

Stanton Nuclear Security Fellows Seminar

1. Robert Brown, BCSIA

Controlling the Absolute Weapon

Introduction

Of the nearly 200 states in the world, fewer than twenty-five have pursued and only nine countries today possess what Bernard Brodie (1946) termed the “absolute weapon.” How has international cooperation helped to keep so few from pursuing or acquiring nuclear weapons? National decisions to proliferate and international and national support for nonproliferation are all strategies designed to improve the security of states. The variability of institutions used to pursue nonproliferation, as well as cooperation in other issue areas, suggests we should pay more attention to how variation in design is caused by variation in the cooperation problem. How can states design cooperation in order to interfere and prevent the sometimes perverse incentive structure of the international system from resulting in disastrous outcomes: the unchecked proliferation of nuclear weapons to states and non-state actors. If most states believe they would be more secure if neither they nor their neighbors have nuclear weapons, how can they achieve this and avoid the unilateral pursuit of security that may leave them all worse off?

When the international community created the International Atomic Energy Agency (IAEA) in 1956, states embarked upon a new collective strategy by creating an international organization (IO) to help them control the proliferation of nuclear weapons. Though many dismiss IOs as generally ineffective, the international community gives the IAEA substantial and increasing autonomy and resources. This delegation has been crucial to the success of the nonproliferation regime, and yet we know little about the IAEA and its role in world politics. Why cooperate on nuclear nonproliferation by delegating to the IAEA? How and why did the IAEA evolve from a failed commitment device into a monitoring agency and, finally, into a nonproliferation verification and enforcement authority? “Controlling the Absolute Weapon” will explain how the IAEA emerged as an international political authority for nuclear issues after states conditionally transferred autonomy and resources to the IAEA.

Argument

How do we explain the rise of an international nuclear authority, the IAEA? My argument has two parts. First, the logic of nonproliferation through delegation argues that delegation facilitates cooperation amongst the principals because the agent offers economies of scale in policy implementation but, importantly, offers the advantages of greater commitment credibility, policy partiality, and behavioral detachment. Delegation occurs when an individual or collective principal transfers to an agent the resources and autonomy necessary to produce desirable outcomes. The second part of my argument explains the emergence of IAEA authority as the result of the continual demand for delegation as a solution to the problem of international nuclear issue cooperation and its successful supply by the IAEA.

This success is contingent not only on the rational design of the IO but also owes much to the specific choices of actors inside and outside the IO and possibly serendipitous exogenous events.

Methods

Observing the power or authority of international institutions to affect state behavior faces an inference problem. While it may be possible to observe the development of black-letter law as it relates to the nonproliferation regime, including the delegation of rights and responsibilities of the IAEA, other factors are only partially observable. For example, the size of the IAEA's budget and staff are mostly observable as indicators of its capacity, but these indicators may not be directly comparable to complementary or competitive efforts by states and other non-state actors. Many concepts, though, such as autonomy, nuclear norms, and authority have long resisted measurement despite their apparent importance, forcing scholars to rely on potentially tenuous analogies, plausibility probes, and indirect inference.

To make my argument, I trace the evolution of nuclear issues from before the IAEA's creation through to the present day. I demonstrate that the IAEA began as a failed nuclear supplier under US control and then became a competent nuclear monitor and provider of limited technical assistance before finally emerging after the Cold War as an international nuclear authority with some power to issue rules and commands with what its principals expect to comply. An extended historical treatment allows a rich exploration of how the IAEA as an agency changed over time: the importance of the relationship between the IAEA's political and bureaucratic organs, of key personalities along the way, and of political conflicts in the broader international environment.

Historical process tracing also helps illuminate the larger theoretical point about the origins of political authority by relying upon the case studies to trace the causal processes and tell a convincing story about how and why the IAEA evolves into a potent but also independent force in international politics. The data derives from archival research of government and IO documents, open-source data on national nuclear energy and weapons programs, and secondary histories of the nonproliferation regime. The story also exploits dozens of interviews over the past decade with former and current officials of various national governments and a number of IOs, including the IAEA, the United Nations, the Comprehensive Test Ban Treaty Organization, and the Organization for the Prohibition of Chemical Weapons.

Structure of the Book

The body of the book is divided into eight chapters. Chapter 1 introduces both the puzzle of international political authority and my answer for its emergence. Chapter 2 offers a primer on the IAEA and a description of how it fits into the nuclear nonproliferation regime. This discussion of its formal structure and growth is important to understand how it does what it does but also because the initial design features planted the Agency on a path that is incrementally modified over time to produce the agent we observe today. Chapter 3 develops more fully the argument behind the emergence of the IAEA as an international nuclear authority.

