NUCLEAR WEAPONS AFTER BUSH: PROSPECTS FOR ABOLITION

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A conference organized by Charles B. Strozier and Michael Flynn, along with Andrea Fatica and Hannah Baldwin.

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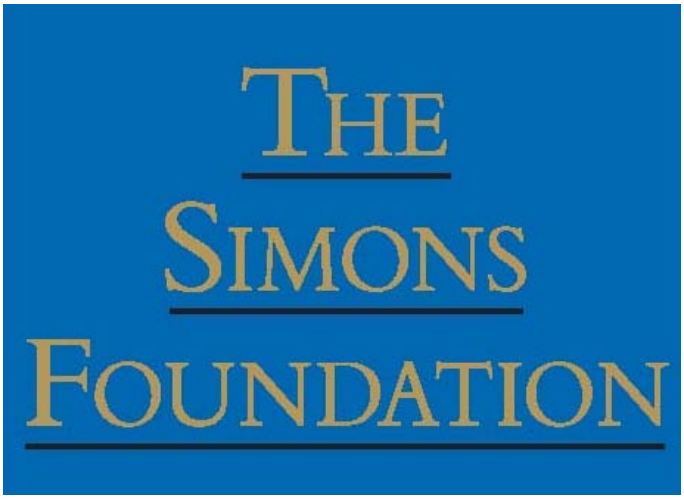

INTRODUCTION:
The History of Nuclear Weapons and the Prospects of Abolition

CHARLES STROZIER:

The Lifton Fellows Project started in 2000 with a conference on "The Second Nuclear Age." After that conference we developed a fellowship program that eventually became the Lifton fellows for younger scholars to teach new courses on nuclear weapons and nuclear issues from any point of view with the avowed activist goal of trying to spark a new anti-nuclear movement among young people in universities. There have been several rounds of fellows appointed, roughly 20 altogether now. It's been very gratifying to see this effort develop over the years in the context of the Bush Administration's grim nuclear policies.

This conference is very much in the hopeful spirit represented by the Lifton Fellows. It seems this is a propitious moment historically to think seriously about the abolition of nuclear weapons.

The conference is built around our three wise men: Richard Falk, Kai Erikson, and Robert Jay Lifton. Richard will be telling us where we've been, Kai where we are, and Robert where we're going. The three major themes in considering abolition are: (1) nuclear terrorism, proliferation, and security; (2) social and psychological issues; and (3) environmental issues, and historical antecedents. We organized these into six thematic sessions.

I was pleased when Robert Lifton first saw the program and he said that he hadn't seen such a concentration of brilliance on nuclear weapons since 1945.

Most of us in this room have been reading Richard Falk's 40 books for the last 40 years. No one has been more consistently profound on nuclear issues.

RICHARD FALK:

Thanks to the Center and to Chuck Strozier and Michael Flynn for bringing us together. I think it is an extremely good time to have such a gathering and I'm sort of humbled by the audience. I'm reminded of the joke about a guy who had lived a very ordinary life

but had saved a couple of people during a flood in his town. He found himself at the gates of heaven and was told by St. Peter that there was just one more thing he had to do and that was to give a lecture. The guy said: "Well, I've never given a real lecture and I have nothing really to talk about except the flood experience." And St. Peter replied, "Well go ahead and do that, that's really necessary, but remember that Noah's in the audience." I think I'm speaking to an audience of Noah's.

Let me begin by saying that I think as we meet today, there are three daunting realities that have been persistent throughout the nuclear age and to some extent have accumulated as time has passed. The first is a particular atmosphere of complacency that was one of the legacies of the ending of the Cold War. There was a sense, first, that nuclear weapons were not used throughout the Cold War, despite the intensity of the ideological conflict and despite the fact there were on the periphery of the global system a series of direct encounters that could have easily escalated and crossed the thresholds toward WW III. Both Korea and Vietnam contained threats to use nuclear weapons, mainly because the United States military dominance was unsuccessful with conventional weaponry in achieving its political goals. The nuclear weapons threat arguably contributed to the end of the Korean War and created a certain edge of uncertainty in the last stages of the Vietnam War. Apparently Kissinger twelve times mentioned the nuclear threat to his negotiating partner. That didn't deter the Nobel Prize Committee in Oslo from awarding Mr. Kissinger a Nobel Peace Prize.

There has been a certain sense that the anxieties about nuclear weapons was oversold from the beginning; that the kind of dire predictions of apocalyptic catastrophe never materialized for almost 64 years. The world has lived with the existence of a nuclear weapons arsenal without these weapons ever having been used. That has affected the public attitudes as well. People think there are many other problems that seem more tangibly challenging and for this reason, there's been a certain inattentiveness toward the nuclear weapons threat.

The second of these realities is that if one looks back at the Einstein-Russell manifesto of 1955, they mention that to address the challenge of nuclear weapons two kinds of political preconditions are needed. What is somewhat discouraging is that neither of them have been satisfied, despite this passage of time. The first precondition is that people have to learn to think in a new way, which is often a quote attributed to Einstein himself about how the atomic bomb changed everything except our way of thinking. To a substantial degree that is true. There is, at governmental levels, one significant adjustment in the way of thinking. Looking back on the Cold War, it is quite likely that a frustrated U.S., with its inability to translate its military power in the Korean and Vietnam wars into a victory, would have been much more willing to risk escalation in

order to get a favorable outcome. In other words, the existence of nuclear weapons and the threat of their possible use has created a certain geopolitical prudence on the part of policy makers, decision makers, and so on. That is part of the explanation for why no weapon, no atomic bomb, no nuclear weapon, has been used since 1945.

If what was meant in the Einstein-Russell manifesto is that we have to rethink the relationship between the security of a sovereign state and the use of military power, then I think indeed, nothing really has changed and there is no perceptible shift in a constructive direction. We had a regressive shift during the Bush presidency in the sense that it did embrace a certain visionary geopolitics that if challenged, could have produced this kind of catastrophic third world war. But there was no confrontation that actualized this excursion into visionary geopolitics that I associate with the neoconservative presidency of George W. Bush.

The other stress that is often given less emphasis in the Einstein-Russell manifesto is the need for a greatly strengthened sense of human solidarity. In other words, there must be a species identity rather than a national identity associated with the states' system. They say in the manifesto that what most impedes understanding more than anything else is the term "mankind," or "humanity." The terms feel vague and abstract. I think it's not an entirely accurate assessment to say that nothing with respect to human solidarity has altered in this period. I think that there was a certain human solidarity evident in the anti-apartheid struggle that really treated virtually the entire world as the symbolic battlefield on which to wage this war of legitimacy that eventually undermined the apartheid racist regime in South Africa.

I also think that the February 15th worldwide demonstrations against the onset of the Iraq War represented the first time, that I know about, where the entire global civil society as a totality was mobilized to demonstrate against the onset of this war in 60 countries, 800 cities, and it did represent something of a global expression of opposition and support for a UN-type framework of restraint on recourse to war. It obviously failed to deter the war, but it does represent an expression of this latent sense of human solidarity in the war-peace area. I would also mention the ongoing current global outpouring of protests against what is happening in Gaza as we speak. You wouldn't know it by reading newspapers, but there are large demonstrations throughout the world that again, I think, do two things. They express a sense of moral outrage about an attack with high technology weapons on an essentially defenseless society, and they are efforts to win the legitimacy war, what I call the second war, that may be the decisive war in the confrontation between Israel and the Palestinians.

If you look back, why did the U.S. lose the Vietnam War despite winning every military battle? Why were the Soviets defeated in Afghanistan? It was essentially because they couldn't win the Second War and people tend to underestimate the Second War. And to some extent, our meeting here, today, is an effort to support the legitimacy aspects of the Second War with respect to the existence of nuclear weapons.

Human solidarity was also strengthened by the rise of an international human rights movement, the establishment of the International Criminal Court, the revival of the Nuremberg idea that political and military leaders should be held accountable for their crimes even though they act in the name of sovereign states. All of these initiatives are partial and basically unsuccessful. But if one takes a longer view of the legitimacy struggle with respect to world order, they are significant events.

So I believe we have a collision of two opposing tendencies at this historical moment. But the negative part of the present historical situation is a new realization that a nuclear war or a war fought with nuclear weapons could be just over the horizon in two regional settings: One, the India-Pakistan continuing confrontation that has been reenergized by the Mumbai attacks, and the possibility that Iran is indeed seeking nuclear weapons and if indeed they are acquired or believed to be acquired, then the Israel-Iran-U.S. relationship could easily produce a regional nuclear encounter. So that represents one of the aspects of why we should be particularly concerned at this moment.

The other aspect of particular concern has to do with the post 9/11 fear that "loose nukes," will fall into the hands of non-state political extremists. The Bush presidency stressed this fear as the misleading basis of its Iraq intervention. But if in fact Iraq had had nuclear weapons and such and intervention had proceeded, it would have been quite likely that such weapons would have been used. So the structure of international politics is still very vulnerable to war fighting to prevent nuclear war or to prevent the use of nuclear weapons and that very act possibly being the provocation for their use.

In my view, more serious post 9/11 risk has to do with the unstable politics of Pakistan where it is quite possible that the Pakistani government could fall under the control of non-state extremist outlooks that are already, to some extent, represented within the Pakistani governmental structure. I think we should at least address this question of whether there is a particular reason to be concerned about Pakistan which is already, of course, a nuclear weapons state and has some very serious, unresolved grievances pertaining to Kashmir, to India and could, it seems to me, be a very threatening situation should the internal politics of Pakistan lead to the emergence of more extremist leadership.

Now let me try at least to make a gesture of deference to the historical evolution of these issues by saying that there have been three past moments of apparent opportunity to move strongly in the direction of abolition, and none of these have been significantly acted upon. The first, of course, is what I would call "the Hiroshima Moment," where there was this immediate shock effect that impacted the language, and I think the feelings, even of political leaders who talked briefly in the context of impending catastrophe, apocalyptic prospects, if the world didn't find a way to get rid of this weapon of mass destruction.

The Hiroshima moment gave rise to the controversial Baruch proposals for general, complete disarmament. The idea of general and complete disarmament was to some extent endorsed by both the Soviet Union and The United States at least up through the Kennedy presidency. But whether they were genuine political projects rather than gestures to a worried public is very unclear and is something that scholarly assessment hasn't yet entirely resolved. My own view is that, except for the very brief moment of trauma that followed the Hiroshima-Nagasaki events, the political leadership of the world resumed its traditional, geopolitical habits and behavior. As a result, this initial time of apparent opportunity never achieved anything very tangible.

The second moment of opportunity that I would call to our attention is what might be called "the summit moment," by which I'm referring to the Iceland meeting between Ronald Reagan and Mikhail Gorbachev in 1986 at Reykjavik, where it seemed that these two leaders, at least for a brief moment, were jointly dedicated to a process of complete nuclear disarmament, phased and verified, but leading to the abolition of nuclear weapons as a totality. But it was, again, soon evident that even leaders with strong public backing and in Gorbachev's case, leading an authoritarian political process, that that leadership was soon neutralized by governmental bureaucracies that were still imbued with what Robert Lifton and I have called "nuclearism," in our book, *Indefensible Weapons: The Political and Psychological Case Against Nuclearism* (NY: Basic Books, 1982) and which made Reagan appear as it was put, "unprepared," in his posture at Reykjavik. Reagan was attacked significantly not just by conservative Republicans, but also by mainstream Democrats. This nuclear establishment is a bipartisan reality and not just an expression of militarist tendencies or even just the military industrial complex.

The third moment of opportunity that I would call attention to is what might be called "The Berlin Wall moment," or the end of The Cold War collapse of the Soviet Union where it seemed that the dominating argument for nuclear weapons, which was the need to deter the opposing superpower and the inability to trust a disarming process because of the difficulties of verification and so on, that this created an ideal moment to propose and act upon nuclear disarmament and to seize the historical challenge by moving in such a

direction which would have been greeted with great support, I'm convinced, throughout the world. But the President at the time, the first Bush presidency, probably summarized its unwillingness to move toward when father Bush said, "don't ask me for the 'the vision thing,'" and this would have been, of course, the most natural component of the vision thing at the end of the Cold War in the early 1990's. And significantly again, the Clinton presidency ignored the opportunity in the 1990's and from the evidence that I know, encouraged Russia not to do anything about either proposing nuclear disarmament or getting rid of their own nuclear weapons.

We could live without Soviet socialism but we couldn't live without the Russian nuclear weapons arsenal because that gave some credibility to the retention and development of our own. Again, it's important to appreciate that this attachment to nuclear weapons is bipartisan, embedded in the governmental bureaucracy and very difficult to challenge effectively. Now we're coming to the new moment of opportunity, which is the Obama presidency combined with what might be called the realist appreciation that nuclear weapons no longer serve the national interest. And no lesser champion of nuclear abolition than Dr. Strangelove himself, Henry Kissinger, in combination with three former Secretaries of State, has proposed, for purely realist reasons, that nuclear weapons, because of their proliferation, now pose a greater threat to the United States than they provide an effective instrument of American power. Kissinger is particularly interesting because his whole reputation was initially made by proposing the tactical use of nuclear weapons as an effective Cold War instrument. In many ways he deserved the title of "the greatest, most influential champion of nuclearism," and he has now endorsed a process of total nuclear disarmament.

So we have arrived at this moment of what David Krieger and I described as "the nuclear precipice" where there is an unprecedented opportunity: the combination of this realist support combined with a growing anxiety about what might happen in these regional situations in the Middle East and South Asia, reinforced by a President who has, although somewhat ambiguously at times, endorsed the goal of abolition. All those elements lead us to believe that there is a fourth moment of opportunity that hasn't yet passed, arguably that is just beginning, but it does confront these old obstacles. The world is still divided into sovereign states with leaders that seem still to accept the political culture that they would rather risk destroying the world than losing a major war. That mentality persists, in my view.

There also persists an unwillingness or an inability to challenge militarism as the basis of American foreign policy. We continue to spend up to half what the whole world spends on this military machine that is only useful if it's wasted. As soon as it's used, it's disastrous, as in Iraq and probably in Afghanistan as well. There still exists the nuclear

weapons establishment and there still exists a bipartisan political consensus in Congress and in the media that's very reluctant to question any aspect of the militarist status quo. So, opportunity exists, but so does danger and so do the obstacles that have persisted throughout the entire nuclear age.

I suppose we're at a moment, again, where a new Einstein-Russell manifesto might be an appropriate gesture of persisting moral, political, and even spiritual concern and perhaps during the course the day, we might think of that possibility as a tangible effect of our meeting here together.

COMMENT:

A couple of things, Richard, regarding your last comment about a new Einstein-Russell manifesto. In my opinion, the reason that that was significant was Einstein's connections to the nuclear issue and Russell's reputation. My question is who's equivalent out there today? I would suggest that perhaps this Kissinger, Perry, Schultz, Nunn statement is, though it's not as attractive for sure. That has even a more dramatic effect on the possibility of transferring our thinking. Also, you mentioned that during the Clinton administration, Russia was asked not to sign its nuclear arsenal. Could you tell us more about that?

FALK:

I think your point is very well taken. It would be extraordinary hubris to pretend that this group or indeed anyone that has our kind of perspective could affect the public discourse the way Einstein and Russell were able to do. And I, as depressing as it is, accept the second aspect that the Kissinger, Perry, Schultz, Nunn, declaration is the closest thing we have, in a contemporary context, to that manifesto. Of course, now it's a year or so old, and one of the depressing aspects is that even the eminence of these establishment figures did very little to shake this nuclearist consensus. It's sort of hovering above the political debate, but as far as I can tell it hasn't penetrated very deeply into the political consciousness of the policy making community. It hasn't yet led to new initiatives and I'm not sure that it will.

COMMENT:

I really think the declaration shook up a lot of people who love nuclear weapons. I think it's an indication of a lot of movement in that direction, which necessarily has to be very, very slow.

FALK:

I hope you're right. The reason I'm not persuaded of that view is because about three months after the declaration I took part in a UCLA conference on these issues, with a group as prominent as this group is, but on the nuclear establishment side. They completely suppressed the relevance of the declaration. I tried to raise this issue at various points, but it was treated as if it was a marginal statement made by people like ourselves. As important as I think it is, I still need to be convinced that that's true.

COMMENT:

I noticed that your three moments are all dictated by the press, events from above that created these openings. I'm wondering if I could make a contribution and offer two more moments when the pressure of movements from below also created openings. One is 1963 when the negotiations and nuclear testing had the very powerful grassroots movement against nuclear testing. And two is the Nuclear Freeze Movement, the largest political protest in American history in this city. I also remember the UN disarmament session created an opening where this was on the table. We shouldn't forget those very powerful grassroots movements.

FALK:

I shouldn't have neglected these moments and movements because I certainly believe that these are examples of part of the legitimacy war in relation to nuclear weapons. I must admit, however, I always had a certain ambivalence about the Nuclear Freeze Movement because it wasn't anti-nuclear. The nuclear establishment could have lived with the nuclear freeze. I was always afraid that premature victory would be declared and the whole effort to eliminate nuclear weapons, which I feel is the indispensable effort, would be dismissed. I've often been criticized because I don't believe in the non-proliferation regime. I believe that perpetuates nuclearism rather than addresses the fundamental issues and is what I call "a mind game" that makes people believe that the real dangers come from countries that don't possess the weapons, rather than the ones that do possess the weapons. It's a very self-serving geopolitical rationalization for the retention of nuclear weapons rather than for their elimination.

Panel Session 1:
Nuclear Terrorism: Loose Nukes and Dirty Bombs

JAMES BORGARDT:

It is my pleasure to welcome you to the session on nuclear terrorism, loose nukes and dirty bombs. My name is Jim Borgardt and I'm an Associate Professor of Physics at Juniata College, one of the many liberal arts colleges in Pennsylvania. Over the past three years I've also served as chair of the Baker Advisory Board at my college, which has a big "Peace and Conflict Studies Program." With regards to my background, since 2002 I worked as a visiting research scientist at Hanford, Washington, at a national lab working on radiation portal monitors that had been stationed at border crossings and at ports of entry. Also I'm one of the former Lifton fellows in attendance at the conference.

On the panel is Charles Ferguson, who is the Philip D. Reed Senior Fellow at the Council on Foreign Relations. Charles specializes in analyzing nuclear energy, nonproliferation and prevention of nuclear terrorism. He's also an adjunct professor in security studies at Georgetown University. Michael Levi is the David M. Rubenstein Senior Fellow at the Council on Foreign Relations and Director of their program on energy security and climate change and Project Director of the Council's Independent Task Force on Climate Change.

Starting with a with a few remarks to frame the issues, it seems that any prospect for nuclear abolition is going to be intricately linked to preventing an act of nuclear terrorism, whether it's a radiological attack or a traditional fissile attack. Pursuing any effective measures to prevent an act of nuclear terrorism is a necessary, although not a sufficient condition for any conceivable hopes of a tangible progress towards abolition. Nuclear terrorism is often overstated in the press as a likely or probable possibility. Such ideas make nuclear terrorism to sound easier than it actually is. Even something like a gun-type device that uses highly enriched uranium, the type of fuel that was used in Hiroshima, while theoretically a relatively simple design, is in practice an enormously difficult undertaking. It presents great challenges in machining, in metallurgy, engineering, demolitions, and would require significant amounts of numerical modeling in things like neutron and transport and hydrodynamic effects, in addition to getting the fissile material itself. So there's a number of really daunting, technical challenges to the possibility of such nuclear terrorism.

Given that you might ask, "Well why do you worry about this type of thing?" I think that Graham Allison put it in terms that any risk that you have with an event is a product of two things: how easy it is to carry it out and the consequences of its success. While the prospects of carrying this out may arguably be low, the consequences of success would be world-changing, a seminal event in world history. That coupled with the fact that Al Qaeda has talked about attacking an American regime with nuclear weapons as a way of balancing the tables between the Islamic world and the U.S. for perceived injustices against the Islamic world and reports that there's been crude schematics recovered from caves in Afghanistan make abolition worth serious consideration.

Over the past decade, in my opinion, the U.S. has taken an inconsistent and selectively aggressive stance on nonproliferation and has done so in an inconsistent and often solitary manner that's been perceived as either disingenuous or arrogant by the international community in light of our own nuclear policy and actions. Although some progress has been made, it is not nearly enough, given the gravity and magnitude of the threat. The country needs to work fully to reduce the availability of loose nuclear material in Russia and prevent the means of producing new fissile material, and attack the political and economic problems of terrorism at its roots. Instead, we've withdrawn from the ABM treaty, become mired in Iraq, and we've seen North Korea and Iran advance their programs and work to diversify and expand their own nuclear capabilities and largely retain a Cold War posture in terms of our weapons.

The question remains: how do we impede those who would aspire to commit an act of nuclear terrorism? In my opinion, the strategic approach has to be consistent with the threat. The government has a tendency to fund projects that overly rely on one specific aspect regarding possible threats and by doing so they're putting a few too many eggs in one basket with, for example, the idea of border detection. The more steps you put into place to catch people, the more likely you're going to succeed in doing so. So we don't want to rely on one magic bullet, but must employ a layered approach that provides numerous opportunities to catch those who had planned such an attack. The good news is that I think we know how to do this, but our doing so depends largely on the political will and initiative to pursue nuclear abolition fully and aggressively.

Some of the widely proposed ideas to secure loose nukes and mitigate the threat of an attack have been, for instance, to have a nuclear tsar to oversee and report directly to the President upon all WMD threats, which includes locking down all the loose fissile material of Russia. There's been some progress made but I think that should be tackled more aggressively. Preventing a group from obtaining fissile material seriously reduces the ability to actually devise such a weapon. We need to lock down existing nuclear

weapons to a greater degree, not only in Russia and Pakistan, but also our own nuclear weapons. US policy needs to be reviewed and strengthened.

The US needs to prevent new nuclear states and work harder to get Iran and North Korea to renounce their programs, while continuing to work and negotiate with Russia to reduce nuclear stockpiles and take weapons off hair-trigger alert. It's also necessary to secure civilian nuclear sites, which includes converting nuclear reactors from operating on highly enriched uranium, which is a proliferation threat and provide the material for such an attack, to low-enriched uranium. A number of reactors have already been converted, but we need to complete this task. The US needs to eliminate and discourage the production of approaches to nuclear energy based on reprocessing and recycling of plutonium. Another crucial element that we do not rely on enough and need to develop is the use of human intelligence. In my opinion, we could make more inroads with utilizing well-developed human intelligence rather than relying solely on, and throwing money at, a technological fix. For example, training customs and border patrol agents to look for certain signs, to learn to inspect cargo to detect different types of threat. Each of these initiatives has its potential flaws, but this is why it's so critical to have a robust network that's inner-connected and layered so that the more trip wires there are, the lower the prospects for success and the greater the likelihood your going to catch someone who might engage in such an enterprise.

There is potential for promising movements on this front with the coming administration. Obama has a decent track record working with people to secure loose nuclear material. He's articulated this issue as a top foreign policy goal. He's worked with Senator Dick Luger to prevent smuggling and Chuck Hagel on proliferation issues and has talked about the desire to work towards abolition. Whether this pressing issue can be given the attention it deserves with the economy being in the state it's in remains to be seen.

Sustained and effective movement in preventing an act of nuclear terrorism is necessary to support any efforts towards nuclear abolition. A world without nuclear weapons has been pursued and the movement has made progress in one form or another since 1945. Richard Falk mentioned the initial 1945 efforts with the Brodie initiative and the Nuclear Nonproliferation Treaty, as well as Reagan and Gorbachev's efforts in 1986. I think there's the potential now for another sustained approach to rid the world of nuclear weapons with Obama coming in.

The weight of political circumstance and associated failure of imagination as to how to attack this issue signals that there has to be some kind of fundamental change in the way one views the problem in order to make real progress towards nuclear abolition. E.L. Doctorow wrote in the mid-1980's about how this issue composes our identity. He

essentially said that nuclear weapons first represented our weaponry, then our diplomacy, and now it's our economy. How can anything that's become so monstrously powerful, after 40 years, not compose our identity? I think part of the issue is the difficulty of disengaging a nuclear economy from the way that the U.S. views itself politically.

Historic examples provide precedence for issues on this front. In the 1940's, after Europe had been racked by a Second World War and numerous regional conflicts, John Monet, a Frenchmen, took the first step to create the European Union by forming the European Coal and Steel Initiative. The reason coal and steel were chosen is because those were what he called "the sinews of war." By getting an international effort of solidarity around those issues, he ushered in six years of relative peace and prosperity in Europe, and it became the E.U. I think that if one could come up with a similar, long-term concerted effort for phased nuclear abolition, coupled with the removal of the sinews of nuclear programs (namely uranium, poly-enriched uranium and weapons grade plutonium) by putting them under strict, verifiable, international controls, that would generate a movement towards not only a reduction of terrorism, but also as the basis for possible efforts towards abolition.

This effort would certainly require a sustained effort and long-term diplomacy to succeed. I think that an international, ideological agreement that works towards the effort of total abolition is, at this time, something that Robert Oppenheimer once called "organic necessity." I think that, at this moment in history these prospects are worth working towards.

CHARLES D. FERGUSON:

I too was a Lifton fellow two years back. It's an honor to have a fellowship, but especially because I've been reading Robert Lifton's books for many years. It's wonderful to be at this workshop and to talk about an issue that has occupied my thoughts, certainly since 9/11. When 9/11 occurred, I was working at the State Department and I was the backup action officer on the so-called dirty bomb threat. My boss, Warren Stern, was stuck in Armenia because the flights were cancelled. He got a call into me September 12th and he said, "Write a memo to Colin Powell about the threat of dirty bombs." So I used google to do my research and I found some interesting articles from "The Washington Post" and other unclassified sources and I wrote this memo that was a page and a half. My boss got back a couple days later from Armenia after I already sent the memo out to Secretary of State. He says, "OK, good memo, well written, but there's a problem here." I said, "Well, what's that Warren?" He said, "You should mark it down 'classified.' If you want to get the Secretary of State's attention you have to mark it 'secret.'" That was a lesson learned. Fortunately, this conference is totally

unclassified, so I think a lot of what James Borgardt, Michael Levi, and I are going to be talking about has already been written about. There's a pretty rich literature now. Both Michael and I have been privileged to contribute to the literature on nuclear terrorism studies. You don't need to have either an advanced degree or government clearance to understand or to know enough about it to make an informed decision.

Because this a conference dedicated to the issue of nuclear abolition, and even though I'm very supportive of that ultimate objective, I thought, "Well, I'll try to play devil's advocate." I don't want to give you the rosy picture that if somehow we can achieve nuclear disarmament, then ipso facto, you're going to prevent nuclear terrorism. I have to admit that I was under that misperception some years back before the so-called Four Statesmen Four Horsemen op-ed came out in "The Wall Street Journal," in 2007. I was at a conference that was hosted by this organization called, "The Fund for Peace." I thought maybe they're peaceniks, but they're not. They were getting the funding for that conference from The Pentagon. And so, silly me, I get up there and I give this speech talking about subjects related to Graham Allison's book about the nuclear terrorism, "The Ultimate Preventable Catastrophe." I said, "Maybe there's 100 percent solution to nuclear terrorism prevention through disarmament." I wrote a ten page paper and I got up there with my power point slides and I'm going through the argument and then The Fund for Peace people wanted to do a Q&A. They just hammered me. They said, "Oh, that's lunacy. We can't give up our nuclear weapons. That's so utopian." The only person who came to my defense was Steve Cohen of Brookings. He said, "Yeah, I like that idea." Then a few months later the op-ed came out and I thought, "Well, it's a little ahead of the curve, that group, but all big name like Kissinger, Perry, Nunn or Schultz," and so I dropped it.

I've been privileged to have been given the task at The Council on Foreign Relations to direct a task force study on nuclear weapons policy being chaired by Bill Perry, one of the four statesmen, and Brent Scowcroft, and Mike Levy who is also serving on the task force as an advisor. We are, hopefully, getting close to getting this task force report published by the end of next month which is still early in the new administration.

What has really motivated this new moment is the fear of nuclear terrorism. That's why we have a special session here on that topic. To play devil's advocate with that issue, let's assume we could achieve nuclear disarmament. One has to ask, "So what is nuclear disarmament? What does that involve? Will that put us in a place where we're free of the nuclear terrorism threat?" I don't think so. I think there's a lot more work we would have to do to get to that stage. I think what we need to do is to really look carefully into technical details of what are the various categories of fissile material being used in the world. It's not all in the military sector, but even in the military sector, there are many

required steps. Cutting up the weapon delivery systems, the missiles, the submarines, the bombers is still not enough. That won't alleviate the threat that some non-state actor may get their hands on fissile material and fashion an improvised nuclear device.

Then you have to take other steps. You must dismantle the warheads themselves and even that is not enough. You must find a way to put that fissile material, the high enriched uranium and geometrical plutonium, into forms that require a significant amount of effort to then fashion either a military nuclear weapon or an improvised nuclear device. Realistically, I think we haven't really gone far enough down that road.

We have a major program that's been very successful providing 10 percent of our electricity in the U.S. The program takes old, Russian nuclear warheads and then five hundred tons worth of "The Megatons, The Megawatts Program," and what's called "downblending," taking non-weapons useable material to make nuclear fuel. It's fueling one half of our nuclear power plants in the U.S., which is roughly 10 percent, one out of ten light bulbs, is electricity from old, Russian nuclear warheads. That really is turning a sword into a plowshare in some sense, and I think we can do much more of that. We haven't really heard enough of that in these last couple of years in the new movement to try to deal with the threat of nuclear terrorism. I think that's something we need to push harder on in our task force report.

Assuming you transform all the warheads into power that can't easily be turned into improvised nuclear devices, thereby dealing with the military sector, then you have a huge civilian sector to tackle. It would be necessary to rule out any civilian use of weapons-useable nuclear material. You need to think through how it would be possible to close off the material avenue to nuclear terrorism.

MICHAEL A. LEVI:

I'd be remiss not to recommend Charles' book with Bill Potter, [Charles B. Ferguson, William C. Potter, Amy Sands, Leonard S. Spector, & Fred L Wehling, *The Four Faces of Nuclear Terrorism*, (NY: Routledge, 2005)] that takes a comprehensive look not just at the mushroom cloud, but at dirty bombs and nuclear power plants and so on.

I'd like to be able to speak today about three basic areas. First, what's the danger? Second, what are the basic things we're going to or should do? Third, what does this have to do with nuclear abolition? On the first two I will talk from my most recent book. I'm not going to get in too deep because a lot of it echoes what was said in the first presentation.

First, what's the risk of nuclear terrorism? What's the danger of nuclear terrorism? You hear a lot of things out there, such as "there's 50% chance of an attack in the next 10 years." That's something that people say and have been repeating every year for more than 10 years. Also it is said that there's twenty percent chance annually, or indefinitely. I don't think you can put a number on this stuff. When I came out with this book I had this dilemma. The book kind of says nuclear terrorism is probably substantially less likely than you think or than you might have thought it was. You can't sell books that way. I was told, "You know, you can't just tell people not to worry. They're not going to pay any attention to you." I said, "But I want to be honest." So I went to a colleague who is really good at selling books, and I asked, "How do I sell these things?" He said, "If they asked you, what are the risks of nuclear terrorism?" You'd say, "They're much higher than I'd like them to be." Frankly, it's true. They are higher than they should be because there are a lot of sensible steps we are not taking that we could be taking to reduce the risk. Even if the odds of a mushroom cloud attack are relatively small, the consequences are potentially enormous.

Why do I think that the odds are relatively small? I get this estimate from two directions. The first is when you sort of go from bottom up, analytically. There are a lot of things that go into pulling off a nuclear terrorist attack. Its core piece is getting your hands on highly enriched uranium or plutonium material. But there are a lot of other pieces involved in an attack, and they all have to be fitted together into some kind of big, essentially criminal, enterprise that has to be kept secure and secret for probably a substantial amount of time. Each of those extra things may have a relatively high chance of success, but put together, there's a fairly substantial chance of failing. Ten steps where you only have a five percent chance of failing still gives you an almost 50-50 chance blowing it when it comes to pulling off the whole. I layer that probability together with the fact that the most capable terrorist groups, the ones that are the biggest candidates for actually being able to pull off these different steps, tend to be the most risk averse terrorist groups out there. They don't mind dying in a successful attack, but they do not like dying in a failed attack. They simply do not like failing. You can explain that in a variety of different ways. For instance, it's bad for recruiting if you fail. Some people have said that theologically they don't like it because failure is a judgment by God indicating they are personally a failure, and that's a big burden. Additionally, there's a sort of natural selection argument. You don't become a very capable terrorist group by constantly getting caught by law enforcement. So, you tend to stick to what you know as much as you can. The combination of moderate hurdles and high aversion to risk do make nuclear terrorism relatively unlikely. However, the consequences are potentially enormous, so we do worry about it.

The other argument asks: why haven't we seen anything really big when it comes to nuclear terrorism? It's not like we just haven't seen nuclear attacks, we haven't seen thefts of enough material to make nuclear weapons. To address this question, I will reference a friend and colleague Matt Barnard at Harvard. A couple of years ago he did this sort of analysis where you took step by step the process of making a nuclear bomb. He broke it down into pieces and put all these different odds in it, and miraculously came up with the same odds of a nuclear terrorist attack as a survey of experts said. If you have something that models a process like this step by step you should be able to also break things down and come up with other predictions. For instance, if this whole model is true, it should be able to tell what the odds are that there are going to be attacks that make it this far, as well as being able to tell how often is someone going to buy or borrow nuclear material, build a bomb, or get caught at the border. These models almost invariably will predict fairly substantial chances of these partial plots happening.

In order to get a decent chance of the full plot happening you probably have to have a decent chance of plots getting part way. Surprisingly, we don't see these plots that are getting part way. You have to ask yourself why is this is the case? There has been terrible security on a lot of nuclear materials in the former Soviet Union. This raises a similar kind of question, why is there still anything on the shelves there? It probably has something to do with the fact that the people who would be assigned to steal large amounts of stuff are thinking about the difficulty of pulling off an entire attack, not just a part of the material, and that there is a sort of risk-reward calculus that they engage in. They may have the base motives, but that doesn't mean that they don't think.

The next question is: what do we do? I think Grahams' book discusses the three basic "Knows" that are important, though I think the three "knows" are harder to achieve than he thinks. The three "Knows" include: first, try to lock everything up; second, try to prevent proliferation; and third, prevent the spread of nuclear field cycle facilities. I think those are the most important elements, but I don't think you can perfect them and I don't think they do the whole job because they can't be perfected. I think these aims need to be combined with much broader investments, both in broader nuclear specific investments like radiation detection at borders, but also things that have payoffs in multiple dimensions like better intelligence. To refer to the earlier example regarding customs guards, I'd rather have smart customs people who have the capability to do a simple search of someone's car if they see them acting nervous than for billions of dollars to be put into really massive radiation detection machines that might not actually work.

The reason I flag the sort of basics of what do we do is because I think it let's us make that bridge to think about the connection to nuclear abolition. Ask yourself, what does nuclear abolition have to do with these things that we say we need to accomplish? As a

general matter, I tend to think that the kind of near term steps that people talk about in moving toward nuclear abolition makes sense for reducing the odds of nuclear terrorism. But I, like Charles, think this a bit oversold. Charles covered the question: if you eliminated nuclear weapons, how much of the problem would you have dealt with? I want to talk about how the process of moving toward abolition intersects with nuclear terrorism because that's being a significant part of the argument. And I think it can cut in both directions.

Firstly, different elements of the abolition agenda have different levels of relevance to reducing the odds of nuclear terrorism. For example, the Comprehensive Test Ban Treaty, though a great thing that we should have, I don't know what it really does in terms of reducing the odds of nuclear terrorism. Frankly, one may suggest that every country should absolutely reduce the amount of fissile material they need to use in every weapon, so if someone gets their hand on the weapon and cannibalizes it, they won't have enough material for a simple bomb. I wouldn't make that argument as being a reason not to do the CTB, but these things do cut in multiple ways. A fissile material cutoff, I think, is substantially more relevant to dealing with nuclear terrorism. It reduces the amount of material that's out there, and if done with verification transparency it allows us to have a better sense of where the security problems are so we can start to deal with them.

The transition, physically, to smaller arsenals is also complicated. I think talking about the megatons to megawatts burden that Charles talked about is a great way to look at this. I just want to be serious about the risks and rewards. First thing, once you take stuff out of a warhead and put it as stored material, it's more vulnerable. Warheads are heavy and big, and I could count them more easily. I know if a warhead is missing. I need more sophisticated systems to know if material is missing. Second, bulk processing of nuclear materials is one of the most vulnerable places in the complex for diversion of theft. When one is taking these huge amounts of material and converting them into something new, there is a massive flow of highly enriched uranium with the real potential for diversion. One of the most challenging things in Russia when it comes to securing material is securing the material that is moving through this megatons to megawatts program from warheads to fuel. Again, it's a great program, but its intersection with prevention of nuclear terrorism is complex.

Last is the other part in the preventing of proliferation, the issue of locking material up. There are multiple schools of thought on this issue. There's one camp that actually says our nuclear weapons are what make other countries want to go nuclear. This school believes that if we really had massive reductions, North Korea and Iran wouldn't want to go nuclear. I don't think that that belief is fueling the argument, and I don't think it's a

particularly great argument. I think North Korea is motivated by the United States. Iran is motivated by the United States and they're motivated by U.S. conventional power, which will not change if you abolish nuclear weapons.

I think the more solid argument made by Perry and company, is that by making a strong move toward abolition, we can basically rally the troops. By reducing our arms we can help build broad support for stopping proliferation activities in states like North Korea and Iran. This argument suggests that people don't take our effort and our interest at doing these things seriously if we're not moving toward disarmament ourselves. Though I think there's some relationship there, I don't think we have a very good understanding of how strong that relationship is. If you were to poll foreign officials and people they will say, "Yes, there's this connection." But the question is in reality how strong is the connection? What is it that the French or British or Germans or the Chinese would be doing differently when it comes to Iran or North Korea if we were making much stronger steps toward abolition? It's not clear they'd be doing all that much different. Would Brazil be more enthusiastic? Perhaps. How much? Does that matter? I'm not really sure. Ultimately, there is a relationship, but I think there is a lot more interesting work to be done and this is one area where I have not seen actual, serious scholarly study trying to analyze the relationship is between moves toward disarmament and rallying people and countries to deal with nonproliferation. I think there's a lot of serious work that can be done, and it would help us clarify what the best form of an agenda moving to a world where far fewer nuclear weapons would be.

FERGUSON:

To comment on Michael's last point, which is really good, Rebecca Hersman has been doing a massive study over the last three or four years looking back over the last 60 years at various countries that had nuclear weapons programs. She looked at why did most of them roll back their nuclear weapons programs and found it was for a variety of reasons. She and her colleagues then polled a lot of experts and she wrote me and a bunch of others with a few questions. One of the questions she posed was if in the next five years the U.S. and Russia take a substantial cut in their arsenals, how will that affect others' calculations in terms of nonproliferation regime and their wanting or not wanting nuclear weapons.

I thought, "oh, that would be a good thing." I filled out my polling sheet saying, "Yes, everyone would like that, and that would actually strengthen the regime," and I'm sure the more hawkish people said, "No, no, no. That would be a bad thing." But, as Michael pointed out, who has actually done the research? Who's actually gone out and looked at

these countries and the decision making instead of just polling a bunch of American experts?

