

Nuclear Futures: What Would Nuclear Disarmament Look Like?

22nd ISODARCO Winter Course

January 11-18, 2009
Andalo, Trento, Italy

Director of the School:
Carlo Schaerf, University of Rome “Tor Vergata”, Italy

Directors of the Course:
Catherine M. Kelleher, Brown University, Providence, RI, USA
Judith Reppy, Cornell University, Ithaca, NY, USA

Once more there is renewed serious interest in the goal of nuclear disarmament after a decade and more during which the issues posed by nuclear weapons were largely eclipsed by concern over ethnic wars and the threat of terrorism. The op-ed article in January 2007 in the *Wall Street Journal* by George Schultz, William Perry, Henry Kissinger, and Sam Nunn which called for a world free of nuclear weapons has galvanized a new discussion of nuclear disarmament and alternate paths to its achievement. Moreover, a number of governments, including those of Britain, France, and Norway, have offered specific new proposals for further cuts in nuclear weapons, improvements in verification technology, and safeguards for nuclear fuel stockpiles.

The 2009 ISODARCO Winter School was devoted to furthering this discussion through a program that considered the political, military, economic, and technical implications of moving toward nuclear disarmament within the next decade or so and the operational steps that might be taken in the near future toward that goal. The course attracted 83 participants from 20 countries and 5 different continents who were attracted to Andalo by the opportunity to re-examine a broad range of topics related to nuclear disarmament. The impressive program and list of distinguished lecturers are attached. In addition to these lectures, participants organized several additional sessions, including a discussion of a possible multilateral initiative for enrichment facilities in Iran, a discussion of domestic legal implications of international arms control treaties, and a showing of several films related to nuclear weapons and disarmament.

The lectures began with an overview of the current renewed interest in nuclear disarmament. The speaker described the background to the 2006 *Wall Street Journal* op-ed piece and analyzed the factors that favor the initiative as well as some of the barriers. In the past there were moments in which nuclear disarmament was seriously considered, for example, at the beginning of the nuclear age with the Acheson-Lilienthal Report, and much later during the summit between Gorbachev and Reagan in Reykjavik in 1986.

Today, there is again a sense that instability threatens the international system, or—to phrase it more optimistically—that it is fluid and open to change. The new administration in the United States gives hope that the issue of nuclear reductions, if not disarmament will again be seriously addressed. Difficulties include the current poor state of U.S.-Russian relations and the low international standing of the United States at the end of the Bush Administration. There are many technical issues to be settled during a move toward nuclear zero. But there are also the political challenges posed by the proliferation situation in North Korea and Iran and the need to devalue nuclear weapons as a political tool, a task that will involve serious adjustments in doctrine and planning in all the nuclear states. In addressing these challenges, we should consider Max Weber’s description of politics— “Politics is a strong and slow boring of hard boards”—and commit to a long term effort.

Other lectures on the first day presented some of the history of the development and the proliferation of nuclear weapons. One presentation argued that the increase in the number of nuclear weapons in the United States in the decades following 1945, rising to over 30,000 warheads in the 1960s, can best be understood as the result of the internal logic of military war planning and nuclear doctrines. The ever expanding list of nuclear targets justified the acquisition of more and more lethal weapons. In another talk, the history of the development of nuclear weapons in France was described. An early stimulus for the weapons program was the belief that only nuclear-weapons states would be included in negotiations on the future of atomic energy. The French weapons program was marked by highly centralized control, extreme secrecy even within government circles, and a remarkable deficit of democratic accountability. Even today there is little public debate in France on the usefulness of nuclear arms or on the official nuclear posture.

The second day of the course was devoted to a panel discussion of the current arms control situation and two lectures that presented the Russian and NATO alliance perspectives. Arms control is trouble, with the START I Treaty expiring at the end of 2009; disagreement between Russia and NATO over NATO expansion; Russia’s withdrawal in 2007 from the Treaty on Conventional Forces in Europe (CFE) in response to the U.S. decision to place ballistic missile defense systems in Poland and Czechoslovakia; and the glacial progress on the Comprehensive Test Ban Treaty (CTBT). After 12 years, the CTBT has been signed by 180 states, of which 148 have also ratified the treaty, but it has not yet entered into force because a number of “nuclear capable” countries have not signed it (North Korea, India, Pakistan) or not ratified it (the United States, China, and Israel among others).

In June 2002, the United States withdrew from the Anti-Ballistic Missile Treaty, leaving the START-I treaty as the only remaining arms control treaty between the United States and Russia fully in force. START-II was never ratified, even if unilaterally observed, and the Moscow Agreement of 2002 (SORT) does not include language governing verification and counting rules, but instead relies on START I procedures. Those procedures include protocols for on-site inspections of nuclear sites in the adhering countries, counting rules, and limits on the number of nuclear warheads which countries

are allowed to possess, and arrangements for an extensive exchange of data. Thus, if START I expires without renewal, the legal framework for verification of nuclear stockpiles will be lost. Another important deadline is the next NPT (Non-proliferation Treaty) review conference in 2010. START and the NPT are interrelated, and without a follow-up to the START-1 treaty in place, the NPT will become very weak as well. Fortunately, both the United States and Russia have reacted positively to finding a solution to these issues, but the extremely short time frame remains an issue of great concern, along with the broader politics of US-Russian relations, so frozen during the last years of the Bush Administration..