Chapter 4 examines the international system into which the Agency was born: The Cold War search for strategic stability and the threat from the proliferation of key actors, aided by advancing international anti-nuclear norms, drives superpower cooperation. The IAEA is created as an agent of Western supplier

states, led and dominated by the United States, to promote the peaceful and safe uses of scarce nuclear materials.

Chapter 5 turns to the Agency's transition from failed nuclear supplier to a technically competent monitor of declared nuclear programs. This story begins with the demand for new delegation, the debate of the Agency's ability to fulfill this demand, and how the Agency develops as a competent provider of safeguards on declared programs and a range of limited forms of nuclear assistance, but not in guaranteeing nuclear safety or responding to nuclear accidents. The expansion over time of the IAEA is a response to functionalist demands for economies of scale as it provides monitoring and other services to their state masters. However, the IAEA also reflects sociological norms of procedural internationalism where legitimate international implementation requires an international civil service.

Chapter 6 examines in detail how the Agency as a technical body is challenged in the late 1980s (Chernobyl) and early 1990s (Iraq), and how it responds to those challenges. The IAEA could have faded away with its reason for existence fundamentally challenged but instead deployed its expertise and agenda-setting power towards proactive involvement in nuclear issues. The legal foundations of safeguards were modified to accommodate a shift from verifying non-diversion to verifying the absence of undeclared nuclear activities.

Chapter 7 examines how the IAEA staff and management, though still directed by its Board of Governors on behalf of the international community, have acquired authority over international nonproliferation issues. The IAEA effectively asserts authority in the international nuclear nonproliferation regime that extends from verifying compliance with rules of behavior that it wrote into enforcing compliance with those rules. This authority, I argue, has grown over the decades, giving the IAEA greater control over the agenda, the right to sit in judgment, and potentially the power to enforce on international nonproliferation. The emergence of IAEA authority also includes the transformation of the IAEA Board of Governors into an international forum for disparate interests to coordinate and compete on nuclear issues. The IAEA's handling of the 2011 Fukushima nuclear accident under its new Director General, Yukiya Amano, suggests we would be wrong to interpret IO authority as inexorable and must remember the contingency of all political authority.

Chapter 8 concludes the book. It begins by reviewing the analytic foundation of the book and the empirical conclusions: The IAEA offers economies of scale in monitoring and as a forum for negotiations among countries over new nonproliferation rules but is politically significant as an *actor* with the autonomy and capacity to act independently of its state principals. The continual demand for these services transforms the IAEA over time from a weak, replaceable agent into an international political authority for nuclear issues. This chapter also reviews the policy implications of the findings.

Policy Implications

Two implications directly concern the IAEA and its role in international nuclear issues. First, its design and structure must evolve if it is to remain effective in verifying compliance with the NPT within a polarizing international environment. Second, enforcement of the nonproliferation regime's norms and rules will increasingly be doubted, more than it already is, as polarization paralyzes consensus. This

suggests the international community must explore new enforcement mechanisms to overcome rising barriers to cooperation.

Three implications apply to international politics more generally. First, international institutions do not just exist in the world but must be created by specific actors to accomplish specific goals and are costly to change. Institutional design is important to the institution's ability to bias outcomes in favor of these goals. Second, once IOs are created, they become actors in their own right with autonomy, authority, and legitimacy to intervene in world politics, though they vary in these qualities just as states are more or less sovereign. The design of the agent – how its autonomy and capacity is constructed – is central to its ability to produce the cooperation desired by its principals. IOs are constructed when cooperation is necessary but other forms of cooperation are insufficiently effective at producing the desired outcomes. Third, the proliferation of an array of global problems that defy easy solution, including but not limited to nuclear proliferation, calls into question an international system predicted upon the freedom of states from accountability – sovereignty – in these issue areas. The agency of IOs offers solutions but also challenges for their state principals and indirectly the citizens of these states.

Target Audience

There are two target audiences for this book. First, this book is directly communicating with academics interested in international cooperation, the design of international institutions, and the structure of political authority and sovereignty. Second, this book will be directly relevant to those with a policy interest in nuclear issues seeking to understand the history and future of the International Atomic Energy Agency.