BORGARDT:

These are people who are trying to influence policy-making, so they're going to, at some level, tell you whatever it is they think is going to promote the kind of policy they like. As a scholarly issue, it's actually really tricky to get at this. It's not clear how you would address it. It may be more appropriate for experimental policy research.

COMMENT:

One of the things that one hears over and over again is that instructions for making nuclear bombs are available on the internet. Now, I haven't tracked that down to see if I could really find it and I wouldn't know what to do with the information if I did, but one of the things that I'm curious about that you touched on is what level of technical expertise would you need in order to make sense of these instructions and use them? Would a high school physics student be able to do it? Do you need a doctoral degree in physics? Who would really make use of them? Second, all of you talk primarily about the book's mushroom cloud scenario, but nobody mentions dirty bombs and what happens to the calculation of probability if we think about dirty bombs rather than a full scale Hiroshima like mushroom cloud device.

BORGARDT:

Regarding the first question, you often hear about the three graduate students were able to come up with the designs for a nuclear bomb just using the internet in the mid-90's. They didn't make the nuclear weapon, but they kind of designed one on paper. Doing something on paper, and doing something in actuality are two very, very different things. Saying the instructions for a nuclear bomb are out there, and saying you could build one are not one in the same. There's a lot of stuff on the internet, but actualizing it is a completely different endeavor. Also, there are a lot of things that are technical details that aren't on the internet. For example, how big the neutron transport that's going to make the difference between a successful bomb and non-successful bomb. And then there are all the mechanical things you do to make it. So, the stuff on the internet, frankly, doesn't worry me very much.

As for the next question, it's harder to get fissile material than it is just plain, radioactive material. This is one of the things that, in my work with the border patrol stuff, you run into a lot. One of the problems with these things is there's a lot of false alarms because ceramics are radioactive, as are smoke detectors, etc. There's a lot of good radiation out

there and it's a problem of how much do you stop at the border, and how strong of radioactive detection you want that to be. I'm always kind of concerned that you can go and get nuclear material for a dirty bomb, not for a nuclear bomb, domestically. It's fairly easy to get. There are a lot of cases where people found it just out in the open. I'm kind of curious if there's some kind of psychological deterrent that would prevent someone from doing that. We're all three trained physics and the three of us could not make a nuclear bomb, but I could make a dirty bomb.

LEVI:

Let me pick up on the first question. First, it's not on a linear scale regarding degree of achievement and the ability to build a nuclear weapon. Frankly, if I could make a rule that said that any terrorist group trying to pull off a nuclear terrorist attack can only employ people with PhD's in physics, I'm all for it because we'll never see a nuclear terrorist attack. The theorists for the most part don't quite understand a lot of the really nitty gritty stuff. That's hard and it's the kind of stuff that you don't just learn by reading. You have to learn by doing, and you don't get many chances to learn by doing when you're a terrorist group. So, I wrote about this stuff at length in my book and then in this sort of tongue in cheek USA Today Op Ed about a year ago. It's almost like the instructions for your VCR. You can read them, but understanding doesn't necessarily mean that a lot of people know how to put them into practice. Or my experience trying to fix my car using the manual, it's the same kind of thing.

FERGUSON:

I've also been quoted as saying that dirty bombs or radioactive weapons are inevitable. The question remains, why are we wrong? I teach this course at John's Hopkins on weapons of mass destruction technologies and I always pose the question to students: why haven't we seen this take place? It's so darn easy. I think goes back to the psychology of terrorist groups. And none of us are really true terrorist experts. You have to talk to people like Brian Jenkins or Jessica Stern to really get the idea of how terrorists think. I may be wrong, but a lot of these terrorists groups tend to be pretty conservative in their methods and if they're succeeding using improvised explosive devices, why do they need to use a weapon that is more complicated to obtain and use? I think that's kind of one part of the explanation of why we haven't seen this.

COMMENT:

I suspect that that is a significant part. I also think you have to break down dirty bombs with the different possibilities. There are dirty bombs where the amount of radiation is so

small that it is really meaningless. There's a wide range of possibilities where you're going to cause contamination above some technical, a legal threshold that, depending on how you manage the situation, which might freak a lot of people out. But the results are uncertain, not just for us but for someone who's going to put effort into pulling something like this off. They are uncertain about what the impact will be. The amount of material that really has large impact is quite vast. It could potentially cause devastation by doubling death from cancer by 1 in 10,000. Imagine if you don't decontaminate and you don't relocate, both very expensive things with wide impacts. That's territory where a terrorist would probably be pretty confident that they would have a big impact. The thing is that stuff is a lot harder to get your hands on than all of these intermediate things that are out there.

You're looking at a narrow window. You're looking at a narrow window because you go from unimportant to ambiguous to scary to I might be willing to die in the process of trying to pull off an attack, leaving me unable to pull off an attack because I'll be dead before I finish. If I'm trying to speculate on the section between the technical part and the psychological part, and there's way too little of people talking about these areas, I'd say that I suspect that in the part where we think they're going to do it because it's relatively straight forward, they may be saying, "I don't know what I'm going to get for this." And the part where they're saying, "I know what I'm going to get for this, people are saying, 'uhhh, that's hard.'"

COMMENT:

One of the misconceptions is the belief that a nuclear bomb itself is radioactive. In truth, the material is not highly radioactive. When they caught people smuggling, one of the head investigators came in, got the stuff in a Ziploc bag and put it in his pocket and said we could leave it here and we'd be fine. The radioactivity comes after you activate it. With a dirty bomb, the radiation is already there, it's on. If you want to make something that's going to be more heinous in terms of the level of radioactivity, you're going to die before you do it. It's like Chernobyl. If you get something less powerful, it's going to contaminate an area but mostly it is psychological havoc. Every year I take a group of students out to the Trinity site, and every year I have a parent call me and say, "Oh my God, you can't take my kid there, the radiation." Going to the Trinity site, you get less radiation than you'd get taking a cross country plane flight. The public just doesn't have an accurate conception because they're scared. That's the psychology.

COMMENT:

If a low level dirty bomb were to go off we would read the headlines in the press saying: "Nuclear Weapons Set off in the Middle of Chicago." The psychology of fear, even if the nuclear effect was absolutely minimal, the psychological effect in terms of how we think about terrorism would be dramatic.

COMMENT:

I think you're probably right, the question when we ask why we think things aren't happening is how confident are the other guys that that's how it would turn out? And there's actually a sort of careful balance to play. It's important to talk about those impacts so that people take preventive steps to make sure this doesn't happen. The last thing you want to do is convince terrorist groups that this really will be a high payoff investment. As I understand, there's substantial evidence that Al Qaeda wasn't particularly interested in biological weapons until we repeatedly told them how bloody scared we were. This is related to Brian Jenkins' thesis in his recent book. He says, "Al Qaeda has become the first nuclear terrorist power without having a singular nuclear bomb because they've made us terrified by talking about things related to nuclear things." We have to be careful.

COMMENT:

I agree with you the use of a dirty bomb being inevitable. It doesn't take rocket science to do it. It doesn't take a huge quantity and terrorism is usually about fear and sending a message and that would be a relatively simple way to do it. And, yes, there are risks involved with the amount you would need and the affect on the individuals who are planning to parent the operation, but I'm honestly surprised that post 9/11, nobody's attempted these devices.

FERGUSON:

Well, I think what we need to be doing is what a colleague of mine, Gary Ackerman, has suggested. Gary has his master's degree in terrorism communication and he's a very smart guy, originally from South Africa, now living in the U.S. He coined this concept of psychologically immunizing the public. If it's all been inevitable that a dirty bomb will sometime happen, then we need to prepare the public of what the three of us have been saying, in a very calm way, not pumping up the fear factor. Additionally we need to put enough effort into mitigation, training first responders, consequence management, as a crucial part of our defense. How do you strengthen these areas of our defenses that are somewhat neglected? If these areas are strengthened then maybe, hopefully, if terrorists really believe we have strong responses they may not take those avenues.

COMMENT:

I think also that terrorist groups have a vested interest in surviving. If they cross that radiological line, I imagine there would be a disproportionate response and using forensics we'd quickly find out who did it.

FERGUSON:

There's talk about the Chechen rebels who demonstrated as early as 1995 their capabilities. They placed a radioactive source in Ismailovsky Park in Moscow and called a TV crew there. They didn't detonate that radioactive material. Though we don't really know why, but my former boss, Bill Potter, thinks that it was enough for the Chechens to demonstrate capability, and they were afraid of the strong reaction from Moscow if they actually did detonate it. It gets into the particular political motivations of different groups.

COMMENT:

What about threats and state supported actors within Israel or the outskirts of Israel? What if Iran or Syria supports the Palestinians and Gaza? I'm not into thinking about a massive mushroom cloud bomb, but of actions beyond conventional warfare material. I don't think of Al Qaeda, I think of state actors.

FERGUSON:

Well, looking at Iran in particular, I haven't seen any credible evidence that even though Iran has been supporting Hamas and Hezbollah, they haven't been giving them chemical weapons, biological weapons, or radioactive materials.

LEVI:

I think there's an interesting tension because one of the obvious ways for terrorist groups to gain greater capabilities is to try to work with states but states tend to have political agendas, so with the greater capability, essentially, comes a restricted ability to actually use them. That relationship with the state tends to put some limits on the level of violence folks are willing to engage in. It may be possible that someone in the Iranian government might give something to a terrorist, but you can't talk about Iran as a single model. There are different players involved. Frankly, we're going to have really tough questions about how much do we isolate Iran and how much do we actually engage them

to try to minimize the sort of knock off effects? We took about 25-35 years to decide how to sort out that balance with India to try to limit the bad side effects of these things. Even if the sort of technical forensics are not there, if Hezbollah does something with unconventional weapons, we're going to have a fairly limited set of guesses as to who was responsible for that. And so that tends to restrict, to restrain.

BORGARDT:

There's been discussion regarding whether we can revive some dimensions of Cold War deterrence by making sure we can trace back attacks to state origins. Whether they're deliberate transfers of terrorist groups or the result of inadequate efforts to keep things secure. The question is can we say that if you don't do a good enough job keeping your stuff at home, we're going to hold you accountable?

Panel Session 2:
The Proliferation of Nuclear Weapons and the Question of Abolition

THOMAS E. REIFER:

My name is Tom Reifer. I am at the University of San Diego and the Transnational Institute and I am chairing this panel. I want to thank Bob Lifton and the conference providers both for giving me a Lifton fellowship and inviting me to this event. What we are going to do is give the four panelists about ten or fifteen minutes each. Then I will make a few remarks and then throw it open for discussion. I'm just planning to go in order that we have here.

This panel is called "The Proliferation of Nuclear Weapons and the Question of Abolition." The first speaker is Ervand Abrahamian, who is a CUNY distinguished professor, Department of History, Weissman School of Arts and Sciences, Baruch College, CUNY.

EVRAND ABRAHAMIAN:

I think one of the major legacies of the Bush administration is the inevitability that Iran is going to become nuclear. Not necessarily nuclear weapons but definitely nuclear capability. The administration has in a way put Iran on that track first with the "Axis of Evil" speech in 2002, then the constant talk of regime change since the year 2000, and then in 2003, the refusal to take up Iran's offer of a grand bargain, which could have actually prevented Iran going onto the track of becoming nuclear.

In 2009, Iran has, in fact, progressed so far in enrichment that it is just a question of time when it will have the capability of being able to build a bomb if it wants to. The talk is usually two to three years or maybe a bit later, but with the type of enrichment if they continue at the present rate, they will have enough materials to make bombs if they need to.

The good news, which has nothing to do with the Bush administration, is that Iran has always insisted that it's not interested in nuclear weapons. Its interest is in nuclear technology, nuclear science. It claims because partly because of energy, and I think even more so, because of the prestige involved in nuclear technology, to be considered part of the developed world you need to be at the cutting edge of science, and they see nuclear

science as that cutting edge. It has become much more, in Iran, a question of national prestige, that Iran will have nuclear technology.

Another good, optimistic reason why Iran is not necessarily going for nuclear weapons but nuclear technology is that it's not in Iran's interest actually to have a bomb. The important figures in the regime such as Hassan Rohani, who was the Khomeini's main nuclear negotiator with the Europeans for years, has made it quite clear that it would not only be against Iran's interest, it would undermine U.S. interests in the region if Iran actually had a nuclear weapon. There's good, rational thinking, it's not a question of being benign, but Iran having a nuclear weapon would scare the hell out of the neighbors, especially the Gulf States, Saudi Arabia. They would then take even more shelter under the U.S. umbrella, or then they would go into the nuclear business themselves, though this would then, in the long term, undermine Iranian interests in the region. If Iran's interests are to increase its influence in the region, then nuclear weapons are not going to help.

These are the arguments they have given, and there is no reason to doubt that. But that doesn't mean there aren't some people in the Iranian administration who would harbor the desire to have a bomb. They don't say that but just look at the attitudes and the psychology of someone like Ahmadinejad. He might be simple-minded enough to think that having a bomb, even if it's one or two, is going to counter-balance Israel's 200 bombs or the innumerable bombs the U.S. has. So there is that element in Iran that would be extremist and dangerous enough to think that it would be a good thing to go for a bomb. But I don't think those elements are really in the driver's seats and people around Khomeini, the Supreme Leader, like Hassan Rohani are much more moderate and down-to-earth, and their interest is not having a bomb.

What is their interest? I think that is where the question of the difference between capability and actually having the bomb comes into play. The devil's in the details. This is not a minor issue, it very much boils down to how to deal with Iran, which is what the rational policy of Iran would be. If one could put oneself in their shoes, I would presume what they're asking, and all the evidence seems to point that way, is that they have been working, basically, slowly, steadily, not in haste, to be able to have the capability of developing a bomb if they need to in any dire circumstances.

Why is this important? This really goes back to their experiences in the Iraqi War. For almost all the leaders in Iran, their most important experience was during the Iraqi War when Saddam Hussein unleashed weapons of mass destruction on Iran, and Iran did not have the ability to retaliate. Even worse than that, they thought the international community would be outraged by the weapons of mass destruction being used on Iran.

Instead they discovered that there was no outrage from the international community. Adding insult to injury the State Department spread out rumors that it was the Iranians who were using the weapons of mass destruction, and then when the Iranian casualties went to Europe for medical help, the U.S. were saying that the Iranians used it on their own troops in order to give bad publicity for Saddam Hussein. This is, of course, the time when U.S. was friendly with Saddam Hussein.

One lesson they have drawn from the Iraqi War is that in future you can't depend on world pressure, like the United Nations. You have to be self sufficient to protect national interests. But that doesn't necessarily mean that you have to have a bomb. What it does mean is you should be able to be capable of being able to produce a bomb if such circumstances arise. And who can guarantee that those circumstances can't arise. Of course, Saddam Hussein is not there, but he was there until 2002 and 2003. Iranians were worried, like the U.S., that he did have the bomb and, of course, they knew that he would be capable of using it.

Most of the leaders would have come to the conclusion that it would be in the national interests of Iran to actually develop the capability of having a bomb. What does that mean? You need the enrichment, you need the scientists, you need the delivery system too to be able to do it and this is all they have been working with. In the nuclear business, this is known as "The Japanese Option," that you can produce a bomb if you need to, but you don't produce it unless you have to. Actually, it's a misnomer calling it "Japanese Option." If some 30 different countries have it, it's not a big deal. It's a worrisome issue, but I think what is Iran's goal is implicitly to have that "Japanese option."

I was reading last night Sanger's book [David E. Sanger, *The Inheritance: The World Obama Confronts and the Challenges to American Power* (NY: Harmony, 2009)] that just came out. Some of the recent revelations have interesting information about the CIA's knowledge about Iran's program and why the intelligence report came to the conclusion that Iran had stopped its program of the delivery system in 2003. Until 2003, if the Iranians were convinced that Saddam Hussein did have the bomb, and he was still a danger, then they would have been working more at speed to have the capability. But in 2003, once Saddam Hussein was gone, and it was discovered that he had no weapons, then there was no urgency for that and that's when the U.S. intelligence report came out saying Iran had stopped the delivery program because there was no haste for it.

The question of enrichment is the core of the issue. They have been doing it for years at the slow rate they're going. The origins of enrichment go all the way to the 1970's when the Shah started it. It's not a recent program. It's over 30 years old. The Shah's

program, in fact, was much more dangerous and on a much grander scale, and the U.S. wasn't concerned about that for obvious reasons.

Now what can the U.S. do about it? There's a general consensus that there is no military solution. Even Sanger's book makes it clear that the Pentagon and the CIA didn't consider the military solution or any solution because all it would do would maybe slow the Iranian program, but then they would speed it up and you would end up eventually with Iranians actually having the bomb rather than just the capability.

The second reason a military solution wouldn't be an answer would be that Iran has "soft power" especially in Afghanistan and Iraq that would create a lot of problems for the U.S. That is a real threat for the U.S. especially with the new administration that is eager to get out of Iraq. The last thing they would want is the unraveling of the situation in Iraq.

The third argument is that greater sanctions should be used in order to stop Iran enrichment. I don't think that would work and the reason why is found in the Iranian history. For most Iranians, whether they're inside the regime or out, left or right, the most important event in the 20th Century was Mosaddeq's nationalization of the oil industry. At that time, there were sanctions that boycotted Iran. The Imperial Powers saw Iran as a "bad boy" because they had nationalized oil and there was basically an embargo on Iran until Iran gave up the nationalization.

Now, in that situation Mosaddeq is seen as the hero of Iran because he didn't submit to international imperial pressures. The Shah, of course, didn't as well, but the Shah is seen as a traitor in Iranian history. The present regime in Iran actually is in the shadow of Mossadeq. Mossadeq is the great national hero and they like to frame the present crisis very much in the context of the nationalization crisis. Even the imagery they use is that this is what happened to us in 1951. Mossadeq did not give in and we're not going to give in. So the more the West says, "we're going to put pressure on you –via sanctions," the more likely they will say "we can live with this. We will, in fact, be more intransigent if you use this type of colonial pressure." I don't think that method would work.

There is a solution if the U.S., meaning the new administration, is willing to step back from the Bush administration's position that enrichment has to stop before you can really do anything, to the position that enrichment is okay. In fact, according to the U.N., Iran has the right to enrich. According to the non-proliferation treaty, not the U.N. resolutions, you have the right to enrich. That enrichment continues, but there are enough safeguards in place to make sure the enrichment is not to the point that it viable for weapon

production and there are enough guarantees that it's not diverted from peaceful purposes to weapon-making.

The U.N. said that it is possible to put these safeguards in, but that this would not happen. This would then give the U.S. the assurance that Iran is not building bombs, but it would also give Iran the confidence that they have the capability of producing a bomb if dire situations arise because it will be under their control, it will be on their own soil. If a dire emergency situation arises, then they can actually choose "The Japanese Option." But it's not an imminent threat to the U.S. or a threat in terms of giving weapons to someone else because they do not have the actual weapons themselves.

Thanks very much. Our next speaker is Zia Mian: Research Scientist, Program on Science and Global Security, Woodrow Wilson School of Public and International Affairs at Princeton.

ZIA MIAN:

I want to think out loud about the question that's posed by the proliferation of nuclear weapons and the question of abolition.

I think we are in danger of getting too hung up on the weapons again, which is what we've done over and over again in the past in thinking about nuclear weapons. If you look at the literature, when we talk about proliferation, the reasons that people like Scott Sagan and others have given about why states acquire nuclear weapons, which are fairly convincing, have to do with possessing a sense of security, a sense of prestige, a sense of power in the international system and so on. In other words, they're about beliefs and expectations and structures of feeling that elites have about the way the world works. It's not really about nuclear weapons. It is actually these political and social-cultural sensibilities that are uppermost. The military and weapons element is not actually the end that is being pursued. You don't want a nuclear weapon because you want a nuclear weapon. You want a nuclear weapon for what a nuclear weapon means, or, at least, what you think it means in the world.

That leads me to a question about thinking in time. Because what things mean has to do with how you think about the world, and where you are in the world, and where the world's been and where you think it's going to go. In that sense, I think this is a particularly bad time for abolition. The Bush administration has given everybody a really harsh lesson in realism. Realists have proliferated, I think, a way of thinking about the world that great powers do whatever they want and that the international system is incapable really of constraining them. This crash course in realism over the past years,

has served to undo some of the gains that we had started to make after the end of the Cold War. There has been a slow move over the past sixty or so years towards an international system, which perhaps, had been thrown off course by the Cold War and the superpower confrontation.

There was a United Nations, there were some rules, there was some international law, there was some collective sensibility and collective process, and an understanding of humankind and its collective security problems. Also agreement on the processes by which we dealt with these kinds of things. I think that the last eight years have really shaken up many people's sense that this is an enduring possibility.

One lesson from the last few years that people take away is about the future. The future is going to be much more uncertain because you've seen what the present, for the last eight years, has been like. Two examples make my point: First, I remember people like Tom Schelling (who helped create arms control in the 1960s) arguing in the 1990s that the anti-ballistic missile (ABM) treaty was proof of the victory of arms control as an idea about how states organized their security. The fact that the U.S. and the Soviet Union had arrived at the ABM Treaty and that it had stayed in force for such a long time, even though it seemed so counter-intuitive, was proof of the victory of arms control as a way of thinking about the world. Well, it's gone. And no one is really talking about bringing it back. Walking away from the ABM Treaty, slowly by the Clinton administration and then the complete jettisoning of it by the Bush administration is, I think, evidence that there has been no doctrinal victory of arms control and collective security. Where the U.S. thought they needed arms control, they supported it. When the US didn't need it any more, arms control was abandoned. That raises the question that if you have other kinds of binding agreements that may appear to some interest to the US, how long will that interest last?

The second example, which is not just about the U.S. but about the international system more broadly, is the U.S.-India nuclear deal. The Indian nuclear test of 1974 came very soon after the establishment of the nuclear non-proliferation treaty, so in that sense, it was the first real test of how the nuclear non-proliferation treaty regime was going to deal with the problem. The nuclear suppliers group was set up to manage nuclear trade. They agreed on a set of rules about when and how they would sell nuclear technology, and those rules have basically lasted until now. Then the U.S. decided it wanted a new strategic relationship with India and it decided those rules need no longer apply. But because it was not just a bilateral, but a multilateral regime, the U.S. needed to convince all the other members of the nuclear suppliers group to go along. The nuclear suppliers group bought into this US-India agreement. The NSG works by consensus. Any one country could have said, "We will not accept this." Not one of them did so, for a variety

of their own reasons, such as each wanting a special relationship with India, or access to the emerging Indian market, or seeing India as a potential strategic player in Asia. Countries did not want to jeopardize their relationship with India. They also don't want to jeopardize their relationship with the U.S. The calculation was that if Washington wanted this badly enough, then why should you upset both Washington and India?

The lesson here is that not just great powers, but medium powers, are willing to abandon international rules and procedures that are somehow meant to be part of a collective security process. Both of those feed into an uncertainty about what the future may look like.

It's interesting that in the U.S., one of the arguments that the nuclear weapons labs are offering for why they need to have the capacity to keep designing nuclear weapons and building a few is this uncertain, vague, fear of the future. The British are more explicit than the Americans. They say: "We don't know what the future will be like, so we should have some nuclear weapons." The sense that we are in this transitional moment is fair. There is a larger sense that the old order and all the old ways of thinking are now so undermined by what's been happening in the past few years that some states think we're not going to give up nuclear options and others think we want to create nuclear options. I think that raises questions both about the proliferation of nuclear weapons and the question of abolition.

The focus, I think, needs to be not about the weapon as such, but the sense of aspiration and expectation and belief about the evolution of the world system.

This has implications for abolition. Some countries, like India, for example, have seen nuclear weapons as part of the costume that goes along with being a great power. In a world without nuclear weapons, what substitutes for the prestige of being a nuclear weapons state? This goes with the physical military capacity to blow up somebody's country and city. What fills in their social, psychological, and collective sense of, "We are a great power. We have nuclear weapons." What will be a substitute for that in the international system? How do states gain recognition in the eyes of others who were great powers? This is one of the British dilemmas and the French dilemmas; if you take their nuclear weapons away, they are just minor European powers. So what would substitute for that?

It's not clear to me whether the question of abolition requires finding an answer to this question. Does there have to be a mechanism in the international community to confer changes in status and to recognize changes in status as the international system

rebalances itself? How do you know the mighty have fallen and the new have risen? There has to be some token of this. What would those tokens be? It's a question.

Finally, I wanted to make an observation about the process of getting to where we are in thinking about nuclear weapons and abolition and the presumption that the coming of nuclear weapons changed lots of things. But as Richard Falk pointed out, and I agree with him, it actually didn't necessarily change all that much. If it didn't, then the going away of nuclear weapons isn't also going to change that much. If that's the case, then what's left? Do we see the nuclear age as a deviation in the course of the historical process where some states built these weapons, they got rid of them, and we're back to pre-1945? What does a "nuclear weapon free world" actually look like? Not in terms of does it make conventional war more likely, etc, which is what some people fear, but will we forever be at the stage of Einstein's letter to Roosevelt? "Oh, so and so might be able to build a bomb." The sense of instability that this implies is, I think, troubling. How do we learn to live in a world where countries have no weapons but are only be a few years away from some kind of capacity to reconstitute a nuclear weapon? To build nuclear weapons from scratch the first time when nobody knew what they were doing took basically three years. I think that's a question both about proliferation and abolition that we need to keep in mind.

THOMAS E. REIFER:

Thank you Zia. Our next speaker is George Perkovich: Director of the Non Proliferation Program at the Carnegie Endowment for International Peace

GEORGE PERKOVICH:

What I would try to do is to follow Zia in a way and talk about some elements of the connection between abolition and proliferation and to facilitate discussion. A question came to me: if no state had any nuclear weapons today, including Israel, would Iran give up its enrichment program? I think the answer is "No" because they would say, "No, it's a civilian program to which they have a right." I put in brackets that they actually lost that right by being non-compliant to the safeguards resolution and there's a superseding U.N. legally binding resolution, and we can go to that, but they would insist that they keep this program, and moreover, because it's civilian.

The rest of the world would look at that and see it as a clear threat for breakout from a world without nuclear weapons, given other aspects of Iranian policy and the nation's background. So, there would be an insistence, "Well, we can't live in that world without nuclear weapons." We'd have to have the circumstance where there are no national

facilities. So Iran couldn't have a national enrichment facility to which they may claim a right, but you would have to have a mechanism where all field cycle facilities would be multi-nationally owned, controlled and operated. But no country, or very few countries, would agree to move to that multi-national world without disarmament. And so, you get the circularity of this problem of disarmament, the civilian field cycle and proliferation, which, it seems, is very hard to break at any one point. Disarmament itself probably wouldn't break it; multi-national fuel cycles would be impossible without progress on non-proliferation and disarmament, and so forth.

Then the question arises, who goes first? How do you break this cycle and basically redesign the whole system which would have to be predicated on no nuclear weapons and no national field cycle facilities? My colleagues and I working on this Adelphi paper recently on nuclear disarmament, and a book we're publishing next month includes that paper plus 15 others, including one from Zia Mian, Jonathan Shell, and representatives from 13 other countries. The book will be available free, including online. Our thought was the breaking of the circularity, or the creating of a positive cycle, where you get disarmament, non-proliferation and multi-national management. To do that, weapon states and non-nuclear weapon states would have to walk together. You'd have to have progress on disarmament and strengthening of non-proliferation rules at the same time. Otherwise, everybody says, "Well, you go first."

We were soundly rejected in that view by just about everybody except Americans and Russians. What everybody else said, including the Chinese, the Indians, and others with nuclear weapons, was "No, No, No, the Americans and the Russians have to go way, way ahead and then we can talk about the others coming along." I've become convinced that the politics will be very interesting, and we'll begin to see movement, even on the CTBT ratification which, I think the Obama administration will pursue, and start pursuing this year with an eye to getting a vote in 2010. You'll see that a lot of centers will be saying, "OK. What are we going to get on non-proliferation if we do this and are we just giving it away?"

My own sense of how you break that, or how you accomplish that, does involve President Obama. A problem is that many things now involve the person of President Obama. It's absolutely literally impossible for him to do all this. Globally, foreign ministries are the place where progress goes to die on this set of issues. If you've ever dealt with the Egyptian Foreign Ministry, for example, on any of these issues, you may just want to smash your head against the wall within 20 minutes. And so, it will require the President going to heads of state and saying, "I am prepared, and I'm going to announce the following initiatives. We're giving big time. I'm participating in much deeper reductions, I'm pursuing ratification, I'm constricting the role of U.S. nuclear weapons,

I'll endorse abolition as a goal, but I need you, not to match me, but I need a couple of things." It's going to be head of state to state, or it's not going to happen. Because if it's done at the level of foreign ministry, they're all, including ours, trained to say no and trained to block any kind of progress.

By the way, this is George Schultz' main insight in the whole discussion about abolition. When you talk with him, he says this can't be done in foreign ministries, and in bureaucracies, and by diplomats. This requires the absolute top of the system saying "All right, we've got to deal" and then the word goes out and goes down and says it has to be done. What's interesting is that Schultz couldn't do that when he was Secretary of State, so he knows of which he speaks, but it's a real challenge. Let's assume that that happened and you started getting some movement on this linkage between disarmament and non-proliferation. I think here we run into an issue that's very hard for the disarmament community and the left to deal with, which is that the current, strongest argument against talking about nuclear abolition is the extended nuclear deterrent guarantee that the U.S. provides to Japan, South Korea, and its European allies. This is emphasized very strongly in the latest Schlesinger report to the Secretary of Defense. It is an amazing document, and goes out of its way to emphasize the need to maintain and strengthen the nuclear deterrent role in Europe. It talks about how we should go back and require every pilot be able to fly nuclear missions as well as conventional missions and decries the lack of attention to the nuclear mission in Europe.

I spent a lot of time in Europe the last few months talking at NATO and other places, and there are a lot of serious challenges. The Turks, for example, where there are a whole lot of other issues going on in terms of their identity, their place in foreign policy, their relationship to Europe, and so on, are very concerned about Iran's nuclear program. They also recognize that there's an argument for nuclear weapons, which goes to Zia's vital point about what are the measures of status and prowess and achievement in a world without nuclear weapons, seeing this as the apogee of modernity and power and so on. In Turkey, there's part of this discussion, too. Talking to Turkish diplomats in NATO, they say, "This isn't a good time to take nuclear weapons out of NATO because, then, it looks like we're being abandoned." Turkey has a very strong claim that they were abandoned or treated like the help or abused. In the first Iraq War, when they asked for a back-up under Article 5 or NATO, they were not given it. Then in the last Gulf War they also tried to invoke NATO because they were worried about reprisals from Iraq. The French wouldn't, and then the Germans blocked the movement of NATO aircraft down to Turkey. The Turks said, "Wait a minute." In comparison, the U.S. invoked article 5 after 9/11, and NATO right away said, "Right, we're all in. What do you need?" They strongly perceive the second class citizenship and the doubt about the viability of the NATO commitment if they're facing a nuclear Iran. They would see a withdrawal of

these weapons as a breaking of that bond. Now, that's a serious issue. And it's a non-proliferation issue which relates to disarming. You can't get to nuclear disarmament if Turkey's going the other way. So that's the really hard one to wrestle with.

In Japan it's the same thing. There's more and more concern in Japan, and I think some of it may be related to national malaise or a concern about China. The Japanese want nuclear disarmament and they're committed not to have nuclear weapons, but there's also a very strong call for maintaining nuclear deterrence. I think there are ways we can do that and we've done very badly in the last years in terms of diplomacy with bringing Japan into U.S. defense planning, and starting from the ground up and asking, "how do we assess the strategic environment in North East Asia? What are you worried about? What systems in China, what policies in China? How do we deal with those, together?" We should consider that it may be that nuclear deterrence is one of the answers, but maybe its not. With that we should propose that we figure it out together, rather than follow typical U.S. protocol where we go to Japan and say, "Here's how it's going to be. We like missile defense now. You want to buy some?" It's a different way of dealing with it.

The last nation to consider is Poland, which is a very valuable ally, especially for senators from Illinois. They also send forces wherever the U.S. goes. They're very important economically and in Europe there's a strong moral commitment based on the solidarity experience, and when you spend time in Poland, especially after the Georgia war, you see how the Poles are very concerned about Russia. It's one of the reasons they've asked for the missile defense to be in Poland. It's a trip wire. They want American soldiers in Poland, and as Churchill once said, "preferably dead," to make sure that the U.S. would then fight for them because, again, they doubt the viability of the NATO commitment. They want American forces, American hardware, there because they want an American commitment that if the Russians lean on them or otherwise, the U.S. will back them up. Russia has thousands of tactical nuclear weapons still unaccounted for. For the Poles, again, it is symbolic. The withdrawal of nuclear weapons from Europe, at this time, especially given the pressure that Russia's putting on Ukraine with the gas issue and what happened in Georgia, would cause lots of consternation in Poland, which then would play back in U.S. politics.

Again, I think it's soluble because when you look at it, nuclear weapons aren't a credible part of the deterrent of Russia for Poland. It's not credible, nor is missile defense. But we've avoided the discussion of what would be credible.

If you're in a room with Russian officials and Polish officials, it's a very uncomfortable experience. The Russians really treat them like the 16 year-old brother with the 5 year-

old brother that comes up and says, "Come on and play with me." "Go away, you little twerp." You watch it happen and somebody needs to get in and try to sort it out.

Another example and then I'll stop. Poland hasn't agreed to land mine convention or to ban land mines. Their military insists, "We have to have land mines all along that border because of Russia." The Polish Foreign Ministry would like to be part of the international community that does this, but as a security issue, it's a different world from the one that we're living in and nuclear weapons are implicated in ways than effect proliferation and other things. I'll stop by saying I think it's soluble, but it is a genuine problem that Obama's going to confront and the answer isn't going to be as easy as people might think. But he's really going to have to wrestle them. Thanks.

MARTIN J. SHERWIN:

It's hard to think what I can contribute that hasn't been said in these really excellent presentations, so I'm going to begin by commenting on what others have said. I'll start with George. It is true, I think, that the "heads of state" model is critical, but heads of state, certainly in the U.S., are not going to be able to do anything without public support. A public transformation of thinking, to pick up Zia's point, about the role of nuclear weapons for the U.S. is absolutely critical and that's why I mentioned in response to what Dick said, that I thought the Kissinger and company initiative of January 2007 is important as a validation from the nuclear establishment. That's point number one.

The second point is about the Turks and their argument that this is not a very good time to move away from the nuclear option, which I think was Zia's point too. I would respond to that by looking over the history of the Cold War, and the history of nuclear weapons and their relationship to the Cold War. There never was, from the point of view of those people who are responsible for national defense and committed to nuclear weapons, a good time, and there never will be a good time --from their point of view. I think that we, at least, have to recognize that there's what you might call a "political, cultural, military, diplomatic debate" that has to go on, and we have to win it in order to make "a good time." A good time will not emerge in some magical way from the ambiance of any particular moment. We are going to have to create it, and push it through, and the people on the other side will believe that we're making a mistake. But that's just the way it is, and it's the way it has to be.

I want to look back on the history of proliferation since 1945, comparing expectations with reality and see if we can pull some lessons from that history for our discussions. Nobody believed in the first decade of the nuclear age that we would get to the 1990s without a nuclear confrontation. Nobody believed we'd ever get to the end of the Cold

War except George Kennan. It was unthinkable back in the early 1950's that if we had a continuing nuclear arms race, that only six or seven powers in the world after 40 or 50 years would get nuclear weapons. Kennedy said the number would be something like 20 or 30. That wasn't just for public consumption. I think everybody really believed that. So, we have to ask the question, why has it been only 9? If we count South Africa, I guess 10.

In any case, why was it such a small number? The answer to that question is to ask yourself what were the barriers that prevented potential nuclear weapons states from getting those weapons? Then if we divide up the world during the Cold War into two categories: America's enemies and America's allies, and we look at who got nuclear weapons, it's very interesting. Of course, more than anything else, we wanted to prevent our enemies from getting nuclear weapons, and the two major enemies of the U.S. during the Cold War were Russia and China, who both got nuclear weapons very quickly, relatively speaking.

We also wanted to prevent our allies from getting nuclear weapons. We were not enthusiastic about Britain getting nuclear weapons, but they got them and we couldn't stop it. We were very resistant to the idea of France getting nuclear weapons and they got them and we couldn't stop it.

In other words, it looks like a very confused picture when you look over the history of the proliferation of nuclear weapons during the Cold War. On the one hand, there are very few nuclear weapons states compared to expectations. On the other hand, all these states that we didn't want to get them, including India and Pakistan, got them. There is absolutely no way that we are going to prevent other nuclear states that want these weapons from getting them in the future. And I think we understand that. And there are two key questions that have to be discussed.

Question one is: What can replace the imagined deterrent value of nuclear weapons? If we can't answer that question, which I think Zia originally raised, then I think we have no way of moving forward. Number two: What has prevented and what will prevent nations from getting nuclear weapons? It's a historical and analytical question, but it has to be answered. Larry Wittner in three volumes has answered the question as public opinion and I think that's absolutely critical, but are there other elements. I'm being warned that I have to stop, so I want to end with one idea that I myself consider a little crazy, but I think it needs to be on the table.

We keep talking about nuclear abolition versus the world we live in today. I think there's another option which is hardly ideal, but is a lot better than what we live with today. I

would call it "the option road to abolition." What about a world, an alternative world, in which no one had an arsenal of nuclear weapons, but everyone had the option to get them? This has been called "The Japan option." Would that be something that satisfied potential nuclear states and states that currently have nuclear weapons and don't want to give them up for reasons of imagined national security?

Finally, the last comment I'm going to make is that we've got to go back to the Acheson-Lilienthal report of February/March 1946. Not the Baruch plan, which was a disaster, but the Acheson-Lilienthal report, which is a very different kind of framework for the international control of atomic energy. It is really the best foundation for a world without arsenals of nuclear weapons.

REIFER:

Thank you very much. I just wanted to make a few comments and then throw it up for discussion. The thought that comes to mind as I listen to people is of Jonathan Schell's "The Gift of Time" and I want to talk about that in terms of opportunities. One thing to emphasize, as many people here know more than most people in the world, is the fact that we survived the super power Cold War confrontation. I say that specifically because I think the Cold War had many different facets, that being one of them. The fact that we survived, without exterminating the human species, is kind of a miracle. And most people, even those who are experts on nuclear weapons, are very ignorant of the real history of how close and how many times the world came to an end during that time. And, of course, one of the things that people are talking about here is the centrality of regional conflict and divided states in terms of the threat of nuclear war.

In this sense, one of the things that I think is a major watershed that we lived through in the 21st century is that the people who did most to highlight the threat of nuclear weapons have been George Bush and his administration. Of course, they highlighted it by talking about how "we can't let the world's most dangerous weapons get in the world's most dangerous hands, in the wrong hands." They were able to say that because of the widespread ignorance of what "the good hands" meant in terms of the nuclear age. I think that we have to write that off as a significant missed opportunity. The February 15, 2003 demonstrations were very important, but looming very centrally in that conflict was the whole question of nuclear abolition. I remind people of that because in the current issue and conflict around Iran, where we've seen a host of nuclear threats in the U.S. Presidential campaign and from Benny Morris in "The New York Times" about possible U.S. and Israeli use of nuclear weapons against Iran. Once again, we have the issue of nuclear conflict and regional conflict and abolition. It's very important for us to think what happened after the invasion of Iraq. People didn't find the WMD's, so it kind of

went away as an issue. That was a significant opportunity that people could have said, "look the larger issue here is the issue of nuclear weapons." In a certain sense, we used to talk in the movement about the deadly connection between intervention and nuclear war, and what we saw in the 21st century is a reversal of that. Now the prospect of a country getting or acquiring nuclear weapons is the basis to argue for intervention, and I think that's a significant shift that we have to talk about.

