

# Improving the Efficacy of Arms Control: From Risk Reduction to Uncertainty Management

By

Amy Joy Nelson

A dissertation submitted in partial satisfaction of  
the requirements for the degree of  
Doctor of Philosophy  
in  
Political Science  
in the  
Graduate Division of the University of California, Berkeley

Committee in charge:

Professor Steve Weber, Chair  
Professor Robert Jervis (Columbia University)  
Professor Laura Stoker  
Professor Mark Bevir  
Professor Lara Buchak

Fall 2013



## ABSTRACT

### Improving the Efficacy of Arms Control: From Risk Reduction to Uncertainty Management

by

Amy Joy Nelson

Doctor of Philosophy in Political Science

University of California, Berkeley

Professor Steve Weber, Chair

My dissertation research addresses a role for decision-making theory in international politics. Specifically, It examines the effect of uncertainty—as distinct from risk—on the negotiation of arms control agreements. This work is driven by the following paradox and foreign policy impediment: current best practices for arms control negotiations recommend strategies for risk reduction, including limiting the scope, scale, and duration of agreements, but these strategies are inconsistent with the overarching goals of arms control, which include the pursuit of long-term peace and stability. When goals and strategies for arms control negotiations instead provide effective “uncertainty management,” we get broader and more durable agreements.

This project is also motivated by the fact that we have little empirical information on the efficacy of arms control agreements in general, and none that speak to the optimization of these agreements in order to meet long-term security goals. My research aims to fill that gap so we can best consider the most effective role for arms control.

Drawing on case studies of successful and unsuccessful nuclear and conventional arms control negotiations and a novel dataset consisting of 43 bilateral and multilateral negotiations and agreements, my findings suggest that current arms control practices tend to fail not for lack of ambition; they fail because the more modest goals which allow agreements to be reached more quickly and easily result in an efficiency that comes at a price. The durability of arms control agreements is better facilitated by including a wide range of treaty terms, including confidence and security building measures (CSBMs) that work in concert to manage multiple sources of uncertainty over time. This means that if we want negotiations to succeed and agreements to survive, we need to strike a better balance between long- and short-term goals. It may also mean that we need to scale back expectations for what can be achieved in the short-term and develop new ways of extending what are thought of as “insignificant” achievements, like CSBMs.

# Improving the Efficacy of Arms Control: From Risk Reduction to Uncertainty Management

---

## Table of Contents

**Acknowledgements.....iv**

**Chapter 1 - Introduction.....p. 1**

Chapter One presents the puzzles addressed in this dissertation and summarizes its main argument: that uncertainty management produces more effective arms control negotiations and agreements than risk reduction, despite the fact that risk-based approaches have gotten more traction across the literature and in the policy space. This chapter also introduces the framework, approach, theory, and methodology employed in the project and summarizes the remaining chapters.

**Chapter 2 - From Risk Reduction to Uncertainty Management.....p. 7**

Chapter Two proposes a new approach to the study of state-level decision-making under conditions of missing information based on behavioral responses to uncertainty with particular emphasis on the "security-specific" nature of analogous behaviors evident in arms control situations. The chapter discusses why prior theories and approaches predicated on risk are inadequate for these purposes, largely because they consist of the use of decision-making shortcuts and heuristics that are not necessarily conducive to producing durable agreements. This chapter also addresses the theoretical, methodological and empirical shortcomings that result when risk-based approaches are used in the analysis of state behavior and the crafting of arms control theory.

**Chapter 3 - The Mutual and Balance Force Reductions Talks.....p. 24**

This chapter applies the uncertainty-based theory and framework to the study of the Mutual and Balanced Force Reduction (MBFR) Talks, which consisted of multilateral negotiations focused on countering the threat of a surprise conventional attack in Europe at the height of the Cold War. The chapter investigates the causes of excessively long duration of the talks as well as the failure to reach an agreement. A lack of both high-level interest and perceived threat, as well an inability of tabled proposals to counter any perceived threat in a meaningful way are found to be causes of both. Additional findings are put forward for further empirical testing.

Mutual and Balanced Force Reductions Talks Timeline.....p. 54

**Chapter 4 - The Conventional Forces in Europe Treaty.....p. 58**

This chapter explores the follow-on talks to MBFR—the successful Conventional Forces in Europe (CFE) Treaty Talks. Analysis leads to the conclusions that the enduring success of the CFE treaty, defined by its robustness and durability, is owed to the agreement's intrusive confidence- and security- building measures (CSBMs), which have provided long-term uncertainty management despite broad-scale geopolitical changes in the region and technological changes that affected the efficacy of existing weapons. The chapter discusses how these factors, recent withdrawals and responses of countermeasures both speak to the robustness of the agreement and raise questions about the Treaty's future utility.

Conventional Forces in Europe Treaty Timeline.....p. 76

**Chapter 5 - The Strategic Arms Limitation Talks.....p. 79**

This chapter applies the proposed framework and approach to the study of a successful bilateral nuclear arms control negotiations between the U.S. and the Soviet Union—the first Strategic Arms Limitation Talks (SALT I). Analysis of these negotiations reveals the use of scenario-planning and security-specific heuristics under conditions of uncertainty from multiple sources. The ability to reach an agreement under high-uncertainty conditions is attributed to the use of such risk-reduction strategies is attributed to the relatively limited scope and duration of the agreement, both of which are associated with risk reduction. Likewise, the lack of durability of the agreement is attributed to the Treaty's short-term benefits.

Strategic Arms Limitation Talks I Timeline.....p. 110

**Chapter 6 - The Reykjavik Summit.....p. 115**

This chapter focuses on the two days of discussions that took place at the, where U.S. President Ronald Reagan and USSR General Secretary Mikhail Gorbachev exchanged extreme proposals to eliminate whole categories of nuclear weapons, largely motivated by fears inspired by "doomsday" scenarios. It suggests a failure to reach an agreement was caused by the unmanaged threat of the U.S. strategic defense initiative (SDI), lingering Cold War suspicions and a difference in the scope and scale of a potential agreement pursued by each side.

The Reykjavik Summit Timeline.....p. 139

**Chapter 7 - Data and Analysis.....p. 141**

This chapter presents the newly assembled dataset of 42 successful and unsuccessful bilateral and multilateral arms control negotiations and resulting agreements from 1945 to 2010. It describes the novel features of the dataset—in particular the inclusion of variables that code for factors associated with risk and uncertainty. The chapter also discusses findings pertaining to the ability to reach an agreement, the conditions under which certain types of agreements are reached, and the durability of agreements.

**Chapter 8 - Conclusion.....p. 173**

This chapter summarizes how best the concepts of uncertainty management and risk reduction may be applied to contemporary arms control and security issues, and lists the issues raised by the analysis here. Some conclusions are drawn regarding the following questions: How do we measure the success of arms control agreements? What constitutes best practices for arms control? How do we reconcile recommendations for risk reduction that limit the scope and scale of potential agreements with long-term uncertainty-management goals of stability and peace?

**References.....p. 180**

**Bibliography.....p. 192**

**Appendices**

**Appendix A: Alphabetical List of Arms Control Negotiations and Agreements in Dataset.....p. 202**

**Appendix B: Codesheet Part I.....p. 207**

**Appendix C: Codesheet Part II.....p. 229**

# Acknowledgements

---

This material is based upon work supported by the Department of Energy National Nuclear Security Administration under Award Number(s) DE-NA0000979.<sup>1</sup> I am also indebted to the Institute of Global Conflict and Cooperation, which bestowed upon me not one but two years' worth of fellowship funding, and the Marshall Foundation, which supported my research and work with the U.S. Department of State in Vienna.

I am thankful to SIPRI North America and the Stimson Center, which gave me an institutional home in D.C., a place to write, and colleagues with whom to exchange ideas. In particular, I thank Dr. Barry Blechman and Ellen Laipson at the Stimson Center and Dr. Chantal de Jonge Oudraat at SIPRI North America, for facilitating this for me. I am especially grateful to Chantal for really making it all happen and for being a constant source of support—to me and for this project—throughout the past year. And thanks also to Dr. Terrence Hopmann at the Johns Hopkins School of Advanced International Studies for giving me academic roots here in D.C.

"Gratitude" would not fully describe what is owed to Christopher Ellis at the U.S. Department of State, who plucked my application from the pile and plunged me neck-deep into the work of arms control diplomacy in the heart of Vienna. This experience changed the trajectory of my research, reshaped my dissertation, and likely altered the course of my life—all of which is to say nothing of the countless hours he stood in my office, or I in his, so that he could regale me with anecdotes of days of arms control's past and pearls of wisdom on arms control's future. This project is all the better for it. Chris's unwavering confidence in me and my work carried me through some of the darkest dissertation moments.

My deepest thanks also go to Dr. Richard Cincotta, Demographer in Residence at the Stimson Center, who spent way too much of his own time on my project and always seemed happy to do so. I remain in awe of his ability to get his head around data that had nothing to do with demography and to advise me on the best way to really get out of the data what my questions sought, all while making it look so easy.

I am deeply appreciative of my dissertation committee, and of the time they have spent and efforts they have made on my behalf over the course of my graduate studies. Thanks to Dr. Steve Weber, who never let me go so far into theory that I lost sight of the policy relevance of what I was doing; to Dr. Laura Stoker, who always pushed me to think clearly and to write precisely; to Dr. Mark Bevir, who never questioned the theoretical relevance of my

---

<sup>1</sup> This document was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

work; to Dr. Lara Buchak, who kept me from sliding too far into decision-theory jargon; and, last but not least, to Dr. Robert Jervis, who was willing to add to his already enormous workload by taking on yet another Ph.D. student, one not at his home institution. I am grateful for Bob's extraordinary wisdom on and insight into all matters at the intersection of international relations theory, psychology and arms control.

My heartfelt thanks go to the army of Berkeley undergraduates and SIPRI North America interns, who doggedly coded cases, meticulously proofread documents, ungrudgingly did library runs, and completed umpteen other sundry research tasks. Thanks, in particular, to Berkeley student Shannon Dick, who worked on this project for over a year-and-a-half and coded more cases than anyone. I am especially thankful to my SIPRI North America intern Caroline Larsson, who attached herself to my side in the final weeks of this project and simply would not stop working on it. And thanks also go to Danna O'Rourke, whose proofreading prowess is unparalleled.

I am also grateful to Masha Keller at SIPRI North America, who freely gave of her interns' time and her own by sitting through practice talks, and reading proposals and drafts. I am also appreciative of and humbled by my Stimson colleagues, who combine policy expertise and analytical thinking with impressive aplomb.

I would be nowhere without my family. My love and gratitude go to my sister and brother-in-law, Jill and Daniel Golub, for their unyielding support and babysitting when I needed it most; to Jill, in particular, for 7 years of pep talks and motivational speeches, but also for her compassion and love. Thanks also to my brother, Samuel Nelson, for his camaraderie in studenthood and parenthood. Love and the deepest appreciation possible got to my parents, Anne and Roy Nelson. Even though they may not have understood why anyone would put herself through the painful and impoverishing process of getting a Ph.D., they were always supportive. I am deeply grateful for their confidence in my abilities, but also for the emergency funds, conference travel funds, computer funds...all kinds of funds, really, that they gave so willingly throughout the past seven years.

And last, but not least, to my sweet family, Christopher and Isadora Romer. We did this together. There are no words to describe the depth of my love for you or my gratitude for your sacrifices.

August 14, 2013  
Washington, D.C.

# Improving the Efficacy of Arms Control: From Risk Reduction to Uncertainty Management

---

## Chapter 1: Introduction

The 2012 reelection of President Barack Obama reinvigorated the arms control community. High on the Administration's agenda has been a set of New START follow-on reductions, the ratification of the Comprehensive Test Ban Treaty, and the implementation of the Nuclear Posture Review (NPR) to reduce U.S. nuclear forces. However, as parties and experts position themselves and put forward targets of numbers and thresholds for further reductions to nuclear arsenals, little attention is being paid to how any potential agreement can best manage uncertainty about security in the long run, or to the effect that uncertainty has on the negotiation of these agreements. In order to establish goals for arms control that are conducive to achieving long-term peace and stability, we need to look beyond sweeping mantras associated with the elimination of nuclear weapons, set aside frameworks established by prior agreements, and abandon directives dictated by "what we think we can get." We need to rethink the way we establish goals for arms control by aiming to strike a better balance between goals that facilitate reaching an agreement and those that contribute to crafting durable agreements. We should also begin to redefine success in arms control with a broader focus: as the ability to reach an agreement that can stand the test of time because it effectively manages uncertainty from multiple sources in the long run.

Moreover, while efforts at arms control theory and approaches to arms control policy have been thoughtful and rigorous, to date we have had no systematic inventory of why and how arms control treaties fail or succeed: we have little empirical information about what makes an arms control agreement successful, nor any framework for evaluating the overall efficacy of these agreements. In order to provide recommendations for best practices in disarmament, we need both. Providing these data points is a fundamental goal of this project. Further, arms control negotiations are wrought with uncertainty caused by missing information. Often, when states are missing information about the capabilities and intentions of rival states, they pursue negotiations to craft cooperative agreements that augment their own security. Arms control negotiations, therefore, function as the deliberate effort to manage uncertainty about state security. As such, while all negotiations must deal with uncertainty, managing the effects uncertainty is a particularly tricky task for arms control negotiations. Consequently, before data can be useful in the task of informing best practices for arms control, we need a rigorous conceptualization of the role and relevance of "risk" and "uncertainty" in arms control negotiations.

Arms control negotiations are often laden with uncertainty about security in particular, which comes from a multitude of sources. The process of negotiating arms control agreements is affected by this uncertainty. This dissertation therefore examines both the effect of uncertainty—as distinct from risk—on the negotiation of arms control agreements, and the ability of negotiated agreements to manage uncertainty regarding security over

time. I argue that current best practices for arms control negotiations offer expedient negotiation strategies that facilitate reaching an agreement while promoting “risk reduction” through the limitations on weapons as well as the scope, scale, and duration of agreements. These strategies, however, are inconsistent with the overarching goals of arms control—long-term peace and stability. When goals and strategies for arms control negotiations instead provide effective “uncertainty management,” we get broader and, perhaps more critically, increasingly durable agreements, often loaded with confidence- and security-building measures (CSBMs).

Chapter Two, the theory and literature review chapter, discusses the role of uncertainty in arms control and establishes an appropriate framework for the analysis of the effects and management of uncertainty in these specific kinds of security situations. The chapter lays out the unique shortcomings in the process that policy-makers and negotiators use to establish goals for arms control agreements, which result from uncertainty about security. It discusses why we would expect to find decision-making shortcuts so prevalent in these high-complexity situations in which uncertainty about security also runs high. By drawing on insights into how individuals make decisions in comparable situations, it explains how decision-makers and negotiators use “security-specific heuristics” to anticipate the outcomes of a potential conflict when establishing goals for arms control negotiations. The use of these heuristics—which include worst-case scenario thinking, limited theater of war thinking and low-dimension scenario thinking—results in codifying potential outcomes as risks (which have a precise estimated probability). As a result, decision-makers and negotiators seek to establish goals for arms control aimed at lowering these risks—or the probability of potential losses. They then employ risk reduction and threat elimination strategies to set targets for arms control agreements, which are expected to lower the overall likelihood of security-related losses. These risk reduction strategies include setting thresholds for weapons, eliminating whole categories of weapons, establishing verification regimes to reduce the risk of defection, and limiting the scope, scale and duration of agreements. Although it might seem like the use of these strategies is effective because they both limit the likelihood of potential losses and increase the likelihood of reaching an agreement, the paradox is that it is too shortsighted and produces suboptimal outcomes. These goals and strategies are not conducive to achieving peace and stability in the long run as they do not result in durable long-term agreements. Finally, the chapter discusses how an emphasis on uncertainty, rather than risk, benefits the goals we set for arms control negotiations by expanding the scope, scale and duration of agreements and including provisions for greater transparency.

This theory and framework are then applied to the in-depth analysis of cases of arms control negotiations as well as quantitative analysis of data from 42 arms control negotiations (43 agreements). Using a structured, focused comparison, chapters three through six first examine cases of successful and unsuccessful conventional arms control negotiations, including the Mutual and Balanced Force Reduction Talks (unsuccessful) and the Conventional Forces in Europe Treaty (successful), as well as nuclear arms control negotiations, including the first Strategic Arms Limitation Treaty talks (successful) and the Reykjavik Summit (unsuccessful). Each of these chapters first present background information including: the historical backdrop and context of the talks, the security goals

and main positions taken by each negotiating state party, the course and scope of the negotiations, and key substantive issues, such as the perceived parity of holdings (weapons), and major roadblocks encountered during the process. The chapters also include evaluations of five hypotheses relative to the substantive material of the negotiations and, where applicable, the resulting agreements.

The first of these negotiations, the Mutual and Balanced Force Reduction (MBFR) Talks, is addressed in Chapter 3. One of the longest-running negotiations in arms control history, the MBFR talks ended fruitlessly in 1989 after nearly 16 years (although both sides ceased to exchange meaningful proposals as of 1986). The talks were initially convened to diffuse the standoff between NATO and Warsaw Pact forces along the intra-German border. The chapter highlights factors contributing to the inability to reach an agreement during this protracted period, including the bloc-to-bloc format of the talks, which slowed the pace of the exchange of the proposals; the infamous "data dispute" stemming from the Soviet inability to adequately count (or account for) their forces; the wildly oscillating scope of the substance and disjointed narrative of the negotiations, which at times included proposals on everything from personnel, tanks, nuclear warheads, nuclear delivery vehicles, and CSBMs; and differing perceptions of the threat faced and the definition of military stability. Although both sides ultimately made considerable concessions to reach common ground, the resulting proposals were utterly meaningless with respect to the threat of a surprise conventional attack. Moreover, with the exception of the one (briefly tabled) nuclear proposal, none of the proposals could adequately manage the threat of escalation from conventional to nuclear conflict. The chapter thus advances the argument that the two sides failed to reach an agreement because the proposals exchanged did not contribute meaningfully to effective uncertainty management—an agreement based on these proposals was ultimately insufficient for producing the "feeling of security" that both sides desired because the scope was too narrow and the security landscape too complex. Moreover, high suspicion manifest in the data dispute and "environmental uncertainty" resulting from engagement in external military conflicts exacerbated this problem.

Chapter 4 discusses the follow-on negotiations to MBFR—the Conventional Forces in Europe (CFE) Treaty talks, which were successfully concluded in record time (less than two years) in 1990. Although the talks began immediately after the failed MBFR talks, they took place in the new post-Soviet security climate with a ready, willing and able Gorbachev now at the helm of the Soviet Union. Like the MBFR talks, the CFE talks also focused on finding common ground on the reduction of conventional armaments that could be used to launch a surprise attack. The negotiations produced what is arguably the broadest, most durable arms control treaty in history, and a regime ultimately consisting of multiple agreements that included extensive CSBMs. What is so significant about the agreement, therefore, is not the fact that the CFE treaty successfully established limitations on five categories of conventional land-based weapons, but that the legally binding treaty also specified conditions for the detailed exchange of data on force structures, and established a tribunal (the Joint Consultative Group) for the resolution of disputes and modernization of the agreement and regular review conferences. The treaty is complemented by the politically binding Vienna Document (VDoc), which was devised during simultaneous negotiations that also ended 1990, which established monitoring provisions comprised of a set of quotas

for on-site inspections to ensure compliance with the CFE Treaty provisions. The chapter highlights the unique ability of the CFE Treaty regime to provide unparalleled uncertainty management because of the transparency it affords and its ability to be modernized and adapted by means of Joint Consultative Group and review conferences. It also addresses the change in significance of the threat that the agreement was designed to temper—by 1990 the security environment was significantly altered and the likelihood of East-West tension erupting in a conventional conflict was particularly low. As a result, there was less disconnect between the proposals exchanged and the belief that they would actually help avoid a conflict, as it had been during MBFR talks. The chapter then discusses how concurrent negotiations further contributed to a feeling of security. Namely, the removal of nuclear weapons from Europe during the late 1980s as a product of the INF Treaty helped alleviate concerns of escalation from a conventional to a nuclear conflict. All of this explains how the treaty has endured given the relatively narrow scope afforded by the armament reduction provisions alone. Finally, the chapter addresses recent withdrawals from the Treaty and countermeasures imposed, and then discusses prospects for both the future of the CFE Treaty Regime and security institutions in Europe.

Chapter 5 takes a nuclear turn and examines the first Strategic Arms Limitation Treaty (SALT I) talks. The chapter highlights relevant aspects of the extraordinarily high uncertainty environment in which the talks were conducted, as well as factors that contributed to sufficiently diffusing this uncertainty to allow for a path towards reaching an agreement. Although uncertainty about the sincerity and intentions of negotiating states, and missing information about the capabilities both sides as well as the strategies they employed all ran high, a high level of elite involvement (via the backchannel) and strong political will made it possible to reach an agreement—albeit one without great longevity. The chapter discusses the use of threshold setting as a security-specific heuristic in this case as well as the risk reduction technique of splitting the agreement into parts to minimize the potential losses associated with the other party's defection or withdrawal. In drafting two separate agreements (the Interim Agreement on Certain Measures With Respect to the Limitation of Strategic Offensive Arms and the Anti-Ballistic Missile Treaty) with two separate duration provisions, negotiators sought to hedge against uncertainty about what capabilities each side had (or would soon have). Ultimately, the chapter suggests that while the verification measures included in the negotiated agreements, which consisted of the use of national technical means (satellites), the agreements themselves provided the kind of reductions that would only augment security temporarily—as the Interim Agreement, at least, was intended to do.

Chapter 6 discusses the 1986 Reykjavik Summit between Reagan and Gorbachev, which can only loosely be defined as "failed" when both leaders walked away from a potentially historic deal that would have eliminated and reduced whole categories of offensive nuclear weapons. Lasting only two days, the leaders exchanged proposals at this negotiation that ranged from eliminating all nuclear weapons to reducing intermediate range weapons in Europe. Although to two sides came close to reaching an agreement—too close for some—the "deal breaker" came in the form of Reagan's refusal to bargain away his plan to develop a defensive shield in outer space—his Strategic Defense Initiative (SDI). What is also interesting about this case was that Gorbachev came to the table with a

comprehensive package—a broad range of proposals that included reductions to strategic arms, intermediate-range missiles, defensive weapons (including space weapons), and nuclear test ban to stop the development of new nuclear missile technology. Reagan, however, did not, and inasmuch as the talks fell apart because of Reagan's refusal to halt SDI development, his position on the subject was determined more by his narrow focus on the this particular goal than it was by something more like Gorbachev's broad-scale approach to tempering the uncertainty about security stemming from multiple kinds of nuclear weapons. The case highlights how it can be difficult to reach an agreement when one side pursues broad goals (more akin to uncertainty management) and the other more narrow ones (more akin to risk reduction) during arms control negotiations. It also addresses in depth the worst-case scenario thinking that motivated Reagan to pursue the goals he did.

In order to address the “data gap” that characterizes our knowledge about what makes arms control negotiations and agreements successful, this project has also produced the largest dataset of arms control negotiations collected to date. Chapter 7 presents this dataset, which contains 42 bilateral and multilateral arms control negotiations from 1945 to 2010 (all of which include the US as a negotiating state) and, when successful, their resulting agreements. The dataset includes detailed information about the agreements that resulted for the successful cases, as well as variables that code for the presence of factors associated with generating and managing climates of uncertainty—including risk reduction, uncertainty management, environmental uncertainty, and uncertainty about capabilities. The chapter addresses the operationalization of these concepts in detail, and discusses both the case selection and the coding process.

Chapter 8 presents findings from the analysis of the data from the negotiations. It focuses on the use of cluster analysis to identify aspects of similar negotiations using variables for factors that affect the ability to reach an agreement, the durability of the negotiated agreements and the formal provisions of these agreements. This preliminary analysis suggests new categories of cases that share similar properties with respect to uncertainty management, risk reduction and the time it takes to reach an agreement. Findings highlight the fact that cases of bilateral negotiations for which both the US and the Soviet Union actively and mutually pursued goals associated with uncertainty management only (heightening transparency, opening up lines of communication and increasing the exchange of data) could conclude rather quickly, leading to the conclusion that (a) when states pursue shared goals agreements are easier to reach; (b) that confidence- and security-building measures (CSBMs) alone don't increase the duration of negotiations (and therefore difficulty reaching an agreement); and (c) that it may be that both the pursuit of asymmetric goals and pursuing a combination of risk reduction (threshold setting) and uncertainty management measures may be what prolongs the duration of the negotiations (and therefore increases difficulty reaching an agreement).

Finally, the conclusion discusses the changing nature of the global security landscape and the continued relevance of arms control in that environment. It highlights the procedural shortcomings evidenced by "threshold setting" as a goal for arms control negotiations and pontificates on the continued relevance of these kinds of agreements going forward.

Ultimately, it suggests that the road to security ought to be paved with broad, flexible multilateral agreements that provide increased transparency, which need not be legally binding.

## Conclusion

This project explores the effect of uncertainty on the negotiation of arms control agreements and provides recommendations for best practices for security through disarmament consistent with the effective management of uncertainty in the long run. In the next chapter, I will lay out my argument that negotiators should rely on “uncertainty management,” which can address the effects of additional sources of uncertainty, rather than “risk reduction” in order to establish targets for arms control agreements.

Uncertainty management consists of a series of strategies and goals designed to increase the amount of information to which negotiators have access on security-related matters, and to respond to changes caused by these other factors that have the potential to alter the security landscape over time. I find that the use of uncertainty management produces better outcomes: durable, long-lasting agreements that facilitate peace and security in the long run.

Consideration of these issues is critical to a comprehensive vision for the future of security, where it is defined by weapons. It is also necessary groundwork in the run-up to any potential future reductions—including a follow-on agreement to New START and implementation of the NPR.

## Chapter 2: From Risk Reduction to Uncertainty Management

This chapter first discusses the use of approaches in the study of international relations (IR) that rely on the concepts of “risk” and “uncertainty” for explaining outcomes associated with state behavior, negotiation, and arms control, and offers an argument for how approaches that rely on risk, specifically, have driven best practices for arms control. It then presents an argument for how missing information affects the process of arms control negotiation through its impact on the goals and strategies states use in pursuing an agreement, by suggesting that “uncertainty” rather than “risk” is a more appropriate description of the kind of missing information that affects and drives these agreements. Finally, the chapter presents an argument for how to negotiate arms control agreements that are capable of effectively managing uncertainty over time.

### Background

Numerous approaches to the study of international politics have sought to address the role of missing information in explaining state behavior. A subset of this work that explores how international agreements are reached tends to focus on how states can lower the possibility of experiencing potential losses by minimizing the likelihood of certain outcomes (Rotfeld and Anthony 1999; Pifer and O’Hanlon 2012). In order to accomplish this for arms control specifically, it is commonly recommended that factors that pose particular threats, or augment the likelihood of these outcomes coming to pass, be reduced or eliminated (Adelman 1984; Rotfeld and Anthony 1999; Goldblat 2002). This wisdom has frequently led to recommendations for best practices for arms control that largely consist of setting thresholds or ceilings for arsenals through formal, legally binding agreements (Larsen 2002; Gottemoeller 2002; Pifer and O’Hanlon 2012). In the abstract, these are not poor practices, per se, but they do not adequately take into account the multiple effects of uncertainty on state behavior in these contexts, and therefore cannot speak to the kind of uncertainty management the security of states requires. In fact, while these recommended goals might be aimed at maximizing security, they can also cause agreements to falter once implemented.

I argue that the pedigree of this wisdom that arsenal reductions are the best solution to the problem of missing information and uncertainty about security is actually derived from and consistent with threads through three literatures: a) international relations and arms control theory; b) game theory and rational choice theory; and c) most recently, applications of decision-theory to the study of international politics.

### International Relations and Arms Control Theory

International relations (IR) theory as a whole may be viewed as “encouraging” the use of approaches favoring the reduction or elimination of capabilities as a means of reducing uncertainty because the kinds of ontological predilections they have or commitments they make help facilitate this kind of logic. Realist IR theory, for example, treats the kind of “self-help” behavior that results in conflict as a product of uncertainty about capabilities and intentions (Mearsheimer 1994; Morgenthau 2009; Waltz 2001). States are, therefore,

theorized to respond to uncertainty in a manner that maximizes their own benefit.<sup>1</sup> Moreover, these ontological commitments aren't restricted to realist theory. Brian Rathbun (2007) argues the concept of uncertainty is actually a "microfoundation" of *all* strains of IR theory, including realism, rational choice approaches, psychological or behavioral approaches, and constructivism. Applications of this kind of thinking to arms control fundamentally mirror this line of reasoning. Thomas Schelling and Morton Halperin discuss the tendency of arms control scholars to suggest that the rational response to uncertainty about intentions consists of reducing uncertainty about capabilities. They explain how many believe that because "estimates of each others' *intentions* will necessarily be uncertain, measures reciprocally to reduce *capabilities* for preclusive attack may help both" (Schelling and Halperin 1985, 13, emphasis mine).

However, the presumption that the path to security is achieved through strict capability (and therefore threat) reduction is misguided: the direct reduction of capabilities alone does not capture all sources of uncertainty pertaining to the crafting of arms control agreements. Schelling and Halperin (1985) instead suggest that a more nuanced approach to goal setting for capabilities would actually be more consistent with the reduction of the likelihood of the onset of war. They write: "The over-all level of potential destruction might be substantially reduced by arms arrangements that did not focus on numbers and sizes of weapons *per se*" (Schelling and Halperin 1985, 18). This is best accomplished, they argue, by reducing the *incentives* that lead to war, rather than by reducing national *capabilities*. These incentives should be determined by the nature of military technology and military expectations.<sup>2</sup> Their argument lends support to the notion that a reduction of uncertainty ought not necessarily result in a reduction of armaments. Further supporting this notion is the idea that it is difficult to reduce uncertainty about intentions via the reduction of uncertainty about capabilities because intentions are necessarily vague or nebulous, and often come across as ambiguous or even ambivalent. This was true, for example, with respect to U.S. assessments of Soviet intentions in the 1960s: "We ourselves do not know how we might respond to certain crises or provocations, and the Soviets do not know in detail just what actions they would take in support of their national goals," writes Donald G. Brennan (Brennan 1961, 31). This means that even if uncertainty about capabilities is eliminated, uncertainty about intentions can remain high. Therefore, in setting goals for arms control, we must also pay attention to ameliorating the uncertainty about security that results from uncertainty about intentions exclusive of uncertainty about capabilities. Finally, Joseph Nye has a related argument supporting the notion that reductions may not necessarily be the best path to lowering uncertainty about security. He offers a more

---

<sup>1</sup> Whether the route to this self-help maximization best occurs through an amelioration of uncertainty about capabilities or intentions is subject to debate. John J. Mearsheimer argues that uncertainty about intentions is more critical than uncertainty about capabilities because uncertainty about intentions makes capabilities, whatever they may be, threatening. By contrast, Charles Glaser places an emphasis on reducing uncertainty about capabilities rather than intentions: "Intentions are knowable, and even if known, could be different tomorrow...States must not overlook the possibility that potential adversaries will use their full capabilities against them, and they therefore must focus on adversaries' capabilities rather than their intentions" (Glaser 1994, 56).

