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# From Bomb to the Base Camp: Global Nuclear Disarmament and the Ensuing Debate

## Interview with Dr. Scott Sagan

CBRN Report

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**Dr. Scott Sagan** is a professor of political science and co-director of Stanford's Center for International Security and Cooperation. Before joining the Stanford faculty, Dr. Sagan was a lecturer in the Department of Government at Harvard University and served as a special assistant to the director of the Organization of the Joint Chiefs of Staff in the Pentagon. He has also served as a consultant to the office of the Secretary of Defense and at the Sandia National Laboratory and the Los Alamos National Laboratory.

Dr. Sagan is the author of *Moving Targets: Nuclear Strategy and National Security* (Princeton University Press, 1989), *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons* (Princeton University Press, 1993), and with co-author Kenneth N. Waltz, *The Spread of Nuclear Weapons: A Debate Renewed* (W.W. Norton, 2002). He is the co-editor of Peter R. Lavoy, Scott D. Sagan, and James L. Wirtz, *Planning the Unthinkable* (Cornell University Press, 2000) and the editor of *Inside Nuclear South Asia* (Stanford University Press, 2009). His most recent publications include "The Case for No First Use," *Survival* (June 2009) and "Good Faith and Nuclear Disarmament Negotiations" in George Perkovich and James A. Acton (eds.) *Abolishing Nuclear Weapons: A Debate* (Carnegie Endowment, 2009).

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Interview with Dr. Scott Sagan, Professor, Department of Political Science, Stanford University and Co-Director, Center for International Security and Cooperation, Stanford University

Rekha Chakravarthi, Research Officer, IPCS

&

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***Hypothetically, if the world indeed succeeds in eliminating nuclear weapons, do you then think that nation states would be any more secure, given that there will be conventional asymmetry between them? What is then the alternative for security as well as the ‘currency of power’ that states, as perceived, seek through nuclear weapons? In which case don’t you think the world is actually more stable with nuclear weapons?***

I do not believe that the world is more stable with nuclear weapons. In a nuclear disarmed world, it would be wonderful if there is also a rough conventional weaponry symmetry among major powers so that no state felt tempted to use military force. But I think that is an unachievable objective, given the differences between states and their economies. Moreover, I strongly believe that that we should not wait for general and complete disarmament before we try to achieve nuclear disarmament. So I think that the linkage that was made in the Nuclear Proliferation Treaty (NPT) Article VI mentioning both nuclear and general disarmament was unfortunate. While we should work for complete disarmament, it should not be in any way a precursor or be considered a precondition for nuclear disarmament.

My own view is that during the Cold War, given the hostility between the US and Soviet Union, it may have been necessary at that time to have nuclear weapons, to prevent an outbreak of a conventional war, that may have been a risky necessity but with the end of the Cold War, to have the kind of bloated arsenals that we have today, strikes me as quite unnecessary. The way I have described it in my writings, is that relying on nuclear deterrence to maintain peace is like skating on thin ice. The fact that you can do it once does not mean that you can continually do it. At some point it is going to fail and

fall through. Unless one feels that nuclear deterrence will be perfect forever, one should be very concerned about being able to rely on it.

***Do you not think that when there is a conventional imbalance between states there are more chances of war breaking out, especially looking at the example of India and Pakistan?***

I think that nuclear weapons have not ended the hostility between India and Pakistan and indeed I think that nuclear weapons were the cause of the Kargil War of 1999 because the people who planned that operation, General Musharraf and other officers, believed that Pakistani nuclear weapons provided a shield behind which they could take aggressive actions and the Indian government would be too afraid to react. They were wrong. Far from being a force for stability between India and Pakistan, nuclear weapons have a very mixed effect. They did not deter war, although certainly they have a cautionary effect, they may have actually caused the last war between India and Pakistan in 1999.

