

ABOUT THE CONTRIBUTORS

CHAIM BRAUN has 33 years of management and consulting experience in the electric and nuclear power industries emphasizing domestic and international power plant economics, and international nuclear power nonproliferation issues, particularly as related to the United States, East Asia, and Eastern Europe. Dr. Chaim is currently a Science Fellow at the Center for International Security and Cooperation (CISAC) at Stanford University, where he conducts studies related to nuclear proliferation spread and has coined the term "Proliferation Rings." He has developed a concept for providing incentives to reduce national motivations to pursue the development of weapons of mass destruction (WMDs), referred to as the Energy Security Initiative (ESI). Dr. Chaim now works on analyzing nuclear fuel supply assurance measures, the nexus between international nuclear power growth and nonproliferation concerns, and on nuclear power economics and nuclear fuel cycle under deregulation. Previously, he worked as a member of Bechtel Power Corporation's Nuclear Business Line management group, specializing in nuclear operating and maintenance initiatives and international nuclear power plant projects, particularly in East Asia and in Eastern Europe. Prior to that he worked as the Director of the Advanced Energy Technologies Department in United Engineers and Constructors (UE&C) Corporation, and as Technical Manager in the Energy Study Center of the Electric Power Research Institute (EPRI). In EPRI he managed power plant economic studies for the first three presidents of EPRI. Prior to that, Dr. Chaim served as research scientist in Brookhaven National Laboratory (BNL), where he worked on electric

energy storage optimizations, hydrogen production and storage and hydrogen injection into natural gas pipelines. Dr. Chaim received his education in Chemical and Nuclear Engineering, Nuclear Chemistry, and in Operations Research in the Technion (Israel Institute of Technology), in the Weizmann Institute in Israel, and in Cornell University, Ithaca, New York.

THOMAS DONNELLY is presently a Resident fellow at the American Enterprise Institute (AEI). He specializes in defense and national security. From 1995 to 1999, Mr. Donnelly was Policy Group Director and a professional staff member for the Committee on National Security (now named the Committee on Armed Services) in the U.S. House of Representatives. Mr. Donnelly is the author of AEI's *National Security Outlook*. His latest book is *Operation Iraqi Freedom: A Strategic Assessment* (AEI, 2004). He has also been editor of *Army Times* and deputy editor of *Defense News*. Mr. Donnelly received his B.A. from Ithaca College and his M.I.P.P. from the Johns Hopkins University School of Advanced International Studies.

GREGORY S. JONES is currently a Senior Researcher at RAND. He served as a defense policy analyst for the past 34 years, joining RAND in 1989. In May 1974, India's "peaceful nuclear explosion" steered his research into the areas of nonproliferation and counterproliferation. He was heavily involved in the studies which helped formulate the Ford-Carter policies in this area. The nuclear tests in 1998 again drew his research focus to nuclear weapons developments in South Asia. Over the course of his career, a major emphasis of his work has been the study of the potential for terrorists as well as hostile countries to acquire and

use nuclear, chemical, biological, and radiological weapons, and the formulation of policies and actions to control and counter these weapons. Mr. Jones is a coauthor of the book *Swords from Plowshares*, as well as the author or coauthor of over 60 reports and articles.

PETER R. LAVOY directs the Center for Contemporary Conflict (CCC) and is Senior Lecturer at the Naval Postgraduate School (NPS) in Monterey, California. In the NPS Department of National Security Affairs, where he has been since 1993, Dr. Lavoy teaches graduate courses and supervises master's theses on nuclear strategy, weapons proliferation and counterproliferation, and South Asian politics and security. He served in the Office of the Secretary of Defense in 2000 as Principal Director for Requirements, Plans and Counterproliferation Policy, and for 2 1/2 years before that as Director for Counterproliferation Policy. Dr. Lavoy edited *Nuclear Weapons Proliferation: 2016* (special issue of *The Nonproliferation Review*, Vol. 13, No. 3, Fall 2006); and *Planning the Unthinkable: How New Powers Will Use Nuclear, Biological, and Chemical Weapons* (Cornell University Press, 2000). His newest books are *Learning to Live with the Bomb: India and Nuclear Weapons, 1947-2002* (Palgrave-Macmillan, forthcoming, 2008); *Asymmetric Warfare in South Asia: The Causes and Consequences of the Kargil Conflict*, editor, (Cambridge University Press, forthcoming, 2007); and *Terrorism, War, or Disease: Unraveling the Use of Biological Weapons*, co-editor (forthcoming, 2007). Dr. Lavoy received a Ph.D. in Political Science from the University of California, Berkeley and a B.A. in Government from Oberlin College.