If you go to the regional conflict, think about the reaction in the press, especially in the U.S., to the conflict between Georgia and Russia and the divided states. There was an outpouring that this would have been solved if Georgia was part of NATO. One of the things we have to think about too is the degree to which many of the postures in the Cold War could come back in different ways and the degree to which it's important for people like us to be mobilized to really have input on these discussions and draw out the larger implications because we're talking about that in a world where people are very ignorant such things.

The final thing I want to mention is the centrality of the kind of U.S. posture. One very useful piece here is Jack Snyder's "Myths of Empire." The myths of empire were very central in terms of the notion of Iraq war. The idea that we have to preempt, we have to go first. Also, the myths of empire in the U.S. are also tied in with what Stuart Udall called "The Myths of August." We have both of those. Nuclear weapons win wars. Nuclear weapons end wars. If you look at kind of recent developments in the U.S., and I'm not trying to attribute it to a sole source, it's interesting how both the Committee for the Expansion of NATO and to Liberate Iraq was headed by Bruce Jackson who happened to be Vice President of Strategic Planning for Lockheed. When I look at it, it's not simply profit motives, but it's this inner section between kind of violence, profits, and power in the American century. One of the things that's important for us to do is, again, really go back to look at these situations, and to weigh in on the contemporary world. Dan Ellesberg wrote something recently where he said there was no post mortem on the Cold War. How did we conduct an intelligence assessment after an intelligence failure? People just kind of moved on. Yet, we're still in a world in which our past may be our future.

COMMENT:

I'd just like to pick up on a point that Marty made just very briefly in passing and you began to make, which is the assumption that nuclear deterrence worked. If you really look closely inside the government to look at some of these things, as well as outside, it is very hard to demonstrate how the nuclear threat effected anything positive, whether it be the end of WWII with Japan, or the end of the Korean War, whether it was the resolution

of the Cuban Missile Crisis, although the cause of the Cuban Missile Crisis clearly was nuclear, the resolution is very hard to trace.

Indeed, if you step back even further in history, was there ever a case where the threat to eliminate a city or it's actual execution affected anyone's behavior positively? It is very hard to trace through this, and I think, as historians to the extent that we are, we kind of dropped that ball, even though we do write about it. I do think if we're talking about changing public attitudes, we've got to get military guys and historians to go talk about whether the hell these weapons were ever useful. In closing, one of the most powerful experiences I ever had in my life was giving a talk to a number of very senior military people at West Point back in which I made the argument that we should take all our tactical nukes out of Europe and Korea, and Japan, because they were dangerous to us and utterly useless. I went into it in fine, technical detail. When it was over, I was greeted by two groups of people, one group of people who'd had nuclear command in the military, who said, "that was great, and you don't know the half of it," and a group of people, both civilian and military who'd never had nuclear command, who said, "what kind of crazy thing are you talking about?"

COMMENT:

One of the things I am hearing through all of this is the presumption that it's nuclear weapons that are the problem. One of the things I teach my students in proliferation class, is there's a taboo against nuclear weapons and then there's the U.S. enforcement of that taboo according to its own interests. We need to merge this idea with the notion that there are various reasons for states to want nukes, including the notion that Iran wants the capacity but not necessarily to have the weapons. Even if you get rid of them all, you still have the notion of trust and the fact that the U.S. has extra capacity and that enforcement of abolition is about intrusion, inspection, secrecy and a variety of different things. How do you separate the notion? How do you deal with the notion that even if you get rid of the weapons, you still have the fact that some states can look with more power and more secrecy to see who has it and how far they are away from getting it? The second, more concrete question was actually in response to George's comments about Russia and the Poles. I was at the Russian embassy the other day being up for Corporate Threat Reduction (CTR) and it occurred to me that the Obama administration's big step forward is to propose to the Russians to go ahead with that final Sort Treaty, the final push to a really low number. What I was told at the embassy was the Russians are ready to do that as long as we remove missile defense from Poland. So, the nuclear tradeoff the U.S. is going to have to face is: what do you do with the ambitions of Georgia, Ukraine, Poland and several other countries, and is it worth that to get lower numbers from the Russians?

COMMENT:

I want to pick up what you said about deterrence because I think deterrence, or your belief about deterrence is at the heart of what's going on and even if you look at the Kissinger, et al statement, they start by saying deterrence worked during the Cold War. I think they're wrong about that, but they think it doesn't work now because of terrorism. It seems to me that how individuals look at deterrence, how elites look at deterrence, is the argument that's going on now. It's necessary to realize that you can never prove that a negative is a causal when searching for a time when deterrence actually worked. Rather, evaluations of whether deterrence worked is totally wound up with belief systems.

On the U.S.-India deal, which you brought up, Zia, it still amazes me that the U.S. got China to go along with that. It seems it is not in China's interest to do that, but in a sense, it seems positive that if the U.S. would believe that abolition was in its interests, and would actually start to act on that proposition, that there is enough muscle in the U.S ability to manipulate the world that it could act in that way. You don't think so? I don't know. But it seems to me that that at least has to be the starting point for the U.S. to believe that abolition is in its interests and start moving in that direction.

With regard to Poland, George, I want to ask you: Isn't there a split between the elites in Poland and the people of Poland on that issue? I thought there had been public opinion polling that suggests that the people in Poland and the Czech Republic don't want missile defenses.

GEORGE PERKOVICH:

There are a bunch of different issues: there's missile defense, there's NATO, there's Russian nuclear weapons. The missile defense piece is a small piece of this.

COMMENT:

At any rate, I wonder if the people share in that. Nonetheless if they want to be protected by nuclear weapons, where that comes into the picture.

JOHN BURROUGHS:

I have a question for George. I can see why multi-nationalizing national enrichment or reprocessing facilities is necessary to go to zero. However, I don't really see, from an

objective point of view, why various steps on non-proliferation, from stopping further spread of these facilities or the additional protocol or other similar steps, are necessary for it to be possible to make progress on disarmament doctrines, de-alerting, reductions, the whole long list. It may be that it's not really necessary except in the minds of U.S. policymakers. That's an important fact, but aside from that, I don't really see the logic.

GEORGE PERKOVICH:

I think you're right, John. I think the additional protocol these various nonproliferation measures have, their non-existence, should in no way be an impediment to much deeper reductions and change in doctrine and all the things you can talk about. They're irrelevant in many ways, just like Iran's nuclear program should be irrelevant to whether the U.S. and Russia can go into the low hundreds. Where the issue comes up if you're thinking about zero, and you're thinking that the proposition is somehow being made to the U.S. or that the U.S. government is about to somehow commit to zero, then those issues of the strength of the nonproliferation regime become very important. There's a conflation that goes on and part of this is a reaction to SChultz, et al. By the way, I put Kissinger in brackets, because he's going around now saying he's having remorse about having done that (endorsed abolition). He has been undermining himself. In McCain's big speech on the subject he was going to say he endorsed no first use and U.S. reductions to 1,000; Kissinger took that language out of the speech. One of the interpretations of all this was made by General Chilton, among others, that what's called for is unilateral U.S. nuclear disarmament. Chilton is the head of the strategic command. In his testimony to the senate, he said that I want to have a world without nuclear weapons; I don't want my girls to grow up in a world with nuclear weapons. I want them to grow up in world where they can be free, but I'm not ready for unilateral nuclear disarmament. That was a direct answer to a question about the Schultz proposal, so it's when people hear that, the argument about all these other steps is necessary.

COMMENT:

I want to go back to some of the thinking that Zia started us off on because we're at a point now where all the old institutions are crumbling. We don't even know if we're going to wind up with capitalism, believe it or not. I think we really have to get out of the box. We're still talking very 20th century here. If we're going to get rid of nuclear weapons, we have to get rid of nuclear power. If you're going to try to control nuclear power, that's going to be another 64 years of trying to control nuclear weapons. You have a whole bunch of new countries going for nuclear power so that they can have their virtual bomb. There's a bunch of the Arab Emirates, and Syria, Morocco, Tunisia, Saudi Arabia, and Egypt that are all going for nuclear power. They have more sun, they could

power up their whole countries on solar energy, so it's not for energy. It's to have the technology, it's to be in the club, it's to have the virtual bomb. I met with the Mayor of Hiroshima when he was a member of Parliament, and he told me "We have the bomb. We can put it together in four weeks." That's what Iran will have if they proceed with their enrichment. We have to enlarge the frame, and really in our speaking, I think it will come up in other workshops, but we have to think about nuclear power. Even if it's benign, it's never benign. It causes all kind of illness in every community where there are nuclear power plants, there's more leukemia and cancer and birth defects. We can't talk about it like it's benign if it doesn't make bombs. We have to really start integrating that they are two sides of the same coin. You can't do one without the other. I don't think, George, that if we move together and get enrichment in one place, it will be ok. I don't think it will make a difference.

LAWRENCE WITTNER:

Flitting through all your presentations here is the relationship between the development of nuclear weapons and the proliferation of nuclear weapons, on the one hand, and the interests of the nation-state and its sense of national security, on the other hand. That is, nuclear weapons are part and parcel of the competition and the rivalry and hostility among nations and while Marty points out that what I've written tends to focus on public opinion and popular pressure against nuclear weapons and the restraint that's provided, the reality is that that pressure has gone only so far. Nation-states that have developed nuclear weapons have for the most part retained them. They've accepted certain limits, but they haven't been willing to have to get rid of nuclear weapons, which is the current situation. I think something finally has to be done in the realm of international security to make nations feel more secure if we are to move to that new and better day where there are no nuclear weapons.

COMMENT:

I wanted to respond to Leon a little bit. I think, unfortunately, there are, maybe mistakenly, leaders who see nuclear threats as having worked. Truman said he believed his '46 threat worked, although it's doubtful about that and even if he made it. And then there's Korea and Vietnam. I think one of the reasons the U.S. didn't use the bomb was because they feared a wider war. In fact, Johnson was very concerned that the North Vietnamese had secret agreements with the Chinese, that if they did various things the Chinese would invade, to which the Joint Chief's response was, "well then you use nuclear weapons." So two things: I do think there are instances where one could see that nuclear weapons have the effect of limiting wars, though they were vastly destructive at

the same time, and also, perhaps more importantly, leaders like Eisenhower and other people believed that their threats worked. Those are things that we have to deal with.

JIM CARROLL:

I want to just observe on this repeated note being struck on the significance of the Schultz, Nunn, Perry, Kissinger initiative and I think one of the victories that is the ground of our entire meeting today is that the word abolition is back in political discourse and they get some significant credit for that. It's also important, I'd like to observe, how much back it is. That has to do not with Kissinger or Nunn, but Schultz and Perry and their role in the story of how abolition disappeared from political discourse. Especially Perry, but remember Schultz did play that crucial role in underscoring Reagan's last minute ambivalence about the agreement he and Gorbachev were coming to. According to Schultz' own account, at the crucial moment when Gorbachev said, "you're killing our agreement," Reagan turned to Schultz and said, "Am I wrong?" and Schultz said, "No, you're not wrong." Reagan stood up and said, "This meeting is over." Schultz could have said, "Let's have an adjournment and consider this," Schultz was actually the person, by his own account, who killed the agreement to end nuclear weapons by the year 2000. For him to return to abolition, is a kind of act of repentance. Similarly with Perry, because Perry was the one who put it in the coffin with the Nuclear Posture Review in 1994 when he was the Secretary of Defense. It was the Clinton administration that killed the idea of moving toward abolition. In 1996, in rejecting that Nuclear Posture Review, I'm sure you remember an important but widely ignored National Academy of Science report that was chaired by three people, John Steinbrenner and General Lee Butler, and if you remember the third, it makes the point to where we are today. The third was John Holdren, who's a radical abolitionist. Holdren would not be the candidate for National Science Advisor today, if it weren't for the cover that he's being provided by Kissinger, Schultz, Perry and Nunn. Otherwise his advocacy of abolition throughout these years would be politically unconfirmable. He has to be confirmed and I believe because of the umbrella provided by Kissinger and Perry and Schultz. I think, properly, they've been lionized and made to feel like heroes. The National Academy of Arts and Sciences gave all four of them a medal six months ago. To reinforce what they did before they take it back, it was a brilliant move. Kissinger didn't show up. He was the only one of the four who didn't. It will be interesting to see if in Holdren's confirmation the issue of abolition even comes up. I haven't seen it observed. I haven't seen it as an issue. It says a lot about Obama that he would put Holdren in that position.

ABRAHAMIAN:

Zia was talking about the world hierarchy. To be in the club, you need to have nuclear weapons. That's how the international system seems to work. Obviously superpowers have an interest in keeping nuclear weapons. However, I think there's another factor that the elite in Iran has discovered, that bombs are a dot. It doesn't actually translate into political power. The image might be that the emperor has the claws, but in reality bombs don't give leaders that much power. Maybe the capacity to produce a bomb if you have to would be a deterrence but in the real world, having an arsenal of bombs is not going to actually give you any real power on political issues. You can give endless examples of where nuclear weapons haven't played a role, such as recently with Georgia. The Russians have weapons, but that didn't stop the nut in Tbilisi attacking Abkhazi. Obviously, he wasn't deterred by the Soviet nuclear power. I think Richard mentioned before that Kissinger kept mentioning nuclear weapons, talking to the North Vietnamese, and they called his bluff, basically. They said, "Make our day. Use the nuclear weapons." They knew perfectly well that this was something that could be used. I think education would be the best way to show people, particularly elites, that, in fact, weapons don't translate into power.

COMMENT:

I think you're absolutely right, but it's like convincing people that prayer doesn't work. I've tried. You try to say, "wait, there's not any evidence for this and it could be any other thing," and they say "No, no it had to work."

MIAN:

I didn't mean to create the impression that I think this is how states should or necessarily do think, but there's enough evidence that some elites have thought along these lines that this is part of, as I said, the costume of being a great power in the modern world. It's not about wanting to actually use them. When you look at the evolution of the nuclear program in India and then in Pakistan, they both had the option, and there was no need for them to test it and go through the security theater of detonating their nuclear weapons and showing themselves and the world that they actually could do this. But, they did it for whole variety of other reasons: domestic, political, international and this comes back to Marty Sherwin's point about living with options. In the case of Mrs. Gandhi and the Pakistani test in 1998, it was so wrapped up in domestic politics that it wasn't really seen as a geo-strategic issue or anything like that. In retrospect actually, it's really funny the way people now write about Benazir Bhutto. At the time of the nuclear tests, when the Prime Minister, Nawaz Sharif, was reluctant in thinking about testing, she had this famous rally where, in front of thousands of people she took her bangles off, threw them at the crowd, and said, "Give them to the Prime Minister. He should wear them because

a real man would test." That's how low it sinks. As long as the option is there, it becomes a tool in the political repertoire of domestic politics. This is my concern, regardless of the pros and cons of nuclear energy. It creates a proliferation noise because you start to worry what your neighbor is doing and they start to worry what their neighbor is doing, and so the process of actually doing inspections and monitoring is distracted by the noise in the system.

The other point that is worth keeping in mind in all of this is Sharon's point about the asymmetry and the capacity in a nuclear weapons free world. Not just a physical enforcement and the processes of decision making about enforcement, but actually about gathering the information necessary to make a decision.

COMMENT:

I'll try and be very quick. I want to look forward to the Einstein-Russell manifesto and figure out how we can get more allies. That seems to me the essential question. I've been working a lot on climate change in recent years. That's why some of you haven't seen me recently. We got to this point in Kyoto. For example, we got a treaty and we celebrated because we did an elite strategy. We worked with Clinton and we dragged Al Gore over there. We had not done our homework in terms of the grass roots, mobilizing and convincing the American public that this was a key issue. No one gave a damn. My point here is as we drag through the manifesto, I do think at that moment, the power of that original movement was linked to making nuclear weapons tangible, as an environmental health threat. The largest movement we have ever seen allowed mothers, children, physicians and others to understand that these things were real. We need to do that again. We need to show how nuclear power on up to proliferation and abolition is linked to human health communities. We need to reach out in drafting our manifesto and shaping this time to reframe it broader than just nuclear abolition, which we are all for, and associate it with climate change. We said, "Climate change, climate change, climate change." It had been known since the 1960's. There were environmental conferences even back then. Al Gore held hearings in 1981 and 1988. Why didn't it take off, what was wrong? We had to reframe the issue and appeal to new constituencies. One of our questions should be who are our new allies who will sign this manifesto? Our task is to draft the manifesto in ways that include environmental health movements.

SHERWIN:

I just had a very brief point about Poland and Churchill's comment. Next time you talk to the Poles, George, remind them about Lebanon and as soon as the 200+ Americans

were killed, Reagan withdrew the Americans and Somalia. It doesn't always work, and it's not a good idea.

Lunch Talk:
Kai Erikson: "Nuclear Power, Nuclear Waste, and Abolition"

CHARLES STROZIER:

When I first asked Kai, he demurred and was a little reluctant. He's been out of the nuclear loop for awhile and he thought he shouldn't present. I made my pitch and I said that everyone in the world is now turning to nuclear power as the answer for everything. Nuclear power produces nuclear waste which produces nuclear bombs and we don't know what to do with the waste itself let alone the problem of producing bombs and other bad things. It seemed to me that nobody has examined these issues more deeply than Kai Erikson. So, with that, he agreed to talk today on nuclear power, nuclear waste and abolition.

KAI ERIKSON:

I wanted to begin by just making two notes. First, I'm going to ask you to appreciate the dilemma of the luncheon speaker who's assignment is to speak to an audience that heard Richard Falk right after breakfast, and is going to hear Robert Lifton just before dinner. The second note has to do with the title that appears above my name in the program: "Nuclear Power, Nuclear Waste and Abolition." Everybody here has had the experience of composing a title weeks, and sometimes months, before sitting down to figure out what one is actually going say on that occasion. So Chuck Strozier and I sat down and came up with a title that would cover any conceptual or intellectual emergency and any inspiration that was likely to occur in the meantime.

I came to the meeting yesterday thinking that my title should be "Thinking Nuclear," but having learned what I did from Dick Falk this morning, using an expression that I guess came from Einstein, I now think a good title would be "Thinking in a New Way."

Now, there are quite a number of people here who have spent their lifetimes studying things nuclear, and I really haven't. This is not just shyness. But what I have done is to spend a fair amount of time studying four different episodes or moments or events that could serve as chapters in whatever the history of the nuclear age turns out to have been. None of them really address directly the kinds of things that we're talking about, but putting them together I'm hoping they might be telling in other ways. My experience of

the nuclear age is almost like circling around a building that I don't know how to enter, looking first into one window and then into another to see if I can't get a few glimpses into what the reality inside that building really is. I don't know if any of us have been in that building, but I know that I haven't.

Those four glimpses, those looks into the building, begin for me with the decision to drop the bomb on Hiroshima in 1945. I would then turn to the decision to dispose high level nuclear waste in underground vaults in Yucca Mountain, Nevada, in the 1970's and 1980's. And then the reaction of the people who lived in the shadows of the reactors at Three Mile Island when the near emergency occurred in 1979. And finally the effects of radioactive fall-out in a tiny atoll on the outer edges of the Marshall Islands, a story that begins in 1954 when there was an atomic blast on Bikini, but is not over yet and won't be over for as long as that island exists. I entered that story 50 years later when an effort was made to figure out what damages had been suffered by the people who lived there at that time.

There's no time really to relate those stories in the detail they deserve. These are essentially outlines, glimpses into that building. One could even call them "parables" in the sense that each one of them says something about the nuclear age.

The first of those fleeting glances is the decision on the part of the U.S. to detonate an atomic bomb over the city of Hiroshima in 1945. One of the longest books on that topic is called "The Decision to Drop the Bomb." I would say now that "decision" is exactly the wrong word to use in describing the thought processes that took place at that time. In 1944, when it was becoming evident that the atomic bomb would be ready for combat use (whatever that really meant), Roosevelt and Churchill met together at Hyde Park. They initialed an aide-memoire that noted among other things that this new weapon "might perhaps, after mature consideration, be used against the Japanese."

Whatever "mature consideration" was supposed to mean, very little of it actually went on during that process, at least on record. A consensus gathered in the councils of wartime Washington –a matter of momentum, of inertia. It was really like a snowball that gathered substance and size as it rolls downhill. As it gathered size, it gave the appearance that it had some logic to it, that there was motive behind it, that it had been set into motion by wise counsels of some kind or another. Oppenheimer said years later that "the decision was implicit in the project. I don't know whether it could have been stopped." What he meant by "the project" was that the minute the decision was made to set The Manhattan Project into motion, the outcome was more or less assured.

Truman remembered years later (being in the White House does this to you) that he had really been the decider in this all along. But I think that can serve as an example of people concluding that the past that they are trying to recollect is so untidy that they have got to find some thread of narrative in it that makes sense. For Truman, it made best sense for him to say that he had made this agonizing decision. But Marty Sherwin, as he usually does, put it just the way it ought to be, "Truman did not inherit the question, he inherited the answer."

What happened here, at least in part, is that the bomb had taken on a life of its own. It was a force almost like gravity. Its very existence supplied its meaning and its reason for being. The moment had long passed by the time we got into 1944-1945 for people to be able to make a judgment on the matter, have a reasonable discussion about it, and come to what in normal life we call "a decision." They were captives of that momentum quite early in the process.

Now everybody here knows that there were a number of alternatives considered at one time or another to the actual dropping of a bomb on a civilian population. I'm not going to review them now. All of them together were different ways of letting the Japanese High Command know that we had this fearful new weapon and we were ready to use it if we had to. Roosevelt, at about the same time as that aide-memoire I was describing, spoke to Vannevar Bush, a Senior Scientific Advisor to the White House. I don't know whether this is a quote from Bush or a quote from Roosevelt, but one of them asked the other whether the atomic bomb "should actually be used against the Japanese or should be used only as a threat." So the thought had been expressed, the idea had been floated.

I'm going to make two assertions here as I close this segment. The first is that "decision" really is much too crisp a term. This was true of the decision to build the bomb, and I think it's just as true of the decision to drop it. There were discussions in relatively high places, but did they involve people wise in the ways of statecraft? I would say rarely. Wise in the ways of warfare? I would say rarely again. Wise in the ways of Japanese culture and Japanese identity, which really did matter, because the whole point of this was to see whether or not the Japanese would understand the size of this force we had? I would guess never. I think it's a fair conclusion that the persons most often consulted on these matters were physicists. There are physicists here who will take no discomfort if I say that physicists may be the least qualified people on the face of this earth to discuss exactly those three things. But they were scientists, you understand, and scientists, you see, know.

The moral I want to draw from this story is not to ask whether it was a good idea to drop the bomb on civilians, but to note that this was a mighty sloppy way to start the nuclear

age if you're thinking about the logic that went into it. It makes one wonder whether the thing we were talking about then and the thing we're talking about now is so immense, so awesome, so overwhelming, that it's almost impossible to look at it in a measured way. This poses the question: how can we expect human beings to react in a moment of crisis when they have at their disposal a more destructive power, literally, then they know what to do with?

That was story number one. Here is story number two: The nuclear age was not very long under way when the problem presented itself of what to do with high level nuclear waste, which is the inevitable by-product of generating nuclear power. For about a decade, I think it's fair to say, the subject was just completely ignored by federal authorities on the theory that something good would come along and answer the question, and that it was more important to help the industry get under way. It became apparent by the later 1970's and the early 1980's that some kind of a plan had to be formed if only to encourage the further development of the nuclear industry, which, of course, the government had been sponsoring at a ferocious rate since the beginning. Congress declared that what was needed was a measure that would assure "permanent disposal" of the waste itself. I would say that both of those words, "permanent" and "disposal," are as suspicious as the word "decision" was in 1945. Dispose means to get rid of something, but the only way of doing so, with the dollars that were available, was to place it somewhere *on* or *in* the very earth you're living on yourself. It's an odd definition of riddance. And the adjective "permanent" is odd, too, if what you're talking about is disposing of something with a half life of 10,000 years or a good deal longer than that.

The plan was to store the wastes in underground vaults in Yucca Mountain, to seal the entrance of the tomb after it had been filled, and leave some kind of notice on the surface warning people who ventured by several thousand years later what was down there. The idea was that if the stuff was out of sight, it would be out of mind. But it's a very strange way of thinking if you see the earth as a living creature, as do the Native Americans who have lived on and around Yucca Mountain for centuries. What we're really talking about here is making an incision in the body of the earth, injecting the heaviest concentration of the most virulent poison that has ever been invented by humans somewhere down in that body, sew up the incision, and try to hide the scar as best as possible.

There are people here who know this story better than I do. Randel Hanson is one, so I'm going to be looking for nods from him. I hope he would agree that the process by which deep burial was selected as the logical disposal strategy involved no thoughtful decision, and that the process by which Yucca Mountain was chosen as the logical site did not involve any thoughtful decision-making either. Nor did mature consideration play much of a role in the earlier decision made by the government to devote all of the resources that

were necessary to the development of nuclear power at the expense of solar power and almost any other way of generating energy.

But that's not where I want to go with this. What I want, instead, is to focus on two questions that the nation in general, and Congress in particular, had to deal with when they were pondering the advisability of underground disposal. The first is a simple one: is it reasonable to suppose that geological formations can remain intact for the 10,000 years that those wastes would have to be entombed? That at least, is a way of thinking that geologists are familiar with. They know how to deal with spans of 10,000 years or more. Arguments among them on this topic are many and furious, but we need not go into them now.

I want to turn to the second question, which is on the verge of inane. Can human beings be counted on not to disturb these entombed wastes for the full term of their half-life of 10,000 years? A satisfactory answer to that question had been mandated by federal authority. Do we have sufficient reassurances that human beings will not interfere with those wastes, either on purpose or inadvertently, over the next one hundred centuries? A mighty question, one would think. But it was not one that the specialists seemed afraid of even slightly. They pondered the matter and concluded that there are no good reasons to suppose that human beings of the future would know how to get access to the wastes a thousand feet underground, nor would they have any particularly good reason to want to do so. And thus there are no valid reasons why we shouldn't proceed with the project itself.

This assessment comes as close to madness as anything I can imagine, but it was expressed in the cool, measured cadences of science. How is it possible to come to a conclusion like that for a rational people who are adept in the ways of modern science and are aware that they're anchored in a particular time and anchored in a particular place? Well, the way you do it is to hold the unknowable constant. Any new emergence that you cannot see coming is by definition a "surprise." You call it an "unanticipated event," you call it an "external perturbation." You may be forced to concede (these are actually quotes from the site characterization plan) "that the range of uncertainty is great," speaking of the next 10,000 years, or that, "the future conditions will be difficult to fully anticipate." No shit. But once you say those things, you may charge ahead. This normal science. What you cannot see a few feet in front of you can be dismissed.

We simply have to acknowledge the high likelihood –I'm just going to say the absolute certainty –that human thought processes will change and that human living arrangements are going to change and that human technologies are going to change in the space of 10,000 years. To call them "surprises" or "unanticipated events" is really to make a

mockery of language, it seems to me. What that does is to remove anything that might happen out of the equation and to allow the going ahead of projects worth billions of dollars to people who count.

Ultimately, "mature consideration" is hardly a phrase that describes very much of the thinking that went on here either. I can't see an alternative for us simply to say: "We do not know. In the very nature of things, we cannot know. And we dare not act as though we do know when we're talking about something as important as what to do with nuclear waste over a 10,000 year period of time." And I would then go back to the parable with which I ended my first story and repeat: it makes one wonder whether this thing is too immense, too awesome, too overwhelming to really look at in a measured way. How do people come to terms with a span of time opening up before them that the human mind can't even begin to comprehend or imagine.

The third story is Three Mile Island. The story itself could be told in a few succinct lines, and you know it anyway. But it was an accident that took place in Pennsylvania in 1975 when the nuclear age was a quarter of a century old. It involved some relatively minor equipment failures, some relatively minor human errors, and the escape of several puffs of radioactive steam. But it was also a moment of very real danger, a moment of real uncertainty, and a moment of real alarm for the people who caught up to it.

Now, we really don't have any idea how much radiation, if any, was really released during that accident. We don't really know how much physical harm, if any, was done, which means that the dread people experienced was almost pure dread, the very essence of dread. It wasn't a reaction to anything anybody could see or smell or hear. It was a reaction to something that took place inside. As the crisis came to its height, the governor of Pennsylvania issued a relatively calm and cautious advisory that pregnant women and children under five who lived within a five mile radius of the plant, might seriously consider evacuating to another place, and that everyone else who lived within ten miles should stay at home. Had that advisory been observed, 350 people would have left the shadows of the reactor. Instead, 150,000 people evacuated within a very short time. This was 45 persons for every one who had been advised to go. And they fled an average of one hundred miles. Specialists who know how to measure that kind of thing say that this is the widest imbalance between an evacuation order and the scale of the evacuation itself on the human record, and the longest average flight as a consequence of such an evacuation.

This was called "overreaction," and "irrationality." I have no real objection to those words, except that they avoid the main point at issue: why were people so afraid? You don't "overreact" and behave "irrationally" for no reason whatsoever. It turned out –a

whole new research industry came into being about this time –that human beings on the average are profoundly afraid of radioactivity in particular, and other forms of toxicity in general. Why should that be so? What calculations go into that kind of thinking? Why did the people of Three Mile Island feel so imperiled? It brings us back to new matters about the nuclear age, new ways of understanding, and new forms of logic. I called it "a new species of trouble" when I wrote about what happened at Three Mile Island and other places like it. It has something to do with the fact that radioactive events cannot take their proper place in the chronologies of history. We can say that the bomb was dropped in 1945 and that Three Mile Island took place in 1979, but those dates have very little meaning to the people who were caught up in it because, for them, the radioactive release, the radioactive exposure, continues to go on for as long as they live and perhaps longer than that. It moves its way into the tissues of the body, it moves its way into the imagination. The event is still ongoing from year to year, from decade to decade, and most horrifying of all, from generation to generation.

Another thing that people find very difficult to deal with is the fact that radioactivity and other forms of toxicity move stealthily into the interior of the body and then do their dark work from the inside out, which is exactly the opposite of what a bullet or a piece of shrapnel does. The decision to outlaw poisoned gas and not shrapnel is one based on the idea that the one process is somehow less moral than the other. Shrapnel kills many more people and can tear them to bits, but it works from the outside in. That's a way of thinking that needs to be brought into the equation somewhere.

So, to go back to this parable that I've been drawing in these other glimpses into the nuclear age: maybe this thing is too immense, too awesome, and too overwhelming to look at in measured ways and in the ways which most of us have been taught to call "reason." This topic requires a kind of a recognition that falls outside the conventional ways of reckoning things.

The fourth story is about an above-ground test that produced an atomic blast on the island of Bikini in 1954 and by some strange behavior of the wind patterns was carried like the trajectory of a gun barrel three hundred miles downstream to an island called Utrik where 200 people lived.

Now, the people of Utrik had never heard of atomic weaponry and they didn't know that Bikini existed. They knew nothing of such things, and suddenly this radioactive dust settles over their lives, settles into them. It takes them a long time to get even a vague medical sense of what had happened, and the Americans treated them, literally, like infected cattle. I went there fifty years later to interview the survivors and found a people who were as convinced as they could possibly be that they, themselves, were

contaminated from bottom to top. They were as sure as they could be that the land they walked on was contaminated, the air they breathed was contaminated, the water they cooked in was contaminated, the food they ate was contaminated, the milk the mothers gave their children was contaminated. They said gently to infants at the breast: "I'm sorry, child, to have to give you poison, but it's all I've got."

To go further than that, I would need to describe how the ways of the old Marshallese culture were voided by this event. It was almost as if they suddenly had no more nutrient value, no more restorative value, no more protective value. It was almost as if what we call "culture" had disappeared in the sheer volume and the size of this thing that had happened to them. They are now a people who doubt that nature is reliable and know it can be full of malice. They doubt that human institutions have their best interests at heart. They doubt that they can trust anybody. It's a different way of living life. I won't say they are without culture, but I will say they are without many of the comforts and the insulations that a culture often supplies.

The social and behavioral sciences really need a new vocabulary and a new way of conceptualizing the life process to capture what goes on in places like Utrik. The people are depressed, but depression doesn't even begin to describe it. They're traumatized, but that does not do it either. These states of mind have worked their way into a new cosmology, a new world view, a new kind of spiritual outlook to cope with an immense, improbable reality.

I've just moved into Robert Jay Lifton territory. I've actually been in that territory for half an hour. In fact, I've been in that territory for half a lifetime. We all know that territory, so I'm just going to stop. There will be no closure to this.

But as I do, let me repeat what I said about the difficulties that other people face in finding a language to express what they're thinking, an image to depict what they're envisioning, a logic to explain what they're experiencing, or a conceptualization to help come to terms with the sheer horror of things nuclear. It is just as hard for us to find a language in which to speak of abolition as it is for others to speak about other aspects of nuclear power. But, we may have an answer. I think it would go something like this: To know that we don't know may be the greatest wisdom of all. That wisdom would strongly suggest, it seems to me, that we be very afraid, and very cautious about moving into mental territories which we find so hard to come to terms with. That may be as good an argument for abolition as can be made at this time. To know our limits is to know something very important.

Panel Session 3:
Historical Antecedents and the Question of Abolition

PETER J. KUZNICK:

I want to talk briefly about some of the insights I've drawn from several articles I've written this past year and a half and the documentary film series that Oliver Stone and I are writing and touch on some themes that emphasize both the immense challenges those of us committed to ending the nuclear threat face and some possible ways to approach them. I'm going to deal with why knowledge of the consequences of nuclear war – potential complete annihilation- hasn't either deterred policymakers from accumulating and using nuclear weapons or inspired the public to demand their abolition. The talk will deal with the limitations of fear as a motivator. It will focus largely on the 1945-1960 period, but will also touch upon how the recent reduction of nuclear fear may hinder our efforts.

I want to start with the Russell-Einstein Manifesto of 1955, which laid out the problem in the simplest, most urgent, terms. It read: "We are speaking on this occasion not as members of this or that nation, continent, or creed, but as human beings, members of the species Man, whose continued existence is in doubt." They expressed concern that most people still think in terms of the "obliteration of cities." Demolition of cities in an H-bomb war, they warned, "is one of the minor disasters that would have to be faced. If everybody in London, New York, and Moscow were exterminated, the world might, in the course of a few centuries, recover from the blow." But now, with the capability of building bombs 2500 times that used on Hiroshima and the new knowledge of the widespread dispersal of "lethal radioactive particles," "the best authorities are unanimous in saying that a war with H-bombs might possibly put an end to the human race. It is feared that if many H-bombs are used there will be universal death, sudden only for a minority, but for the majority a slow torture of disease and disintegration." The signers asked, "Shall we put an end to the human race or shall mankind renounce war?" They concluded with the words "We appeal as human beings to human beings: Remember your humanity, and forget the rest. If you can do so, the way lies open to a new Paradise; if you cannot, there lies before you the risk of universal death." It was signed by 11 of the world's most prominent scientists, 9 of whom were Nobel Laureates.

Why have such dire warnings had so little influence on the behavior of either American leaders or the American people. While critics have been horrified that government

officials would pursue policies they believed represented a recklessness beyond imagining, most Americans paid little attention as they went about their daily routines.

Many Manhattan Project scientists understood the nightmarish future that lay ahead if they succeeded. They knew that the primitive atomic bombs they were producing in this war would likely be superseded by far more powerful ones in the future. Physicist Edward Teller consistently maintained that the real goal should be production of a hydrogen or "super" bomb hundreds or thousands of times more powerful. At the May 31, 1945 meeting of the Interim Committee, Robert Oppenheimer estimated the first bombs would have an explosive force of 2,000 to 20,000 tons of TNT; the second stage would be 50,000 to 100,000 tons, and the third, which might be ready in three years, would have an explosive force ranging from 10,000,000 to 100,000,000 tons. In other words, those attending, including Secretary of War Henry Stimson, Gen. Leslie Groves, Gen. George Marshall, and soon-to-be Secretary of State James Byrnes, heard Oppenheimer predict that the U.S. would soon have bombs thousands of times more powerful than the bomb about to be dropped on Hiroshima.

Byrnes, who would greatly influence Truman's early decision-making, already understood the enormous power the U.S. was about to unleash and made sure that Truman did as well. He rushed to Washington on April 13, 1945, Truman's first full day in office, and provided Truman his first real information about the bomb. Stimson's passing mention the night before after an emergency Cabinet meeting was, astonishingly, the first that Truman knew of the project. In his memoirs, Truman reported that Byrnes explained that the U.S. was building an explosive "great enough to destroy the whole world." Stimson and Groves reiterated that message when they gave Truman a much more comprehensive briefing on April 25, 1945. Stimson warned that "modern civilization might be completely destroyed" by atomic bombs and that decisions about the use and subsequent control over these weapons would determine the future of mankind. Truman remembered Stimson's indecision about the U.S. even using such a bomb "because he was afraid it was so powerful that it could end up destroying the whole world." After listening to Stimson and Groves and reading Groves' accompanying memo, Truman admitted that he "felt the same fear."

Although he behaved as if the bomb were simply a more powerful weapon whose combat use was preordained, Truman continued to express his understanding that it was nothing of the sort. At Potsdam on July 25, 1945, after Stimson delivered a detailed briefing on the enormous power of the Trinity test, Truman wrote in his diary that the bomb "may be the fire destruction prophesied in the Euphrates Valley Era, after Noah and his fabulous Ark."

Given Truman's understanding of the potential apocalyptic horrors he was unleashing, his use of atomic bombs, when there were other options for ending the war, becomes even more indefensible. Indicative of the fact that other means existed to induce the Japanese surrender, six of America's seven five-star generals and admirals who earned their final star during the war are on recording saying either that the atomic bombings were morally indefensible or militarily unnecessary.

Many Manhattan Project scientists signed petitions in an effort to persuade Truman not to use the bomb against Japan. Leo Szilard drafted a petition, signed by 155 Manhattan Project scientists, which warned: "The atomic bombs at our disposal represent only the first step in this direction, and there is almost no limit to the destructive power which will become available in the course of their future development. Thus a nation which sets the precedent of using these newly liberated forces of nature for the purposes of destruction may have to bear the responsibility of opening the door to an era of devastation on an unimaginable scale."

Key opinion-makers and much of the public quickly intuited that there would be almost no limit to the crushing power of future bombs. Instead of jubilation over the bombing of Hiroshima, the news was met with a deep sense of foreboding, often tinged with apocalyptic premonitions. The *St. Louis Post-Dispatch* declared that science may have "signed the mammalian world's death certificate." Major George Fielding Eliot wrote in the *New York Herald-Tribune*: "Mankind stands at the crossroads of destiny." If humans fail to rise to the challenge, "this planet will vanish into darkness and roll on, a blackened cinder, through the limitless night of interstellar space….the forces which man has now brought into play are forces which can be utterly destructive, so that no living thing may survive their loosing—if ever they are loosed in their ultimate power."

Scientists immediately mobilized to convince the government to put nuclear weapons under international control and stop the anticipated nuclear arms race before a disaster occurred. In May 1946, they launched the Emergency Committee of Atomic Scientists with Albert Einstein as chair. In May 1947, Einstein warned, "What is at stake is the life or death of humanity." But with Truman's September 1946 ouster of Commerce Secretary Henry Wallace, an outspoken nuclear abolitionist, from his Cabinet, the scientists had few, if any, allies in high places. If time permits later, I'll tell the depressing story of how the conservative Democratic Party bosses engineered a bloodless coup to remove Vice President Wallace from the ticket in 1944 and replace him with the little known and lightly regarded Truman—a move that has changed the course of history. And this occurred despite the fact a Gallup poll taken on the first day of the convention reported that voters preferred Wallace over Truman by 65 percent to 2 percent.