<sup>2</sup> They suggest that invulnerable retaliatory systems would work better as a deterrent and might also lead to reductions in number naturally.

nuanced approach to threat reduction by suggesting that the best way to reduce the threat of nuclear war is contingent upon an understanding of possible paths in which a nuclear war may begin—and there are at least five paths (Nye 1985, 10).

### Game Theory and Rational Choice Theory

Game theory approaches go hand-in-hand with utility-based and rational choice theories of politics that emphasize self-help behaviors. Generally, applications of game theory and rational choice theory have primarily focused on addressing capabilities through an analysis of risks they pose.

Game theory, as an approach, is largely predicated on risk. “Risk” is perhaps the most commonly used concept to address state behavior under conditions of missing information. It refers to the availability of information required for decision-making. In its most narrow or strict definition, it describes when a decision-maker must choose from a set of potential actions, each of which leads to an outcome that has a *known probability* (Luce and Raiffa 1957, 13). The critical idea then is that probabilities associated with specific outcomes are assessable, estimable, or somehow *a priori* or otherwise known to the decision-maker.<sup>3</sup> When these probabilities are available, it is possible for a decision-maker to employ a decision-making procedure to choose the best option.

In formal, game theoretic terms, risk refers to when “a choice must be made from a set of acts  $A_1, A_2, \dots, A_m$ , but the relative desirability of each act depends upon which ‘state of nature’ prevails, either  $s_1, s_2, \dots, s_n$ ” (Luce and Raiffa 1957, 276). The term “states of nature” describes a “mutually exclusive and exhaustive listing of those aspects of nature which are relevant to this particular choice problem and about which the decision maker is uncertain” (Luce and Raiffa 1957, 276-277). Because states of nature are therefore unknown, the outcome of a particular action (choice option) is unknown.

The use of a decision-making procedure requires risk to assign “utilities” to particular outcomes. Utilities are calculated as a function of both the probability of a potential future state of the world, as well as a numerical valuation of the likelihood of that outcome occurring. Utilities allow actions to be ranked according to an optimality criterion, which makes it possible to then choose the best course of action from a set of possible actions.

Under risk, the probability distribution over the set of potential future states of the world is either known, or “the decision maker deems it suitable to act as if it were known” (Luce and Raiffa 1957, 277). This means that information about probability is required in order to make decisions as if under risk and to, therefore, to employ a decision-making procedure. When decision-makers must make a choice absent any information about probability, Luce and Raiffa (1957) explain that they may do so by employing a process of “risk assessment,” which entails using some procedure to estimate or calculate risk in the absence of *a priori* risk information. Numerous scholars have made recommendations for best practices in

---

<sup>3</sup> Decision theory treats human beings and organization (and everything in between) as an individual decision-maker because they can be understood as having a ‘unitary interest’ that is driving decisions (Luce and Raiffa 1957, 13). A collection of individuals who have potentially conflicting interests are considered a group. This approach is adopted here.

international negotiations using risk analysis.<sup>4</sup> But, here is the tricky part: how do decision-makers get “under risk” so that it is possible to use game theory or another decision-making procedure to make a choice? This is not always obvious, and while arms control negotiators and decision-makers typically rely on intelligence estimates of likelihood that rival states have certain capabilities or intentions to use them to provide probabilities, this dissertation describes in depth the high level of uncertainty caused by missing information that affects these decisions, as well as the additional sources of missing information that do likewise. Indeed, I aim to show how the presumption of being under risk and having information about probability about potential states of the world, leads to biases in goal-setting that result in suboptimal agreements.

### **The Application of Decision Theory the Study of State Behavior**

Another line of research in the IR literature focuses on interpreting state behavior by incorporating insights from the decision sciences. These generally prescriptive approaches from the application of decision theory to the study of state behavior tend to elide over the technicalities of risk: instead of relying on probability information to inform choice behavior, work in this vein instead tends to instead employ a kind of layman’s sense of the concept “risk” that that eschews the use of formal risk assessments, relying on categories of gains and losses. This more coarse use of the concept is frequently employed by approaches devoted to the application of expected utility and prospect theories to state behavior (Farnham 1992, Farnham 1997, 1997b; Kanwisher 1989; Levy 1992, 1997; McDermott 1992, 1998; McInerney 1992).

One consequence of these approaches has been advocating that states avoid potential losses during negotiation through practices of risk reduction and threat elimination. For arms control this means setting goals for treaty negotiation that consist of establishing thresholds and ceilings or reducing holdings for weapons or arsenals, which will help achieve stability and security. Bilder (1981), for example, identifies the numerous risks associated with entering into international agreements and creates a kind of typology of losses or areas of potential loss. For arms control, specifically, he explores the risks that are associated with security and non-compliance, discusses the potential losses that can occur, and then provides recommendations for risk reduction. He uses “risk” to refer to the potential losses associated with making an international agreement, regardless the availability of probability information. While it is useful to have a typology of potential loss that identifies all possible losses, for Bilder, this leads to recommendations for minimizing loss (risk reduction). The typology is useful and potentially conducive to contributing to best practices, but it also implies that a kind of straightforward utility maximization will lead to the optimal outcome. He writes, for example: “a nation may reduce its risks by limiting the size or scope of its agreement with another nation” (Bilder 1981, 43).

---

<sup>4</sup> See, for example, the following works: Starkey, Boyer and Wilkenfeld 2005; Luce and Raiffa 1957; and Raiffa 2002.

Bilder is not wrong—states often do seek to minimize risk through related tactics.<sup>5,6</sup> However, this kind of approach to creating best practices is shortsighted. Absent with information about probability, risk cannot provide prescriptive guidance. Moreover, when this probability information is missing, people respond in a manner that can be technically “irrational” but variably systematic. As such, this kind of “layman’s” approach to risk elides over the ways in which uncertainty affects or determines behavior, generally speaking.

Furthermore, problems arise in general when applying concepts from decision theory directly to state behavior, because the processes of generating foreign policy and that of generating human decisions are emphatically different. While individuals do frequently behave “as if” under risk, it is an overstatement to say that states do likewise—the bureaucratic structure of the process that provides guidance for setting goals for arms control impedes this kind of unconscious or subconscious estimation process. When states do make decisions using estimates of likelihood (information about probability), they do so often using estimates from the intelligence gathering and analysis process, which is not without its own biases (Jervis 2010, 158-160). We should expect responses to uncertainty at the state level to differ from those at the level of the individual.

Game theory approaches likewise reveal a discomfort with, or a reluctant to accept the fact that uncertainty is present when we make decisions. When we use risk estimation to essentially “get out” of uncertainty, uncertainty collapses into risk, and this is not a good idea in security-specific scenarios because it obscures aspects of the scenarios that contribute to uncertainty and the patterns of behavior that characterize responses to uncertainty. Moreover, it fails to address the fact that risk, in many cases, is impossible to achieve, quantify, or calculate—particularly for security scenarios.

International arms control negotiations actually take place under conditions that more closely resemble uncertainty than risk.<sup>7</sup> Mitzen and Schweller (2011) have said as much, arguing that the risk model frequently employed by IR scholars does not accommodate this kind of fundamental uncertainty. Barry O’Neill (2001) has argued similarly: in order to apply prospect theory to state behavior, scholars must make unjustified assumptions about the “inflection points” of states, which divides the space of gains from that of losses. And, in his book on models of politics and uncertainty, Claudio Cioffi-Revilla (1998) argues that “ubiquitous” uncertainty plays a defining role of political life, which is composed of “non-linear” political events, further supporting the notion that risk is not an appropriate

---

<sup>5</sup> Indeed, there is evidence that states do this somewhat systematically for high uncertainty type negotiations. Barbara Koremenos (2005) reveals that for security negotiations, all of which she categorizes as “high uncertainty,” states tend to sign onto agreements of shorter durations.

<sup>6</sup> Bilder himself acknowledges the distinction. “While risk presupposes uncertainty, uncertainty does not in itself necessarily involve risk. Thus a nation will often be uncertain as to whether another nation will perform its obligations under an agreement or as to other events relating to the agreement. But these uncertainties will not in themselves involve risk unless, under the most pessimistic assumptions, a nation’s participation in that agreement could result in that nation’s experiencing a net loss, leaving it in a worse position than if it had not entered into the agreement” (Bilder 1981, 13).

<sup>7</sup> Mitzen and Schweller (2011) have said as much, arguing that the risk model frequently employed by IR scholars does not accommodate this kind of fundamental uncertainty. O’Neill (2001) has argued similarly that in order to apply prospect theory to state behavior, scholars must make unjustified assumptions about the “inflection points” of states, which divides the space of gains from that of losses.

concept for these situations. Indeed, Cioffi-Revilla explains that absent an understanding of how to treat this uncertainty, “politics is reduced to a system of utilitarian reductionism” (Cioffi-Revilla 1998, 13). If under risk, a straightforward utility maximization reveals the optimal strategy. Under uncertainty, however, these calculations are not possible, either due to missing information or high situational complexity. A risk-based (risk reduction) approach, therefore, can be detrimental to crafting agreements that are able to manage uncertainty effectively and are, therefore, durable. In other words, risk cannot address how states can successfully pursue agreements that both achieve a desired state of security and also have the capacity to endure. If we wish to better understand how the goals we set for arms control may be most effective in the long run, we need to better understand the effect of uncertainty on the negotiation of these agreements.

### **A New Theory for the Role of Uncertainty in Arms Control**

Research on decision theory reveals that when individuals must make decisions under conditions of uncertainty (with unknown information about the state of the world combined with unknown probability), they tend to resort to the use of decision-making shortcuts. This results in biased estimations and responses. Decision-makers and negotiators do likewise during the negotiation of arms control agreements. In these situations, missing information about capabilities and intentions results in uncertainty about security. In order to establish goals for arms control negotiations, decision-makers and negotiators use security-specific heuristics to anticipate the outcomes of a potential conflict. These heuristics include: a) worst-case scenario thinking; b) limited theater of war thinking (one-weapon type planning); and c) and low-dimension (non-complex) scenario thinking. Using these shortcuts produces a biased response: it results in codifying potential outcomes as risks (which have a precise probability estimate), which in turn causes decision-makers and negotiators to establish goals for arms control that are aimed at lowering these risks (or the probability of potential losses).

This means that negotiators then employ risk reduction and threat elimination strategies to set targets for arms control agreements, which are expected to lower the overall likelihood of security-related losses, including: a) setting thresholds for weapons; b) eliminating whole categories of weapons; c) focusing on the ability of verification regimes to reduce risk of defection; and d) limiting scope, scale, and duration of agreements. Interestingly, these strategies may facilitate reaching an agreement by focusing the dialogue of the negotiations on precise, substantive and easily quantified targets. Nevertheless, while it might seem like the use of these strategies is effective because they both limit the likelihood of potential losses and increase the likelihood of reaching an agreement, they do not produce durable, long-term agreements, which instead require the effective management of uncertainty.

### **Missing Information and Uncertainty in Hard Security Scenarios**

Negotiations are generally the ideal setting for the study of the effects of uncertainty because states frequently negotiate to reduce or get out of uncertainty. Specifically, in the context of IR theory, we can say that states seek to reduce uncertainty about adversaries’ capabilities and intentions by filling in missing information over the course of the

negotiation process. More broadly, IR theory tells us why so much uncertainty in international affairs exists: the international system is anarchic – with no discernible hierarchy (order) or system for the enforcement of rules. This is the root or structural cause of uncertainty. Additionally, the social world and international relations within it can be exceptionally complex, erratic and volatile. These factors augment the uncertainty from which states seek relief.

What exactly makes arms control negotiations so high in uncertainty? There are a number of factors endemic to these kinds of security situations that cause uncertainty. First, states enter into negotiations when they are already uncertain about the capabilities and intentions of other states. This may mean states are unsure, not only about another state's holdings, but also whether other states actually intend to use what they have. Additionally, arms control and security negotiations are actually more complicated and calculation intensive than other types of international negotiations such as trade, for example: not only may states be uncertain about another state's holdings or intention to strike, they may also experience difficulty making calculations associated with security.

Mitzen and Schweller (2011) describe how large quantities of information make it impossible to process all relevant information. This “calculation complexity”<sup>8</sup> makes states uncertain about how to quantify holdings, how to compare weapon effectiveness (compare the weapons held by other states), and how to calculate parity. Difficulty calculating weapon effectiveness presents a challenge to comparing military strength. For example, people have difficulty grasping the units of measurement of the degree and effect of yield of nuclear bombs. This affects the ability to estimate the effects of megaton-class weapons, for example (Brennan 1961, 33). Likewise, defensive weapons pose a unique problem for calculating security: while the destructive power of offensive weapons is, in theory, estimable, it is difficult to estimate the gains associated with defensive technologies.<sup>9, 10</sup> This also means that it can be difficult to calculate what constitutes parity of weaponry, particularly when weapons differ across negotiating parties. When the U.S. and the Soviet Union both developed “heavy” ICBMs, both sides were uncertain about how many Soviet SS-20s were equivalent to U.S. Pershing missiles, for example. This means that states may also be uncertain about how to compare another state's holdings to their own, which makes determining relative strength and parity difficult.

---

<sup>8</sup> While the concepts of uncertainty and complexity are distinct, the two concepts are highly associated with one another. For Pamela Chasek, complexity results from conditions of uncertainty. Complexity in the context of international negotiations, therefore, can be “created under conditions of uncertainty, when information needed for decision making is difficult or costly to obtain or is simply unavailable” (Chasek 1997, 442). For organizational theorist Frances Milliken, the concepts of uncertainty and complexity are actually one and the same: complexity (along with volatility and heterogeneity) makes environments, and therefore future states of the world, less predictable, causing individuals to perceive greater uncertainty in these kinds of environments than in more stable ones (Milliken 1987, 137). The approach taken here is consistent with Milliken's.

<sup>9</sup> This was the case for discussions over antiballistic missile technology during the SALT I talks.

<sup>10</sup> Despite cuts to offensive strategic weapons, this is one justification for continued development of ABM technology—to hedge against the rapid change of offensive technologies, despite these cuts. This was an issue during Reagan and Gorbachev's discussions during the Reykjavik Summit.

Finally, gains and losses are difficult to calculate in security-specific situations, particularly when certain outcomes are associated with the outbreak of conflict, which means that there is often no good method for estimating outcomes. This makes setting goals for arms control negotiations tricky.

As a result of the difficulty calculating future gains and losses, negotiators often pursue short-term gains that may prove detrimental in the long term. This makes it all the more challenging to establish meaningful goals for negotiation. Donald Brennan explains: “Both the hazards [arms control] may protect us against or reduce and the hazards it may introduce are often subtle, complicated and difficult to understand” (Brennan 1961, 32).

### Uncertainty in the Arms Control Negotiation Process

Second, factors endemic to the *process* of arms control can actually have the net effect of increasing uncertainty and augmenting a state’s perceived vulnerability or susceptibility to loss. These factors include the trustworthiness of data presented, or suspicion that another state is using the negotiations to extract information or codify asymmetry in holdings (sinister intentions or lack of intention to reach an agreement).

Additionally, environmental sources of uncertainty have the potential to threaten the ability of proposed treaty terms to manage uncertainty in the future, which refers to factors that have the capacity to alter the future in a way that impacts the anticipated benefits of agreement. This is why Gilbert Winham argues that the ideal would be the negotiation of international agreements to serve to “limit the free play of certain variables in the future” (Winham 1977, 94). Factors contributing to this kind of environmental uncertainty include regional and economic volatility, potential regime change, and technological change. Volatility can impact both the negotiation as well as the ratification process. Uncertainty about who will lead in the future can impact the goals for arms control negotiations. Reagan made reference to this kind of uncertainty on the margins of his negotiations with Gorbachev in reference to his desire to take additional precautions by increasing defensive weaponry: “Who knows?” said Reagan at Reykjavik, “Governments change” (Reagan 1990, 678; Reykjavik Transcripts). Likewise for the ratification process, although negotiators were able to arrive at an agreement during the SALT II negotiations, for example, the resulting treaty was not ratified by the United States due to uncertainty stemming from the Soviet invasion of Afghanistan, which the U.S. perceived to be destabilizing.

Changing weapons technology can also make it difficult to set goals for arms control negotiations. This “technology creep,” which is not typically addressed in traditional accounts of the effect of uncertainty about capabilities, has the capacity to alter the strategic landscape as well as drive the competition for new weapons (Newhouse 1978).<sup>11</sup> Winham explains the significance of increasingly rapid changes in military technology for both arms control negotiators and society as a whole:

Negotiators today spend more time discussing technology than did their predecessors because technology—whether it takes the form of information

---

<sup>11</sup> This was a factor during SALT I with MIRV technology.

systems, industrial processes, or nuclear weapons—has a proportionately greater impact on human existence now that it did in the past. And technology is in a state of rapid change, often at an exponential rate; it creates an enormous problem of comprehension and adaptation for contemporary society” (Winham 1977, 88).

Finally, the format of arms control negotiations can contribute to complexity at the negotiation table. Such factors as a large number of negotiating states, a focus on numerous substantive issues or issue linkage, for example, all contribute to heightened complexity and have the capacity to augment uncertainty (Chasek, 1997, 442).

### **Uncertainty about the Security Benefits of the Agreement Reached**

Third, aspects of the agreements themselves (once reached) can heighten uncertainty about security. This can occur, for example, when treaty terms “[set] lower levels of arms than would otherwise appear prudent based on a strict threat assessment” (Larsen 2002, 5). Additionally, when states commit themselves to a legally binding agreement with other states, they must trust other states to uphold a kind of mutual and reciprocated cooperation. In this way, they become dependent upon other states for their own national security and self-preservation, which frequently requires an exceptional level of trust.<sup>12</sup> This trust cannot be taken for granted and leaders and negotiators may experience uncertainty about whether negotiating partners will sincerely implement and uphold an agreement (not cheat or withdraw or fail to ratify).

### **Consequences of Uncertainty for Arms Control**

Regardless the cause of uncertainty, individuals tend to respond to it in very particular ways. The Ellsberg Paradox illustrates how people avoid choosing options that are ambiguous and prefer risky ones instead. Often, when a more certain choice option is not available, individuals will delay or avoid making a decision. When forced to make decisions under uncertainty, however, people tend to rely on three heuristics (decision-making rules or shortcuts) to make the most accurate judgments possible. These shortcuts include "representativeness," when a person judges that the probability that one object or event belongs to a particular category based on the similarity; "availability," which is the use of the strength of associations in memory or imagination to make a prediction; and "anchoring and adjustment," which is the formation of predictions based on initial values insufficiently adjusted to new information (Kahneman, Slovic, and Tversky 1982). Availability may allow for vivid impressions of a particular leader or country to displace more extensive, albeit less vivid, information about a country's military intentions, for example. It may also affect the perceived likelihoods of worst- and best-case scenario planning across the board: creativity is often restricted to the most obvious choice options or alternatives. Consequently, scenarios that are less likely, but easier to imagine, may be judged to actually be more likely by the decision-maker and will therefore receive more attention. In this way, these kinds of heuristics can lead to biases in decision-making for security.

---

<sup>12</sup> An analysis of cooperation under anarchy is beyond the scope of this paper. For further information on the subject, see Jervis 1978 and Wallander and Keohane 2002.

Consistent with the notion that uncertainty has unique effects on individual decision-making, the sources of uncertainty relevant to arms control also effect notable responses evident in negotiations. Whereas the decision sciences have revealed how people delay, exhibit implicit biases, and rely on the use of heuristics under conditions of uncertainty (Tversky and Kahneman 1974), a similar response appears true for decisions and behaviors associated with ensuring the security of states (McDermott 2001, Kanwisher 1989).<sup>13</sup> States use decision-making shortcuts when they are missing information. These “security-specific heuristics,” which include worst-case scenario thinking, limited theater of war thinking, and low-dimension (non-complex) scenario thinking, are prominent during the negotiation of arms control agreements. Each is addressed in turn.

### Worst-Case Scenario Thinking

Individuals who set goals for arms control negotiations tend to rely on the use of worst-case scenarios—outcomes resulted from surprise attack, for example, that result in devastating losses—in order to identify specific potential losses or threats. When is difficult to think of war as “limited war,” as it often is for potential nuclear conflicts, it is difficult to anticipate *non*-worst-case-scenario outcomes. Brennan writes that people are “disinclined” to do so as a result of the imagery of human destruction associated with atomic bombs, and find it abhorrent to describe such large-scale human devastation in any kind of “limited” terminology.

Worst-case scenario thinking can inspire fears that lead to extreme positions (biases). Steven Kull provides an illustration of this kind of “doomsday thinking” and its biased response in his discussion of President Dwight D. Eisenhower’s efforts to adapt to grapple with the new reality posed by nuclear weapons during the 1950s. Eisenhower said:

Atomic War will destroy civilization... If the Kremlin and Washington ever lock up in a war, the results are too horrible to contemplate... It would literally be a business of digging ourselves out of the ashes, starting again (Kull 1990, 6).

As a result of this fear of total nuclear annihilation, Eisenhower advocated unilateral reductions as a best practice for arms control (independent of Soviet commitments to reduce the size of their nuclear arsenal). An alternative approach would have been to maintain arsenals at parity, which would also have instead been consistent with the logic of deterrence theory.

### Limited Theater of War Thinking

Compartmentalization in the form of limited theater of war thinking—in which scenarios involving the limited use of weapons, specific categories of weapons, or geographically contained conflict—is endemic to consideration of the threats associated with particular weapons. During the Reykjavik summit, for example, President Ronald Reagan and General Secretary Mikhail Gorbachev sat face-to-face and debated the reduction of missiles based on scenarios involving the exclusive use of these particular nuclear weapons—as if no other weapons would be deployed in conflict in which nuclear weapons would be used.

---

<sup>13</sup> Suboptimal approaches to establishing goals are largely implicit or subconscious.

Entire sets of weapons (such as Britain and France's intermediate range weapons in Europe) were mentally set aside during the negotiations, and left out of the tally of total weapons to be reduced. Moreover, a controlled theater of war is highly realistic, particularly for conflicts that begin conventionally. The Conventional Forces in Europe (CFE) Treaty deals exclusively with conventional arms because efforts to establish a parity of forces across both conventional and nuclear weapons failed miserably during the precursor Mutual and Balanced Force Reduction Talks. This kind of compartmentalized thinking—that ignores the likelihood of escalation from conventional to nuclear threat under high uncertainty and high-tension situations—means that thresholds are often established with respect to particular categories of weapons rather than across capabilities. Such practices are not advantageous for long-term security goals because they fail to manage additional sources of uncertainty that can derail security agreements—like escalation.

Changing technology is likewise frequently ignored in these negotiations, a shortcoming that a number of scholars have sought to address. Legal scholar Edwin Smith, for example, has argued “static arms control provisions become obsolete because they fail to provide for changing weapons technologies” (Smith 1991, 1562). Similarly, Schelling and Halperin lament this unfortunate tendency, which they argue consists of focusing on numerical limitations as goals for arms control, rather than on selective targets consistent with the reduction of the likelihood of a sudden attack, and has persisted since SALT I (Schelling and Halperin 1985).

### Low Dimension (Non-Complex) Thinking

Finally, an effort to simplify the complex negotiating space tends to also result in threshold setting. For example, an inability to compare a state's own capabilities with those of another state due to the complexity of the calculation required to make this comparison, can result in uncertainty about how to achieve parity. Robert Jervis explains how this inability to calculate parity can lead to a kind of preoccupation with the number of weapons each side may have, as well as a focus on who is trailing whom by how many (Jervis 1993, 350).

In addition, a great deal of the uncertainty surrounding arms control stems from potential outcomes. The complexity of security scenarios can make calculating potential gains (benefits) and losses (costs) exceedingly difficult. Arild Underdal writes: “the calculus of benefits can in some cases be so complex that only very crude estimates can be given” (Underdal 1991, 110). Jervis likewise explains how the effort to overcome difficulty with calculations about gains and losses in a future state of the world leads to a focus on states' holdings:

In general, it is very difficult to estimate what would happen in the event of a war—the ‘outputs of the weapons.’ The interaction of what each side will do is terribly complex. It is much easier to measure the ‘inputs’—what weapons each side has—even though the relationship between inputs and output is tenuous (Jervis 1993, 351).

## Uncertainty Management

Arms control treaties require more effective management of uncertainty about capabilities, as well as more effective management of additional sources of uncertainty. A good model for this kind of uncertainty management comes from the field of organizational behavior. Whereas individuals making decisions tend to avoid uncertainty, firms, by contrast, tend to actively manage it. They do this by identifying and prescribing ways to either reduce or absorb the negative consequences of uncertainty about the future state of the world, “state uncertainty” (Milliken 1987). The effective management of state uncertainty is considered critical for both organizational stability and performance (Perminova *et al* 2008).

Generally, in the organizational behavior literature, the perceptual experiences produced by state uncertainty are characterized by the inability to assign probabilities<sup>14</sup> to the likelihood of future states of the world—a concept that is consistent with decision theory (Duncan 1972; Pennings 1981; and Pfeffer and Salancik 1978). For individuals, uncertainty about the state of the world makes it difficult or even impossible to go through the steps of a linear decision model that is based on risk. Likewise, missing information about probability is responsible for a variety of outcomes associated with firm behavior. At the firm level, the behavioral consequences of state uncertainty are said to include the following: “muddling through” (Lindblom 1959); the use of the garbage can or multiple streams model (Cohen, March and Olsen 1972); and as protective responses, such as hedging against loss, preventing loss (avoiding committing resources), and doing anything that may diminish firm vulnerability (Milliken 1987).

We see something like an organizational response to uncertainty at the level of the nation-state in these kinds of security situations. Consistent with the multiple streams model, Gilbert Winham has described a “proliferation of bureaucracy” that states use to create structure under uncertainty (Winham 1977, 93). Wallander and Keohane (2002) also describe how cooperative security regimes deal with security issues: security institutions evolve in response to changing threats, which keeps security regimes relevant and durable. Finally, Brian Rathbun (2007) explains how international organizations reduce uncertainty for states by providing “technical knowledge” about the complex international system in which they function.

## Uncertainty Management in Arms Control

Uncertainty management in arms control can be accomplished by a variety of measures. These are discussed in their likely order of use. First, prior to coming to the table, David Lax and James Sebenius advise the consideration of possible unknowns:

Parties should anticipate the possible later problems. They should carefully analyze the chances of self-destruction from considerations of ex-post unfairness, surprises,

---

<sup>14</sup> The Ellsberg Paradox actually illustrates uncertainty about the state of the world. This well-known thought experiment reveals how missing information about the actual distribution of red and black balls causes uncertainty in the decision-maker. The decision-maker can *interpret* or *judge* the likelihood of a red ball in any one of a number of ways (from 0 to 100 reds). Each of these potential red-ball-configurations corresponds to a potential state of the world (Ellsberg 1961).

new information, illegitimacy, or changed alternatives. They should compare the value of continued agreement for all parties with the value of alternatives to continued agreement under a variety of possible contingencies” (Lax and Sebenius 1989, 289).

In essence, Lax and Sebenius advise advanced scenario planning beyond the scope of military strategy.<sup>15</sup> Some might refer to this as a consideration of “unknown unknowns” in addition to a full spectrum “known unknowns” (Daase and Kessler 2007).

Other prescriptions for uncertainty management in international negotiation concern the negotiating process itself. Winham, for example, suggests that “process” be privileged over “outcome” in international negotiations through the use of a tactic involving a kind of trial and error search that ought to be used to distill out salient information and organize existing knowledge (Winham 1977, 97 and 101). He further explains:

The principle problem for contemporary negotiators is not to outwit their adversaries, but rather to create a structure out of a large mass of information wherein it is possible to apply human wit (Winham 1977, 89).<sup>16</sup>

There is evidence of the use of negotiation as a process designed to reduce uncertainty from President Gerald Ford’s meeting with Soviet leader Leonid Brezhnev during the 1974 Strategic Arms Limitation Talks in Vladivostok. The leaders were able to establish an understanding conducive to crafting a basic framework for the SALT II agreement that was characterized as a “major breakthrough,” although their meeting did little (according to “hardliners”) to manage the threat of Soviet first strike (Newhouse 1989, 300). Despite this, the U.S. bureaucracy opted to pursue the agreement in order to try to curb the threat, which would later be subject to further “erosion,” they argued, via future efforts and agreements (Newhouse 1989, 300). The U.S. position was to use the negotiation to acquire information at the cost of an agreement designed to ensure security

Second, even if we privilege process over outcomes and take negotiation as a forum conducive to the search for more information, we must still identify goals for treaty-making—parties must come to the table with substantive proposals. Recommendations for uncertainty management, therefore, are also directed at goals that states pursue and the terms to which they agree during arms control negotiations.

---

<sup>15</sup> Such tactics are actually quite rare in arms control negotiations, for which incidents of noncompliance evoke little reaction (Smith 1991), likely due to a lack of anticipated consequences and countermeasures.

<sup>16</sup> It follows that negotiations that are guided by an estimate or desired outcome would not do very well. It also implies that use of “hard bargaining” techniques that are thought to be so successful in inducing patterns of concessions are not likely to be optimal in these situations...the search for information, however, is. Winham advises that the “development of common perceptions” ought to supersede the “exchange of concessions” in the process of negotiations. When this process goes well, therefore, we would not expect to see the patterns of compromise and convergence advocated by some negotiation theorists/scholars (Winham 1977, 100, also citing Ikle and Leites).

## Dynamic Obligations

Legal scholar Edwin Smith explores the issue of crafting durable agreements under conditions of uncertainty. He argues that treaty making reflects adequate uncertainty management when the agreements are structured to allow for “evolving commitments” that permit adaptation to “uncertain or unpredictable circumstances” (Smith 1991, 1549). The resulting “dynamic international obligations”, he explains, result from agreements that are “structured to allow consensual changes in the obligations imposed in order to fulfill the object of the treaty in *uncertain* conditions” (Smith 1991, 1557, emphasis mine). The need for dynamic obligations arises from conditions of uncertainty, which lead to the desire to “mutually adjust commitments while maintaining a shared perception of reciprocal responsibility” (Smith 1991, 1557). Smith explains that agreements crafted this way are more durable, and therefore conducive to future cooperative endeavors (Smith 1991, 1560). Dynamic obligations result in more successful agreements, Smith explains, because they allow for the relationship between treaty parties to naturally evolve, which is endemic to the process of negotiation; in this way they help facilitate agreement.

Lax and Sebenius (1989) would seem to concur. In their discussion of how flexibility leads to more durable agreements they write:

Perhaps the most effective contingent mechanism is a long-term relationship in which the parties trust each other. Needed changes can be renegotiated in the context of their many dealings over time (Lax and Sebenius 1989, 288).<sup>17</sup>

The authors would also appear to agree with the notion that uncertainty is prevalent in these situations that require effective uncertainty management in order to produce robust agreements: “Change is a given,” write Lax and Sebenius, and “the environment, the organization, the needs of other actors, and all manner of unforeseen circumstances can sometimes require that agreements be modified. *Renegotiation may be avoided if the initial agreement includes a way to handle unforeseen contingencies*” (Lax and Sebenius 1989, 287, emphasis mine). Lax and Sebenius also suggest that measures that allow for this kind of flexibility include mechanisms for dispute resolution through an arbitrating body, or the use of issue linkage and contingencies (see below).

