Last Sunset or New Dawn for Nuclear Weapons?

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Reviewed by Randy Rydell

The Twilight of the Bombs: Recent Challenges, New Dangers, and the Prospects for a World Without Nuclear Weapons
By Richard Rhodes

Richard Rhodes has become the Herodotus of the nuclear age. Like Herodotus, he is a meticulous observer of the world around him. He gathers facts systematically and presents his work in a literary narrative sprinkled with anecdotes and interesting insights that lure readers deeper into the text. Yet, many readers of his other exhaustive works on the history of nuclear weapons—The Making of the Atomic Bomb (1986), Dark Sun: The Making of the Hydrogen Bomb (1995), and Arsenals of Folly: The Making of the Nuclear Arms Race (2007)—may wonder what more is there to say about the bomb.

It is perhaps not surprising that his most recent book, The Twilight of the Bombs, would focus on what one might call “the making of” nuclear disarmament. The subject is quite timely, and the conclusion is clear: the world would be better off without the bomb.

There is, however, a certain ambiguity, probably unintentional, in the title, for “twilight” can refer to the glimmer of light in early morning or late evening. Many readers will see the bomb approaching its final sunset, a theme stressed in this book.

To others, the bomb might appear to be facing a new dawn. Warhead modernization programs continue. Work proceeds on new delivery systems. Long-term planning focuses on the maintenance and improvement of stockpiles rather than their elimination. Disarmament agencies are most noted for their absence in nuclear-weapon states. The budgets, to the extent they exist at all, for nuclear disarmament pale in comparison to the largesse for current and planned nuclear weapons programs.

So what is really ahead for nuclear weapons? Is the world destined to accept the existence of such weapons as a permanent feature of the international landscape? Will their persistence sow the seeds of new weapons programs around the world, justified as always with the logic of nuclear deterrence, reinforced by some recent calls that the sole purpose of nuclear weapons should be to deter nuclear attack? If the perpetuation and proliferation of such weapons are unavoidable, will this also imply a greater risk of use or of acquisition of such weapons by nonstate actors? If all are true, can anything be done by anybody to yield a safer world free of such weapons?

Although The Twilight of the Bombs does not answer all of these questions, it does leave some strong hints about where to find the answers.

Heroic Efforts

The first and perhaps most prominent clue lies in the author’s keen interest in the views and activities of specific individuals who have had responsibilities relating to the bomb. For this reason, he also might be regarded as the Thomas Carlyle of the nuclear age, with his characteristic focus on heroes and heroic acts.
The heroes in this book are bold individuals who took the initiative, often despite the constraining influences of bureaucracies or the counsel of experienced veterans. Readers will find quote after quote from the heroes of the UN Special Commission (UNSCOM) who were determined to root out all of Iraq’s alleged weapons of mass destruction after the 1991 Persian Gulf War. Juxtaposed against them are the more cautious views of Hans Blix, first as director-general of the International Atomic Energy Agency (IAEA) and later as the executive chairman of the UN Monitoring, Verification and Inspection Commission, whose moderation and measured incrementalism appeared, vis-à-vis the bravado of the UNSCOM teams, to be somewhat short of what was really needed to accomplish and verify the disarmament of Iraq.

Yet, the line between hero and bureaucrat is not quite so clearly drawn in this book, as Blix and his IAEA successor, Mohamed ElBaradei, also emerge as sage professionals working courageously to avert another war in Iraq in 2003. Regardless of the personalities involved, this book attaches great importance to the efforts of specific individuals.

Learning From Crises

Another clue the author offers on how to achieve a world free of nuclear weapons is to learn lessons from particular disputes. The routine, day-to-day observance of global norms by the vast majority of states receives far less attention in this book, as in many others, than the hot crises that have demanded immediate responses. This method reverses Sherlock Holmes and counsels us all to concentrate on those dogs that do bark in the night.

Perhaps reflecting the book’s subtitle, which mentions “recent challenges, new dangers,” the table of contents makes it quite clear that the case for disarmament is being constructed here on a foundation of lessons learned from crises. Rhodes pays close attention to the challenge of finding Saddam Hussein’s weapons of mass destruction or at least figuring out what happened to them. He also addresses concerns over the security of nuclear weapons during the breakup of the Soviet Union and the emergence of the Russian Federation and discusses the prudent “preventive defense” initiatives of cooperative threat reduction.

Together, these cases comprise about one-half the book. Much of the factual basis for these narratives comes from previously published works, supplemented by interviews with key participants.

Also, there are chapters on the nuclear challenges posed by North Korea; the reversal of South Africa’s nuclear weapons program; the effort led energetically by Thomas Graham, to whom the book is dedicated, to achieve the indefinite extension of the nuclear Nonproliferation Treaty (NPT); and a brief account of nuclear rivalry in South Asia.

