

Too Close for Comfort: The Threat of Near Nuclear Use

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Gill Bennett

Good afternoon and welcome to you all very much to this session, ‘Too close for comfort: The threat of near nuclear use’. As everybody has been remarking as we’ve been chatting just before this session, this is an extremely appropriate time to be talking about nuclear issues, even though it’s not exactly the nuclear issues that we’ve been looking at in this particular report.

We’re very glad to have here with us today three people who have really quite different takes on the same issue, but who are going to explore some very exciting themes for us. Firstly, on my left here, we have Eric Schlosser, the author of *Command and Control*, which is probably what you all know him as, but over the years as his biography tells me, he’s done everything from harvesting with migrant farm workers, meat packing in Texas and Colorado... You’ve told the stories of marijuana growers and pornographers.

I mean, I think perhaps I won’t read all this out. But his book *Command and Control* published in 2013 examines the efforts of the military since the atomic era began to prevent nuclear weapons from being stolen, sabotaged or detonated by accident, which of course is one of the themes of today’s session. The book has been very widely appreciated. It’s been nominated and has won a number of prizes and been nominated for others. So we’re very glad indeed to have Eric here. He’s going to begin our talk today.

Our second speaker, Heather Williams, has been a research fellow here on nuclear weapons policy in the International Security Department since January 2013 and her current projects focus on the Nuclear Non-Proliferation Treaty and humanitarian impacts of nuclear weapons. She speaks regularly on US nuclear policy, Trident replacement, North Korean nuclear testing, arms control, all issues which will be explored in today’s session.

Finally, at the end here, we have Dr Ronald Sturm who’s the head of the Nuclear Unit in the Austrian Federal Ministry for Europe, Integration and Foreign Affairs. Originally a diplomat, Dr Sturm has served in a number of roles to do with the IAE and the Austrian permanent missions to the UN, the Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO) in Vienna, and before that, in the Economics Unit of the UNDP office in Dar es Salaam. He is working very closely with all the issues that we’re talking about today.

My name is Gill Bennett. I’m not a nuclear expert at all. I’m a historian, an official historian you might say, since I worked in Whitehall in historical matters for over 40 years. I have worked on nuclear issues in my time, but secret intelligence is normally what I work on. But I’m intensely interested in this report, which I read with great interest, and I’m looking forward to our session today.

The event, as always, is being held on the record. People can comment via Twitter if they wish to, using the hashtag #CHEvents. Please, if you have not done so already, put your mobiles on silent. Each of our speakers is going to talk for roughly six to eight minutes each, so quite a short time, but introducing themes that we can then explore in the Q&A session. Without further ado, I’d like to ask Eric to begin. Thank you.

Eric Schlosser

Thank you. Thank you for having me here today, and thank all of you for coming here on such a beautiful, beautiful day to hear about the risk of nuclear Armageddon. Today is an important day, and there's a very important deadline tonight that will have an impact about whether there will be another nuclear nation in the world. There are some academics who argue that the proliferation of nuclear weapons is not a danger, that it can be a stabilizing force because countries that have nuclear weapons are less likely to go to war with one another and they look at a number of cases, the United States and the Soviet Union for example, about how nuclear weapons perhaps deterred a third world war.

I think those theories are true, until they're not. My research, which took place over six years, was to look at the efforts of the United States to control its own nuclear weapons. By control them, I mean to make sure they never detonated by accident, to make sure they were never stolen, to make sure that someone within our own chain of command never used a weapon without authorization of the president of the United States.

What I found is really, since the dawn of the nuclear era, these weapons have always been on the verge of being out of control. The thing I'm going to emphasize today is some of the technical challenges of controlling your weapons, particularly when as the United States has for decades wanted to have weapons available for immediate use. The technological mechanisms required to have weapons available for immediate use and reliable, are often very different from the technological mechanisms necessary to make sure that these weapons will never be stolen, never be detonated accidentally, never be used without proper authorization.

So when you look at the history of the American arsenal, there is this continual tension between always wanting to be able to use your weapons and always wanting them to detonate properly, and never. Again and again, in our history, the decision was made to emphasize always over never and that is why repeatedly during the Cold War, the United States came close to having accidental detonations with its own weapons that could have destroyed American cities, that could have destroyed large parts of the United States, and we were quite fortunate.