## Limited versus Comprehensive Agreements

The scope of arms control agreements can range from “limited” to “comprehensive.” Agreements that serve to solely place thresholds on capabilities are often characterized as limited. According to the George Brennan, such agreements may also be described as ineffective. They implement as short-sited strategies because they seek to “...examine current and projected armament policies, to isolate their major unnecessary hazards, and

---

<sup>17</sup> If this notion were true, we would expect that the U.S. and Russia would develop increasingly robust agreements over time. Alternatively, we might instead expect changes in leadership and environmental uncertainty to continue to have the capacity to derail agreements, despite the trust and confidence that come from long-term cooperation.

to attempt to reduce or eliminate these, one at a time, leaving the basic armament policies largely unchanged” (Brennan 1961, 37).

Limited agreements are not all bad news, however; they can be useful for achieving certain goals like inhibiting the use of existing armaments, functioning as a kind of targeted deterrence or disincentivization. This may be useful, according to Richard B. Bilder, in dealing with conflicts involving escalation or “catalytic nuclear war,” which are conflicts initiated by the provocations of a smaller power. Limited agreements may also be useful in pursuing goals of non-proliferation because they hinder the ability of nuclear weapons to spread to non-nuclear powers (Bilder 1981, 86). However, Bilder cautions that: “such ceilings can work only when the competitive situation can be defined in terms of numbers alone” (Bilder 1981, 86).

As one might expect, “comprehensive” approaches tend to cover more ground, or have a broader scope. For an arms control agreement to be considered adequately comprehensive, Brennan argues that it must meet the following criteria:

[It must] attempt a survey of the basic requirements for armaments to implement the various types of deterrence that must be provided for the participating nations, and to adjust all types of armament to fit these basic needs in such a way as to give *maximum net security* (Brennan 1961, 38, emphasis mine).

Such agreements are both more effective in the long run and more difficult to negotiate. The paradox is that, while the minimization of potential losses associated with limited agreements would seem to point to specific, detailed, pared-down outcomes (per risk reduction recommendations), successful security ambitions actually require broad, comprehensive agreements to manage uncertainty.

### *Duration provisions*

Like the scope of an agreement, agreement duration can also present a real puzzle for arms control negotiators. A treaty with a long duration can augment uncertainty during negotiations by lengthening the shadow of the future and increasing prospect for cheating or defection in this way. Perhaps this is why high uncertainty negotiations tend to be correlated with treaties of shorter durations, which may be imposed to limit risk or potential loss (Koremenos 2005). Bilder’s discussion of risks speaks to the concerns about agreements that have shorter durations:

Every nation knows that the future is uncertain and unpredictable, that even its best judgments and assessments may prove wrong, and that, under certain circumstances, a proposed agreement which now seems to be a good deal may turn out to be a bad one which leaves it worse off than before (Bilder 1981, 12).

However, shorter agreements designed to limit risk do not manage multiple, specific forms of uncertainty—they focus instead on limiting potential loss. Furthermore, they are not necessarily conducive to obtaining goals of long-term peace and stability. At best, they may be viewed as short-term trust building measures; at worst they are Band-Aid

agreements with little utility. Alternatively, they may function merely as temporary provisions with the intention to renegotiate later on.

### *Special Tribunals*

In recent years, it has become increasingly common to establish special tribunals for the purpose of maintaining formal agreements, resolving ambiguities, and dealing with non-compliance issues for arms control treaties. Examples include the Standing Consultative Commission (SCC) for the ABM Treaty, the Joint Consultative Group (JCG) for the CFE treaty, and the Open Skies Consultative Commission (OSCC) for the Open Skies Treaty. The alternative to resolving disputes within a special tribunal would, in theory, be the use of an international criminal court or tribunal. In reality, however, noncompliance with arms control treaties almost never results in adjudication through neutral international courts or tribunals. Instead, the U.S. for example, has sought to maintain “national control” over dispute management through direct state-to-state diplomacy or the use of these special tribunals (Smith 1991, 1563). Such tribunals help facilitate dynamic obligations because they provide the both the flexibility and control that help ameliorate or manage the effects of uncertainty.

### *Verification and Compliance Measures*

Verification and compliance provisions (also called confidence and security-building measures or CSBMs) comprise a set of treaty terms that are by and large unique to arms control relative to other kinds international agreements. They consist of provisions that allow states party to an agreement to “observe and evaluate the other parties’ behavior in relation to treaty obligations” (Smith 1991, 1563). As such, they serve to provide early warning of cheating or aggression, and also function to minimize risks of defection by non-complying parties to an agreement (Bilder 1981, 119-120; Smith 1991, 1582). Examples of such provisions include systems of inspections of states parties’ holdings, and regimes for the exchange of data concerning arsenals and military exercises.

### *Withdrawal Provisions*

Withdrawal provisions that detail how and under what conditions states party to an agreement may cease to uphold their obligations are also increasingly common in international agreements. They do, however, represent a double-edged sword for arms control: while withdrawal provisions facilitate dynamic obligations and help individual states manage their own uncertainty, the codified ability to withdraw from an agreement can reduce trust between negotiating parties (Lax and Sebenius 1986, 288). This may, in turn, impact the likelihood of future cooperative agreements by augmenting uncertainty about cooperation. The ABM Treaty is an example of an agreement with withdrawal provisions: although the treaty is of unlimited duration, each party has the right to withdraw from the agreement if “extraordinary events” threaten its “supreme interests,” provided notice of such six months prior to withdrawal. The U.S. did indeed withdraw from the ABM Treaty under President George W. Bush in 2002 in order to pursue plans for a European Phased Array Missile Defense (MD) System. The Russians have been balking at these plans since that time and, while the U.S. and Russia were able to reach an agreement

on New START since that time, Russian president Dmitri Medvedev threatened in 2011 to withdraw from the agreement if the U.S. moves forward with its plans (Herszenhorn, 2011).

## Conclusion

A better understanding of uncertainty and its effects on behavior can help inform best practices for arms control negotiation. Efforts towards arms control in climates of uncertainty can lead to modular thinking about threats and capabilities, which impairs the ability of agreements to manage uncertainty both effectively and in the long term. This chapter details an argument for effective uncertainty management through arms control. It identifies the shortcomings of risk-based approaches and identifies challenges posed by the application of decision theory to state behavior, and examines an alternative approach akin to organizational responses to uncertainty. Finally, it suggests more fruitful approaches for reaching durable arms control agreements by means of uncertainty management.

## Chapter 3: The Mutual and Balanced Force Reductions Talks (1973-1989)

Instead of promoting a whole series of agreements reducing friction between the two blocs, stabilizing their military rivalry and gradually paving the way for a genuine relaxation of tensions on the continent and beyond, European arms control has settled down into a protected and frustrating negotiating process whose chances of ultimate success have grown gradually dimmer...European arms control has clearly entered a period of crisis.

– Theodor H. Winkler, "Arms Control and the Politics of European Security" (1982)

### Introduction

The Mutual and Balanced Force Reduction Talks (MBFR) comprised nearly 16 years of arms control negotiations between the Warsaw Pact (East) and NATO (West) alliances (bloc-to-bloc) from 1973 to 1989. The talks largely focused on finding common ground on the reduction of conventional armaments in order to render forces on both sides incapable of launching a surprise attack. Difficulties arose during the course of the negotiations when proposals deviated from this single, narrow goal. Although significant and sincere efforts were made to overcome obstacles and to reach an agreement during the extended negotiation period, this ultimately proved impossible. While some argue that the talks were “doomed from the outset” (Blacker and Duffy 1984), others have noted that negotiators made more progress towards reaching an agreement than initially anticipated (Dean 1982, 1). Many, in fact, consider the progress made during the MBFR talks crucial to the subsequent relatively quick and entirely successful negotiation of the Conventional Forces in Europe (CFE) Treaty in 1990 (Hopmann 1993, 977; Goldblat 2002, 220-221).

This chapter first presents background information on the content and course of the talks, including each side’s major positions and proposals, as well as some key substantive issues, such as parity of weapons, scope of the negotiations and roadblocks during the negotiations.<sup>1</sup> Second, it presents an analysis of the MBFR talks per the hypotheses that address the ability to reach a successful agreement. Finally, it discusses reasons why the talks failed, advancing the argument that shortcomings of the proposals exchanged led to ineffective uncertainty management. This conclusion suggests that a failure to manage uncertainty can impact the ability to reach an agreement successfully, in addition to the previously discussed hypothesis that uncertainty management affects the long-term success of an agreement once reached.

---

<sup>1</sup> In this analysis, I draw on official and unofficial primary source texts, including transcriptions of meetings and memos compiled into a Foreign Relations of the United States volume, as well as those that chronicle first-hand accounts from those who participated in the talks (primarily available for the U.S. side). I also rely on secondary sources that have thoroughly documented decades of news reports, articles, statements and speeches. Note that these were “closed” negotiations, although there were leaks to the press.

## Background

The MBFR talks focused on producing an agreement that would limit offensive forces in the Central European area, including the territories of Federal Germany, Belgium, the Netherlands, Luxembourg, East Germany, Poland and Czechoslovakia. There were a total of 11 negotiating and eight “non-negotiating states” involved in the MBFR talks. Fully participating NATO states included those with forces in Central Europe: Belgium, Canada, the Federal Republic of Germany (FRG), the Netherlands, Luxembourg, the United Kingdom, and the United States. “Flank states” included Norway, Denmark, Italy, Greece and Turkey. Although these states had no troops in the Central European territory, they were considered particularly vulnerable to a potential Warsaw Pact attack due to their geographical location. These five NATO members were therefore designated as “special participants” for the Western alliance, although were technically non-negotiating states.

Other non-participating NATO members included Iceland, Portugal, and Spain, which neither had troops in Central Europe nor were considered geographically vulnerable. Notably, France elected not to participate out of objection to the bloc-to-bloc format of the negotiations (Keliher 1980, 34; Goldblat 2002, 220).

All Warsaw Pact members with forces in Central Europe were full participants in the talks, including the Soviet Union, Czechoslovakia, the German Democratic Republic (GDR), and Poland. Hungary, Bulgaria and Romania were the Pact’s “special participants” and were, therefore, non-negotiating states.

## Goals, Motivations, and Objectives

Generally speaking, the MBFR Talks were motivated by three primary objectives: 1) to achieve military stability in Europe (which would mean deterring a sudden offensive move); 2) to lower the overall cost of defense; and 3) to “reinforce the political détente” in Europe (Hopmann 1993, 970). It was believed that limitations to conventional armaments and personnel could accomplish all three objectives.<sup>2</sup>

The first two goals were closely linked for the NATO alliance. Well before the MBFR talks began, NATO convened a working group to address reductions to military spending. This working group would eventually produce the 1967 Harmel Report, which established a mandate for the future role of the Alliance. When NATO ministers approved the report in Reykjavik in June of 1968, they issued a declaration signaling their intention to begin the process that would become the MBFR negotiations (Keliher 1980, 17). Western principles for MBFR reductions were consistent with and reflected by those established within NATO, and targeted reducing the cost of the defense of the Alliance while pursuing the goal of stability in Europe.

The Alliance initially sought to achieve a military balance in Europe by eliminating WTO superiority through a series of reductions in ground forces and tanks. Per the 1968 NATO declaration, the reductions they wanted would have to “compensate for the differences in

---

<sup>2</sup> That each side had a different conceptualization of what it would take to achieve stability is discussed throughout the rest of this paper following this section.

reinforcement capabilities of the two sides,” which meant addressing the fact that U.S. forces would be withdrawn all the way across the Atlantic, making it difficult to redeploy them in the event of a conflict (NATO MBFR Declaration 1968). By contrast, USSR forces would simply be withdrawn to a boundary line a few hundred kilometers away (Goldblat 2002, 222)). While this notion of balance motivated early NATO proposals, ultimately, as a result of domestic pressures, the U.S. would come to emphasize the need for troop reductions above all else (Keliher 1980, 43).

The Soviet Union was also driven, in large measure, by the desire to maintain stability in Europe, but more specifically by keeping in check the West German Bundeswehr, the forces of the FRG (Hopmann 1993, 971; Goldblat 2002, 221). General Secretary Brezhnev supported the notion of arms control negotiations as an alternative to unilateral U.S. troop reductions, which he believed would be too destabilizing in Europe (Carter 1989, 233). More specifically, the Soviets were concerned that a unilateral withdrawal of U.S. troops would leave a vacuum conducive to the expansion of FRG forces, which were significant to the composition of NATO force structure, totaling approximately 45 percent of NATO’s forces (Keliher 1980, 67). Keliher explains why this was of concern to the Soviets:

The force ratio of most concern to the Soviets is the Soviet/FRG ratio. It is of even more importance than the ratio vis-à-vis U.S. forces. Historically, the Russians have reason to respect the military potential of the Germans. Twice in this century they have been badly hurt by German military power; hence, they find the Germans’ present military strength a residual threat which, given the historic capacity of the Germans to mobilize quickly, could present a threat under certain conditions to the current status quo in Europe. Hence, in the Russian view, the Bundeswehr, not the United States Army, is the principal counterpart to the Soviet Forces stationed in Central Europe (Keliher 1980, 77).

The Soviets essentially engaged in the MBFR negotiations in order to effect limitations on FRG forces specifically (Hopmann 1993, 971)

The second objective—cost reduction—is fundamental to an understanding of the West’s, and particularly the U.S.’s, motivations. Ambassador Jonathan “Jock” Dean, who participated in and wrote extensively about the negotiations, explains the significance of the cost factor:

Each year, the NATO-Warsaw Pact confrontation in Central Europe becomes more costly for both sides. By itself, it now consumes a rough total of two hundred forty billion dollars a year for both alliances (Dean 1982, 1).

Prior to and during the MBFR negotiations, the U.S. was engaged in an extensive domestic dialogue concerning U.S. force reductions in Europe. Senator Mike Mansfield led this charge by pushing for unilateral U.S. personnel reductions in Europe through a series of congressional resolutions, including the Mansfield Amendment (Carter 1989, 231). This line of thinking was primarily precipitated by American involvement in Vietnam, which was causing “a diminishing and a rethinking of the American role in NATO,” and thus a reconsideration of U.S. military presence in Europe (Keliher 1980, 15).

The third objective—political détente—is fundamental to an understanding of the East’s motivation, and it did not take on comparable significance for the West. Whereas NATO saw the MBFR negotiations as an opportunity to improve security through a technical and military agreement, the Warsaw Pact saw it as an opportunity to pursue a purely political agreement, which would enhance détente more than anything else (Keliher 1980, 22).<sup>3</sup> Specifically, the East was motivated to engage in negotiations to secure “political ratification for the status quo in Europe” (Carter 1989, 231) by obtaining official recognition of the GDR (East Germany) as a sovereign state, and by obtaining recognition of the Oder-Neisse border of the GDR with Poland (Carter 1989, 232).

### Main Positions and Proposals

In November of 1973, the Warsaw Pact tabled the first proposal of the negotiations, which consisted of a draft proposal on the reduction of forces and armaments (Goldblat 2002, 220). The proposal offered a single agreement to be negotiated in a single phase, but implemented in three successive phases (Keliher 1980, 61). It would include, first, a national freeze on forces for both alliances at current levels and a reduction of personnel by the same percentage for both alliances— a “symbolic reduction” of 20,000 men for each alliance, with all direct participants making contributions towards this number. The reduction would take place over a two-year period, targeted for completion by 1975 (Keliher 1980 62). In the second and third stages, there would be a 15 percent reduction (five percent in 1976, and 10 percent in 1977) in residual ground and air manpower (across infantry units, tank regiments and battalions, aviation units, artillery units, as well as additional support units and those supporting nuclear weapons) in addition to the armaments of the personnel in those units (Keliher 1980, 62; Dean 1983, 120; Dean 1987, 158; Goldblat 2002, 220).

The Pact’s proposal would require the complete removal of equipment by departing stationed (foreign) forces, and there could be no storage within the territory. According to April Carter, this aspect of the proposal was designed to “undercut the USA’s practice of pre-stocking arms and other equipment in the FRG” (Carter 1989, 235). Per the proposal, all indigenous forces targeted for reductions would also be required to demobilize completely, but would be able to put all of their equipment in storage in the region (Keliher 1980, 62). Notably, the Pact’s proposal included cuts that would have extended beyond military personnel to include armaments:

The Warsaw Pact wanted armament reductions on the common-sense ground that reduction of military personnel without reduction of armaments would not result in a real reduction of destructive power in possible conflict (Dean 1987, 159).

The Pact’s proposal stipulated that force ceilings would apply nationally—to the troops and armaments of individual states within the reduction zone—as opposed to each alliance as a whole. This would result in a cap on West German forces, and would prevent NATO from ever being able to restructure its forces in a way that would permit a build-up of West German forces (Goldblat 2002, 221).

---

<sup>3</sup> For more on the Soviet perspective on this, see Borawski (1979).

Two weeks later, NATO tabled its counterproposal: a decrease in the ground force personnel of each alliance to an eventual “common collective ceiling” of 700,000 ground force personnel, and 900,000 total including air force personnel (Goldblat 2002, 221). The U.S. and the Soviet Union would cut their forces in the first round of a two-stage reduction plan, and all other participating countries would cut their personnel in the second round according to a second agreement to be negotiated at a future date. NATO also proposed a package of six “associated measures,” which were aimed at obtaining provisions for transparency and verification, including the verification of compliance with the ceilings proposed, the pre-notification of large force movements in and close to the reduction area, as well as the presence of observers to vouch for the accuracy of said notifications (Dean 1982, 2; Dean 1983, 120). NATO, however, initially did not put forward any concrete (detailed) proposals for the associated measures because they would have to be contingent upon the kind of reductions to which both sides agreed. An additional obstacle to putting forth a detailed proposal concerning the associated measures was that there was disagreement among NATO members regarding the nature of these measures<sup>4</sup> (Carter 1989, 236).

In contrast to the Warsaw Pact’s proposal, NATO’s proposal called for “asymmetric” cuts for the two sides in order to reach the common ceiling number, meaning that East would make greater cuts than the West to reach parity. The first phase would have the U.S. remove 29,000 troops, but leaving their equipment in Central Europe. In exchange, the Soviet Union would withdraw an entire tank army consisting of 68,000 troops and 1,700 tanks (Keliher 1980, 84; Carter 1989, 236; Goldblat 2002, 221). That the NATO-proposed ceilings would be “collective” and “common” meant that the ceilings would apply to each alliance rather than to each nation, leaving each alliance adjustment room to move troops within the targeted reduction area—a provision for flexibility. Fundamentally, NATO (and the FRG in particular) opposed the Pact’s proposal for “national ceilings,” which they felt would have placed an unjust responsibility for reduction on the NATO countries within the reduction area, and on the FRG in particular (Dean 1982, 2).

NATO was also opposed to the marginal cuts stipulated in the Pact’s proposal, which would have amounted to mere tokenism. This might have served the interests of furthering the détente dialogue, but such reductions were not meaningful for preventing or deterring conventional attack. In a defense of their proposal for the limited multistage reductions (which was leaked to the press), the East confirmed as much:

Of course, to a certain extent this would be a symbolic step. Bu it would be of important political and practical significance since it would clearly show the readiness of all the above states to embark on a real reduction of their armed forces and armaments in Central Europe and would promote the strengthening of national trust (Keliher citing December 14, 1973 speech published in *Novoye Vremya* 1980, 54).

---

<sup>4</sup> It was not until 1979 that NATO did put forward concrete associated measures proposals. This, however, changed arms control: from then on CSBMs would play a greater role; a vital one even for CFE.

Likewise, the Pact objected to NATO's proposal because it feared it would both undercut the existing stability in Europe and tip the military balance in favor of NATO forces (Carter 1989, 236).

### Negotiation Process: Course of the Negotiations

There is evidence to support the notion that the negotiations saw both sides making considerable concessions. On one hand, Ambassador Dean describes the trajectory of the talks as tilting in NATO's favor: "The long history of the MBFR talks," he writes, "shows slow but definite movement of the Warsaw Pact toward the Western position" (Dean 1987, 161). Indeed, the Warsaw Pact would eventually come around to NATO's common and collective ceiling approach, as well as NATO's proposal for phased reductions with the U.S. and the Soviet Union reducing in the first round. The East even warmed to the proposal for associated measures in the end, although it would never address them in depth or respond to proposals detailing the measures.

A critical breakthrough came in June of 1978, when the Soviets tabled a proposal that indicated acceptance of the Western push for parity in the form of the common collective ceiling. The proposal offered reductions to a ceiling of 700,000 ground force personnel and to a combined ceiling of 900,000 ground and air force personnel (Keliher 1980, 73; Goldblat 2002, 221). The Soviets also accepted the Western position of limiting first-stage reductions to the U.S. and Soviet Union, as well as the Western proposal on limitations to armaments, which excluded reductions to the armaments of air forces. According to Keliher, this concession was likely due to the Soviet Union coming to recognize that "requiring reductions and limitations on a multitude of weapons systems would overly complicate the negotiations" (Keliher 1980, 74).

By February of 1982, the Warsaw Pact Alliance had accepted the proposal for reductions by phases and individual ceilings for both ground and air forces, which was tabled in a draft agreement at that time (Goldblat 2002, 222). The draft indicated acceptance of the following: a first phase of U.S.-Soviet reductions of active duty ground force military personnel; and equal collective ceilings for both alliances set at 70,000 men. Regarding the associated measures, the East agreed to establish temporary exit points that were to be guarded by observers; the pre-notification of military activities, including movements into and within the reduction area; and the exchange of data following reductions. The Warsaw Pact states also agreed to non-interference with monitoring of compliance by national technical means (satellite surveillance), and to establishing a consultative mechanism to facilitate the agreement's implementation. Finally, the Pact agreed to avoid the deployment of any withdrawn forces from the reduction area in a way that might threaten the security of the flank states (Dean 1983, 123). According to Dean, this was about half of the line item proposals from the Western draft agreement from July of 1982. On the whole, these concessions signaled that reaching an agreement might actually be possible.

On the other hand, according to April Carter, while the Soviets appeared to have made a greater number of concessions, "the reality of these concessions was questionable" (Carter 1989, 239). The Soviet position on verification remained intractable for the NATO allies, and the persistent data dispute mired any significance of the acceptance NATO proposals

for troop reductions. Additionally, the Soviets continued to use every opportunity available to pursue restrictions on West German forces.

Furthermore, while the latter years of the negotiations reveal Warsaw Pact movement towards NATO positions, Keliher is of the opinion that the early years of the negotiations actually show the West to be making more concessions:

The box score on concessions at the preliminary consultations favored the Soviets. Getting the West to back down on the inclusion of Hungary as a direct participant, dropping the key word 'balanced' from the title of the talks, and blocking agreement on a formal agenda to include confidence-building measures all portended rough going for the West at the actual negotiations" (Keliher 1980, 42).

Keliher suggests that the Soviet hard bargaining strategy may have simply been a "manifestation of the typical hardline approach taken by the Soviets to any negotiation and their natural penchant to push for terms that were as favorable as possible" (Keliher 1980, 42).

NATO did eventually make a number of concessions on substantive proposals. By December of 1979, the West would lower the target number of troops for withdrawal by the Soviet Union from 68,000 to 30,000 (Carter 1989, 238). Then again in 1985, NATO proposed a reduction of 5,000 U.S. troops and 11,500 Soviet troops, while the WTO proposed a reduction of 6,500 U.S. troops and the same 11,500 Soviet troops (Carter 1989, 240). By the mid-1980s proposals were converging on numbers that represented the "mere tokenism" to which the West had initially objected so strenuously. This focus on low numbers reflected the tradeoff between reaching an insignificant agreement and not reaching any agreement at all.

### Agreement Scope

The scope of a potential MBFR agreement varied significantly over the course of the negotiations. At various points during the negotiations the two sides submitted proposals that included reductions to personnel, tanks, nuclear warheads, nuclear delivery vehicles, and CSBMs. The exchange of proposals at times seemed disjointed and disconnected, often motivated by domestic priorities, and even out of line with security concerns—a departure from any kind of real uncertainty management.

Although NATO initially preferred to leave armaments out of proposals and focus on personnel, the Western Alliance did broaden the scope of a potential agreement by proposing the associated measures designed to assist in the verification of meaningful reductions:

The West was envisioning much more than just a reduction without any sort of capability to verify and monitor the post-agreement period. It...wanted MBFR to be a serious military/technical type of negotiations and not just token troop withdrawals under the umbrella of political expediency and détente" (Keliher 1980, 22).

Notably the East also initially sought a relatively broader agreement inasmuch as it sought the withdrawal of more than just personnel. An early Pact proposal, which was leaked to a Soviet news outlet, revealed that the Pact preferred the “withdrawal or disbandment of entire tank and motorized infantry formations (divisions and brigades) and units (regiments and battalions), units of combat aviation (regiments, wings and squadrons), artillery, missile and anti-aircraft missile units and support units (regiments and battalions) as well as units and subunits equipped with nuclear weapons” (proposal published/leaked to *Novoye Vremya* on December 14, 1973, quoted from Keliher 1980, 55).

Early discussions concerning the agenda would narrow the scope to produce a consensus on the exclusion of naval (and amphibious) forces from the negotiations (Dean 1983, 120; Carter 1989, 234). This would be the first time the scope of the negotiations was officially narrowed by mutual agreement—in the service of setting a manageable agenda in a complex negotiating space (Dean 1983, 120). However, in 1973, both sides agreed to widen again the scope of the negotiations to include armaments in addition to personnel (although Western proposals, which prioritized the reduction of military personnel, would never actually include the reduction of armaments) (Dean 1983, 122).

While the scope of the negotiations was intended to cover weapons and personnel relevant to curbing a conventional attack, the negotiations would also come to touch on reductions to nuclear weapons. In establishing their first position in the negotiations, NATO chose from a number of proposal options: “Before finally deciding on its negotiation objective, NATO studied at least two other reduction concepts, which represented some effort to cope with the problem of armament reductions” (Dean 1987, 155). NATO would later table one of these options—the “nuclear option”—that it had initially considered. In December of 1975, the Western alliance presented a one-time offer to withdraw 36 American Pershing I surface-to-air tactical nuclear missile launchers (Keliher 1980, 67), 54 F-4 nuclear-capable Phantom fighter-bombers (aircraft), 1000 nuclear warheads, and to limit the residual levels of nuclear warheads (approximately 7,000 remaining). The removal of this equipment would take place in exchange for the Soviet withdrawal of an entire tank army, which consisted of 68,000 troops and 1,700 tanks. The East would also be required to come into compliance with a ceiling of 700,000 military personnel<sup>5</sup> (Dean 1983, 122; Goldblat 2002, 221). NATO likely tabled this one-time proposal in order to “sweeten” its original offer to withdraw U.S. soldiers in exchange for twice as many Soviet troops and Soviet tanks.<sup>6</sup>

The East eventually responded to the West’s nuclear proposal with an offer to match on the withdrawal of nuclear-capable aircraft, tactical surface-to-surface missile launchers, and

---

<sup>5</sup> Notably, this offer to reduce nuclear weapons in exchange for conventional ones is highly unusual in arms control negotiations (and may be the only instance of a nuclear-for-conventional offer).

<sup>6</sup> A memo of a conversation between U.S. and U.K. leadership regarding the original proposal includes the following comments from Secretary Kissinger: “There is...this other thing NATO has to recognize—the Russians will not roll over and accept it. I think our position in its numerical form will prove unacceptable to the Soviets. And they have to take a 62,000 cut to [our] 29,000 and [their] tanks against nothing. No Soviet negotiator can sell this to the Politburo. I don’t mind having this as an opening position. We have to keep in mind the elements of a nuclear package or another package...” (Foreign Relations of the United States 1969-1976, Volume XXXIX, European Security 2007, 997; hereafter FRUS Volume XXXIX, European Security).

nuclear warheads. The East also offered a 17 percent reduction on personnel and equipment. This proposal remained consistent with the East's "rigidly symmetrical approach" to tank withdrawals. However, the offer came with the provision that reductions would be based on "Eastern data" (Keliher 1980, 74). Predictably, the West found this proposal unacceptable due to the fact that such an approach would leave a critical disparity of holdings intact<sup>7</sup> (Keliher 1980, 71-72). In addition, the West found the proposed reductions to NATO forces, particularly FRG, to be too high.

However, these proposals were actually the most ambitious of the negotiations. The proposal coming from the Soviets, in particular, was unexpected:

By their surprising offer to reduce nuclear weapons and warheads, the Soviets demonstrated, to an extent greater than they probably later found to be prudent, their eagerness and desire to set reductions and limitations of Allied nuclear systems (Keliher 1980, 73).

Their offer was ultimately rejected by NATO, which then withdrew the nuclear option entirely. Two years later, in order to get the stalled talks started again, the Soviets would offer and execute unilateral nuclear reductions. Nevertheless, the negotiations would circle back to the initial narrow scope consisting of the limited personnel reductions. Finally, everything changed in 1986, when Secretary General Gorbachev, who had recently entered office, proposed that the scope of talks be expanded to cover a wider agenda, the MBFR talks officially came to a close, and preparations began for the CFE Treaty talks (Carter 1989, 240).

### Territorial Scope and Participation

Early discussions were also aimed at addressing territorial scope—the geographical region covered by a potential agreement—as well as negotiation participants. These two issues were intertwined: directly participating states would be subject to reductions. Early on, the East expressed the preference that the MBFR talks be open to all interested states—an attempt to include more participants and to avoid the "rigidly bloc character" of the talks. This was actually a direct appeal to France, which had refused to participate in talks with a bloc-to-bloc format (Keliher 1980, 34). NATO, however, insisted otherwise, preferring to limit the participants in the negotiations to those countries that actually had troops stationed in Central Europe (Keliher 1980, 33). The question of who would participate in the talks continued on through preliminary talks, with both sides lobbying for the inclusion and exclusion of various states outside of Central Europe.

Talks would drag on this way for months, bogged down in the question of which countries would participate. While the East lobbied for Hungary's involvement as an indirect participant, the West preferred that Hungary participate as a direct participant due to Hungary's geographic proximity to the targeted region of Central Europe. As a direct participant, Hungarian and Soviet troops and armaments within the state would be subject to reductions, providing the West with a greater degree of "flank security" (Keliher 1980

---

<sup>7</sup> NATO possessed 6,700 tanks in Central Europe, while the Pact states had 16,000.

36). The Soviets, however, did not want Hungary included as a direct participant because they preferred to have some ground forces stationed in Eastern Europe (Hungary) outside of the Soviet Union that were not subject to MBFR restrictions.

Italy's status was similarly contested. If Hungary was to be included as a direct participant, then the Warsaw Pact wanted Italy to be included as one as well.<sup>8</sup> This proposal had adverse effects on the progress of the negotiations: "Resisting vigorously any Allied suggestion that Hungary should be a direct participant, the Soviets effectively brought the preliminary talks to a standstill for over three months" (Keliher 1980, 37). Both Hungary and Italy would eventually participate as non-negotiating states.

