

## Curriculum Vitae

### Matthew Bunn

#### *Work:*

Belfer Center for Science and International Affairs  
John F. Kennedy School of Government  
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#### *Home:*

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**Publications:** See attached list.

#### **Honors:**

Joseph A. Burton Forum Award, American Physical Society (2007)  
Elected Fellow of the American Association for the Advancement of Science (2007)  
Hans Bethe Award, Federation of American Scientists (2007)

#### **Professional Experience:**

*July 2008-*

**Associate Professor of Public Policy, John F. Kennedy School of Government, Harvard University.** Teaching and research focusing on nuclear theft and terrorism; nuclear proliferation and measures to control it; and the future of nuclear energy and its fuel cycle. Co-principal investigator, Project on Managing the Atom, with central role in management and fundraising for the effort, including advising pre-doctoral and post-doctoral researchers. Manage all aspects of the project's research focused on security and accounting for nuclear weapons and materials. Frequent publications, public speaking, and work with Congress and the press. Consultant to the Nuclear Threat Initiative. Member of the Board of Directors of the Arms Control Association and the Partnership for Global Security. Currently member, Committee on the Internationalization of the Nuclear Fuel Cycle (National Academy of Sciences-Russian Academy of Sciences).

*January 2002-June 2008*

**Senior Research Associate, Project on Managing the Atom, Harvard University.** In-depth research focusing on nuclear theft and terrorism; security for weapons-usable nuclear material in the former Soviet Union and worldwide; nuclear proliferation and safeguards; Iran's nuclear programs; nuclear energy and nuclear fuel cycles; and nuclear waste storage, disposal, and reprocessing.

*January 1997 – December 2001*

**Assistant Director, Science, Technology, and Public Policy Program, Harvard University.**

Helped direct multi-disciplinary research programs related to nuclear weapons, power, and materials; energy research and development; information infrastructure; and technology policy for competitiveness. In-depth research focusing on nuclear weapons and fuel cycle issues. Assisted with fundraising, program development, and management. Served on the Nonproliferation Advisory Board to the Director of Central Intelligence, and the Panel on Technical Opportunities for Proliferation-Resistant Systems (advising the Department of Energy's Office of Nuclear Energy), and as the U.S. Executive Secretary for the U.S.-Russian Independent Scientific Commission on Disposition of Excess Weapons Plutonium. Consultant for Lawrence Livermore National Laboratory and Bechtel National.

*January 1994 -- December 1996*

**Advisor, Office of Science and Technology Policy and Department of Energy.** Developed policy initiatives and participated in interagency processes, focusing primarily on control of weapons-usable nuclear materials. Frequently participated in a wide range of negotiations with Russia on related issues. Principal staffer for the Interagency Plutonium Disposition Working Group. Regular public speaking and work with the press. Credited by President Clinton with having “greatly helped our overall efforts to reduce nuclear dangers.”

Major accomplishments included:

— Initiated a new approach to assisting Russia in security and accounting for weapons-usable material, which was adopted as U.S. policy in March 1994. Subsequently played a lead role in gaining approval for several additional initiatives for this program, along with funding increases amounting to some \$70 million in FY1996 and over \$100 million in FY1997.

— Served as study director for a major secret study of U.S. efforts to secure fissile material in the former Soviet Union, undertaken by a panel of the President's Committee of Advisers on Science and Technology, which culminated in a briefing for the President and the Vice President in March 1995, and led to substantially increased attention to the issue at the highest levels of the U.S. government, including discussion at several summits and Gore-Chernomyrdin meetings. Helped draft the Presidential Decision Directive responding to the study, which reflected all nine of the study's recommendations for Presidential action.

— Served as study director for a major joint report to the Presidents of the United States and Russia making recommendations for carrying out disposition of excess weapons plutonium, prepared by a group of senior U.S. and Russian scientists. The study substantially advanced the areas of agreement between the U.S. and Russian sides.

— Principal author of the comprehensive U.S. proposal on “transparency and irreversibility” of nuclear arms reductions, tabled during the December 1994 Gore-Chernomyrdin meeting.

— Developed the first comprehensive approach to cooperation with the states of the former Soviet Union in the nuclear material area, synthesizing dozens of U.S. initiatives, which was adopted and presented in testimony, speeches, and a press conference by Jack Gibbons, the

President's Science and Technology Adviser. A more detailed classified version was approved by the Deputies Committee, and subsequently served as the unifying basis for testimony from several agencies.

