

Introduction

I. William Zartman and Mordechai Melamud

The Comprehensive Nuclear Test Ban Treaty (CTBT), the latest step in efforts at nuclear arms control, is now nearly two decades old and not yet in force, for lack of a few crucial ratifications. Negotiations to expand the general international regime on the problem of nuclear armaments into a new building block of regime construction dealt with the matter of nuclear testing within the fundamental asymmetry between nuclear-weapon states (NWS), nuclear-capable weapon states (NCWS), and non-nuclear-weapon states (NNWS). However, despite the treaty's status in limbo, practice runs on its most important element, on-site inspections (OSI), have already been made, producing insightful lessons. This book analyzes the negotiation processes associated with the establishment of the treaty, its Organization (the CTBTO), and its on-site inspection procedures, in order to evaluate the adequacy of these negotiations for creating a viable international regime. It examines two phases of CTBT negotiations: the multilateral negotiations for regime creation in the mid 1990s and the currently ongoing negotiations (termed "elaborations") in the policymaking organs on verification regime modalities, including simulated inspector-inspectee negotiations associated with carrying out specific verifications. The purpose is not to propose alternatives but, in stopping just short of that point, to throw new analytical light on the initial process as a case of regime-building and to draw new lessons from the very realistic trial runs used for training inspectors. The chapters in this book relate to issues representing past, present, and future aspects of the treaty-related negotiations.

Negotiating a multilateral regime

The creation of international regimes is a continually moving affair, a recursive negotiation process (Spector and Zartman, 2003; Hasenclever, Meyer, and Rittberger, 1998). It involves the coming together of a large number of sovereign states parties into an agreement to set up the regime in an initial form and then periodically move on to further readjustments

and constructions. The modifications do not occur on some predetermined schedule, although the extant form of the regime may call for periodic reexaminations. Governing the content of these examinations and of larger constructions of the regime are exogenous or contextual changes in the power, interests, costs, and/or benefits of the parties both within and still outside the regime. Topical logjams and tsunamis quite beyond the control of the states parties are often required to move a regime to face old issues, encompass new problems, and invent new solutions. These readjustments can take many forms, prominent among which are minor tinkering at fixed intervals occasioned by a conference of parties or a review conference, or the construction of new and larger building blocks punctually extending the initial regime in new directions. The nuclear regime has been the product of a combination of both of these.

While scheduled periodic conferences provide their own timetable, the progress of the informal building process is more erratic. It involves competing forces of system maintenance and system adjustment, plus benthic or domestic inputs and exogenous factors. Regimes have been described as “watercourses flowing through time and space,” making their own bed across plains, around bends and boulders and over dams (after a delay), and pulling up material from the domestic bottom as well as detritus from the top (Spector and Zartman, 2003: 18). Others have characterized the process less poetically as a garbage can mixing separate streams of problems, solutions, participants, and opportunities to make policy in an ad hoc and haphazard process (Cohen, March, and Olsen, 1972; Kingdon, 1995; Howlett and Ramesh, 2003; developed by Hampson in Chapter 4), although this image suggests (among other things) that the process ends when the can is full. Whichever image is preferred, the fact is that regime-building involves a recurrent return to the business of construction, not just to make minor adjustments but to do major building and rebuilding as circumstances require and opportunities allow.

These watercourses (or garbage cans) do not only contain specific provisions governing policies and actions dealing with problems and solutions on a particular subject; these provisions, policies, and actions are rooted in general notions of the nature of the problem, the type of solution required, and the broader philosophy linking the two together. A study of textual changes and even the arguments behind them does not capture the different, combining, and conflicting ideas of appropriate approaches to the situation in which both the problem and the proposed solutions are nested. Thus, for example, to look at the policies and proposals of India, the United States, and the USSR/Russia toward the

banning of nuclear tests without understanding their view of the global situation and the roles that they expect to play in it – well presented in subsequent chapters by Ulrika Möller, Alexey Fenenko, and Chris McIntosh – is to miss the grounding of these policy stands and an understanding of where they come from and where they are going. In international relations theory terms, bringing the two together, as this study does, is to combine the realist and the constructivist angles of vision and provide a hologram of the subject, as McIntosh argues (Chapter 7).