Forgive me if I indulge in a bit of jingoism here, but we invented this technology with help from British scientists. The United States perfected this technology and I would argue the United States has more experience with nuclear weapon technology than any other country. In my book, I write about very trivial events, very small things, that could have led to these accidental detonations.

In one case, over the state of North Carolina, the break-up of a bomber mid-air led to two hydrogen bombs being released inadvertently. When the bomber was breaking up, a lever was pulled in the cockpit as though the pilot were pulling it during war time, that one of those hydrogen bombs went through all of its arming steps, except for one, and could have detonated full scale in North Carolina in 1961.

There was another incident in which there was an intruder alarm at a Minuteman missile silo. Basically the burglar alarm was showing some problems and the technician went there in order to see what was wrong with the intruder alarm, opened the fuse box with a screwdriver, was pulling out one fuse after another, and pulled out a fuse, heard a loud explosion, and what had happened is he'd created a short circuit that had essentially lifted the warhead off of the missile and the warhead dropped 80 feet in the silo, did not detonate, could have detonated.

In another instance, there was a weapon that was being tested in Florida near Cape Canaveral at a naval air station. While they were testing the weapon, they were plugging various testing equipment into it, and did not realize that on the plug of one of the pieces of testing equipment, there was a bent pin. When it was plugged in, this bent pin created a new electrical pathway and fully armed the atomic bomb which could easily have detonated and would have destroyed our premier space facility, Cape Canaveral.

According to the Pentagon, there have been 32 broken arrows, serious nuclear weapons accidents in the history of our arsenal. Through the Freedom of Information Act, I obtained a document that listed between 1950 and 1968 more than 1,000 nuclear weapon accidents and incidents, many of them not listed on the official Pentagon list, that could have led to a detonation.

This is a very complex technology. There are all kinds of ways that not only a weapon can go wrong, but a weapons system, which is the weapon made into a bomber or a missile or a communications network can go wrong. One of the conclusions of my book is that human beings are much better at creating complex technological systems than we are at managing them or understanding them when something goes wrong.

We have come close again and again to catastrophe. The fact that it hasn't happened does not mean it won't happen and there are thousands of these weapons right now. The addition of another state with nuclear weapons, facing pressure from its nearby adversaries to remain on alert, is not going to be conducive to world peace. I think this is a subject of urgent importance that needs much more attention. I thank you all for being here today.

Heather Williams

Thank you. Thank you all for coming. Our report, *Too Close for Comfort*, was actually launched back in April, but since then we've seen numerous incidents highlighting the report's findings and unfortunately showing that it's still quite relevant. Two such developments that I'm going to talk about today have been recent reports from the United States on issues with their nuclear enterprise. But then also the breakdown of cooperation between the United States and Russia on nuclear security.

The bottom line from our report, and from these incidents since then, has been that there is a sense of vigilance missing from nuclear matters. This isn't something we can just throw money at or try to develop some new technology to resolve. Rather, we need to remember that nuclear weapons are not just some Cold War relic that we can shove in a closet and forget about. These are weapons that we continue to live with and have to be

worried about. In that sense, the cases from this report are not just historical, but their relevance we're seeing today might be a glimpse into the future.

The cases from our report, we had 16 which were near misses and accidents. They included the Cuban Missile Crisis, Able Archer, Kashmir and then also some sloppy practices. What we did is we tried to look at these nuclear incidents from a risk lens, as probability times consequence. As we know, the potential consequences of a nuclear detonation are massive. There's an international initiative going on right now to try to increase awareness of those.

We wanted to look at the probability side, and particularly the human judgement factor. As individuals in control of these weapons, what was their decision-making process? What was their judgement in working with these?

Our findings were that there are limits to learning. There have been nuclear mistakes being made for decades and for whatever reason, it seems that the lessons of these incidents have not been learned. We also found that prudent judgement and intuition can often save the day and it can help to avoid nuclear escalation and further risks. As I said, since the report was released, we've seen new reports about sloppiness in the US arsenal, and also the deterioration in US-Russia relations, which is having implications on nuclear risks.

Looking now to the case of the US nuclear arsenal, there were two reports that came out this year. One was an internal study. The other was an independent review, and this comes in the wake in a series of mishaps from the US nuclear enterprise, including cheating on tests. You had servicemen texting test answers back and forth to each other. One senior official was dismissed for using fake casino chips. Other incidents of inappropriate behaviour, and then of course we have the 2007 incident when six nuclear tipped missiles were flown across the United States unknowingly.