## Roadblocks

In addition to disagreement over format and scope, there were a number of other roadblocks that stymied the MBFR talks. These included a high degree of mistrust (or a concern over a lack of sincerity); issues of parity; the comparison of weapons and therefore the nature of the reductions; and a dispute over data on the number of troops in Central Europe.

## Trust and Sincerity Issues

A concern over sincerity was an ongoing issue throughout the talks. Early in the process of getting ready for force reduction negotiations, the Soviet Union invaded Czechoslovakia (in August of 1968), which had the effect of delaying the talks. NATO wasn't sure that the Soviet Union came to the table to sincerely negotiate a meaningful agreement that would serve the security needs of the participating states. Among other concerns, the West feared that the Soviet Union was using the negotiations as a vehicle for further executing the "Brezhnev Doctrine." These concerns were augmented by the failure to provide data on Warsaw Pact forces, and later exacerbated by the provision of questionable data. In the end, the West had reportedly overcome considerable "apprehensions" about any potential agreement with the East, in getting to the table (Dean 1983, 121).

Likewise, the Soviets had doubts that would make them reluctant to begin talks, including the concern that the U.S. was using the talks to obtain a strategic advantage, and that the FRG would manipulate the outcome to serve the interest of augmenting their own military power. The Mansfield amendment, however, was critical for effectively communicating sincerity to Soviets (Keliher 1980, 27-28), and getting them to agree to talks. In the end, it would take two and a half years for both sides to get to the table (Keliher 1980, 33).

Suspicion and mistrust did not abate once negotiations began. April Carter discusses how the talks reflected the "ritualized suspicion" between NATO and the Warsaw Pact. This was made manifest in NATO's insistence on verification and the Soviet Union's fear that

---

<sup>8</sup> Just as the U.S. wanted to include Hungary as a full participant for strategic reasons (there were 40,000 Soviet troops stationed there), the USSR wanted the exact same thing for Italy, which would have brought the U.S.'s Sixth Fleet (stationed in Italy) under the umbrella of MBFR limitations.

inspections would be used for spying purposes (Carter 1989, 243). Furthermore, suspicion was evident in the NATO concern that the Soviet Union's offer for the unilateral withdrawal of troops and equipment was a trick, as well as in the Soviet Union's perpetual concern about FRG force levels. The Soviet Union objected to the two-phases of negotiations and two separate agreements, balking at the idea that it would reduce its own forces in Central Europe in exchange for U.S. reductions, leaving Western allies unrestricted for a period of time to increase their forces, absent a binding agreement. According to Dean, "much of the time in the Vienna negotiations was taken up with this issue" (Dean 1983, 121).

### Parity Issues

Parity issues would plague the talks throughout the nearly sixteen years. Although it was also generally accepted as true that the two alliances had parity in air force personnel and that the Soviet Union had achieved nuclear parity in the 1960s (Dean 1987, 85), among NATO allies it was widely believed that the Warsaw Pact had superiority in terms of ground force capabilities (both personnel and armaments), which could give the alliance a clear advantage in the event of a conventional attack (Dean 1983, 120). NATO's acceptance of the Pact's proposals for symmetric reductions, therefore, would have meant codifying these existing asymmetries—an unacceptable proposition for NATO (Dean 1983, 120). As such, the Pact's proposals were not well received.

The discussion of parity was never resolved during the negotiations, which prevented agreement on a conceptualization of "military balance." Arms control scholar Jozef Goldblat explains this problem:

Since different national perspectives generated conflicting perceptions of what was an acceptable military balance, the controversy regarding the scope of the reductions and the manner in which they had to be carried out—symmetrically, according to the East, or asymmetrically, according to the West—remained unresolved" (Goldblat 2002, 222).

Nevertheless, both sides were able to make a number of concessions that would allow them to come closer to an agreement, though they would never actually get there.

## Hypotheses and Analysis

**(1) A “feeling of security” drives the goal-setting for arms control negotiations, which results from scenario planning. In working through scenarios, negotiators use “security-specific heuristics” that include: (a) worst-case scenario thinking; (b) limited theater of war thinking (one-weapon type planning); and (c) low-dimension (non-complex) scenario thinking. Treaty proposals and goals reflect these forms of thinking, often in counter-productive ways.**

This hypothesis speaks to effects of strategic planning that takes place in the run-up to arms control negotiations, as well as the goals and formal proposals for arms control negotiations that emerge from that process. It suggests that negotiators and leaders use cognitive shortcuts in establishing goals and proposals for these security-specific situations. In considering the relevance of these concepts to the MBFR case, I first consider the hard security motivations of each side for engaging in the talks as well as additional issues critical for goal setting. What were the threats against which both sides were hedging? How did both sides perceive or construe these threats?

### Curbing the Conventional Threat

A primary motivation for the MBFR talks was indeed the mutual desire to reduce the risk of a particular threat—a potential surprise attack in Central Europe resulting from an eruption of East-West tensions. Both sides sought to lower the feasibility of an outbreak of conflict in Central Europe along the intra-German border.

The concern about a surprise attack was particularly acute for NATO, which had a defense strategy in Europe that required a three-week advanced notice of a Pact attack in order to be successful. However, Soviet capabilities had advanced so significantly since the 1960s that the expectation of having this advanced notice was no longer realistic (Record 1980, 22). Jeffrey Record explains:

The principal consequence of the Soviet military buildup in Central Europe has been to *deny NATO the amount of warning time it needs to augment and reposition its forces deployed on the Continent* (Record 1980, 30).

Without an MBFR agreement, NATO anticipated that Soviet forces would remain in a “forward position” in Central Europe along the intra-German border (Dean 1983, 118). So long as this was the case, NATO would be compelled to do likewise—to maintain forces sufficient for balancing them in an equivalent configuration. Dean describes the scene as “the largest and most potent peacetime military confrontation in the history of the world” (Dean 1983, 116). As such, NATO viewed the MBFR talks as an opportunity to reduce the likelihood of an eruption or sudden attack. For the Warsaw Pact states, the MBFR talks were also an opportunity to prevent the build-up by the FRG, and a potential conventional attack by their forces, which had twice in history dominated Soviet troops.

Although the two sides shared a concern about a sudden conventional attack, they had fundamentally different security concerns. Kelihier explains reaching an agreement would have required that each side had been satisfied its perception of the concept of

“undiminished security” (Keliher 1980, 52). This proved impossible because each side had unique ideas about what kinds of measures (reductions) would prove destabilizing:

The West saw the current active duty force ratio as destabilizing and wanted to change it, the East saw it as favorable to them and thus it was stabilizing and to be preserved...There is no consensus on the balance (Keliher 1980, 56).

In his speech to the World Conference of Peace forces in October of 1973, Leonid Brezhnev addressed this concern about the potentially destabilizing effect of reductions, and cautioned:

...[I]t is very important that future reductions not disturb the existing balance of power in Central Europe and on the European continent in general. If this principle is disturbed the whole question will become a bone of contention and an object of unending dispute...” (Cited in Keliher 1980, 59).

It is also important to note that, at root, the West believed that the East’s proposed reductions—a 17 percent reduction across the board over a short timeframe—would likely create “considerable turmoil and even destabilization, not balance (Keliher 1980, 62). In this way, the terms provided insufficient uncertainty management for the Warsaw Pact. However, the Soviet Union likely believed that maintaining the same “correlation of forces” would preserve the current status quo stability (Keliher 1980, 67). Keliher further explains: “To the Soviets, stability comes through having primacy in strength” (Keliher 1980, 67).

### **Nuclear Parity, Threat, Escalation, and the Doctrine of Flexible Response**

The MBFR talks may have been about conventional arms control, but any discussion of the strategic landscape or military threat would be incomplete without mention of the nuclear issues lurking in the background.

#### **Nuclear Parity**

Both sides were motivated by the desire to ensure for themselves nuclear security or even dominance. That Soviet capabilities had generally caught up to those of the United States meant that NATO’s nuclear superiority had been eroded. By the time the MBFR talks began, the Soviet Union had shifted the “qualitative balance” of conventional forces in Europe and also had, for all intents and purposes, achieved nuclear parity (Record 1980, 22). NATO, in one sense, entered into the talks to halt this shifting balance, but also pursued alternative measures to help achieve this end. The two additional measures were, first, the implementation of a plan to improve their capabilities through the Long-Term Defense Program (LTDP), which was adopted in May of 1978, and second, the engagement of the Soviets directly in nuclear arms control negotiations (like SALT II).

As part of the LTDP, NATO pursued the modernization of its arsenal of “theater” nuclear forces (short- and mid-range weapons) in Europe, which coincided with the course of the MBFR negotiations. During negotiations, NATO deployed Pershing II (medium-range ballistic missiles) and long-range ground-launched cruise missiles (GLCMs), while removing existing Pershing IA missiles, and 1,000 nuclear warheads (unilateral

reductions). The entire set of actions was aimed, ostensibly, at rectifying the loss of military advantage and maintaining alliance security commitments. The unilateral withdrawal of nuclear warheads was also possibly designed to curb potential Soviet fears that NATO was engaged in a build-up, rather than a modernization, although it could also be construed as a reply in-kind to the Soviet offer to withdraw up to 20,000 personnel and 1,000 tanks unilaterally, and to reduce medium-range nuclear missiles. The Soviets had initially offered these “unilateral” measures in exchange for an agreement with NATO that the U.S. would deploy no additional medium-range systems (including Pershing II and cruise missiles) (Keliher 1980, 82 and 86).

Nevertheless, the Soviets objected strenuously to these modernization plans, and subsequently refused to negotiate over the reduction or removal of their own medium-range delivery vehicles (Option III) until the West withdrew the new Pershing and cruise missiles (Keliher 1980, 105).

### Nuclear Escalation

Fundamentally, both sides sought to avoid the escalation of a conventional conflict into a nuclear one. Ambassador Dean explains that negotiators held the belief that the “East-West conflict in Europe could rapidly escalate to nuclear war, including all-out strategic strikes on the United States and the Soviet Union” (Dean 1983, 117). The talks, in one sense, were aimed, not simply at reducing the likelihood of a surprise conventional attack, but also at the intertwined goals of reducing the likelihood of escalation to a nuclear conflict by reducing the likelihood of a potential conventional one.

European NATO allies had become concerned about the Soviet Union’s ability to retaliate with strategic and nuclear weapons during a conflict, which they had acquired in the mid-1960s. This nuclear capability made it unlikely that NATO would respond to a non-nuclear Soviet attack with nuclear weapons (out of fear of a nuclear retaliation), and therefore forced a change to existing NATO strategy, which had relied on tactical nuclear weapons to counter Warsaw Pact conventional superiority:

Since the mid-1950s, tactical nuclear weapons have been the mainstay of NATO’s defense... They were there [in Europe] to counter the large superiority of conventional forces the Warsaw Pact held in Central Europe and thus deter the Soviets from launching an attack on Western Europe (Keliher 1980, 96).

Soviet acquisition of nuclear capability made the response of “automatic escalation” less desirable for the West.

In 1968 NATO adopted a three-part strategy, adding “flexible response” to the existing strategic concept, which came to consist of deterrence, forward defense, and now flexible response. These strategies were to be implemented sequentially in the event of a conventional conflict with the express purpose of avoiding immediate escalation to a nuclear one (Keliher 1980, 97). Per the earlier doctrine, should both conventional and nuclear deterrence fail, NATO would first respond with “forward defense,” which began

with conventional defense in the FRG<sup>9</sup> (Keliher 1980, 97). NATO's conventional forces were to be positioned in such a way as to guard the intra-German border, hold their ground, and minimize the potential for lost territory (Record 1980, 7; Keliher 1980, 126 cites from the Federal Minister of Defense White Paper 1979).

Failing adequate conventional retaliatory capability, a margin of nuclear superiority in tactical and strategic nuclear forces would serve the dual purpose of deterring a Soviet conventional attack and escalation to a nuclear attack. If NATO forces were not able to deter or defeat an invasion by conventional forces (per forward defense), the U.S. would use tactical nuclear weapons as an escalated response to the Soviet Union (Keliher 1980, 96-97). This response was designed to terminate the war in terms "acceptable to the United States and its allies at the lowest feasible level of conflict" (Keliher cites Schlesinger 1975, 8).

However, once the Soviet Union had achieved parity in strategic nuclear weapons, the NATO doctrine concerning the use of tactical weapons would fail to provide a credible deterrent. Thus, NATO adopted the doctrine of flexible response in 1968,<sup>10</sup> simultaneously reassuring U.S. allies of their strategic nuclear security guarantee despite cuts to both conventional and nuclear armaments (Record 1980, 6). Record explains the strategy:

Flexible response calls for the development of strategic nuclear, theater nuclear, and conventional capabilities sufficient to provide NATO an ability to deter, and if necessary, to defeat Pact nuclear and conventional aggression in Europe (Record 1980, 6).

Thus, for NATO, the perceived threat was actually more complicated than that of a sudden conventional attack. However, NATO participants did focus on reducing ground force personnel via MBFR reductions because they believed the most likely onset of conflict to be an attack by Warsaw Pact conventional forces, which had "ground superiority" over NATO forces, as opposed to air force manpower, which was believed to be roughly equal (Dean 1983, 120).

### The Use of Security-Specific Heuristics

The hypotheses above suggest that we might find evidence of negotiators using heuristics, including worst-case scenario thinking, limited theater of war thinking, and low-dimension

---

<sup>9</sup> Forward defense was also designed to be implemented in phases. In phase one of a response to an invasion of Western Europe, NATO forces would deploy a "covering force" of mostly armored cavalry along the intra-German border, which would assess the main sites of invasion, as well as "impose maximum losses on advancing Pact forces, and to permit the assemblage to the rear of sufficient operational reserves for the main defensive battle" (Record 1980, 7-8). The second phase (main defensive battle) would aim to halt Pact forces before they reached the Rhine River, using major NATO combat formations in Europe as well as reserves stationed in North America and the United Kingdom. The third phase would consist of either a major counterattack (should the Pact's forces be successfully held off) to remove the forces entirely from NATO territory, or the consideration of the use of nuclear weapons if the Pact forces were not successfully thwarted.

<sup>10</sup> NATO first expressed interest in talks aimed at the mutual reduction of conventional forces in Europe in 1967.

scenario thinking, which motivates states to come to the negotiating table and produces goals or targets for treaty terms. Evidence does in fact suggest that both sides were motivated by worst-case scenario thinking to come to the table. Only some of their proposals, however, reflect the desire to curb the outbreak of a sudden conventional attack. Lurking in the background throughout the talks was fear of escalation to a nuclear conflict. When the proposals did reflect worst-case scenario thinking, such thinking employed scenarios that had escalated beyond conventional attack. Proposals would eventually reflect these fears and the desire to reduce the likelihood of this kind of catastrophe. This “threat eclecticism,” however, disrupted the fluid exchange of proposals in a bargaining situation and impeded negotiations.

Thinking about a threat in terms of escalation like this was actually relatively complex or multi-dimensional. It consisted of envisioning the outbreak of a conventional conflict along the intra-German border escalating to a nuclear war and then spreading in various ways throughout Europe. Not surprisingly, the proposals exchanged were unable to capture this complexity. Furthermore, the climate of suspicion and wariness made such proposals, which would have consisted of large, integrated reductions, unlikely or even impossible.

Not only could the proposals not get a handle on the complexity associated with the worst-case outcome, both sides had different ideas about how to get a handle on reducing the likelihood of the initial outbreak of conflict. April Carter writes that “both sides were pursuing incompatible strategic goals,” which, she argues, was the most significant impediment to success during the MBFR negotiations (Carter 1989, 243). While NATO was operating with the goal of establishing a strategic balance of peacetime forces, the Warsaw Pact fundamentally wanted to contain the FRG and was pursuing equal reductions for both sides that largely amounted to tokenism. There was no security gain to be made in an agreement that afforded neither side that which they most wanted, namely a reduction to FRG troops for the Warsaw Pact Union and the withdrawal of Soviet troops from Central Europe for NATO (Carter 1989, 245).

This suggests that when both sides engage in worst-case scenario thinking, but have different ideas about what is that worst case (namely, how a conflict like that would begin), proposals reflecting corresponding goals can be both ineffective at curbing a particular threat and misaligned, making it can be impossible to reach an agreement.

**(2) The goals and strategies that nation states use for reaching arms control agreements focus on reducing uncertainty in order to prevent possible losses via (a) the elimination of threat (e.g., by banning an entire class of weapons that might be used against the nation state), and (b) the reduction of risk of defection (e.g., by establishing verification regimes). This focus on loss and risk reduction has two notable opposing effects. First, in some cases, it facilitates reaching an agreement by providing simple, straightforward, negotiable targets. Second, such a limited focus can actually produce less effective, and therefore less durable, agreements. This is because agreements of limited scope fail to manage the uncertainty about security because proposed reductions don’t map well onto the broader security landscape.**

*(2b) In some cases, when the scope of the goals for a negotiation is too narrow with respect to the security threat perceived, it can be impossible to reach an agreement.*

The theories advanced by this project suggest that a focus on the kinds of goals that are associated with reducing the risk of an attack and the costs associated with conflict may facilitate reaching an agreement. They also suggest that a narrow scope for a potential agreement has a similar effect—making it more likely that an exchange of proposals will result in an agreement. Indeed, over the course of the MBFR negotiations we can see evidence that suggests a convergence to these kinds of risk reduction (narrow) proposals. This occurred despite some early preferences to the contrary for a broader agreement.<sup>11</sup> These hypotheses point to the fact that agreements that result from these narrower provisions tend to be less successful, once implemented. In this section I address the question of why no agreement could be reached given the fact that the proposals exchanged reflected such a narrow focus.

### **Risk Reduction Strategy: Limiting the Scope of the Agreement**

There was considerable debate during the MBFR talks regarding the scope of a potential agreement. One contributing factor to the prolonged debate was the fact that the two alliances did not see eye-to-eye on what was the threat that most urgently needed managing. Because of this, they could not agree to what kind of arms control proposals would best manage that threat.

With the exception of the brief exchange of nuclear proposals in the late 1970s, the MBFR negotiations would ultimately come to focus primarily on active duty ground and air forces stationed in Central Europe, within the territories of the Federal Republic of Germany, Belgium, the Netherlands, Luxembourg, the German Democratic Republic, Czechoslovakia, and Poland (Dean 1983, 116). This was the part of Central Europe that “saw the beginning of the two most destructive wars in human history” (Dean 1983, 116).

While the East initially preferred a more limited agenda with respect to arms control (without significant reductions or associated measures), the East had initially hoped that reductions would apply to armaments as well as personnel. Meanwhile, the West was pursuing a more comprehensive arms control package, in the traditional arms control sense. Keliher explains:

[T]he Eastern leaders indicated that they wished to hold MBFR to a simple reduction exercise by their refusal to have anything on the agenda but reductions. In contrast the West wanted items on the agenda such as verification and confidence-building measures that would make MBFR a true military/technical arms control agreement. This difference was most critical because it showed that the East looked upon MBFR as essentially a political/détente negotiation (Keliher 1980, 42).

---

<sup>11</sup> In a meeting on August 2, 1973 in Washington, D.C. with U.S. Secretary of State Henry Kissinger, Defense Minister of the United Kingdom Lord Carrington said “We would prefer to see judgments in terms of combat effectiveness rather than in numbers,” in regards to a potential first NATO proposal (FRUS Volume XXXIX, European Security 2007, 995).

While the East pursued limited reductions sufficient for helping to accomplish détente goals, the West preferred arms control that would manage uncertainty (and the risk of defection). However, there was very little discussion of the CSBMs (the “associated measures”) that would accomplish this during the talks by either side. For the East, this perhaps reflected a lack of interest. For the West, such measures would have to be contingent upon the kinds of reductions in the final agreement.

Although the Soviet Union preferred a more limited agreement, that preference did not preclude the inclusion of armaments—at least initially. Ultimately, however, the substantive focus of the MBFR negotiations centered on reductions to personnel, with other measures—including limitations to armaments and CSBMs—gradually falling away. Blacker and Duffy (1984) explain why armaments posed such a problem:

The difficulty with armaments has been practical rather than theoretical; indeed, given the rapid pace of conventional military modernization and deployment, the question of limiting armaments might seem to deserve priority in the interests of stability. But the disparity in the weapons strategies and deployments of the two sides has made it difficult to find a common ground on the issue of armaments limitations. Personnel, by contrast, is an easier force to measure and reduce—though the calculations are not without their difficulties” (Blacker and Duffy 1984, 298).

While typically this kind of focus on weapons and thresholds facilitates dialogue and increases the likelihood of reaching an agreement, in this case, disparity in the weapons strategies and deployments of the two sides made it difficult to find a common ground on the issues of armaments limitations. Personnel proved to be easier to measure, compare and reduce, although those calculations were not entirely straightforward either (Blacker and Duffy 1984, 298).

Ambassador Dean was fairly forthcoming about the idea that this focus on personnel reductions was too limited. He points out two reasons for this. First, reductions alone, absent limitations on residual ceilings, are not meaningful with respect to the security assurances both sides desired. He writes:

To be meaningful, a reduction must be accompanied by a limitation or ceiling on the remaining elements of the type being reduced, whether the element is artillery pieces or soldiers. Reductions without residual ceilings are illusory, and, to be effective, ceilings must be expressed in finite numbers (Dean 1983, 124).

Second, Dean points out those reductions, even when accompanied by limitations or ceilings on residual forces, can be insufficient when they, essentially, do not manage uncertainty effectively. Such proposals reflect obsolete goals for contemporary arms control, which requires CSBMs. Dean explains this in his own terminology:

A more general criticism of the focus of the MBFR negotiations is that force reductions and limitations as such are no longer a useful vehicle of arms control and that emphasis should properly be placed on confidence-building measures and crisis stability (Dean 1987, 172).

This was also the case for the later proposals, which focused on personnel reductions exclusively. The substantive scope of these proposals was simply too limited to manage the perceived threat. Dean explains further:

It is believed that manpower reductions, even if implemented, would be ineffective in reducing the level of confrontation...It is a defect of MBFR that no adequate arms reduction concept has yet been developed" (Dean 1987, 172).

Furthermore, a number of weapons that would have been involved in a potential conventional conflict were left out of the proposals entirely. Even the nuclear proposals were insufficient, and would have done little to alleviate the most pressing security threat. When asked about the Western proposal of December 1975 (Nuclear Option III), the Polish representative to the MBFR talks, Dabrowa, discussed its insufficiency. He said:

The new proposal provides for reduction of only a certain part of the American carriers of nuclear weapons. It does not concern the carriers possessed by the armed forces of the other NATO states in Central Europe...We consider the proposal of the 16 December 1975 as a step that is tantamount to recognizing the need to include nuclear weapons in reductions, but we also consider this step inadequate (Keliher 1980, 100 citing "Polish Delegate's Vienna Press Conference," *Trybuna Ludu*, Warsaw, 31 January-1 February 1976, 1-2.).

The proposed reductions themselves could not effectively manage uncertainty because this kind of "classic" arms control has limited efficacy in curbing real threats. Dean writes: "Force reductions and limitations...are no longer a useful vehicle of arms control and...emphasis should properly be placed on confidence- and security-building measures and crisis stability" (Dean 1987, 172).

In addition, evidence also supports the notion that NATO used the MBFR negotiations to bargain away less effective weapons in order to modernize their forces in a manner that wouldn't provoke any kind of retaliation or response. Carter explains that "[b]oth sides had cautiously tailored their proposals so as to allow weapon modernization and to ensure that the weapons that might be bargained away were of limited military value" (Carter 1989, 244). Attempting to bargain away weapons of limited military value portends poorly for the management of uncertainty.

Furthermore, the inability to compare both personnel and armaments also hindered the talks:

Asymmetries in force structure, types and number of weapons deployed, in military doctrine and in the distance of the two Great Powers from the Central European Theatre complicated the possibility of an agreement on what, exactly, would constitute a fair trade-off further (Carter 1989, 243)

Finally, while the pact-to-pact negotiations were, essentially, Europe-wide considering all of the direct and indirect participants, the proposed reduction area was relatively limited—confined to a small region of Central Europe, centered on East/West Germany. The area of

proposed reductions was too small to ensure security (for NATO). Dean explains the sin of this omission:

It reflects the view that the MBFR concept is defective because the reduction area does not include the western military districts of the Soviet Union, where a large number of forces are stationed that could be used against NATO forces in the event of a conflict” (Dean 1987, 171).

Jozef Goldblat also explains how the artificially limited reduction area negatively impacted the negotiations:

From the strategic point of view, the relatively narrow sector of Europe where the reductions were to take pace could not be isolated from the remaining European area; it could not be subject to a different regime without affecting the military balance on the European continent as a whole. The *artificiality* of the exercise was accentuated by the exclusion of Hungary and Italy from the designated zone of possible reductions, as if the forces deployed in these two countries were unrelated to the disposition of forces in the central part of Europe, as well as the absence of France from the negotiating table (Goldblat 2002, 222)

In short, the territorial scope of the negotiations had a negative impact on the ability of negotiations to ensure a feeling of security, or to lower uncertainty about security.

Fundamentally, the limited scope of the agreement—presumably a product of high mistrust, suspicion and uncertainty about security—prevented the proposals from having the ability to meaningfully contribute to security. Indeed, the limited scope of the proposed agreements was too narrow to be effective.

### **Risk Reduction Strategies: Splitting the Agreement into Parts**

Motivated by the desire to reduce the risk of Soviet defection (cheating), NATO employed a classic risk reduction strategy, proposing to split the agreement into two separately negotiated agreements. Per the NATO proposal, the first round of negotiations would establish reductions for the U.S. and the Soviet Union. The negotiations and reductions would be followed by negotiations for a second agreement, which would establish similar reductions for the rest of the states in the reduction zone (Dean 1983, 121). NATO was concerned that the Soviet Union would not completely withdraw from the reduction area (Dean 1983, 121). If they reneged on the first agreement and failed to withdraw, the second agreement would never go into effect. This was also a way to appease the domestic U.S. demand for troop withdrawal from Europe immediately, per the initiatives that precipitated the Mansfield Amendment.

The Soviet Union objected to this proposed format for the negotiations and reductions, not because of the two-agreement format per se, but because the first agreement didn't ameliorate the threat with which they were most concerned: the forces of the FRG. The Soviet Union was therefore reluctant to agree to reductions to their own forces absent any limitations to those of the FRG. Thus, they were concerned about cheating in a way as well.

MBFR illustrates a rare case in which the pursuit of treaty terms associated with risk reduction does not result in an agreement. What is notable is that proposals converged around these more-easily negotiated kinds of proposals. Nevertheless, the glaring reality that the proposals would come up short in the real management of any kind of uncertainty combined with the different security goals of both sides made reaching an agreement impossible.

**(3) High uncertainty about the future along multiple dimensions implicitly affects the ability to reach an agreement.**

*(3a) High environmental uncertainty can make it difficult for the proposals put forth to contribute to security in an adequate way.*

*(3b) High complexity may make it difficult to put forth meaningful proposals that could meaningfully contribute to security.*

*(3c) High mistrust or suspicion can make it impossible to reach an agreement.*

*(4) The management of these multiple forms of uncertainty—including uncertainty tied to regional instability, regime change, technological change, and the evolution of military strategy—tends to facilitate reaching agreement and produce durable agreements.*

**(4b) If external events or sources of uncertainty cannot be managed through arms control, it is likely an agreement won't be reached.**

*(5) For arms control, the management of uncertainty calls for a strategy that pursues flexible agreements that may be characterized as vague, broad, shallow, and loaded with confidence- and security-building measures.*

While the inability to manage perceived threats through traditional arms control clearly hindered the talks, other factors also contributed to the inability to reach an agreement. The talks actually dragged for so long, they became vulnerable to effects of political changes and altered security landscapes, creating a kind of moving target for any potential agreement. Indeed, the inability of the proposals to manage uncertainty from these other sources became apparent over time (Keliher 1980, 154-156).

First, a lack of sustained high-level interest in the talks contributed to failure (Keliher 1980, 154-156; Dean 1987, 170; Hopmann 1993, 974). However the reason for the lack of sustained interest is compelling as an indicator of alternative threats and competing security priorities. As such, they present further evidence that the talks, which were not top security priority, were actually not managing an urgent threat:

For the United States, and probably for the Soviet Union, multilateral arms control negotiations like MBFR, CDE, and the chemical and biological warfare negotiations at the UN Commission on Disarmament have failed to achieve top-priority interest because they are not considered, rightly or wrongly, to involve issues of national survival" (Dean 1987, 168-9).

Indeed Keliher describes the MBFR talks as “in the shadow” of the second round of SALT negotiations (SALT II) (Keliher 1980, ix). In a letter to Secretary of State Kissinger, Secretary of Defense Schlesinger articulates that delays in MBFR were due to SALT. “We could not move on MBFR until the SALT stage had been set,” he wrote (FRUS Volume XXXIX, European Security 2007, 1032). The longer the talks went on, the worse the problem of a lack of sustained high-level political interest became (Dean 1983, 123). Dean describes this phenomenon as a “vicious circle,” in which a “lack of progress has diminished political interest and lack of interest has reduced the chances for progress” (Dean 1983, 123).

Moreover, a lack of political interest on the part of the United States in particular is evidenced by the notion that the U.S. did not feel any direct security threat in this matter. Dean describes the “persistent U.S. inclination to view the MBFR talks as a matter of interest primarily to European NATO states.” Other states, such as the FRG, were reluctant about the value of a potential MFBR agreement, which made them reluctant to “take the lead” during the talks (Dean 1987, 180-181).

Second, external events have the capacity to derail negotiations, and MBFR was not exception. The long timeline of the MBFR negotiations opened up numerous possibilities for this. The most extreme was the Soviet invasion of Afghanistan, which “severely damaged the détente process and led to a decision by the United States to put the SALT process on an indefinite hold” (Keliher 1980, 105). Likewise, the Soviet invasion of Czechoslovakia in August of 1968 had similarly delayed the process of getting to the table for MBFR (Keliher 1980, 17; Carter 1989, 232).

Third, the long timeline opened up possibilities for technical change, which could create the sense of a “moving target” for a potential agreement. This was particularly true for the proposals involving nuclear weapons. April Carter explains:

The momentum of weapon development and deployment did impinge on the MBFR negotiations. NATO initially devised Option III in 1972. By the time it was finally proposed in 1975, many defense experts had concluded that it made less sense (by then) to trade NATO nuclear weapons against a WTO tank army” (Carter 1989, 244).

There was also no prohibition on modernization or enhancements to existing arsenals during the course of the MBFR talks. NATO remained concerned with modernizing its theater nuclear forces to better protect itself against a surprise attack, and proceeded with plans to carry out this improvement plan (Carter 1989, 244). When the Soviet Union deployed SS-20s and developed its Backfire bomber in 1969 (deployed in 1972) NATO received the last push it needed to deploy the modernized cruise and Pershing missiles in Europe.