The concluding part treats nuclear weapons as “an intolerable threat to humanity.” Yet, only the last 21 pages—the final chapter—address the actual “making of” nuclear disarmament. The discussion of what is required to achieve the “twilight of the bombs” is reserved for the twilight of the book.

The prescription emphasizes the following:

• the “political courage of national leaders”;
• the need for the world community to “sooner or later organize to meet” the security needs of India, Israel, North Korea, and Pakistan;
• the claim that the growing “technological and economic interconnection” among peoples of the world “fosters non-violent relations,” a trend reinforced by a “demographic transition” to a new generation “less willing to see their children pressed into military service to be slaughtered in war”;
• a “tightening web of social controls over public violence”;
• a prediction that “[i]f not in my lifetime, probably in the lifetime of my children, and certainly in
my grandchildren’s lifetimes, weapons of mass destruction will be outlawed’;

• a declaration that, “[i]n time, possession of a nuclear weapon will be judged a crime against humanity’; and

• progress toward global implementation of a “public health” or “common security” approach, involving a “fundamental transformation in relationships between nations.” Elements of this approach include “materials control and accounting, cooperative threat reduction, security guarantees, agreements and treaties, surveillance and inspection, sanctions, [and] forceful disarmament if all else fails.”

Given these formidable conditions, which include a fundamental transformation of international relations and the prior resolution of chronic regional disputes, should readers expect to witness a twilight of the bombs or of nuclear disarmament? Readers may reach different conclusions. Yet, none could doubt the credit that is due the author for taking on the challenge of answering this question—one that follows logically from his previous works.

Achieving Nuclear Disarmament

The great strengths of this book are its clear writing style; the importance it justifiably attaches to all nuclear threats from existing arsenals, proliferation, and terrorism; and its unambiguous conclusion that the world will be safer without nuclear weapons.

The book also has a few shortcomings that somewhat limit its value as a guide for practical action to achieve global nuclear disarmament. First, the book is not strong in its treatment of the U.S. Congress. The author recognizes heroic leadership from Senators Sam Nunn (D-Ga.) and Richard Lugar (R-Ind.), who pioneered cooperative threat reduction, and addresses the partisan politics leading to the Senate’s failure to ratify the Comprehensive Test Ban Treaty in 1999.

Although Congress has indeed not shown much leadership on nuclear disarmament, it has certainly played major roles in enacting U.S. nuclear nonproliferation laws and in overseeing their implementation. The book does not mention the 24-year career of Senator John Glenn (D-Ohio) in these areas, including his efforts to enforce legal prohibitions on providing military aid to Pakistan while it was building its bomb and to strengthen norms for international cooperation in peaceful uses of nuclear energy.[1] The contributions of many other members of Congress similarly are not discussed.[2]

The United Nations is scarcely addressed in this book, apart from its role in the disarming of Iraq. There is no mention of the role of the General Assembly in constructing global norms of disarmament and specific criteria for assessing progress in this field, namely transparency, irreversibility, verification, universality, and bindingness. The book does not address the role of the secretary-general, including Secretary-General Ban Ki-moon’s five-point nuclear disarmament proposal,[3] which was endorsed in 2009 by the Inter-Parliamentary Union[4] and cited twice in the final document of the 2010 NPT Review Conference.[5] The past successes, current difficulties, and potential future roles of the Conference on Disarmament (CD) might have received some attention as well.

The book makes a persuasive case that achieving nuclear disarmament will require overcoming opposition from the “military-industrial complexes” of nuclear-weapon states and solving the problem of “threat inflation,” but is less clear on how to accomplish these crucial tasks. There is no call, for example, to rally nongovernmental organizations in civil society or to encourage a grassroots movement. The role of private foundations in funding their work is not considered. There is no recommendation to mobilize international groupings, such as the middle-power countries or various coalitions of the willing, to advance disarmament. The change, one is left to infer, must come from heroes inside governments of the states that possess nuclear weapons.

In terms of civil society, some reference to the historical work of Lawrence Wittner would have been helpful, especially his three-volume series The Struggle Against the Bomb, on the global evolution of postwar anti-nuclear-weapon movements.[6] Rhodes also does not mention several recent
disarmament initiatives launched by civil society: Global Zero, the International Campaign to Abolish Nuclear Weapons (ICAN), Mayors for Peace, and Parliamentarians for Nuclear Non-Proliferation and Disarmament, among many others.