Looking closely at the independent review that came out in June, there were three main findings that I just wanted to highlight, because they do link into our report. The first was the issue of morale. There isn't a lot of incentive to work on ICBMs in particular right now. In other areas of the Air Force, you have servicemen and women who want more crew time. They want to be more hands-on. You don't see that in the nuclear, particularly in the ICBM force.

The second issue was resources, lack of resources, lack of interest in a lot of issues in the nuclear infrastructure. The classic anecdote that's being told in the media when the report was released was about this wrench. There's a special type of wrench you need to attach a warhead to an ICBM and there were two bases sharing one wrench, so they were Fedexing it back and forth to each other. We've been told that since then they now have two wrenches.

The third issue was this over-emphasis on perfection. One quote from the report said, 'Micro perfection generates macro risk to the mission.' The nuclear enterprise in the US is not really an enterprise. It's a federation where you have different groupings worried so much about perfection, because they won't want mistakes. It's a hierarchy. Nobody wants

to be to blame. Nobody wants to be held responsible if something goes wrong, that as a result this is further undermining morale and creating more problems.

As [Secretary of Defense] [Chuck] Hagel said, 'We took our eye off the ball.' There have been a series of recommendations and steps that are going to change, supposedly to fix some of these issues, to try to increase morale, increasing funding by 10 per cent over the next five years. But what we really need is a culture change. I think these reports highlight that.

Turning now to the issue of US-Russia relations, particularly nuclear cooperation, this is one area since the end of the Cold War, that's really been a success story. It has been the United States and Russia working together to try to secure Russia's nuclear materials. This included consolidating the material into fewer sites, converting reactors to only produce low enriched uranium rather than weapons grade.

But this is coming to an end. Russia has announced it will not attend the 2016 nuclear security summit and that it does not envision any initiatives for further cooperation with the United States. We're also seeing a breakdown in threats to the arms control regime. According to the US State Department, Russia violated the 1987 Intermediate Range Nuclear Forces Treaty, and there are no prospects for further arms control at the moment between the US and Russia, no new start follow-on, nothing to deal with the tactical nuclear weapons in Europe.

All of this is coming at a time of heightened risk and escalation. There was a great report a few weeks ago by the European Leadership Network, which I would recommend, which found 40 sensitive incidents and three high risk incidents between NATO and Russia. Again, this relates back to our report and these findings of the cases that often occur at a time of heightened geo-political tension with an increased risk of miscalculation and misperception.

Just to wrap up, I don't mean to single out the United States and Russia here by any means. Our report also does not single them out. It tries to deal with all states and all nuclear weapons. The report was limited, obviously, by some classification issues. The main take away that I had, at least from working on this report, was that there's so much that we still don't know.

There are probably things going on right now that we just can't know about. Since the report has come out, we've been really grateful for people who have given us feedback and told us, 'There was this incident...' We heard something about a bear breaking a trip wire at a nuclear facility once. That was a good story.

Then also, some people saying, 'You know, I think you got this one a little bit wrong.' But the main issue is to try to increase awareness and be talking about this more. As I said, these are problems that we can't fix with money or smarter and sexier technology, though I suspect Washington is probably going to try that. But rather, we need to rethink the way that we think about nuclear weapons. How do we continue to live with these weapons?

Just to close, I wanted to close with a couple quotes, which I thought were pretty telling. This year, Secretary Hagel [indiscernible] Air Force base, when he was talking about the

incidents in the US nuclear infrastructure, he said, 'You are an indispensable element of our national security. You are the main deterrent for the security of this country.' Six years ago at the same base, [former Secretary of Defense] [Robert] Gates said, 'For your part, you must never take your duties lightly. There is simply no room for error. Yours is the most sensitive mission in the entire US Military.' Six years apart, almost same exact quotes, and things have not been improving. So clearly some lessons are not being learned.

Gill Bennett

We've had two... Gloomy is not the word, but two rather threatening presentations, I would say. I'm looking to Ronald to give us a slightly more upbeat view.

Dr Ronald Sturm

Well, certainly I'm not going to threaten anybody. Thank you first of all for the two very insightful presentations by experts. I myself am a diplomat and by definition therefore I'm not an expert. So I will give you some more general comments basically to illustrate that it's very important to continue creating awareness about the continuing threat of nuclear weapons and the risks that we still have to live with and that we need to eliminate.