2. Dane Swango, RAND

Targeting States: Institutional Design and the Creation of the Nuclear Nonproliferation Treaty

Project Description

Has the Nuclear Nonproliferation Treaty (NPT) limited the number of states that possess nuclear weapons? Much of the arms control and nonproliferation policy community thinks so. But less sanguine views of the NPT also exist. NPT skeptics assert that the NPT doesn't have much effect on proliferation, because states that desire nuclear weapons either don't join the treaty, or leave when their weapons programs are sufficiently developed. And a small group of analysts argue the NPT actually contributes to proliferation by facilitating the dissemination of nuclear material, equipment, and knowledge.

A starting point for resolving these competing claims is to examine the origins of the treaty and the factors that shaped its design. The research project I propose, "Targeting States: Institutional Design and the Creation of the Nuclear Nonproliferation Treaty," is a book project that uses hundreds of little known archival documents from the 1960s to reexamine the negotiation of the treaty. The evidence I bring to light significantly revises our understanding of the NPT, and has important implications for contemporary policy efforts to strengthen the NPT system.

Basic Argument

Conventional wisdom is that the United States and the Soviet Union created the NPT to deal with the emerging possibility of proliferation by a number of countries across the globe, as nuclear technology, materials, and know how spread. But the declassified record shows the superpowers did not negotiate the treaty to prevent proliferation by a number of states. Instead, the primary reason they created the NPT was to prevent West Germany from developing nuclear weapons.

Because the superpowers had narrow objectives in creating a nonproliferation accord, they were not particularly concerned with the problem of incentivizing widespread adherence, and designed a treaty that did little to achieve broad participation. Security guarantees for nonnuclear weapons states were dealt with by a Security Council resolution, rather than as part of the NPT, because doing so wouldn't obligate either superpower to provide assistance to a country being threatened with nuclear attack. The provision on nuclear disarmament (Article VI) was left vague, described by one American official as "an essentially hortatory statement." And peaceful nuclear assistance (Article IV) was not restricted to NPT parties, because neither superpower wanted to inhibit their diplomatic flexibility.

Policy Implications

A better understanding of the forces and concerns leading to the creation of the NPT provides insights useful for contemporary policy debates. My argument highlights the importance security alliances played in the development of the nonproliferation system, a point which is underappreciated in most policy debates. Understanding the impetus for the NPT also contributes to contemporary efforts to design more effective nonproliferation tools. Knowing that the principal architects of the treaty did not believe nuclear cooperation was an unqualified right is useful in building support for efforts to limit the spread of enrichment and reprocessing facilities, and reinforces the case for restricting Iran's access to

sensitive nuclear technologies. And the fact that disarmament played a peripheral role in the negotiation of the treaty forces advocates to more clearly articulate the rationale for nuclear disarmament. Without a basic theoretical and empirical understanding of the creation of the treaty, trying to strengthen the NPT regime will be a frustrating, error prone process.

Target Audience

My book has three audiences. The first is academic political scientists that focus on institutional design, international law, and international security. The second is academic historians that specialize in nuclear history, U.S.-Soviet relations in the 1960s, and NATO in the 1960s. The third is policy analysts and (hopefully) policymakers in the United States government that work on nonproliferation.

3. Wilfred Wan, BCSIA

Through the Lens of Institutional Theory: Change and the Nuclear Non-Proliferation Regime

President Obama spoke of the critical role that the Nuclear Non-Proliferation Treaty plays in establishing a world free of nuclear weapons. Hans Blix has similarly referred to it as the central instrument for global disarmament. When policymakers examine the breadth of nuclear issues – including Iran and North Korea’s programs, instability in the Middle East and South Asia, and the threat of nuclear terrorism – they often refer to both the centrality of the treaty and the need for change in the NPT regime. But is this misplaced faith in an overwhelmed entity? Does the NPT regime have the capacity to adapt to evolving challenges and emerging threats?

Over the course of my academic career, I have developed an interest in the nature of international institutions – their contributions to the global order, their relationships with states and state actors, and their sources of autonomy. The promises, limitations, and contradictions of security institutions in particular are well represented in the NPT regime. It is counterintuitive that one of the most prominent and widespread legal arrangements at the international level centers on a fundamental security issue such as nuclear weapons. Beyond its durability, moreover, it appears – at first glance – as though signatories have been willing to alter the regime in accordance with relevant challenges: with the expansion of the safeguards system, the indefinite extension of the treaty itself, and the general process of institutionalization. But how can we reconcile this with the fact that the problems the regime faces today are ones it has seemingly failed to address time and time again (including material diversion, safeguards implementation, and testing)? My project analyzes the character of the NPT regime’s evolution. What have been the limits of its adaptability to date, and what does that suggest about its future?