The evolution of a nuclear weapons regime flows along such courses. The problem was posed by the presence of nuclear weapons after World War II and then their proliferation during the Cold War. Proliferation reached its five-country limit in the nuclear-weapon states (NWS), whereupon the focus shifted to the problem of further improvements – horizontally, to other states, and vertically, to improved technology – calling for new solutions. That search has been punctuated and goaded by repeated exogenous inputs and focusing events, such as tests, accidents, and the expansion of club applicants, if not members. Domestic reactions, feedback, and demands that contribute to a congeries of national moods periodically calling for action have played a major role, but the negotiations are solidly in the hands of the states. Participation in this evolution has engaged a spectrum of parties, from the universal membership of the UN General Assembly to the bilateral confrontation of the two Cold War protagonists (modified little by the usual addition of the UK). The negotiations have shifted from the larger to the smaller arena and back again as one or the other runs into blockage, and the form of the regime efforts has shifted accordingly. In the 1950s and 1960s, the focus was on horizontal proliferation, handled as a solid block in regime construction by multilateral negotiation with the Non-Proliferation Treaty (NPT) of 1970. Negotiations building the nuclear weapons regime then turned for the next decade and beyond to arms limitation talks among the NWS, primarily bilaterally between the two leaders, the US and the USSR, resulting in the 1972 SALT I, then the 1979 SALT II, the 1987 INF, the 1991 START I, the 2002 SORT, and eventually the 2010 New START.

On the multilateral side, the General Assembly created a succession of venues for regime-building with the Ten-Nation Committee on Disarmament (TNCD) of 1960, the Eighteen-Nation Disarmament Conference (ENDC) of 1962, the Conference of the Committee on Disarmament (CCD) of 1969, and the Conference on Disarmament (CD) in 1979 (the effect of these on the rules of the game for multilateral negotiations is analyzed in Chapter 3). These bodies spent long years in inconclusive discussions but kept up the pressure for new thinking and

action. A major building block to the regime that eluded construction concerned the matter of nuclear testing. Instead, the subject was repeatedly a stumbling block in the bilateral negotiations between the superpowers, and therefore was beyond the capabilities of the multilateral fora. But these bodies were able to act as an agent for world pressure to handle the problem. A commitment to do so was written into the NPT but remained beyond reach for a quarter-century.

As indicated, the explanation for the dam break had to come from contextual or exogenous inputs that changed the power, interests, costs, and/or benefits of the parties. The most important of these contextual changes was of course the end of the Cold War, which changed the dynamics of competition between the US and now Russia. The new Russia was more interested in a full test ban with the US and the rest of the world and less worried about inspections to control it (as discussed in Chapter 8). For the US, a Group of Scientific Experts (GSE) appointed two decades earlier by the CCD had studied the possibilities of effective monitoring and found verification feasible, awaiting an appropriate opportunity. More important for determining the opportunity, a test ban treaty would complement the NPT by locking in the special status of the NWS, but the time for a treaty limited to the NWS, even if later opened to the rest of the world, had passed; it was more in the US interest to reinvigorate the multilateral CD as the negotiating forum. The rest of the world, acting in the UN General Assembly, agreed.

Negotiating a step in the nuclear arms control regime

The CTBT represents an important evolution in the general principle of nuclear arms control over the second half of the twentieth century, which uncertainly governs the thrust of nuclear arms control in the twenty-first century. The initial principle, or formula, for handling the nuclear weapons problem after World War II, expressed in the US Baruch Plan and the Soviet Gromyko Plan in 1946, called for the complete abolition of nuclear weapons globally.

The associated problems of proliferation and testing were obviated by the principle, since there would be no more nuclear weapons to spread or test. The consummation of nuclear technology in the USSR in 1949, then Great Britain in 1952, and later France (1960) and China (1964) completely changed the situation and called for a new formula.

The challenge of arresting proliferation required not just an extended principle but an entirely new concept of the nuclear arms problem. By its definition, non-proliferation meant that the current five NWS – the Big Five of the UN Security Council – were locked in their exclusive status.

It was no longer a matter of banning nuclear weapons but of banning them only to a selective audience – the rest of the world – and legitimizing their existence to a special group of states. Negotiations in the 1960s were conducted under this principle, blocking horizontal proliferation in the Non-Proliferation Treaty of 1970. The NPT also included a comprehensive test ban and eventually total nuclear disarmament as goals, in its preamble and Article VI, respectively, in a gradual move from a status-protection formula to a universal formula. Indefinite extension of the NPT a quarter-century later was obtained by a promise to achieve a comprehensive test ban, and subsequent review conferences of the NPT parties have insisted on the ratification of the 1996 CTBT.