Wallace, an extraordinary, though now largely forgotten, public figure, delivered a national radio address the evening of his resignation in which he explained why winning the peace was far more important than holding high office: “The success or failure of our foreign policy will mean the difference between life and death for our children and our grandchildren. It will mean the difference between the life or death of our civilization. It may mean the difference between the existence and the extinction of man and of the world.”

With Wallace out of the picture, the United States proceeded blindly down the path toward maximizing destruction. The Soviet atomic bomb test of August 1949 provided the pretext for the next quantum leap—production of Teller’s long-sought super bomb. Meeting in secret session, Joint Committee on Atomic Energy chairman Senator Brien McMahon asked Gen. James McCormack how much the bomb would “magnify the destruction.” McCormack responded that the bomb would be “infinite. You can have it any size up to the sun.”

The eight members of the General Advisory Committee to the AEC declared that the proposed bomb “is in a totally different category from an atomic bomb” with “no inherent limit in…destructive power….Therefore, a super bomb might become a weapon of genocide.” “…the existence of a weapon of this type whose power of destruction is essentially unlimited represents a threat to the future of the human race which is intolerable.”

On February 13, 1950, appearing on Eleanor Roosevelt’s television show with Hans Bethe and Oppenheimer, Einstein commented, “If these efforts should prove successful, radioactive poisoning of the atmosphere and, hence, annihilation of all life on earth will have been brought within the range of what is technically possible. The weird aspect of this development lies in its apparently inexorable character. Each step appears as the inevitable consequence of the one that went before. And at the end, looming ever clearer, lies general annihilation.” Writing soon thereafter in *Scientific American*, Bethe asked fellow scientists, “Can we, who have always insisted on morality and human decency, introduce this weapon of total annihilation into the world?” Leo Szilard soon delivered the most frightening news of all when he told a University of Chicago Roundtable NBC radio audience that the fusion of 500 tons of deuterium in a hydrogen-cobalt bomb would be enough to “kill everybody on earth.” The *Times* reported this in a front-page article headlined “Ending of All Life By Hydrogen Bomb Held a Possibility.”

The public seemed unconvinced by these warnings. Gallup wrote in June 1950, “The gloomy forebodings of atomic scientists that another war will end civilization do not

seem to be shared by the general public." Gallup posed the following question to interviewees: "Some people say that if another world war comes it will mean an end to mankind. Do you agree or disagree?" Nationally, only 19 percent agreed, while 67 percent disagreed, with 14 percent registering no opinion. Gallup found the results "especially interesting" given the extensive publicity about the power of the hydrogen bomb and opponents' forthright public statements that "the power of the H-bomb could be so frightful as to destroy the world as we know it." Gallup concluded that "such fears have not yet taken hold of any large segment of the public."

President Eisenhower sounded another strong warning in his inaugural address in 1953: "The promise of this life is imperiled by the very genius that has made it possible….Science seems ready to confer upon us, as its final gift, the power to erase human life from this planet."

Over the next few years, the prospect of cobalt bombs that could end all life captured public attention. In February 1955, German Nobel laureate Otto Hahn, who had the dubious distinction of having been the first to split the uranium atom, lowered the requisite number from 400 to 10 in an address broadcast across much of Europe. The *Washington Post* headlined its article "Cobalt Bomb's Peril to All Life Stressed." The next week, the *New York Times* carried an article headlined "End of World Seen with a Cobalt Bomb," which began, "Val Peterson said today that use of the fearsome cobalt bomb might lead to the death of everybody in the world." Peterson, the Civil Defense administrator whose job was to control, not inflame, public hysteria, had been asked on NBC's "Meet the Press" if nuclear war could destroy the world. He replied, "I think there's only one area in which that were true and that was if someone were foolish enough to make a cobalt bomb. I believe it is possible to create a situation where it would drift around and around the world and kill everybody."

Democratic Presidential candidate Adlai Stevenson highlighted these issues in the 1956 campaign, warning about nuclear weapons' potential to "destroy all life." It was his generation's destiny to choose the universal blessings of peace or "the mutilation if not extinction of human life on this planet."

In coming years, cobalt bombs would indeed extinguish all life on earth not just once but twice—in two of Hollywood's greatest nuclear war movies. The foul deed would first be accomplished in Stanley Kramer's powerful 1959 film *On the Beach* and then again five years later in Stanley Kubrick's brilliant black comedy *Dr. Strangelove*.

That wasn't the only outrage that occurred twice during these years. I recently published a piece reflecting on the life of Enola Gay pilot Paul Tibbets, who, unlike some of the

others who participated in the bombings, never expressed any remorse over what he had done. Crew members' terrifying eye-witness accounts of the power of these first bombs, though a tiny fraction of the power of the bombs that would later be tested, lends insight into their impassioned pleas that atomic bombs never be used again. I read these accounts aloud whenever I can, never wanting my students or others to lose sight of the magnitude of destructive capability we are dealing with in nuclear weapons. For many on board the *Enola Gay* and the two accompanying planes, the image of instantaneous destruction, even from miles above and miles distant from what was left of Hiroshima, was so terrifying as to be transformative. They would never be able to exorcise the apocalyptic images from their minds. The images were so indelibly imprinted that few ever changed their descriptions over the years, often using the exact same words to describe what they had seen.

Abe Spitzer watched from the *Great Artiste* and thought he was hallucinating: "Below us, spread out almost as far as I could see, was a great fire, but it was like no ordinary fire. It contained a dozen colors, all of them blindingly bright, more colors than I imagined existed, and in the center and brightest of all, a gigantic red ball of flame that seemed larger than the sun. Indeed, it seemed that, somehow, the sun had been knocked out of the sky and was on the ground below us and beginning to rise again, only coming straight up toward us—and fast." "At the same time, the ball itself spread outward, too, until it seemed to cover the entire city, and on every side the flame was shrouded, half-hidden by a thick, impenetrable column of grey-white smoke, extending into the foothills beyond the city and bursting outward and rising toward us with unbelievable speed." "Then the ship rocked again, and it sounded as if a giant gun—some large artillery or cannons—were firing at us and hitting us from every direction." "The purple light was changing to a green-blue now, with just a tinge of yellow at the edges, and from below the ball of fire, the upside down sun, seemed to be following the smoke upward, racing to us with immeasurably fast speed—although, we at the same time, though not so quickly—were speeding away from what was left of the city." "Suddenly, we were to the left of the pillar of smoke, and it continued rising, to an estimated height, I later learned, of 50,000 feet. It looked like a kind of massive pole that narrowed toward the top and reached for the stratosphere. The scientists later told us they believed the pole was as much as four or five miles wide at its base and a mile and a half or more wide at the top." "As I watched, hypnotized by what I saw, the column of smoke changed its color, from a grey-white to brown, then amber, then all three colors at once, mingled into a bright, boiling rainbow. For a second it looked as though its fury might be ending, but almost immediately a kind of mushroom spurted out of the top and traveled up, up to what some say was a distance of 60,000 or 70,000 feet….the whole column seethed and spurted, but the mushroom top shot out in every direction, like giant waves during an ocean storm." "Then, quite suddenly, the top broke off the column, as if it had been cut away with a sharp blade, and

it shot still further up; how far I don't know; nobody did or does; not even the pictures show that, and none of the apparatus could measure it exactly. Some said it was 80,000 feet, some 85,000 feet, some even more…." "After that, another mushroom, somewhat smaller, boiled up out of the pillar…" Spitzer heard someone say, "I wonder if maybe we're not monkeying around with things that are none of our business."

Shortly before the 60th anniversary, in 2005, navigator Theodore "Dutch" Van Kirk said, "I pray no man will have to witness that sight again. Such a terrible waste, such a loss of life. We unleashed the first atomic bomb, and I hope there will never be another…I pray that we have learned a lesson for all time. But I'm not sure that we have."

Tibbets, apparently, never learned that lesson. In 1976, he reenacted the bombing of Hiroshima before a crowd of 40,000 at a 1976 Harlingen, Texas air show sponsored by the Confederate Air Forcet. As Tibbets flew over in a B-29, U.S. Army demolition experts set off a smoke bomb that simulated a mushroom-shaped cloud. Hiroshima Mayor Araki Takeshi called the show "grotesque" and sent a letter of protest to the U.S. Embassy in Tokyo. The *Washington Post* reported that ordinary Japanese shared this sense of outrage. The *Asahi Shimbun* called the incident "insensitive and callous," and wondered how Tibbets "could…do such a stupid thing." The *Washington Post* reported that embassy officials were "appalled" by the episode, especially the involvement of the Army. One unnamed official commented, "It's unbelievable." A U.S. diplomat compared it to Japanese veterans reenacting the Bataan Death March. Tibbets insisted that the stunt "was not intended to insult anybody" and made plans to participate again in the reenactment the following year until pressure from Congress and the Carter Administration forced its cancellation.

Whatever Truman's intentions or Tibbet's intentions or Eisenhower's intentions in increasing the U.S. nuclear arsenal from 1750 weapons when he took office in 1953 to 23,000 when he left eight years later, warning about the rise of the military-industrial complex as if he had not played a central role in its creation. By that time, the pieces were well in place for the total annihilation the scientists had warned about from the beginning. The Pentagon estimated that Eisenhower's war plans, if enacted, would kill over 600 million. We later learned that, with nuclear winter, it was unlikely anyone would have survived such a war. But the buildup continued. We have scaled back somewhat in recent decades, but, until the threat of nuclear war and the possibility of complete annihilation are eliminated, the dangerous legacy of these first decades of nuclear madness will continue to haunt us.

LAWRENCE S. WITTNER:

In the following comments, I will summarize some ideas presented in my scholarly trilogy, *The Struggle Against the Bomb*, and in an abbreviated, forthcoming version, *Confronting the Bomb*—both published by Stanford University Press.

The conflict among nations provided the major incentive for the development of nuclear weapons, just as it has provided the basis for their use and maintenance in subsequent years.

For millennia, competing geographical territories—ultimately including nations—have drawn upon weapons to defend or advance what they regarded as their interests. This dynamic accounted for the development of clubs, spears, bows and arrows, swords, crossbows, guns, cannons, warships, tanks, fighter planes, bombs, and guided missiles. During World War II, as hostile nations engaged in military conflict once again, the major powers established nuclear weapons programs in an effort to triumph over their foes. By July 1945, the Anglo-American nuclear weapons program had won this first nuclear arms race, and the following month U.S. military forces dropped atomic bombs on Hiroshima and Nagasaki with the full approval of the governments of the Allied powers: the United States, Britain, and the Soviet Union.

After this first use of the atomic bomb and against the backdrop of a developing Cold War with the U.S. government, the Soviet government instituted a crash program to build its own atomic bomb. Meanwhile, the British government, having been dropped from the Anglo-American nuclear weapons project, established its own program to build nuclear weapons. In subsequent years, numerous nations, committed to protecting what they considered their national security, followed their example, and the French, the Chinese, the Israelis, the South Africans, the Indians, the Pakistanis, and the North Koreans built such weapons successfully. Additional nations waited eagerly in the wings.

However, even as scientists worked feverishly at developing nuclear weapons during World War II and, especially, after nuclear weapons were revealed to the world through the terrible destruction of Japanese cities, there developed a countervailing force. This force was based on the perception among thoughtful people that, with nuclear weapons integrated into the long-term conflict among nations, the world stood on the brink of unprecedented disaster—a disaster that had to be prevented.

As a result, there developed not only a widespread popular belief in the value of nuclear arms control and disarmament, but three great waves of popular protest against nuclear weapons. The first wave began in 1945 and continued until the end of the 1940s. The second wave developed in the late 1950s and continued into the early 1960s. And the third wave crested in the late 1970s and the early 1980s. The first wave of protest was

triggered by the atomic bombing of Hiroshima and Nagasaki. The second wave of protest developed thanks to the atmospheric testing of hydrogen bombs. And the third wave of protest was occasioned by the revival of the Cold War, nuclear buildup, and loose talk of nuclear war. These waves of protest included not only condemnations of nuclear weapons by prominent individuals, but the formation of mass antinuclear movements led by groups like Britain's Campaign for Nuclear Disarmament, France's Movement Against Atomic Armament, Japan's Council Against Atomic and Hydrogen Bombs, the Netherlands' Interchurch Peace Council, Norway's and Denmark's No to Nuclear Weapons, and this country's National Committee for a Sane Nuclear Policy, Women Strike for Peace, Nuclear Weapons Freeze Campaign, and Peace Action. The waves of protest ebbed thanks to a number of factors, including acceptance of the Cold War by the early 1950s, the onset of nuclear arms controls and detente in the 1960s, and the advent of nuclear disarmament and the end of the Cold War in the late 1980s.

The popular revulsion at nuclear weapons, including the waves of protest against them, had a significant effect: it chastened government officials and led them to temper their nuclear ambitions. As a result, they grudgingly accepted some measure of nuclear arms control and disarmament, including a Partial Test Ban Treaty, the Nuclear Non-Proliferation Treaty, SALT treaties, the INF Treaty, and START treaties. The leaders of many non-nuclear nations abandoned plans to develop nuclear weapons, while most nuclear nations reduced their arsenals. Perhaps most important, the nuclear powers backed away from plans for nuclear war.

The result of this tug of war between the apparent national security imperatives of the nation-state system and public resistance to nuclear weapons was a rough compromise, in which nuclear arsenals were maintained by a small number of nations that promised further arms control and disarmament measures and, meanwhile, hesitated to resort to nuclear war. That is where we find ourselves today.

What is the relevance of this historical background to current efforts to abolish nuclear weapons?

First, it suggests that, if left to themselves, governments will gravitate toward developing, maintaining, and using nuclear weapons. Or, to put it another way, public pressure is necessary (though perhaps not sufficient) if governments are to abandon nuclear policies.

Second, it suggests that, if governments are to abandon these policies, the anarchic nation-state system must be reformed into a genuine international security system. And this, in turn, probably means that a stronger, more effective United Nations must be developed to ensure that nations feel secure without a nuclear guarantee.

Third, it suggests that, as reforming the nation-state system will take some time, the world requires nuclear arms control and disarmament measures if it is to survive long enough to reach the establishment of that new system of international security.

In short, if we are to progress toward a nuclear-free world, the development of an international security system and the adoption of nuclear arms control and nuclear disarmament measures should move ahead simultaneously, and the general public should be encouraged to channel its revulsion at nuclear weapons into support for this new direction in public policy.

Panel Session 4:
Social and Psychological Themes in Moving Towards Abolition

MICHAEL FLYNN:

This is a song from “the Future” and there are lyrics if you want to follow along.
(PLAYS SONG)

Give me back my broken night
my mirrored room, my secret life
it's lonely here,
there's no one left to torture
Give me absolute control
over every living soul
And lie beside me, baby,
that's an order!

Give me crack and anal sex
Take the only tree that's left
stuff it up the hole
in your culture
Give me back the Berlin wall
give me Stalin and St Paul
I've seen the future, brother:
it is murder.

Things are going to slide, slide in all directions
Won't be nothing
Nothing you can measure anymore
The blizzard, the blizzard of the world
has crossed the threshold
and it has overturned
the order of the soul
When they said REPENT REPENT
I wonder what they meant
When they said REPENT REPENT
I wonder what they meant

When they said REPENT REPENT
I wonder what they meant.

You don't know me from the wind
you never will, you never did
I was the little Jew
who wrote the Bible
I've seen the nations rise and fall
I've heard their stories, heard them all
but love's the only engine of survival
Your servant here, he has been told
to say it clear, to say it cold:
It's over, it ain't going
any further
And now the wheels of heaven stop
you feel the devil's RIDING crop
Get ready for the future:
it is murder.

Things are going to slide ...

There'll be the breaking of the ancient
western code
Your private life will suddenly explode
There'll be phantoms
There'll be fires on the road
and a white man dancing
You'll see a woman
hanging upside down
her features covered by her fallen gown
and all the lousy little poets
coming round
tryin' to sound like Charlie Manson
and the white man dancin'.

Give me back the Berlin wall
Give me Stalin and St Paul
Give me Christ
or give me Hiroshima
Destroy another fetus now
We don't like children anyhow
I've seen the future, baby:
it is murder.

Things are going to slide ...

When they said REPENT REPENT ...

OK. Cohen's song provides very little mercy. For this reason I decided to forgo my interpretive dance that I was going to accompany it. The song seems handmade for today but it was produced in 1991 or 92. It was Cohen's response to the Cold War that was pretty common throughout the West. Cohen obviously thought there were other forces at work. I wanted to set a mood and provide a common text to talk about this issue. I'm going to run through it pretty quickly. Many opponents of abolition and disarmament argue that it's the presence of these weapons that have prevented the realization of the nightmare scenario rendered by Cohen or current Cormac McCarthy's "The Road." Such conditions might exist elsewhere, they argue, but not here, not in nuclear states. Abolition, they contend, is a reckless project, one that realizes the result of a fool's paradise with an expiration date of a couple of weeks. I find nothing edifying about the entire nuclear project and I certainly have no patience for the nuclear peace argument, but I do share with these opponents, my opponents, the belief that simply getting rid of these nuclear weapons guarantees very little in the project of human planetary survival. The OED defines abolition, and here I'm quoting, "is the act of putting an end to or the nulling or making void."

I must admit that this amassment of every existing nuclear warhead and delivery system is the annulling of the nuclear weapon project would be an obsolete act that I would welcome. But I wouldn't see it as transformational as many here at the conference. It would be modern, or current, so when we speak about abolition we should refer to it as an existing custom or institutional project. We also have to note that, although nuclear weapons are singular and they have the ability to bring about almost instantaneous destruction, they're not the only objects capable of causing widespread extermination or extinction.

Several years ago, I attended a nuclear weapons meeting in Washington D.C, sponsored by Helen Caldicott, who's a veritable Who's Who of nuclear weapons policy. In one of the question and answer periods, Robert McNamara stood up and delivered an impassioned rant about the necessity of nuclear abolition because, and here I quote directly, "Wars kill people, nuclear weapons destroy nations." I couldn't help myself, and I whispered to my neighbor that Mr. McNamara had seemed to have forgotten that he had directed the obliteration of one country and overseen the devastation of a generation using only conventional weapons and conventional strategy. In the years since Vietnam, the difference in devastation between nuclear and conventional has substantially decreased. I find this to be a strategic and ethical abomination. Many of the world's most esteemed scientists argue that we are on the threshold or in the midst of the greatest

extinctionary crisis that this planet could face and that nuclear weapons can't be implicated in any of it.

Ian Wilson, hardly anyone's example of a leftist, argues eloquently that we are experiencing what he calls "the death of birth;" a state in which every living system and its supporting networks are in decline. In their 2007 article, "The Greatest Dying," Jerry Coyne and Hopi Hoekstra argue that we are experiencing levels of species loss that are far more catastrophic than the four previous extinctionary periods. This current period differs from previous ones in that it is entirely inhumane and I quote: "We are relentlessly taking over the planet and eliminating most of our fellow species. More ever, we are doing it much faster than mass extinctions that came before." They end their article with saying, "We are creating a world in which exotic diseases flourish, but natural, medicinal cures are lost. A world of dwindling food sources, sweltering heat, failing crops and impure water. In the end, we must accept the possibility that we, ourselves, are not immune to extinction or, if we survive, perhaps a few of us will remain scratching out a grubby existence in a devastated world."

These scientists forecast a world situation that's remarkably similar to that imagined by Cohen and McCarthy. I steal an appropriate word, a term from the philosopher Wyschogrod, "a death-world" in which a world is oriented around the negation of life. According to McCarthy, it is a world in which the few capable of love live haunted by, and here I quote, "the wish that it was over." I can't conclude without returning to Cohen's image of the white man dancing, a demonic man, sponsor of death. A demon far more comfortable with chaos than stability. I'm drawn to the theme of them because I've been doing a fair amount of thinking about evil and in my reading of novels written by Peter Matheson and Toni Morrison, Marilynne Robinson and Cormac McCarthy, whom have sensitized me to the presence of demons. These writers offer a needed vision of the ordinary man socializing in the evil path or even the more incisive authoritarian, manipulative character argument that influence, directly or indirectly, most discussions of contemporary evil.

When discoursing terror and nuclear and the conventional, we in academia and policy circles are expected to abstain from demon talk and settle for active metaphors that identify the logic, ideology sometimes purpose or intention. I've been guilty myself of forbidding my students the luxury of demonizing Bin Laden or the Bush administration, but I'm rethinking this position. Demons are far more protected in appearance and position than we usually understand. I'm arguing for making a kind of cognitive rule for a category called "the insider demon." I'm going to offer additional perspective. This insider demon is a summit attending, department heading, corporate individual who's spent a fair share of his or her time serving the state. Here I'm quoting from McCarthy's

novel, *Blood Meridien* "we believe that we are born for gain, nothing else. Every child knows that play is nobler than work. They know that the worth or merit of a game is not inherent in the game itself, but in the value of what has been put at hazard. This is the nature of a war whose stake is at once game and the authority and the justification. Seen so, war is the truest form of divination. War is the ultimate game, because war is at least a forcing of the unity of existence. War is god."

These national security demons believed or believe themselves to be untouchable, perhaps supernatural forces in this ultimate game. Not God, surely, but surely transcendent to the contemptible citizenry whom they address regularly. I raise this issue of demons because a few of them, despite spending decades ridiculing or ignoring calls for nuclear abolition, are now leading the charge. For most of them, this call isn't brought on by a new found ethical or spiritual disgust of or for the weapons and their exterminatory nature, or re-thinking of the legitimacy of past deterrence policies or concern over the damage done by the nuclear weapons to political and scientific life or even ecological concerns. The call is being issued by the conviction that irresponsible states and non-deterrable, non-containable terrorist organizations are within a long arms reach of acquiring or producing these weapons. I don't think this is sufficient. I have no right to proclaim the correct relationship of demons and I suppose there are several alternatives, including avoidance, containment, imprisonment, which come immediately to mind, but here I have to agree with the conservative creed that has been repeated again and again over the last 50 years. People of conscience should refuse to appease and never collaborate with demons, particularly the unpunished, unrepentant ones.

HUGH GUSTERSON:

I'm an anthropologist who spent much of the last two decades hanging out with nuclear weapons designers and writing about the culture of nuclear weapons labs. But, actually, that's not what I'm going to talk about today. I thought I would talk about narratives. And I'm interested in the question of how you narrate the ending to something that has become profound common sense to people. Something that people have inhabited all of their lives. I'm thinking here of the institution of nuclear deterrence. So, if you all will forgive me, my remarks are a little bit abstract and I'm going to read parts of it. I want to talk about how one narrates an ending to the nuclear age, if indeed that's possible. Because it seems to me that human beings are story-telling animals. We don't live by treaties, we live by narratives. And one of the problems with arms control discourse is that's it's all subordinate clauses and treaties and so on. But human beings live by stories. Narratives give us a sense of plot; characters with fears, hopes and passions. Above all, narratives give us a sense of direction and a sense of meaning.

I want to consider here the strengths and weaknesses of, first, the status quo narrative, the dominant nuclear narrative, the story that holds our stockpiles in place right now. Then look at narratives of abolition. After all, it's by narrating abolition, that we will lend the plot of realism to a fervent hope. Let's begin with the dominant nuclear narrative.

The story that holds the current nuclear stockpiles in place has so far proved adequate to its task, but despite its historical efficacy, it's a flawed and unsatisfying narrative. In fact, as a narrative, I would say it's almost incoherent. Its main faults lie not in any intrinsic appeal, but in the brute fact that it describes the world as it is. According to the status quo narrative, it was inevitable that sooner or later nuclear weapons would be developed. In other words, we have no choice but to live in the reality we're in. While arms control treaties concur with the numbers of nuclear weapons and help restrain, destabilize any technological developments quote, "the genie can't be put back in the bottle." In this narrative piece, it's not so much peace in what Kenneth Boulding would call the positive sense of the term, but, instead, stability; a life of indefinite but anxious security in the shadow of a nuclear avalanche.

The U.S. role in the narrative was, in accordance with U.S. discourses of exceptionalism, to pioneer the development of nuclear weapons, and then to superintend the rickety global apparatus of treaties and alliances that keeps the avalanche at bay. Now, the strengths of the story lie in the authority of its tellers and in its power to suppress alternative storylines. The status quo story is the one we've been told since the 1940's by Presidents, Secretaries of State and Defense, military leaders, arms control experts, and most mainstream media pundits. It's hard to resist the story no matter how crazy, told by such powerful storytellers. And it's hard to think outside the storyline that's so powerfully reinforced by the reality of the status quo. It's a story whose power lies in its ability to say, "This is the way the world is –there is no alternative." But the status quo narrative also suffers some major flaws. First, in some versions, I'm thinking here of Carol Cohn's work on nuclear discourse, it's the weapons, not the people who seem to be the principle actors within the discourse. Carol Cohn points out that there are narratives of a nuclear war where you win despite having lost 30 million people because you have more weapons left at the end. This makes people the midwives or custodians of the weapons, but it's the weapons that rule our destiny. This is quite unappealing.

Second, even if there are good and bad people among the dramatists personate, there space for moral maneuver is constricted by the weapons. So the storyline of deterrence is one whereby the dictates of deterrence itself force human beings to threaten immoral things. I spent 20 years talking to people who'd believe in deterrence, and even they'll concede that what the weapons threaten is genocide, but they have no choice because the weapons make them do it.

Third, the plot affords little space for climax or ending. Instead, the unsatisfying plot is one of endless deferral of catastrophe. It seems to me that deterrence is like bad sex. It goes on and on, not getting any better or any worse and never reaching a climax. Finally, there's a contradiction at the heart of the status quo narrative. Nuclear weapons are presented both as terrifying objects that could destroy the nation in half an hour, and as the ultimate guarantee of our security. Nuclear weapons are terrifying, but deterrence is what keeps us safe. Thus, the dominant nuclear discourse is mediated by a blatantly, hypocritical double standard. Nuclear weapons are demonic objects in the hands of others, especially black, brown or Muslim others, but they're rational instruments of peace when we deploy them. Of course, it's the essence of privilege to live comfortably with double standards. And Americans are not so bothered to explain why it should not abolish its nuclear weapons while other countries would be guilty of a crime for acquiring them, or why deterrence assures peace, but Iran should not be allowed to balance Israel's nuclear weapons. But the hypocrisy here increasingly grates on the rest of the world. In David McReynold's words, "the world cannot be half nuclear and half nuclear free indefinitely."

Moving on to discuss abolitionist's narratives, the problems with the abolitionist narrative are well enough known. It has the onus laid upon it to explain why things should not continue to be done and the way they've always been done since the 1940's. This is always the problem with insurgent narratives. The onus is on them to explain why change should happen. The onus is not on the status quo narratives to defend the status quo in the same way. Also, the spokespersons for abolition must persuasively explain, as they have so far failed to do, how countries with no nuclear weapons could protect themselves against a rogue state that had somehow hidden one or two of these weapons. The narrative of abolition has a blank page at the end. And I would say that this is the major problem for the abolitionist narrative and I know that George Perkovich has been working on this in particular, trying to write a convincing last page. And we're still not there.

Another liability has more recently abated. That concerns the authority of its spokespersons. For many years its spokespersons were on the radical end of the anti-nuclear movement and didn't get much mainstream credibility. Now that Henry Kissinger, perhaps, Sen. Nunn, George Schultz and Bill Perry have given the bipartisan realism to abolition, as well as a direct lineage to Ronald Reagan, the cause has a new sheen. It doesn't hurt that the new global zero campaign has added the support of such political figures as Margaret Beckett, until recently, Foreign Secretary of the UK, Jimmy Carter, Gro Harlem Brundtland, Zbigniew Brzezinski, Lawrence Eagleberger, Michel Gorbachev, Chuck Hagel, Max Kampelman, who was Reagan's arms control negotiator,

Robert McFarland, Reagan's National Security Advisor, Anthony Lake, Clinton's National Security Advisor, General McPeak, Queen Noor, Jack Matlock, Philip Zelikow, Condi Rice's advisor, Pickering and Malcolm Rifkind, conservative, Secretary of Defense from the UK. These are people with the authority to narrate the world, and so their enlistment on behalf of this narrative is profoundly important. And Michael mentioned that many craven pundits have suddenly flipped sides overnight seeing which way the political winds are blowing.

So, clearly, the abolitionist narrative has a momentum in elite foreign policy circles, a momentum that derives from a recalculation of the costs and benefits of nuclear weapons in the age of post Cold War terrorism. Obviously, what this is about for people like Kissinger, Nunn, Bill Perry, and so on, is the fear that weapons that once assured the U.S. and Germany, are now the Achilles heel of the U.S. if the wrong people come to acquire them. The U.S. could easily lose a city. But I did once speak to a hydrogen bomb designer, Lawrence Livermore, who told me around 1995, that he'd become a nuclear abolitionist. This surprised me, and I said, "why have you become a nuclear abolitionist? This is your bread and butter, designing nuclear weapons." He said, "No, no, no. You don't understand. A world with no nuclear weapons is a world where the U.S. has uncontested military superiority over every country in the world." And I'm sure that logic has something to do with the changing of sides.

What the abolitionist narrative has above all others is that it's structured around a clear struggle between good and bad. Abolition is good, nuclear weapons are bad. People who favor abolition are good. People who are against it are bad. This makes it morally comprehensible in a way that deterrence is not. One of the major flaws of deterrence is its moral inscrutability; it's illegibility in moral terms for most people. I think also it's possible to do a clear bifurcation of narratives where you can narrate the extinction of the human race or other kinds of lesser catastrophes if we keep nuclear weapons around and you can build a contrasting bifurcated narrative of a more utopian kind of future if we get rid of the weapons.

The abolitionist narrative also has a clear plot line with a dramatic culmination in the achievement of abolition, and it has great intertextual resonance with other heroic narratives of hope and progress. As its name implies, it's built around a symbolic reenactment of the great historic movement to abolish slavery, which provided the sort of second foundation in American history. It also, in the hands of some of its practitioners, has a resonance, I think, with Biblical narratives. We see this, for example, in Sam Nunn's description of the abolitionist movement as leading us to the top of a mountain he does not expect to scale in his lifetime. Language reminiscent, I think, of Moses in the Old Testament seeking the promised land, although God tells him he won't get there, and

language reminiscent of Martin Luther King's last speech before he was assassinated. But let me conclude with a note of warning in this regard. As the great cultural historian Sacvan Bercovitch has observed "American political discourse has a tropism toward the Jeremiah." The Jeremiah is a form of sermon popular among the early Puritans, berating a chosen people for not living up to their unique calling and summoning them to redouble their efforts to be God's chosen ones. As well as being a biblical form of discourse, it's a form of political discourse inhabiting an edge between the secular and the religious that goes well with the American exceptionalism that non-Americans find so irritating. An American exceptionalism excoriated in Jeffrey Hutchins' fine new book. Great American reformers often speak the language of the Jeremiah. John F. Kennedy did in his inaugural speech. I expect Barack Obama will next week in his inaugural speech. Martin Luther King certainly did in his "March on Washington" speech. And Barack Obama's whole campaign was a campaign around berating the American people for having fallen short of their historic calling and it's telling us that he was the embodiment of the greatest nation on earth. In what other nation could the son of an African immigrant rise to become the President. So it's a call for America to be restored to its preeminent place among nations, to be truly the greatest nation on earth. And I think that should give us some pause about who Obama might turn out to be.

Many American anti-nuclear activists who speak of America's historic mission to lead the world to abolition also inhabit the world of the Jeremiah and the language of American exceptionalism. I don't know how many people here read discussions on the Abolition 2000 list serve, but in the last week, there's been an interesting exchange of messages about precisely this issue where a Swedish person said that he refused to sign on to a sort of poll to Obama to tell him that the abolition of nuclear weapons should be among his top ten priorities. And the reason he gave was that the language in which that call was framed, was one that talked about America's historic destiny to leave the world of abolition. And he said that as a European, he found it profoundly offensive, and he refused to buy into this.

This discussion shows how grating such talk can be to Europeans and people in other parts of the world. This is the echo within the anti-nuclear movement of the double standards problem that haunts the status quo position. It's the hubris of the anti nuclear movement. So, I leave you with this interesting conundrum: how to compose a global movement through the narrative form of American exceptionalism or whether it's possible to summon the American people to the task of abolition without talking to them in that language.

DAVID KRIEGER:

This is a good follow on because I was one who initiated the change.org idea that was directed at ideas for change in America. I think, perhaps, the Swedish person looking at it didn't realize fully that it was aimed at change in America, but at the same time, we were asking others outside the country to respond and, in fact, needed others outside the country to respond to an abolition message to Obama in order to have any chance of getting into the top ten ideas that would be presented to him. I think that reflects, first of all, how difficult it is to arouse the American people to the abolition idea, and secondly, how difficult it is to bring together the abolition movement within this country to focus and to inject some motivation into their own constituencies and to cooperate and collaborate on trying to raise the profile, in a relatively simple way of the abolition issue. And essentially that's what I do. I try to raise the profile of the abolition issue in the United States, and while I agree with the "Kissinger group," it's meant to have a certain derogatory ring to it, that the U.S. is vulnerable, and that is one reason why citizens of the U.S. need to pay attention to the abolition movement and get behind it, I'm disturbed in a way that they get so much attention. I think, yes, they raise the issue, but no, they're not the right people to raise the issue, and again, it says more about whom we are as a people in this country that we're listening to those who should be held accountable for war crimes, rather than be the purveyors of moral positions for us to consider. On balance, I think it's a good thing that they've said it rather than not, but I also think that what they give they can take away and unless there is a solid base of moral concern and security concern among the people of the U.S., it will be very difficult, even for Barack Obama, to lead the way to abolition. And Barack Obama has said some good things about abolition, but he's followed up every good thing that he's said with the phrase, "as long as other countries retain nuclear weapons, we will maintain a deterrent force second to none" or something like that. And I think that deterrence is, in a sense, at the heart of the consideration of nuclear weapons because somehow people believe that deterrence is a kind of magic potion that works. And I think deterrence needs to be deconstructed in a very strong way and somehow that story needs to be told.

Now, I focus on the U.S. because I don't think the U.S. has any strong moral claim to leading an abolition, but I think if the U.S. doesn't lead, it will be very hard to make progress. If the U.S. doesn't act, it's very unlikely that the Russians will act, and if the Russians won't act, the Chinese won't act, and so on. Nuclear weapons right now are something of a check on American power, and within America, there's a sense that nuclear weapons give us greater degrees, at least among the elite, that nuclear weapons give us greater degrees of freedom to impose our will mostly without having to actually use them, but having them as a quiver, or an arrow in our quiver.

I continue to think that if the American people don't catch on, and don't raise this as a priority issue, that the American government is going to be largely stymied, will make

some concessions, but won't really move in any serious way toward abolition. And when polling takes place, most people say, "in a world in which others would give up their nuclear weapons, the U.S. should do so as well." Or when posed a slightly different way, the question is: "should all countries give up their nuclear weapons including the U.S.," the answer is about two-thirds saying, yes, they think that that should be the case. This suggests that there doesn't seem to be any widespread desire among the people to have nuclear weapons for their own sake. Given that the people are more or less in favor of abolition, I ask the question: Why is it that so little happens? Why is there so little pressure from below? Or in my own case, why is our job so much more difficult to arouse public opinion or arouse people to some form of action, meaning some form of overt commitment on the nuclear issue then it seems like it should be, given their essential support of the idea?

I just want to run down a short list of reasons that I think are worth considering in relation to why the American people are so quiet on this issue. First, there's a belief I think among most people of the U.S. that one is powerless to effect change. The issue is too big and too far removed from day to day pressure. Maybe there's some hope on that one in the election of Barack Obama who campaigned explicitly on change. We've yet to see what kind of change that means, but at least there's some hope. I do think that most Americans don't feel that they have any real leverage in the system, and thus, as a consequence, they look to people like Kissinger and Perry and Schultz and Nunn, to do the work for them. And they don't look to civil society as ways to try and express themselves on this issue.

Secondly, I think that there is a belief that the nuclear issue, and particularly, nuclear deterrence and nuclear weapons in general, is an expert issue and that the people are not really qualified to address the issue. Ironically, in Kai Erickson discussion he noted that in every case, the experts were wrong. Three Mile Island is an example. The experts first told the people in the area, "Don't worry, these plants are safe." That's the same thing that was told to the people in the Marshall Islands, "don't worry, it's not going to affect you. You're going to be making a contribution to our side in the cold war." And so forth. Even though the experts are wrong, there's still a deference to expertise that is way too strong.

Abolition would be helped by moving from the thin-democracy of voting-only to a living-democracy where people actually get involved.

An additional area of concern is the belief that nuclear weapons provide security through their retaliatory capacity. In other words, the people and the country have been led to believe that deterrence is viable, but deterrence is very complex. There's nothing

physical about deterrence, it doesn't provide physical protection. It doesn't provide security. I think that's missing in people's understanding of deterrence. They think that it provides them with security when it's just a kind of illusion that there's security attached to the threat of mass murder.

Another problem is the fear of cheating. The fear that a nation may not follow but rather cheats and maintains weapons. Won't we then be at a disadvantage? That is a question that needs to be answered, but I think it's answerable when we acknowledge that we won't go there tomorrow, we won't go there overnight. We go there in a phased process of disarmament in which we act in such a way that what we do is transparent, irreversible, verifiable, and so forth. When we get there, which I think could be done in that way in ten to fifteen years, there would be more confidence in the system, or we could stretch the phase element to some degree before we get there. I think, ultimately, that's not a surmountable problem.

There is also a strong desire to have or retain the power and prestige of nuclear weapons. Right now nuclear weapons are working, I think, for some countries, such as Pakistan which likely considers the deterrent value of nuclear weapons to be something that advantages them. Vis a vis India and North Korea, must think that nuclear weapons have real value to them as a deterrent. I think, arguably for weaker countries, there is a greater value to nuclear weapons than there is for already powerful countries. However, whatever advantage that comes with a nuclear weapon can be offset by, in the case of North Korea as an example, meeting their demands for security, and guarantees for development assistance. We have to change the way we look at the world. But right now, that exists.

Another point is complacency. I think you can't underestimate the enormous strength of complacency in this country and probably elsewhere, but more so in this country than elsewhere. Here in the US there is this sense that "we're number one" and for all the wrong reasons and we can let it go, the experts, our leaders, will handle it. There's a tremendous need for civil society to rouse ordinary citizens out of their lethargy and complacency and apathy.

An additional issue is that the country certainly gives higher priority to other issues that seem more immediate. And, again, that's reflected in this recent attempt to get nuclear weapons abolition into the top ten ideas to change America. A lot of other ideas must have seemed more immediate that made into that top ten list having to do with healthcare and gender relations and other domestic issues. I think conformity also plays a role and there's not enough sense that this is a large group of people to switch their allegiance. And psychologically, denial, at some level, plays a role.

I was going to mention that we have a UC nuclear free campaign in which we try to educate the students of the University of California that the university is involved in the management and oversight of the nation's nuclear weapons labs. And we went into that thinking once the students knew that, they would be really upset and want to rally to the cause of getting nuclear weapons out of their university system. But we haven't found that to be the case. Some students have become very engaged, but the large majority of students, I think, fall prey to the same issues of complacency and reliance on experts and other priorities that I mentioned with regard to the general population.