ZIA MIAN is a Research Scientist and Director of the Project on Peace and Security in South Asia, at the Program on Science and Global Security, Woodrow Wilson School of Public and International Affairs, Princeton University. He is also a member of the core staff of the International Panel on Fissile Materials, an independent group of arms-control and nonproliferation experts from 15 countries working for cooperative international policies to secure, consolidate, and reduce stockpiles of highly enriched uranium and plutonium that can be used for making nuclear weapons. He teaches at the Woodrow Wilson School, and previously has taught at Yale University and Quaid-i-Azam University, Islamabad. He has worked at the Union of Concerned Scientists, Cambridge, Massachusetts, and at the Sustainable Development Policy Institute, Islamabad. In addition to his research and writing, Mr. Mian is active with a number of civil society groups working for nuclear disarmament, peace and justice, including serving on the Board of the Los Alamos Study Group, the United Nations NGO Committee on Disarmament, the International Network of Engineers and Scientists Against Proliferation, and Abolition 2000, a network of over 2000 peace groups in 91 countries. He also serves on the Board of the Eqbal Ahmad Foundation. Mr. Mian is the editor of several books, most recently *Between Past and Future: Selected Essays on South Asia by Eqbal Ahmad* and *Out of The Nuclear Shadow* (2002). Other books include *Pakistan's Crises of State and Society* (1997) and *Pakistan's Atomic Bomb and The Search for Security* (1995). His writings have also appeared in journals, magazines, and newspapers around the world. He has made two documentary films with Pervez Hoodbhoy, *Crossing The Lines: Kashmir, Pakistan, India* (2004) and *Pakistan and India Under The Nuclear Shadow* (2001).

ABDUL MANNAN is Director of the Directorate of Transport and Waste Safety at the Pakistan Nuclear Regulatory Authority. His responsibilities include establishing and maintaining regulatory frameworks for the physical protection of civilian nuclear facilities and transport links including import and export. He has authored or co-authored over 25 scientific papers on various research topics related to radiation and safety. Dr. Mannan holds masters' degrees in Physical Chemistry from Karachi University and Nuclear Engineering from the Centre for Nuclear Studies in Pakistan.

ABDUL H. NAYYAR served for over 30 years on the faculty of the Department of Physics, Quaid-i-Azam University, Islamabad. He has been a Research Fellow, and is now visiting research fellow, at the Sustainable Development Policy Institute, Islamabad, where he led the program on energy and education. Dr. Nayyar has also been a regular visiting fellow with Princeton University's Program on Science and Global Security since 1998. His research interests include fissile-material production, nuclear weapons proliferation, consequences of nuclear war, and nuclear-reactor safety. He currently serves as President of Pakistan's Peace Coalition, a national network of peace and justice groups, and is the Co-convener of Pugwash Pakistan. Dr. Nayyar is the Executive Director of the non-profit group, Developments in Literacy, Pakistan.

GEORGE PERKOVICH is Vice President for Studies – Global Security and Economic Development, and Director of the Nonproliferation Program at the Carnegie Endowment for International Peace. His

personal research has concentrated on nuclear strategy and nonproliferation, with a focus on South Asia and Iran, and on the problem of justice in the international political economy. Dr. Perkovich is the author of the award-winning book *India's Nuclear Bomb*, which *Foreign Affairs* called "an extraordinary and perhaps definitive account of 50 years of Indian nuclear policymaking," and the *Washington Times* has called an "important . . . encyclopedic . . . antidote to many of the illusions of our age." The book received the Herbert Feis Award from the American Historical Association, for outstanding work by an independent scholar, and the A. K. Coomaraswamy Prize from the Association for Asian Studies, as an outstanding book on South Asia. Dr. Perkovich recently coauthored a major Carnegie report, *Universal Compliance: A Strategy for Nuclear Security*, a new blueprint for rethinking the international nuclear nonproliferation regime. The report offers a fresh approach to deal with states and terrorists, nuclear weapons, and missile materials to ensure global safety and security. He is also developing a project on fairness in the international system, drawing on his interests in trade and globalization. His article, "Giving Justice Its Due," published in the July/August 2005 issue of *Foreign Affairs*, establishes the central theme of this project.

RAMAMURTI RAJARAMAN is emeritus professor of theoretical physics at Jawaharlal Nehru University, New Delhi. He has been a professor at the Indian Institute of Science, Bangalore, Cornell University, and visiting faculty at the Massachusetts Institute of Technology, Harvard, Berkeley, and Stanford Universities. He is a Fellow of both the Indian Academy of Science and the Indian National Science

Academy. He has twice been a member of the Institute of Advanced Study, Princeton, and is a regular visiting research scholar at Princeton University's Program on Science and Global Security since 2000. His research interests include, apart from different areas of theoretical physics, ending the production of fissile material for nuclear weapons, capping South Asia's nuclear arsenals, the dangers of accidental nuclear war, civilian nuclear energy, and science and education policy in India.