***Let us take the example of the US and Soviet Union and India and Pakistan. When two countries are hostile to each other, the tendency is to build a deterrent capability first and then states move backwards to build confidence building measures. However, in the absence of any kind of deterrence how can one be sure that nations would work towards any confidence building measures?***

It seems to me that there were serious reasons why India and Pakistan developed nuclear weapons. So I am not suggesting that there are no security concerns involved. It would not be useful at this point of time to deny what has happened in the past. But it does seem to me that an open ended doctrine which is what India has been calling the Minimum Credible Doctrine, without saying what “minimum” or “credible” means, without listing what the minimum number really is, has become an excuse for gradually expanding the roles and missions and adding more caveats to its “No First Use” (NFU) policy. This is a recipe for a build up of nuclear weapons and creating a larger arsenal. I think this is

neither necessary for the sake of deterrence nor is it something that will encourage disarmament.

***Do you think the current form of the CTBT will suffice as an appropriate disarmament measure keeping in mind the sort of scientific research being done on Inertial Confinement Fusion research in the NWSs, especially in the US and France? Whereas the National Ignition Facility has been completed in the US, the French are pursuing pure fusion research in their Megajoule facility in Bordeaux. In light of these facts, how do you conceptualise the role of science and technology in nuclear disarmament keeping in mind the fundamental asymmetry in scientific knowledge between the developed and the developing world?***

I do not think one can restrict scientific advancement and we should not look at arms control treaties to end scientific research or to create complete symmetry of scientific knowledge. What the CTBT can do is to prevent all states from developing new kinds of advanced weapons and testing them. It will not and should not, in my view, stop people from doing activities to make their existing weapons safe or ensure that the

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weapons are reliable. So states can continue to do different kinds of experiments, including some of them which you referred to above, within the treaty. Remember that India helped to negotiate and design the CTBT, because the ultimate goal is to stop everybody from developing new designs and new types of weapons.

***The fundamental problem again is that any kind of scientific development by default has a dual use purpose in it, particularly with nuclear energy and associated technologies. So how do you close that option? You cannot close it by having scientific asymmetry between nations.***

Again, one should not expect any arms control agreement to change asymmetry in scientific knowledge. What it can do is to change the behaviour of the state and inhibit the development of new weapons. If we wait for a treaty that can somehow equal our knowledge then one has to go through the experience the Russians went through and the Americans went through, with all its costs and all its risks. It seems to me that even if the CTBT could not create an equal knowledge for all states from the past nuclear tests, it could at least inhibit other states in their neighbourhood and elsewhere in the globe from testing.

Also, as you nicely point out in your next question that it (CTBT) will close the Peaceful Nuclear Explosion (PNE) loophole. So your next question is very insightful. People have forgotten of the PNE loophole that was put in the NPT and of which the Indian government took advantage of in 1974. Indeed in some ways, I believe that Mrs. Indira Gandhi was convinced by the Indian scientists that the US and other countries really would not react that badly because the 1974 test was only a “peaceful nuclear explosion” when in fact the end result was a great amount of anger and recognition that the NPT has permitted this kind of a activity to take place. At the NPT Review Conference, a number of years ago, it was decided that the states would from now on treat the PNE issue as a matter of the CTBT and that the CTBT would supersede the NPT in that respect. So I think this PNE point is very important and yet one more benefit of the CTBT, because it would be possible without the CTBT that a non-nuclear weapons state part to the NPT could test a PNE in the future and claim that it had not violated the

NPT. That would no longer be possible under the CTBT once it enters into force.

***Although the CTBT will effectively close the Peaceful Nuclear Explosion loophole in the NPT, the other loophole regarding the unsafeguarded nuclear activities for military purposes, especially the naval nuclear fuel cycles and highly enriched uranium as a fuel still remains a way out for those countries which want to gatecrash into the nuclear club. How can this loophole be fixed? What role should the FMCT play in this regard?***

I would not want to go into the details of the FMCT. It is too early and also it is not very clear what is going to be attempted under the treaty and what all is going to be negotiated. I know that there have been some ideas floated that eventually under the FMCT you could either set a timeframe for getting rid of all highly enriched uranium or have highly regulated HEU stock. It seems to me that the use of HEU in the naval reactors for example is a problem that on the road of disarmament, we would obviously have to deal with. The key question is whether the FMCT should try to do it in its early stages or is it something to negotiate further down the road.