— Principal author of the Department of Energy's comprehensive assessment of the nonproliferation and arms control implications of alternatives for disposition of U.S. excess weapons plutonium, released to the public in October 1996.

*December 1992 -- December 1996*

**Study Director, National Academy of Sciences.** Directed a far-reaching study of the problems posed by excess weapons plutonium resulting from U.S. and Russian arms reductions, for the Academy's Committee on International Security and Arms Control. The first volume of the study, *Management and Disposition of Excess Weapons Plutonium*, was released in January 1994, and was quickly endorsed in editorials in *The Washington Post*, *The New York Times*, *Science*, and *Nature*, and by the Secretary of Energy, who established an office to implement its recommendations the day the study was released. A second technical volume was released in mid-1995. The study's recommendations became the basis for a wide range of U.S. policy initiatives. In preparing the study, research ranged over security, technical, economic, and political issues. Responsible for all aspects of managing the study, including drafting of most of the first volume and significant portions of the second, extensive editing of those portions of both volumes written by others, and interfacing with ongoing U.S. government studies and work by independent groups. After the release of the study, responsible for coordination of press activities and scores of briefings for the Administration, Congress, and the public. Received a 1994 staff award for “exceptional contributions” to the Academy.

*June 1990 -- November 1992*

**Editor, *Arms Control Today*, and Associate Director for Publications, Arms Control Association.** Responsible for all phases of editing and production of *Arms Control Today*, and for managing the work of the Managing Editor and Assistant Editor. During this period, for the first time in the magazine's history, it received the Olive Branch Award for “outstanding magazine coverage of international security.” Conceived and produced a series of special single-subject issues, including magazines on the Comprehensive Test Ban, the global arms trade (guest edited by Lee Feinstein), chemical weapons, European security, and, in the January/February 1992 issue, nuclear weapons in the former Soviet Union. As Associate Director, continued to be responsible for daily work with the press, Congress, and the interested public on a broad range of arms control issues, focusing particularly on the Strategic Defense Initiative and the Antiballistic Missile Treaty. Continued to write both for *Arms Control Today* and outside fora (see attached publications list), and to give regular lectures and briefings on Capitol Hill and elsewhere. Interviewed on television and radio programs such as the McNeil-Lehrer News Hour, CNN, and All Things Considered, and regularly quoted in the national and trade press.

*September 1986 -- June 1990*

**Senior Research Analyst, Arms Control Association.** Extensive analysis and commentary on the Strategic Defense Initiative and the ABM Treaty. Authored the Association's book, *Foundation for the Future: The ABM Treaty and National Security* (1990), described by Ambassador Gerard Smith, chief U.S. negotiator of the accord, as “the most comprehensive and compelling defense of the ABM Treaty ever published.” In addition, wrote a comprehensive outline of next steps in arms control, which appeared in the Summer 1990 issue of *Foreign Policy*, and several chapters of the Association's previous book, *Arms Control and National Security: An Introduction*. In addition to SDI and ABM work, responsible for analyses of chemical and biological warfare; nuclear weapons effects; antisatellite weapons; and a variety of current force balances and arms control proposals. In 1987, coauthored (with James Rubin) a widely quoted point-by-point analysis of the Reagan administration's noncompliance charges. Frequent work with the press, Congress, and the public.

*October 1985 -- August 1986*

**Research Fellow, Center for International Studies, Massachusetts Institute of Technology.** Researched issues relating to possible arms control limits on ballistic missile flight-testing, as a means of controlling the qualitative arms competition. This work, along with previous research, eventually led to a paper on limiting maneuvering reentry vehicles, presented at the American Association for the Advancement of Science annual meeting in early 1988, and published in shorter form in *Technology Review*. Helped organize a conference on updating the ABM Treaty.

*Spring 1981 -- Summer 1985*

**Research Associate, Program in Science and Technology for International Security, Massachusetts Institute of Technology.** Researched and wrote a detailed technical report on ballistic missile guidance and technical uncertainties in planning attacks on silo-based missile forces, which ultimately led to an article in *Scientific American*. Researched and wrote another technical report on the technology of ballistic missile reentry vehicles, focusing in significant part on the potential benefits and dangers of maneuvering reentry vehicles.

