

Book Review

By

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Richard D. Burns and Phillip E. Coyle III, *The Challenges of Nuclear Non Proliferation*, (Rowman and Littlefield Publishing Group,2015)

Since the end of the Cold War, the omnipresent threat of an all-out nuclear war between USA and USSR has receded. Various new apprehensions concerning nuclear weapons have taken its place. The possibility of regional nuclear conflicts in the Korean peninsula; and in the subcontinent of South Asia, and of nuclear proliferation and a subsequent arms race in the conflict prone Middle East, along with the ever increasing threat of nuclear terrorism, form the most recent concerns shaping efforts to strengthen the non-proliferation regime. Spelling out the dominant issues, the book proceeds into a chapter by chapter comprehensive survey of the chronological development of voluntary, bilateral and international non-proliferation initiatives.

The opening chapter describes the history of nuclear weapons and the conditions under which the original five nuclear weapon states acquired their nuclear capabilities, and the emergence of the second-tier nuclear weapons states- Israel, India, Pakistan and North Korea- under the motivated impetus of regional security concerns. The book then proceeds to describe the early efforts to curtail the proliferation of nuclear weapons after the discovery of their destructive potential as witnessed by the international community following the Hiroshima and Nagasaki bombings. President Dwight Eisenhower's influential speech to the UN general assembly that initiated the Atoms for Peace program, emphasized the potential to harness nuclear energy

for peaceful purposes such as in the field of medicine, agriculture and its application in developing electrical energy. The overly optimistic program was later criticized for actually contributing to nuclear proliferation in various states.

Critics recognized the inherent problem in the program as its dual-use feature, as the same facilities set up to generate electricity from nuclear fission reactions and other peaceful benefits, could just as easily be directed to the development of nuclear military weapons. The initiative, however, laid the foundation for the development of the International Atomic Energy Commission and subsequently the Non-Proliferation Treaty, which came to be regarded as the institutional backbone of the nonproliferation regime.

The IAEA was an organization designed to extend technical, scientific and material aid to civilian nuclear facilities in member countries and to establish a system of safeguards to ensure the provided facilities would not be associated with military purposes. The escalating threat of a nuclear war between the two superpowers of USA and USSR during the Cold War and the realization that the hostility between the two nations could lead to devastating consequences beyond their borders led to increasing support for the Non-Proliferation treaty. Halting the spread of nuclear weapons was in the interest of all, and thus the NPT was founded on three basic principles: a commitment by non-nuclear weapon states not to pursue nuclear status, a promise by the nuclear weapon states to diminish and ultimately disband their nuclear arsenals, and a commitment to respect and guarantee the right of all nations to the peaceful development and use of nuclear energy.

The book chronicles the agreements imposing limitations on nuclear testing in the midst of rising concerns about the

radioactive fallouts and environmental hazards associated with such tests. The Limited Test Ban Treaty restricted nuclear testing in the atmosphere, in the ocean and in space, and the Threshold Test Ban Treaty imposed a limit on underground testing to not exceed a yield greater than 150 kilotons.

The authors offer important insights into the problems faced in the negotiations of the test bans, including issues such as verification problems, and how these were resolved. The five nuclear states have not conducted a nuclear test since 1996, a big success for the non-proliferation regime. However, efforts to ratify a Comprehensive Test Ban Treaty that would outlaw any nuclear test explosion in areas under the treaty's jurisdiction and set up monitoring facilities to ensure compliance have failed. Other early efforts to curtail the hastening nuclear arms race between the USA and USSR and to prevent further proliferation in other states included the proposed Fissile Materials Cutoff Treaty. The treaty suggested that controlling the dissemination of the raw materials required to produce nuclear weapons would stifle their development. However, negotiations for the treaty have faced repeated objections from Pakistan. The state advances the view that the treaty should cover existing stockpiles of fissile material in addition to future productions, and takes the stance that the treaty in its current form puts the state in a disadvantaged position relative to India.

The authors also point out the important contribution made by regional voluntary denuclearizations in strengthening the global nonproliferation regime and the norms it is based on. Presently recognized Nuclear Weapon Free Zones span an area of over a hundred states in several different continents and cover more than 50 percent of the globe. NWFZs are areas established through voluntary treaties that entail the following basic features: Nuclear weapons may not be manufactured,

imported, stored or deployed within the territory of the treaty and Nuclear Weapon States grant assurances not to use or threaten to use nuclear weapons against the states party to the treaty. Five such treaties are in place that cover the areas of Latin America and the Caribbean, Central Asia, Southeast Asia, Africa, and the South Pacific. Additionally, three further treaties establish the unpopulated areas of Antarctica, Outer Space, and the Seabed as free of nuclear weapons.