A further issue is the continued presence of nuclear arms in the countries that are under the so-called nuclear umbrella of NATO. Symbols of extended deterrence, they appear increasingly anachronistic in a Europe in which the Cold War lines have disappeared. This is a very delicate issue—not least in Italy, which is now host to the largest number of US tactical nuclear weapons; like the presence of US ballistic missile defense systems in Europe, which were discussed in another session, the weapons have a symbolic function within the NATO alliance that transcends any military utility. Progress toward denuclearization in this area will require better communication and consultation among the NATO allies, as well as with Russia.

Papers presented in other sessions covered nuclear developments and the cause of “getting to zero” in a set of “special” cases (India, China, and Israel) and discussed their probable responses to a move toward nuclear disarmament in the near term. These are countries that have acquired nuclear weapons after the first wave of nuclear adopters. In place of the usual explanations that rely on the external security situation to explain nuclear decisions, the analysis in these lectures focused on the domestic political context and the influence of domestic political standing of different groups on final decisions. There were interesting speculations on the role of scientific leaders and the scientific community in each case. Another lecture discussed the factors influencing countries not to develop nuclear weapons. Research suggests that countries that are strongly engaged in the global economy have a motive to avoid the costs—economic and political—of a nuclear weapons program, whereas regimes that are more inward-looking are more likely to decide to go nuclear.

In the present and foreseeable world situation the risk is not only further nuclear proliferation by national states, but also the danger that nuclear weapons or nuclear material may fall into the hands of sub-state actors such as terrorist groups. The last decade has seen an increase of terrorist attacks aimed at mass casualties. We cannot rule out the possibility that some group would consider an attack involving nuclear material. This is yet another important reason for reducing the number of nuclear arms and nuclear material to a minimum.

Supposing political support for pursuing complete nuclear disarmament, how could or would it be implemented? Any solution will depend crucially on the possibility of mutual verification by the involved countries in order to build a relation of trust between these

countries. Such trust is essential to be able to proceed to the actual dismantling of the nuclear arsenal of these countries. Verification is not simple; it includes procedures and agreements on on-site inspections, counting procedures for materials and warheads, and reliable exchange of data between the countries. Verification is always a matter of probabilities, and a certain level of trust between states is needed to overcome tensions that may rise from discrepancies in the observed numbers, due, for example, to instrument error or gaps in material accounting records.

Another continuing thread in the discussions was a return to the promises of civil nuclear power and its implications for further nuclear proliferation. Article IV of the Nuclear Non-proliferation Treaty guarantees all members access to the materials and technology needed to develop civilian nuclear power; the problem, of course, is that civilian programs may be used as a cover to conceal the acquisition of nuclear materials suitable for weapons. The United States has proposed a program, the Global Nuclear Energy Partnership (GNEP), to deal with the proliferation aspects of the fuel cycle for nuclear power plants, in particular the enrichment and reprocessing stages, and to provide the means to manage radioactive waste. At present there are 50,000 metric tons of commercially-generated nuclear waste stored in the United States, which gives some idea of the extent of this problem. GNEP aims include reducing the spread of dual-use technologies and resuming the reprocessing of nuclear material in the United States as a way to manage radioactive waste. To date, however, the initiative has not enjoyed much success, in part because the program has been conducted with minimum transparency, breeding suspicion in potential international partners, and in part because the storage and disposal of nuclear waste involve intractable technical and political problems.

On the final day, a panel discussed what concrete steps would be most appropriate to reach significant further reduction of the remaining nuclear weapons in the world. Three prominent lecturers gave their views on the issue, followed by general discussion. The situation in the European Union is not the same for all 23 member states. There are some that would be publicly in favor of reduction or even elimination of the nuclear weapons based in Europe, whereas others would be more reluctant because of their past relations with Russia. New, urgent negotiations between Russia and the United States remain essential for reaching any significant reductions. Early progress on renewing or replacing START I is essential, and ratification of the CTBT would help to strengthen the NPT by providing evidence of the willingness of the nuclear weapons states to work toward disarmament. The nuclear postures of the smaller nuclear weapons states, which still reflect too much the world situation of the previous century, should be re-examined. Other ideas for next steps are an international summit on the abolition of nuclear weapons, a moratorium on the production of nuclear weapons, and raising public awareness about the danger and the immorality of the possession of nuclear weapons.

The 22nd winter ISODARCO closed with a brief session for evaluating the course, soliciting opinions from the participants and ideas and preferences for themes of future courses. Many participants expressed their appreciation that ISODARCO has returned to the core issues of nuclear disarmament and suggested a follow-up course on the same

theme. It might address, they suggested, a number of critical aspects in more detail, such as the interrelation between nuclear disarmament and non-proliferation, legal aspects of nuclear disarmament, and its relation to civilian nuclear energy.

In conclusion, this course once again combined information exchange and active learning with extensive discussion and debate. As in previous years, the lively and well-informed participation of the international audience in the discussion following each lecture and in the round table sessions formed a valuable contribution to the unique atmosphere in which these delicate topics could be openly and profitably discussed among students and professionals from so many different countries.