**Education:** Ph.D. in Technology, Management, and Policy, Massachusetts Institute of Technology, 2007. Dissertation: “Guardians at the Gates of Hell: Estimating the Risks of Nuclear Theft and Terrorism, and Identifying the Highest-Priority Risks of Nuclear Theft.” SM and SB in Political Science, specializing in defense and arms control, Massachusetts Institute of Technology, 1985. Thesis: “Strategic Stability: Theory and Measurement for Arms Control.” Phi Beta Kappa.

## Matthew Bunn

### Publications

#### Books and Reports

Matthew Bunn, *Securing the Bomb 2008* (Cambridge, Mass., and Washington, D.C.: Project on Managing the Atom, Harvard University, and Nuclear Threat Initiative, November 2008). 183 pp.

U.S. Committee on Internationalization of the Nuclear Fuel Cycle, National Academy of Sciences and National Research Council, and Russian Committee on Internationalization of the Nuclear Fuel Cycle, Russian Academy of Sciences, *Internationalization of the Nuclear Fuel Cycle: Goals, Strategies, and Challenges* (Washington, D.C.: National Academy Press, 2008) 206 pp. (Matthew Bunn, U.S. committee member.)

Matthew Bunn, *Securing the Bomb 2007* (Cambridge, Mass., and Washington, D.C.: Project on Managing the Atom, Harvard University, and Nuclear Threat Initiative, September 2007). 166 pp.

Matthew Bunn and Anthony Wier, *Securing the Bomb 2006* (Cambridge, Mass., and Washington, D.C.: Project on Managing the Atom, Harvard University, and Nuclear Threat Initiative, July 2006). 171 pp.

Matthew Bunn and Anthony Wier, *Securing the Bomb 2005: The New Global Imperatives* (Cambridge, Mass., and Washington, D.C.: Project on Managing the Atom, Harvard University, and Nuclear Threat Initiative, May 2005). 121 pp.

Matthew Bunn and Anthony Wier, *Securing the Bomb: An Agenda for Action* (Washington, D.C.: Nuclear Threat Initiative and the Project on Managing the Atom, Harvard University, May 2004). 109 pp.

Matthew Bunn, Steve Fetter, John P. Holdren, and Bob van der Zwaan, *The Economics of Reprocessing vs. Direct Disposal of Spent Nuclear Fuel* (Cambridge, MA: Project on Managing the Atom, Harvard University, December 2003). 117 pp.

Matthew Bunn, Anthony Wier, and John P. Holdren, *Controlling Nuclear Warheads and Materials: A Report Card and Action Plan* (Washington, D.C.: Nuclear Threat Initiative and the Project on Managing the Atom, Harvard University, March 2003). 189 pp.

Matthew Bunn, John P. Holdren and Anthony Wier, *Securing Nuclear Weapons and Materials: Seven Steps for Immediate Action* (Cambridge, MA: Project on Managing the Atom, Harvard University, and Nuclear Threat Initiative, May 2002). 78 pp.

Matthew Bunn, John P. Holdren, Allison Macfarlane, Susan E. Pickett, Atsuyuki Suzuki, Tatsujiro Suzuki, and Jennifer Weeks, *Interim Storage of Spent Nuclear Fuel: A Safe,*

*Flexible, and Cost-Effective Approach to Spent Fuel Management* (Cambridge, MA: Project on Managing the Atom, Harvard University, and Project on Sociotechnics of Nuclear Energy, University of Tokyo, June 2001). 127 pp.

Oleg Bukharin, Matthew Bunn, and Kenneth N. Luongo, *Renewing the Partnership: Recommendations for Accelerated Action to Secure Nuclear Material in the Former Soviet Union* (Washington, DC: Russian-American Nuclear Security Advisory Council, August 2000). 88 pp.

Oleg Bukharin, Harold Feiveson, Frank von Hippel, Sharon K. Weiner, Matthew Bunn, William Hoehn, and Kenneth Luongo, *Helping Russia Downsize its Nuclear Complex: A Focus on the Closed Nuclear Cities*, Report of an International Conference held at Princeton University, March 14-15, 2000 (Princeton, NJ: Program on Nuclear Policy Alternatives, Center of International Studies and Center for Energy and Environmental Studies, Princeton University, June 2000). 53 pp.

Matthew Bunn, *The Next Wave: Urgently Needed New Steps to Control Warheads and Fissile Material* (Washington DC: Carnegie Endowment for International Peace and Project on Managing the Atom, Harvard University, April 2000). 109 pp.

