



**What Role, If Any, For Nuclear Weapons?
(And Just How Many, If Any, Are Needed?)**

**A New Mexico Nuclear Study Group Workshop
Center for Science, Technology, and Policy
University of New Mexico**

11-12 September 2008

Hyatt Regency Tamaya
Santa Ana Pueblo, New Mexico

*This workshop is dedicated to the memory of
Dr. Timothy Moy (1963-2007)
Associate Professor of the History of Science and Technology
University of New Mexico
Colleague, Friend, and Hero*

Workshop Agenda

All sessions will be held in the Hyatt Regency Tamaya's "Bear" Room

Thursday, 11 September

0800-0900 Registration and Continental Breakfast

0900-0930 Opening Remarks

Michael Dougher, Associate Vice President for Research, University of New Mexico

Henry J. Abeyta, Director, Global Security Programs, Sandia National Laboratories

Andrew L. Ross, Director, Center for Science, Technology, and Policy, University of New Mexico

0930-1145

Panel 1. What role have nuclear weapons played in the past?

- How did we get to where we are and what are the implications of nuclear history for the present and future?
- Why did countries acquire nuclear weapons? What was the relationship between vertical and horizontal proliferation?
- What was the nature of the relationship between major and minor nuclear powers? How did those relationships play out regionally and globally?
- To what extent can the “long peace” of the cold war be attributed to the superpowers’ possession of nuclear weapons?
- What is it that nuclear weapons deterred? How did evolving conceptions of deterrence (concepts and doctrine) and force postures (structure and size) affect the superpower relationship and international security?

Chair: John M. Taylor, Sandia National Laboratories

Speakers: George H. Quester, University of Maryland
David Alan Rosenberg, Institute for Defense Analyses

Discussants: Alan B. Carr, Los Alamos National Laboratory
Douglas B. Lawson, Sandia National Laboratories

1200-1345

Lunch and Keynote Address

“An Agenda for Nuclear Debate,” Thomas C. Schelling, University of Maryland

1400-1630

Panel 2. What role do nuclear weapons now play?

- Do nuclear weapons enhance or erode national and international security today?
- What deterrence concept(s) or doctrine(s) underlie nuclear postures?
- What is it that nuclear weapons deter today?
- Do nuclear weapons have utility beyond deterrence?
- What are the regional and global security implications of the relationships among major and minor nuclear weapons states? What is the relationship between nuclear proliferation and the continued possession of nuclear weapons by countries such as the United States, Russia, China, Britain, and France?

Chair: John Mark Mattox, Defense Nuclear Weapons School

Speakers: M. Elaine Bunn, Institute for National Strategic Studies, National Defense University
Hans M. Kristensen, Federation of American Scientists
Jeffrey A. Larsen, Science Applications International Corporation

Discussants: Thomas H. Karas, Sandia National Laboratories
Stephen D. Harper, Defense Nuclear Weapons School

Friday, 12 September

0800-0900 Continental Breakfast

0900-1145

Panel 3. What role can nuclear weapons play?

- What roles can nuclear weapons play that they don't already play?
- Might nuclear weapons be employed to deter a greater range of threats?
- Can nuclear weapons provide other than deterrent capabilities?
- What are the force structure and size implications of new nuclear roles and missions?
- How might new roles and missions for nuclear weapons affect proliferation incentives and disincentives?

Chair: Paul C. White, Los Alamos National Laboratory

Speakers: Thomas G. Mahnken, Office of the Secretary of Defense, Policy Planning
Joseph C. Martz, Los Alamos National Laboratory
Amy F. Woolf, Congressional Research Service

Discussants: Edward D. Arthur, University of New Mexico
Linda J. Branstetter, Sandia National Laboratories

1200-1300 Lunch

1315-1630

Panel 4. What role should nuclear weapons play in the future?