***As in the case of climate change, the debate on nuclear disarmament involves the argument of the historical responsibility of NWS. Measures such as the CTBT and the FMCT are labelled as non-proliferation measures and the NNWS approval of them are linked with tangible steps towards global nuclear disarmament. However, if these steps are not steps in the right direction, then what should be the appropriate course of action? Do you think these issue-linkages from the NNWS are merely evasive tactics or are these concerns genuine in nature? How do scholars in the West, especially in the US perceive this issue-linkage?***

I cannot speak for scholars in the US, I can only speak for myself. I do not think that all NNWS have the same opinions on the issue. What I would say is that there are many diplomats in NNWS who feel that the US in particular and all NWS in general did not live up to the commitments that it made in both 1995 and then in 2000. Those agreements that were made, I think it is fair to say that they were not legally binding, but were political statements. Nonetheless,

the US should, I believe, have an obligation to try to meet as many of those commitments as possible because other states made their decisions on those statements. I understand that anger. However, I would not go back and replay all the 13 steps and say that the US has to honour every single one of them because, I think, some of them no longer apply like the ABM treaty which the US withdrew from following the proper rules of the ABM treaty. However, there are others which the US abandoned rather recklessly in my view and therefore, I think that the Obama administration is going to do what it can in good faith to live up to those commitments.

The new US administration will see whether the US can negotiate the kind of deeper cuts it seeks with the Russians, will attempt to ratify the CTBT and will also see what kind of progress the US can make on the FMCT. In the 13 practical steps of 2000, there was a concern about reducing reliance on nuclear weapons and that is one more reason why the US' moving towards a No First Use policy would be a useful policy change today.

***In the recently held meeting of the Board of Governors of the IAEA, the Nuclear Threat Initiative's fuel bank proposal was scuttled by the developing countries. Interestingly this opposition to the internationalization of the nuclear fuel cycle was led by the Indian delegate. How do you perceive this opposition, keeping in mind that none of the proposals for multilateralization on fuel cycles have taken the non-NPT members into consideration?***

It seems to me that there are times where anger over the past behaviour can lead states to do things that are short-sighted in nature. The NNWS and others who oppose the creation of a fuel bank as some kind of unfair constraint on them and cutting against their rights are making a very short-sighted view on things. I believe that widespread proliferation of enrichment capabilities around the world is not in anybody's interests. If we go that route, we will find it much harder to have nuclear disarmament. The risk of nuclear weapons proliferation will be greater and the risk of nuclear terrorism will be greater. So my argument is that we need to think more about shared responsibilities, for nuclear disarmament. Article VI of the NPT does not say states have to

disarm, it says they have to work in good faith to disarm and have to have negotiations about that. For the NNWS to say that we do not want an IAEA Nuclear Fuel Bank and refuse to negotiate constraints on the global spread of uranium enrichment facilities is therefore, to me, contrary to their Article VI obligation.

*After the withdrawal of North Korea from the NPT, there were calls for closing the denunciation option under Article X or at least take measures to deter states from using the denunciation option. Also, the withdrawal from any International Treaty is legally justified under the Vienna Convention on the Law of Treaties. Even if an International Treaty is silent on withdrawal, under the doctrine of rebus sic stantibus, states can withdraw from the Treaty. Would it be logical to change the terms of the treaty once it has entered into force? Moreover, if the NPT's terms on withdrawal are changed, do you not think that NNWS can demand the same changes for the withdrawal clause in the CTBT and the prospective FMCT? Would NWS agree to such an issue-linkage?*

I do not believe that you can amend the treaty easily at all because it needs to be ratified by

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parliaments or whatever is the ratifying body in each individual state. If you try to amend the treaty literally, it would actually open a Pandora's Box; the NPT amendment strategy is one that I do not think is worth pursuing. So people who talk about altering the interpretations of the treaty of Article X or to make it more difficult for states to withdraw or more costly to withdraw are not talking about actually amending the treaty. What they are talking about are two kinds of things.