Let me just conclude with two quotes. The first one is from Kenzaburo Oe, Nobel Laureate in literature from Japan and he's writing about Hiroshima and says: "Hiroshima is like a nakedly exposed wound inflicted upon all mankind. Like all wounds, this one also poses two potential outcomes, the hope of human recovery and the danger of fatal corruption. Unless we persevere in remembering the Hiroshima experience, especially the thoughts of those who underwent that unprecedented experience, the feint signs of recovery emerging from this place and people will begin to decay and real degeneration will set in." We can contrast that statement, which I think is very powerful and correct, with the way in which the Hiroshima experience has been spun in the U.S. nuclear weapons wars to be seen as powerful tools that benefit us and our security. I wanted to read that quote because I think the Hiroshima and Nagasaki experience still remains at the heart of the change that's needed.

The final quote I want to read is this: "Those who profess to favor freedom and yet depreciate agitation are people who want crops without plowing the ground. They want rain without thunder and lightning. They want to ocean without the roar of its many waters. The struggle may be a moral one, or it may be a physical one or it may be both. But it must be a struggle. Power concedes nothing without a demand. It never has and it never will." That's by Frederick Douglass in an earlier abolition movement. And I suggest to you it's the strongest reason that we shouldn't be complacent to let Henry Kissinger speak for us. Thank you.

COMMENT:

The conclusion I had has already been very eloquently stated by Kai Erikson at the end of his talk at lunch. I want to start where Michael began and just cover some of that same ground in a slightly different way. I also have been thinking, as I've been listening, that I don't come out of IR or any of the fields that a lot of you do. I feel like a bit of an outsider, although I'm heartened by the connections that happen in these kind of interdisciplinary ways. I was also thinking about how my roots are in radical feminist

theory; not simply looking at the way gender plays out in the contemporary era, but looking, really, at a critique of patriarchy and the conception of power. And so, the talk of a death culture took me back there because that's, I think, the fundamental insight of feminism. That patriarchy, by defining life as the quest for domination, becomes a death culture, and that is the culture we're living in. And that bigger context, I think, is important. I also like Hugh's talk about stories and Jeremiah, the prophetic. I think that is actually something to claim—the prophetic voice—but not in this very narrow American context, but in a more universal context.

What I started thinking about in this concept of the social and psychological themes is that when the first people who were arguing against nuclear weapons were making that argument, nuclear weapons were, in fact, probably the only tangible threat to the ongoing human existence. That was it. And I think what is so profoundly different today is not only all the changes we've talked about, but the fact there is now another profound threat to ongoing human existence and that is not simply, I think what we would call environmental problems, but the more profound ecological crisis. The fact that the systems in which we live are making it impossible for the ecosystem in which we live to sustain human life, or any life, perhaps, into the future. I used to be a journalist and a headline writer, so my pithy little title is "How will the end times come? Sudden explosion or slow erosion." I think that is part of the psychological and social landscape we have to think about. So, what I'm going to do is talk about some of the differences between those two threats; not necessarily to make an argument, but to generate some ideas and then, at the end, conclude what I think is profoundly similar about them.

What's different is clear. The nuclear threat is specific and easily identified. It is the explosion of a nuclear weapon. The ecological threat is general and dispersed over time and place. They are two very different kinds of threats. The timeframe is different. Once the bomb explodes, it is an instantaneous occurrence and it will happen probably just once. The ecological threat is over time, in fact, it's already started and it's ongoing. What generates these two threats? Well, one could argue that the nuclear threat is generated by a desire for power and dominance over other human beings. The ecological threat is generated in part by a desire for material comfort in the world which puts us in opposition not with other human beings, but with the entire nonhuman world. Who is the responsible party for generating this problem? This is all very simplistic, but you could argue that the responsible parties are a relatively small group of elites who want to maintain that dominance with regards to the nuclear threat, whereas in the ecological threat, the responsible party is, quite literally, all of us, at least all of us in the first world. All of us who live at levels of affluence that everyone in this room is familiar with.

What about the solution? Well, the solution in the nuclear threat is quite simple. You just disarm, you abolish them. You get rid of them. It doesn't mean that all of the accompanying problems around nuclear waste are solved, obviously, but with the main threat it is at least easy to identify what one would do. With the ecological threat, I would describe the solution as a radical change in our living arrangements at all levels. We must live with far lower levels of energy much lower on the food chain, as it's often said.

So what is the likelihood of success of containing the nuclear threat? It's not guaranteed, but it's a reasonable thing to assume that we could accomplish that. All of the discussion today reflects the fact that people believe this is a reasonable goal, though not guaranteed. The likelihood of success of radical change in our living arrangements in a way that would curb the ecological threat is roughly zero. I've done a scientific study of this and it's zero. It's not going to happen. I think that if you take into account the historical trajectory and the nature of the human animal, I don't think that's going to happen. And I think that is, in fact, the profound task of being a human in the modern era—to come to terms with that. Now the question is will there be, as Michael suggested and from certain books, such as "The Road," some small number of humans clinging to life on the edge? No one here can predict, but I think it's important to take seriously what it means to say we are going to change those living arrangements.

Those are some things that are different about those threats. The reason I think it's important to think about is because the project of abolishing nuclear weapons goes forward on that landscape. Now everything I just said would be derided as lunatic in most of the culture, but I think that's a kind of thin veneer. I think most people, in their guts, have some recognition about the reality of what I'm talking about. This is not to say that people agree with it, or would acknowledge it in a telephone survey, but I've been talking more about this, and I'm always shocked at the resonance I get when I first start talking like this. When I first said it maybe two or three years ago, I thought they were going to run me out of the hall, and I looked out and everybody was just nodding. These were self-identified sort of leftist activist types. But it didn't generate the kind of pushback that I thought, which tells me that it is something, even if we don't articulate it, that people recognize.

So, what is the common core of all this? This goes to, I thought, the really important remarks Kai Erikson made. And this also takes us back to probably the most important and foundational story of the Bible, which is the story of the garden. I think what's at the core of both of these is the problem of human arrogance, the failure of humility. Human beings have a fundamental problem. We are very clever and we mistake cleverness for the capacity to control the consequences of our cleverness. We can manipulate the world

in ways that really are quite extraordinary, but we simply cannot manipulate the consequences of some of those interventions. It's the problem of knowledge, which is, of course, I think the core of the story of the garden.

One person who's really helped me understand this is a plant geneticist by training named Wes Jackson. Wes Jackson co-founded and currently runs something called "The Land Institute" which is doing very, very exciting research on sustainable agriculture, such as how to breed perennial polycultures that can replace annual monocultures. I think it's some of the most important work going on. Wes says the solution to this is to embrace ignorance. Not to behave stupidly on purpose, but to recognize as a species that we are far more ignorant than we are wise. That our knowledge is not adequate to run the world, and then to come to terms with what that means, and to start to devise actions that recognize those human limits, as Kai was talking about.

I think the cautionary note for any of us doing progressive political work is to remember that's true not only of the industrial world, not only of the people, the elites running the economy or the political systems, it's also true of us. We are also that same human animal that is fundamentally ignorant, but a fair bit of humility is important. This ties into something Hugh said. There's been a term that's developed, I use it all the time, "technological fundamentalism." The notion that if you have problems, especially problems created by technology, they can always be remedied by a new form of technology. The poverty of that argument is rather obvious, but there's a way in which we can get sucked into that. I think your point about stories, not treaties was important. This is not a problem to be solved by, in this case, the technology of a treaty under the illusion that we can control those outcomes. We really do have to fundamentally reorient ourselves; which is why I think we should never buy into things like American exceptionalism even if we think there's a short term political gain. We have to re-narrate, not only the story of nuclear weapons, but the story of the species in some sense. That takes me back to the prophetic. I can't imagine how to do that except in the prophetic voice stripped of it's arrogance that's so often the way the way it's delivered here in the U.S.

The title of the book I'm just finishing up and comes out in the spring is from a quote in Jeremiah. Jeremiah was a reluctant prophet. He's talking about the experience of the prophetic and he says something to the effect of: "All my bones shake. I am like a man drunk on the Lord." The title of my book is "All my bones shake." We need to think of the prophetic not as that spoken by a prophet but that which we all have a responsibility to take up. We need to recognize that responsibility, to move into that space is to move into a space where all my bones will shake. So I really want to thank Michael. When I was making notes for this, I thought I was going to be a bit of a freak, and then I realized

once I heard Leonard Cohen that there was at least one other freak in the room. But I really want to thank you for doing that because it took us in a different direction. A direction I think is crucial, and I think I owe you a debt for that.

ROBERT JENSEN:

Lots of intriguing things here to reflect on. One of the things I was thinking about listening to a lot of conversations today, but especially in here, between you three is sort of a notion of apocalypse fatigue. There's a book out that I can't remember the name of, but that's out now on the environmental movement and the kinds of dangers that it backed itself into. It's an interesting book and it brings up some very relevant things to the conversations here today as we talk about abolition as well as ecological collapse and so forth. How we frame the project at hand given that the dangers of apocalypse are so easily undermined now with this other narrative, that emphasizes that the apocalypse hasn't happened, whether it's the one that the environmentalists talked about or the one that the anti-nuclear activists talked about happening.

On the other hand, that apocalyptic narrative is very skillfully used by people, for example, in the Bush administration justifying very draconian changes in our political, social life. I just raise that here as another unanswered issue that seems to resonate with issues here.

COMMENT:

I think it was a problem for the nuclear freeze movement that apocalypse fatigue set in. So much of the rhetoric of the anti-nuclear movement of the early 80's would describe what would happen if a one megaton bomb was dropped on your city. On the one hand, it sort of ruptured this membrane of denial that people had about nuclear weapons. But on the other hand, it was profoundly disempowering. Especially in a country such as the U.S. where certain kinds of evangelical fundamentalism, the Christian flavor, have such profound appeal. One direction in which that can push people is something that we saw in the 1980's, where more and more people started to get interested in the rapture. They felt disempowered politically as a collective from doing anything about it, so the solution becomes one of private faith. If you believe in God ten minutes before the apocalypse, you get raptured up from your car on I-25 and suddenly you're in heaven and you don't have to worry about it, right? I think you're profoundly right, that there is a real danger of apocalypse fatigue and there's a danger that telling stories only of apocalypse can sort of shake people up, it can rattle their bones, but at the same time, it then leaves them just sort of rattled and disempowered. This is why the narrative's telling us how we then get to abolition. Persuading the ordinary, disempowered people that there are very powerful

people, like Sam Nunn, or whoever, who share the concern and who are working to make this happen in the real world. That becomes really important. The new abolitionist narratives sort of remedy a defect, I think, in the discourse of the movement in the 1980's.

COMMENT:

The question is where does this conversation take place? Does it take place within the realm of conventional politics or does it happen in the sphere of radical politics? This is where the prophetic comes in. In Hugh's book I was struck by a woman who said "If I engage in prophetic discourse, I'm going to lose my church and lose my job." I thought, "Maybe that's because she doesn't do prophetic narrative and prophetic discourse correctly." I kept thinking about how to do prophetic discourse correctly, in a way that can be heard by many different audiences. It seems to me, that we can find a new kind of prophetic discourse that doesn't take the self so seriously, that has a place for laughter, the comic, and the absurd, a place for forgiveness after a certain kind of repentance is necessary. I think repentance is, for me at least, one of the problems. I've been to several meetings now with Robert McNamara and the son-of-a bitch still hasn't repented correctly –he's apologized but not repented. I had lunch with him and I kept hoping he would. I kept saying, "shit, give him a chance," and he wouldn't do it.

COMMENT:

A couple of thoughts. One is that I'm always persuaded by Hugh, and I think narratives are profoundly important in everything, including in these communities. I think where the abolition narrative is strongest right now is in the U.S. military. And I can point in lots of different ways where you can find it and there a bunch of reasons for it. Among them are nuclear weapons precisely don't give us freedom, meaning they don't give the military freedom to maneuver. Also, nuclear weapons are horrible instruments for domination and they've never worked that way. They didn't work in Vietnam, they didn't work for the Russians in Afghanistan, they didn't work in China and South Korea, and they don't work for the Israelis for compliance. They'd never work. What they may do is protect you or deter an aggression on your territory, that is deterrence. But for domination, they're terrible and the military know that. And so it's the military's getting the strongest push to get away from these things.

The third thought is that there's an assumption, I think, in the discussion about how abolition won't occur without popular pressure, a public movement. I happen not to agree with that, but in any case if it were true, and that's the only way to get it, then I would argue it's never going to happen because you can't imagine a public movement on

this issue in Russia, China, Pakistan, Israel, and probably France. So, if it's only going to happen through popular and public pressure, we're talking about the UK and the U.S. and India as the places where potentially you're going to foresee that in at least the distant future. Now, to me, that isn't a problem because I happen to think that it's going to be much easier, and historically, the only countries that have stopped nuclear weapons programs did it very undemocratically, did it secretly, did it with few people deciding to stop this.

My last point is on the whole issue of demons and demonizing. I would be very weary of moving into that model or that language in part because, we may all agree on a few demons in this country, but once you're in that language and that frame, it's very easy to find people in the other space that are more demonic than yours are, and when their demon is worse than your demon, you get a bigger weapon. And so, I think that's not a space that would be productive to go in. Thanks.

COMMENT:

The presentations were very stimulating and valuable, I think, for deepening our political imagination. I think it's really about political imagination, and to some extent about moral imagination. I have a couple of questions to ask. Michael's last point, which I guess is what George is referring to in part, where he threw out this rather provocative line that "people of conscience should never compromise with demons." Isn't that implicitly also a form of hubris? The question seems to me to be whether one has the capacity to de-demonize oneself sufficiently to make that incredible posture and it doesn't have to risk what George is raising and relate a little bit to this centrality of the issue of hubris. Who has the authority imbedded in the transformative narrative? And how does one acquire that authority? And I think it does have to be accompanied by humility rather than by claiming access to the truth. And I have some problem also with the prophetic mode which is very attractive, but in a globalized world, isn't it one more form of western civilizational exceptionalism? It is based on The Old Testament Bible, which is a perspective that isn't particularly congenial with eastern religions, for instance, that as far as I know, are not particularly drawn to a prophetic mode. And that gets, for me, at least, to this point that I tried to raise briefly at the end of my remarks this morning about the Einstein-Russell manifesto giving such a strong emphasis to the idea of human solidarity as an element of an effective abolitionist narrative.

And my final remark has to do with Hugh's very stimulating comparison of these narratives. If you imbed and rely upon the realist frame as part of the abolitionist narrative, that doesn't speak to the rest of the world. Because that really is saying, "let's get rid of these weapons as these guys tell us to do, and then we can really dominate the

world because we have such pronounced military superiority in the non-nuclear domain." And that relates to this other point that George was making that it's not altogether surprising that support for nuclear abolitionism comes from the most militarist sector of American bureaucratic life, namely, the Pentagon itself. It doesn't want to have to reflect upon that in constructing a credible abolitionist narrative.

One final point goes to the reference to "The Road." The popularity of "The Road" suggests that the culture, at least, is not completely succumbing to apocalyptic fatigue. I think there is an implicit anxiety about the credibility of apocalypse that gave Cormac McCarthy's book such a cultural resonance and made it so powerful. One could easily argue the opposite point of yours about a revival of the apocalyptic consciousness. Several films have portrayed a kind of end time, so I think there's a dialectic between apocalypse fatigue and apocalypse vitality.

COMMENT:

Perhaps, like all of you, my mind is spinning and enjoying the spin. We've lapsed into things religious, so I wanted to follow that metaphor just a little bit because, in terms of narrative, and what you were saying, Robert, which I'm on the other end of this from you, that the world will continue, that humans will save it, etc. Whether we're speaking with our secular selves that we have the capacity for evil, destruction, power, domination, empire, patriarchy, apocalypse, we're all very well aware of that. We have another narrative which also is our capacity for altruism, for caring, for giving, for sacrificing, for sharing, and it really is a choice.

On the one hand, there is, as my New England puritan ancestors used to put it: "In Adam's fall we sinned all." And there is this gloomy view of a sinful humanity that's just nasty and needs to be saved. In my book, and quick joking about it, I talk a lot about Noah, who's one of my favorite guys, and we had our flood joke that you started with, which I will steal. But Noah crosses Old Testament, New Testament, and onto secular thought. He's a pragmatist, he's an optimist. I mean, here the world is coming to an end, there's clearly apocalypse happening, and he and his wife and his kids get out the tools and the planks and this mysterious voice has told them to build an arc. And what I try to say is that is us. Whatever happens in human history, global history or theological history, we have to build the arc and to me, that's a tremendously hopeful story that we can do that. And so I try to construct a counter narrative, sort of starting with Noah, but leaping forward to that tiny band of early anti-nukers who, as I said earlier, were concerned about global trans-boundary pollution called radiation fallout, created a huge worldwide movement, which did give us the limited test ban treaty, and I know the limits of that.

The nuclear freeze movement, for all its problems, actually helped to lead to reductions and cuts. I was in Reykjavík, and Reagan and Gorbachev are not just actors by themselves. There was a huge worldwide movement to help produce that. There's a less known period in the 80's and early 90's where I worked with a few people in this conference, to move along the process of ending the nuclear weapons production facility by dealing with environmental health and radiation. And so we shut down all facilities. A nuclear freeze was accomplished, meaning nuclear production testing ended. The complex was pretty much shut down through local actions of people around those sites, of victims, of Navajo miners, and downwinders and a whole collection of people. That narrative leads up, in my view, to the Iraq war, which obviously it is still going on. It looked hopeless. And we did those worldwide demonstrations, but actually now we come to Obama. How did he come down out of the sky? Bad historians will say this great human was raised up or popped out of the Bible or whatever, but it really started with humans that led to deniacs in Iowa in '04, that led to internet and building a huge thing that, ultimately, now some elites have learned to use. And so it's that narrative that we helped get Obama who said, "Yes, we can," not "Yes, I can."

So, without oversimplifying the narrative, I think we have a clear choice. I also think we divide easily between optimists and pessimists. Those of us who work in Washington have to be optimists. In the words of The Gipper who I love, Reagan, "there's got to be a pony in here somehow." You can't keep shoveling that shit year after year down in Washington without thinking, "We can do this." The opposite of that is a kind of profound pessimism that some people are drawn to is deep thinking. I haven't heard yet the connection to the mechanisms of change. In politics, Leo Szilard started The Council for a Livable World. This sounds sort of meager in the face of apocalypse, but I think there's a set of intermediary institutions, organizations, and politics that we need to talk about, such as which organizations, how do they work, how will we push the senate and congress? Ultimately, I see a pretty hopeful narrative there, so we can duke it out later.

COMMENT:

I had a very interesting, provocative point about how there's this strand of realistic thinking in these abolitionist narratives, and so how do you sell to other countries a narrative that has smuggled within its heart a way of reviving American dominance? It's a very important point. As an anthropologist, my job description is to try and ask myself constantly how things look to people in the third world, if you want to give them that title. There are some days that I think that if you live in the third world, the direction in which to go at this moment is not nuclear abolition, it's for everyone to have nuclear weapons. Why shouldn't North Korea have them, why shouldn't Iran have them, why

shouldn't Saudi Arabia have them, why shouldn't Nigeria have them? That's the root to empowerment from Western imperialism and oppression if you live in the third world.

Reaffirming my hope for abolition, it seems the role of narratives is precisely to paper over contradictions, to mediate contradictions, to present narrow, sectional interests as if they're universal. Good storytellers, like Obama, can take something which has traction in American politics and the machinery of American politics because there's been a recalculation of the national self interest, and they can tell a story of universal salvation, and universal self-interest that comes out of it. That's precisely why stories are so important and why people just talk in the language of interests can never really move a public. That's the job of the narrative.

FLYNN:

My issue about abolition, as it has been narrated, and maybe I didn't make this clear enough, is that it's less about nuclear weapons and more about a kind of relationship to exterminatory violence. Maybe this is where the human security folks are telling a different kind of tale. I think that the abolition movement should be creating a story that insists that exterminatory violence and the capacity for exterminatory violence is not tenable. And I'm talking about exterminatory violence against human beings and against the natural world. Kissinger, Shultz and all these newly minted abolitionists are not going to sign onto this agenda, they are exterminatory to their core. Maybe this is the difference between the national security narrative and the human security narratives. Maybe that's the story that needs to be told also.

KRIEGER:

I think there's some split about the way to get there and whether it's by influencing elites, or whether people are needed in this picture. Going after elites seems to me a larger leap of faith than the possibility that we might have a narrative that awakens people to actually press for change along these lines.

If they do support abolition, they must do it in a very quiet way. Obviously, they have restrictions on what they can say publicly, but what the spokesmen in the area of nuclear weapons say publicly, is that deterrence is needed. It's needed for the foreseeable future, not only deterrence for ourselves, but extended deterrence for all who depend upon us, or who otherwise might want to develop nuclear weapons themselves. If what you're saying is correct, that they secretly support abolition but have no capacity to address it in a public way, that's a huge problem that needs to be addressed.

COMMENT:

In terms of the military, it's not public, but you have to look at what's happened. The flying around of those nuclear armed cruise missiles reflects that no one cared. These weren't useable weapons, these were lousy jobs, they didn't pay attention because we're never going to use them. And the Schlesinger report, which I urge you all to read, that just came out, is chilling. It says precisely that the military has stopped caring about nuclear weapons and that the highest priority of the President elect should be to re-invest in nuclear deterrence and to shake up the U.S. military establishment and require them to do what they're not doing now, which is give any priority to nuclear deterrence.

It's happened in Europe. The Commander of the U.S. Air Force in Europe wants to remove all the nuclear weapons from Europe. Rumsfeld wanted to do it unilaterally, not even telling anybody who was doing it, but just get rid of it. The push back is coming from people in Europe, governments in Europe saying "No, No, don't you do that." The Schlesinger people are reprimanding the head of the U.S Air Force and saying, "that guy shouldn't be in charge anymore. You should put it in charge of a new nuclear bureau in the Pentagon. That's the kind of material dynamic that is going on that's kind of missed at the rhetorical level.

ZIA MIAN:

Two observations. With this talk of stories and the prophetic, I ask what happened to the enlightenment? You know, we have reasons, we have democracy, we have institutions. I worry about all this business with demons and all the rest of it and I kept thinking, what would Mahatma Gandhi say? He even managed to find some decent things to say about the British. The point being that one of the lessons, I think, I've learned from the bureaucratization of everyday life by creating states and state institutions, is that people do this for a living. That doesn't make them into demons. They do this for a living.

The second thing in all this business of storytelling is who is telling the story to whom, exactly? There is now, in one sense, if you tell a ridiculous story here it will be heard by other people in other places, and the story will be heard as something completely different. There is no such thing as telling a true story—because that story will be heard in many, many ways, often completely in contradictory ways. One presumes that there is a story and the meaning of the story is clear.

JENSEN:

Let me sum up, because there are some tensions, not between people, but between ideas. Some things that came to mind are first, is there a way to speak about universal principles without pretending that there's a universal voice? I think that's one question, because I think there are only local voices. The second is, with that in mind, is that task to build an arc or to build arcs? Is one of the problems of that narrative that it is centralized power in a sense? Third, is there a way to retain a radical understanding of the world and work on reforms, realizing that unless one is a revolutionary? And then finally, I don't think of myself as a pessimist. I think of myself as very optimistic, in a sense, so the question is not "can we do it," but "what is it that we imagine we can do?" I don't imagine I can beat Michael Jordan in one-on-one basketball. There are some things I imagine I can do, and I think defining the possible is one thing. And then finally, since we ventured so consistently into religion, I was struck on the demonic of Abraham Heschel's famous line in his book on the prophets where he says, "what the prophets did was call out a people to remind that few are guilty, but all are responsible." I think that's sort of the modern. It's what makes being human in the modern world so hard. Few are guilty. McNamara is guilty. Kissinger is guilty. But all are responsible.

Panel Session *5*:
Environmental Issues and Abolition

RANDEL HANSON:

I have been asked to speak to the question of nuclear waste and abolition. And I'm here to say that on some fundamental level, that question is oxymoronic.

Nuclear waste is an enduring substance and will be here in practical human terms forever. Simply put, we aren't going to abolish nuclear waste. Rather, our framework is necessarily to devise ways of ecologically containing it from the biosphere for extremely long periods of time as well as build in some kind of institutional memory system, be it passive, active, or combinations of both, that reiterates this reality across generations. Indeed, this is not one of those problems that we can 'once and for all solve', attractive as that framework is for our contemporary sensibilities. For wherever we put this enduringly toxic garbage on and/or in a dynamic Earth, it will forever remain a threat to life, human and otherwise. And in spite of the upbeat official narratives surrounding Yucca Mountain and other sites for nuclear waste internment, serious social and scientific disagreements rage as to the ability of humans to create systems that successfully keep the waste from the biosphere for the long time frames of its active toxicity.

Nonetheless, nuclear waste certainly fits into the broader conversations surrounding the abolition of nuclear weapons, because whether we desire it or not, all of our nuclear weapons, and all other nuclear materials created by human hands, will become 'waste', which is to say, materials in need of ecological containment. And that waste already created in the nearly seven decades of our nuclear experiment, filled as it has been with great human suffering and ecological harm, is documented, ongoing and begging for honest address.

This morning, Richard Falk began our conference by speaking about a couple of different aspects of war. First, he spoke of 'hot' war itself and the actual fighting; and then he spoke of a second war, the war over hearts and mind. These frameworks reminded me of Kai Erickson's work in *A New Species of Trouble*, in which he explores that category of human suffering which is part of our modern technoscientific abilities to manipulate matter at chemical, biological and nuclear levels. These deep powers not only add to our sword and tool-boxes; they also add to our garbage piles in ways that often insidiously endure across communities and generations.

As it concerns nuclear weapons, activists and researchers have observed for decades that that we have added a new category of war, which following Richard's framework we might call 'the third war', which consists of the enduring aftermath of either the production of nuclear weapons, their use, or the use of some of associated waste materials. The third war includes 'the war at home' as one book frames it, which is to say, the way that the U.S. was turned into a sprawling factory system for producing nuclear weapons and the ongoing suffering that those communities still endure long after cessation of WW II and the Cold War. It consists of both material and psychological states of affair in which the enduring toxic aftermaths are dealt with for a long time by peoples in specific places across generations. It also include things such as the radioactive materials used in Bosnia and Iraq in projectiles fashioned from so-called depleted uranium. These are terrible affects of war which endure far after the hot war and the war over hearts and minds ends. Indeed, the fight over hearts and minds here as it concerns these enduring aftermaths is one of preventing forgetting, if I may use that awkward phrase, as well as convincing, for the biophysical realities of those aftermaths make it impossible to forget. And so when we talk about radioactive waste in a military sense, in addition to our own military use of these weapons, we must remember that our own citizens as well as the peoples we unleashed these terrible powers upon felt the effects of these polluted processes of nuclear weapons building. And many are still suffering from this war.

When we're talking about nuclear waste, we're talking about two different streams: first, there are those waste streams from overtly military activities itself; and there are waste streams generated from the commercial nuclear power industry, which is itself inextricably linked to military activities in their origins and for many nations in ongoing weapons development. I want to talk a little bit about both of these streams in terms of environmental justice.

Environmental justice is often more narrowly framed, but in my invocation of this framework, I want to talk about three dimensions. One is the relationship between human communities, societies and nations. A second level involves human relationships to non-human life. And a third level concerns relationship of present humans with future generations. When we speak of nuclear activities, we're marshalling all three of those dimensions of environmental justice because each of those domains are affected and afflicted in terms of experiencing the enduring aftereffects.

I want to first address the streams of radioactive waste created by the commercial nuclear power industry. Kai explored briefly in an earlier talk the decision to use deep geologic burial. And as Kai pointed out, the decision --which I would frame as justification via science fact and fiction-- to bury it at Yucca Mountain is still ongoing. About $20 billion has been spent in that endeavor. There are big questions remaining as to whether or not

Yucca is going to open to take a portion of the commercial nuclear industry waste. I say a portion because even if it does open, we'll need additional sites for 'disposing' of the commercial waste already generated. The earliest that the Yucca Mountain facility could begin to take volumes of waste is 2020. I suspect it's probably not going to happen. Too many uncertainties exist, uncertainties that are detailed in the scientific and public relations battles over the project. These uncertainties, and the public and back room conflicts surrounding them, are intriguing, urgent and complex. You could point to a discipline like geology, which as a rule is deeply skeptical about knowing and/or stating with any degree of certainty that you can successfully inter the waste over the million years mandated by federal courts. (How the mandate over length of time for 'taking responsibility' for the waste from 10,000 to 1 million years is also intriguing and complex, but also the topic of another conversation.) On the other hand, many engineers associated with the project are willing to throw their lot into the million year void, producing data that seeks to convince a deeply skeptical public in Nevada and elsewhere that things would be under control. If not, if the waste somehow does leak --through geologic disruption, normal water flow, whatever-- the site lies in the Colorado River basin, and contamination could have deep and broad consequences to all forms of life in that huge area of the southwestern North America. In spite of these unsolvable uncertainties, Yucca Mountain could end up opening and taking huge volumes of waste. We could end up forcing it, which if it does open up will definately be the case, since there is so much public opposition and unsolvable data claims and conflicts. If it does open, the trucks and trains would roll in across our highway systems for decades. And then we'd need to start looking for another site, because as earlier indicated, Yucca Mountain won't hold all the waste already generated.

The research, writing and communication work that I've done over the last decade has dealt with one of the ways that the nuclear power industry and its governmental boosters worked to deal with commercially generated waste. This includes the 40,000 tons of radioactive waste already created by the nuclear power industry as it has evolved since 1957. As Kai pointed out, there was very little movement on trying to figure out what to do with this waste until in the 1970's; and even then, a patina of 'technological optimism' held that the solution was purely technical. And the bill that designated Yucca Mountain as the sole site under consideration (affectionately known in some spheres as the 'Screw Nevada Bill') didn't take shape until the 1980's. The kind of delayed action of finding a so-called solution to that stream has always characterized the problem of nuclear waste, whether in the U.S. or elsewhere.

By the late 1980s, commercial nuclear waste was becoming an increasingly public issue, since it was piling up alongside reactors across the US. The public was getting nervous about amounts of waste on site locally. At the same time, no new reactors had come on line since the 1970s. Nuclear utility companies were asking for and receiving permission

to extend the licensing of reactors in use, which had a public hearing component in which the indelicate problem of the waste was also being aired. In a bid to figure out what to do with that waste in an interim sense, the commercial nuclear industry and the US government hatched this plan to market it as economic development. Since states had already been saying no to nuclear waste as part of the Yucca Mountain process, this left Indian tribes as possible destinations.

Thus was born the U.S. Nuclear Waste Negotiator's Office, a quasi-independent entity associated with the Department of Energy. In a nutshell, the US government hired promotional salesmen to spin nuclear waste as not the supreme ecological bad it was but rather as a new, neoliberal economic good. This process of marketing nuclear waste to American Indian tribal communities ran its course over a period of about 10-12 years, with many twists and turns, and deep divisions were created among tribes whose councils considered the sales pitch. Suffice to say that venure has likely come to an end because the last standing tribal council that sought to take nuclear waste as economic development, the Skull Valley Goshutes in Utah, were formally denied the right to do so by the Department of Interior, which administers a conflicted trust responsibility over the decisions of tribes. And so commercially generated nuclear waste remains on site at reactors across the country, awaiting Yucca Mountain or some other interim or final 'solution'. And until some kind of palatable solution to waste can be articulated clearly and set into motion, it's going to be very difficult for nuclear power in the US context to take off again.

As we've talked about in an earlier session, there's been great talk about the doubling of our electricity capacity generated through nuclear means by the Bush administration. And, in fact, very significant DOE funds have been devoted to that project, themselves shifted from the cleanup process and devoted to the boostering of more commercial nuclear power. Currently there are some 60 some sites where nuclear power exists in the U.S. with 110 reactors in potential operation right now at any given time. Originally these sites were created to have twice the number of nuclear reactors on them, but some minor things called Three Mile Island and then Chernobyl happened and slammed the door on that optimistic plan. Most likely, given the logics of late industrial garbage in general --which tends to follow the paths of least resistance, which is to say, the places where garbage already is-- the expansion of nuclear power will take place on the sites where nuclear power already exists. To do that, somebody has to figure out how to frame what's going to happen with the already existing waste that is there. Every year we generate about 2,000 more tons of radioactive waste. That stuff is just piling up at these sites. What are we going to do with this? That's a major question for the boosters of nuclear power to "solve" so that the take-off of the expansion of nuclear power can really happen. That's one component of what's happening with radioactive waste in the commercial stream.

In the time I have left, I want to turn briefly to the military stream of nuclear waste, which is voluminous. Up until the end of the Cold War in the late 1980s, it was very difficult to assess the state of military waste because of the secrecy and centralization of those sites. Beginning in about early 1990's, there was a kind of *Glasnost* and *Perestroika* moment within the DOE that opened up files for the public to help assess what had happened. Scholars, scientists and activists jumped on this opportunity and access for assessments and participated in conversations about what was going to happen with this nuclear waste generated by Cold War nuclear weapons, research testing and so forth.

There are a lot of messy details to that process, but I'm just going to jump to what I believe ended up being the grand narrative of it in the mid '90's, which was that we were going to create something called "The Legacy Program" that would consolidate the messy and voluminous amounts of military waste on the continental factory system for producing nuclear weapons. There were about 150 sites that were deemed very difficult or too expensive to clean up. These sites may or may not ever be cleaned up. The National Academy of Sciences got involved and critiqued what the DOE was saying, and after much ado a new plan was hatched to clean up these up these wastes over about a 50 to 70 year period. Money for this clean-up would come from the DOE budget and The Office of Environmental Management, and the DOE was required to be more specific in figuring out ways to consolidate the wastes and clean them up. That got going in the mid-90's and was proceeding; yet again, there were a lot of problems with it, but at least there was a plan.

When George W. Bush was elected or appointed President by the US Supreme Court, he appointed Spencer Abraham as the Department of Energy head, who made an assessment of that program and basically threw it out. Rather, he announced the creation of something he called "the accelerated clean up plan." And I quote: "The old plan for cleaning up our sites call for a timetable of some 70 years to compete at a cost of $300 billion. That's not good enough for me, and I doubt it's good enough for anyone who lives near these sites."

And so there was a lot of rhetoric about doing a better job, spending more money, cleaning this up quicker and sort of bashing through the problems of the Clinton administration as it concerned this issue. Unfortunately, and perhaps not surprising, what happened was not quite what the words may have suggested to an average, educated listener. Rather, the budget was slashed and a strategy of re-classification of what counted as waste emerged. A new category was developed called "incidental waste," and anything so named could then be left on site because it didn't fall under the rules and guidelines of the Environmental Protection Agency and the Nuclear Regulatory

Commission. This incidental waste pile magically grew overnight and so the clean up could be done much quicker with a lot less money.

This process associated with the “accelerated cleanup program” was resonant with what happened in the Bush administration more generally: a lot of rhetorical slippage, a lot of dropping the ball, and a lot of strategic undermining of governmental credibility and capacity. What they did do was pour a lot of the money from the DOE budget slated for cleaning into the low hanging fruit, the places that could be much more easily cleaned up in these 151 sites. And they talked to places like Hanford and Savannah --places where it’s really nuclear nasty-- and they said, 'Look, let us do this right now, and then later we’ll devote a lot more budget to helping you. And if you don't agree, we'll back away from proceeding on much of anything.' So these places agreed to it, in part because there was this kind of de facto blackmail process going on. Through this process the Bush administration winnowed the number of sites from about 151 down to 24. And they have systematically cut the funding for this Office of Environmental Management over this period so that these remaining, much more complicated sites are now deeply underfunded.

Last year, the Assistant DOA Secretary, James Rispoli, did an audit that showed the costs of doing this remaining clean-up. Even within the terms of the new Idimensions of what counted as waste within the Bush administration, the cost was deemed to be much higher, more than $50 billion higher, than their earlier estimate. Additionally, Rispoli's assessment declared that it wouldn't be done by 2035 as the Bush administration had set up in 2002; rather, it would be at least until 2062 to do the job under the accelerated cleanup program. At the same time, the DOE budget allocations for cleanup continued to be slashed as the Bush administration focused DOE monies on new nuclear bunker busting weapons and expanding commercial nuclear power.

And so, that’s the snapshot, as I understand it, of what’s happening with nuclear waste at these two streams. It is an understatement to say that the Obama Administration has a lot on its plate. In spite of this fact, we need, I think, to pressure the Obama administration to finish the third war at home. This is the third dimension of WWII and the Cold War, and the communities who have already suffered physically and psychologically across several generations deserve responsible and truthful cleanup of The Cold War nuclear weapon sites. And we need to honestly rather than expeditiously assess Yucca Mountain and where the growing amounts commercial nuclear waste will end up.

If not now, then when?

ROBERT MUSIL:

Randy, thank you. That's a story in a set of analysis that most Americans know nothing about and it's absolutely critical, I think, that we get it out there. I'm going to blame everything I say and what's wrong with it on Kai Erikson because we all need a scapegoat. I made the mistake of going into American studies, which at the time, was the cutting edge, interdisciplinary, boundary breaking discipline. I since have broken many others from public health to communications, foreign policy, etc. and so, what I want to do is use my American studies, history-journalism narrative frame and not my policy frame.

I wanted to tell a couple of stories and try to think about how and what we can do to bring together a larger group of Americans to help us with this problem that we have. It has been my goal since I started on this business many, many years ago to try to translate complex, expert information to regular Americans, if there is such a thing. To break out of academic jargon and specialty jargon and try to translate through radio programs and the like. And I still think that's what we need to do, and so in a very brotherly way, man, I loved your talk because I follow it, I know it. I also know it's hard for others to enter into our narrative.

What I've witnessed over a career, having been in at least five different coalitions in Washington, national and international ones related to nukes, environment, climate, energy, nuclear waste, guns, toxic chemicals, agricultural facilities, etc, is that we're all part of one great big progressive diaspora that is now beginning to come together as we see the planet at risk. And we've been able to look at the planet since earth rising and the photos from space for quite a while; we've had a revolution in our thinking. We've been slow to pull back together this diaspora of the women's movement, gay and lesbian rights, civil liberties, nuclear waste, nuclear power, and one could go on and on. Part of that, I think, is the failure, particularly about a generation ago of our political parties. The democratic party drove out many of us who were then young, with failure to seek the Mississippi Freedom Democratic party, with allowing people to be beaten in the streets in Chicago in 1968, I could go on with a litany. We now have the opportunity with the bifurcation of parties and with the election of Obama to reenter into politics, which is another one of my themes.

Whatever your issue, women's rights, civil liberties, nukes, abolition, we need to put together something resembling a national summit. A National Security Council of non-profit advocacy interest groups that can transcend and make us more powerful. To transition to my stories I have to go back to the beginning of the nuclear age. To understand Obama, we have to begin with prehistoric times or 1945. But I've always been reminded all day of a story I was told by several nuclear scientists who were at Alamogordo and The Trinity Test. I've heard it from a number of these folks in which

every man is out in the desert, a little bit drunk, and The Trinity Test goes off and all of those awful roiling colors and mile high blast and he looks up and he says, "Oh my God. The long hairs have let it get out of control." And I thought that was a pretty reasonable response for every man.