In addition, the book reaches some questionable technical conclusions, especially relating to the author’s dismissal of plutonium as “a likely terrorist explosive.” That position is at odds with other references in the book to the “Nth Country Experiment,” which proved that a small group of physicists without nuclear weapons training could design a nuclear weapon. According to the experiment’s report, “It was decided to design a spherically symmetric plutonium implosion explosive which would be compressed by a spherically converging detonation wave.” [7] The dismissal of plutonium also contrasts with a paper, cited in the book, by J. Carson Mark, Theodore Taylor, and three other former Los Alamos National Laboratory scientists, which found that a small team of terrorists working with five or six kilograms of plutonium “should be able to produce a weapon with a minimum yield of several tons of TNT equivalent, and very possibly of one hundred tons or more.” [8]

The book comments on the limitations of fissile material controls in Russia, but this problem exists in all states that possess nuclear weapons. A 2000 report by the British Ministry of Defence concluded that “the Government does not believe that it will ever be possible for any of the relevant States to be able to account with absolute accuracy and without possibility of error or doubt for all the fissile material they have produced for national security purposes.”[9]

This finding has profound implications for the future of nuclear disarmament, nonproliferation, and even efforts against nuclear terrorism. Its implications extend to the world’s long-standing pursuit of a multilateral fissile materials treaty, which the book mentions only in passing.

Other omitted subjects include the various efforts that have been underway in the world community to pursue a nuclear weapons convention. A model convention has already been drafted by a group of nongovernmental experts and circulated as a UN document and recently updated. [10] Ban’s five-point disarmament proposal included the goal of concluding such a convention or a framework of separate, mutually reinforcing instruments. ICAN is working specifically to advance such a convention. The Henry L. Stimson Center has published a detailed study urging pursuit of such a treaty. [11]

The book speaks highly of the value of security assurances in ensuring that Kazakhstan and Ukraine would become non-nuclear-weapon states, but does not mention the role of security assurances contained in the protocols to the treaties establishing five regional nuclear-weapon-free zones. These protocols are important to the 113 non-nuclear-weapon states that are members of those zones. The fact that not all of the nuclear-weapon states have ratified them would have been useful to note, along with the various provisos that have been attached to them; the book also could have mentioned recent meetings of the members of such zones to coordinate their activities. [12] The difficulties encountered at the CD in achieving a consensus to negotiate legally binding negative security assurances deserve some recognition as well.

The book’s “twilight” theme could have been strengthened by reference to the work of some past architects of nuclear weapons policies, especially Robert McNamara, [13] Paul Nitze, [14] and George Kennan, [15] who later questioned the value of nuclear weapons, as did 60 generals and admirals who voiced their support for nuclear disarmament. [16] More than 200 prominent political, military, business, faith, and civic leaders have joined the Global Zero campaign.

Without doubt, the future historiography of nuclear weapons will be shaped by careful chroniclers like Herodotus and by contributions from Carlylian heroes. Perhaps one day, they will be joined by a future Thucydides, who will trace the roots of the final elimination of these weapons to their obsolescence in a world with rapidly evolving concepts of power and duty.

Global nuclear disarmament efforts would benefit from a solid critique of nuclear weapons from the standpoint of political realism, one identifying some practical solutions to chronic institutional and political obstacles to disarmament. These will surely include leadership by the nuclear-weapon states, efforts by coalitions in the international diplomatic community, and persistent initiatives from
civil society. Rhodes has capably pointed his readers in the right direction, while not claiming to offer all of the solutions himself.

**The Approaching Twilight**

Readers of this book should consider the extraordinary diversity of security challenges facing the world community stemming from civil wars, terrorism, global climate change, chronic poverty, corruption, injustice, human rights abuses, disputes over natural resources, pandemics, ethnic conflicts, and countless other sources. Such a survey would help to put into sharp focus both the irrelevancy of nuclear weapons in addressing such threats and the realities of how these weapons aggravate many threats, especially proliferation and terrorism.

Readers should consider the social and economic opportunity costs of burgeoning military expenditures worldwide, now in excess of $1.5 trillion annually, including the tens of billions slated for investments in nuclear weapons over the years ahead. They also should consider the moral unacceptability of weapons that are intrinsically indiscriminate in the effects and the common benefits the world would gain from their elimination.

Having finished this book, they should view nuclear disarmament as a practical necessity and a moral imperative. This alone would be a triumph of *The Twilight of the Bombs*. As Herodotus once wrote, “Look to the end, no matter what it is you are considering.”[17]

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**ENDNOTES**


2. These include Senators Howard Baker (R-Tenn.), Alan Cranston (D-Calif.), Jacob Javits (R-N.Y.), Claiborne Pell (D-R.I.), Abraham Ribicoff (D-Conn.), and Stuart Symington (D-Mo.) and Representatives Jonathan Bingham (D-N.Y.), Edward Markey (D-Mass.), Richard Ottinger (D-N.Y.), and Clement Zablocki (D-Wis.).


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