In the end, these modernization processes proved more urgent than goals associated with arms control and, specifically, the goal of curbing the likelihood of a sudden conventional attack. Carter explains that “[b]oth sides consciously tailored their proposals so as to allow weapon modernization and to ensure that the weapons that might be bargained away were of minimum military value” (Carter 1989, 244). Furthermore: “New weapons and

technological innovations, such as precision-guided munitions, are likely both to complicate the calculus of arms control and to adversely influence each side's perceptions of the other's intentions" (Borawski 1979, 871). Uncertainty from all of these additional sources impeded the ability to reach an agreement.

### Why did the talks fail?

Most accounts of the MFBR talks tend to identify the two most significant impediments to reaching an agreement as the failure to agree on the limitations that would apply to residual forces following a first round of reductions and the data concerning Warsaw Pact forces (Keliher 1980; Carter 1989; Dean 1983). Some also cite the Pact's reluctance to respond seriously to the NATO proposal of associated measures (Dean 1983; Dean 1987). While these accounts are not incorrect, they overlook the broader issue: the feeling that any agreement based on the proposals exchanged was insufficient for producing the feeling of security that both sides desired. Furthermore, the proposals did little to manage the uncertainty caused by the current strategic environment as well as uncertainty about how it was changing.

In order to manage uncertainty about long-term security effectively, goals for and proposals made within the structure or format of arms control negotiations must accurately reflect a limitation on potential loss given the particular strategic landscape. Proposals for reductions must have a direct relationship to the reduction of a likely threat or conflict. When arms control goals and proposals do not effectively manage uncertainty (from all of its sources) about what are presumed to be likely threats or kinds of conflict, they are less successful.

Evidence from the MBFR talks therefore suggests that a number of factors directly related to the goals and proposals of both sides contributed to the failure to reach an agreement. The proposals presented were inadequate for managing the uncertainty caused by the (changing) strategic landscape for precisely the following reasons:

#### **1. The scope of the negotiations was too narrow.**

Prior to the official beginning of the MBFR talks, there was considerable debate concerning what kind of arms control the talks would aim to accomplish. The lead up to and the negotiations themselves reveal a process of reducing the scope of any arms control agenda. One by one, various elements of a conventional army were excluded from any potential agreement. Air and sea forces were removed from the agenda, and later nuclear options were taken off the table. CSBMs were relegated to separate negotiations in the CSCE. Ultimately, the scope of the negotiations was limited to ground force personnel only. Those reductions would apply only to personnel in Central Europe and exclude Soviet Forces in the Western Soviet Union, which would likely be involved in the event of a conflict, most definitely in the event of nuclear escalation (Dean 1982, 2). Even proposals concerning the reduction of personnel became too small to have any real significance for security—they would have little impact on impeding the outbreak of a conventional attack (Carter 1989, 240).

Robin Ranger concurs that the narrow scope of a potential MBFR agreement proved a disservice: “The MBFR talks are simply too narrow, in scope and membership, to produce measures enhancing European security” (Ranger 1979, 164). I would also argue that the scope of the talks was too narrow to ensure a “feeling of security,” which would be a prerequisite for successfully reaching an agreement.

However, the narrow scope of the MBFR talks need not have been an a priori indicator that any potential outcome would prove insufficient to ensure a feeling of security. The MBFR talks were actually one track of arms control negotiations taking place concurrently with others, and could have potentially been a single part of a collective, broad-reaching attempt to curb existing threats—a single tool in the collective arms control toolkit. First, the Conference on Confidence- and Security-Building Measures in Europe (CSCE) talks began in 1973, and concluded in 1975 with the signing of the Helsinki Final Act, which provided limited CSBMs for all of Europe. Follow up CSCE talks then took place throughout the late 1970s and early to mid-1980s. Second, the Conference on Disarmament in Europe (CDE) was formed in 1979, and would facilitate negotiations for the Biological Weapons Convention (BWC) and the Chemical Weapons Convention (CWC) while the MBFR talks were taking place. Third, throughout the mid- to late-1980s, the U.S. and the Soviet Union were engaged in bilateral negotiations over the reduction of intermediate-range nuclear forces (INF). There was also a U.S.-Soviet dialogue during these talks on restricting space weapons and strategic nuclear weapons (Dean 1987, 93). Finally, the SALT II talks, which centered primarily on the reduction of strategic nuclear weapons, took place from 1972 to 1979.<sup>12</sup>

In this context, conventional arms control negotiations focusing on personnel limitations could have served as one aspect of effective uncertainty management when combined with these other tracks. Nevertheless, this would not be the case for two reasons. First, it is fairly evident that negotiators were not operating with a collective framework for arms control in mind. One might have thought, for example, that NATO negotiators could have become comfortable with the fact that proposals exchanged during the MBFR talks failed to address the associated measures because these measures were being pursued simultaneously in the CSCE. However, negotiators never linked the two. Ambassador Dean states quite clearly: “In the 1970s, NATO states carried out no organized analysis of the

---

<sup>12</sup> The Soviets had improved their nuclear capabilities consistently since the late 1950s. Specifically, they had “increased the number of tactical surface-to-surface missile launchers in their field armies to roughly three times as many systems as NATO possesses; the Soviets are also replacing older launchers with newer, more capable ones. There is also increasing evidence of a Soviet nuclear artillery capability, which has long been an area of NATO monopoly. The Soviets have, in addition, undertaken a massive modernization of their tactical aircraft stationed in Central Europe, so that now all of their aircraft stationed there have the capacity to deliver nuclear weapons. Two other systems recently deployed in Western Russia are the Backfire bomber and the SS-20 mobile intermediate-range ballistic missile. The Backfire is a highly capable supersonic bomber primarily designed for use as a theater weapon but with sufficient range to reach the United States. Soviet refusal to codify restrictions on it within the SALT II treaty itself was one of the most emotional issues of those negotiations. The SS-20 has three highly accurate independently targetable warheads and a range of 4,900 kilometers, which puts all of Western Europe well within its range. These two weapons are at the heart of the argument about so-called “Gray Area Systems” because they possess tremendous capabilities, but fall under neither SALT nor MBFR (Keliher 1980, 97-98).

connection between the CSCE and MBFR negotiations” (Dean 1987, 115). In a meeting with the Verification Panel Working Group on the MBFR negotiations on August 1, 1974, Secretary of State Henry Kissinger alluded to a lack of attention paid to events in the CSCE: “We have not explicitly linked the two, have we? I think we should do more of that... I do think we made a mistake by not linking CSCE and MBFR more explicitly in the first place, however,” he said. (FRUS Volume XXXIX, European Security 2007, 1019) In the same meeting, Kissinger wanted to consider any potential nuclear proposals in relation to what had codified in the SALT I agreement, and what would be sought in SALT II (FRUS Volume XXXIX, European Security 2007, 1023). “I would like to see an agreement that would link MBFR, SALT and CSCE in order to give the Soviets something comprehensive...” (FRUS Volume XXXIX, European Security 2007, 1023)

Dean also explains how the collective endeavors failed to make up a coherent whole, for NATO and the West in particular:

“[The] various segments into which arms control in Europe is being negotiated form only a haphazard disarray. This disorderly pattern reveals the underlying truth that there is no integrating concept to hold together these diverse activities, no overall Western scheme of arms control negotiation with the East, and no comprehensive coverage in arms control negotiation of all important aspects of the East-West military confrontation” (Dean 1987, 93).

Second, no combination of the concurrent negotiations sufficiently addressed even the European threat. Dean describes the critical omissions:

Many important aspects of the NATO-Warsaw Pact confrontation—notably naval forces, air forces and air defenses, nuclear weapons of range under 1000 kilometers, and the entire range of conventional armaments—are not actively covered in any of the forums” (Dean 1987, 94).

Thus we can say that both the scope of the MBFR negotiations and of arms control efforts at the time proved too narrow—insufficient to address the threat present. In the end, April Carter explains, “[t]here were no strong military incentives for either side to make serious concessions in order to achieve an agreement” (Carter 1989, 244). While proposals confined to reductions and limitations of armaments increase the likelihood of reaching an agreement inasmuch as they facilitate a dialogue about security even when conceptions of security can differ, the MBFR talks highlight the fact that this does not hold when proposals have a limited bearing on actual [perceptions of] security. With this in mind, it seems that the real lesson we learn from the MBFR talks is that negotiators may have failed to reach an agreement because the various proposed reductions made little sense in a strategic context.

## **2. Negotiators used the proposals to accomplish domestic goals, which made them ill-suited to the goal of curbing a military threat.**

Both sides exchanged proposals aimed at maintaining a strategic advantage. For example, many of the proposals offered the reduction or elimination of equipment that was becoming obsolete, with the intention of replacing the equipment with updated models not subject to restrictions in the agreement.

In a Party speech on February 24, 1976, Brezhnev said that the reason so little progress had been made so far in the MBFR talks was that “NATO countries still do not want to stop trying to use the talks to insure for themselves unilateral military advantages” (Keliher 1980, 68).

April Carter agrees. She explains:

NATO devised Option III so as to permit the introduction of new missiles and aircraft. The 54 F-4 aircraft which NATO offered to abandon were believed to be less effective because of the development of Soviet anti-aircraft defenses (Carter 1989, 244).

## **3. High environmental uncertainty made it difficult for the proposals put forth to contribute to security in a meaningful or adequate way.**

External sources of uncertainty and insecurity—outside of capabilities—would not be well managed via the proposals exchanged. The MBFR talks highlight how events external to the negotiations can augment (environmental) uncertainty in a way that affects the ability to reach an agreement.

The negotiations also lasted 16 years, during which the security and geopolitical landscape had evolved and targets for the negotiations changed, and would become relatively meaningless—incapable of lowering the likelihood of potential losses.

During that time a number of events would affect the ability of the negotiations to establish an agreement that would manage uncertainty about security: technological change, the Soviet invasion of Afghanistan, changing administrations, and waning executive interest all impacted the ability to reach an agreement.<sup>13</sup>

## **4. High complexity made it difficult to put forth meaningful proposals that could meaningfully contribute to security.**

Numerous scholars agree that the MBFR talks were marked by an all-consuming complexity. Blacker and Duffy (1984), for one, note the complexity of the MBFR negotiations, for example, relative to the CSCE negotiations:

While the MBFR had fewer participants and its scope was narrower than that of the thirty-five-nation CSCE, its subject matter was unusually complex” (Blacker and Duffy 1984, 297).

---

<sup>13</sup> For his first three years in office Reagan had very little interest in arms control.

The “unusual” complexity was due to the sheer number of decisions that had to be made in order for the talks to proceed, explain Blacker and Duffy (1984). For the MBFR talks, negotiators had to reach agreement on who were the participating states, what territory would be subject to reductions, and the focus and scope of the negotiations. Per their interpretation, this complexity would seem to play a more decisive role than single standard complicating factors, like a broad scope or numerous participating states. Blacker and Duffy also argue that the omission of French forces from a potential negotiated agreement added to the complexity (Blacker and Duffy 1984, 299). All in all, the complexity of the situation would contribute to the “intricacy and slow pace” of the negotiations” (Blacker and Duffy 1984, 299).

April Carter would seem to concur with the notion that MBFR negotiators had the unusual task of making a very large number of decisions concerning format. She also describes how much remained undecided at the onset of the talks:

Before the talks started officially in Vienna, there had been no clarification on whether the negotiations would cover reductions in both nuclear and conventional forces, or would be confined to cuts in conventional forces. In addition, there was room for further dispute over whether air, as well as ground forces, should be covered, whether the focus was on men or equipment, and what sort of weapons would be included (Carter 1989, 234).

Keliher agrees that the MBFR talks were uncommonly complex: “The complexity of these negotiations was to prove far greater than any of the participants had imagined as they prepared to leave for Vienna,” he explains (Keliher 1980, 33).

April Carter also takes a similar position to Keliher’s, arguing that the complexity, which stemmed from a number of sources, impacted the ability to calculate a fair bargain:

“Asymmetries in force structure, types, and number of weapons deployed, in military doctrine, and in the distance of the two great powers from the Central European theater complicated the possibility of an agreement on what, exactly, would constitute a fair trade off” (Carter 1989, 243).

As such, it became impossible to compare systems and weapons in order to establish meaningful limitations for both sides.

Intra-alliance politics further complicated matters in a manner that was unique to negotiations with a bloc-to-bloc format. Because proposals were tabled by alliances and not directly by participating states, they were not necessarily straightforward indicators of the preferences of those states. In particular, disagreements within NATO partners concerning the use of nuclear weapons in the event of an East-West conflict underlay the motivation for a number of NATO proposals. The East, not understanding the origins of these proposals, found them insincere, and as a result they were not well received.

Another kind of “strategic complexity” further contributed to the complexity of the MBFR talks. In this case, it centered on the discussion of conventional weapons against a backdrop of a nuclear security landscape. While most descriptions of the talks address the

fact that both the East and the West had significant conventional *and* nuclear capabilities, and likewise note that NATO at one point put forth a proposal to limit tactical nuclear weapons, few account for how the nuclear-conventional weapons strategic interplay shaped the complex landscape against which the talks transpired.<sup>14</sup>

Dean writes: “the risk of conventional conflict between East and West somewhere in the world is greater than that of a conflict beginning with all-out strategic [nuclear] attack and that the most probable road to nuclear conflict between the United States and the Soviet Union lies through conventional conflict and its escalation to the use of nuclear armaments” (Dean 1983, 116).

It was difficult enough to draft proposals that might be effective in curbing the outbreak of conventional attack, much less escalation to nuclear war. The nuclear-oriented proposals that were exchanged during MBFR were capable of doing little to address the latter. Furthermore, they amplified the disjointed nature of the proposal exchanges and highlight the fact that the two sides had very different perspectives on what constituted parity or balance.

##### **5. The “data dispute” and high mistrust made it impossible to reach an agreement.**

NATO and the Warsaw Pact had highly divergent figures on the number of Warsaw Pact active duty air and ground force personnel (Dean 1982, 2). Specifically, the West estimated that Warsaw Pact manpower was 960,000 and the East argued that it was at about 800,000—a difference of 160,000 troops (Dean 1983, 124). This disagreement was, in part, due to a lack of clarity on who among civilian employees could or should be counted. The dispute over data was also a consequence of the fact that, early on in the negotiations, the Warsaw Pact refused to submit their own data on their own force size, and also refused to accept the accuracy of Western data, which had been compiled by Western intelligence agencies (Dean 1983, 124). The Soviet Union had always been reluctant to release information on Soviet armed forces, “especially strength or order of battle figures,” writes Keliher (Keliher 1980, 62). Not releasing data almost certainly contributed to the perception that the East was perhaps less than sincere pursuing a mutually beneficial agreement (Keliher 1980, 62).

While accounts that indicate that the data dispute was a major obstacle to reaching an agreement might be incomplete, they are not incorrect. The data dispute had two significant consequences on the negotiations: the reductions were meaningless absent hard data on forces, and the resulting mistrust meant low confidence that an agreement would be effectively implemented or upheld.

First, the data dispute detracted from the significance of potential reductions. Dean explains that the absence of any “usable quantitative information on armed force strength” made assurance that the restrictions for common ceilings in manpower were met impossible (Dean 1983, 124). For this reason, according to Keliher “the problem of data had been the single most controversial aspect of the whole negotiation” (Keliher 1980, 61).

---

<sup>14</sup> Jonathan Dean bucks this trend in his historical account of these détente years in *Watershed in Europe*.

Second, the data dispute further exacerbated the West's suspicion that the East was not sincere in pursuing an arms control agreement. This also resulted from the deal that had been done to get the East to the table. In September of 1973, Brezhnev and Kissinger had agreed to begin MBFR talks (which were desired by NATO) in exchange for beginning CSCE talks (which were desired by the Warsaw Pact) (Keliher 1980, 42). The Soviet Union had made no secret of the fact that it wanted an all-European security conference. The West, however, would not agree to one without a Soviet commitment to MBFR talks. At the same time, "the Eastern press occasionally made vague references that 'for successful talks on force reduction the political climate in Europe must be appropriate' and a 'successful European security conference is a prerequisite to such an atmosphere'" (Keliher 1980, 35 citing Foreign Broadcast Information Service, "Soviet Philosophy on Timeliness of MBFR," 30 January 1973, R-1). Officially, the East wanted CSCE talks because they sought formal recognition of the European "status quo." Some believed that the Soviets would participate in MBFR talks without making much progress, and then withdraw from the talks once the CSCE had been successfully formed (Keliher 1980, 36). Indeed, the East achieved recognition of the European status quo at the CSCE in Helsinki early on during the MBFR negotiations. Per this agreement, West Germany (and its allies) officially recognized the Oder-Neisse River as the official border between the German Democratic Republic (GDR) and Poland<sup>15</sup> (Keliher 1980, 41).

As a result, the West questioned Soviet sincerity on MBFR, and wondered if they had come to the table simply because they had no other choice (Keliher 1980, 36). Lead MBFR negotiator Ambassador Stanley Resor corroborates this uncertainty about sincerity. In August of 1974 (when negotiations were at a stalemate), he said: "One of our big problems over there [in Vienna] is that we don't know what the Soviets are thinking. We have no test of their true emotions on MBFR" (FRUS Volume XXXIX, European Security 2007,1022).

## Conclusion

The MBFR talks are touted as both a success and a failure: a success because there was tremendous movement towards a mutually acceptable position, which paved the way for the rapid negotiation of the Treaty on Conventional Forces in Europe (CFE); and a failure because the talks lasted so long and produced no agreement. Ambassador Jonathan Dean (among others) has also argued that, regardless their outcome, the MBFR talks successfully contributed to détente objectives (Dean 1982, 3).

Certainly there were more proximal causes for the failure of the negotiations in the form of persistent "stumbling blocks" or "negotiation problems" as Ambassador Dean calls them. These included the data dispute, details concerning the format for inspections, the composition of forces, and pre-notification of out-of-garrison activities (Dean 1987, 165). There were additional impediments that had relatively little to do with the substantive content of the proposals themselves, or unabated uncertainty about security. These included the poor "atmospherics" surrounding U.S.-Russian relations during the 1980s, as well as the lack of President Reagan's interest in arms control during his first few years in

---

<sup>15</sup> Once this had been accomplished at the CSCE, the focus of the conference shifted to abuses of human rights by the East.

office. They also included impediments unique to the structure of the MBFR negotiations—the bloc-to-bloc structure of the negotiations. In addition, multilateral negotiations tend to take longer than do bilateral ones (Simonelli 2011), and intra-alliance politics further bogged down the negotiations in this case (particularly true for NATO). April Carter writes:

In general, differences of perception and interest, especially between European members [of NATO] and the USA, slowed down NATO's ability to promote the MBFR negotiations" (Carter 1989, 243).

But, if arms control is a kind of “mutual psychological reassurance” between countries, as Jonathan Dean describes it, in this case, there was not much reassurance to be found in the proposals exchanged. There was, therefore, no deal to be done (Dean 1987, 174).

Analysis of the MBFR talks also introduces the notion that, in certain cases, the factors that potentially make an agreement difficult to uphold—namely a narrow scope and focus on reductions to existing arsenals—may make it difficult to reach an agreement. In this case the exchanged proposals were too narrow to capture the security threat, and were, therefore, not very meaningful with respect to achieving security goals. Furthermore, the two sides never obtained a shared understanding of the threat, which exacerbated the abilities of the proposals to manage uncertainty about security.

If either side came to the table to pursue measures consistent with effective uncertainty management, one could argue that NATO came closer in seeking terms that would afford a certain level of flexibility (which the personnel ceilings would have done), and have provided a number of CSBMs. NATO was also well aware that it was using force numbers, which would serve as a (potentially poor) proxy for combat effectiveness (FRUS Volume XXXIX, European Security 2007, 1006).

The Strategic Arms Limitation Talks (SALT I) represent how an alternative outcome may be achieved. During SALT, once a mutual understanding and acceptance of strategic deterrence had been achieved, the dialogue then turned to a comparison of weapons, and reductions were eventually agreed upon.<sup>16</sup> In keeping with this logic, neither a shared understanding of threat and strategy nor a consensus on comparable weapons was ever achieved during the MBFR talks, so reductions were never possible. Divergent estimates, mistrust, and the ascription of sinister intentions all heightened uncertainty. While one might expect that the two sides could reach an agreement that had such a narrow scope, the presence of severe mistrust meant that *any* the intention to comply with any agreement was suspect.

---

<sup>16</sup> Fresh off the SALT negotiations, Kissinger tried to pursue a similar plan for MBFR. “The major thing,” he said in regards to negotiating with the Soviets, “is to find a theory you can get them to accept. Then there are still bloody fights, but it is easier” (FRUS Volume XXXIX, European Security 2007, 995).

## Mutual and Balanced Force Reductions Talks Timeline

January 1965 – The Political Consultative Committee of the Warsaw Pact calls for a collective European Security Conference.

July 27, 1966 – United States Senator Mike Mansfield calls for a substantial reduction of U.S. troops in Europe (unilateral force cuts).

December 14, 1967 – NATO approves the “Harmel Report,” which gave NATO the mandate to play a greater role in détente and in creating a stable military situation in Europe.

June 1968 – NATO raises idea of MBFR talks. NATO ministers issue a declaration on MBFR at their ministerial meeting in Reykjavik, Iceland, which began the process that would lead to the opening of MBFR negotiations in October 1973. This was the first official offer to the East.

July 1968 – NPT open for signature.

August 1968 – Soviet Union's invasion of Czechoslovakia and the implementation of the “Brezhnev Doctrine.”

December 1, 1969 – Senator Mansfield reissues the 1966 Senate resolution calling for “a substantial reduction of U.S. forces permanently stationed in Europe.”

Winter 1969 – Sino-Soviet border dispute over the possession of islands in the Ussuri River.

March 17, 1969 – Warsaw Pact re-issues its call for European Security Conference.

May 1971 – Brezhnev accepts proposal for talks on the mutual reduction of NATO and Warsaw Pact forces in Europe.

May 1972 – U.S.-Soviet Summit in Moscow for the signing of the SALT I agreements/accords.

June 1972 – Nixon and Brezhnev meet in Washington.

November 1972 – CSCE process begins; a precondition for MBFR talks for Moscow.

January 1973 – Preparatory talks for the MBFR negotiations begin in Vienna.

June 1973 – CSCE preparatory talks conclude in Helsinki.

June 23, 1973 – Preliminary consultations on MBFR conclude. Both sides agree to discuss reduction of armaments and personnel, and the geographical boundaries of the reduction area.

September 1973 – Brezhnev and Kissinger strike a deal: the Soviets agree to start MBFR talks in exchange for NATO’s agreement to CSCE.

September 25, 1973 – Jackson Amendment passes in the Senate requiring NATO allies to offset the \$1.7 billion cost of keeping U.S. troops in Europe within 12 months. If unsuccessful, US troop reductions would make up the balance.

September 26, 1973 – The Humphrey Mansfield Amendment is defeated in the Senate.

September 27, 1973 – The moderate Humphrey-Cranston Amendment passes in the Senate by which the U.S. will have a reduction of 110,000 troops overseas.

September 1973 – CSCE negotiations begin.

October 30, 1973 – Formal MBFR negotiations open in Vienna, Austria.

November 8, 1973 – East tables first proposal in draft format for a three-stage reduction of forces and their weapons with one phase of negotiations. In the first stage: 20,000 men on each side over a two-year period (by 1975). Each “direct participant” would contribute some number of personnel towards this quota. In the second and third stages: reductions for foreign and national forces and their equipment, which was to be returned to their country of origin or eliminated.

November 1973 – NATO counter-proposal: reduce ground-force manpower to parity (common collective ceiling) in two phases. In the first phase: a 15% reduction for Soviet and U.S. forces only. In the second phase: a reduction of all forces in the reduction area. This would establish common ceilings of 700,000 forces on either side or associated measures.

March 1975 – East modifies original proposal, offering to accommodate the Western preference a first phase of U.S. and Soviet reductions and split the first stage into two six-month periods in this way.

August 1, 1975 – CSCE process ends with the signing of the Helsinki Final Act (Accords). August: first phase concludes with a declaration of principles. MBFR negotiations continue.

December 1975 – West tables a proposal to include aircraft and nuclear systems in the negotiations. It offers to withdraw 36 American Pershing I surface-to-air tactical nuclear missile launchers, 54 F-4 nuclear-capable Phantom fighter bombers (aircraft), and 1000 nuclear warheads and to limit residual levels if the East would agree to withdraw a Soviet tank army, consisting of 68,000 troops and 1,700 tanks, and to come into compliance with a ceiling of 700,000 military personnel.

February 1976 – Soviet introduces an initiative, which would help bridge the nuclear delivery vehicle gap. East’s response: an equal reduction of nuclear delivery vehicles and a freeze on nuclear systems in the Central European reduction area.

June 1976 – Warsaw Pact presents its data on its own force size, including ground and air force personnel within the reduction area.

April 19, 1978 – West concedes that Soviet reductions consist of the withdrawal of a complete five-division Soviet tank army. The U.S. offers instead that the Soviets withdraw

any five divisions (1,700 tanks and 68,000 personnel). The U.S. partially accepts the Soviet demand that U.S. soldiers be withdrawn in units, rather than by thinning out existing units, and agreed to withdraw some of the 29,000 troops in whole (small) units, as well as by thinning out larger ones.

June 8, 1978 – WTO accepts equal ceilings of 700,000 men for ground troops and 200,000 for air, and first-phase reductions for U.S. troops (by 14,000) and Soviet troops (by 30,000). Also insists on withdrawal of nuclear warheads and delivery vehicles, which the West had taken off the table. NATO also resists withdrawing units and their equipment together.

October 6, 1979 – Brezhnev offers immediate unilateral withdrawal of Soviet Forces (including 20,000 troops, 1,000 tanks, and other military hardware) from East Germany, likely to circumvent the data dispute issue and keep talks moving forward. This withdrawal not intended as reductions in addition to those proposed in 1978.

November, 1979 – West Germany submits new MBFR proposal to NATO, largely focusing on U.S.-Soviet (Phase I) troop reductions.

December 1979 – West expands on associated measures in current proposal, including provisions for pre-notification of military activities, exit and entry points manned by observers, data exchange, and ground and air inspections. Talks reach stalemate over data issue.

December 5, 1979 – Soviets begin implementing withdrawal plan by withdrawing a contingent of 18 tanks and 100 soldiers.

December 13, 1979 – West German proposal is approved by NATO foreign ministers in Brussels.

December 17, 1979 – West takes 1975 mixed package offer from the table and presents new West German proposal, which includes the withdrawal of 30,000 Soviet ground personnel in three divisions and of 13,000 U.S. ground personnel (two-thirds in units and one-third via a thin-out). NATO agrees to deploy new Pershing missiles and cruise missiles as part of a plan to modernize theater nuclear forces. No significant progress made in MBFR talks after December, 1979.

January 20, 1981 – Ronald Reagan takes the office of the U.S. presidency where he was known for his generally skeptical approach to arms control in the very early years of his presidency.

October 1981 – The US and Soviet Union enter into intermediate-range nuclear forces in Europe (INF) negotiations.

February 1982 – In draft agreement format, East informally accepts Western proposal of U.S. and Soviet Union first round reductions, equal ceilings for both sides (by alliance) for manpower reductions, and a restriction to reductions in active duty ground force manpower which effectively took the reduction of air force personnel off the table. They agreed to temporary exist points with observers, pre-notification of military activities, and

data exchange, and the establishment of a consultative commission to oversee the implementation of the agreement. Parties agree to restrictions on flank deployment.

July 1982 – NATO accepts original Warsaw Pact proposal of a single agreement with successive phases of reductions/stages of implementation; agrees to reduce 13,000 men while the Soviet Union will reduce 30,000 in the first phase, and a freeze until second phase. Additionally, NATO presents proposals in the form of a draft agreement and finally, recess of MBFR negotiations.

January 17, 1984 – Conference on Confidence- and Security-Building Measures (CSBM) and Disarmament in Europe opens in Stockholm (Stockholm Conference), within the CSCE framework.

March 1984 – MBFR talks in Vienna

April 19, 1984 – The West puts forth new proposal to address the data problem and the question of verification with new measures for “flexibility.”

March 1985 – Mikhail Gorbachev takes power as General Secretary of the Communist Party of the Soviet Union.

December 1985 – Gorbachev proposes that the number of troops to be withdrawn becomes “token” gesture where there are genuinely significant cuts off the table.

January 1986 – NATO proposes to have 5,000 U.S. and 6,500 Soviet troops withdrawn within the next 12 months, followed by the exchange of data on remaining forces

February 20, 1986 – The Warsaw Pact tables and proposes in the draft MBFR agreement measures for ensuring compliance.

April 1986 – Future of MBFR negotiations subject to debate. Gorbachev suggests widening the scope of the negotiations.

June 1986 – WTO proposes change of venue to committee on disarmament (CD) and more radical cuts.

September 25, 1986 – Representatives of NATO and the Warsaw Pact resume the mutual and balanced force reduction (MBFR) talks in Vienna.

February 1987 – NATO reaches verdicts on change of venue. Informal discussions on procedures for a new conventional arms treaty negotiation conducted in Vienna, with both sides participating.

December 7, 1987 – INF Agreement is reached (Reagan and Gorbachev).

January 1989 – NATO and Warsaw Pact states author the Mandate for the Negotiation on Conventional Armed Forces in Europe.

February 1989 – MBFR talks formally end.

## Chapter 4: The Conventional Forces in Europe (CFE) Treaty (1990)

The political context surrounding conventional arms control...is not an agenda to be created, but an environment to be managed.

–Foerster et al., *Defining stability: conventional arms control in a changing Europe* (1989)

### Introduction

This chapter discusses the Conventional Forces in Europe (CFE) Treaty, which was successfully negotiated in record time (less than two years), following the abysmal failure of the prolonged MBFR talks. The CFE Treaty is arguably the broadest, most durable multilateral conventional arms control treaty in history. Despite Russia's withdrawal from the treaty in 2007 and subsequent selective cessation of implementation of the agreement by other OSCE member states in response, the treaty is still in force today. Nevertheless, among arms control practitioners, the conversation regarding CFE centers around where to go from here—what is required of a conventional arms control agreement given the contemporary security landscape that bears scant resemblance to that of the Cold War era?

The CFE Treaty regime effectively has two components: 1) the original 1990 CFE agreement, a legally binding treaty, and 2) the Vienna Document (originally, dated 1990, but subsequently updated and reissued in 1994, 1999, and again 2011), a politically binding agreement. The CFE Treaty sets limitations on five categories of conventional land-based weapons and specifies conditions for verification of compliance via on-site inspections.<sup>1</sup> It also provides for the exchange of data on the structure of land and air forces; holdings in each category of treaty-limited equipment (TLE); number and types of TLE; various sites (location of TLE); changes in force levels or structures; entry into service of TLE; entry or exit of TLE from the zone of application; and any TLE transit across the zone of application lasting more than seven days. It also established the Joint Consultative Group (JCG) to resolve ambiguities about implementation and compliance, settle disputes, and continually update and modernize the provisions of the agreement, including the equipment that falls within the scope of the CFE Treaty provisions. Finally, the CFE Treaty established regular review conferences to convene every four years.