I was then reminded of David Lilienthal who was involved in decisions and tried to oppose on a variety of grounds the decision to build the hydrogen bomb, the big, super bomb. I got to talk to him and interview him at great length for a radio series and he told a similar story that they were meeting at Dumbarton in Washington and discussing all these great issues of what to do about the H bomb and every time the gardener would wander by the window, Lilienthal said to me, "I wonder what that guy is thinking. Here we are in secret, figuring out the fate of the world and this guy has no idea that we're in here doing this."

I think Lilienthal felt guilty, along with George Kennan who told me another story. He also tried to prevent the building of the hydrogen bomb. He was the head of the Policy and Planning Division in the State Department, and the decision had come down.

George Kennan wanted to convince Truman not to go ahead with the H-bomb. To make a long story short, George Kennan was a thoughtful, kind, erudite man who told me he still felt bad that he had handed in his essay late. He wrote a 79 page essay quoting Shakespeare on the dangers of power. The Joint Chiefs had already put in a 14 point briefing memo many months before in crisp, "Joint Chiefs" language, explaining why we needed the H-bomb. In this case, Lilienthal was unable to convince Hatchison or Truman. But he, too, wondered where the ordinary person fit into this narrative.

That is really my theme, because Kai, you were talking about "peering in the windows." Being humble, you're not, among many other things, you're not exactly a nuclear expert, but in the windows analogy, you're trying to figure out what's going on inside. That's what we're all trying to do, whether it's the every man outside of Dumbarton, whether it's the drunk watching the results of The Trinity Test, or it's us trying to figure out what will happen inside the Obama administration and who will prevail, or what's going on in this nuclear priesthood.

I say that because the part of this story that gives me some hope is that a friend of mine, Ken Cook, was one of the leading people to oppose Yucca Mountain. I was up close to Yucca Mountain. I've been involved in many, many years, in studies of radiation and what it does to you, and I had the happy, bizarre, experience of testifying to the EPA on plans for radiation and its standards 10,000 years out. Who needs absurdist theater when you can testify to the EPA about standards of that sort of thing?

Ken Cook is head of The Environmental Working Group. He and I, on the inside, led the lobbying (not the whole huge movement) around Yucca Mountain. Ken was with The Environmental Working Group months before and knew nothing about Yucca Mountain. Ken wanted to say, "How can I get ordinary people involved, not just the experts in this room. And so, with his sort of genius partner, they constructed a website in which any one of you could click onto maps to see where the radioactive waste would be shipped through your neighborhood by rail to Yucca. If you went to the Environmental Working Group website and partake in the last great battle, the legislative battle, over Yucca. Now anyone could go to a website and say, "Holy Shit. I didn't know there were train tracks going near Bethesda, MD. I thought I was safe from everything. That's why I paid excessive amounts for my house."

Hundreds and hundreds of thousands of people clicked onto that website. I remember the conversation with Jim Jeffords, then the head of the Environmental and Public Works Committee, and I spoke to him about how you need to really talk through the wastes and the casts and how they get delivered and the underground storage. But he said the staff of the Senate Committee was aware that this had now become a public issue. It had burst the bounds of the nuclear waste groups, the nuclear abolition groups, and had entered into some, not fully mainstream, but a larger venue where there was a chance for every man, for the gardener, for us, to look through the window and be heard and seen.

That's the kind of narrative that we earlier were talking about –what narratives do we have, what hope do we have, to penetrate this stuff? I try to tell those stories which are still not well known, such as the public movement about the wastes themselves or how we beat Yucca Mountain. Yes, there was some gambling money from Nevada that went to Harry Reed that made it out to groups, but it was primarily the involvement of ordinary citizens.

That leads me to the question: what we would do here? As I said earlier, I think we need to expand our allies and our understanding of the movement. That there's a great diaspora of people all of whom share our interests. If you go to a women's meeting, or the civil liberties, they're all sort of liberal, and progressive. They're worried about the planet, they're worried about their kids, and about waste. We've just divided up into our specialties. So how do we put that back together? I think we've had the revolution and thinking that Einstein talked about. Humanity has the capacity to destroy the earth through nukes. We've had another revolution and we realize we have the capacity to destroy the earth through our industrial production with both toxic chemicals and carbon dioxide and other greenhouse gases. That's the apocalyptic narrative.

We have another way of looking at this that started with earth rising in about 1969. Humans developed the capacity to understand that we live in a little fragile, blue planet that Al Gore shows in his movie. We can see we're part of a planet where there are no boundaries, there are no Americans, there are no Ukrainians, it's us. That is a revolution. Technology now allows us to understand global climate change, to measure the depths of the ocean, to find out what's happening with El Nino's and hurricanes and the like. The other revolution is an internal one that I paid a lot of attention to at Physicians for Social Responsibility through developments in microbiology, in medical technology. We now are able to see and measure inside the human body in ways that were previously totally unknown. Some of us are old enough to remember when we looked at paramecium under a sort of a funky little microscope and wondered that we could see cells in water. We now are able to trace molecules that may come from PCB's in Texas when a transformer breaks and ends up in the breast milk of a mother in Greenland that then affects her child. It also affects polar bears. The internal revolution includes that we can see that we humans have made a philosophical and political mistake, in my view, of labeling the environment, the planet, as something other.

The effects of nuclear waste and toxic chemicals affect us globally and enter into our bodies, literally into our cells. We can measure that, we can see it, we can take body burdens. We are not separate from that blue planet or the polar bears or the nuclear waste. We need to break down that barrier and begin to talk about what is sustainable, that are we a part of a larger narrative of humans, philosophically not distinct from the other molecules and species on the earth. We need to look very deeply at everything we do. I think this will begin to pull in broader constituencies from environmental help movements. As I said earlier, the great early nuclear movement was founded upon not just by Einstein and Lord Russell, but also Barry Commoner, Linus Pauling, and Ben Spock and others who measured radiation in babies' teeth and brought the great cosmic questions, the planetary questions, the blast, down to mothers. These then became issues that were human.

In wrestling with environmental questions and global climate change, I've been trying to figure out how to get people into the equation. I got an idea, borrowed, of course, from a friend of mine who runs The National Religious Partnership for The Environment, Paul Gorman. Paul told me a story of how he got interested. Bishop James Malone in Ohio was unemployed doing work around the declining rust belt near Youngstown, Ohio, and said to Paul Gorman, the head of this religious environmental coalition, "Paul, how come environmentalists never have pictures of people in their materials?" It encourages me to spend some time talking about how it's not just penguins and polar bears but people too. Getting people back into the picture, into the narrative of climate change, has transformed a debate that went on for decades. Al Gore has been doing this since he met Roger

Revelle at Harvard in the 60's. The facts weren't enough. It required narratives and stories and including people and building a movement from that.

I work in Washington. I said I'm an optimist, but I also see that it takes all of the above. Now I'm going to wax biblical in close and ask you to come to the altar. We all have different gifts. Some of us are computer jocks and wonks and quiet and we sit there and we do research all day long. Some of us like to be out front and talk and tell stories and give sermons or speeches or shout into a bullhorn. Some of us see evil, devils that need to be exorcised. And Michael, this is something that I agree with you. I come at it from a more pastoral approach, so they send me to talk to the people in Washington. You presumably are out there worried about evil. It takes all of those things.

To conclude back with you, Randy, we need people shouting at the margins, calling and talking about the apocalypse, but we need to talk more about what mechanisms can take that energy and lead us toward Washington, which, frankly, is where the decisions in this country are made. Change ultimately happens in the legislation, and in the policy-making. That, however, is not where it develops. I hope, as we write our final Einstein manifesto that it can talk about humanity broadly and can bring in our allies in environment, public health, women, and children, to talk about our need for a sustainable future and allow the ordinary person, who sees those windows going by, or the secret rooms where people are debating our fate, the opportunity and inclination to participate. Some of us will shout, and some of us will cajole, and some of us will see apocalypse and some of us will see hope. But we need to build those mechanisms from out in Arizona or around the Four Corners, where the wastes are, to Washington where the decisions are made, and carefully link them. I look forward to working with all of you and signing the manifesto and solving these problems once and for all or at least for the time being.

CHARLES STROZIER:

Both of those presentations were very interesting, and I just want raise a question. I think that you, Randy, lay out some extraordinary information. You had a phrase about the "ecological burial." It was wonderful. You evoked some wonderful metaphors as well as astonishing facts and figures that I really did not have access to before. But the metaphor of war, I think, is not helpful. We're a nation fighting two wars right now. And we're about to lose two, or certainly we're about to lose one. I think to talk about the third war or to evoke war and all of the feelings that the nation appropriately has about the immorality of the process that led us into war has tainted any kind of war metaphor as motivational at this point. In the contemporary context especially, the metaphor is not only sort of spiritually bankrupt, but I think it's counterproductive politically. Furthermore, the war on terrorism is poorly defined and represents the bankruptcy of

ideas since 9/11. So, I would urge you to think about a different way of calling forth activist impulses from people.

I also want to comment on what Bob and Kai mentioned about the fact that it took us decades to start thinking about waste. It's an extraordinary historical phenomenon. Kai, you mentioned that at first you can see them not wrapping their heads around it at the very beginning, but the figure Peter Kuznick gave may help. He said that we went from 1,000 nuclear weapons at the beginning of the Eisenhower administration to 23,000 nuclear weapons at the end of the Eisenhower administration. The so-called peaceful, non-activist, sleepy 1950's was the time of the great commitment to these genocidal weapons.

It was in the 70's and the 80's before people began to think meaningfully about waste. I think it's useful to raise that as a question, whether you or anyone here has further thoughts about why that was the case. It was clear certainly by the end of the 1950's that there was no means at hand for the disposal of the waste, and yet it took another couple of decades before it became an issue which could engage people's imagination in any meaningful way. The question is what feeds into the kind of collective amnesia?

I'm so struck with where we are now with the environmental with nuclear power as being seen as the solution to all of our problems with energy. We all are aware how oil is a finite resource, we're reaching the end of it, and we've tied a foreign policy to it, and it makes us insecure, and fosters terrorism, the Iraq Wars and all the kinds of conflict, and yet the answer is not to think meaningfully about alternative sources. Well, I shouldn't say not at all because there are solar energy and certainly people turn to it. But corporate America is not going to embrace windmills. They're going to embrace nuclear power. You mentioned this, and I completely agree, that to separate out the anti nuclear weapons world from the anti nuclear power world, as was done for so many decades in the anti-nuclear movement, is not beneficial to the cause. I remember debates and meetings in the 1980's where everybody would be concerned about nuclear weapons and Reagan and then there would be one person who'd say, "what about nuclear power?" They are coming together now.

COMMENT:

Can I just comment for a second on that? First of all I have this book out called *A Sustainable Energy Future is Possible Now*. It has like a 188 footnotes to studies to show that we can power up the whole world with sun, wind, geothermal and marine energy and we don't need fossil, nuclear or bio power. The reason ethanol is taking off and why nuclear and fossil fuels are being pushed is because they have something to sell. It's a

corporate thing, but if you were to rely totally on the sun or the wind or geothermal, you might have some profit to make from the infrastructure like the windmills, but you couldn't be constantly selling the feed stock and all over the world, people would be accessing their own free source of fuel. My take on it is the commercial corporate gang-up on the world to do everything they can to make you think that the other kind of energy really won't work and that you need this death giving kind of energy

CHARLES STROZIER:

I was talking about the question of the appropriate level of fear in the other session and I just want to throw it out here again. I think dealing with environmental issues is very appropriate because if people get terrified, they get immobilized and they get numb. On the contrary, if they forget about the fear, like in the 1990's when people assumed we won the Cold War and we didn't need to worry about nuclear weapons and nuclear waste, then they alternate between numb forgetfulness and hysteria. Neither one is an appropriate level of fear. We need to think about environmental issues intelligently and wisely and keep alive that question of fear. It is so devastating in and of itself in terms of the waste it produces, but that issue also connects to all the questions of bombs as we've been talking about.

Finally, to end on a hopeful note, it seems to me that the issue that young people most connect with right now is the environment. No question about it. The issue reaches down to teenagers, from 12, 13, 14 year olds up to people in college, in universities, it's the single issue which people get. That is the handle, I think, to connect with in building the new anti-nuclear movement.

We need to make the connection to the environmental movement very specific and to try to build on it. We have an historical antecedent. Rachel Carson in "Silent Spring," for example, was motivated by the nuclear issue in the 1950's. The earliest beginnings in the last half century or more of anti-nuclear energy really stimulated the early environmental movement. Now we've got the reverse. Now we need to recover that history and build on it to connect anti-nuclear consciousness with the environmental awareness and energy that is very real. People feel that issue with great intensity, young people especially, who one wants to motivate.

COMMENT:

I also want to say, the metaphor or war, in thinking about the panel before I came here, I didn't have that. I was just sort of drawing from earlier speakers on that, but I think you're right in terms of the effect the word may have on us war weary Americans. Even

though it's been written quite a bit in terms of "the war at home," it would be useful to find other metaphors to talk about this gross reality and the need for thinking about it in terms of our infrastructure.

COMMENT:

I know young people who take my courses don't know who Rachel Carson is, but for those of us who do, it's always useful to remember, I think, that's she's associated in popular lore with "Silent Spring" and the decline of robins and pelicans and birds. Really though, much of the book is about human health and the effect of chemicals on humans, which, I think, is an important way to look at this issue. As you said, young people are interested in the environment, but they're interested in other things as well, such as exploitation and globalization, etc. People don't know, for example, one can click a mouse and activate a million college students on the environment. There are huge coalitions that are formally structured with have paid staff. They take the form now of things like "The Campus Climate Challenge."

So, I keep talking about bringing the diaspora back together. I would love to see this group have a conversation at some point about how we tap into the environmental movement and what are the obstacles? Why is it they don't do as much as they should about nuclear power, even though they're dealing with climate change and energy and cars and all of that other stuff? After we figure out what the problem is and how to frame it and discuss it we need to work on those kinds of practical questions. We could write some people on it. I mentioned The Environmental Working Group, and Friends of The Earth is another group that works on some of these issues. There aren't many because most of them were formed, in the past, to worry about specific environmental issues. More recently, they have begun to broaden their view to planetary sustainability, climate change, and energy. The time is ready to bring this issue to these groups.

COMMENT:

I think you also have to broaden the frame to get rid of nuclear weapons. If you're going to reach out at that level you have to talk about war. I have to speak about Article 9 in the Japanese constitution. We made them put Article 9 into their constitution stating that they could not have an army. Bush, over the last eight years, has been trying to get them to rescind it so they can send their cannon fodder to Iraq. We had a conference in Japan, and the stadium held 10,000 people and 15,000 people showed up to keep Article 9. I was reading that we had 200 million deaths during the 20th Century from wars, and most of those are civilians. It was roughly 20 million up to WWI I, but in total it's estimated to be 200 million, but maybe it's more.

(someone says: Sounds like a low figure to me).

Maybe we have to like, broaden the issue to get everybody in. Nuclear weapons are really like the brass knuckles on the fist of the empire. It's the whole thing. Russia's not even going to talk about nuclear disarmament if we continue with Star Wars.

CHARLES STROZIER:

T.S. Eliot had it right when he said we're either going to go with a bang or a whimper. They're two sides of the same coin. That's the kind of connection we need to make in people's consciousness.

COMMENT:

I think we all understand that in an analysis of the U.S. government, there are rival forces, as you always have to tell people from other countries. American policy is far more complicated than either the Capitalism or just the great leaders. There are bureaucratic complexities.

I would say that we came very, very close, closer than I've heard spoken of today, in 1996. It might not have been perfect, but Clinton, for whatever reason, did the Non-Proliferation Treaty permanently. The atmosphere was quite strong. Then the DOE opened, partly because old anti-nukers like Dan Reicher, who had been with the NRDC. Reicher ended up special assistant to Hazel O'Leary and working with her to argue why we needed this to go to the Clinton cabinet to do battle.

So, I think we are closer than people realize. We got up to 1996 with abolition and within U.S. policy circles and the military there is a lot of recognition, whether we like it or not, that these weapons are no longer useful, either to the humanity or to the American empire, and we ought to get rid of them. Of course, there are countervailing powers, and what I would urge, again, is that this group connect up with people who do the dirty work of having to argue with cabinet members, press on this and that bureaucracy. We should pay attention to who will be the Secretary of Energy and who is going to work there, who are our allies in the Department of Defense, as well as the academic and the grass groups. I have heard people speak against nuclear weapons inside The Secretary of Defense's office, and those folks are back. I've written the assistant secretaries and they're liberal democrats who are not friendly to abolition. That's the battle we want to get into backed by all the resources that we all collectively have.

KATHARINE BOYD:

A couple of things. First of all, I think it's important to acknowledge how during the Clinton administration the Enola Gay exhibit at the Smithsonian sparked enormous controversy. The abolition of nuclear weapons is necessarily fighting a well-developed psychological resistance. There are many people who defend bombing Hiroshima and are not ready to admit fault or take moral responsibility for the event. To abolish these weapons, on some level, involves acknowledging fault or wrongdoing in the past. We should really consider how to address this issue to the opposition in a way that can best serve the goal of getting rid of nuclear weapons.

Second, I think joining with the environmental movement is a very good idea, however, I think we need to consider how the environmental movement now sees nuclear power as a solution to the CO2 concern. I don't think people are aware of the waste problem unique to nuclear power. It would be interesting to bring this issue to grass roots groups to address power source at a local level.

COMMENT:

It seems that abolition has to be directed towards practice and institutional custom, something larger. There's an archaic use of getting rid of an object. Consider other issues of the past. One of the larger institutional issues people bring up is slavery. It's back. It's back in pretty big numbers. And if you look at this history of slavery you see it never really disappeared. Now, I'm not suggesting and I'm not a scholar on abolition movements, but it seems that if the institutions and the customs and the traditions aren't targeted, abolition is not successful.

I think one of the animated principles of the ecological movement is that there's a sense of basic survivability and that there's no where else left to inhabit, so we had better see to the health and sustainability of the planet for ourselves, as well as, perhaps, the larger spiritual connection of human continuity. I think that both are there. I think that Al Gore's film is very successful in talking about it as a moral issue rather than just a functional, political issue. I think this method has been successful in addressing the larger context of related customs and traditions. Even the evangelicals are getting on board with the environment issue after taking it on as a spiritual concern about the human place within the creation and our relationship to all kinds of organic and inorganic life. It seems that the abolition movement has not taken on the moral dimension of the issue. I'm not, again, an expert on it, but it seems like we're getting rid of the most wicked and destructive elements.

Some of my students say, "something else will come up. They'll make something else." I hear this concern regularly. Another issue brought up earlier is that there's a probably big split between ideas of who is going to bring about the abolition. Some believe that it will be an elite-led movement and somehow elites will come together and figure this out, and then there's the other part about where the grass roots and community come in. What is the role of ordinary citizens and the youth movement? I don't know the answer.

COMMENT:

Some say that it wasn't Martin Luther King that brought people equality, it was Lyndon Johnson. Others say this is considered racist and backwards and stupid. Are we not able to put Obama and Hillary together and say that we need a civil rights movement and a John F. Kennedy and a Lyndon Johnson and the foundations that funded the civil rights movement and the namesake churches that marched alongside them? There's contradiction all the time between the establishment and the movement. I think we need to put them together in ways that are protected. We need figure out the levels of power and how to influence them and learn what brought change and when and how. We have a perfect conjunction of forces right now. It does take a President willing to push, and it also takes a Congress willing to do that. The big problem Bill and Al had was that they had a Republican Congress. Clinton was elected with 43% of the vote. They couldn't get stuff through, and maybe they didn't push hard enough. We now have the President, the Congress, and we have a movement that I think has demonstrated that it can be successful with an historically unusual President. With this conjunction of forces which is very, very rare, we can align the grassroots with inside lobbying and build communications and organizational mechanisms and necessary intermediary groups.

Lastly, I just want to show how Al Gore's movie used the grassroots. 34 national organizations with 1300 members told their members through e-mail, classes, and websites to go to the first weekend so Paramount pictures will decide how many openings there will be and whether to build on this movie or not. There were 4,000 different congregations who held Al Gore movie viewings on the same night with millions of people. Nobody knows that in this country. It's not just a movie. That's the power of a movement. With that, you then need to figure out how to pressure Obama and his cabinet.

COMMENT:

I have to add something to this. I think we have to step back a little bit. We are in an incredible time of flux. As I said in an earlier panel, we might not even have capitalism when this is all over and we don't know what is going to happen. Even if you've got the

whole U.S. establishment lined up from Kissinger to Obama to Ralph Nader on nuclear power and nuclear weapons, we will not have anybody to talk to in Russia or China unless we give up Star Wars and NATO expansion. We have to look at a larger message. What do we want to ask for now as we move forward with this opportunity with Obama? If the message is too narrow, assuming we could all unite on the narrow message, we won't have anybody to talk to in the rest of the world and then you'll have people saying, "I told you so. Russia's not going along and China's not going along." It'll bounce back to us. We have to expand it.

COMMENT:

The word evolve doesn't strike me as the word we use to describe our mission. In calling this an abolition movement, we are defining what the other side has suggested comes much closer to our sensibility than it does to theirs. Is the bomb evil? I think it is evil so I'm going to call it abolition so that you people who take the bomb as a good thing understand the immorality of your stance. When is the last time you used the word abolition? We didn't abolish hard liquor. We didn't use it for that because it was a different type of movement. What I'm saying is the word abolition calls upon the kind of images and morality. If I go out to the land and say, "You guys have all these bombs, let's call it a garbage cleanup. Let's get rid of those damn things. They cost a lot of money and they are dangerous sitting there because they're a target. Why don't you just get rid of them because they're useless." You wouldn't use the word abolition for that kind of argument. The word abolition would be used if one were in the possession of something which God himself would not allow normal people to do and it is the end.

COMMENT:

That gets back to your own talk earlier. It is a fantasy that we can get rid of the waste once and for all.

COMMENT:

Kai, I agree with your vision thing, and earlier you were talking about the realism and the practical approach. I'm a little confused. I mean, when you say, "abolition names incessant evil, and that's a good thing," are you saying we wouldn't, at some point, have a conversation with the Secretary of Defense and say, "Look, these things aren't going to to help you"?

KAI ERIKSON:

Oh, sure. I'm really just making the single point, which I'm not going to be sitting on very long, that the language we use to bring the argument to the front is going to establish the nature of the debate.

STROZIER:

I think that's a brilliant point. The whole anti-slavery movement was one that began as a spiritual and a moral movement and it was framed very much so to fight an evil and it was understood that that was the discourse, that was the language from the 1830's through the 1850's and it generated violence. John Brown, for example, was a religious fanatic because at the extremes the discourse stirred that kind of religious energy because the issue became more intense before it was finally eradicated.

COMMENT:

Are you saying using the term creates more resistance because people are defending against such sentiments?

STROZIER:

Yeah, it's better.

COMMENT:

I'd be worried about two things. First of all, it creates the mood in which the conversation takes place and it may create resistance on the part of the opposition. Also, I'm not even sure it's a good description of what we're about.

COMMENT:

This discussion interestingly resonates with a variety of earlier conversations that nuclear weapons are not the thing themselves. It's exterminatory violence.

COMMENT:

I was thinking about the connotation that the word abolition brings. I think that it does divide the faction within America that is unwilling to deal with Hiroshima or acknowledge any sort of responsibility for it. I think that the best way to appeal to people who are very gung-ho is to show that getting rid of nuclear weapons is necessary, rather than to make accusations or suggest we didn't do anything wrong in the case of

Hiroshima. I think that those people would be much less to jump on board if we use that word as opposed to if we talk about how it's costing us a lot of money. If you go at it that route, we might be able to convince more people in those terms.

Panel Session 6:
The Challenges of Security in a World without Nuclear Weapons

ERIKA SIMPSON:

My name is Erika Simpson and I'm not going to introduce everyone in the biographies, you can read that at your own leisure. I actually have to start. I wanted to use Power Point, and I'm just going to go through my presentation keeping it short.

What I wanted to talk about are two challenges to nuclear abolition. I think these are two key problems so I'm going to talk about the U.S. doctrine of preemptive warfare and its implications also for NATO strategic concept and NATO's nuclear strategies. We've talked a lot today about how many of us have been involved in this movement since the Cold War. I've been involved since 1983, motivated by Helen Caldicott's apocalyptic visions, and then gradually learned a lot about how to perhaps effect change and reach people.

I teach 200 students a year in international politics and also an international security course, a fourth year course, and I was a Lifton fellow in 2003/2004. What I've noticed over the years teaching in this field is that many people have gone into what I call "terrorism" field rather than focusing on substantive measures to reach some measure of arms control. I have a student here, Christine, who came from Canada and she, too, will probably end up going in a different field. So, there's very few of us left.

When I was a Lifton fellow, I worked with Senator Douglas Roche who is a Canadian Senator and also a strong advocate of nuclear disarmament worldwide. We have written and worked on many reports which have been circulated and we've done a lot of different things. David Krieger and I have been to a lot of these same consultations and international conferences that we've worked on. Alice Slater's here and she, too, was at the Atlanta consultation. We've worked at Hiroshima. We all went to Hiroshima for the 60th anniversary and worked on the NPT in 2005. We've done a lot of extraordinary strategy sessions at Pugwash at Thinker's Lodge.

My own feelings about all this were permeated by a bit of depression because of 2005. I felt that the fact that 180 nations couldn't even agree on an agenda was a travesty. I put my mind to doing other things, doing less work on the NPT and shoring up the NPT in

2010. Doug wanted me to be on the Middle Powers Initiative with David and I chose not to. Instead I put my energy into other projects and one is a book on belief systems, what I call "critics versus defenders." I think defenders, NATO defenders, have very coherent belief systems as do people in Canada who have worked a lot on nuclear disarmament over the last 50 years. .

But why do I bring this up? I thought it would be best to work on a project which I call "nuclear insecurity." This is a book on a whole range of nuclear issues and today what I want to talk about is what I think are the two preeminent challenges to a nuclear weapons free world, and those are mainly the preemptive strategy, not just of the U.S., but of Russia, UK and France, and I also want to talk about NATO's strategic concepts. These are the two problems that I think prevent us to getting to the world that John Burroughs and others want, the world that Doug Roche wants, a world without nuclear weapons.

The short form for this chapter is the quote directly from Guy Roberts: "The U.S. is from Mars; Europeans are from Venus." This is a short way for me to explain the cognitive dissonance that I want to talk about. He's a preeminent hawk. He's in charge of NATO's nuclear planning group, which is very well versed in deterrence. When George Bush first promulgated the National Security Strategy of 2002, essentially he advocated: acting against threats before they're fully formed and possibly using nuclear weapons even in reaction to a biological or chemical attack.

That doctrine has been promulgated in 2002 and so the question that many of us in the arms control community are asking is whether NATO is going to move toward that doctrine. There are a lot of people, like Christopher Ford, who argue that we should be more ambiguous about nuclear doctrine. There are other countries like France, and so on, that I'll talk about in a moment, that are even more ambiguous. They think that's perhaps the best way to go. This doctrine is dangerous and the question remains, will the new Obama administration jettison that strategy or not? There has been widespread criticism since 2002, much from high-level world leaders including, obviously, Russia. This is all summed up in a variety of scholarly articles, but what I want to talk about is not so much the tactical implications of preemptive doctrine. I want to talk about the belief systems that are at the heart of deterrence.

When the U.S. government re-promulgated it in 2006 I thought I would go to Washington and interview decision makers because I thought they would actually cancel that doctrine. I went there, and I'll tell you what different people said. Daryl Kimball, arms control, basically understands they are going to stay with the national security strategy. They haven't learned from the scholarly dialogue or international debate.

I like to use a sandbox analogy for this doctrine. Children are in a sandbox and the parents teach their kids to never hit first. This doctrine is saying, "We're allowed to hit first with nuclear weapons." One must wonder, are other countries following that example? This is why there's a lot of pessimism. You can't really trace this. You can't say, "Oh, they have led other countries to follow them." What we see five years afterwards is that the United Kingdom, France, and Russia are all also asserting their own preemptive strategies. I've been to NATO headquarters six times in the last seven years and interviewed lots of policymakers including the British who considered their latest defense strategy to be a defense of nuclear deterrence. They don't pull any punches on that.

What the British most fear and what Americans, except for Guy Roberts, fear is a debate within NATO circles and within Europe, about deterrence strategy and moving toward a preemptive strategy. They would prefer to stay with an essentially ambiguous strategy where nuclear weapons are essential, but we do not rely upon them. They don't want to have a full scale debate in NATO's planning committee.

That said, I went to this conference with120 senior policy makers for academics and our role was just to ask probing questions. The whole time we were there all the criticism focused on Iran and Iraq even though the Japanese and Chinese were there. All the criticisms focused on the proliferation of what I call the small-scale rogue states and not on the U.S., the U.K and France, or other NATO allies.

I just want to talk about finding NATO's nuclear strategy, as NATO has about 100 nuclear weapons under U.S. control. Guy Roberts would like to have a debate, but they don't, in Europe, want to talk about nuclear weapons. It's very uncomfortable for the ambassadors there, so he's uncomfortable about that, but he sees his role as "the U.S. is like the heavy handed, stern father," and "The Europe is from Venus and the U.S. is from Mars." The Europeans are reluctant to face up to the usefulness of nuclear deterrence and the first use of force or pre-emptive warfare.

What we are going into now is NATO's review of its strategic concept on the 60th anniversary of NATO's founding. Myself and others in Canada are trying to change NATO's strategic concept. We're trying to get rid of the tactical nuclear weapons, of which there are about 100 of them. We have to think about the independent deterrent of the British and the French and also the international deterrent.

In many ways what we see now is this time where we could pressure NATO to at least talk about deterrence, because obviously it's hypocritical for the NATO countries to rely on nuclear weapons while at the same saying Iran and North Korea cannot have them.

I'd encourage you to look at our website. We have a NATO statement that I'm trying to get signed. David Krieger, I thought, summed it all up today when he said, "It's the belief systems about deterrence that are our problem." My own reluctant conclusion from having interviewed all these, what I call "defenders" of deterrence, is that they will continue to rely upon nuclear deterrence.

Eliot Cohen wants to have unambiguous deterrence. He's a hawk, thinking about deterrence and he's going to stay in that belief system. He's never going to change. But what about what I call a liberal dove? Here's Michael Mandelbaum, someone who would be an advisor to Obama, is still talking about the need to have nuclear weapons. I think what we have to do is try to combat the belief systems that continue to assume that deterrence is viable for the long-term.

I'm going to turn now to my good friend, John Burroughs.

JOHN BURROUGHS:

First of all, I, too, am proud to be a Robert Jay Lifton fellow. And, also, I feel privileged to be here for this really excellent discussion today. Erika made reference to The Middle Powers Initiative. I just wrote a brief for The Middle Powers Initiative which lays out MPI's general perspective, and mostly my perspective. I also passed around a statement of my organization, The Lawyers Committee on Nuclear Policy on Law and Nuclear Weapons.

From a technical and institutional point of view, achieving a world in which nuclear weapons have been abolished in a verified and enforceable way is very challenging. This is true regardless of whether an agreement on abolition is achieved in the near term or the far term. Given the huge number of warheads and huge amounts of fissile materials, even assuming political determination, it will take decades to be confident that all has been accounted for. George Perkovich and James Acton have explained all this and more, very well, in their recent paper, "Abolishing Nuclear Weapons." From a different point on the political spectrum, Christopher Ford has been writing about this recently.

But, it's well known to those of us who've been working in this field. It's no surprise. We all know this. I don't think we talk about it as honestly as we should, but we know it. Should the mission, therefore, be abandoned as hopeless? No, but the difficulty of the task should inform the way in which it is approached. Now I just have some suggestions, and I don't think this first one gets enough emphasis. It is necessary to entrench the norm that the threat or use of nuclear weapons is unacceptable just as slavery or genocide by gas chambers is unacceptable.

Now, for those of us who are familiar with international institutions, there are some pretty straightforward ways to do this. One would be to add nuclear weapons to the list of specifically banned weapons in the Rome Statute of the International Criminal Court. There's a procedure specifically designed for this in the Rome Statute, an amendment procedure. For this very purpose, adding banned weapons, there are already some banned weapons listed in The Rome Statute: poison and poisonous gases, expanding bullets. Let me just talk a little bit about geopolitics here, though. You probably know the U.S. is not a party to the International Criminal Court. Russia, China, India, Pakistan, Indonesia, Iran, among others, are not party to the Rome Statute either. Most of those countries are also not parties to The Land Mines Treaty or they're not going to be parties to The Cluster Munitions Treaty. I think there is something going on in which the Northern major powers are declining to join into these international security agreements. Now maybe that all would change, or even will change, if the U.S. changes its approach, but maybe it won't be quite so easy. We have something to keep in mind.

A second way in which to entrench the norm is by a Security Council resolution that would be binding on the world. The Security Council declares "the threat or use of nuclear weapons is against the laws, a crime against humanity." A third way would be a framework agreement on nuclear weapons. This would be a multi-lateral agreement and it would ban the threat or use of nuclear weapons and it would also set out stages, phases, for negotiated elimination of the weapons and all of the related matters that need to be dealt with. Many of the people I work with in the nuclear abolition movement favor a sort of immediate negotiation and conclusion of a nuclear abolition agreement. I'm not convinced that that's really feasible. I'm not even talking about political will. I'm talking about sort of the logistical, and technical, and institutional difficulties that have to be confronted. It would be possible, however, to have a framework agreement that says, "The use of nuclear weapons is banned and the world is now going to engage in a process of their elimination."

So far I haven't really been talking about political will. I'm putting political will aside and I'm just talking about what could be done. But, if we did succeed in entrenching the norm of the unacceptability of nuclear weapons, success would make meeting other challenges of nuclear disarmament less pressing and less difficult. Now, a second suggestion, and this one has receive a lot of attention over the years and in the recent publications I mentioned, and that's improvement of the multi-lateral machinery for enforcement of international norms on war and peace, love, use of banned weapons, etc.

Presently, for instance, the enforcement techniques deriving from the biological weapons convention or the chemical weapons convention consist of the following: you can

withdraw privileges under the treaty, you could have collective sanctions, including economic sanctions by treaty parties, you can have reference to The U.N. Security Council. George and his co-author point out in their study that this would be perceived as inadequate for banning nuclear weapons because The U.N. Security Council just hasn't been all that consistently effective as a political or certainly as a sort of quasi-legal authority. This refers to the use of the veto by the permanent members to protect their friends or themselves.

This leads to discussion of reform of The U.N. Security Council and perhaps this is going to be something that will be considered during a first or a second Obama term as the U.S. gets seriously involved in it. It's worth thinking about in general and perhaps even in terms of its immediate political viability. I can't, today, talk about all the various ways The Security Council could be reformed, but let me mention some of the things that are on the table: expanding the permanent members, limiting or renouncing the veto, Richard Butler once suggested establishing that The Security Council itself would establish a special body in which the veto would be renounced or limited that would deal only with violations relating to nuclear, biological and chemical weapons, it can expand the number of elected members of The Security Council, and perhaps give some longer terms. Right now they just have two year terms, which is not enough time for them to really get into the swing of things in The Security Council.

There are some obvious difficulties regarding nuclear weapons and The Security Council. India is going to want to be on an expanded Security Council, but Pakistan isn't going to want India to be on an expanded Security Council, certainly not as a permanent member. China and The Republic of Korea have been opposing Japan joining The Security Council as a permanent member. Italy doesn't like the idea of Germany being a permanent member, and so on. But I have colleagues who work on wider issues of disarmament in global security and I often get into discussions about what preconditions need to be met in order to abolish nuclear weapons. I generally say I don't really favor talking about preconditions. There might be things that facilitate, or go along with, or that I have an affinity with, or support, but I don't like talking about preconditions.

I tend to think that we need to have a much improved Security Council, at a minimum, if we're really going to seriously talk about abolishing nuclear weapons. That means it has to have more representation, it has to have more transparency, it has to have more accountability, it has to have more legitimacy. We're going to need a really effective agency in order to engage in detection and determination of violations. We've all learned over the past two decades how problematic that process is. Those are my two suggestions for what needs to happen for there to be a secure world without nuclear

weapons. Entrench the norm against nuclear weapons and improve the multi-lateral machinery. Improve it is an understatement of what really needs to happen.

What are some of the other proposed methods? Well, reliance on reconstitution of nuclear capability as a response to breakout is one that has always been discussed and is getting quite a bit of discussion now. This tends to be favored, perhaps you could say, in current expert discussion. The more extreme version is to say that some nuclear weapons would be retained under multilateral control. But, if reconstitution is recognized as an option in a nuclear weapons free world, it complicates, as Zia said this morning, it complicates greatly monitoring and verification, but secondly, it undermines the norm. I think establishing the norm is really, really fundamental here. It doesn't get enough recognition. Obviously the possibility of reconstitution is going to be a factor affecting how states approach design of a weapons free regime, but I say, again, the stronger the norm is, the less deterrence by capability to reconstitute will will play a role.

Another suggestion for how a nuclear weapons free world could be sustained is it's reliance on non-nuclear military power in the hands of the U.S. above all, as well as missile defenses. There's an obvious paradox here, which is that U.S. conventional superiority does and will make nations less inclined to give up nuclear weapons. I think nuclear weapons force us to think about what is necessary. Here, I would point to an incite of global action to prevent war, among others. To achieve the sustained abolition of nuclear weapons, there's going to need to be a scaling back of offensive military capabilities, generally, as well as a gradual strengthening of multilateral institutions.

So here's my conclusion: In the nuclear, biological, chemical weapon field, and more generally, in other fields, global government in quotes "has been the approach that has been talked about over the last few decades." This consists of regimes centered on norms, implementing agencies review procedures, ultimately backed up in the security field by a problematic authority, The Security Council. Given the specter of breakout and the difficulty of confidently verifying that the last warheads and fissile materials have been disposed of for nuclear weapons, this is likely to be insufficient. It's one thing for a nuclear test to take place in a world where states still have the weapons and there's a comprehensive test ban treaty in place. It's one thing for a small or middle power to acquire chemical weapons. It's another thing for a state to reveal or acquire nuclear weapons in a world in which other states have relinquished them.

So perhaps, we have to admit to ourselves, if not yet to the public, that institutionalizing a nuclear weapons free world will require movement toward what once was called world government, a fusty old phrase never heard anymore. A ban on nuclear weapons threat

or use as criminal, coupled with adequate, multilateral enforcement machinery, will go well beyond the state centered system we now have. I'll stop there.

LEON SIGAL:

My argument can be boiled down to a single sentence: It's the first steps to the ultimate goal that are the critical ones. In January, 2007, Kissinger, Schultz, Perry and Nunn called for: "a global effort to reduce reliance on nuclear weapons, to prevent their spread into potential hands, and ultimately to end the missile threat to the world." Three points are worth noting. First, as I think was pointed out a little bit in the morning, these four are all nuclear conservatives, not nuclear radicals, who showed little sympathy for abolition while they were in office. Second, even in this statement, they spoke of abolition in millennial terms as the ultimate goal, which is standard rhetorical practice in the foreign policy establishment. Third, most important, renewed interest in the goal of abolition by people like this is welcome news, but only if it arouses significant public support, and gives new impetus to the immediate, practical steps to reduce nuclear weapons and nuclear dangers and is not deflected into academic discussions about how to get from 500 weapons to zero. I know that's a little harsh, but I've been through this three times. I'm tired. I want to get somewhere.