I break the case study of the NPT regime into two empirical phases. First, I begin with an examination of particular substantive topics under its jurisdiction, including 1) IAEA safeguards; 2) regional activity; 3) nuclear explosions and testing; and 4) nuclear disarmament. I trace the types, sources, and patterns of change that have occurred in each, while taking note of attempted change and stasis as well. Second, I provide a segmented study of the totality of the NPT regime, in five-year periods. This periodization of regime ‘life-cycles’ allows me to consider whether the character of change itself has evolved, to examine how regime components have interacted under different systemic circumstances, and to place the current status of the regime in proper context. One focal point is the interaction between the various issues that fall into the umbrella of the NPT regime – in effect, highlighting whether, how, and why the focus of the institution has shifted over the course of its life. As a result, I discuss topics not included in the first section (including, for instance, export controls and treaty withdrawal), as well as topics that pertain to the regime’s operation (review processes, budgetary aspects, etc.).

I draw upon a spectrum of primary and secondary sources in this project. To start, I turn to the content of the five-year NPT Review Conferences (in the form of Final Documents and Main Committee reports). They present the formal and regularly timed framework for change to the treaty itself, and thereby the

most prominent opportunity and stage for change to the entire regime. Working papers, statements, and reports reveal more about the environmental conditions at large, as well as the failed (or diluted) attempts at change. Reports from research institutes, some of which are NGO participants, and individuals, found in *The Nonproliferation Review*, the *IAEA Bulletin*, and other such publications, present points of comparison in interpretation, while offering invaluable contemporary narratives. Beyond archival research and a survey of existing literature, I also place emphasis on first-hand accounts – in the form of biographies, retellings, or existing interviews. To supplement these, I conduct personal interviews with a number of nuclear experts, deriving subjects from two major populations. The first includes regime participants; the second consists of regime scholars. While the individual's expertise and experience dictates the content of the interviews, I generally ask each subject to relate their a) sense of pressing challenges in their issue-area, b) impression of institutional dynamics over time, and c) assessment of the regime. The main purpose of all interviews is to add to the host of perspectives that piece together the character of change in the NPT regime, across issue-areas and life cycles. First-hand accounts, after all, can reveal a subtext that may not be so explicit in sources such as correspondence, logs, and statements.

I believe that my project will contribute to a better understanding of the nature of the NPT regime. There appears to be a general attitude that the NPT regime is imperfect, but it remains the only option: that the NPT must remain at the core of any successful global nuclear non-proliferation campaign. By examining the nature and limitations of its adaptability, as well as its overall direction, I hope to add to the conversation. Perhaps the inflexibility of the treaty ensures the rigidity of the regime, and a more viable option to accomplishing non-proliferation and disarmament goals is a smattering of short-term regional arrangements with greater capacity for enforcement. Perhaps the regime's responsiveness varies among its different jurisdictions, and alternative forums are not only necessary, but to be encouraged depending on the issue (as exemplified in the current debate over negotiations for the *Fissile Missile Cut-Off Treaty*). Or, perhaps the processes of the past – in terms of the role of states, the threshold required for action, and the sources of innovation – can provide a sense of how policymakers can ensure both its survival and effectiveness. This project is thus aimed at individuals who work with and study the NPT regime, especially those who consider its capacity for evolution, as well as those who focus on the temporal component. In addition, it is meant for scholars who analyze the nature and role of international security institutions in the world more broadly, and those who examine variables of change within them.

My null hypothesis is that the NPT regime has experienced a conservative path of change to date. Its responsiveness has come only as a result of specific instances of operational failure. Its apparent adaptability is thus severely limited: the NPT regime has experienced change borne out of necessity, not by innovation or choice. The issue of IAEA safeguards should mark the domain where both proposed and actual change has been most pronounced. It is most directly connected to the regime's primary goals of information exchange and transparency, and relatively speaking (compared to disarmament action, regional commitments, and explosions and testing), that which requires the least surrendering of state sovereignty. I also suggest that the 'least common denominator' character of the NPT regime explains its longevity to date. Any departure from its innocuous character – and subsequent expectations or

obligations for regime actors (especially the Nuclear Weapons States) – ultimately presents the most striking challenges to its persistence. Given these limitations, the NPT regime’s reactive orientation provides a severe disadvantage in a rapidly changing environment. Its struggles since the end of the Cold War demonstrate this, and the coherence of the regime will be under serious threat in the near future.