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"Talking about nuclear disarmament"

Martin Rees

TRANSCRIPT

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Martin Rees (Baron Rees of Ludlow, OM) is an English cosmologist and astrophysicist. He is Professor of Cosmology and Astrophysics and Master of Trinity College at the University of Cambridge. He is President of the Royal Society of London. He was appointed to the House of Lords as a non-party-political peer in 2005, sitting on the Cross-Benches. He holds the honorary title of Astronomer Royal and also Visiting Professor at Imperial College London and at Leicester University.

"When we look back to the sixties and seventies we realize that the avoidance of a global nuclear catastrophe was a result of good luck, and that there was a real threat, in particular at the time of the Cuban crisis, and that we were lucky to survive. And of course that's the impression given by people like (Robert) McNamara in their later reminiscences.

And if we look back over that 20 years, then the greatest threat to which humanity was subject was the threat of a catastrophic nuclear war. After the end of the Cold War the threat of a nuclear catastrophe, in the sense of tens of thousands of weapons going off, has diminished. But I think there are two reasons for concern. One is that the threat of a few nuclear weapons going off is probably higher than ever before, because of possible flashpoints – the Middle East, Pakistan, etc.

And secondly, we can't be complacent because if we look back over the last hundred years and realize that during that time the Soviet Union rose and fell, there were two world wars, we can't predict the geopolitical situation fifty years from now. We can't rule out the possibility of a new standoff between new superpowers that might be handled less well or less luckily than the Cold War was. And I think it's for that reason that the aim of shifting towards a zero total number of nuclear weapons, which was a view held only by a few idealists in the 1980s, has now become part of the mainstream agenda.

There was the Canberra Commission about 10 years ago which involved people like McNamara as well as visionaries like Jo Rotblat, and more recently there's been the Gang of Four in the US, as it were, and their UK counterparts who have said that, at least in the very long term, we should aim to move towards zero. And I think the reason that's symbolically important is that if the five major nuclear weapon powers don't articulate that as a goal and move actively towards it, then of course it diminishes the pressure they can exert against further proliferation.

And although proliferation has been perhaps less extreme than you might have predicted 20 or 30 years ago, when many people thought there would be twenty-plus nuclear powers by now, I think there is a risk that the number may start to grow in the future quite fast if we don't take any action to control this and take a lead on the part of the five major nuclear powers.

Another related question of course is that one of the ways to combat global warming is to have a big push towards nuclear power, and I think in countries that already have nuclear power stations this is a good course of action. But I think most of us would be somewhat ambivalent about the idea of a worldwide dissemination of hundreds of nuclear power stations, unless and until there's a very strict regime under the IAEA or some similar body to deal with the fuel both before and after it is

processed. And I think unless we have that, then I'd be very concerned indeed about the enhanced risk of proliferation which could stem from the much wider use worldwide of nuclear power stations.

But I think it's very important that there should be independent voices who are well informed enough to contribute to the agenda and the discussion on nuclear disarmament. In the US there are many such people, but in other countries, particularly in this country, the United Kingdom, there are rather few and that's because I think in this country defence is rather a closed world. It's a lifetime career for some people; we don't have the revolving door system in the United States where those who are out of power move into think tanks, etc.

So we have fewer people who are independent of government and also well informed. And also the secrecy laws here are stricter. And so for those reasons it's very hard to have an informed debate on issues of disarmament, where one can have people who are independent and can contest any claims that come from the government on the basis of adequate knowledge and background. And so that's something which I think we as the Society and the community need to be aware of and try to remedy.

But I think the Obama administration, obviously, by putting disarmament as a long-range goal is going to raise this up the agenda and attract the interest of many scientists. I think what we need to do is to get more scientists engaged with these political questions. Scientists tend to focus very much on their research areas, and we need to ensure that they are aware that they do have a special responsibility to speak out on these questions, because they can't control the way their science is used.

But no scientist should feel a lack of responsibility for the way their work is used, and they should use their influence with their own country, and also with the international scientific community to try and promote the agenda. And I think if we look at the rest of the 21st century, the risk of nuclear catastrophe is one of the looming ones, and we are perhaps complacent about it because the last 10 or 20 years it has seemed a diminishing threat, but is now an increasing one.

Of course, if you look towards 2050 and beyond, then clearly there are going to be many global problems, a combination of growing population, scarcity of resources, and water etc., the need to provide clean energy for the whole world, all these things being aggravated by potentially serious climate change. So all these issues, which need global solutions, are going to be high on the agenda, and ever higher as time goes on.

But of course looming over all of those is the threat of something that could be an actual catastrophic setback to civilization such as a nuclear catastrophe. This didn't happen in the sixties and 1970s through good luck more than anything else, but this could happen in the future if there's a standoff between new superpowers, less well handled than the Cold War was. And I think therefore we need to do all we can do now to minimise the risk of nuclear proliferation and to minimize the role which is played by nuclear weapons and nuclear deterrence in international politics generally."

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