

Foreword

Until the signing of the Nuclear Non-Proliferation Treaty (NPT) in 1968 and its entry into force in 1970, the acquisition of nuclear weapons by a state was an important achievement providing national esteem that nations were not willing to forgo. By referenda Switzerland twice voted to build nuclear weapons, Sweden had an active program, and the minority white regime of South Africa actually built six nuclear weapons. And a number of other countries explored the nuclear weapon option. As a result, there was serious concern in the 1960s that nuclear weapons would simply sweep all over the world with unimaginable security consequences. But the NPT changed all that; it converted what had been an act of national pride into an act contrary to international law. It became the cornerstone of the international nuclear nonproliferation regime, which has served us well by severely limiting nuclear proliferation over the past 35 years. Only a few countries have actually crossed the nuclear weapon threshold.

But the NPT was founded on a central bargain. Most of the world—now some 182 countries—agreed not to acquire nuclear weapons, while the five NPT-authorized nuclear weapon states (i.e., China, France, United Kingdom, United States, and the Soviet Union) agreed to share peaceful nuclear technology and engage in nuclear disarmament negotiations aimed at the eventual elimination of their arsenals. From the very beginning it was clear that the non-nuclear weapon states looked at a permanent ban on nuclear testing as the litmus test of whether the nuclear weapon states would live up to their side of that bargain, thereby upholding the political balance of the treaty. Unfortunately, despite the brilliant negotiating efforts by the United States and like-minded countries, which is so effectively described in Keith Hansen's book, to this day no comprehensive test ban is in force.

The attempts to bring a halt to nuclear weapon testing go far back into the nuclear age to the mid-1950s. Indeed, it was the first effort made to bring the nuclear arms race under control. A complete ban on nuclear testing was nearly achieved in the early 1960s, but it failed over the inability of the United States and the Soviet Union to agree on verification arrangements to monitor underground nuclear tests. So instead a more limited agreement was reached to prohibit tests under the sea, in outer space, and in the atmosphere, thereby solving the environmental problems of fission by-products from nuclear tests' finding their way into the food chain. But this limited ban did nothing to control the arms race. Having gone underground, nuclear weapon tests greatly increased in number, and for 30 years no progress on the testing issue was made, much to the strong objection of many of the NPT's non-nuclear weapon states.

However, in 1993 following the end of the Cold War, the five nuclear weapon states agreed to enter negotiations on a comprehensive test ban treaty (CTBT) in Geneva at the UN-affiliated Conference on Disarmament. In 1995, in order to achieve the permanent extension of the NPT, the nuclear weapon states pledged to achieve a CTBT by 1996. As a result of vigorous leadership by the United States, as well as important contributions by other countries, the negotiations were concluded in August 1996. The last-minute objections of India were circumvented, and the Treaty was signed at the United Nations by 156 countries, the United States being the first.

Unfortunately, nearly 10 years later, the CTBT has not yet come into force, and its prospects for doing so are not bright. By the terms of the Treaty, 44 nations including the five nuclear weapon states must sign and ratify for it to enter into force. Thirty-three of the 44 have ratified it, including Britain, France and Russia. However, after a cursory review and in a partisan action, the U.S. Senate rejected the Treaty in 1999. China appears to be waiting for the United States to take the first step; and India, North Korea and Pakistan, which are also included in the list of 44 countries essential for entry into force, show no willingness to join the Treaty. The current U.S. Administration continues to support the existing worldwide nuclear test moratorium and the establishment of the CTBT's International Monitoring System, but it has stated that it does not intend to support ratification of the Treaty.

That the Comprehensive Test Ban Treaty is very much in the national security interest of the United States is without question. The United States leads the world in nuclear weapon technology by a considerable margin having conducted more nuclear weapon tests than the rest of the world combined. With its advanced technology as well as the Science-Based Stockpile Stewardship Program—a large-scale U.S. Government program designed to maintain the integrity of the nuclear stockpile—the U.S. nuclear stockpile will remain safe and reliable for the indefinite future without testing. A permanent worldwide ban on nuclear testing would inhibit the ability of so-called rogue states to develop types of nuclear weapons that could be mated to long-range ballistic missiles thereby threatening the United States. And it would prevent Russia and China from developing new types of more sophisticated weapons and thereby catching up to the United States in capability.

The Treaty is effectively verifiable with the vast International Monitoring System being built pursuant to the Treaty working in conjunction with the national technical monitoring systems of individual countries. Of course, in verifying a zero yield ban there will always be uncertainties, but the redundancies being built into the worldwide network will give sufficient assurance of effective verification and will inhibit cheating. By adhering to the test moratorium but not supporting entry into force of the Treaty, the United States is forgoing the considerable verification advantages of the CTBT's worldwide monitoring system, which can function fully only after the Treaty enters into force. Moreover, the test ban is essential to the political balance of the NPT and the international nuclear nonproliferation regime. This important regime may simply come apart at some point in the future to the detriment of everyone, unless all available nonproliferation tools—including the test ban—are supported and utilized.

Keith Hansen was a man on the inside. We have worked together in various negotiations during the past 30 years, and he has contributed to U.S. and international efforts to strengthen nuclear test monitoring capabilities for the past decade. He served as a key member of the U.S. Delegation in Geneva and in Vienna in both the CTBT negotiation and early implementation phase. As a result, he knows the issues better than almost anyone and effectively takes us through all the key events and issues in his book. In addition,

Mr. Hansen explores alternative futures for the nuclear test ban in a comprehensive fashion and analyzes their implications for the future of the nuclear nonproliferation regime. All those who are interested in nuclear nonproliferation issues and the future security of the United States will find this excellent book of value.

AMBASSADOR THOMAS GRAHAM