The challenge of devising a formula to handle the testing problem was more ambiguous. One aspect was tied to the proliferation problem, for a ban on testing would reinforce the attempts to control proliferation among NNWS. A more direct part of the problem was the testing race that was the particular form of the Cold War arms race of the 1950s and 1960s; a ban on testing would presumably freeze technology (vertical proliferation) and therefore prevent military escalation between the two blocs. However, a third aspect of the challenge involved conceiving non-testing as the path to elimination, since without testing nuclear weapons could gradually become obsolete – symbols of a past era of Cold War competition but not functionally viable. In this vision, non-testing was larger than the testing problem itself and the formula for handling it would be a circumvention of the inability to achieve total banning frontally and would be primarily aimed at the privileged status of the Nuclear Five by destroying their protection. The idea was captured in the then-current slogan, “Ban the bang to ban the bomb.” The evolution of this triple formula for expanding the nuclear weapons regime through a building block devoted to banning testing is explored in Chapter 2.

India was the first to call for a ban on testing in 1954, under all three principles, although it later rejected the NPT because of the treaty’s implied protection of the special status of the NWS (and because it was doing some proliferation of its own). Efforts to pursue the goal kept the third principle alive by reference to the ultimate goal of nuclear disarmament in the preambles of the various mandates, but the main formula aimed to arrest Cold War arms escalation. When CTBT negotiations failed, the only attainable goal was a half-step in the Limited Test Ban Treaty (LTBT) of 1963, which prohibits nuclear tests only in the atmosphere, outer space, and under water, where only the NWS were likely to venture. But the two superpowers (with the UK) also pursued partial testing limitations at the same time, in the Threshold Test Ban Treaty (TTBT) and the Peaceful Nuclear Explosions Treaty (PNET),

which limit the yields of nuclear explosions for weapons and for peaceful purposes, respectively, to a maximum of 150 kilotons, both confirming and constraining their privileged status.

The same triple formula – obviate NNWS proliferation, reduce the NWS arms race, and aim at eventual total elimination – guided the organizational efforts of the UN General Assembly. The NPT injunction to address testing, the 1993 mandate of the CD, and the deadline of 1996 given the CD in 1995 for a complete text all served to put the issue of a comprehensive ban directly before the states to deal with under a revised triple formula – obviate further NWS proliferation, reduce environmental pollution, and contribute to eventual total elimination (the second item only implicit). However, when the negotiations within the CD Ad Hoc Committee finally began in 1994 under the explicit CD mandate, the understanding of the general guiding principles differed widely. The job of translating the general consensual mandate into operative terms that clarified these differences was a challenge that took two years of negotiations. The challenge was generally met by provisions leaning to one side or another of the differing interpretations with a passing nod to the differing position, but in some cases was handled by further generalities, contradictions, and split-the-difference compromises. As in any multilateral regime negotiations, it was these decisions and obfuscations that in the end allowed for a consensus on a final text of the Comprehensive Test Ban Treaty.

This evolution is presented from several angles in the first six chapters of this volume. The larger historical picture of international efforts to pursue arms control and especially to create a nuclear non-proliferation regime is treated in the opening chapter by Pierce Corden. The core issue of intrusive inspections that stood as the major obstacle during these efforts and was finally overcome as a basic principle of the 1990s CTBT negotiations is analyzed by P. Terrence Hopmann; he refers especially to the demand for a 100 percent detection requirement within the US debate raised by opponents of the CTBT. Ambassador Jaap Ramaker provides a first-hand view of the actual negotiations he led in the CD in Geneva during 1995–6 from the position of the chair, placing the process within the typical mechanisms of a multilateral negotiation that produced an approved treaty text. Fen Osler Hampson and Rebecca Johnson explore the impact of the wide variety of participants at the domestic and international levels who are becoming actors in international negotiation processes. Hampson situates the regime-building process within the context of actors outside the formal organizations of government in his analysis of the earlier case of the Limited Test Ban Treaty; Johnson discusses the role of civil society in disarmament and security processes through the participation of non-governmental

organizations (NGOs). As a step in the process of building a nuclear arms control – and elimination – regime, the CTBT negotiations exemplify the way in which a formula for agreement is crafted out of a basic mandate but subjected to the concatenation of various national versions of the same theme, as analyzed by I. William Zartman and Julia Lendorfer.