M. V. RAMANA is currently a Fellow at the Centre for Interdisciplinary Studies in Environment and Development (CISED), Bangalore, India. He has held research positions at the University of Toronto, the Massachusetts Institute of Technology, and Princeton University. He has taught at Boston University, Princeton University, and Yale University. Dr. Ramana specializes in studying Indian nuclear energy and weapons programs. Currently he is examining the economic viability and environmental impacts of the Indian nuclear power program. He is actively involved in the peace and anti-nuclear movements, and is associated with the Coalition for Nuclear Disarmament and Peace as well as Abolition-2000, a global network to abolish nuclear weapons. Dr. Ramana is co-editor of *Prisoners of the Nuclear Dream* (New Delhi: Orient Longman, 2003) and author of *Bombing Bombay? Effects of Nuclear Weapons and a Case Study of a Hypothetical Explosion* (Cambridge, MA: International Physicians for the Prevention of Nuclear War, 1999). Dr. Ramana holds an M.Sc. from the Indian Institute of Technology, Kanpur; and a Ph.D. from Boston University.

HENRY D. SOKOLSKI is the Executive Director of the Nonproliferation Policy Education Center, a Washington-based nonprofit organization founded in 1994 to promote a better understanding of strategic weapons proliferation issues for academics, policymakers, and the media. He served from 1989 to 1993 as Deputy for Nonproliferation Policy in the Office of the Secretary of Defense under Paul Wolfowitz and received the Secretary of Defense's Medal for Outstanding Public Service. Prior to his appointment to this post, Mr. Sokolski worked in the Secretary's Office of Net Assessment on proliferation issues. In addition to his Executive Branch service, Mr. Sokolski served from 1984 through 1988 as Senior Military Legislative Aide to Senator Dan Quayle and as Special Assistant on Nuclear Energy Matters to Senator Gordon Humphrey from 1982 through 1983. Mr. Sokolski also served as a consultant on proliferation issues to the intelligence community's National Intelligence Council. After his work in the Pentagon, Mr. Sokolski received a Congressional appointment to the Deutch Proliferation Commission, which completed its report in July of 1999. He also served as a member of The Central Intelligence Agency's Senior Advisory Panel from 1995 to 1996. Mr. Sokolski has been a resident fellow at the National Institute for Public Policy, the Heritage Foundation, and the Hoover Institution. He currently serves as an adjunct professor at the Institute of World Politics in Washington and has taught courses at the University of Chicago, Rosary College, and Loyola University. Mr. Sokolski has authored and edited a number of works on proliferation related issues, including *Best of Intentions: America's Campaign Against Strategic Weapons Proliferation* (Westport, CT: Praeger, 2001), *Getting Ready for a Nuclear-ready Iran* (Carlisle, PA: Strategic Studies

Institute, 2005); *Checking Iran's Nuclear Ambitions* (Carlisle, PA: Strategic Studies Institute, 2004); *Getting MAD: Nuclear Mutual Assured Destruction Its Origins and Practice* (Carlisle, PA: Strategic Studies Institute, 2004); *Beyond Nunn-Lugar: Curbing the Next Wave of Weapons Proliferation Threats from Russia* (Carlisle, PA: Strategic Studies Institute, 2002); *21st Century Weapons Proliferation: Are We Ready?* (London: Frank Cass, 2001); *Planning for a Peaceful Korea* (Carlisle, PA: Strategic Studies Institute, 2001); *Prevailing in A Well Armed World* (Carlisle, PA: Strategic Studies Institute, 2000), and *Fighting Proliferation* (Maxwell AFB: Air University Press, 1996). Mr. Sokolski attended the University of Southern California and Pomona College and received his graduate education at the University of Chicago.

BRUNO TERTRAIS was the Director of the Civilian Affairs Committee, NATO Assembly, Brussels from 1990 to 1993. In 1993, he joined the *Délégation aux Affaires Stratégiques* (Policy Division) of the French Ministry of Defense. From 1995 to 1996, he was a Visiting Fellow at the RAND Corporation, Santa Monica, California. From October 1996 until August 2001, he was Special Assistant to the Director of Strategic Affairs at the French Ministry of Defense. Dr. Tertrais is now a Senior Research Fellow at the *Fondation pour la Recherche Stratégique* (FRS), as well as an Associate Researcher at the *Centres d'Etudes et de Recherches Internationales* (CERI). He is also a member of the International Institute for Strategic Studies (IISS), a contributing editor to *Survival*, a member of the editorial board of the *Washington Quarterly*, and a member of the Gerson Lehman Group Policy Council of Advisors. His latest book in English is *War Without End* (New-York: The New Press, 2005). Dr. Tertrais graduated from the *Institut d'Etudes Politiques de Paris* in 1984. He also holds

a Master's degree in Public Law from the University of Paris (1985), and a Doctorate in Political Science from the *Institut d'Etudes Politiques de Paris* (1994).