Now, in renewing their call last January, the four horsemen of the apocalypse, if you will, proposed a list of practical near term steps for the U.S. and Russia to take. I'll just go through them briefly but they are all publicly available. First, continue reductions in U.S. nuclear warheads. Second, extend key provisions of the Strategic Arms Reduction Treaty of 1991 is scheduled to expire on December 5, 2009, including the essential monitoring and verification provisions. Third, take steps to increase the warning and decision times for the launch of all nuclear armed ballistic missiles. Fourth, discard any existing operational plans for massive attacks that still remain. Fifth, postpone further missile defense deployments until a workable system is tested. Notice, here are people who know what they're talking about and know none of this stuff works. None of it! OK? Dramatically accelerate work to provide the highest possible standards of security for nuclear weapons, as well as the nuclear materials now possessed by 40 countries. This is not easy work. Start a dialogue with NATO and Russia on consolidating the nuclear weapons design for forward deployment to enhance their security. I'd take them out, that'd make them more secure. Strengthen the means of monitoring compliance with The Nuclear Non Proliferation Treaty and adopt a process for bringing the Comprehensive Test Ban Treaty into effect which requires a bi-partisan review of: first, and this is not trivial, improvements over the past decade in the international monitoring system to identify and locate explosive underground tests in violation of the CTBT, and second, the technical progress made over the past decade in maintaining high confidence in the

reliability, safety, and effectiveness of the nation's nuclear arsenal under a test ban. They're trying to tell us something. The answer to both questions is: Yes, we can do those things. We don't need a new warhead. These points matter. Develop an international system to manage the risk of a nuclear fuel cycle. Undertake further reductions in U.S./Russian nuclear forces to 500 warheads. Complete a verifiable treaty to prevent nations from producing nuclear materials for weapons. Build an international consensus on ways to deter, or when required to respond to, secret attempts by any countries to break out of the agreements—that's a pretty, futuristic statement.

Now, Ivo Daalder and Jan Lodal, who have played in this game for a very long time, pointed the way in the latest issue of Foreign Affairs. I would note that this article probably cost Daalder a high job in non proliferation. He's probably going to be Ambassador to NATO. What they called for were two things. First, Washington must establish, and this is very important, as official policy the limited purpose of U.S. nuclear forces to prevent the use of nuclear weapons by others. Other purposes are no longer realistic or necessary. This goes far beyond the preemptive. It goes to the heart of the issue. It's no first use. Second, given this limited purpose of its nuclear weapons, the U.S. should unilaterally begin to reduce its nuclear arsenal from 7,000 to no more than 1,000 nuclear weapons deployed or held in reserve and then take the land based weapons and phase them out, but in the immediate future, take them off hair trigger alert.

Now, how realistic are these proposals? That's what I want to focus on. Despite President-elect Obama's endorsement of the goal of "ultimate" elimination of all nuclear weapons, the political climate is actually not especially propitious. You heard some of that this morning, but let me tick off a few things that I think matter. First of all, the new abolitionists have not activated a significant mass movement, like those in the 1950's or the early 1980's, to make Obama do much. The reason I use that last phrase is Obama, in case you didn't hear about it, talked to a bunch of groups on domestic policy earlier this year, and he reminded them of FDR when he was governor of New York who was talking to a group of reformers, and at the end of the meeting where they were advocating a whole series of steps. Roosevelt turned to them and said, "OK, I agree with you all. Now make me to it." That's Obama's position.

Now nuclear conservatives remain in bureaucratic control of the issue in Washington and other key capitols, and nothing I've seen in the appointments so far suggest otherwise. The understanding that nuclear arms are pure terror devices, not useable for any coherent military purpose, has yet to gain widespread acceptance either in the bureaucracy or in the public, and the international climate is inhospitable as Putin's Russia enhances the role of nuclear weapons in its strategy, as Iran proceeds unconstrained with its enrichment program, as negotiations with North Korea proceed fitfully with no clear end

in sight, and as a nuclear arms race heats up in South Asia with tremendous implications for what the Chinese, and in turn, the Japanese, might do down the road. Now, unless these conditions are significantly altered, the new abolition movement is unlikely to gain much traction anywhere that counts.

Now many of the practical steps also face an uphill fight in Congress and within Obama's own administration. For example, although the Democrats enjoy a 59/41 majority in the Senate, that is well short of the two-thirds majority needed for ratification of a test ban. Right-wingers like John Kyl who dominate the Republican caucus remain firmly opposed to a ban and favor deployment of new nuclear arms. Obama's Defense Secretary designate, Robert Gates, while publicly noting that a test ban is verifiable, just before he got appointed, that was the price he had to pay, also endorsed the need for replacement warhead in the same talk. Now thanks to the determent opposition of a Republican Subcommittee Chairman who doesn't get much attention, now retired, David Hobson of Ohio, the RRW failed to muster funding from a Republican dominated Congress for years. Will Gates or a handful of Republicans insist on the new warhead as their price for supporting CTB ratification? If so, I don't want the test ban.

A significant, unilateral U.S. cut, like Gorbachev's decision to withdraw unilaterally much of the Red Army from Eastern Europe, is what is needed to start the process. If we don't get that, we're not going to start much of a political process. Is that politically feasible in the U.S. and how deep without Russian reciprocity? It seems to me that's open to question and that's a key question and it has to be worried about. How much progress we can make in negotiations with Russia is also not clear, but the key is clearly not to proceed with either new deployments of missile defenses or more NATO expansion. The Russians have to be reassured on that point and not quite the way it was done in the first Bush administration. Stopping Iran's enrichment effort is only possible by diplomatic give and take, as a number of you have noticed, but doing so requires a U.S. special envoy determined to do his best however skeptical he may be, and let me tell you the person you're going to get is real skeptical. I'm not sure he's going to have much initial momentum here.

Now, I'm almost done. Daalder and Lodal, along with many advocates of abolition, have made as their premise and I quote, "that the likelihood of success would be significantly enhanced if the U.S. and other nuclear powers were demonstrably committed to adhering to the same non-nuclear status and fissile material oversight that they are demanding Iran, North Korea and every other nuclear aspirant to accept." Now, I would say that to premise negotiating efforts with either North Korea or Iran that this is putting the cart before the horse. It is very commonplace among abolitionists to say, "Boy, this will

show a good example to others." I think we have to look very closely at what Iran, and North Korea, and countries like them are asking for.

Now, let me just say, briefly, in the case of North Korea, commitment to zero will not be particularly persuasive at this point in the negotiating process. North Korea has been unusually explicit in its public statements about why it acquired nuclear weapons, insecurity. The prime reason for that insecurity, it says, is the U.S, what Pyang-Yang calls "America's hostile policy." For North Korea, the concept of Washington's hostile policy is much broader then the threat posed by Washington's nuclear arsenal and even the U.S. threat of nuclear first use of weapons against it. It includes political, economic, and other military factors such as the threat of invasion by conventional forces, economic sanctions, and the attempts to suborn its government, which continue. Now, ending this hostile policy rather than the elimination of American nuclear weapons is the main condition for Pyang-Yang to eliminate its arsenal. An improvement of political relations is absolutely essential to achieve denuclearization.

In that context, authoritative North Korean interlocutors have characterized U.S. nuclear strategy as threatening, but they have never talked about the need to reduce or eliminate all U.S. nuclear weapons. Never. Never once. Not publically, not privately, not with U.S. officials, not with any of us who talk to them regularly. Now, whether it will change its approach in the future, and like China, link its nuclear reductions to those of the U.S is not clear. I would just note, in North Korea's recent formulation, January 13, 2009, that is a couple of days ago, a statement by the Foreign Ministry spokesman hints at a potential change of approach. They said, "If the nuclear issue is to be settled, leaving the hostile relations as they are, then all nuclear weapons states should meet and realize the simultaneous nuclear disarmament." This is the only option. Notice the key thing is leaving hostile relations as they are. In other words, if the U.S. improves its relations, they're not interested in disarmament, so far. The key qualifier is leaving the hostile relations as they are, for now. We'll see if they intend to change.

SHARON WEINER:

I'm Sharon Weiner. I want to make four little points. Three of these points actually are different from most of the discussion today because they relate to low politics. In my case, extremely low politics, bureaucratic politics, the interests of institutions, and how they support a U.S. mission that connects nuclear weapons to national security. As often happens to the last speaker of the day, two of these three points have been mentioned by other people, so I'll try and emphasize something a little bit different about each one.

Given that, the first point I want to make regards a focus on the U.S. military's role in national security. The first point has to do with the bureaucratic interests of the U.S. military which since 1950 have been to move away from nuclear weapons, because simply put they are not helpful in fighting and winning wars. Nuclear weapons are weapons that are used by politicians. Once they're used, the military's out. There was a brief foray in trying to understand tactical nuclear weapons, and limited response, and a countervailing strategy. None of it was ever embraced, really, by the military except for a part of the military, Strategic Command, that lives in Omaha, Nebraska. The rest of the military started moving away from nuclear weapons because they were of little use in fighting war.

Since the end of the Cold War, Strategic Command, the one place that is responsible for nuclear weapons, has been headed by a military officer that had no nuclear weapons in his service. In bureaucratic speak, this is the kiss of death for a mission. Strategic Command is also in charge of cyber-warfare. This also suggests that the nuclear mission is declining in terms of emphasis within the military. Most recently, James Schlesinger issued a report for a small group of people that almost pleads with people to remember that deterrence and nuclear weapons were a key to American national security. But this movement away from nuclear weapons as a practical tool of warfare has been building since the 50's I would argue, since Eisenhower decided that nuclear weapons really weren't like regular conventional weapons and that they shouldn't be used in warfare.

But today there are a couple of new twists to this argument. One is called "reset" and one is called "modernization." The U.S. military right now is faced with rebuilding itself in two ways. One has to do with replacing all the spare parts and equipment that have been used up in Afghanistan and Iraq. This is resetting the force. The second rebuilding effort is modernization. In the best of all possible worlds, the military wants to do something they've been trying to do since the end of The Cold War: modernize the military with weapons that incorporate an entirely new generation of technology into weapons systems and, ideally, develop weapons systems (like drones) that don't involve people at all so no one dies. These things are very, very expensive. In some estimates, to have even minimal modernization would increase the defense budget to twice the size of what it is today, and today it's at an all time high. There are also higher estimates.

The fact of the matter is the military is looking around for things to cut because it wants to buy stuff it can use to fight on the battlefield and two of the top things on that list are nuclear weapons and national missile strategic defense initiative. A little factoid to help support this point, *Foreign Policy* magazine and The Center for a New American Security did a poll of military officers last fall. They asked officers what tools are the most effective in the U.S. arsenal? What should the U.S. invest in? I believe it was three

percent of those who responded said nuclear weapons. We need to nurture this and support it. The military is an ally in abolition, but it needs to remain an ally after abolition. There needs to be attention to reinforcing among the military that nuclear weapons are not in their interest.

This leads to point number two. This is the notion, which has also been brought up, of deterrence as a military strategy. I teach undergraduates about proliferation and national security issues and I'm always a little shocked. My students come into class assuming nuclear weapons are a really stupid idea. For them Ronald Reagan and Abraham Lincoln came from the same era! These are people whose historical background has led them to not assume these are useful weapons. But they also assume deterrence has never been challenged or questioned and it is the cornerstone of American security.

Back in the good 'ol 80's, when I was in graduate school, deterrence was something we questioned. There was a whole literature that says deterrence wasn't responsible for peace after World War II, that deterrence doesn't work, that deterrence is always illogical, but all that seems to have fallen by the wayside. In terms of institutional interests, we need to debate he role of deterrence in American strategy this doesn't mean debating only the role of deterrence as a nuclear strategy; this means debating deterrence as a military strategy and as a means of assuring the American position in the world by threatening to use overwhelming force to punish people, to deny them what they might want, or, the alternative, to compel them to do something they don't want.

The U.S. version of deterrence now is to use precision-guided weapons as part of a conventional military strategy. The role of advanced technology provides another assumed level of deterrence because it suggests that other countries can't develop the same conventional weapons in a short period of time. It leaves breathing room for the U.S. military. The third part of this is less risk. Over time, the U.S. military has developed a conventional force structure which glorifies the notion that you can go to war, hurt people, and that you, yourself, never have to die. You, therefore, aren't vulnerable. It's not a bad idea if you're in the military, but it creates a break between people and the foreign policy goals of the state and the pain that they have to perceive when they pursue those goals. I would argue all of these things are part of a strategy of deterrence that in many ways is irrelevant with respect to nuclear weapons. Conventional weapons fulfill that role and national security after abolition has to have a discussion and a dialogue about this form of deterrence as the cornerstone of American security.

The third part, which gets into the nitty gritty of institutional interests, is after abolition, what do you do with the nuclear weapons laboratories? Do they go away? Do they do something else? Do they become involved in other public science, or other public goods?

Where do they live? What's their mission? What's their function? There is a discussion now in Washington, and it's albeit a minority, but an influential minority discussion, that the Department of Energy should be broken up. If you're truly interested in climate change and solving energy problems, you take the nuclear weapons function from the Department of Energy, which is now in a semi-autonomous agency, The National Nuclear Security Administration, and you give it to the Department of Defense. I think that this is a debate that needs to come out and that people need to have. I, personally, am opposed to it. There were good, civil military reasons for not giving the military control of the nuclear mission and I think there are equally good organizational reasons.

The Defense Department is an institution which has been told "No" to many missions over the course of The Cold War and since then: "No you can't have missile defense." "No you can't have an airborne laser." They had become the masters of having a small little organization hidden under levels of secrecy and so-called special access programs which continue to do those missions. M**y** concern is that in a world after abolition, if you divide up DOE in the name of climate change and dealing with these issues and give the nuclear mission to the military, you will give the most capable organization in the U.S. government a mission, and it will pursue that mission in some way. This is not the way to abolition, this is the way backwards. Regardless of that, I think there needs to be more debate about where the mission of the nuclear weapons labs go and, I would also say, that includes whether or not the official managers and overseers of the nuclear weapons laboratories become contractors or whether the U.S. government becomes the official manager and administrator of the labs.

Over the Cold War and since then, the number one security threat of the U.S. and most western states has been nuclear weapons, until September 11th. Now we worry about terrorism. Some other people worry about terrorism too. Some other states have worried about terrorism, but it's a different thing than the U.S. worries about. The vast majority of humanity has been plagued by something else, and that is conventional weapons. Not big conventional weapons, but small arms and light weapons. These are things that you can carry. If we're expecting the rest of the world to cooperate to verify that nuclear weapons no longer exist and to create a world where there aren't pockets of ungoverned ability where terrorists can flourish, I would argue that it's time that the U.S. and the rest of the world starts paying attention to conventional weapons and their regulation. Most international arms agreements focus on nuclear weapons. Most limits on conventional weapons are informal agreements, country-specific regulations, and supplier agreements. Further, one of the key problems is the U.S. is the number one supplier of small arms and light weapons around the world today.

Just a couple of statistics according to SIPRI –the Stockholm International Peace Research Institute. In 2007 there were seventeen active major conflicts in the world, and fourteen major arm conflicts under way. The U.S. supplied weapons to most of those conflicts. Thirty one percent of the global arms transfers, over the last five years, were conducted by the U.S. The U.S. State Department and the Defense Department sell weapons to countries which the State Department itself classifies as "undemocratic" or engaged in humanitarian violations. It would seem to me that if we are wanting global cooperation to deal with our own security issues, we should pay attention to dealing with the security issues that most of the rest of humanity worries about on a daily basis.

ERIKA SIMPSON:

I'm going open it up for discussion.

COMMENT:

Just one quick thing for Sharon. I don't disagree with your characterization of the attitudes of the military now, but I think that people might have been misled by what you said about the military in the 50's because, despite the lack of actual use in Korea, certainly for a substantial time in the 50's, the military, especially the air force and the navy, was really committed to that. I'd like you to expand on that because I think that even under Eisenhower, he had this notion that a war with the Soviets wasn't going to remain limited, but he still predicated his defense policy like Kimoi and Matsu on nuclear use. I was wondering if you could just talk about it a little because I think the thing you are pointing to, which is the shift of the military away from that is a big change and important.

WEINER:

No, certainly I don't mean to suggest that. Especially the air force and the navy weren't. Everyone was initially interested in nuclear weapons because this was the key to a budget and admission and relevancy and everything else. But at some point in the Eisenhower administration, Eisenhower decided that we were going to do two things: limit defense budgets and take nuclear weapons off the shelf for use as a regular conventional weapon. Eisenhower came to office initially committed to the notion that nukes will be used in a conventional war, even a limited conventional war. But he backs away from that. If you look at the requests of the services and the budgets, you see that some time during the Eisenhower administrations, they too start to realize that if you're going to do fighting, you need to invest in conventional systems. In history, you see the army start to pull back from its commitment to nuclear weapons, and the air force and the navy still duke it

out. Even that becomes more and more compartmentalized in one part of those services. I'm suggesting that's when the trend starts and they start moving further and further and further away.

COMMENT:

Just one quick thing. The whole plans for defense were predicated on nuclear weapons, correct?

WEINER:

Yes. But the navy didn't want to put nuclear weapons on submarines. Part of the argument was because it would require us to retool our entire personnel policy for rotating on submarines.

MARTIN SHERWIN:

Erik, I just wanted to sort of pick up the very last line that you ended with Michael Mandelbaum. I think you called him a liberal dove and yet he's still interested in maintaining nuclear weapons. I don't raise this to pick on Michael Mandelbaum, but to generalize from that in terms of the problem we've been talking about all day since Richard Falk's presentation about assumptions about nuclear weapons that we have to deal with basic attitudes. Mandelbaum wrote an early book called "The Nuclear Question," and in the introduction he says, "we don't live in the best of all possible nuclear worlds, but we live in the best world possible." Now this was, I think, published in the 1970's probably, or something like that, and no one here believes that we lived in the '70's in the best nuclear world possible.

That ties in with another book that I think is important in understanding the momentum idea, assumptions, and other things that we talked about. The book that came out of The Center for Science and International Affairs at The Kennedy School written by Paul Doty and Joe Nye and some others called *Doves, Hawks and Owls.* What that book argues is that the doves are sort of on the left and they are irresponsible because they don't understand the value of nuclear weapons. The hawks are way on the right, and they're irresponsible because they want to use them. But we owls at The Kennedy School have the right balance and we understand. It's as if it was one third, one third, one third. The owls have always run interference for the hawks and the doves have been sort of left out in the corner. It's these attitudes that, I think, we're dealing with here. When I talked to Richard Falk earlier after his talk he said, "You know, the owl is a form of hawk," and the entire structure of thinking about nuclear weapons is reinforced by history and is an

enormous barrier that we have to overcome. I think Leon's right when he says some kind of action so dramatic that it shakes up the whole debate needs to be initiated. I'm not even sure that threatening, or promising, or whatever we want, to suddenly go down to 500 nuclear weapons is really dramatic enough. I think that that idea that Leon is proposing, whatever it would be, however it would be manifested, it is something that we really need to think about.

SIMPSON:

Can I just mention one thing in reply on belief systems? I thought Leon's ideas about a unilateral initiative were good. If you look at the track record of Gorbachev in ending The Cold War, he took a number of unilateral initiatives from, essentially 1985, one after another. It took a long time before the U.S government recognized or even saw it. If you're interested in game theory, it's like there was a lot of noise and you couldn't see that he was trying to cooperate. I like to think of this man, Robert Osgood, going back to his notion of graduated, reciprocated, intention reduction initiatives. Basically, the idea is that you have to keep doing unilateral initiatives over and over again before your opponent recognizes them as tension reducing. Anatol Rapaport has the same basic ideas in cooperation under anarchy. The idea that if you have an opponent and he's going to continue to defect and you have to cooperate, cooperate, cooperate, or, if he defects, you've got to hit him back really fast. This is getting into more theory, but I think a unilateral initiative needs to be repeated with more unilateral initiatives by Obama, and then it will overcome the noise.

COMMENT:

Let me just respond by saying that if you say you're going to make a number of cuts, then the first cuts are going to be small.

CHARLES FERGUSON:

I really appreciated all four speakers and their remarks. I thought they were all excellent, and so I'm going to ask something I've been struggling with for a long time, ever since I was a naval officer in The Cold War. I decided to get out because I thought nuclear weapons policy was absurd. Now I'm working for this establishment-type think tank and I'm also directing this CFR task force report that George Perkovich is also involved with. There are a lot of good ideas that have come out today, but what I'm struggling with here is the connection between conventional weapons and nuclear weapons, and this whole issue of taking on deterrence. A few months ago, I was down at a military conference at SMU in Dallas, and it's a whole different world down there. You have the John Tower

Center for Defense Studies and the people there have a whole different mindset than most of the people in this room. So, I was asked to speak on this panel about how technologies are transforming the military. First I sent them back an e-mail: "why am I invited to this?" I said talk about what I want to talk about, nuclear disarmament and transformation of nuclear weapons policy. I made it back alive. I didn't talk about why I left the Navy. They said, "Ok, he's an all right guy." Then I made a statement. I said one of the main reasons why the U.S. can entertain the notion of nuclear disarmament is because we have conventional weapons superiority. And, as a number of speakers are pointing out, those roles have been reversed in the past. Now the Russians are saying: well, we don't want to get rid of these nuclear weapons. We're actually putting tactical nuclear weapons up higher on a pedestal in terms of our defense policy. So, are we just going to keep going round and round in terms of this conventional nuclear type of connection? How do we cut that or not, and then how do we deal with the issue of taking on nuclear deterrence?

I remember the first day I worked for The Federation of American Scientists. Jeremy Stone hired me. I worked for Jeremy Stone and Frank Von Hipple. The first assignment I had from Jeremy Stone was on February 1, 1998. General Lee Butler gave this revolutionary talk at The National Press Club on that day and the theme of his talk was taking on this issue of nuclear deterrence which had been placed on this pedestal. I thought he did a masterful job taking that on and now he's kind of faded into the woodwork. So now is anyone out there really hammering away at deterrence?

BURROUGHS:

There's a very interesting discussion by Li Bin in the companion volume to the most recent report of The International Panel on Fissile Materials. It's about China's attitude towards a fissile material cutoff treaty. In it he says that China has been reserving its position on whether to go forward with a fissile materials treaty because they think well, maybe, we're going to need to increase our arsenal and, of course, and FMCT would cut it off. The idea is that they might support an FMCT, but they want to see how it fits into the overall strategic picture. They haven't been reassured enough on that. They haven't been stridently opposing an FMCT, but they've been cautious about it. In particular, he says that China is concerned that missile defenses combined with a non-nuclear offensive strike capability might render their nuclear forces vulnerable. This is a very striking thing to me because obviously if they are concerned about being vulnerable to a non-nuclear strike, they could also be concerned about being vulnerable to a nuclear strike. But, maybe they think that the U.S. wouldn't do that because nuclear retaliation might come back and whereas the U.S. might think nuclear retaliation would not come back

from a non-nuclear strike, it's confusing. I'm still trying to understand exactly what's going on with this.

We've been talking about Gorbachev. Gorbachev certainly understood there was a relationship between nuclear and non nuclear arms control. The chemical weapons convention was given momentum during that time. There was an important op ed published this last summer in *The International Herald Tribune* where he said he realized that in order to pursue nuclear disarmament, he had to convince the U.S. that he was serious about disarmament and security, generally.

This is an area that I am very cautious about because, as I said earlier, I am really resistant to saying there's x, y, or z preconditions to moving on or achieving nuclear disarmament. Nonetheless, everybody talks about missile defenses and how they can negatively impact nuclear disarmament, but we have to think seriously because there's not very much discussion about how non-nuclear offensive strike capabilities can affect nuclear disarmament.

COMMENT:

First of all, the Russian response to this isn't just about nuclear conventional weapons, as you know, it's about their budget and the fact that they're afraid of our conventional capabilities, and they're afraid that someday they'll never be a superpower and so they have to do something about that. But I want to agree that there also has to be a strategic component in this. We know that there are differences in conventional weapons that protect your homeland versus those that go abroad and act aggressively there. I think part of this discussion about deterrence is to help make this distinction in the public's mind, because the military understands it, between protecting the homeland from terrorism and an aggressive foreign policy and the strategies and conventional forces that go with it.

COMMENT:

I want to bring up a very small point. One of the things that was being talked about in the last couple of years was arming long range missiles with conventional. So far it's not gone anywhere for reasonably good reasons and I think that's maybe because of the Chinese. They are not worried about aircraft preempting their nuclear capability. They are worried about missiles doing that with very short warning. You have to keep that stopped. You don't get to compensate for reduction in nuclear by putting conventional warheads on, otherwise I think you'll get the Chinese problem. I think that's what they're talking about, but that's worth probing.

COMMENT:

Just quickly towards Charles. I think you raise an important thing which implicitly came up in the Georgia question, which is type one versus type two deterrence. This brings up the issues of the U.S. wanting extended deterrence in places where it has a conventional disadvantage and also the U.S. strategic thinking relationship between tactical nuclear weapons and strategic nuclear forces and "missile defense" as part of that. That relates to a set of ambitions that the U.S. had, which for various reasons it saw as not being able to rely on conventional sources for. If you look at the place where the nuclear threat was used in the Third World, it's in those places where there's conventional disadvantage. And, finally, both Lieber and Press and also The Rand Corporation have talked about the strategic posture the U.S. has and the implications of that for strategic stability in China and Russia. I think that those are all things that really have to be addressed and taken into the mix. It does call for a kind of reassessment of The Cold War and alternative modes of security that take into consideration more than one actor.

COMMENT:

This whole question of the conventionally armed trident missile relates to things that you all were talking about in a way. General Cartwright was the strategic commander before General Chilton and he's the one who actually was trying to significantly reduce the role of nuclear weapons in U.S. policy. He said: Let's figure out if we're going to accomplish every mission that we have to accomplish under our current guidance with non-nuclear weapons. He basically worked it out that there was only one mission that they still needed nuclear weapons for, which was if they had to destroy a target around the world in 30 minutes, which requires a trident missile to be able to do it. And so, it was he who proposed that if we could put some conventional warheads on these missiles then everything we have to do we can do with conventional weapons. He also wanted the President to change the guidance so we could lower U.S. forces unilaterally. He went to the White House and Cheney's people basically cut his head off. He's now the Vice Chairman of the Joint Chiefs, but no longer the Head of Strategic Command. He's a marine, so he came from a service that didn't have nuclear weapons.

If you want to talk about nuclear abolition, then you do have to address the question of whether there are legitimate military interests and targets that that any President would perhaps want to have and that you could accomplish with conventional weapons, though it might require missiles. Now, the Russians are willing to deal with this in an arms control format. They're willing to say, "just count those missiles with conventional warhead as if they had a nuclear warhead in strategic arms control so we can deal with it." For China, that's a more difficult problem because they have a much smaller arsenal,

so this gets into triangulating your strategic budget. This is a set of questions that I think that will come back, and the answer to which isn't so obvious.

COMMENT:

Can I just ask briefly, George? Why can't we partially solve that problem by changing the notion that "you're half way around the world and you're doing something we don't want you to do, and we're going to come and get you. We're not going to get you in 30 minutes, but we'll be there in 24 hours." The end result's going to be the same thing. Why does there have to be an American conventional strategy focused on the notion of immediate response?

GEORGE PERKOVICH:

I think their argument, and Charles probably knows it better than I do, is that there are some activities that require such speed, whether it could be a North Korean missile launch or there's a terrorist network operating there and in half an hour you think you could still get them.

COMMENT:

There's also a psychological phonomenon going on. It's the Pearl Harbor mentality. That's one of our fears here in America. We want to be able to react fast so we're not caught flat-footed, I think.

COMMENT:

That's the assumption that I think we need to challenge, because even as the analogy of Pearl Harbor, we know it's problematic.

COMMENT:

We've talked briefly of alternative national security strategies. I wonder if anyone on our panel would like to comment on U.N. security strategies, not merely treaties or revisions of The Security Council, as fine as those might be, but through using U.N. military forces as a replacement for national forces.

COMMENT:

John has worked a great deal on the notion of United Nations Emergency Peace Service, UNEPS, and I think probably you would see that as part of the institutional architecture that we need in order to move to a nuclear free world.

COMMENT:

Larry, first of all let me ask: are you talking about a UN nuclear weapons capability? (Larry: NO). OK. Right. It is part of the proposal of global action to prevent war and that over a long period of time there would be military forces under U.N. command. Some of you may not know, there's explicit provision for this to take place in the U.N. charter drafted in 1945. It's not a new idea. It was envisioned at the outset. So, the idea is that this transfer of military power and authority to the U.N. could take place in conjunction with reduction of national military capabilities. I personally wouldn't want to say "this must happen before we can have nuclear abolition, though."

COMMENT:

I mean, for the first time in my lifetime I can remember, there's an enormous amount of articles in *The Financial Times* and *The World Street Journal* about the question of global governance, about the question of world government, of whether capitalism can survive in terms of the current financial instabilities and in terms of the climate change. We're living in a period of extremely high uncertainty, which we've seen before with the decline of Britain and the rise of the U.S., but now the decline of the U.S. and the rise of China is a very different situation, though still a situation where the declining power no longer has the capability that it once had and nobody else has yet come up to provide that kind of global governance. I think that now it is a time in which questions about global governance are going to be more and more important since people don't really know how to, or don't have the power to, solve the crisis that we're currently in.

BURROUGHS:

I, perhaps, ran over that point to quickly. Global governance has been a hot topic for a long time, and it's even hotter now for the reasons you were saying. What I meant earlier was that to solve the problem of nuclear weapons is such a hard problem that it raises issues about having an effective authority with military power at its disposal on a global level, which sounds a little bit like world government. Maybe Larry can tell us exactly when world government went out of favor, but something like the early 1950's I would say. (Larry: Yes).

COMMENT:

Yeah, maybe if I could just add on the idea of U.N. Emergency Peace Service because Sir Brian Eckhart here in New York City has been a longtime advocate of that. He thinks the UNEPS should be a combination of national contingence and volunteer forces over time that would cope with the conventional conflicts all around the world, not just as a volunteer force. But, there hasn't been much of a connection to a nuclear weapon free world, although it is part of a global governance institutional framework that all of us envision in the future. It's a necessary step. But, usually, people get pretty cynical about it. All I can say is I've been involved in the UNEPS initiative since 1991, and at that time everyone pooh-poohed the idea of peace keeping training centers saying it'll never happen. We were pushing it as the first one in Canada; now there are hundreds of them all around the world. Change happens really fast and the things that we think are not going to happen are going to happen really super fast, so we've got to be ready. I think we need to have a vision. I don't want to sound too idealistic and I want other people to contribute, especially the people at the back. I'd be curious to hear from Professor Gusterson and also David Krieger, if you'd like to step up to the microphone and help us out. We want to hear from as many people as we can in the few minutes we have left. Anybody else at that table? Martin Sherwin.

MARTIN SHERWIN:

I just want to make one comment which has been developing in my head as I've been listening to all the talks and everything that was said before. I'll frame it as a question. Aren't we making a mistake thinking about the abolition of nuclear weapons essentially as a problem that's isolated from lots of other problems? My answer tentatively, at this moment, is maybe it is yes. What we need to think about is the connection of the nuclear weapons problem to what else, and how does it fold into the whole zeitgeist? I mean, a lot of strange things have happened in our recent lifetime, a lot of impossible things, such as the election of Obama. Well, it wasn't just because Obama is a saint and we all recognize it and he got elected. There were all kinds of things that were happening at this period of time that made that possible. So, how does the nuclear issue fit in? It's something we need to think about.

COMMENT:

Well, I think that's a really important question and one that I've thought about a fair amount, although I don't think I've taken it far enough. It seems to me that the U.S. has to lead the way, at least in terms of it's actions if it wants to involve the Russians. The U.S. leaders are only going to go so far without involving the Russians, and that isn't going to be real far. To involve the Russians or just to get them going again on nuclear

disarmament, which I think they would like to do in general, it seems to me, is going to require us to back off of ballistic missile defenses, at least in Europe, and probably elsewhere as well. It's going to require some kind of an accommodation on space weaponization. We're not going to be able to continue to press for that while China and Russia speak against it and try to promote the prohibition of space weaponization. I think we're going to have to bring nuclear power into the mix because, ultimately, it's just going to be too crazy to try to control nuclear weapons at lower levels without seriously controlling nuclear power. Personally, I think it's always been crazy to think that we can promote nuclear power while trying to control nuclear weapons. That's just the first layer of the onion, as far as I can see, and there are much bigger questions, some of which have come up already today about Poland and Georgia's relation to Russian and various countries relations to each other, that are going to have to somehow be taken into account in the process of the phased elimination of nuclear weapons. But, to get moving on the question, there has to be a serious start somewhere. The kind of start that Lee Butler was willing to promote for a short period of time and that others of us in civil society have promoted seriously for a long time. I think it's going to have to start by the U.S. kicking something off, probably unilaterally, but then quickly move to bilateral negotiations with the Russians, and then fairly quickly move to the initiation of a larger scheme with all the nuclear weapons states, at least the initiation of negotiations for abolition. As soon as those things start in motion, all of these other issues are going to start popping up in serious ways and there's going to have to be the overriding concern that it's too dangerous to live with nuclear weapons if we're going to move to living without them, and to live without them, there's going to be lots of costs in terms of policies that are going to come. From my perspective, none of them are unsolvable, but they're all very big issues.

SIMPSON:

OK. I have very strict rules from Chuck and he just waved at me through the window to say "Stop." I thank all the speakers and thank the questioners and I hope that we reached some good conclusions in this final chairs report that everbody's going to put together in a few minutes. Thank you.

Evening Session:
Reporting Session by Chairs

CHARLES STROZIER:

The concept here at the end is to spend a little time with the chairs since we were in two different rooms. Although I'm sure brief reports will be impossible to capture the texture and nuance of an hour and a half of discussions, at least it will give some opportunity for all of us to be aware of what was going on in the other room. Before we go any further, I do want to thank certainly Michael Flynn and the staff at my center who have been indefatigable. Hannah Baldwin, who many of you have corresponded with, and Andrea Fatica and Kathy Boyd who helped with today's conference. So let's start with James Bogart. We'll just go through in the order in which they were.

JAMES BOGART:

I'll just give you a summary of some of the things we talked about in the session on Nuclear Terrorism, Loose Nukes and Dirty Bombs. The speakers in this session were myself, and Charles Ferguson, and Michael Levi. We had three physicists, two of whom were on The Council of Foreign Relations. So, you can guess, there was a focus on policy and on some of the physical possibilities of nuclear terrorism with some discussion towards abolition mixed in with that.

We discussed the act of nuclear terrorism that is often parsed for public consumption. It oversimplifies how easy it is to carry out an act of nuclear terrorism. I think for the three of us, being on the technical end of it, it seems like you can just look on the internet and find out how to do it, and go into your garage and do it, and that's just simply not so. I'm reminded of a line that Graham Allison uses in his book that while the probability of success of someone developing a nuclear weapon is very, very low, the consequences of just one nuclear weapon going off are so high that it makes the prospects worth serious consideration and acts to go about preventing it.

We talked about the dirty bomb and brought in a psychologist for help on this because with the dirty bomb, the materials are out there. It's something that I think we all kind of express some amount of disbelief that there hasn't been some type of radiological attack. It's not rocket science, and the material is domestically procurable, and we even asked a psychologist in our session and no one came up with an answer as to why these groups

haven't done it. That was really compelling. We all kind of had our different theories on it.

I think we all agreed on the number of steps that we should be taking as a nation from a policy standpoint to reduce the likelihood of a nuclear attack. These including locking down loose nuclear material, working with the Russians more to do this, working with Pakistan and Russia to secure nuclear weapons and as we saw last year, the year before, our own nuclear policy could use a little tweaking as well.

From the abolition standpoint, the session was bullish on the theory end of it, but bearish on the implementation and practice end of it. I think it was something that we generally thought is a good idea, but there's just so much detail in the nuts and bolts in doing this. And something that was kind of telling to me is Michael Levy was talking about a program called Megatons to Megawatts where Russian nuclear weapons are used to make highly enriched uranium for U.S. use. Now ten percent of our energy comes from that source. Michael was kind of laying out that there are steps in between that where you actually, in that process, are making the material more dangerous because you're removing it from the weapon, and then you've got to transport it, and you've got to do a lot of other things in getting from point A to point Z that, actually, you could make an argument, increase the proliferation risk. So, in any of these steps in reducing the amounts of weapons we have and kind of working towards getting rid of any or abating any terrorism worries, there are steps involved that you just can't wave a hand and get rid of. It's a very difficult thing to do from a technical standpoint.

We also talked about North Korea and Iran saying that it's difficult to make progress towards abolition and nuclear terrorism without solving those issues first. That's part of the big ball of wax and having any type of really tangible movement towards proliferation. I think one of the things that I got out of the session, although it wasn't overtly stated, is to, again, really make some type of tangible progress. We may need some type of strategy which, I think, Leon, in the last session, called the game change, or something profound has to happen to kind of make some movement. We didn't have any ideas or proposals for that. I put out a quote that I came across a couple of weeks ago from E.L. Doctorow in the mid-1980's where he was talking about nuclear weapons and said (I'll paraphrase): first it was our weaponry, then our diplomacy, and then our economy. How can we suppose something so monstrously powerful would not, after 40 years, compose our identity? And so, in talking to psychologists, when you have a sense of identity that's now so ingrained with the nation, I think there's a lot more than just mechanical things and treaties that need to be worked out. It's more. How do you separate that out from the identity of a people, the identity of a nation. So, that's a kind of quick overview of some of the things that we grappled with.

THOMAS REIFER:

OK. Well, I've always had a problem with reading my own handwriting, so if Marty and other people can help me out, that'd be great. There was a discussion initially about Iran and Iran's desire to have a capability to produce nuclear weapons under various circumstances. That was related also to the Iran-Iraq war, of course, during which time the Iraqis used WMD's, chemical weapons, against Iran, which was greeted with no really hostile reaction by the international community and pretty positive support by the U.S. We also discussed of how much the current Iranian regime is influenced by harkening back to Mohammed Mosaddeq and the kind of nationalist leader in the context of rivalry with the U.S. It was a very nuanced discussion about Iran and the question of nuclear weapons in terms of the current conflict.

We also had a discussion about the whole question of the world after the invasion of Iraq and the reemergence of realism among other states who are more sympathetic to the nuclear option after seeing what happens with a country that didn't have nuclear weapons. We also discussed the whole question of status where nuclear weapons serve as badges of status and if you get rid of nuclear weapons how does one transfer to a world within which this type of status is gone and what kind of status do you have?

There was also a discussion of abolition. Specifically we addressed the need for a kind of movement from the top, as opposed to sinking in foreign affairs bureaucracies. Additionally we talked about the interrelatedness of certain questions about the nuclear fuel cycle and production of fissile materials, and the complexities of the question of extended deterrence and of Poland and Russia and the relationship in terms of Star Wars or non-offensive defense.

There was some discussion, too, about the centrality of regional conflict in the acquisition of nuclear weapons. I mentioned the utility I found of Jack Snyder's *Myths of Empire* in terms of looking at some of the factors in terms of the way we've gotten into the situation. It was a very good, broad-ranging discussion, I thought, about a lot of the issues of proliferation and the historical context today. The kind of reemergence of nuclear fear, strangely enough, heightened by George Bush, and the kind of lost opportunity of using that as an effective means for an alternative to people to posit the issue of nuclear weapons abolition. This context is essential to understand in terms of also calming down regional conflict and intervention that's now being pursued in order to supposedly deter people from getting nuclear weapons or nuclear capability, etc.

SCOTT KNOWLES:

I'm going to tell you about the historical antecedents session, and I'll just move through the notes and when I hit ten minutes, I'll stop.