Following the end of the Cold War, the two leaders of the former enemy states of the USA and USSR engaged in bilateral processes of “proliferation in reverse”, whereby they recalled much of their tactical nuclear weapons deployed abroad, secured many of the weapons of mass destruction scattered in facilities of former Soviet Union states, and destroyed a large portion of their arsenals, thus contributing to a major decline in the number of nuclear weapons in their possession compared to the height achieved by the states during the peak of the tensions of the Cold War. The Global Threat Reduction Initiative emerged with the aim of securing and destroying the vast piles of nuclear materials scattered across the globe, to reduce the risk of these materials falling in the hands of rogue states or terrorist non-state actors.

The Nuclear Suppliers Group was created to monitor and impose regulations on the export of nuclear material that could be directed towards military use. Other efforts and initiatives to achieve the aims of nuclear disarmament and non-proliferation and to address the global risks associated with nuclear weapons have been discussed comprehensively by the authors in the following chapters.

The authors offer an interesting and insightful analysis of why certain states chose to forego the development of nuclear

weapons. They examine the different combinations of voluntary pacifist intentions, economic costs, political factors and coercive threats that came into play in the making of this decision by these states. They highlight the fact that emerging regional security threats could cause some of these nations to reexamine their earlier commitment to staying nuclear weapons free and initiate national nuclear programs, creating a domino effect in other states that would eventually lead to a proliferation epidemic. The proliferation threat has not been completely thwarted, and additional steps must be taken to eliminate it. They pinpoint certain regional hotspots, such as the Middle East where the threat from Israel's nuclear program and Iran's potential nuclear proliferation led the other states to initiate their own programs to counterbalance the threat and assure their security from hostile neighbors. North Asia is another crisis zone, where North Korea's nuclear status raises concerns of South Korea and Japan abandoning their commitment to the NPT and pursuing nuclear weapons should they perceive their security to be seriously threatened. The global political landscape is ever-changing, and it is entirely possible that any future regional conflict could create the conditions of fear and suspicion necessary for governments to abandon their pledge of non-proliferation and acquire nuclear weapons.

Authors Richard D. Burns and Phillip E. Coyle sum up their work by focusing attention to the lingering threats regarding nuclear use. They point once again to the nuclear status of the rogue and unpredictable North Korea that threatens the regional security of North Asia and the globe beyond. The international community had expressed apprehensions on the potential of Iran acquiring nuclear weapons, a move that could entail a regional arms race within the Middle East and significantly destabilize the already precarious security situation in the

region. A regional conflict between India and Pakistan has the potential of igniting long existing rivalries and hostility between the two neighboring countries and resulting in a nuclear tussle with grave consequences.

Lastly, the events on the fateful day of 11th September 2001 focused the attention of the international community on the emerging terrorist threat. Radical terrorists have shown their potential and willingness to perpetrate acts of mass violence. The possibility that these non-state actors, not bound by the principles of deterrence and the accepted norms of the international political community, could acquire WMDs through theft or create crude “dirty bombs” by employing nuclear raw materials and detonate such devices would cause massive loss of life, infrastructure damage and environmental poisoning. It is paramount, the authors remark, that the non-proliferation regime take appropriate measures to adequately secure existing stocks of nuclear weapons or destroy them to ensure that they do not fall into wrong hands.

The Challenges of Nuclear Non-Proliferation is a highly interesting and informative read for anyone willing to expand their knowledge in the subject area of nuclear weapons and nonproliferation. The organization of chapters follows a logical pattern, acquainting the reader initially with the history of nuclear weapons and how states acquired them, following then with a detailed and exhaustive survey of the development of the almost 60 year long non-proliferation regime, familiarizing the reader with its many accomplishments and the challenges that still remain. The authors describe, at length, the political issues that were a hurdle in the face of negotiations for various initiatives, how they were overcome, and issues that continue to pose obstacles for the further attainment of non-proliferation goals. They employ a story like format in their description and

assessment of the non-proliferation regime, making what is inherently a dull subject into an absorbing and fascinating work of literature. The language is academic and formal yet easily comprehensible. Thus the volume is an appropriate read for anyone, ranging from a novice undergrad student pursuing nuclear studies, to accomplished academics of the field wanting to expand or refresh their knowledge on the subject matter.

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