However, the consensus was not all smooth. The largest issue returned to the deepest principle of the mandate: the relation between the abolition of testing nuclear weapons and the abolition of nuclear weapons themselves. This issue translated itself into various sub-formulas implicit in the shape of the new regime-building block. To the Big Five, the ban on testing respected their privileged position as NWS, not enabling their testing (unless “necessary” for security reasons) but barring testing by NCWS (India, Pakistan, Israel, and North Korea) and the NNWS of the rest of the world. Others were more equivocal on that interpretation. Most strongly, to India, it was a denial of the very principle and purpose behind the entire nuclear weapons regime, and so India refused to join the consensus and left the negotiations. With India out, so was Pakistan, feeling its own security to be threatened as long as India did not subscribe to a test ban, a feeling that was mutual. Other states, such as the Middle East triangle of Israel, Egypt, and Iran, with their own Cold War, were more concerned about their own security vis-à-vis each other than about general nuclear disarmament or NWS security, and of course North Korea was not interested in a test ban at all.

The three chapters that examine in greater detail the national versions in key countries relate their evolving positions to the general interpretation and implementation of the mandated principles. Chris McIntosh discusses the debate that engages US policymakers, explaining that in the case of the CTBT, norms and interests took on a bipolar relationship over (material) interests versus (ideational) norms. Fundamentally, the debate about the CTBT for theoreticians and policymakers is one of prediction – what would happen were the United States to ratify the treaty and what would the world look like? Alexey Fenenko analyzes the history of the Soviet and Russian positions on banning nuclear tests and the evolving internal debate in Russia about its feasibility and importance. Ulrika Möller analyzes the change of India from support to repudiation as it followed the dictates of both its ideational and its world power position.

Negotiating implementation of the test ban regime

The challenge of regime creation does not end with the successful negotiation of an agreement, as the basic concept of recursive negotiations indicates. The apparent paradox is that the functioning consensus

is not sufficient to enable the treaty to enter into force (EIF), despite enough agreement on the principles of the international regime to gain adoption and substantial ratification. As seen, passage of the treaty was achieved by decision, compromise, exclusion, deft chairing, and a parliamentary trick. The remaining loopholes in this process returned to haunt its final consummation. That is not abnormal in the regime-building process, and, as the recursive notion underscores, often require a return to negotiation to correct. Reopening negotiation is explicitly rejected in discussions by the parties on the CTBT situation, in part because the barriers to entry into force are neither small matters of adjustment that could be handled with some tinkering nor major confrontations that require either one side's capitulation or a salient intermediate solution. The problem may be seen rather as inherent to the nature of the regime itself as being beyond a perfect or fully satisfactory solution to its formulaic problems. Two approaches are open in that case: to confront the inherent challenge of negotiated regime-building on nuclear testing, or to move on to the next level to examine the negotiation challenges of specific implementation.

The core mechanism of the test ban contribution to the nuclear arms regime is the matter of verification, which has stalled attempts to ban testing since the 1950s, as the chapter by Hopmann shows in detail. It was long accepted that if it were not to be just a pious promise, a test ban would have to include inspections as the operational control over the prohibition and this was explicitly included in the CD mandate. But the issue that divided the parties involved the details of the principle on the intrusiveness of the verification procedures. NCWS and NNWS, concerned about their sovereignty and security and fearful of greater power attempts to penetrate their secrets, favored such weakening tactics such as difficult authorization procedures, strengthened multilateral authority and sources of information, and a protective role for the inspected state, against most of the NWS, who pushed for a strengthened requesting state role and a more intrusive inspection.