The Vienna Document establishes extensive monitoring provisions, including a quota system for inspections. The package of legal and political commitments provides a security guarantee and has yielded effective restraint, with no major conflict occurring in Europe since adoption.

The original CFE agreement was negotiated among 23 sovereign state members of both the NATO and Warsaw Pact alliances within the CSCE, although the negotiations were not bloc-to-bloc as they had been for MBFR. The treaty has 30 original signatories, which was the product of the unique ratification situation and negotiation environment that followed the

---

<sup>1</sup> CFE is an incredibly technical agreement, and provisions are extensively detailed. Many of these details are omitted in this chapter to focus on the most relevant aspects of uncertainty management.

fall of the Soviet Union in 1991. It was signed on November 19, 1990 and entered into force on July 17, 1992.

This chapter pays special attention to how the original 1990 CFE agreement was successfully negotiated, particularly in light of the failure of MBFR talks. In doing so, it discusses the CFE Treaty regime's unique ability to provide unparalleled uncertainty management, as well as the ways in which the regime has adapted and endured. Finally, the chapter discusses new challenges to conventional arms control in Europe.

## Background

The most critical information concerning the backdrop against which the talks were completed pertains to the changed security environment in Europe following the General Secretary Mikhail Gorbachev's entry into office in 1986. As such, a discussion of the background for the CFE talks begins to shed light on how the CFE talks were able to succeed where the MBFR talks failed.

First, the Soviet Union's foreign policy changed significantly under the leadership of General Secretary Mikhail Gorbachev, who removed the roadblocks that had stymied the MBFR negotiation—namely the data dispute and a reluctance to agree to inspections. Jane Sharp explains how Gorbachev himself was responsible for these changes:

Prior to Mikhail Gorbachev's leadership, Soviet unwillingness to provide military data and to open up WTO territory for inspection were serious stumbling blocks to negotiated arms control. Under Gorbachev's leadership the Soviet Union accepted intrusive inspections—but not without some grumbling by the military (Sharp 2006, 7).

In addition, Gorbachev also removed another major stumbling block from MBFR—Soviet resistance to asymmetrical cuts. For the first time, the Soviet Union was willing to admit where the WTO was ahead of NATO in some areas of weaponry. This showed a willingness to accept deeper cuts to ground forces than it had during MBFR. Sharp writes that this “marked a change in from the pre-Gorbachev days when, for example, at the MBFR talks Soviet spokesmen maintained that NATO and WTO forces were evenly balanced and insisted that any force reductions must be by equal percentages to maintain the balance at the same ratio” (Sharp 2006, 11).

Second, in December of 1987, the U.S. and the Soviet Union signed the INF Treaty, which completely eliminated two categories of land-based INF missiles. While this may have made Europe safer, it may have also given new impetus to conventional arms talks due to NATO's security obligation to maintain extended deterrence per its doctrine of flexible response. Specifically, in order to uphold the doctrine of flexible response post-INF elimination, NATO would need to pursue conventional balance to thwart the outbreak of any conflict that might escalate to nuclear war. Foerster et al. explain this further: “The failure to improve the conventional military relationship through arms control would only heighten the requirement for a modernized and more credible theater-based nuclear deterrent” (Foerster et al. 1989, 19).

Additional impetus for conventional arms control negotiations may have come from the removal of the nuclear weapons themselves, given that NATO still held theater-based (as well as strategic) nuclear weapons in Europe:

According to NATO's delicately formulated 'comprehensive concept' for arms control, therefore, conventional arms control assumed a particular urgency, even if for no other reason than to deflect proposals for further negotiations on nuclear weapons in Europe (Foerster et al. 1989, 18).

Third, the end of the Cold War (1989-1990) marked by Soviet reforms under Gorbachev, the Velvet Revolution in Czechoslovakia, the collapse of the Warsaw Pact governments and fall of the Berlin Wall all contributed to a thawing of the Cold War and a normalization of relations between the East and West, which improved the "atmospherics" and were conducive to reaching a conventional arms control agreement.

### Goals, Motivations, and Objectives

Both East and West were experiencing resource constraints. The Soviet Union was eager to downsize military expenditures in order to reorient resources to their own economy (Sharp 2006, 12). Gorbachev was making great strides to improve the Soviet economy under his restructuring (*perestroika*) plan by unilaterally reducing Soviet military strength. In addition, the FRG would have a shortfall of draft-age males by the mid-1990s, and the U.S. was grappling with serious budget cuts, which would require major reductions to military manpower (Foerster et al. 1989, 19).

WTO motivations were many. The WTO also wanted to curb NATO's ability to launch an air attack capable of penetrating deeply into WTO territory. As a result, Gorbachev was willing to make steep cuts to the Soviet arsenal in exchange for curbing "NATO's qualitatively superior technologies" (Sharp 2006, 12). The WTO was concerned about:

[A] growing Western military superiority in advanced conventional defense technologies (a new 'revolution in military affairs') at a time when the Soviets appear to be increasingly skeptical about the military utility of nuclear weapons (Foerster et al. 1989, 12).

This logic would account for Gorbachev's willingness to make concessions for asymmetrical quantitative reductions for both INF and CFE. For CFE, this meant that the WTO was aiming for relatively modest reductions to NATO's air power. Finally, Gorbachev hoped to convince NATO to engage in a dialogue on military doctrine in order to shift the emphasis of current doctrine from offensive to defensive (Sharp 2006, 12). The Warsaw Pact wanted to secure: "a radical reduction in the military potentials of both alliances...as would leave the NATO and Warsaw Pact countries with forces and systems needed for defense but insufficient for a surprise attack and offensive operations" (Pravda, Statement adopted by the Political Consultative Committee of the Warsaw Treaty Organization, Warsaw, July 16, 1988).

For NATO, the CFE talks presented an opportunity to obtain steep cuts in Soviet ground forces—plain and simple. These would correct the imbalance of conventional armed

forces in Europe and ensure stability. Moreover, NATO was categorically unwilling to agree to steep cuts to its own ground forces, and particularly opposed to the notion of cutting naval and air forces (the forces of greatest concern to the Soviet Union) (Sharp 2006, 13).

Even before the MBFR talks ended, the alliances met to negotiate a mandate for CFE talks. The informal mandate talks addressed issues of scope and scale: which states would participate, the forces to be limited, means of disposal of forces, territorial scope and stabilizing measures (Sharp 2006, 15).

It was ultimately agreed that the 16 NATO and seven WTO states would participate in CFE talks, while all 35 CSCE members would participate in concurrent Vienna Document talks (as they had in crafting the Stockholm Document in 1986). The potential CFE agreement would cover the territory from the Atlantic Ocean to the Ural Mountains—all of Europe.

The alliances agreed that the goals for the CFE talks would be to: 1) establish a stable and secure balance of conventional forces at lower levels; 2) eliminate disparities in holdings that detract from stability and security; and 3) eliminate the ability to launch a surprise attack and to initiate any kind of large-scale offensive military operation (Copson 1989, 4-10). The mandate also called for an “effective and strict verification regime,” including on-site inspections (Federation of American Scientist (FAS), CFE Chronology).

### **Main Positions and Proposals**

Although the CFE negotiations did not have a bloc-to-bloc format and states could technically table proposals on their own behalf, the majority of the proposals were exchanged by each alliance. Nevertheless, to accommodate France’s concern that any semblance of bloc-to-bloc negotiations would perpetuate the climate of hostility in Europe, delegations were seated by state in alphabetical order, making intra-alliance consultations during the formal negotiations impossible (or at least very awkward) (Sharp 2006, 17).

On March 9, 1990, the opening day of the CFE negotiations, NATO tabled the first proposal. The proposal stipulated that common and equal ceilings be implemented for three categories of armaments: main battle tanks (20,000 for each side), artillery (16,500 for each side), and armored troop carriers (also called armored combat vehicles or ACVs) (28,000 for each side) (Federation of American Scientists (FAS), CFE Chronology). These ceilings would be common across four geographic zones in the ATTU region. NATO also proposed a “sufficiency rule” which provided that no country would have more than 30 percent of the equipment in any one category permitted in the entire ATTU region. This aspect of the proposal was designed to bring the Warsaw Pact forces down to parity with NATO forces (Foerster et al. 1989, 62). Such reductions would necessarily entail asymmetrical cuts—the Warsaw Pact would have to reduce forces significantly (to 5-10 percent below NATO’s force levels), with the Soviet Union removing forces from Eastern Europe, while NATO would take equipment reductions primarily from storage. The restriction on national ceilings would require an approximate two-thirds reduction in Soviet holdings. Withdrawn equipment would be destroyed—rendered incapable of returning to combat-ready status.

Moreover, much like the “Associated Measures” tabled during MBFR, the NATO proposal included a number of “stabilizing measures” which included provisions to ensure transparency, provide notifications, and establish constraints on the movement, deployment and level-of-readiness of conventional armed forces (NATO Press Service, statement on conventional arms control December 8, 1988). These stabilizing measures were specifically designed to hinder the ability to launch a surprise attack and were actually intended to complement verification measures.

In June, the Warsaw Pact tabled a counterproposal. The Eastern Alliance proposed that reductions be executed in three phases. The first phase would have NATO and the Warsaw Pact reducing troops and conventional weapons (including tanks, ACVs, artillery, aircraft and helicopters) to “roughly equal collective levels” over a two-to three-year period. The Soviet Union estimated this to be a level that was about 10 to 15 percent below “the existing level for whichever alliance was inferior in a particular category” (Foerster et al., 1989, 65). This would require large, asymmetrical reductions in ground forces—similar to that which was proposed by NATO. However, the Warsaw Pact’s proposal was notably broader inasmuch as it included reductions to tactical aircraft and combat helicopters.

The second phase would provide reductions of an additional 500,000 troops (25 percent), and a subsequent third phase would reshape armed forces to a “strictly defensive character” (Federation of American Scientists (FAS), CFE Chronology ).

### **Negotiation Process: Course of the Negotiations**

In January of 1989, NATO and the Warsaw Pact states produced a mandate for CFE Treaty negotiations. Formal negotiations began on March 9, 1989 in Vienna.

Impetus for the agreement came directly from leadership. On the part of the U.S., there was strong political will from President George Bush, who issued a public statement of support for the Vienna negotiations in May of 1989.<sup>2</sup> In his statement, he expanded NATO’s original proposal to include reductions to land-based combat aircraft and helicopters to equal ceilings, 15 percent below current NATO levels and cut manpower of U.S. and Soviet forces outside their borders (non-indigenous) within Europe to equal ceilings of 275,000 (Federation of American Scientists (FAS), CFE Chronology). Having accepted the Warsaw Pact proposal of reductions to combat aircraft and helicopters and a 275,000 troop ceiling in Europe, he called for an agreement to be reached in six to 12 months and urged NATO to do likewise (New York Times 30 May 1989, A-3).

In July, NATO formalized Bush’s initiative in a revised proposal. NATO’s expanded proposal offered reductions to land-based combat aircraft to 5,700 for each side, and land-based combat helicopters to 1,900 for each side. Personnel would be reduced to 275,000 for both the U.S. and the Soviet Union (Federation of American Scientists (FAS), CFE Chronology).

In November of 1989 the Berlin Wall fell. Revolutions broke out in Czechoslovakia, Hungary, Romania and Bulgaria, given greater impetus to arms control negotiations. The U.S. responded by proposing even steeper reductions. The Soviet Union, meanwhile,

---

<sup>2</sup> Bush also reinvigorated the Open Skies initiative at this time.

reached an agreement with the other former Soviet States (Warsaw Pact states) on the withdrawal of Soviet troops from their territories.

At the Malta Summit (December 2-3, 1989) between President Bush and General Secretary Gorbachev, the two leaders agreed to conclude CFE negotiations by the end of 1990 and to sign the agreement at a summit of NATO and WTO leaders.

In September of 1990, the U.S. announced that previously tabled proposals regarding troop levels no longer applied in light of the reunification of Germany and the withdrawal of Soviet troops from the region. NATO also withdrew a number of troops from Central Europe in response. By October, the delegates reached an agreement on armament levels in the flank states (4,700 tanks, 5,900 ACVs, and 6,000 artillery pieces) in Bulgaria, Greece, Iceland, Norway, Romania, Turkey and the Soviet Union's northern and southern military districts. In November, both the WTO and NATO countries agreed to formally allocate weapons within the states of their respective alliances.

On November 17, 1990, 16 NATO and six Warsaw Treaty states signed the Vienna Document on CSBMs in Paris. The Vienna Document improved upon the notification and information exchange provisions that came out of the 1986 Stockholm Document. It requires annual information exchanges on the strength of troops, weapons systems, and military budgets, and also established the Conflict Prevention Center (CPC) in Vienna.

Two days later, on November 19, the Treaty on the Conventional Forces in Europe was signed in Paris. It formally set limitations on five categories of conventional military equipment. Limitations were to be executed as to create a balance across the two groups of states parties. Each group was permitted 20,000 battle tanks (3,500 of those must be in storage); 30,000 ACVs (with 2,700 in storage); 20,000 artillery pieces (with 3,000 in storage); 2,000 attack helicopters; and 6,800 combat aircraft. Per the sufficiency rule, no one state could have more than one-third of equipment limited by the treaty (Federation of American Scientists (FAS), CFE Chronology). Additionally, the group limits were further subject to zonal sub-limits, with zones consisting of concentric circles extending outward from central Europe (Germany, Benelux, Poland, Hungary and Czechoslovakia) to the outer flanks. Reductions to treaty-limited equipment (TLE) were to take place in three phases over 40 months. Sharp writes:

The agreement culminated two of the most productive years in the history of East-West arms control since World War II. Under the enlightened leadership of President Mikhail Gorbachev the Soviet Union negotiated cooperatively in Vienna, making many concessions to Western positions (Sharp 2006, 3).

One week later delegates reconvened to readdress troop limitations in light of the geopolitical changes in Europe (CFE I-A talks).

### **Multiple Concurrent Negotiations**

The late-1980s were a high point for East-West relations and arms control diplomacy proved no exception. The signing of the INF Treaty in 1987 was the first in a series of arms control agreements signed during that period. In fact, more arms control agreements were

signed between 1989 and 1992 than at any other time in history. Vienna Document negotiations for future CSBMs ran concurrently with the CFE negotiations. The CSBMs were intended to ensure openness and predictability of military activities, and afforded full access for all CSCE states to military information. The same was true for the Open Skies initiative, which provided for unarmed surveillance flights over WTO and NATO territories to collect data intended to complement intelligence provided by satellites.

The Treaty on Open Skies was intended to provide “regular scrutiny” for both sides, and “unprecedented territorial access” and “openness” (Federation of American Scientists (FAS), CFE Chronology). On June 12, 1989, the U.S. and Soviet Union also signed the Dangerous Military Activities (DMA) Agreement, which committed both sides to work towards preventing certain potentially instigating military activities during peacetime, including unintentional or emergency entry into the national territory of the other side (foreign territory), the hazardous use of laser devices, the disruption of military exercises in predetermined “special caution areas,” and interference with the command and control networks of either side (Federation of American Scientists (FAS), CFE Chronology).

### Negotiation Pace

It took only 21 months to negotiate the CFE Treaty (Sharp 2006, 9). However, while the first months of the negotiation were marked by rapid convergence on some of the terms of agreement, the pace slowed markedly in 1990. The quick pace of negotiations early on (during 1989) may have been due to the optimism engendered by Europe’s velvet revolutions. Sharp writes: “The rapid pace of the negotiations in 1989 matched the euphoria of Europe’s velvet revolutions, in which energetic and democratic reformers replaced stagnant communist regimes” (Sharp 2006, 3). In addition, the MBFR negotiations may have helped facilitate a speedier negotiation process the second time around. Nevertheless, the slower pace that followed in 1990 may have been due to both Soviet concern about German reunification and the demise of the WTO and concern on the part of Western countries “about the stability of the Soviet Union and the emerging democracies of Eastern Europe” (Sharp 2006, 3).

### Agreement Scope

The CFE Treaty was designed to encompass a greater expanse of territory than the MBFR agreement; whereas MBFR focused on reductions to forces stationed only in Central Europe, CFE encompassed all of Europe—the territory between the Atlantic Ocean and the Ural Mountains (ATTU). This meant that while MBFR negotiations would have affected the seven NATO and four WTO states that had had troops in Central Europe, the CFE negotiations would affect *all* 16 NATO and seven Warsaw Pact forces in the ATTU region. This was significant for a number of reasons, most notably that French and British forces, as well as Soviet forces within the Soviet Union and northern and southern flank regions, would now be subject to reductions. It also meant that there would be no artificial demarcation of territory within the continent as there had been in the failed MBFR talks.

The CFE negotiations were also broader in scope with respect to the targeted reductions. Even though manpower reductions were eventually dropped from the agreement (tabled

for future negotiations) the remaining aspects of the proposals were broader than those tabled at MBFR, and included five categories of conventional weaponry. This is not to say there was immediate consensus on the substantive scope of the reductions: initially, the WTO pushed to include nuclear systems (as well as air and naval forces), while NATO's proposals addressed land-based conventional forces exclusively. However, the WTO narrowed their scope fairly early on in the process. During talks about the mandate for the CFE negotiations, the West ultimately convinced the USSR to exclude limitations on naval forces from any potential agreement. However, this did not completely streamline the talks. Sharp writes that this issue subsequently "haunted almost every stage of the negotiations" owing to the fact that NATO had superiority in naval capabilities. The Soviet Union had concentrated its military strength in its large standing army, due to the fact that it had such a large landmass to defend. (Sharp 2006, 5) In this way, NATO codified its military superiority via the CFE Treaty.

### Hypotheses and Analysis

**(1) A "feeling of security" drives the goal-setting for arms control negotiations, which results from scenario planning. In working through scenarios, negotiators use "security-specific heuristics" that include: (a) worst-case scenario thinking; (b) limited theater of war thinking (one-weapon type planning); and (c) low-dimension (non-complex) scenario thinking. Treaty proposals and goals reflect these forms of thinking, often in counter-productive ways.**

**(2) The goals and strategies that nation states use for reaching arms control agreements focus on reducing uncertainty in order to prevent possible losses via (a) the elimination of threat (e.g., by banning an entire class of weapons that might be used against the nation state), and (b) the reduction of risk of defection (e.g., by establishing verification regimes). This focus on loss and risk reduction has two notable opposing effects. First, in some cases, it facilitates reaching an agreement by providing simple, straightforward, negotiable targets. Second, such a limited focus can actually produce less effective, and therefore less durable, agreements. This is because agreements of limited scope fail to manage the uncertainty about security because proposed reductions don't map well onto the broader security landscape.**

**(2b) In some cases, when the scope of the goals for a negotiation is too narrow with respect to the security threat perceived, it can be impossible to reach an agreement.**

This section addresses the extent to which the goals and proposals for the CFE negotiations served as effective countermeasures for the perceived threat of surprise conventional attack. Because the CFE negotiations were a kind of second round to the MBFR negotiations, the use of heuristics is less relevant—the threat was well understood by time the CFE negotiations began. Moreover, there was already general agreement on what was the threat. Finally, this section discusses the ways in which the proposals resulting from these goals did or did not facilitate reaching an agreement.

## Perceived Threat

The perceived threat targeted by the CFE negotiations remained consistent from MBFR days: the onset of a surprise conventional attack in Central Europe. Secondary to eliminating the possibility of such an attack, efforts focused on concerns of each side about the ability to reinforce and maintain a war effort in the event that conflict did break out. Whereas the goal-setting process for MBFR 17 years earlier had been motivated by a crisis situation resulting from the peaking of East-West tensions, the process of goal-setting for CFE was not. Goals for CFE differed as a result of the significant changes taking place in Europe—the end of the Cold War, the reunification of Germany and the thawing of East-West relations. Whereas MBFR was intended to minimize the potential losses of a Europe-wide conflict, CFE was actually part of a series of concurrent negotiations aimed at improving security and already thawing relations in Europe. By the time the CFE negotiation concluded, the threat was actually considered minimal. Indeed, as early as 1988 western military experts were revising their perceptions of the Soviet threat based on a series of speeches and reforms executed by Gorbachev. Sharp writes:

Military officers testifying before the U.S. House of Representatives Defense Policy Panel in September 1988 concluded that the new Soviet military and political leadership was highly risk-averse, and that there was little risk of a short-warning surprise attack by the WTO. The unilateral force cuts announced by Gorbachev at the UNGA in December 1988 provided further evidence to support Soviet claims of restructuring for [defense]...by reducing manifestly offensive elements of forward-deployed Soviet forces (Sharp 2006, 39).

## Goals

Despite the ameliorated threat, goals for the negotiations were consistent with and proportional to security goals across Europe. With uncertainty about intentions no longer a great concern, both sides presented proposals that focused on managing uncertainty about capabilities. Proposals sought to reduce offensive conventional weaponry in order to eliminate the ability to launch a surprise attack, or to reinforce a military conflict once begun by controlling the weapons thought to be most militarily significant for offensive operations in any NATO-Warsaw Pact war (Peters 1997,xi).

Nevertheless, a permanently changed East-West relationship and a peaceful Europe was not a foregone conclusion for the future. The West believed that Moscow would have a strategic military advantage should hostilities erupt. Although all sides agreed that the wartime production and manpower potential of NATO countries was much higher than that of the Eastern Bloc, NATO allies were concerned that the Soviet Union could mobilize reinforcements into Eastern Europe over land in the event of a conflict. The U.S., by contrast, would only be able to support Western Europe with reinforcements by air and sealift (Sharp 2006, 5-6). In addition, NATO conventional forces were too low in numbers to maintain a credible conventional deterrent. As such, NATO could not afford to make any significant reductions and NATO proposals focused on significantly reducing Soviet troop numbers.

The Soviet Union and Warsaw Pact were on board with this line of thinking, with Gorbachev having accepted the Western approach to stability through a legitimate balance of forces (parity) well in advance of the negotiations. Therefore, in tabling its proposal at the opening round of the negotiation, the WTO indicated the desire to bring WTO forces down to parity across categories of armaments considered to be the most destabilizing, and to reorient the structure of forces to achieve a defensive—rather than offensive--posture (Sharp 2006, 40).

### **Reaching Agreement**

The classic narrative of the CFE Treaty negotiations stresses the speed with which an agreement was reached. This was true for some aspects of the agreement, while others either stalled the negotiations or were tabled, left for negotiation at a future date. Indeed, with the resolution of the data dispute issue, where targets for reductions were easily quantified—such as troop levels—agreement was reached relatively easily. Disagreements remained on those aspects of the agreement that were less “quantifiable,” namely zones and sub-zones of application and inspections.<sup>3</sup>

### **Troop Levels**

Both sides fairly quickly (by the end of the second round) settled on manpower ceilings—the most easily quantifiable aspect of the negotiations. Despite this early success, however, troop levels would become moot after the fall of the Berlin Wall and unilateral withdrawal of both Soviet and U.S. troops from Central Europe. Each of the seven negotiating rounds would be dedicated to the discussion of those issues that were less quantifiable or posed a challenge to quantification.

### **Treaty Limited Equipment**

Also by the end of the second round, all parties had agreed to the five categories of equipment that would be subject to limitations per the treaty. The U.S. conceded to add ceilings to combat aircraft and helicopters to the existing categories of tanks, ATCs and artillery to round out the five categories of TLE. Like troop levels, these provisions were also fairly easily quantified, although disagreement lingered over the definition and categorization of equipment in each category (detailed classification). Definitions of artillery were agreed to in the third round, but definitions of tanks, ACVs and aircraft would remain in dispute until the final round of negotiations.

### **Information Exchange, Stabilizing Measures and Verification**

It wasn't until the third round that parties tabled in depth proposals for information exchange, stabilizing measures and verification. Indeed a discussion of such matters was contingent upon the kinds of reductions to be verified.

---

<sup>3</sup> The debate about inspections is fascinating in terms of the various ways in which all parties lobbied to use them to ensure confidence. This may warrant further exploration in a future draft.

However, progress on these issues slowed in the next two rounds, as events surrounding the negotiations heightened uncertainty, namely the fall of the Berlin Wall, the reunification of Germany and the unilateral withdrawal of Soviet troops from Czechoslovakia. In order to reach an agreement by the Paris summit deadline set for November 1990, three of the proposed stabilizing measures were dropped during the last round of the negotiations and tabled for future meeting. These included limits on the sizes and frequency of military exercises, limits on calling-up reserve duty personnel, and limits on the movement of troops across the ATTU region (Sharp 2006, 69).*(3) High uncertainty about the future along multiple dimensions implicitly affects the ability to reach an agreement.*

*(3) High uncertainty about the future along multiple dimensions implicitly affects the ability to reach an agreement.*

**(3a) High environmental uncertainty can make it difficult for the proposals put forth to contribute to security in an adequate way.**

**(3b) High complexity may make it difficult to put forth meaningful proposals that could meaningfully contribute to security.**

**(3c) High mistrust or suspicion can make it impossible to reach an agreement**

While external events that transpired during the negotiations augmented uncertainty about the future, the CFE Treaty negotiations were fairly low-uncertainty negotiations due to the preceding MBFR negotiations, which had laid the groundwork for an agreement, and the new era of transparency and cooperation pursued by Gorbachev.

### **Environmental Uncertainty**

The greatest source of uncertainty during the talks was indeed external—international events define the years during what the talks occurred.

First, both alliances were involved in militarized conflicts. The Soviet Union was also experiencing economic strain. By 1989, the Soviet economy would show signs of its imminent collapse.

Second, these militarized conflicts were both symptoms and sources of more systemic upheaval.

Not only did 1990 mark the end of the cold war, with the collapse of the WTO and the end of the Soviet threat to Europe, but it also marked the emergence of a multipower world, with several economic giants but only one military superpower, the USA (Sharp 2006, 4).

Sharp predicts that the Soviet Union would not have even entered into CFE negotiations had it been common knowledge that the WTO would collapse. Once this happened, the CFE Treaty would not be able to provide the same balance it would have otherwise (in a bipolar international system) (Sharp 2006, 4).

These ambient changes certainly affected the pace of the talks, causing leaders and negotiators to pursue an agreement with a sense of urgency at first. For the Soviet Union, this was particularly true. Sharp explains further:

The leadership in Moscow needed to demonstrate that to sceptics and conservatives at home that Gorbachev's dynamic foreign policy and arms control initiatives...would not undermine Soviet security but, on the contrary, would pay dividends in terms of enhancing security for the international community as a whole (Sharp 2006, 39).

Moreover, the Soviet Union had another concern stemming from these changed circumstances: codifying military inferiority. Sharp writes of the wariness this engendered:

For the weaker powers in the international community, one of the most powerful motivations against concluding formal arms control agreements was the fear of committing one's country to a position of inferiority. The USSR would not even enter into bilateral negotiations with the USA until it had achieved an intercontinental delivery system for its nuclear weapons, and would almost certainly not have entered into CFE negotiations had it known the WTO would collapse so quickly (Sharp 2006, 5).

Although the events augmented uncertainty, negotiators seemed to have seized the optimistic optimal moment. Regarding prospects for an agreement, Sharp writes: "It was clear in early 1989, however, that the window for this opportunity would not remain open indefinitely" (Sharp 2006, 39). The pace of negotiations in 1989 was uncharacteristically rapid as reforms spread across Europe.

However, this rapid pace of negotiations would not last. As uncertainty heightened further, the pace of the negotiations slowed as negotiating states stepped up their efforts manage it. Sharp writes:

The pace [of the negotiations] slackened in 1990...as Soviet anxiety about German unification and the collapse of the Warsaw Treaty Organization (WTO) increased, and Western countries began to worry about the stability of the Soviet Union and the emerging democracies in Eastern Europe (Sharp 2006, 3).

### **Mistrust and Suspicion**

While uncertainty about sincerity may have been high in the early 1980s, by 1989 a more nuanced picture came into focus. Although doubts about Soviet sincerity, in particular, were dissipating among the NATO allies, no one took for granted a new age in East-West Relations. Foerster et al. write:

The Soviet Union, with reformists at the helm, is talking and, more modestly, acting in ways that bode well for peace and new relationships. We cannot yet tell, however, whether the storm, with consequent possibilities for a new era in international relations, or whether the blue is simply the eye of the storm, soon passing and the storm resuming (Foerster et al. 1989, viii).

Nevertheless, Gorbachev ultimately proved his sincerity during the negotiations. When Bush made his strong stand on CFE in May of 1989 and offered his counterproposal with concessions to the WTO position, he was partly motivated by a desire to “test” Gorbachev. Sharp writes that in doing so, Bush was challenging Gorbachev to deliver on his manpower reduction promises (Sharp 2006, 42). When he did, the negotiations proceeded (in 1989) with sincere efforts put forth by all sides.

However, as the pace of the negotiations slackened in 1990 along with increasing uncertainty about the stability (and intentions) of the Soviet Union, new events came to light warranting suspicion of intentions. Just weeks prior to the treaty signature, the West discovered the Soviet General Staff had transferred almost 80,000 pieces of equipment out of the zone of application, thereby evading the requirement to destroy excess weapons in Europe. Sharp explains the impact of the event:

While not a breach of the letter of the agreement, these transfers eroded much of the trust and confidence that had been built up over the previous two years and suggested that Soviet dissatisfaction with the limits imposed by the treaty could still jeopardize ratification (2006, 3).

Fortunately, this did not jeopardize ratification, but suspicion of similar events has plagued implementation.

### Complexity

Complexity did not play a great role in the negotiations. Proposed reductions were fairly unambiguous as there was minimal disagreement over data on forces. The CFE negotiations were also a clear case of negotiating an agreement on the reductions of forces (five categories of conventional armaments) that were easily quantifiable. However, while agreement on the categories of TLE were reached easily and rapidly, discussions concerning the categorization of each of the five categories of TLE bogged down the negotiations in 1990.

**(4) The management of these multiple forms of uncertainty—including uncertainty tied to regional instability, regime change, technological change, and the evolution of military strategy—tends to facilitate reaching agreement and produce durable agreements.**

**(4b) If external events or sources of uncertainty cannot be managed through arms control, it is likely an agreement won't be reached.**

The CFE Treaty negotiations pursued goals pertaining to conventional stability, defined as when both sides believe that neither could launch a successful attack against them, and either side can successfully repel any attack launched by the other (Rohn 1990). Foerster et al. (1989) write about how the relatively broader CFE agreement was able to manage ambient uncertainty as well as uncertainty about capabilities:

Despite the inevitable uncertainty surrounding Soviet and East European motives in pursuing conventional arms control, the expanded political framework in CFE raises the possibility of a far-reaching agreement (Foerster et al. 1989, 13).

Moreover, the proposals were meaningful inasmuch as they offered reductions and transparency measures capable of managing the conventional threat—particularly now that the nuclear threat had been abated with the INF Treaty and reduced tensions. In assessing the U.S. position during the CFE negotiations, Foerster et al. (1989) address the meaningfulness of the comprehensive package of proposals—NATO’s in particular—and their ability to manage the conventional threat:

The principal merit of NATO’s proposal, then, is not that it achieves parity, but that it incorporates measures that, together would reduce Warsaw Pact’s opportunities and, hence, its incentive to mount a preemptive attack. By themselves, equal aggregate ceilings on ground equipment in the ATTU region do not necessarily alter NATO’s vulnerabilities. Deep reductions in forward deployed Soviet armor and operational reserves in the western USSR, however, coupled with operational constraints and intrusive diplomacy measures as an integral package, could effectively eliminate a surprise attack capability and significantly extend Warsaw Pact mobilization requirements while enhancing NATO’s ability to monitor such a mobilization (Foerster et al. 1989, 64).