- What should the United States do with its nuclear primacy or superiority?
- Should nuclear weapons play a greater role, a lesser role, or no role in the future?
- What deterrence concepts and doctrine should inform nuclear policy and strategy?
How should U.S. nuclear forces be structured and sized for the future?
- What is it that nuclear weapons should be relied upon to deter? Will there be a requirement for extended deterrence?
- Is it time to move seriously toward "a treaty on general and complete disarmament," as called for by the Non-Proliferation Treaty? Can nuclear weapons be eliminated? Should they be eliminated? If so, how?

Chair: James M. Smith, United States Air Force Institute for National Security Studies, USAF Academy

Speakers: James E. Doyle, Los Alamos National Laboratory
Kerry G. Herron and Hank Jenkins-Smith, University of Oklahoma
William C. Martel, Fletcher School of Law and Diplomacy, Tufts University
Ivan Oelrich, Federation of American Scientists
Andrew L. Ross, University of New Mexico

Discussant: Arian L. Pregoner, Sandia National Laboratories

1645-1715 Meeting of contributors to the edited volume

The New Mexico Nuclear Study Group

Under the leadership of the University of New Mexico's Center for Science, Technology, and Policy, the New Mexico Nuclear Study Group was founded in 2007. The Study Group has brought together scientists, engineers, and social scientists from Los Alamos National Laboratory, Sandia National Laboratories, the Defense Nuclear Weapons School, and the University of New Mexico in an ongoing effort to assess a range of U.S. nuclear policy and strategy, force size and structure, and infrastructure—research, development, and production—issues and alternatives. Study Group participants bring to bear the combined intellectual resources of two nuclear-weapons laboratories and a flagship state university; vast scientific, engineering, and policy expertise; unsurpassed knowledge of nuclear weapons; an interdisciplinary approach that includes extensive experience working at the S&T and policy interface; and access to and relationships with DoD, STRATCOM, DTRA, DOE/NNSA and other relevant government and non-government organizations. Andrew L. Ross, the Director of CSTP and a Professor of Political Science at UNM, serves as the Chair of the Study Group.

The Center for Science, Technology, and Policy

The Center for Science, Technology, and Policy (CSTP) was jointly established by the University of New Mexico and Sandia National Laboratories. Launched in 2003 as the Office for Policy, Security, and Technology, the program was transformed into CSTP in February 2007. Since its founding, CSTP has worked to develop research, education, and public engagement programs across a broad range of public policy and science and technology issues. The program emphasizes a cross-disciplinary approach that brings together the public policy expertise that resides in political science, economics, history and other social science and humanities disciplines with the expertise found in the physical and natural sciences and engineering. With over twenty Faculty Associates from across the University of New Mexico's colleges, schools, and departments, CSTP provides a unique vehicle for the development of collaborative efforts between leading national laboratories and a major research university. In addition to Science, Technology, and Security work, CSTP is developing research, education, and public engagement programs in Science and Technology Policy and Science, Technology, and Society.

Through its curriculum development initiatives, CSTP has helped put in place new graduate and undergraduate courses on topics such as "Communicating Science," "Strategy and Policy," "National Security and Defense Planning" and "Nuclear Non-Proliferation Science & Policy." The program also sponsors public forums on important public policy issues. During the fall of 2007, CSTP and the Santa Fe Council on International Relations cosponsored the series "Safety in a Nuclear World: Fears, Hopes, and Realities," which featured speakers such as Richard L. Garwin, Ambassador Thomas Graham, and Richard Rhodes. CSTP collaborated with Women in International Security, a national organization based at Georgetown University, and SNL to hold a symposium on "The Reliable Replacement Warhead Program and the Future of the U.S. Nuclear Weapons Complex" on 29 September 2006. On 11 September 2006, it cosponsored, with UNM's Institute for Public Policy and Department of Political Science, an event on "September 11: Five Years Later." In collaboration with UNM's School of Engineering and the Feminist Research Institute, CSTP convened the 29 March 2006 "Forum on Opportunities and Challenges for Women in Science and Engineering." The CSTP website is at <http://www.unm.edu/~cstp/>.