*Nonproliferation and Arms Control Assessment of Weapons-Usable Fissile Material Storage and Excess Plutonium Disposition Alternatives*, DOE/NN-0007 (Washington DC: U.S. Department of Energy, January 1997). 232 pp. (Matthew Bunn, principal author.)

Panel on U.S.-FSU Cooperation to Protect, Control, and Account for Weapons-Usable Nuclear Materials, President's Committee of Advisors on Science and Technology, *Securing Weapons-Usable Nuclear Materials in the Former Soviet Union: Urgent Measures to Prevent Nuclear Proliferation (U)*. (Washington DC: Office of Science and Technology Policy, March 28, 1995). (Secret/Noform.) (Matthew Bunn, Study Director.)

Panel on Reactor-Related Options for the Disposition of Excess Weapons Plutonium, Committee on International Security and Arms Control, National Academy of Sciences, *Management and Disposition of Excess Weapons Plutonium: Reactor-Related Options* (Washington DC: National Academy Press, 1995). 418 pp. (Matthew Bunn, Study Director.)

Committee on International Security and Arms Control, National Academy of Sciences, *Management and Disposition of Excess Weapons Plutonium* (Washington DC: National Academy Press, 1994). 275 pp. (Matthew Bunn, Study Director.)

Matthew Bunn, *Space Arms Control: An Overview* (Los Alamos, NM: Center for National Security Studies (CNSS), Los Alamos National Laboratory, 1991). 59 pp.

Matthew Bunn, *Foundation for the Future: The ABM Treaty and National Security*. (Washington, DC: Arms Control Association, June 1990). 222 pp.

Matthew Bunn, *Technology of Ballistic Missile Reentry Vehicles* (Cambridge, MA: Program in Science and Technology for International Security, Report # 11, Massachusetts Institute of Technology, March 1984). 82 pp. (Also published in Kosta Tsipis and Penny Janeway, eds., *Review of U.S. Military Research and Development: 1984* (Washington DC: Pergamon-Brassey's, 1984).)

Matthew Bunn and Kosta Tsipis, *Ballistic Missile Guidance and Technical Uncertainties of Countersilo Attacks* (Cambridge, MA: Program in Science and Technology for International Security, Report #9, Massachusetts Institute of Technology, August 1983). 164 pp.

### Theses

Matthew Bunn, *Guardians at the Gates of Hell: Estimating the Risks of Nuclear Terrorism – And Identifying the Highest-Priority Risks of Nuclear Theft*. Ph.D. dissertation in Technology, Management, and Policy. (Cambridge, MA: Massachusetts Institute of Technology, January 2007). 466 pp.

Matthew Bunn, *Strategic Stability: Theory and Measurement for Arms Control*. Joint S.B. and S.M. thesis in Political Science. (Cambridge, MA: Massachusetts Institute of Technology, May 1985). 160 pp.

### Articles, Book Chapters, and Reviews

Matthew Bunn, "Corruption and Nuclear Proliferation," in Robert Rotberg, ed., *Corruption and World Order*, forthcoming.

Matthew Bunn, "The Real Risk of Nuclear Terrorism," in Stuart Gottlieb, ed., *Debating Terrorism and Counterterrorism* (Washington, D.C.: Congressional Quarterly Press, forthcoming).

Matthew Bunn, "Expanded and Accelerated HEU Downblending: Designing Options to Serve the Interests of All Parties," in *Proceedings of the Institute for Nuclear Materials Management 49<sup>th</sup> Annual Meeting*, Nashville, Tenn., 14-17 July 2008 (Northbrook, IL: INMM, forthcoming).

Matthew Bunn, "Securing Nuclear Stockpiles Worldwide," in *Reykjavik Revisited: Steps Toward a World Free of Nuclear Weapons*, forthcoming.

Matthew Bunn, "Transparent and Irreversible Dismantlement of Nuclear Weapons," in *Reykjavik Revisited: Steps Toward a World Free of Nuclear Weapons*, forthcoming.

Matthew Bunn and Anthony Wier, "Preventing a Nuclear 9/11," in Michael E. Brown, Owen R. Coté, Sean M. Lynn-Jones, and Steven E. Miller, eds., *Going Nuclear: Nuclear Proliferation and International Security in the 21<sup>st</sup> Century* (Cambridge, Mass: MIT Press,

forthcoming).

Matthew Bunn and Andrew Newman, “Preventing Nuclear Terrorism: An Agenda for the Next President” (Cambridge, Mass: Project on Managing the Atom, Harvard University, November 2008).

