ms. SANCHEZ. Why would non-nuclear weapon states agree to give up forever their right to seek the acquisition of nuclear weapons?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Ms. SANCHEZ. We have no forward-deployed nuclear weapons in Northeast Asia and the presence of these weapons in NATO is becoming a more controversial issue within the Alliance. Given the cost of maintaining these weapons in excess of \$10

billion just for the life-extension program, are there other approaches to extended deterrence that would maintain a strong nuclear alliance?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Ms. SANCHEZ. Where did the current effort to reach the goal of global elimination of nuclear weapons come from, did it come from President Obama himself or is he following a bi-partisan policy first begun by President Ronald Reagan and now continued by former Secretary of State George Shultz?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Ms. SANCHEZ. Why does the continued viability of the NPT matter? What is the impact of the NPT unraveling?

Dr. SCHAKE. I think the NPT matters for two reasons. First, it provides the basis for IAEA inspections and U.N. Security Council action against violations by signatories to the Treaty. Second, it has established an international norm against proliferation by signatories that has been valuable.

The impact of it unraveling would be a much more difficult and likely less effective effort to constrain nuclear proliferation.

Ms. SANCHEZ. Why would non-nuclear weapon states agree to give up forever their right to seek the acquisition of nuclear weapons?

Dr. SCHAKE. The reasons vary among states, the most common being (a) they never had any plans to develop nuclear weapons in the first place; (b) confidence in security guarantees from reliable allies—the United States has actually been the most important discourager of capable countries crossing the threshold by extending our deterrent to their protection; and (c) the political and economic costs of proceeding against IAEA and U.N. sanction.

Ms. SANCHEZ. We have no forward-deployed nuclear weapons in Northeast Asia and the presence of these weapons in NATO is becoming a more controversial issue within the Alliance. Given the cost of maintaining these weapons in excess of \$10 billion just for the life-extension program, are there other approaches to extended deterrence that would maintain a strong nuclear alliance?

Dr. SCHAKE. I respectfully disagree with your statement that the presence of nuclear weapons in NATO is becoming more controversial. They are substantially less controversial than at almost any time in NATO's history—especially compared to anti-nuclear protests in Britain during the 1950s or Germany in the 1980s. Three times in the past few years NATO allies have reaffirmed the importance of nuclear weapons deployed in Europe and the benefits to the alliance of widespread participation in nuclear responsibilities.

There are a variety of ways allies seeking to maintain a strong nuclear alliance can do so, but I think the essential element is sharing in nuclear responsibilities. Deterrence gets brittle when the burden is not shared in ways allies consider equitable.

One reason forward stationing U.S. weapons in Europe matters so much, both to the U.S. and its allies, is that it shows potential adversaries that our European allies are willing to shoulder responsibilities, risks, and costs along with us. NATO allies have just reaffirmed again at the Chicago summit that we want our defense to be inseparable—no way for an aggressor to split the U.S. off from Europe. Not having the Alliance's nuclear deterrent stationed in Europe might tempt an aggressor to believe otherwise, and that would be dangerous for us all. So NATO allies recommitted our governments to a defense strategy and a nuclear posture that continues the existing force. Europeans are also very nervous just now about Russia's slide into authoritarianism and the Obama Administration's "pivot to Asia." Allied governments want to maintain the status quo in nuclear sharing because they're worried aggressors might believe the U.S. no longer cares about Europe's security. So now isn't a terrific time for the U.S. to make changes.

Ms. SANCHEZ. Where did the current effort to reach the goal of global elimination of nuclear weapons come from, did it come from President Obama himself or is he following a bi-partisan policy first begun by President Ronald Reagan and now continued by former Secretary of State George Shultz?

Dr. SCHAKE. As your question suggests, there is considerable continuity across presidential administrations aspiring toward a world without nuclear weapons; there is, however, also considerable continuity in their belief we do not live in that world yet.

Ms. SANCHEZ. Why does the continued viability of the NPT matter? What is the impact of the NPT unraveling?

Ambassador GRAHAM. The unraveling of the NPT would almost certainly have led eventually to that highly proliferated world which was President Kennedy's nightmare, 15–20 or more states with nuclear weapons integrated into their national arsenals. Only today, the number would be higher. The Director General of the International Atomic Energy Agency said in 2004 that over 40 nations now have the ca-

pability to build nuclear weapons. Proliferation on this scale would mean that every conflict would carry with the risk of going nuclear and it would be very difficult to keep nuclear weapons out of the hands of terrorist organizations they would be so widespread.

Ms. SANCHEZ. Why would non-nuclear weapon states agree to give up forever their right to seek the acquisition of nuclear weapons?

Ambassador GRAHAM. NPT non-nuclear weapon states, more than 180 countries, most of the world, agreed pursuant to a Basic Bargain established by the signing of the NPT in 1968 and its indefinite extension in 1995, that they would never acquire nuclear weapons, the most powerful weapons ever developed. The structure of the Basic Bargain is that most of the world agreed never to have nuclear weapons in exchange for the commitment of the NPT nuclear weapon states (the United States, the United Kingdom, Russia, France and China) to share peaceful nuclear technology as well as pursue nuclear disarmament negotiations aimed at the ultimate elimination of their nuclear weapon arsenals. In the interim, prior to achieving nuclear disarmament in the far off future the NPT nuclear weapon states are expected to take interim steps including: a comprehensive test ban; deep reductions in nuclear weapons; a fissile material cut off treaty; and a legally binding commitment not to use, or threaten to use, nuclear weapons against NPT non-nuclear weapon states in good standing.