NATO’s proposal went beyond the “bean count” to assess the factors that contribute to different readiness and manning levels, namely the forward deployment of the Warsaw Pact’s forces “whose mass, firepower, and mobility would enable them to concentrate rapidly, penetrate NATO defenses, then strike deep into NATO’s shallow rear,” and therefore would essentially be capable of launching and ending a war before it would begin (Foerster et al. 1989 34).<sup>4</sup> NATO’s proposal then, when implemented, was able to meaningfully achieve the balance that could deter a surprise attack by eliminating this crushing Pact offensive capability and preserve NATO’s ability to respond to a potential attack of this nature.

The Warsaw Pact indicated a compatible objective of obtaining reductions in order to render forces adequate for defense, but “insufficient for a surprise attack and offensive operations” (Pravda, Statement adopted by the Political Consultative Committee of the Warsaw Pact Treaty Organization, Warsaw, July 16 1988).

### Excluded Forces

The Soviet Union would have preferred the treaty regime to include confidence- and security-building measures that established exclusionary zones, where naval forces and sea-based aircraft were prohibited. Early in the negotiation process, however, the Soviets agreed to exclude these forces, which Soviet Foreign Minister Eduard Shevardnadze referred to as “destabilizing” from a potential CFE agreement (Novosti Press Agency speech

---

<sup>4</sup> See Mearsheimer’s compatible argument in *Conventional Deterrence* (1985), as well as Kim R. Holmes, “Measuring the Conventional Balance in Europe,” in *International Security*, 1988.

by Soviet Foreign Minister Eduard Shevardnadze March 6, 1989). However, this may have had more to do with predilection each side had for targeting for reductions those categories of weapons for which the other side was ahead. Sharp suggests this is the case for the Soviets and NATO naval forces: “The Soviet Military was unwilling to accept limits on those categories of force in which it was ahead and leave naval forces, in which NATO enjoyed superiority, unlimited” (Sharp 2006, 5).

While the naval issue, dropped from the agenda during mandate talks, didn’t derail the CFE negotiations, the issue has plagued CFE renegotiations for decades now.

Nevertheless, in the end, the reductions (TLE) were meaningful: both sides believed that they could achieve and maintain stability as a result of the reductions: “neither side could generate a surprise attack while observing the limitations of the treaty” (Rand, xi).

**(5) For arms control, the management of uncertainty calls for a strategy that pursues flexible agreements that may be characterized as vague, broad, shallow, and loaded with confidence- and security-building measures.**

The CFE Treaty practically defines what it means for an arms control agreement to be flexible, broad, and full of CSBMs. The regime provides an unprecedented degree of transparency by means of the verification regime, including the annual exchange of information and a schedule of on-site inspections, which has “had the effect of dispelling ‘suspicion about states’ motives and activities and contributed to the prevention of surprise attack” (Peters 1997, xii). This may be the regime’s crowning achievement. Sharp writes:

The confidence building aspects of a formal agreement should not be underestimated. The lasting legacy of the CFE Treaty will not be the numerical limits imposed on five categories of heavy military equipment, important as those are, but on the extraordinary degree of transparency afforded by the annual information exchanges and schedule of inspections (Sharp 2006, xiii).

The treaty also includes provisions for amendment and review processes so that the agreement can be modernized as necessary. This has afforded significant flexibility to adapt to a changing environment and manage newer (emerging) threats. Peters notes this with optimism and writes:

There is substantial flexibility in the United States’ arms control repertoire and...the ‘fit’ between what CFE can deliver and Europe’s current security requirements is loose enough so that it should be possible to preserve the essential elements of CFE as a ‘security redoubt’ against the worst-case fall in Europe’s fortunes while adjusting some aspects of the treaty to fit present circumstances more closely (Peters 1997, xiii).

As a result, the CFE regime also defines what it means for an arms control agreement to be durable, setting the standard for robustness over time.

## What Has Happened Since: Implementation, Follow-On Negotiations and Violations

CFE-1A talks convened almost immediately following the successful conclusion of the CFE talks in Vienna. These talks established reductions to troop levels in Europe—a limit of 250,000 per side—and required that all participating states provide notification of increases to force levels. The CFE-1A agreement, which is politically binding, entered into force at the same time as the original CFE Treaty in 1992. CFE inspections verify compliance with the CFE-1A agreement.

The Flank Agreement, signed on March 31, 1996 permitted additional troops in the flank regions of Ukraine and Russia.

However, the CFE Adaptation talks, undertaken during the Istanbul Summit in 1999 were not as successful. The talks aimed at revising limits based on nations rather than alliances in order to accommodate the post-Cold War geopolitical situation in Europe. NATO states have refused to ratify the agreement until Russia complies with its obligation to withdraw troops from Georgia and Moldova (the Istanbul Commitments), and, as such, it has never been implemented. Russia has openly criticized this “politicization” of diplomatic arms control efforts, and has troops in both these states today. The lesson in this, writes Sharp, is that: “The diplomatic process cannot run ahead of the political relations between the state parties to the negotiation...Arms control reflects rather than affects international relations...” (Sharp 2006, xiii). Russia subsequently withdrew from the CFE Treaty in 2007 and invaded Abkhazia and South Ossetia—both in Georgia—in December of 2008.

Finally, the exclusion of naval forces has continually haunted dynamics and stymied diplomatic efforts, with Russia persistently resorting to requests for greater transparency on the movement of naval vessels, which NATO will never accommodate (Sharp 2006, 5). Whereas Russia, with its large landmass, has historically relied on large standing armies, NATO has always held superiority in naval capability and the U.S. considers the knowledge of movement of its ships critical to its national security and, therefore, non-negotiable.

## The Future of CFE

Calls for the negotiation of a new CFE Treaty have dominated the most recent two review conferences. By all accounts, the treaty is in need of modernization to accommodate a number of changes in Europe. As it stands, the treaty does not include all members of Europe or of the OSCE, and a new agreement might bring the Baltic States into the regime. Additionally, the treaty must be modified to manage threats posed by the Mediterranean Basin—to shift the ideological barrier from its Cold War boundary to that of radical Islam. Efforts towards modernization seek to maintain adequate security in OSCE states most readily affected by this new threat.

However, attempts at modernization via the JCG and review conferences have been met with Russian resistance. Russia’s position is that the treaty is “unfair” and has failed to address Russia’s own security concerns, which are exacerbated by seemingly endless NATO enlargement, and threatened by events such as the NATO bombing campaign against Serbia and Montenegro in response to ethnic cleansing in Kosovo.

Likewise, many OSCE states are concerned about Russia's potential return to a military posture akin to that from Cold War Days. On the heels of the formation of the NATO-Russian Council following the September 11<sup>th</sup> attacks, many expected that that Russia would meet its 1999 Istanbul (withdrawal) commitments. Instead, Putin intensified the war in Chechnya and lent support to the South Ossetian and Abkhazian secessionists in Georgia (Sharp 1996, xiii). The subsequent invasion of Abkhazia and South Ossetia presents a case in point regarding the wariness of OSCE states regarding the negotiations of a new CFE regime. And the invasion was not an anomaly. In September of 1999, President Vladimir Putin intensified the war against Chechnya in response to the Chechnyan effort to establish independence from Russia.

Russia has also violated the CFE Treaty on occasion, contributing to the wariness of would-be cooperative European states. Dating back to the early 1990s, Soviet General Staff evaded requirements to destroy excess weapons in Europe when it transferred almost 80,000 pieces of equipment outside of the zone of application. Sharp explains the effect of this move:

While not a breach of the letter of the agreement, these transfers eroded much of the trust and confidence that had been built up over the previous two years and suggested that Soviet dissatisfaction with the limits imposed by the treaty could still jeopardize the ratification (Sharp 2006, 3).

Again, in May of 2001, Russia was found in violation of the CFE Treaty, when it exceeded Article V limits on equipment in the flank zone (Sharp 1996, xiii). This has led to the NATO claim that the CFE inspection quotas and inspection system are less adequate because "more states are interested in inspecting Russia and their immediate neighbors than they were before," and the current quotas don't reflect this desire (Peters 1997, xii).

More recent efforts at modernizing CFE (in 2010), led by Victoria Nuland of the U.S. State Department were impeded by concerns about changes in weapons technology. While the U.S. presented a framework for a new agreement that read like a revised CFE 1990 agreement, Russia rejected these proposals on the grounds that limitations on the existing five categories of TLE do not adequately capture the "capabilities" of the conventional military forces of all states party to the agreement. Namely, setting ceilings on these categories of weapons does not take into consideration reaction time, the speed of movement or the firepower of military forces. Furthermore, the heavy equipment currently regulated under CFE is designed to hold or maintain ground rather than seize it, but for Russians, light forces "lead the way." Likewise, CFE doesn't control munitions like guided artillery projectiles and rockets, and guided bombs and air-to-surface missiles. Prospects for modernizing the treaty to accommodate uncertainty about security caused by these weapons are dim: monitoring these technologies would require extreme intrusiveness, including declaration of and access to all ammunition storage areas, and is therefore not likely.

Finally, sub-regional conflicts in Europe that were not prominent during the negotiation of the original CFE Treaty presents new sources of uncertainty that are not currently managed by the regime.

Therefore, because the sources of uncertainty present today differs from that of 1990, and because the agreement has not been adapted to respond to these changes, the CFE Treaty no longer provides effective uncertainty management in in Europe.

## Conclusion

Despite concerns with the CFE Treaty's ability to manage uncertainty about security going forward, the regime has been remarkably successful. First, in light of the failure of MBFR, that an agreement was reached at all was a major accomplishment. Foerster et al. (1989) attribute the success of CFE to an emphasis on limitations to armaments rather than manpower:

[MBFR's] technical approach to solving NATO's security problem was deficient, owing largely to an emphasis on manpower reductions accompanied by an intractable debate on data. By dealing with major categories of armaments whose inventories are ostensibly more verifiable, CFE will hopefully avoid such a data wrangle (Foerster et al. 1989, 10-11).

Another factor contributing to the success of the CFE negotiations was the presence of the sincere desire to reach an agreement by both sides, which was made possible by an abatement of uncertainty due to a myriad of factors, including the removal of INF missiles from Europe, the reductions of tensions and the emergence of trust. These factors made it possible for both the U.S. and the Soviet Union to muster up the political will to get the job done.

The durability of the CFE Treaty is its other great success. That the treaty has outlived its military usefulness speaks volumes for the value of transparency from information exchange and on-site inspections—which may be as valuable as the limits to conventional equipment. Moreover the breadth of the regime—the legally binding limits combined with the politically binding transparency measures—is significant in its uniqueness in arms control agreements.

For CFE, an early focus on decreasing the offensive potential of the forces of both sides went hand-in-hand with establishing verification and compliance measures (CBSMs). They were inseparable goals for the negotiations (Rohn 1990). Part of why the CFE regime hasn't collapsed entirely is the fact that states don't want to give up the transparency, even though the reductions are no longer meaningful. It is imperative for the Vienna Document to be modernized to re-establish its relevance in the modern era, although we now need to consider the value of the legally binding measures of the regime and whether it is worth the time cost to pursue them.

## Conventional Force in Europe Treaty Timeline

September 1986 –The 35-nation Conference on Disarmament adopts an accord designed to reduce the risk of war in Europe. Per this document, NATO and the Warsaw Pact agree to provide one another advance notice of all major military activities in the Atlantic-to-the-Urals region. All signatory nations must be invited to observe any military activity involving more than 17,000 troops.

December 11, 1986 – NATO proposes successor talks to MBFR.

January 10, 1989 – Member states of NATO and the WTO (23 in all) issue a mandate for the Negotiation on Conventional Armed Forces in Europe Treaty.

March 9, 1989 –The Conventional Forces in Europe (CFE) negotiations formally open in Vienna. WTO countries presented a revised version of Gorbachev's three-stage proposal from April 1986 to bring down WTO forces levels at parity with those of NATO.

March 1989 – In the first round of CFE Talks, both sides agree to pursue terms that would correct armament imbalances, establish special zones for sub-limits. Agree that, once parity is achieved, both sides will draw down forces an additional 25 percent and each side will restructure its forces to a defensive posture.

May 12, 1989 – U.S. President George Bush reinvigorates President Dwight Eisenhower's 1955 Open Skies proposal.

May - July 1989 – In the second round, U.S. Secretary of State James Baker goes to Moscow where Gorbachev gives specific numbers to the WTO proposal. A new Soviet proposal is tabled in Vienna on May 23, 1989 that is closer to NATO's proposal, but adds new limits on aircraft, helicopters, and manpower.

June 12, 1989 – U.S. and Soviet Union sign Agreement on Dangerous Military Activities, committing themselves to prevent four kinds of dangerous military activities during peacetime.

September - October 1989 – In the third round, each alliance presents similar proposals with respect to information exchange, stabilization measures and verification. NATO attempts to meet WTO concerns about U.S. equipment stored in Western Europe. Both sides agree on a definition of "artillery," but are unable to agree on definitions for tanks, ACVs or air assets.

November - December 1989 – Fourth round of talks. Breaching of the Berlin Wall in November 1989 slows progress in this round, as Soviet anxiety over German reunification tempers willingness to make concessions in Vienna. Nevertheless, WTO and NATO positions come closer together and all delegates hope for completion of the negotiations in 1990.

December 2 - 3, 1989 – Malta Summit between President Bush and General Secretary Gorbachev. Leaders agree to complete CFE agreement by end of 1990.

January - February 1990 – In the fifth round, a lack of cohesion within the WTO countries slows progress. Hungary and Poland adopt many Western positions and develop good communications with NATO counterparts. Greece, France, and Turkey are regarded as the main obstacles to progress.

February 12 - 28, 1990 – First round of Open Skies negotiations.

March - April 1990 – Sixth round of CFE Talks. Gorbachev's agrees to withdraw all troops from Czechoslovakia and Hungary by June 1, 1990.

May - November 1990 – In the seventh round, Soviets complicate aircraft limits by insisting that land-based naval aircraft be excluded from CFE limits. Agreement on sub-zones within the overall zone of application and inspection schedules require careful inter- and intra-alliance negotiations.

October 11, 1990 Agreement on CFE flank limits and aircraft levels reached.

November 17, 1990 – Vienna Document 1990 (VD90) issued following a CSCE summit in Paris.

November 19, 1990 – CFE Treaty signed in Vienna by 22 participating states.

November 25, 1990 – U.S. Senate ratifies CFE Treaty.

February 29, 1992 – Vienna Document 1992 (VD92) issued.

March 24, 1992 – Treaty on Open Skies signed at CSCE meeting in Helsinki.

May 15, 1992 – Successor states to the Soviet Union within the zone of application of the CFE Treaty meet in Tashkent to apportion themselves the equipment entitlements of the Soviet Union. Russia claims ownership of former Soviet equipment in these states. Tashkent Agreement signed.

July 8, 1992 – Russian ratification of the CFE Treaty.

July 9 - 10, 1992 – Two documents signed in Helsinki at the CSCE Summit on eve of CFE Treaty entering into force. First, the Helsinki Document requires CSCE members to initiate new negotiations on disarmament and to intensify cooperation between member states on matters relating to security. At this meeting, 29 states also sign the CFE Treaty and declare national limits on the personnel strength of their armed forces in the zone of application.

July 17, 1992 – CFE Treaty enters into force.

November 28, 1994 – The CSCE adopts the Vienna Document (VD94) and the Global Exchange of Military Information (GEMI). These agreements support transparency between signatories regarding location and strength of their armed forces.

December 5 - 6, 1994 – CSCE becomes OSCE. Participating states endorse early entry into force of the Open Skies Treaty and implementation of GEMI. They also endorse the CSBMs of VD94 and approve the Code of Conduct for the Political-Military Aspects of Security.

Russia begins an aerial bombardment and land invasion of Chechnya and claims that the CFE Treaty infringes on their operations in the Caucasus. Bombing of civilians in Chechnya hinders NATO support to raise Russian CFE Treaty limits.

May 15 - 31, 1996 – First review conference of the CFE Treaty is held by all states party to the agreement. CFE parties have eliminated over 58,000 pieces of treaty-related equipment, have reduced personnel by 1.2 million persons, and have conducted over 2,500 inspections to ensure compliance. Russia recommits itself by promising to eliminate 2000 pieces of undestroyed equipment that have been moved east of the ATTU zone.

December 1996 – Partly in response to Russian concerns about the expansion of NATO in Europe, scope and parameters are established for setting the terms of reference for reexamination of the CFE Treaty. The Joint Consultative Group (JCG) rules out a wholesale renegotiation of the treaty, calling instead for adoption of specific adaptations for particular purposes.

1997 – Poland, Hungary and the Czech Republic join NATO

February 17, 1997 – Adapted CFE Agreement, which abolishes alliance-group structure and eliminates nested zones, is reached.

September 1999 – Between the two Chechen wars, Russia maintains military forces and equipment in the North Caucasus and refuses six CFE inspections in two years. Putin intensifies attacks in Chechnya, claiming to take the approach NATO had in Kosovo.

November 1999 – Agreement on Adaptation of the CFE Treaty reached at OSCE summit meeting in Istanbul; Russia also agrees to withdraw from Moldova and Georgia (Istanbul Commitments). Treaty never ratified.

May 2001 – The second CFE Review Conference convened and limited its work to a set of formal conclusions, noting the steps still needed to bring the adapted treaty into force, and endorsed continuing work on individual Treaty implementation issues.

July 14, 2007 – Russian President Vladimir Putin orders suspension of the CFE Treaty.

December 2011 – NATO allies implement countermeasures and suspend a number of their Treaty obligations, ceasing to perform their Treaty obligations vis-à-vis Russia. This cessation applies to military data exchange and onsite verification inspections.

## Chapter 5: The Strategic Arms Limitation Talks I (1969-1972)

Nothing about so volatile a matter as arms is certain.

– John Newhouse, *Cold Dawn* (1973)

The time has come for an era of negotiation.

– President Richard Nixon, Address accepting the Presidential nomination in Miami Florida (1968)

### Introduction

Shrouded in secrecy and beset by a high degree of uncertainty, the Strategic Arms Limitation Treaty (SALT) talks comprised a seven-round, two and a-half year negotiation between the U.S. and the Soviet Union (USSR). The talks focused on reducing or stabilizing nuclear armaments in order to achieve parity and avoid total nuclear annihilation. Negotiating rounds alternated between Helsinki and Vienna and were accompanied by rigorous “back channel” efforts. The negotiations produced two agreements: the Antiballistic Missile (ABM) Treaty and the Interim Agreement on Certain Measures With Respect to the Limitation of Strategic Offensive Arms.

The ABM Treaty limited the number and location of defensive missile systems each side could have, a restriction designed to prevent national ABM defense—or total land-area protection from a nuclear attack. The treaty permits each side one ABM system to protect its capital and a second to protect its ICBM launchers.<sup>1</sup> Both sides also agreed to halt the further development, testing or deployment of “exotic” ABM systems and their components, including missiles and radars.<sup>2</sup> The ABM Treaty was designed to be of unlimited duration with provisions due for review every five years following entry into force.

The Interim Agreement on Certain Measures With Respect to the Limitation of Strategic Offensive Arms established limitations on strategic operational and under-construction ballistic missile launchers: it froze intercontinental ballistic missiles (ICBMs) at current levels and set a ceiling on submarine launched ballistic missiles (SLBMs). All launchers under construction at the time could be completed, although neither side would be permitted to start the construction of new land-based ICBM launchers (or relocate existing ones) for the duration of the agreement. The agreement also stipulated that launchers for older, lighter ICBM launchers could not be converted into heavy missile-capable ones (U.S. Department of State’s Bureau of International Security and Nonproliferation Interim Agreement Narrative 1972).<sup>3</sup> Both sides agreed to verification by National Technical Means (NTM) by way of satellites and to a policy of “noninterference” with each other's

---

<sup>1</sup> The ABM Treaty also restricts the number of interceptor and launcher missiles each system may have to 100 each and places restrictions on the number and kinds of radars these systems may have.

<sup>2</sup> “Exotic” refers to sea-based, space-based or air-based systems.

<sup>3</sup> A protocol to the Interim Agreement, which was signed the same day, set limitations to ballistic missile launchers on submarines (SLBMs), permitting the U.S. a total of 710 SLBMs and 44 nuclear missile-capable submarines, and permitting the USSR a total of 950 SLBMs and 62 nuclear missile-capable submarines (U.S. Department of State’s Bureau of International Security and Nonproliferation Interim Agreement Treaty Text 1972).

satellites. The Interim Agreement was intended to remain in force for five years, with the understanding that follow-on negotiations would take place to complete a more comprehensive agreement as soon as possible. The Treaties established the Standing Consultative Commission to "promote the objectives and implementation" of the agreements. For both the ABM Treaty and the Interim Agreement, each side had the right to withdraw should "extraordinary events" make it such that the agreement would jeopardize either country's "supreme interests."

The negotiations are remarkable because the agreements they produced represented a breakthrough in U.S.-Soviet relations and marked the beginning of détente following a period of high tensions between the two superpowers. Moreover, the kind of reductions to which the two sides agreed—for both offensive and defensive nuclear weapons—were unprecedented, even if they were rather limited. SALT is also notable as a negotiation for the high level of top-level interest and involvement as well as the use of the "back channel" during the negotiation process.

The SALT talks are an ideal place to assess various types of and responses to uncertainty in arms control situations due to the notably high degree of uncertainty under which they took place. Descriptions of the talks are replete with references to the ambiguity surrounding the negotiations and the resulting uncertainty. The fact that nothing in the history of U.S.-Russian relations presented a viable template or precedent for the talks heightened this uncertainty. Journalist John Newhouse, who chronicled the talks in great detail, wrote: "Precisely because SALT was a novel and major departure in great power relations, it was mired in uncertainty" (Newhouse 1973, 125).

Uncertainty about feasibility, intentions, capabilities, and strategies all ran rampant before and throughout the course of the negotiations. However, what is perhaps unique to the SALT negotiations relative to other arms control negotiations was the extraordinary degree of uncertainty about capabilities both sides had, and the related concerns about each party's parity. The question of which country had the advantage in which weapons technologies and deployment persistently affected the negotiation process. At the time of signing, the U.S. had 1,054 operational land-based ICBMs with none under construction while the Soviet Union had approximately 1,618 ICBMs, both operational and under construction.

The U.S. had an advantage in the development of multiple reentry vehicles (MIRVs)<sup>4</sup> and was close to MIRV deployment by 1970 (Garthoff 1985, 134); the Soviets were still in MIRV development at that time. The USSR, however, had an advantage in heavy missiles (a kind of ICBM and SLBM), with their heaviest (MIRV-capable) missile outdoing the throw-weight of the largest U.S. missile. Ultimately, although they were dead wrong, the U.S. believed the Soviets also had an advantage in ABM technology.

Added to the uncertainty regarding each side's holdings was uncertainty about how the military leadership planned to *use* them—their intentions. There was also a great deal of

---

<sup>4</sup> MIRVs make it possible for a nuclear missile to carry several independent warheads

uncertainty regarding the role these kinds of weapons and systems played in each country's nuclear strategy and military doctrine.

This chapter illustrates the types, causes, and effects of uncertainty on the SALT negotiation process and treaty. For this analysis, I draw extensively from John Newhouse's comprehensive investigation into the SALT talks in his book *Cold Dawn*, as well as a number of primary sources that include declassified intelligence and diplomatic documents (predominantly the Foreign Relations of the United States, FRUS, Volume XXXII 1969-1976 and the BDM study),<sup>5</sup> and numerous secondary sources. While the SALT negotiations began under President Johnson's administration this chapter focuses on the negotiations under President Nixon's administration, which produced and signed the final agreement of SALT I. However, particularly salient aspects of uncertainty and their effects under Johnson's administration are included as well.

## Background

The road to the SALT negotiations was a halting and meandering one. In 1964, still during the "era of confrontation," U.S. President Lyndon B. Johnson proposed a freeze on strategic nuclear weapons. The Soviets rejected this proposal outright, likely due to concern that the U.S. was trying to codify their existing advantage in ICBMs (Payne 1980, 17). By 1968, however, the Soviets had caught up on the development of nuclear weapons and were more confident about their own security. This caused a shift in their position on arms control towards a policy of "peaceful coexistence" (Payne 1980, 18). While this boded well for the prospect of bilateral arms control negotiations, the Soviet-led Warsaw Pact invasion of Czechoslovakia in August of 1968 effectively stymied Johnson's plans for a summit meeting in Leningrad, where both sides had hoped to finally launch the SALT process (Garthoff 1985, 128).

By late 1968, however, the Soviets—who had previously been in favor of beginning talks—stalled, reluctant to engage in negotiations due to U.S. involvement in Vietnam. While Johnson was still in office, the Soviets attempted a strategy of linking the start of strategic arms limitation talks to the removal of U.S. troops from Vietnam in the hope of coercing the president to take a different stance on the issue (Savel'ev and Detinov 1995, 8-9). However, once the Communist North Viet Cong launched the surprise Tet Offensive against the U.S. and South Vietnam, the U.S. did begin to withdraw their troops, thereby removing obstacles to negotiation. When Richard Nixon entered office in 1969, the Soviets knew they would have a much harder time forcing this kind of issue linkage and thus indicated willingness to begin arms control talks immediately (Savel'ev and Detinov 1995, 9).

## Leadership, Delegations, and Decision-Making Structure

Johnson and Nixon had very different management styles as far as the SALT process was concerned and perhaps presidential styles as well. Whereas Johnson had a tendency to "stand aloof and let the bureaucracy thrash out most of the SALT-related issues"

---

<sup>5</sup> The BDM study on SALT was carried out by John G. Hines, Ellis M. Mishulovich, and John F. Shull in 1995 by BDM Federal, Inc.

(Newhouse 1973, 36),<sup>6</sup> Nixon had a different approach, preferring a more hands-on role as coordinator, point-person, and lead decision-maker. He also had a “fondness for options” and tended to exploit existing divisions in the Washington bureaucracy to “exercise better control” over the process (Newhouse 1973, 36). Of the two presidents, Newhouse writes, Johnson was actually “the stronger advocate of SALT” (Newhouse 1973, 38). However, despite Nixon’s initial reluctance to starting arms control talks with the Soviets, he was ultimately sincere in his efforts during the negotiations and would eventually come to press hard for a SALT agreement. The SALT Treaty would become “the pilot ship of negotiation, and later the flagship of détente, as well as the crowning achievement of Nixon’s first term” (Garthoff 1985, 127).

When Nixon took office, he wanted the opportunity to consider all options regarding SALT and returned to the drawing board, scrapping Johnson’s initial SALT proposal (Garthoff 1985, 128). His team did a complete review of the SALT process, documents, and plans, and became “appalled and thoroughly disapproving of the way [Johnson’s] 1968 proposal had been handled” (Newhouse 1973, 113). Nixon was aghast that such a critical responsibility had fallen into the hands of “a wholly irregular tiny ad hoc group of middle-level bureaucrats” (Newhouse 1973, 113). Indeed, Johnson’s team had relied on the bureaucracy to advise on questions pertaining to ABMs, ICBMs and MIRVs. Johnson’s SALT proposal, comprised of a limitation of 1200 ICBMs with numerical equality on ABMs and a freeze on SLBMs (Clearwater 1996), was a compromise, designed to please all branches of the bureaucracy and to find favor with the Soviets. Nixon, however, believed arms control issues were political questions and should be decided by the highest political authority—the president in consultation with his most senior advisors.

It almost goes without saying that Nixon’s National Security Advisor Henry Kissinger was the most influential of his advisors. Newhouse writes that Kissinger “is so dominant an influence that it is sometimes hard to remember that he is the President’s agent” (Newhouse 1973, 50).<sup>7</sup> Indeed, his power and influence were extraordinary although he was at times overruled by the President and occasionally made mistakes due to miscalculation or fatigue. Of Kissinger’s role Newhouse also writes: “The President insisted on establishing control through a single, trusted, omniscient individual” (Newhouse 1973, 51).<sup>8</sup> Nixon also had a “proclivity to prefer a clandestine rather than over-the-table approach to the exercise of power” (Garthoff 1985, 129). Together, Nixon and Kissinger established back channel negotiations during SALT, which were unknown to neither the official SALT delegation nor executive departments and was actually the source of most major advancements in the talks subsequent to the official first round (Garthoff 1985, 129).

The official SALT delegation largely mirrored the SALT bureaucracy in its composition (Newhouse 1973, 43; Garthoff 2001, 248).<sup>9</sup> Although Gerard C. Smith, the chief U.S.

---

<sup>6</sup> Analysis of the effect of uncertainty on the SALT talks under Johnson, therefore, might require attention to concepts of “group think” and bureaucratic decision-making, although such a study would lay beyond the scope of this project.

<sup>7</sup> Some argue this is overstated.

<sup>8</sup> Kissinger was known to have an “aversion” to mixing bureaucracy with policy.

<sup>9</sup> The entire SALT delegation included: Gerard Smith (ACDA Director), Ambassador Llewellyn Thompson and later Ambassador J. Graham Parsons, representing the State; Paul Nitze representing Defense; Lt. General

delegate and head of the Arms Control and Disarmament Agency (ACDA), was a competent negotiator who had a full command of the issues, he was primarily concerned with extending the scope of the negotiated agreement and lacked the White House's full confidence (Newhouse 1973, 43-44; Garthoff 2001, 279).<sup>10</sup> In truth, Smith and his Soviet counterpart, Foreign Minister Vladimir Semyonov, had very little authority. Although the two men led the first round of negotiations, Kissinger and Ambassador Anatoly Dobrynin actually held the early "critical negotiation" in the back channel in Washington in January 1971 (Newhouse 1973, 44; National Security Council Files notes of conversation June 11 1969 Henry Kissinger and Anatoly Dobrynin 2007). It was during this meeting the two sides agreed that any agreement limiting offensive nuclear weapons had to be accompanied by one establishing limitations to defensive systems (Newhouse 1973, 203).

General Secretary Leonid Brezhnev, who presided over the entire Politburo while Johnson and Nixon were in power, led by necessity, only making decisions on contentious issues when he had to. It is likely that this personal attribute contributed to the Soviet buildup of strategic nuclear weapons. Samuel Payne writes: "The path of least resistance from him was to proceed with the build-up without deciding its ultimate objective" (Payne 1980, 15). Brezhnev thus allowed the build-up to proceed with no end-goal in mind, perhaps cognizant that a decision would have to be made once the build-up was complete and parity had been achieved, which came in the form of his new "peaceful coexistence" position on arms control.