Matthew Bunn and Martin B. Malin, “A Nuclear Revival Needs New Cooperation,” *Bulletin of the Atomic Scientists*, September/October 2008, p. 60.

Laura Diaz Anadon, Kelly Sims Gallagher, and Matthew Bunn, “DOE FY09 Budget Request for Energy Research, Development & Demonstration – Commentary” (Cambridge, Mass.: Energy Technology Innovation Policy, Harvard University, 3 June 2008).

Commission of Eminent Persons, *Reinforcing the Global Nuclear Order for Peace and Prosperity: The Role of the IAEA to 2020 and Beyond* (Vienna: International Atomic Energy Agency, May 2008). 33 pp. (Matthew Bunn, principal drafter.)

Matthew Bunn and Anatoli Diakov, “Disposition of Excess Highly Enriched Uranium,” in *Global Fissile Materials Report 2007* (Princeton, NJ: International Panel on Fissile Materials, October 2007), pp. 24-32.

Matthew Bunn and Anatoli Diakov, “Disposition of Excess Plutonium,” in *Global Fissile Materials Report 2007* (Princeton, NJ: International Panel on Fissile Materials, October 2007), pp. 33-42.

Matthew Bunn, “Bombs We Can Stop” (review of William Langeweische, *The Atomic Bazaar*), *American Scientist*, Vol. 95, No. 5 (September/October 2007), pp. 452-454.

Matthew Bunn and Tom Bielefeld, “Reducing Nuclear and Radiological Terrorism Threats,” in *Proceedings of the Institute for Nuclear Materials Management 48<sup>th</sup> Annual Meeting*, Tucson, Arizona, 8-12 July 2007 (Northbrook, IL: INMM, 2007).

Matthew Bunn, “Troubled Disposition: Next Steps in Dealing With Excess Plutonium,” *Arms Control Today*, Vol. 37 No. 3, April 2007, pp. 6-13.

Matthew Bunn and Anthony Wier, “Funding for U.S. Efforts to Improve Controls Over Nuclear Weapons, Materials, and Expertise Overseas: Recent Developments and Trends” (Cambridge, Mass.: Project on Managing the Atom, Harvard University, February 2007). 17 pp.

Matthew Bunn, “A Mathematical Model of the Risk of Nuclear Terrorism,” *Annals of the American Academy of Political and Social Science*, Vol. 607, September 2006, pp. 103-120.

Matthew Bunn and Anthony Wier, “Terrorist Nuclear Weapon Construction: How

Difficult?” *Annals of the American Academy of Political and Social Science*, Vol. 607, September 2006, pp. 133-149.

Matthew Bunn, “Preventing a Nuclear 9/11,” in Stephen van Evera, ed., *How to Make America Safe* (Cambridge, Mass.: The Tobin Project, 2006)

Matthew Bunn, “Assessing the Benefits, Costs, and Risks of Near-Term Reprocessing and Alternatives,” in *Proceedings of the Institute for Nuclear Materials Management 47<sup>th</sup> Annual Meeting*, Nashville, Tennessee, 16-20 July 2006 (Northbrook, IL: INMM, 2006).

Matthew Bunn, “Placing Iran's Enrichment Activities in Standby” (Cambridge, Mass.: Project on Managing the Atom, Belfer Center for Science and International Affairs, June 2006).

Matthew Bunn, “Cooperation to Secure Nuclear Stockpiles: A Case of Constrained Innovation,” *Innovations: Technology/Governance/Globalization*, Vol. 1, Issue, 1, 2006, pp. 115-137.

Matthew Bunn, “Incentives for Nuclear Security,” in *Proceedings of the Institute for Nuclear Materials Management 46<sup>th</sup> Annual Meeting*, Phoenix, Arizona, 10-14 July 2005 (Northbrook, IL: INMM, 2005).

Matthew Bunn, “Building a Genuine U.S.-Russian Partnership for Nuclear Security,” in *Proceedings of the Institute for Nuclear Materials Management 46<sup>th</sup> Annual Meeting*, Phoenix, Arizona, 10-14 July 2005 (Northbrook, IL: INMM, 2005).

Matthew Bunn, Steve Fetter, John P. Holdren, and Bob van der Zwaan, “The Economics of Reprocessing v. Direct Disposal of Spent Nuclear Fuel,” *Nuclear Technology*, Vol. 150, No. 3, June 2005.

Matthew Bunn and Anthony Wier, “The Seven Myths of Nuclear Terrorism,” *Current History*, April 2005.