It's no surprise I think that Chatham House invited somebody from Austria to talk about this, because Austria is organizing a conference on the humanitarian impacts of nuclear weapons on 8 and 9 December. We are going to repeat this exercise at a much larger scale in Vienna in a few weeks' time.

I think there's a saying in English along the lines 'you stand where you sit', which means it's quite logical that Austria would be following the humanitarian approach. Look at the risks. Look at the humanitarian consequences of nuclear weapons, because in the past, in the centre of Europe, as a neutral state, not a NATO member, not under any nuclear umbrella, we never kind of benefitted from the so-called nuclear deterrence. We always were just carrying the risk, carrying the burden of the risks of nuclear weapon detonations.

The same is the case for many countries outside Europe. There are many nuclear weapons free zones, so most of the countries in the world don't rely on nuclear weapons for their security. So for us it is quite natural to take the humanitarian approach, which for us is also one way of uniting all the countries, because all the countries will be affected if a nuclear weapon explodes, if a nuclear war breaks out, whether in a nuclear weapons state or non nuclear weapons state.

I would also like to make a small comment on the state of awareness that we have at the moment, compared to the state of awareness that we had in the days of the Cold War. In the days of the Cold War, everybody was aware of the humanitarian impact of nuclear weapons. Everybody talked about nuclear winter. In fact, I was at college in the UK at that time, and I learned about nuclear weapons as a student here in the UK, not back in Austria. We didn't have nuclear weapons.

I look at the audience here and we have a mix of people, mix of generations. That is very encouraging. The older generations will remember all the talk about the humanitarian impact and the threats of nuclear war. Younger generations still have to learn about this and that is the exercise we're engaging in at the moment.

In the post Cold War period, suddenly there seems to be no more threat of nuclear war, so the kind of expertise that we had in the past also in the diplomatic service, where we had to negotiate nuclear treaties like the statute for the International Atomic Energy Agency, for example, which is also part of the nuclear non-proliferation regime, also has a role in nuclear disarmament, although this is not publicly stated. Also, in the negotiation of the Nuclear Non-Proliferation Treaty, and then later in the negotiation of the Comprehensive Nuclear-Test Ban Treaty.

In the days of the Cold War, there was a lot of expertise in this diplomatic service. With the end of the Cold War, this kind of expertise faded. The expertise and the awareness faded among officials, policy-makers. It faded in the public. Only expert circles, like think tanks here, Chatham House, they maintain some expertise. But if they wanted to raise awareness, no media would listen to them. There was very little reporting in the public.

Things are changing now. Things are changing sometimes for bad reasons. Bad reasons are proliferation cases. Bad reasons are regional security problems, where nuclear weapons have a role or are threatened with. And then there are also good reasons, like efforts by states, by civil society, to bring back to the conscience the humanitarian consequences of nuclear weapons and therefore the need to go the extra steps that we had already started in the past, in the times of the Cold War, to eliminate nuclear weapons and to eliminate the threat of nuclear war.

In 2010, in the review conference of the NPT in New York, again member-states, the states parties of the treaty reminded themselves of the humanitarian consequences of nuclear weapons. Then afterwards, year after year, in the framework of the NPT preparatory commission meetings or in the framework of the United Nations General Assembly [indiscernible] committee, countries made joint statements on the humanitarian impact of nuclear weapons and of the need to make progress towards the elimination of nuclear weapons.

Progress, which had become very elusive in the conference on disarmament in Geneva, which after the negotiation of the CTBT, did not manage even to agree on a programme of work and to implement a programme of work in order to negotiate further treatments, which are needed to reach the goal of a world free of nuclear weapons and to maintain a world free of nuclear weapons, and to create a cooperative security system that does not need to rely on nuclear weapons.

So what we are doing in Vienna is a conference which is now the third conference of this kind on the humanitarian impact of nuclear weapons. It was started in 2013 in Oslo, a NATO country. It started off as a discussion. It continued in Mexico earlier this year. So a country in a nuclear weapons free zone continued and we have the third conference in Vienna in a single state nuclear weapons free zone, I might say, in a neutral country, in a region which is full of nuclear weapons and which carries the burden of the risks of nuclear weapon use.

We want to use this conference to create momentum, to create the political will which has been lacking in the past years, in order to move forward in negotiating and in bringing about a world without nuclear weapons. As UN Secretary-General Ban Ki-moon has said, it is time to end the age of nuclear nightmare. That is what we try to do with a kind of incentive building conference. Thank you very much.