With this, the book turns to focus on the question of verification. One group of chapters addresses problems of the nature of regime-building around the issue of inspection. In an overview, Hein Haak looks back at the verification negotiations and then forward from the treaty negotiations to the question of its implementation through inspections. With a view to seeking ways and means to establish the authority of the treaty mechanism, Franz Cede examines the legal standing and operation of the present CTBT Organization, now functioning on a provisional basis to prepare for inspections and implement a treaty that has not yet been fully ratified, and therefore not yet entered into force. Beyond the external

constraints on treaty operation, internal decision obligations call for verification of compliance when in fact it is non-compliance that is being inspected, as Nicholas Kyriakopoulos points out. He questions whether a monitoring and verification system (which is a technical system) can be designed by negotiation (which is a political process), given the fact that a treaty developed through a political negotiation process results in a vague and sometimes ambiguous text which cannot support a technical verification regime requiring clear and accurate procedures. Also within the decision system of the verification regime are two types of possible error – false alarm in the case of compliance (error of the first type) and missed inspection in the case of non-compliance (error of the second type). Rudolf Avenhaus and Thomas Krieger present a quantitative analysis of the decision-making process in regard to the probability and consequences of error and formulate advice for the optimal decision-making for or against an inspection in case of a doubtful seismic event. For many reasons the situation is not clear regarding the relevant parameters (such as payoffs for involved states), and therefore further negotiations will take place in the Executive Council, given the interdependence of the parameters and functions determining the problem. At the most detailed level, an operational detection scheme for a trace item such as noble gas will have to be a tradeoff between the perceived neutrality of reporting and the ability of states lacking the possible complex analysis tools to obtain an independent analysis of the treaty's International Data Center measurement data. Martin Kalinowski and Simon Hebel present the specific example of a technical verification issue that requires political negotiation and the agreement of member states in the policymaking organs of the CTBTO Preparatory Commission (PrepCom). The optimal categorization scheme depends not only on technical but also on political considerations, the main issue being that the noble gas scheme would require an elaborate interpretation of the measurement data which might be seen as a judgment on the part of the Technical Secretariat (TS) and a contradiction of the CTBTO's task of reporting "without prejudice."

Beyond such issues at various levels of regime construction lie the new challenges to negotiation created by attempts to put the regime, when fully conceived and elaborated, into action. This involves the prospective application of verification missions. While the conditions for OSI are set out in detail in the treaty and its annexes, the conditions for access are unexplored and unspecified. An inspector and his team arriving at the door of the inspected state will have to talk their way in, from the position of a *demandeur*. Their duties are clear – to conduct an inspection – as are the sovereign rights of the inspected state, but the extent and *modus*

operandi of the inspectors' rights are nowhere specified. It is a perfect situation for negotiation, and a perfect example of the translation of the regime negotiations, occurring at the highest level, to the benthic level of operations.

The last group of chapters in this volume concerns this subject of OSI negotiations. There is no experience or precedent to cite or to learn from, and yet the inspections – rarely analyzed as negotiations – represent the place where the regime's "rubber hits the road." It works or it falls apart at this juncture. However, such asymmetrical situations are commonplace in negotiation and, while there is no "winning" behavior – as if there were in any negotiation encounter – there is equalizing behavior and positive-sum strategy from other such instances typical of the situation of the *demandeur* (Zartman and Rubin, 2000). Most broadly, the situation shows that the international regime is no more than a constraint, and not a control, over the actions of the sovereign states that compose it, just as the vulnerability of the regime itself to the individual state ratification decisions shows where final controls lie. The result lies at the point of departure in regime-building, in the negotiation process where mutually agreeable outcomes according to the power, interests, costs, and benefits of the parties meet in equilibrium. CTBTO OSI teams must negotiate their way at the point of entry into the state they are inspecting, to collect data that will establish clarity for the Executive Council to decide on compliance or non-compliance with the consensual norms the states parties have established.

Where that equilibrium lies and can be established, in the absence of real precedent, can be manipulated, studied, and taught through quite realistic simulations. Actual negotiation aspects during the conduct of an OSI are presented in the final group of chapters. Ariel Macaspac Penetrante describes experience on the two sides at the first meeting between an inspection team and an inspected state as occurred in the major OSI exercise conducted by the CTBTO in 2008, which, in the absence of consciously designed tactics by the inspectors, confirmed the asymmetrical situation; he recommends that the CTBTO explore strategies that would take the point-of-entry negotiations away from the level of rights and principles to concentrate more on the object level and common interests. Mordechai Melamud analyzes the need for negotiations, both inside the team between experts in the different scientific techniques used during the inspection as well as between the inspection team and the inspected state representative, underscoring the aspects of the situation and the encounter that create the unproductive asymmetry. The special modalities of the CTBTO OSI make negotiations the key to opening the point-of-entry door – more so than in other verification