Matthew Bunn, “Preventing a Nuclear 9/11,” *Issues in Science and Technology*, Vol. 21, No. 2 (Winter 2005).

Matthew Bunn, “Thinking About How Many Guards Will Do the Job” (commentary on Scott D. Sagan, “The Problem of Redundancy Problem: Why More Nuclear Security Forces May Produce Less Nuclear Security”), *Risk Analysis*, Vol. 24, No. 4, 2004.

Matthew Bunn, *Preventing Nuclear Terrorism: A Progress Update* (Washington, DC: Nuclear Threat Initiative and the Project on Managing the Atom, Harvard University, 22 October 2003).

Anthony Wier and Matthew Bunn, "Controlling Nuclear Warheads and Materials: Priority Actions to Prevent Nuclear Terrorism," *LBJ Journal of Public Affairs*, Vol. 16, No. 1, Fall 2003.

Matthew Bunn and Anthony Wier, "Controlling Nuclear Warheads and Materials: An Update," in *Proceedings of the 44<sup>th</sup> Annual Meeting of the Institute of Nuclear Materials Management*, Phoenix, Arizona, July 2003 (Northbrook, IL: INMM, 2003).

Matthew Bunn, "Securing Nuclear Warheads and Materials: Seven Steps for Immediate Action," *Austrian Military Periodical*, Special Edition, Proceedings of the EU-High Level Scientific International Conference on Strengthening global Practices for Protecting Nuclear Material (NUMAT), 2003.

Matthew Bunn and George Bunn, "Strengthening Nuclear Security Against Post-September 11 Threats of Theft and Sabotage," *Journal of Nuclear Materials Management*, Spring 2002.

Matthew Bunn and George Bunn, "Nuclear Theft and Sabotage: Priorities for Reducing New Threats," *IAEA Bulletin*, Vol. 43, No. 4, 2001.

Matthew Bunn and George Bunn, "Reducing the Threat of Nuclear Theft and Sabotage," in *Proceedings of the Symposium on International Safeguards: Verification and Nuclear Material Security*, Vienna, Austria, 29 October-2 November 2001. (Vienna, Austria: International Atomic Energy Agency, 2001.)

Matthew Bunn, Oleg Bukharin, and Kenneth N. Luongo, "Renewing the Partnership: One Year Later," in *Proceedings of the 42<sup>nd</sup> Annual Meeting of the Institute of Nuclear Materials Management*, Indian Wells, California, 15-19 July 2001 (Northbrook, IL: Institute for Nuclear Materials Management, 2001.)

Matthew Bunn, "Russian Import of Foreign Spent Fuel: Status and Policy Implications," in *Proceedings of the 42<sup>nd</sup> Annual Meeting of the Institute of Nuclear Materials Management*, Indian Wells, California, 15-19 July 2001 (Northbrook, IL: Institute for Nuclear Materials Management, 2001.)

Matthew Bunn, "The Bush Administration and Nonproliferation: Skeptics at the Helm," *PIR Center Arms Control Letters* (Moscow), July 2001.

Frank von Hippel and Matthew Bunn, "Saga of the Siberian Plutonium-Production Reactors," *F.A.S. Public Interest Report*, November/December, 2000.

Robert H. Williams, convening lead author, "Advanced Energy Supply Technologies," in José Goldemberg, ed., *World Energy Assessment: Energy and the Challenge of Sustainability* (New York: United Nations, 2000). (Matthew Bunn, contributing author.)

Matthew Bunn, "The Next Wave: Urgently Needed New Steps to Control Warheads and Fissile Material," in Joseph Cirincione, ed., *Repairing the Regime* (New York, NY: Routledge, 2000.)

Matthew Bunn, "Executive Summary," and "Funding Nuclear Security" (principal author) in Sam Nunn (chair), *Managing the Global Nuclear Materials Threat: Policy Recommendations* (Washington DC: Center for Strategic and International Studies, January 2000.)

Matthew Bunn, "Safeguards, Security, and Transparency of Nuclear Materials in Repository Systems: The Role of International Collaboration," in *Proceedings of the Conference on Geologic Repositories: Facing Common Challenges*, Denver, Colo., 31 October-November 3, 1999 (Washington, D.C.: U.S. Department of Energy, 2000), pp. 189-191.