One could be a voluntary acceptance in the NPT Review Conference about some new goal or new understanding. Just as the NPT Review Conference said that we will now view the PNE clause as coming under the CTBT rather than the NPT, a future Review Conference could declare that all states parties believe (for example) that the withdrawal advance warning period should be lengthened to one year from its current 90 days. That is not amending the treaty. It is a voluntary statement, an interpretation made by the NPT members.

There can be two likely solutions to the withdrawal problem. First, that the UNSC would say that states can still withdraw, they still have their rights, nothing has changed in Article X, however, we think that if a state does withdraw having seen to be in non-compliance with its agreements, we will bring this up automatically at the UNSC as a threat to International Peace and Security.

The other point which I want to make on this question is about “return to sender” clauses and potential changes in agreements to sell future nuclear technologies. There are some IAEA safeguards that lapse when a state withdraws from the treaty; there are others that continue regardless of states commitments. It is possible to encourage states and request the IAEA to have more of the agreements that continue on rather than those which lapse when the state withdraws from the treaty.

Pierre Goldschmidt, the former Deputy Director of the IAEA, has written extensively on this and I think, his ideas are very much worth pursuing. It is also possible that the NSG could in future say that it will condition sales of whatever technologies it deems appropriate to be conditional upon a country accepting in its purchasing agreement to return to sender clause which says if we withdraw from the NPT, we would then be

obligated to turn the material and technologies back to the state of origin.

***Why is nuclear terrorism perceived with a rather blind assumption that it may be initiated by non-state actors; why cannot states themselves be perpetrators of nuclear terrorism?***

I think people are concerned about both the options. One is the possibility that a non-state actor may build a crude device from HEU, as it will not be as hard as making a weapon with plutonium, and the second would be that a state could either give them the material or disguise an attack that they initiated by using terrorists as a cover. This later scenario has been called a “catalytic attack” in the literature. People are concerned about both scenarios, but the biggest problem with state terrorism is the problem of forensics.

I think that there is no country on earth that is confident that it could determine after a blast where the materials came from under all conditions. I do not know what India is doing, but in the US we are spending millions of dollars to acquire better forensic capabilities in order to determine where a weapon came from and would like to develop more international data bases of materials in different countries. However, there would always be a problem, even if we knew where the weapons material came from, in determining whether the material was stolen or given to a terrorist group.

***How is Project Base Camp different from any other previous disarmament initiatives, say the Rajiv Gandhi Action Plan or the 13 Practical Steps apart from the fact that it is conceptualized differently? Do efforts to conceptualize the same goal differently each time indicate that the underlying problems with achieving disarmament lies in how nuclear weapons are perceived, that is, nuclear weapons are political weapons rather than military weapons?***

Project Base Camp is not “a plan” in the way that the Rajiv Gandhi action plan was and it is not a listing of practical steps that were agreed to by consensus by the authors. Rather, it is a project to encourage people from different countries, some NWS and some NNWS, to use this metaphor of

reaching a sub-goal, and setting a base camp once you achieve that goal and seeing what we could do next. So much attention has been focused upon the simple questions of what we are doing next week or next year and not enough about what are the intermediate goals towards disarmament that we could set and try to reach a consensus on. So the project instead of developing a single plan, developed a set of scenarios and that had experts from different countries to come up with their set of assumptions, their concerns and try to think these through together. As we talked in our seminar today (India International Centre, New Delhi, 6 August 2009), there were, I think, a number of creative ideas that came out of that process. For example, it highlighted the possibility of states agreeing to proportional disarmament: instead of smaller nuclear countries sitting on the sidelines and waiting for larger nuclear countries to come down to their levels, one could craft a treaty whereby countries coming from different levels could agree to work at reciprocal and proportional cuts, which would aim to have all countries reach the same lower number of weapons at a future date.