Ms. SANCHEZ. We have no forward-deployed nuclear weapons in Northeast Asia and the presence of these weapons in NATO is becoming a more controversial issue within the Alliance. Given the cost of maintaining these weapons in excess of \$10 billion just for the life-extension program, are there other approaches to extended deterrence that would maintain a strong nuclear alliance?

Ambassador GRAHAM. U.S. land based forward-deployed nuclear weapons in Europe no longer have a role. They were deployed to offset the conventional force imbalance in favor of the Warsaw Pact during the Cold War. But it is NATO that now that has superiority.

However, these weapons should not be withdrawn without the consent of NATO and it would be good to withdraw them—should NATO consent—pursuant to a treaty with Russia withdrawing their tactical nuclear weapons from the European region.

Extended deterrence can be maintained by the presence of U.S. nuclear armed ballistic missile submarines off the coast of Europe.

Ms. SANCHEZ. Where did the current effort to reach the goal of global elimination of nuclear weapons come from, did it come from President Obama himself or is he following a bi-partisan policy first begun by President Ronald Reagan and now continued by former Secretary of State George Shultz?

Ambassador GRAHAM. The idea for the current effort came from the first Wall Street Journal article published in January, 2007 co-authored by former Secretary of State George Shultz, former Secretary of Defense Henry Kissinger, former Secretary of Defense, Bill Perry, and former Chairman of the Senate Armed Services Committee, Sam Nunn. In that article the four authors note that President Ronald Reagan called for the abolishment of “all nuclear weapons” which he considered to be “totally irrational, totally inhumane, good for nothing but killing, possibly destructive of life on earth and civilization.” And the four authors said in the article that “. . . unless urgent new actions are taken, the U.S. soon will be compelled to enter a new nuclear era that will be more precarious, psychologically disorienting, and economically even more costly than was Cold War deterrence.” In conclusion the four authors call for the achieving of “the goal of a world free of nuclear weapons”. President Obama followed this lead at Prague in 2009 and thereafter.

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#### QUESTIONS SUBMITTED BY MR. LANGEVIN

Mr. LANGEVIN. Do you think it would have been better to have New START and Russia's cooperation on not selling S-300 missiles to Iran, or would we be better off without New START and S-300 surface-to-air missiles in Iran?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. LANGEVIN. Do we have stronger multilateral sanctions on Iran now than we did in 2008? Has the U.S. contribution to the reset with Russia contributed to this effort?

Mr. RADEMAKER. [The information was not available at the time of printing.]

Mr. LANGEVIN. Do you think it would have been better to have New START and Russia's cooperation on not selling S-300 missiles to Iran, or would we be better off without New START and S-300 surface-to-air missiles in Iran?

Dr. SCHAKE. I believe Russia would have cancelled the S-300 missile sale to Iran whether or not there was a New START Treaty.

Mr. LANGEVIN. Do we have stronger multilateral sanctions on Iran now than we did in 2008? Has the U.S. contribution to the reset with Russia contributed to this effort?

Dr. SCHAKE. We do have stronger multilateral sanctions on Iran, but recall they were passed in the U.N. without the support of Turkey or Brazil, and achieved only by exempting most of Iran's main oil customer (Japan, South Korea, and China). The Russians made clear, just 4 days after the U.N. sanctions bill passed, that it was the last round they would vote in favor of. Turkey and India are overtly circumventing the sanctions, part of why the Iranians may believe they can endure even seemingly stronger sanctions.

The Iranians may also believe Europe's financial crisis will make the higher cost of sanctions unworkable. Europe's enforcement of EU sanctions have actually had a greater economic effect, and possibly even political effect, than the U.N. sanctions.

So I think it gives undue credit to the reset policy to suggest it made stronger sanctions possible. The credit actually should go more to Europe than to anything the U.S. did.

Mr. LANGEVIN. Do you think it would have been better to have New START and Russia's cooperation on not selling S-300 missiles to Iran, or would we be better off without New START and S-300 surface-to-air missiles in Iran?

Ambassador GRAHAM. It is of course far better to have New START and Russia's cooperation on not selling the effective air defense missile, the S-300, to Iran. New START brought Russia's arsenal—larger than ours—back under control and restored the START verification system of such great value to the U.S. If ever there was a win-win, this is it.

Mr. LANGEVIN. Do we have stronger multilateral sanctions on Iran now than we did in 2008? Has the U.S. contribution to the reset with Russia contributed to this effort?

Ambassador GRAHAM. The fourth round of sanctions on Iran was adopted by the United Nations Security Council in 2010; they made the grip of sanctions considerably tighter. They likely would not have been possible without the U.S. reset policy with Russia.

Mr. LANGEVIN. What are your recommendations as the United States prepares for the 2015 NPT Review conference? What can we expect and what can/should the United States bring to the table?

Ambassador GRAHAM. At the 2010 NPT Review Conference the NPT non-nuclear weapon states indicated that they would be much stronger in their demands for the implementation of the Basic Bargain in 2015. It is highly important that the U.S. ratify the CTBT before that date and also if at all possible make progress on a fissile material cut off treaty as well as a second round of New START negotiations.