Matthew Bunn, "The Economics of Reprocessing Compared to Direct Disposal of Spent Nuclear Fuel," in Peter Ellis, ed., *Nuclear Reprocessing: Has it a Future? Views from Inside and Outside the Industry*, Current Decisions Report Number 22. Oxford, UK: Oxford Research Group, October 1999.

Matthew Bunn, "The Economics of MOX Fabrication," in Peter Ellis, ed., *Nuclear Reprocessing: Has it a Future? Views from Inside and Outside the Industry*, Current Decisions Report Number 22. Oxford, UK: Oxford Research Group, October 1999.

Matthew Bunn, "Enabling A Significant Future For Nuclear Power: Avoiding Catastrophes, Developing New Technologies, Democratizing Decisions -- And Staying Away From Separated Plutonium," (plenary address) in *Proceedings of Global '99: Nuclear Technology- Bridging the Millennia*, Jackson Hole, Wyoming, 30 August - 2 September 1999. La Grange Park, IL: American Nuclear Society, 1999.

Matthew Bunn, "Ensuring Security for Weapons-Usable Nuclear Material Worldwide: Expanding International Cooperation, Strengthening Global Standards," in *Proceedings of Global '99: Nuclear Technology- Bridging the Millennia*, Jackson Hole, Wyoming, 30 August - 2 September 1999. La Grange Park, IL: American Nuclear Society, 1999.

Matthew Bunn, Steve Fetter, and John P. Holdren, "The Economics of Reprocessing vs. Direct Disposal of Spent Nuclear Fuel: Short-Term and Long-Term Prospects," in *Proceedings of Global '99: Nuclear Technology- Bridging the Millennia*, Jackson Hole, Wyoming, 30 August - 2 September 1999. La Grange Park, IL: American Nuclear Society, 1999.

Matthew Bunn, Neil J. Numark, and Tatsujiro Suzuki, *A Japanese-Russian Agreement to Establish a Nuclear Facility for MOX Fabrication and Spent Fuel Storage in the Russian Far East*. (Cambridge, MA: BCSIA Discussion Paper 98-25, John F. Kennedy School of Government, Harvard University, November 1998.)

Matthew Bunn, Oleg Bukharin, Jill Cetina, Kenneth N. Luongo, and Frank von Hippel, "Retooling Russia's Nuclear Cities," *Bulletin of the Atomic Scientists*, September/October 1998.

Matthew Bunn and John P. Holdren, "Reducing the Threat of Nuclear Theft," in Joseph Rotblat, ed., *Nuclear Weapons: The Road to Zero*, pp. 117-144 (Boulder, CO: Westview Press, 1998.)

Matthew Bunn, "Security for Weapons-Usable Nuclear Materials: Expanding International Cooperation, Strengthening International Standards," in *Comparative Analysis of Approaches to Protection of Fissile Materials: Proceedings of a Workshop at Stanford California, July 28-30, 1997*. Livermore, CA: Lawrence Livermore National Laboratory, Document Conf.-9707121, May 1998.

Matthew Bunn, "'Pit-Stuffing': How to Rapidly Disable Thousands of Warheads and Easily Verify Their Dismantlement," *F.A.S. Public Interest Report*, March/April 1998.

Matthew Bunn, "Act Now, Mr. President," (proposal for unilateral initiatives to control warheads not covered by the START treaties), *Bulletin of the Atomic Scientists*, March/April 1998.

Matthew Bunn and John P. Holdren, "Managing Military Uranium and Plutonium in the United States and the Former Soviet Union," *Annual Review of Energy and the Environment*, Vol. 22, 1997, pp. 403-486.

Matthew Bunn, "The Case for a Dual-Track Approach — And How To Move Forward From Here," *Nuclear Materials Monitor*, Exchange Monitor Publications, Landsdowne, VA, Vol. 1, No. 5, July 14, 1997; originally presented to the conference on "Comprehensive Controls on Plutonium and Highly Enriched Uranium: Long-Term Problems and Prospects for Solutions," Institute for Science and International Security, Washington DC, 11 June 1997.

Matthew Bunn, "The U.S. Program for Disposition of Excess Weapons Plutonium," IAEA-SM-346/102, in *Nuclear Fuel Cycle and Reactor Strategies: Adjusting to New Realities: Contributed Papers*, pp. 79-91. Vienna, Austria: International Atomic Energy Agency, IAEA-TECDOC-990, December 1997. (Invited paper to the international symposium with the same title, 3-6 June 1997.)