We were also talking about delegitimizing nuclear weapons, which is also mentioned in the Rajiv Gandhi Action Plan. However, not all members of the Project Base Camp agree that it is the way to go. Indeed a number will point out that the Rajiv Gandhi Plan called for a legal mechanism making the use of nuclear weapons illegal and the problem which some people point out is that it might make retaliation illegal, not just the first use. So there are debates about whether one would want to make the first use illegal or how one would want to do that and whether the adaptation of NFU doctrines around the world would be enough of a change to permit more effective disarmament.

***If one really considers the metaphor of a Base Camp and actually imagines a mountain, then there problems associated with different sides of the climb or different routes which states can take to reach the summit. States can start climbing from different sides. It is not necessary to take one single approach. What is your take on it?***

Like all metaphors, this metaphor is imperfect. What is important is that this metaphor is both inspiring as is the climbing of a mountain and also because it recognizes that one may not be able to see all the steps

needed to progress from a long distance away. Therefore one should not wait until one sees the summit or until all the clouds have parted to start walking up the pathway to disarmament. One should start moving in the right direction and do that in a safe, secure way and try to do it together. So it is surely the case that different countries are at different places on this mountain today, but the idea is that if we could pick a place to meet, at a certain level of weaponry and doctrine, that could get us up the mountain. Let us start discussing where the base camp could be rather than simply wait for the clouds to dissipate because it can take a long time and in the meantime we are sinking a little bit lower and getting away further from that lofty summit of nuclear disarmament.

*Instead of eliminating nuclear weapons, why can't Kenneth Waltz's argument of horizontal proliferation be extended in a sense that when every nation has nuclear weapons, there is, one, an increased risk of using these weapons and if there is an increased risk there will also be a heightened degree of motivation to eliminate nuclear weapons and two, because every nation will possess nuclear weapons, they (nuclear weapons) would lose their exclusivity, thereby making them redundant?*

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I do not think the club of exclusivity is the only problem. There are problems of accidental use, we have problems of terrorist threats and you have dangers that some states may decide to use them regardless of many states being responsible nuclear powers. So the idea that spreading nuclear weapons to all states would lead to nuclear disarmament is a convoluted logic. It is like saying that you should hit your head against the wall because it feels really good when the pain stops. It would be much better not have instigated that pain in the first place.

*Do you think that a world free of nuclear weapons will necessitate a restructuring of the International System, since in a world of conventional balance there will be a possibility of frequent clashes and that the states would not be deterred of incalculable damages and therefore, would be more willing to take risks?*

I do not think it is true that there has to be a restructuring of the International System. A world without nuclear weapons will not be a world without war. There will still be a possibility of war and indeed a world without nuclear weapons may require some kind of mechanism to enforce disarmament. Rousseau had the phrase that individuals may sometimes need to be “forced to be free” by which he meant that people who are punished for breaking laws that they have agreed to, are actually being forced to be free. In a nuclear weapons free world, I believe that, there will be a role to be played for the use of force or the threat of use of force to punish individuals who break out of the treaties they have signed and threaten others. So I do not see in any way to restructure International Politics so that the use of force is totally outlawed.

A world free of nuclear weapons will not be a world where there will be no threat of war. Indeed it will be a world in which there must be an agreement on part of all the countries to work together to use military force to potentially punish the states which violate the disarmament agreement and the mechanisms for doing that have yet to be worked out. We need to have mechanisms to enforce disarmament but need to do so in a way that is via agreements, via transparency and being multilateral agreements rather than through unilateral action.