This session featured some very light questions like: How much fear is enough to inspire nuclear abolition, and how much is too much to stall it out? What are the fundamentals of nuclearism and Peter's question: Why aren't my students concerned about nuclear annihilation? James Carroll started us off talking about some of what he sees as underlying assumptions of nuclear violence. He, literally, began with the Big Bang and talked to us about his ideas that renewal through death and violence is a fundamental aspect of human history. He said, "We become who we are in the act of killing. Hunting and communication actually grow through the hunt." He says that we're violent animals by nature it's a miracle that we are not extinct, but that the role of history, our ability to understand and learn from history, is perhaps why we're not.

Then he sort of shifted gears a little bit and talked about what he sees as the four main ingredients to understanding nuclearism as a historical process when it begins. They all, in his telling, sort of happened within about one week in 1943, which would be a great question on a final exam. First is the dedication of the Pentagon. The second is the decision, at Casablanca, that Churchill and FDR reached that saying they were going to push for unconditional surrender in the war. And third is the movement of the U.S. Air Forces to adopt the RAF's decision to avoid precision bombing and go for actually bombing of whole cities. The fourth piece was actually the operationalization of the bomb itself, which was clear by January of 1943, was going to possible.

To Carroll, what he sees happening here at this point is the development of a momentum that goes beyond just pulling out particular moments in history. As he says, "War at this point is more than one plus one equaling two. It's one plus one equaling something bigger than that." That's a critical way to understand how nuclearism sort of grows beyond simply pulling out particular discreet moments in time after this. Then he shifted gears and he said something interesting about The Secretary of Defense and the U.S. after nuclearism had been launched becoming basically Ahab, and Moby Dick as a metaphor for what has happened in the U.S. security apparatus after this period. He set out for us this vision of the ambivalence of the moment, now represented for President-Elect Obama with John Holdren on one side and Robert Gates on the other and him in the center trying to decide how to act. He concluded by saying that once we understand scapegoating, this process in civilization of picking out a discreet enemy to blame all of our ills on, then perhaps we can move beyond this sort of momentum and move into some deeper thinking.

Peter Kuznick was talking to us about a couple of main areas in the historiography that he wants to focus on. One is this idea that nuclear fear as a motivator has really been understudied or under documented. He went into discussion on the Russell-Einstein memo which we'd heard of earlier. This quote from it: "Shall we put an end to the human race? Remember your humanity or face death." He said that by May of 1945, Oppenheimer and others were not just monkeying around with the atomic bomb; they were already thinking the super. A much bigger sort of fear was looming on the horizon already almost fully formed, at least mentally.

Then he showed us a moment in time that I think we need to focus more on: what if Henry Wallace had become Vice-President of the U.S. and then President rather than Truman? The historical record shows us that Truman only had two meetings with FDR before he became President, and in neither one were nuclear weapons discussed. Truman essentially found out about nuclear weapons on the day that he became the President of the U.S. which indicates that he was maybe the wrong man at decidedly the wrong time. Additionally, he points out to us that Truman and many others were aware of the larger implications of the use of nuclear weapons going beyond just the simple, strategic decision. Some of Truman's language used at that time corroborates this idea: "We're building a weapon great enough to destroy the whole world." Truman said this or intimated this at least three times Peter said, I think. He was more aware of what was about to come, perhaps, than the historical record has indicated.

Second issue he discussed was that nuclear annihilation was discussed almost immediately in the aftermath of the bombing in Hiroshima in the U.S. *The New York Times* discussed it. By the late 1940's, by the time the Soviet's have developed a bomb and the U.S. was on its way to developing the hydrogen bomb, there's a real fear of other types of weapons. He talked about the cobalt bomb, which I hadn't heard much about, and the notion that 400 cobalt bombs could blanket the earth with radioactivity. Over a relatively short period of time, we find out that it's not 400 that are necessary, it's 30. No it's not 30, it's 10. This became the premise in popular culture for films like *On the Beach*. And we sort of had to cut him off there before he could get to his final point about that, so he might want to correct me there. And he left us with a tantalizing vignette of some of the research he's doing now or had done for an article about the crew and The Enola Gay. He described how Paul Tibbets participated in an air show in 1966 where he flew over a sight in Texas, and they actually did a little mushroom cloud explosion for him to try to like dredge back up this "great moment." Peter wants to problematize this view and say that that's just one way of looking at it. In fact, a lot of the crew didn't view it as heroically as Tibbets did, so Peter wants to go back and force us to dig back up those documents to dig deeper and problematize that historical moment.

Our third speaker, Lawrence Wittner, was talking to us about the relationship between public policy formation and public reactions against the bomb. We focused on the growth of public reaction after World War II, but he wants to push this timeline back. He wants to force the periodization back in time and have us look at peace movements that go back much earlier into the 19th century. In fact, I think he made a very provocative claim that the notion of the weapon to end all weapons or the war to end all wars is not just a modern or a post-modern conception, but rather it goes back pretty far. In fact, even you would say, back to almost primitive warfare as an impulse or a way for us to stress this periodization back, which I think is good advice.

One interesting point, he says, that might make the nuclear age somewhat different is that countervailing pressures really become much more focused than they had been before. So, peace movements start to take on a new kind of intensity. He sketched out for us various moments along the way here: a wave of reaction drawing on pacifism as a movement immediately after World War II, but then also with the development of the h-bomb and atmospheric testing, and how the ban the bomb movement comes out of that. It subsided because of a period of détente and because of the Partial Test Ban Treaty. He's sketching out for us here, the cycles and a good notion of the push and pull of history as these movements pop up, but then there's some sort of geopolitical change that forces them back into a box. Another wave occurred in the '70's and '80's with the revival of The Cold War, which is followed by a wave of complacency after the end of The Cold War.

Then he moves us to the present where there are still 26,000 nuclear weapons on the world scene, we've scrapped constraints as best we could since the current occupant came into office, and the question of what we do now is imperative. He promotes a two prong approach: first is a change back to a more rich system of international security and second we just need fewer weapons and more treaties. We shouldn't just focus on one thing, but should push both of these initiatives forward. At the same time, he said that if we can't get or have international security, we can and should try to decrease the number of weapons.

Now, as a historian, this session raised for me a particular historiographical problem that I think everyone who writes or studies history deals with. The one is the desire to deeply analyze particular historical turning points and decisions by really get into the journals of Truman or to look at the internal dynamics of some of these peace movements and how they really worked. The other, though, I think is to try to understand broader errors or maybe even deeper impulses, which are harder to analyze because there are fewer metrics for them and they are harder to prove. They are the kinds of things that James Carroll was talking about when he said "more of a deeper history," the phrase that he used to talk

about a destructive element in humanity. We might focus more on documenting these impulses and broaden out our periodization. I'll split the difference and go the easy way and say let's just do both; we have unlimited time to do this?

No, of course not, but I would say that Louis Mumford came up in our session and Mumford represents, to me, sort of the high art of multidisciplinary history or multidisciplinary writing trying to capture all of the critical impulses and things happening in a particular time and place. These might include the spiritual elements, the role of the church, peace movements, as well as the actions of politicians, as well as the actions of engineers, perhaps, and then the hardest people to ever bring into the picture: the average people and what they thought. Additionally there's the critical role of social and cultural history in all of this. These are not easy histories to write, but it attaches to something that Marty Sherwin said in the last session and I've heard other people say today, which is that if the goals of this conference are going to succeed, I don't think they're going to be simply by focusing on nuclear abolition, but probably on attaching that to the broader impulses and historical transitions of our time right now that are unfolding. If it has to do with climate change or a more meaningful understanding of globalization. Maybe those are the kinds of histories that we need to be thinking about, or at least reading, if not writing. I'll leave it there. I expect I'm out of time.

ROBERT JENSEN:

I think that flows into what we were talking about: social and psychological themes. Hugh reminded us that we are a storied animal, so we spend a lot of time talking about these things in the context of narratives, not just the particular story you tell that day, but the larger overarching story. We talked not just about this story we have to tell to be successful, but recognizing that that's affected by the stories that came before. The stories about deterrence and things that were compelling at one time. And then we talked at the end more fundamentally about the kind of animals we are as people hearing these stories. This took us into the problems of evil. We talked a bit about the terrain on which these stories are being told. It is notable that unlike the early movement, we now face another existential threat, the ecological crisis. This crisis is every bit as likely, perhaps even more likely, to make human life impossible on the planet and that's part of the consciousness that we're dealing with. It's also important to realize that all these stories are being told in, for lack of a better term, a kind of death culture. We must always remember the nature of the culture we're in.

The underlying motivations of people and how to understand people, also came up. We discussed this question of evil and what motivates people who do things we might identify as evil. We didn't solve the problem, obviously. More concretely, when we're

telling stories, people think of themselves as citizens of a nation and in the U.S. that has a certain narrative about exceptionalism and the special role of the U.S. and how to craft a narrative that people can hear, but doesn't exacerbate the worst of our pathological, nationalist tendencies in this country.

I'm having a little trouble summarizing it, but I think it took us to a level that reminded us that facts are important and analysis is important and the nuts and bolts of fashioning political policies are important, but there's a deeper level in which we have to always remind ourselves we are working. This it led us to a discussion at the end of the nature of the prophetic voice and both the importance as well as the limitations and dangers of the prophetic voice. This should not be deluded into thinking the prophetic voice is universal drawing on universal principals, but we must recognize that it's very culturally specific. And finally, we discussed how the prophetic voice can be overused. It also can be cheapened when it's not taken seriously. So I'll leave it at that.

CHARLES STROZIER:

OK. I'm not Valerie Kuletz, but since she didn't come, I decided to make myself the designated hitter of this conference. I filled in for Valerie and will summarize the environmental session.

We commented that this room was filled with everyone talking about security and so we had a much smaller number of people talking about environmental issues next door. Yet, in terms of the larger culture, the emphasis is probably just the reverse. The awareness and the consciousness of environmental issues, particularly as related to nuclear power, is much keener in the larger public than the thinking and awareness of nuclear weapons and the kinds of issues that were going on in this room.

Randel Hanson started and talked about streams of waste that have come into play in America during the nuclear age. Quite extraordinary facts that he brought to our attention about the ecological burial of waste, or the tempted ecological burial of waste, and the almost monumental failure to solve some of the issues of toxic waste. He quoted the figure that there are now 40,000 tons of waste that's already been generated in the nuclear age. Two thousand tons a year are added to that stack. There's never been a solution. Kai had mentioned Yucca Mountain in his talk and Randy further elaborated on that. He also had some interesting and very important things to say, although technical and bureaucratic, about the way the Bush administration reclassified waste to talking about incidental waste and, therefore, gave the appearance of dealing with waste when, in fact, the budgets were radically cut and new regulations allow for waste to be left on site which does nothing to solve the problem.

Bob Musil picked up on some of these themes and talked about the necessity of building alliances with other groups, specifically environmental groups. There are literally millions of people participating in these movements now around the country. It's extremely important for us, in our concerns with nuclear weapons, to make these kinds of connections and it's very, very possible.

He also stressed two other points, which I want to emphasize. One is that the moment is propitious with Obama, but we need to remember that, unlike Clinton, Obama has both houses of Congress so there is an opportunity to raise the issue and to make policy changes at levels which have not existed, perhaps ever, in the nuclear age. The politics of abolition are at hand and should be embraced. He also made an argument that, in fact, we're closer to it than most people realize. We also talked about the ways of connecting the environmental movement, the history of it, and the nuclear weapons movement.

Finally, I want to mention and elaborate somewhat on a point that Kai Erikson made who was in our session at the end. He stressed that the term abolition is, in fact, a wonderful term to describe the movement against nuclear weapons and all kinds of waste. The term purposely evokes and intentionally evokes the spiritual dimension of what we're opposing. The very term, abolition, has a spiritual and moral dimension to it which gives it power. We don't just eliminate waste. We don't want to just get rid of nuclear weapons. We want to abolish them. And, of course, it connects with the American experience with slavery. I think it also certainly connects with something that Robert has written a lot about. He says that we shouldn't even call them weapons. They're instruments of genocide. I don't even know where Robert first wrote that, but he's been saying it for so many decades that I practically say it in my sleep. We shouldn't use the word nuclear weapon; it's an instrument of genocide. And that, you know, as Kai put it, in the end, you know, God herself would not allow use of these weapons. I think those are the terms that we should embrace in talking about this, and that it is necessarily and appropriately evoked in the very term of an abolition movement.

ERIKA SIMPSON:

My name's Erika Simpson and I just wanted to thank Chuck for letting me be a Lifton fellow a few years ago because it gave me the opportunity to meet Jonathan Schell who had always been a personal hero of mine and, of course, he wrote *The Fate of the Earth* and also *The Abolition*, and it was a very memorable experience.

I thought I would sum up our discussion using PowerPoint because I just like PowerPoint, but also it's quicker and faster. I just tried to summarize what they said as

they went. I hope they forgive me if I misinterpreted it, and they can correct me as we're speaking.

My attitude as a chair was that, essentially, all of us lived through The Cold War and many of the ideas that we learned about have been OBG'd or outdated by Gorbachev. I was hoping to hear some new ideas, but also go back to some traditional ideas that are still successful. So, we'll start off with me because I went first.

I chose five slides that I thought were most pertinent about the national security strategy of the U.S. since 2002, and its implications for NATO's strategic concept. As we go into the 60th anniversary of NATO's founding, we need to ask questions about the interplay between the national security strategy and then NATO's strategic concept which says that nuclear weapons are essential. I talked about this new preemptive strategy and its implications. I also spoke a bit about how other countries are learning those same lessons, including the United Kingdom, and France, and NATO, and, obviously, Russia.

And finally, I wanted to draw attention to the ideas of different defenders of deterrence. For example, I quoted some ideas by Guy Roberts who's the head of NATO's Nuclear Planning Group, and people that I've interviewed on these issues. They do want to tackle questions about deterrence, but they're very concerned about domestic debate, and they want to avoid open discussions. So what we can do is pressure them to have more discussions, and in doing so, I hope that we can move forward along the spectrum toward rejecting nuclear weapons. That led to some discussion about what, perhaps, typical liberals like Mandelbaum and Kimball, and so on, might argue or espouse not just at NATO headquarters, but in the U.S.

So, those are my five slides. Let's go to John. John started off talking about the dilemma that we face, such as the huge numbers of warheads out there, and pointing out that should the mission, therefore, be perceived as hopeless, we can't abandon the task. We have to think about ways to approach it. He did raise a good point about the norm. We have to raise the idea that nuclear weapons, just like slavery and genocide, are completely unacceptable and we have to continue to talk about the nuclear taboo. That led him to talk about the Rome statute and how we need to make nuclear weapons illegal just like expanding bullets. He raised some points about the U.S. and the other Northern major powers not honoring a whole range of international treaties from The International Criminal Court to The Land Mines Process, and so on. He wanted to expand the U.N. Security Council, change the rotating Security Council, and give them longer terms. He was very ambitious on a framework agreement that we need to have. So, that was John Burroughs just in one slide there. And now he's got four more slides to go.

John then started talking about multilateral machinery that we need to improve. There were different lessons that we are all learning from The Chemical Weapons Convention and The Biological Weapons Convention that discuss different ways to try to make changes in institutional machinery. I think a lot of energy could be spent on these issues, such as the P5. I wasn't certain about the connection there in terms of preconditions, so I might have misunderstood that, but, essentially, more transparency, more lessons about Resolution 15-40. John wants to improve detection capabilities and determination of violations. This led to some rather complex discussions about reconstitution, and in a world of nuclear abolition, what would we do in order to reconstitute nuclear weapons? My understanding is that he was saying reconstitution would complicate monitoring and verification and it would undermine the norm. We didn't have time to explore that issue, but it was interesting.

And then, finally, he had learned some lessons from Global Action to Prevent War on offensive capabilities basically saying that the U.S. has to give up some of its conventional superiority as well. I thought that was interesting.

Then we went into Leon Sigal, and he spoke at length about what he called the "nuclear conservatives," whom other people today have called "The Kissinger Group," and "The Four Men of the Apocalypse." He argued that they were speaking in millennial terms, so we shouldn't take what they were saying so seriously. Then he overviewed some comprehensive measures. I didn't catch who those measures, but I think his basic tenet there was to question how realistic these proposals are and whether they actually are going to come into place? That led him to argue that we haven't got a political climate in the U.S. that is sufficiently activated. He said Obama is going to agree with all our proposals, but then he's going to say, "Make me do it." So the question is: how are we going to do that? Then he started to list all these impediments to change: everything from Kim Jong-Il to different initiatives. Basically he suggested that we need a unilateral initiative just like Gorbachev had done in order to move to what he called "a zero agenda."

Then Sharon started talking and she had four or five themes that I put it into four or five slides. The first one was on the connection between the U.S. military industrial complex and arguing that they're moving away from reliance on nuclear weapons because they can't use nuclear weapons to fight wars. Then she went into the concept of deterrence and whether nuclear weapons are still necessary. The role of deterrence was a common theme all day long today. Then she argued that the conventional forces structure would mean less risk and went into talking about the institutional interests that would be threatened by nuclear abolition. She was talking about Los Alamos, and Livermore, and

so on, and breaking up the Department of Energy, and so on. These are pretty ambitious proposals.

Finally she started talking about getting rid of conventional weapons and that we need to think that the rest of the world is thinking more about conventional weapons than nuclear weapons. Small arms and night weapons and how to get an arms control treaty among other conventional weapons issues are things that we, in this movement, don't really dwell on.

As the chair, I kept a speakers list and then tried to figure out the themes. We did go all around the world, including to North Korea and China, and so on. We went everywhere. We also returned to scholarly ideas that were preeminent during The Cold War, so there was much discussion of Gorbachev's legacy and then different ideas that people have had about hawks, and doves, and owls, and how we can change those belief systems. That led to discussion about whether we need dramatic unilateral action and whether that could be iterated action in the style of grit and General Lee Butler. There was no discussion of rogue states. It was more a discussion of China, Russia, and the U.S., and as a Canadian who's been long involved in this sort of disarmament issues, I was quite surprised that there was that sole focus on the Great Powers.

There was also some discussion about preconditions. John Burroughs doesn't want to talk about preconditions, but there were a lot of ideas about BMD, and we need to get rid of that. We need to change the strategic posture of China and Russia, and we need alternative modes of strategy. We need more ideas on preconditions and returning to China and why can't we change the deterrence doctrine to get rid of a rapid, immediate retaliation in the event of a bolt from the blue. I found it interesting that you guys were talking about nuclear power and nuclear waste. We, basically, just agreed that we have to solve that problem, and we have to get rid of all the nuclear waste. It sort of turned into a discussion that we have layers of problems that we need to figure out: everything from nuclear power to China. All these layers of problems led to global governments and the idea of The U.N. Emergency Peace Service, or UNEPS, and also questions about how those things would all work together to achieve the impossible. Despite that, some people who are kind of idealistic, including myself, said, "Oh well, look at all the change we've witnessed, including Obama's election." Different people were getting ambitious and saying we need to kick something off unilaterally.

On my final slide I addressed whether we arrived at any firm conclusions or recommendations which we could put in the report. The impression I got from the discussion was that we need more institutional machinery, more rules of the road. We

need to combat belief systems, we need to strengthen the nonproliferation regime, and deal with rogue states. Thank you very much.

Conclusion:
"Reflections on Kicking the Nuclear Habit"

By Robert Jay Lifton

CHARLES STROZIER:

I've introduced Robert many times in my life, and I always try to say something different each time, but with this crowd, I hardly need to describe his influence, or impact, or the enormous range of his creative work. We are certainly all in his shadow.
He's been my mentor, and it's a special pleasure to play a part with Michael and others in creating The Lifton Fellows Program which continues directly and symbolically, his enormous influence. I think what he's taught us, among other things, is to understand nuclear weapons.

Robert has changed us psychologically and spiritually. And yet, in that process, for all our foreboding, which is understandably and appropriately real, we must find hope. Robert is truly a man who has looked into the abyss but sees beyond it. And unless I'm mistaken, that's what prophets do. Robert.

ROBERT LIFTON:

When Chuck has introduced me before, my way of responding, which some of you have heard but I ask your forbearance if I repeat it, is to quote my own bird cartoon. I do these little cartoons as a way of staying sane and in this cartoon a small, excited, young bird looks up and says, "All of a sudden I had this wonderful feeling I am me." And an older, bigger, more jaundiced bird looks down at him and says, "You are wrong." But now I decided to add another identity element to that. I discovered this marvelous line that could only come from Samuel Beckett. He said, "I am what I am, more or less."

Anyhow, I'm deeply grateful for this whole conference; to Chuck Strozier for what he's done today and done in general, and also to Michael Flynn and to their associates, and to Jennifer Simons who did much to make all this possible. In the past, I've expressed my ambivalence about the name Lifton Fellows because although always proud to be associated with the program, I felt uneasy about having something named after me while still around. But I'm happy to announce I've overcome my ambivalence. I'm just now delighted at this marvelous program. It's extraordinary. I did say to Chuck earlier that

this is the greatest collection of nuclear wisdom since the beginning of the nuclear age in 1945. I've decided to amend that and make it since those dialogues that had the name of Plato, I guess they were in Athens, some time ago. It's that kind of wonderful conference.

The idea of "kicking the nuclear habit." The phrase was my own. I suggested it to Chuck, but now that I've come to the moment, I'm not sure I can give a proper prescription for kicking the nuclear habit. But still, we have to return to the nature of the disease. We have to identify the disease, to keep the medical idiom, if we're to bring about some sort of relief or cure. And there has been much discussion about what nuclearism is and I want to go back to the idea of nuclearism, perhaps in a certain new way or different way. Of course, we know that nuclearism is the exaggerated dependency, even embrace or deification of the weapons as saviors to us for something called "national security" or "keeping the peace" or "keeping the world going." But I'd like to add and say that nuclearism is the great Faustian disease of our time because it's an expression of an illusion that with these vehicles of ultimate power we can control the world. Of course it's illusion. And then to mix the metaphor a little bit, or combine two metaphors, its Faust chasing his own tail, because we're constantly saying, "Why do we need nuclear weapons because of nuclear weapons?" In other words, to combat the bad nuclear weapons we need good nuclear weapons, and besides, we've always got to modernize our own nuclear weapons, otherwise they'll deteriorate and that's not good. So you always have to keep in that vicious circle of nuclear weapons and more nuclear weapons, and that really is Faustian in the ultimate sense of that myth as well as being some kind of tail-chasing process.

Nuclearism is a form of moral insanity. We have to say that. It's often built on a pseudo-rationality. I've said it is a logic of madness. But it is moral insanity and it has to do with the ultimate power that I mention, but also with versions of scientism and technicism, and with worship of a version of science and a version of technology that, of course, power bound. It's quite clear from all the historical information, and Marty Sherwin has done a lot on this, that nuclearism began from the beginning. Just even, this was also in Jim Carroll's presentation. It's all through our conference. It begins even prior to the weapons, and when you look at people like Oppenheimer and even Szilárd at Oppenheimer, there's a long sequence of nuclearism. He was determined to get that bomb used and he did really believe that by dropping the bomb, using it, which he insisted upon doing and made sure was done, we would so enlighten humankind that we could eliminate war-making or at least make a statement in that behalf. That's really early nuclearism. And even Leo Szilard, who became much of a hero to all of us and deservedly so, in his very earlier moments, very briefly, went through a phase of a similar

view to that of Oppenheimer. And that's a way of recognizing how pernicious and how attractive that temptation to nuclearism is.

This conference, and the problem, is all about imagination. You know in looking at all the participants, so many of you are good friends of mine and just about everybody here is a scholar activist. So I decided, you don't have to be a scholar activist to be my friend, but it helps. And in terms of imagination, I'm working on a memoir now, so I'm inclined to be a little autobiographical, and I have a strange sense of how nuclear imagination worked on me. David Krieger was asking me about early childhood influences in coming to the Draconian interest that I've come to, but I can remember, and I've said this in writing, that when the bomb was first used and I was a 19 year-old medical student, my first reaction was one of sheer joy. The bomb was dropped. The war would end. It would be won. I wouldn't have to go to war. It would be a glorious American victory. Of course I became quickly ashamed of that response and I've been trying to make up for it ever since. But that was my first imaginative reaction.

Quickly I understood more about the bomb within days, but I didn't begin to think about the bomb as an intellectual issue, and that's very important. Until I got in the coterie of David Riesman, then at Harvard in the late 1950's when he ran a little group that was called Committees or Council of Correspondents Model on the American Revolutionary Group and was the first faculty advisor to a student anti-nuclear group called "Toxin" at that time at Harvard. I became very close to Riesman and we talked a lot about the absurdities of shelter building and, of course, you all know about that central, philosophical issue at the time: if you're neighbor insists upon entering your shelter, should you shoot him in order to preserve oxygen for your family? And we looked at those things and asked questions about what that said about a society but also about strategic projections and the absurd psychological assumptions they made: I drop a bomb on Moscow, you drop one on New York and then we stop because we've both done it so to speak. These ideas were among all sorts of things that we could talk about.

It was through that influence and through that immersion in a group that really thought about basic issues in relation to nuclear weapons that I got to Hiroshima. It wasn't the opposite. You don't have some extreme experience that I mean, in most cases, I think, that then enlightens you about these things. I think you need a certain amount of beginning opening out in order to get to the subject. And I'm sure most of you here would find that something opened your imagination to these issues and then you could plunge in and learn a whole lot. That's what happened to me in Hiroshima. And then, of course, in 1962 when I got there, I had this staggering finding. The first thing I learned was that nobody had studied it.

Certain things that I observed or experienced in Hiroshima really affected me and I want to mention one: the case of, appropriately, a professor of history, then at Hiroshima University, who had been a very young man as a survivor in 1945. I interviewed him on several occasions. He said that he had a typically terrible, grotesque experience and lost his wife and went wandering through the city desperately looking for her. He had been on the outskirts of the city when the bomb was dropped and he said, "I looked down on the city from Hijiyama Hill," a little hill outside the city, "and I looked down and I saw that Hiroshima had disappeared. Hiroshima just didn't exist." He said, "No matter what terrible things I experienced that day, that was what stayed in my mind. Hiroshima didn't exist." As I listened to that, in my own imagination, I began to see. I've been interested in how when one does interviews, especially about extreme events like this, one finds oneself translating words into images that give one a sense, as closely as possible, of what one is hearing said by the person who's been through this extreme experience.

I began to have images of absolute emptiness. Hiroshima, not there. And then I'd go back and forth in my own mind, with images of a city, and then nothing, a city, and then nothing. I only realized later on how much that influenced my own evolving ideas or concepts about nuclear weapons. Soon after doing my Hiroshima work, I came to the idea of what I call "imagery of extinction." I meant, seriously, that that kind of imagery of everything ending or a species destruction, really affects just about everybody in the world after 1945. It's true that that was literally only possible with the hydrogen bomb, but it was the atomic bomb that really initiated that imagery. It had been a part of science fiction, H.G. Wells and others before that, but it was from this history professor and what I heard and the images that could form from talking to him that that idea and it's consequences, because I think that idea has very powerful, psychological consequences, and cutting off the great chain of being or our sense of connectedness to the great flow of human history, or what I call "symbolic immortality," that really penetrated my consciousness.

I also came to a kind of mantra and very much related, again, to those interviews with that history professor and I used the mantra in my writings and especially in talks I gave in various places all over. And the mantra is a response to people who would raise the issue, "what's so special about the atomic bomb? Look, more people were killed one night in Tokyo than in Hiroshima," and that's probably true and that was pretty terrible as well. I would answer, "In Hiroshima it was one plane, one bomb, one city; One plane, one bomb, one city." That was partly the legacy, again, of what this professor of history taught me as I took it in and translated it or transmuted into my own narrative or my own re-telling of that kind of experience.

There was another moment of imagination in Hiroshima. It was a wonderful moment for me even though it was about dreadful things which had great impact on my imagination. I happened to read one day, while I was doing this work in the summer of '62, in an English language Japanese newspaper, about how a group of doctors published a series of articles in "The New England Journal of Medicine" describing what would happen, if say, a ten megaton bomb would drop in a particular neighborhood in Boston. This was just a brief paragraph in this English language Japanese newspaper, but I was thrilled to read it. Here were a group of doctors, of colleagues, in a way, of mine, back in the U.S. who had the same kind of projection of visceral effects that I was experiencing from my Hiroshima interviews. Of course, that was the beginning of the physician's anti-nuclear movement. Right there, in Boston, with leading figures such as Bernie Lown and Jack Geiger and Victor Seidel and then later, Helen Caldicott.

Now, of course, I joined them when I came back and wrote to them. Even when "Death and Life" won an award, I gave part of the award money to The Physicians for Social Responsibility. I realize now one needs, of course, this kind of imagination to take in and then confront a nuclear weapons danger and find alternatives. It has to be shared imagination. It has to be shared imagination in solidarity. In a way, that's also what I think this day has been about, a shared imagination in solidarity, a common set of goals and a struggle with imagination and sometimes differing views about how to get to those goals.

The doctors' movement could extend our imagination to our audiences by a simple kind of message or a narrative. It was very, very simple. I think it's good to keep in mind how simple the message was because there was much talk about not only the effect of the weapons on these cities, but the absolute breakdown of all medical facilities. And our message was something like, and I used to say this in my talks and others said similar things, "This time we won't be able to patch you up. It's not because we wouldn't want to, we're doctors. That would be our job. The trouble is it won't be possible because you'll be dead and we'll be dead." People understood that and that kind of imagination could extend out broadly to many who had previously shut it out from their minds. There is this shared imagination in our solidarity and disseminating that imagination. Now, I'm not saying that this is totally a psychological problem. All these psychological issues have to be translated politically into policies and political action. Nevertheless, this is some of the psychological process that has to go on and that exists in relation to it.

There was another leap in imagination when the American Physician's Movement went international. It was mainly Bernard Lown and then Eugene Chazov and that became a crucial tandem for the Americans and the Russians to be together in this movement. We did have our gallows humor in the movement because, you know, Chazov, a leading

Soviet, and now Russian cardiologist, was the cardiologist who took care of all the Soviet Premiers, all the leaders, and they were dropping off like flies from a heart disease and we used to wonder whether we shouldn't make a tactful suggestion that they change their cardiologist. We had this little joke in the doctors' movements. It was usually after hours following a few drinks and it was often proposed by one of the Soviet doctors, but it could be an American doctor, it doesn't matter. It was one reaching across the table to the other and it went something like this: "Here's to your survival because if you die, we die, and if you survive, we survive." And that, in a way, was the gallows humor equivalent for the central theme of mutual security.

There's another factor of great seriousness in terms of the transmission of anti-nuclear imagination in relation to the doctor's movement and I don't think this is so widely appreciated. I mentioned Eugene Chazov, and he turned out to be a really stellar figure who was crucial to the whole process, deeply dedicated to an anti-nuclear position. He was also extremely close to Gorbachev and worked with him regularly. He wasn't only his doctor, he was a close confidante. He conveyed to Gorbachev all of the findings and attitudes about the movement. We were coming together with the Soviet delegation in the Physicians International Movement, IPPNW. In a way, Gorbachev was fed and open to all the documents and attitudes of the anti-nuclear movement, the Physicians Anti-Nuclear Movement, and when he began to make those speeches and write those articles, I think this was a major influence on him. Lown also got to talk to him, but it was Chazov who was very close to him, and that says something about the transmission and contagion. I mean, we know about the contagion of nuclearism, but what about the contagion of anti-nuclearism or imaginative truth, about what the weapons really are. That was a great example in a very powerful way of that kind of contagion.

Actually, I'm happy to say to you, because you're all heroic to stay on for so long, but I'm going to do something amazing and take less than the time allotted me. I'm going to talk now a little bit about abolition versus the dissemination of nuclearism. Now this has been talked about, but let me just put it in psychological or basic terms. Abolition of nuclear weapons means not only getting rid of these extraordinarily dangerous weapons that could do us all in, it means interfering with and radically diminishing what I call "trickle down nuclearism," as I say, the only Reagan term I use. Trickle down, and there is such a thing as trickle down nuclearism because in various ways that we all know to well, the central nuclearism of the United States and the former Soviet Union or Russian remnants of the Soviet Union and other countries, nuclear weapons possessing countries, makes itself contagiously available to other countries, smaller nations and non-national groups, so-called terrorist groups. That is a really powerful danger in terms of contagion because what is transmitted is not only the know how of nuclear weapons, but the attitudes of, as has been pointed out today, very often the embrace of these weapons and

the making of these weapons against the actual interest of these countries, but it may become irresistible because of the psychological attraction.

If we abolish nuclear weapons, we're changing the mindset of the world as well as the destructive potential of those weapons and that's a very simple, but very important matter. In the book that I wrote with Greg Mitchell, "Hiroshima in America," we looked at all of the American Presidents since the beginning of the nuclear age in terms of their mostly ambivalence toward nuclear weapons. If you sum it up everybody, prior to George W. Bush, had a deep ambivalence which each expressed. Everyone would say on one occasion, "Look, these are just part of our weapons. They're part of what we have available should we have to use them." He said on another occasion, "these weapons are unusable and nobody should even dream of it." Each President said that at one time or another until George W. Bush. He never said the second part. With George W. Bush, our weapons were weapons to, in a way, eliminate evil, the other, and their weapons. They were evil. In that sense, the nuclearism of the recent Bush administration has been almost unfettered. That has perhaps been slightly modified by touches of pragmatism that we've seen in the last few months of the end of this administration.

I would like to point out something else. One of the great dangers of nuclearism is this expression in the midst of declining power. The Bush administration has really functioned in a phase of declining American power which they have sought to deny. With the decline of power, there's more danger of the attempt to express exaggerated power. That applied with, in many ways, Vietnam and Iraq and with the Bush policies toward nuclear weapons and we're not over that danger where there'd still be forces in American life, in American public life, which reacted to the decline of American power which is a very strong kind of psychological influence, and may react with an exaggerated nuclearism. I think we should be very much on guard for that.

I want to say something about the absurdity of nuclear weapons, and then I'll return again to my theme of kicking the nuclear habit which is really the theme of all of us. We have to remember, always, that nuclear weapons are absurd. Don't for a moment think that these weapons are reasonable. They're absurd. It's absurd for us to build devices, as Chuck quoted me as saying, even though I use the word weapons, that is not proper. They're devices for genocide. To build them with a potential to self-destruct, so to speak, the entire species, has a fundamental absurdity. We need to look for vulnerabilities in the nuclear weapons argument in order to assert their absurdity and that's very important.

The obvious one, the obvious vulnerability has always been shelter building. During the '50's, Michael Carey, who used to work with me and who's now in Alaska and a great authority on Sarah Palin, but in any case, Michael did a wonderful study of those nuclear

drills in the 50's and without going into all the details, he found that those kids of six or seven years old were much too bright to believe that they would survive from a boy scout-like response to an air raid drill. But they were terrified and they weren't allowed to say that. The authorities asked them to do it. They had nuclear dreams and they had symbolic reactivation when certain things came up in the world. So, shelter building and the defense against nuclear weapons has always been an absurd. This serves as an entrée into the absurdity of nuclear weapons. We don't hear too much about the shelter building idea, but we do hear about anti-ballistic missiles. That's part of that absurdity of defense against nuclear weapons. They don't work and they can't defend against various manifestations of nuclear weapons and there's much illusion of the most dangerous kind that goes into various plans which are geopolitical more than, in any way, reasonable for anti-ballistic missiles.

The second vulnerability in terms of revealing nuclear absurdity was described brilliantly, I thought, by Kai Erikson, earlier, in terms of nuclear waste. Think of that. Here is this stuff that we use, and we're told by proponents of nuclear weapons and nuclear power that we can handle this material. It's beneficial to humankind, and we've got to use it to protect ourselves in the case of weapons and nuclear power and yet we are totally unable to get rid of the malignant waste that these weapons produce. The so-called half-life is forever of these weapons. If anything is more revealing of the absurdity and the falsity of the claims for use of the weapons, it's this limited dimension of technology, the inability to, in any way, get rid of nuclear waste. Kai put it very well when he talked about it being a kind of legion in the earth in which we pour our greatest poison.

Finally, kicking the nuclear habit. One thing I would say, as Chuck said, I'm a hopeful man and I'm still a hopeful man. I think we should go back, as we also have to do in terms of anti-war sentiment, to Homer. You know, when you read *The Iliad*, of course it's a kind of glorification of warrior prowess, there's no doubt about that. But there are these voices in the background pleading for mercy. They are mostly women's voices, but not entirely, it's like a chorus or a few key people, and they're saying in effect "It's not worth it. There's too much pain, too much suffering." If there had been nuclear weapons in Homer's time, there would have been voices saying, "These weapons are absurd." From the very beginning we have traditions for anti-war and despite the fact that nuclear weapons are of a dimension unique to themselves, anti-war sentiments, as Larry Whitner has emphasized, very much associate themselves and bring out and stimulate our anti-nuclear sentiments.

Now, that is part of the good news and there's another aspect of good news I have for you this evening. It has to do with what I call "super power syndrome." We're in the process of kicking not only the nuclear habit, but trying to kick, or at least at our better moments,

the super power syndrome. At least Obama and the administration and many people in it have raised questions about American unquestioned unilateral hegemony in the world. Super power syndrome I describe as the sense of being the world's greatest military power and the sense of entitlement to being just that, and ultimately a sense of omnipotence and omniscience which gives one the right to control history. That's what the super power syndrome is about. The super power syndrome is totally based on a foundation of nuclear weapons. Nuclear control, the capacity for world destroying domination with world destroying weapons, is the basis for super power syndrome. So, as we struggle to release our self from the super power syndrome, and to the extent we do that is with enormous lifting of a burden, a burden for the world and it's a burden for us, so we increase the possibilities for nuclear abolition. And here, again, there's a creative tandem between nuclear abolition and stepping out of the super power syndrome. And they can enhance each other, but it's something, obviously, we have to work on.

And here, I would say that we shouldn't be shy about connecting with this new election. Let's seize upon that and of course, let's not deceive ourselves, they'll be plenty of nuclearists in the Obama administration, but there will also be people who are open to and want to hear the kind of anti-nuclear messages, which have to be and should be, both scholarly and activist, that we have to convey. I don't think we should feel ourselves shut out from this kind of influence. Again, I would remind you of that sequence from the Doctors Movement, of Chazov to Gorbachev. Maybe there's something parallel that we have a possibility of achieving right now with the Obama administration.

One thing I mentioned it in one of the panels is this three levels on which we work: the political influence, which includes the nitty-gritty of necessary dealings to diminish nuclear danger and work toward abolition; the scholarship and imaginative views to break out with new means of doing this and of offering something in it's place that we've all come to; and also, finally, some specific and passionate activism. I don't think we should forget about that. I think activism needs scholarship, but scholarship needs activism if it's to be relevant and strong and significant.

So, I'd say this is a special, historical moment for our country, for our reasoned, anti-nuclear crusade, in particular, and we must, indeed, seize the moment. I thank you all for honoring me in connection with this call. And I'll close, as is also my habit, with some lines of poetry. Though you may not have heard these lines, they seem appropriate now on many levels. They're from Stanley Kunitz and I quote him not only because he was a good personal friend and lived to be, literally, a hundred years old believe it or not. He wrote these I think in his ninth decade, these lines in one of his volumes called "Passing Through," and they go this way: "Great events are about to happen. I have seen

migratory birds in unprecedented numbers descend on the coastal plane. My bones are waiting for the uncertain signal to resume the long march." Thanks very much.