*U.S.-Russian Independent Scientific Commission on Disposition of Excess Weapons Plutonium: Final Report* (Washington DC: Office of Science and Technology Policy, June 1, 1997). (Matthew Bunn, Executive Secretary.) 19 pp.

Matthew Bunn, "Eliminating Excess Plutonium Stockpiles: A Dual-Track Disposition Strategy," *Strategic Comments*, International Institute for Strategic Studies, Vol. 3, No. 2, March 1997. (No byline.)

John P. Holdren, John F. Ahearne, Richard L. Garwin, Wolfgang K. H. Panofsky, John J. Taylor, and Matthew Bunn, "Excess Weapons Plutonium: How to Reduce a Clear and Present Danger," *Arms Control Today*, Nov/Dec. 1996, Vol. 26, Number 9.

*U.S.-Russian Independent Scientific Commission on Disposition of Excess Weapons Plutonium: Interim Report.* (Washington DC: Office of Science and Technology Policy, September 1996). (Matthew Bunn, Executive Secretary.) 19 pp.

Matthew Bunn, "Getting the Plutonium Disposition Job Done: The Concept of a Joint-Venture Disposition Enterprise Financed by Additional Sales of Highly Enriched Uranium," presented to the "International Conference on Military Conversion and Science: Utilization/Disposal of the Excess Fissile Weapons Materials: Scientific, Technological, and Socio-Economic Aspects," Como, Italy, 18-20 March 1996, published in V. Kouzminov and M. Martellini, eds., *Science for Peace Series: Volume 1*, Venice: UNESCO, 1996.

Matthew Bunn, "The Antiballistic Missile Treaty," in Richard Dean Burns, ed., *The Encyclopedia of Arms Control and Disarmament*. New York, NY: Charles Scribner's Sons, 1993.

Matthew Bunn, "The ABM Talks: The More Things Change..." *Arms Control Today*, September 1992.

Matthew Bunn, "Birth of the Beryllium Baby," (Review of Donald MacKenzie, *Inventing Accuracy: A Historical Sociology of Nuclear Missile Guidance*) *Technology Review*, August-September 1991.

Matthew Bunn, "SS-18 Modernization: The Satan and START," *Arms Control Today*, July-August 1990.

Matthew Bunn, "Arms Control's Enduring Worth," *Foreign Policy*, Summer 1990.

Matthew Bunn, "The Star Wars Story," (Review of Sanford Lakoff and Herbert York, *A Shield in Space? Technology, Politics, and the Strategic Defense Initiative*) *Science*, 4 May 1990.

Matthew Bunn, "The ABM Treaty: Toward the 21st Century," *Arms Control Today*, April 1990.

Matthew Bunn, "The Bomb's Brilliant History," (Review of Richard Rhodes, *The Making of the Atomic Bomb*) *Arms Control Today*, May 1988.

Matthew Bunn, "Star Wars Testing and the ABM Treaty," *Arms Control Today*, April 1988.

Matthew Bunn, "Maneuvering Reentry Vehicles: Missions, Implications, and Prospects for Control," paper presented at the American Association for the Advancement of Science Annual Meeting, 15 February 1988.

Matthew Bunn, “Smart Warheads: The Next Nuclear Offensive,” *Technology Review*, January 1988.

Matthew Bunn, “Soviet Missile Tests Near Hawaii Arouse Controversy,” *Arms Control Today*, November 1987.

Matthew Bunn, “Threat Inflation Annual,” (Review of Soviet Military Power, 1987) *Arms Control Today*, May 1987.

James P. Rubin and Matthew Bunn, “Analysis of the Administration’s Report on Soviet Noncompliance With Arms Control Agreements,” *Arms Control Today*, April 1987.

Matthew Bunn, “Early SDI: Deploying a Disaster,” *Arms Control Today*, March 1987.

Matthew Bunn, “Does Throwweight Really Matter?” *Arms Control Today*, November 1986.

Matthew Bunn, “Les Missiles Nucléaires Ultraprécis,” *Le Temps Stratégique* (Geneva), Spring 1985.

Matthew Bunn and Kosta Tsipis, “The Uncertainties of a Preemptive Nuclear Attack,” *Scientific American*, November 1983.

## **Testimony**

Matthew Bunn, “Next Steps to Strengthen the National Nuclear Security Administration’s Efforts to Prevent Nuclear Proliferation,” testimony before the Subcommittee on Energy and Water, Committee on Appropriations, U.S. Senate, 30 April 2008.

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