In general, Soviet foreign policy decision-making took place at the top—within the Politburo—in order to minimize potential internal conflict (Bennett 1997, 17). The Soviet SALT delegation was comprised of six delegates and 18 advisors, with Foreign Minister Semyonov leading the Soviet delegation.<sup>11</sup> Much like Smith, Semyonov likely had little authority. Rather, the Military Industrial Commission within the Politburo, called the *Voenno-promyshlennaia Kommissiya* (VPK), a powerful ministerial-level government body, "supported and integrated the efforts of nine defensive ministries in research, development, production, investment, and budgeting" to coordinate decision-making on SALT (Savel'ev and Detinov 1995, 6). Dobrynin had a direct line to Brezhnev, Gromyko and the Politburo and was key in moving the negotiations along (Dobrynin 1995, 220). As ambassador to the U.S., he was also able to cultivate a rapport with the highest officials in Washington (Dobrynin 1995, 220).

---

Royal Allison, U.S.AF, representing the Joint Chiefs of Staff (JCS); and Dr. Harold Brown, defense scientist and a former high Defense official (future secretary of defense). Brown took part of the delegation as an expert without a specific affiliation with an agency. (Raymond Garthoff was Smith's closest adviser).

<sup>10</sup> Because Smith was "persistently denied the responsibility he thought he should have," he resigned at the beginning of Nixon's second term (Newhouse 1973, 44).

<sup>11</sup> The full Soviet delegation included: Nikolaj Vasil'yevich Ogarkov (first deputy chief of the General Staff, Soviet Armed Forces), Georgiy Markovich Korniyenko (Chief of the U.S. Division, U.S.SR Ministry of Foreign Affairs (MFA)), Petr Stepanovich Pleshekov (U.S.SR Deputy Minister of the Radio Industry), Nikolai Alekseyev (Colonel General and at the time, member of the General Staff), Alekandr Shchukin (authority on defense research).

## Goals and Motivations

### U.S. Goals and Motivations

When Nixon entered office, he was wary of using arms control to achieve security goals and believed it was instead useful as a “political enterprise” for establishing domestic and international gains, not least of which was potentially a clean disengagement from Vietnam (Garthoff 1985, 127- 128). However, Nixon eventually came to see the merits of arms limitations for the sake of security goals and ultimately fought hard for a SALT agreement, which he hoped would be a hallmark of his presidency. Garthoff writes:

If President Nixon had been looking for a subject with which to open his proclaimed ‘era of negotiation’ with the Soviet Union, the Strategic Arms Limitation Talks (SALT) were the obvious, even ideal candidate” (Garthoff 1985, 127-128).

This is evidenced by his use of the back channel and supported by various anecdotes. For example, when the two sides were close to agreeing to link offensive and defensive limitations, Kissinger writes that “Nixon was seized by the fear that Gerard Smith, rather than he, would get credit for the seemingly imminent breakthrough of linking offensive and defensive limitations” (Kissinger 2011,814-15).

U.S. leadership—including the Arms Control and Disarmament Agency (ACDA), the State Department, and the White House—aimed to maintain U.S. ICBM and SLBM programs (Newhouse 1973, 176-177 and 159). The Department of Defense (DOD) and the Joint Chiefs meanwhile were focused on MIRV deployment, intent on making certain that the U.S. maintained its superiority in this capacity. As a result, the DOD and Joint Chiefs lobbied for a negotiation position that would secure limitations on the Soviets’ ability to catch up on MIRVs; this could be accomplished by limiting the size of the largest missiles (heavy ICBMs) capable of MIRV-ing by limiting Soviet ICBM throw-weight (payload capacity) (Garthoff 1985, 134). The DOD, in particular, pressed for reductions to these larger, MIRV-capable Soviet land-based missiles (Garthoff 1985, 134). ACDA and the State Department, however, were not in agreement on this MIRV position and lobbied instead for mutual limitations to MIRVs consisting of a moratorium on the testing of MIRV technology, which would quell the arms race by curtailing MIRV development and deployment (Garthoff 1985, 143). However, Kissinger and Nixon were quick to overrule that recommendation and eventually took the position that establishing limitations to MIRVs was “strategically undesirable.” This would also garner intense opposition from the DOD and political right (Garthoff 1985, 135). Therefore, while Kissinger eventually took the position that it was more valuable that the U.S. maintain its ability to deploy MIRVs than it was to limit Soviet deployment of this technology, which would have been the tradeoff required (Garthoff 1985, 141).

### Soviet Goals and Motivations

Once early obstacles were overcome, the elite Soviet leadership was actually eager to begin SALT negotiations with Nixon: the Soviet Foreign Ministry made a public statement on the date of Nixon’s inauguration, declaring the USSR’s readiness to come to the table and

discuss the “mutual limitation and subsequent reduction of offensive and defensive nuclear weapons” as soon as Nixon was ready (Savel’ev and Detinov 1995, 8-9; Zamyatin and Novikov 1969, A8). The Soviet Union’s goals in coming to the table were relatively transparent: elite Soviet leadership wanted to “end uncertainty in the accelerating arms race, to perfect the strategic balance...and to keep some of the advantages that the Soviet leadership believed the nation had obtained in certain military areas” (Savel’ev and Detinov 1995, 9). Indeed, the Soviet Union had previously been uninterested in coming to the table, when they were behind in the development of strategic nuclear weapons. Once the USSR had attained something close to parity (which they actually achieved quite rapidly) and felt on equal footing, they indicated willingness to negotiate (Payne 1980, 11 and 15). Marshall Shulman also writes that the Soviet motivation to engage in the SALT was also precipitated by Brezhnev’s ideal of “peaceful coexistence where the Soviet would not be subject to threat or intimidation (Shulman 1974, 102).

This is not to say that the idea of negotiated arms limitations was not without controversy in the Soviet Union. The Soviet bureaucracy was not entirely behind the idea of arms control—the military, in particular, was reluctant and suspicious of the U.S. (Garthoff 1985, 130). In particular, the Soviet military was concerned that the U.S. was seeking to gain the upper hand militarily and to deceive them into accepting a militarily inferior position (Savel’ev and Detinov 1995, 34). This meant that, in terms of negotiation goals, the Soviet military was in favor of “obtaining the most favorable possible strategic nuclear balance,” largely by pursuing strong restrictions to U.S. nuclear programs (Bennett 1997, 17). The Soviet Ministers of Foreign Affairs and Ministers of Defense also wanted “an accounting” of nuclear forward-based systems (FBS) (Savel’ev and Detinov 1995, 9). Regarding ABM technology, Soviet political leadership was prepared to discuss restrictions to ABM whereas the military opposed a total ban “arguing that a system was already under construction around our [Moscow] capital” but was well aware of the technological problems and the fact that the existing system was imperfect (Dobrynin 1995, 213). Nevertheless, the Soviet government worked hard to “conceal the differences of opinion” prevalent among different factions of its government (Payne 1980, 5), such as the division between military and political leadership with respect to this ABM issue. Once negotiations began, the Soviet positions would be shaped through coordination among multiple branches of the bureaucracy via the Ministers of Foreign Affairs and Defense with the Politburo (Brezhnev) making final decisions (Savel’ev and Detinov 1995, 9).

## Main Positions and Proposals

The U.S. provided the majority of proposals discussed during the talks whereas the Soviets mostly reacted to these proposals instead of tabling their own (Garthoff 1985, 207-209; Bennett 1997, 32).

### Round I

When the first round of talks began in Helsinki on November 17, 1969, the U.S. presented two options for its initial position (“Option A”). There was the ACDA-State Department approach that consisted of either a total ban on ABM systems or limitations of ABMs to the defense of “National Command Authorities” (NCA), meaning Moscow and Washington.

These defensive limitations were accompanied by a freeze on ICBMs and SLBMs at existing levels and a total MIRV ban. The U.S. at this time wanted some kind of linkage between an ABM agreement and offensive weapons limitations (Garthoff 1985, 157). The second U.S. option was the DOD-preferred alternative, which consisted of a similar approach to ABM, combined with a gradual reduction to missile launchers (ICBMs and SLBMs) over a seven-year period with no limitation to MIRVs (Garthoff 1985, 136).

*Table 1. U.S. "Option A"*

	MIRV	Inspections	ICBMs and SLBMs	ABM
ACDA Position	Total ban	On-site inspections to verify MIRV ban?	Freeze at existing levels	Total ban or limited to NCA
DOD Position	No limitations	No position taken	Gradual reductions over seven years	Total ban or limited to NCA

Both options would support a U.S. strategic advantage. If either one were accepted by the Soviets, the U.S. then planned to table Kissinger's preferred "Option B," which was a mix of the ACDA and DOD positions, and consisted of a freeze of ICBMs and SLBMs and limitations to ABMs while allowing MIRVs. Option B aimed to thwart the Soviet buildup of offensive weapons by placing a freeze on ICBMs and SLBMs at existing levels.

*Table 2. U.S. "Option B"*

	MIRV	Inspections	ICBMs and SLBMs	ABM
U.S. Position	No limitations, no ban	Not specified.	Freeze at existing levels	Total ban or limited to NCA

In response to ACDA's version of Option A, the Soviets rejected the idea of a MIRV ban fairly quickly, in part due to the necessary accompanying provisions for on-site inspection to verify the ban.<sup>12</sup> The Soviet Union was categorically opposed to on-site inspections, perpetually suspicious that they would be used for the purposes of collecting information. The U.S. knew well that those on-site inspections had traditionally been a "deal-breaker" for the USSR. The Soviets also found the ACDA Option A proposal unfavorable because a ban on MIRV testing and development would not curtail MIRV deployment, and the U.S.

---

<sup>12</sup> Prior to this first round Dobrynin had let it be known, however, that the USSR had not ruled out entirely on-site inspections, although they rejected them in Helsinki.

was the only state capable of deployment at that time (Garthoff 1985, 139). A ban on MIRV testing and development would have solidified the U.S. advantage in this technology. Garthoff writes:

The Soviets saw the loophole of allowing MIRV production as a 'booby trap' and as a further indication that the U.S. was not serious about seeking a ban or limitation on MIRVs" (Garthoff 1985, 139 FN. 34).

The Soviets did not come to the first round with proposals, nor did they present alternatives to U.S. proposals. Nevertheless, they were firm in rejecting the American ones (Bennett 1997, 32). At the start of the negotiations, Soviet leadership wanted to focus exclusively on offensive weapons, particularly land-based nuclear weapons (ICBMs), although the USSR did raise the issue of ABM limitations during this first round. The Soviets initially envisioned an agreement that would lower aggregate levels of ICBMs, including those belonging to British and French forces, while establishing a strategic balance. They preferred to leave the question of limitations to SLBMs (and other naval issues in which they held an advantage) out of the dialog (Savel'ev and Detinov 1995, 11). The Soviet position revealed in the first round of talks also reflected strong support for mutual deterrence, which would be enhanced by these limitations to strategic arms as well by limitations to ABM deployment (ABM sites and locations) (Garthoff 1985, 133). This position did not rule out a complete ban on ABM altogether. In time, Soviet preference for "maximum" ABM limitations were revealed, explains Garthoff, which they came to view as essential for continued negotiations on offensive arms (Garthoff 1984, 303). Interestingly, the Soviets did not discuss MIRV in the initial meeting, and likely were not interested at the time, although they did press for the inclusion of U.S. forward-based bombers in Europe in the accounting of offensive weapons (Bennett 1997, 33).

Table 3. U.S. and Soviet Positions at the End of Round 1

	MIRV	Inspections	ICBMs and SLBMs	ABM
U.S. Position	Allowing or banning	On-site for MIRVs	Freeze at existing levels	Total ban or limited to NCA
U.S.S.R. Position	None	None	Limitations to ICBMs only	Maximum limitations to ABM deployment

## Round II

The Soviets came to the second round in Vienna on April 16, 1970 ready to discuss MIRV. They offered a ban on production and deployment but, notably, not on testing, and offered no on-site inspection. A ban on MIRV testing is what would allow the U.S. to verify that the Soviet Union was not deploying MIRVs—there was no other way to effectively verify their deployment (Garthoff 1985, 139). The Soviets again objected the U.S. exclusion of forward-based systems (FBS) from their proposals.

Shifts in the Soviet position came first in 1971, when the Politburo recommended freezing the number of ICBM launchers in conjunction with an agreement on the limitation of ABM systems (a coupling approach), and again in 1972 when the Soviets realized that SLBMs had to be included in any agreement aimed at achieving nuclear parity and strategic balance (Savel'ev and Detinov 1995, 24 and 26). The U.S. presented a second set of proposals during the second round in August 1970 ("Option C"), which consisted of a total or limited (to NCA) ban on ABM systems, and a total ban on MIRVs, which would codify U.S. superiority in the technology. The Soviets rejected this proposal outright (Newhouse 1973, 183).

Table 4. U.S. and Soviet Round 2 Positions

	MIRV	Inspections	ICBMs and SLBMs	ABM
U.S. Position "Option C"	Total ban	Not addressed	Freeze ICBMs at existing levels, include SLBMs	Total or limited ban (NCA)
U.S.S.R. Position	Ban on production and deployment, but not testing	None	Limitations to ICBMs only	Maximum limitations to ABM deployment

The Soviets accepted the U.S. proposals for limitations on ABM to NCA, but were taken aback when later in the same round, the U.S. proposed the "zero" ABM option instead. Having already accepted the U.S. proposal for NCA defense by ABM, the Soviets reaffirmed this choice. However, they questioned the seriousness of the U.S. negotiating position on ABM as a result of this change (Newhouse 1973, 185). The Soviets also raised the issue of NATO forward-based-systems in Europe again, insisting "European and carrier-based aircraft would have to be treated as part of the American aggregate" (Newhouse 1973, 189). In the back channel, Nixon also sought limitations on SLBMs and bombers ("Option E") in conjunction with taking seriously the USSR's insistence on taking forward-based systems into account—a deal that Brezhnev ultimately accepted (Garthoff 1985, 159-161).

It also became evident during the second round that the U.S. was prepared to move at a much faster pace than the USSR, which appeared to exercise "traditional and normal caution" (Newhouse 1973, 191). This had the effect of revealing the significant role the Soviet bureaucracy was playing in the talks. Additionally, in the middle of the second round, Dobrynin introduced the notion of dropping the idea of an agreement on offensive weapons and focusing exclusively on defensive ones in the back channel (Bennett 1997, 33). As a result, the formal negotiations yielded a consensus to first negotiate an ABM agreement and to then negotiate a second agreement with some kind of limitations to offensive weapons (Dobrynin 1995, 214).

### Round III

Although the U.S. expected a response to Option E at the opening of the third round, which began in Helsinki on November 3, 1979, both sides turned to defensive weapons limitations, which were mutually desirable. Bennett writes: "[A]n ABM treaty first would stop the American Safeguard ABM program while damaging prospects for limiting Soviet missile deployments" (Bennett 1997, 33). At this point, the Soviets pressed for a "decoupling" of an ABM agreement from one on offensive weapons, which was not met with a favorable U.S. response—the U.S. preferred limits to both offensive and defensive weapons, even in separate agreements. The U.S. counter-proposed, offering to put FBS

back on the table in exchange for the Soviets bringing offensive weapons back into the conversation (Bennett 1997, 33). In the back channel, Dobrynin revealed that the Soviets would be willing to discuss the "offensive-defensive link" (Bennett 1997, 34).

#### Round IV

The Soviets came to the table in Vienna on March 15, 1971 with a complete draft treaty, which provided limitations to ABM (defensive) systems only. In the same round, they offered to discuss offensive weapons again provided that the U.S. accepts NCA-only provisions for ABM deployment (Bennett 1997, 35). This would have halted Safeguard development and deployment entirely, at the same time allowing the Soviets to keep their Moscow defense "Galosh" system. All the while offensive weapons were being discussed in the back channel and on the margins of the negotiations in Vienna. The Soviets felt that a freeze on offensive weapons might be acceptable only when an agreement had been reached on ABM. During a dinner with Smith in Vienna, Semyonov offered the proposal of NCA ABM provisions combined with ICBM limitations (Newhouse 1973, 214-215). In the back channel, the two sides began to discuss the idea of pursuing an agreement on ABM and an interim (temporary) agreement on offensive weapons. The Soviets also agreed to drop the FBS issue, at least until an initial agreement had been reached, while the U.S. agreed to drop its request for equality (reductions) in the number of offensive weapons (per "Option E").

#### Round V

The fourth round of negotiations had seen the breakthrough of an agreement on a freeze on ICBM, but the U.S. still wanted to pursue SLBM limitations. In the fifth round, which began in Helsinki on July 8, 1971, the U.S. proposed a freeze on SLBMs. However, the majority of the discussion during the fifth round centered on ABM limitations because the Soviets "continued to treat defense as the first order of business" (Newhouse 1973, 225). This round also focused on the technical details pertaining to limitations on ABM technology and, in particular, the number of ABM sites each side could have. The two sides debated the merits of the U.S.-proposed three-to-one plan, which would allow the U.S. to have three ABM sites and the Soviet Union only one (because they had yet to develop and test the technology), as well as the Soviet proposed one-plus-one plan, which would allow Moscow and Washington to keep the sites protecting those cities, while allowing the eventual deployment of a dedicated ICBM defense for these sites.

A breakthrough on the offensive (SLBM) issue came when Brezhnev proposed the 950/62 plan during Kissinger's visit to Moscow. The plan would allow each side 950 ICBMs and 62 SLBMs. Interestingly, Kissinger had planted the seed for this plan during back-channel discussions (Bennett 1997, 55; Newhouse 1973, 244; Garthoff 1985).

#### Round VI

The sixth, which began on November 15, 1971 in Vienna, round saw a big shift in the Soviet bargaining position, with the USSR finally accepting the U.S. position on ABM systems and also agreeing to limitations on ICBMs. Discussion then turned to SLBMs, with the U.S.

proposing parity in numbers of boats and rough parity in numbers of "tubes," while the USSR argued it needed more boats due to the "heavy geographic penalty on their sea-based operations" (Newhouse 1973, 237-238). The Soviets were particularly sensitive to the SLBM issue because, at this time, the U.S. had a fully functioning triad (land, air and sea nuclear weapons), whereas the Soviet Union did not yet have functioning sea-based weapons (Bennett 1997, 55).

## Round VII

Round Seven began on March 28, 1972 in Helsinki. The U.S. put forth its ABM proposal: equality in ABM systems, which would be limited to two-and-two sites (two sites for each side), in exchange for a Soviet agreement to put SLBMs into the offensive weapons package (Newhouse 1973, 241). The Soviets put forth their own similar ABM proposal of one-plus-one, which also allowed two sites for each party, one covering NCA and the other defending ICBM silos. This would allow the U.S. to protect Washington and to keep its Grand Forks site, while allowing Moscow to keep Galosh and build on additional ICBM defense site (Newhouse 1973, 242).

Finally, at the summit between Nixon and Brezhnev in May of 1972, the two leaders formalized the terms of the ABM Agreement, which permitted one NCA ABM site plus one additional ABM site to each side, has been cast as a "major arms control achievement" because it limited the ballistic missile defense to "strategically insignificant deployment" (Garthoff 1985, 188). In doing so, it served to quell the arms race in strategic offensive missiles although it was "less than was hoped and less than it should have" (Garthoff 1985, 189). The Interim Agreement, however, was "a much more limited accomplishment" (Garthoff 1985, 189). While it placed a limit on ICBM launchers, it did not limit MIRVs or the arms race in that technology, nor did it limit "qualitative" improvements to offensive missiles, like increased accuracy (Garthoff 1985, 189). It also placed no limitations on bomber aircraft or cruise missile systems. However, SALT II efforts would be aimed at shortcomings of the Interim Agreement, where the U.S. and the USSR would produce a broader, more comprehensive agreement on offensive weapons, intended to be of an indefinite duration just like the ABM Treaty (Garthoff 1985, 189). SALT II, however, was never ratified, which begs the question of whether SALT I was a missed opportunity. Garthoff writes that the agreement was a "crucial failure" inasmuch as "at least in retrospect it seems clear that a more serious effort should have been made in SALT I to deal with the complex of offensive arms issues, and above all with MIRV limitations" (Garthoff 1985, 189).

## Negotiation Process: Course of the Negotiations

### Agreement Scope

The scope of the negotiation was broader than that of the resulting agreements. The course of the negotiations saw a narrowing of scope. Although each side fought throughout the talks to have included weapons of concern (SLBMs for the U.S. and FBS for the USSR), the resulting agreement did not affect the development of MIRV technology, which was potentially the most destabilizing of the omitted weaponry. Although the Soviets did not

mention MIRV in the initial meeting, they were not disinterested (Garthoff 1985, 133 FN. 17). They did insist, however, that the category of strategic offensive arms include all weapons capable of striking the USSR and the U.S., including American forward-based systems (delivery aircraft) in Europe and Asia. The Soviet Union was never able to get the U.S. to engage in a meaningful discussion of limiting forward based systems in Europe (Garthoff 1978, 13; Garthoff 1985, 148).

### Course and Pace of the Negotiations

The negotiations went on for two and a half years in seven rounds. The back channel also played a significant role throughout the talks and was the locus of most major breakthroughs, particularly with respect to offensive weapons. Once the back channel had been established, discussion of offensive weapons were taken on the main negotiation table and turned to defensive weapons (ABMs) (Bennett 1997, 33).

Perhaps due, at least in part, to the back channel, negotiations moved at a moderate pace, which is not to say that there were no obstacles. The U.S., for example, took a mixed position on ABM, on one hand tabling proposals to limit ABM to NCA and on the other proposing the "zero" option once the Soviets had agreed. This slowed the pace of the talks and augmented Soviet suspicion that the U.S. was not negotiating sincerely. The Soviet position on ballistic missile defense was another reason the talks took as long as they did (Garthoff 1984, 297). Outcomes hinged on who had what in this capacity and that no one really knew.

Moreover, while the U.S. was able to respond to Soviet proposals at a relatively quick pace due to high-level involvement, there was a high degree of compartmentalization of information in the Soviet Union, whereby various bureaucratic agencies did not share information with others (Shulman 1974, 115). Additionally, the Soviets lacked any mechanism that could speed up the implementation of decisions on arms control and disarmament issues:

All documents necessary to support the talks were still prepared exclusively by the Foreign and Defense Ministries. This was at the direction of the Politburo, which routinely demanded proposals on certain issues by set deadlines. Thus, all initiatives came from the top down rather than from the bottom up (Savel'ev and Detinov 1995, 29).

Another theory suggests that the Soviets purposefully delayed the onset then stalled the ongoing negotiations to buy time to "catch up" to the U.S. and achieve nuclear parity (Bennett 1997, 29).

### Concurrent Agreements

During the course of the SALT negotiations, Kissinger visited Moscow (in 1972), largely in an effort to move forward the stalled Vietnam peace talks (Garthoff 1985, 161). Although he made limited progress on this issue, he did address not only the SALT SLBM issue, but also managed to negotiate the basic charter of détente, which was formalized in the Basic Principles on Mutual Relations between the United States of America and the Union of

Soviet Socialist Republics, as well as the Hotline Agreement to deal with the issue of "provocative attack."

## Hypotheses and Analysis

**(1) A "feeling of security" drives the goal-setting for arms control negotiations, which results from scenario planning. In working through scenarios, negotiators use "security-specific heuristics" that include: (a) worst-case scenario thinking; (b) limited theater of war thinking (one-weapon type planning); and (c) low-dimension (non-complex) scenario thinking. Treaty proposals and goals reflect these forms of thinking, often in counter-productive ways.**

Whereas cases like Reykjavik, CFE or MBFR highlight the use of scenarios to anticipate outcomes from conflict that are often limited and negatively biased to reflect a higher likelihood of potential loss, what SALT highlights, for the U.S. in particular, is actually the use of comparable heuristics in the context of missing information about capabilities, rather than outcomes. Namely, missing information about what the Soviets had in terms of functional military technologies led to "gloomy" U.S. calculations (Newhouse 1973, 156). These calculations varied by intelligence agency, as did resulting recommendations for goals for arms control.

### Missing Information about Soviet Capabilities

The U.S. had missing information about both Soviet ABM and MIRV capabilities. In assessing Soviet capabilities, the Johnson Administration first made the judgment that a Soviet build-up would necessarily mirror that of the U.S. This was a relatively successful strategy where the U.S. and the USSR had similar capabilities, but failed miserably otherwise. Newhouse explains:

Americans had flattered themselves that the Russians, in building up their forces, would follow the strategic path they had traced, and to a degree the Russians did—hardening their ICBMs and developing a Polaris-type nuclear submarine (Newhouse 1973, 73).

But the Soviet development of ABM systems (Galosh and Tallinn)—technology that the U.S. had not yet achieved—threw intelligence agencies for a loop. First, the uniqueness of Galosh presented a challenge to the U.S., which had no analogous working technology at the time to which it could compare. These uncertainties would carry forward from Johnson to Nixon. A CIA report commissioned by Nixon upon entering office in 1969 corroborates these overstated judgments of Soviet ABM capability, and a CIA intelligence memorandum on Soviet ABM defenses estimated that a full defense of Moscow would be nearly operational within two years (CIA Intelligence Memorandum 1970). Moreover, on the subject of Galosh's capability there was significant disagreement among presidential advisors in Johnson's administration, which exacerbated uncertainty.<sup>13</sup> Intelligence estimates on the offensive-defensive nature of Galosh and a second system, Tallinn, were

---

<sup>13</sup> See Nancy Kanwisher's article on "Cognitive Heuristics and American Security Policy" from 1989 on "expert disagreement," published in the *Journal of Conflict Resolution* 33(4): 652-676.

subject to fierce debate. From this uncertainty, the Administration ultimately concluded that both systems were a) intended to defend Moscow, and b) nearing full functionality. Because Galosh was presumed to be functional, the Johnson Administration assumed that the Soviets were building up an extensive ABM research and development program to provide complete protection to all of urban Russia (Newhouse 1973, 73). Based on 1965 intelligence, Galosh and Tallinn were therefore presumed to be evidence of “a broad Soviet ABM research-and-development program that, in time, would produce refinements leading to extensive protection of all urban Russia” (Newhouse 1973, 73).

This may have also contributed to an overreaction to Tallinn, which, in time, was thought to be a high-performance (wide deployment) Soviet air defense system. Although intelligence pointed to the fact that the system was likely offensive in its current configuration, the Johnson Administration feared Tallinn would eventually be upgraded to defend against missiles—a second ABM system. The location of the system also contributed to the ambiguity about defensive versus offensive purposing. Tallinn was located in a region that required defense against bomber attacks, but also coincided with the flight plans of American missiles. This led intelligence analysts to conclude that the system was ABM capable prior to the talks. Only later estimates, however, would correct this notion and assert that Tallinn could never have real or effective ABM capability.

These assumptions about Tallinn's defensive capability led the U.S. to assume that the Soviets were building up their defensive capability in anticipation of striking first. Moreover, the U.S. concluded the Soviets were targeting U.S. cities. Robert Jervis also writes that the intelligence community “paid little attention to the possibility of extensive deception” with respect to Tallinn's capabilities, despite the fact that there was a “great deal of evidence” to suggest this (Jervis 1993, 341). Jervis explains why the U.S. made such big mistakes about Soviet nuclear doctrine (Jervis 1993). When there is uncertainty resulting from causal processes that are not well known, it is common to assume that others use a strategy like ours:

Up until the mid 1970s, the United States thought that Soviet nuclear doctrine resembled American views even though Soviet history, context, and civilian-military relations were very different. Beliefs about how the Soviets would use specific weapons similarly proceeded on the assumption that they would adopt the American pattern, and it took several years before U.S. analysts realized the Soviets' large missiles were not targeted as we would have used them, but instead were aimed at the U.S. command and control structure” (Jervis 1993, 348).

The U.S., meanwhile, had missiles aimed at a full array of Soviet military targets (Steinbruner 1981-1982, 23).

The U.S. was also uncertain about Soviet MIRV development (Garthoff 1985, 135). In the ranks of the U.S. government, considerable effort was made to use this missing information to the advantage of the position of those who opposed MIRV limitations by drawing conclusions that supported the idea that the Soviets were further along in their development than they actually were.

The Soviets made similar judgments under uncertainty about capabilities. Regarding the other side's ABM capabilities, Newhouse explains: "Planners on both sides tend toward gloomy calculation; they reckon with all contingencies, including the most remote, and they become victims of internal rhetoric, now exaggerating the qualities of the opponent's forces, now doubting the performance of their own" (Newhouse 1973, 156).

**(2) The goals and strategies that nation states use for reaching arms control agreements focus on reducing uncertainty in order to prevent possible losses via (a) the elimination of threat (e.g., by banning an entire class of weapons that might be used against the nation state), and (b) the reduction of risk of defection (e.g., by establishing verification regimes). This focus on loss and risk reduction has two notable opposing effects. First, in some cases, it facilitates reaching an agreement by providing simple, straightforward, negotiable targets. Second, such a limited focus can actually produce less effective, and therefore less durable, agreements. This is because agreements of limited scope fail to manage the uncertainty about security because proposed reductions don't map well onto the broader security landscape.**

*(2b) In some cases, when the scope of the goals for a negotiation is too narrow with respect to the security threat perceived, it can be impossible to reach an agreement.*

Whereas the response encapsulated by the dialog at Reykjavik consisted of concerted efforts to mutually eliminate threats, the SALT I talks occurred in a considerably more competitive environment wherein each side sought to respond to the threat they perceived either by limiting the other side's capabilities, buying time, or pursuing treaty provisions that would allow them to increase their own. Thus, uncertainty about capabilities and the responses they precipitate are very much at the root of the goals established and proposals tabled during SALT I.

### Arms Control for ABM Systems

The ambiguity of the offensive-defensive nature of Tallinn's capabilities sparked a huge debate in Washington. Tallinn (and to some extent Galosh) invited opinions and assessments from numerous agencies seeking to advance their own interests that "set off fierce controversy within the national-security bureaucracy" (Newhouse 1973, 72).<sup>14</sup> Newhouse suggests that uncertainty about the offensive-defensive nature of Tallinn, exacerbated by expert disagreement, essentially steered the outcome of negotiation. It dictated treaty terms meant to hedge against the worst-case scenario for the U.S.—Tallinn as a fully functional defensive system. Interestingly, the response to this information varied by administration. Johnson's first SALT proposal would contain broadly permissive language on ABMs and a freeze on long-range missiles, including ICBMs and SLBMs, at existing levels, with a ban on mobile missiles, all while leaving MIRV testing untouched (Newhouse 1973, 127). His proposal relied on qualitative, instead of quantitative, limitations to MIRV technology that would allow MIRV testing to continue. It was actually critical for Johnson that the U.S. be able to pursue advanced MIRV technology. Under

---

<sup>14</sup> The clash of opinion showed up in the National Intelligence Estimates in notes appended to the original documents.

Johnson, however, “Tallinn was the intractable issue” (Newhouse 1973, 122) affecting the U.S.'s ability to compromise on offensive weapons, like MIRVs, and on ABM development because MIRVs can penetrate ABM defenses and improve or achieve damage-limiting capability. Judgments that Tallinn was an air defense system also essentially prompted U.S. MIRV deployment. Additionally, Poseidon, a sea-based MIRV program, was initiated mainly in response to the uncertainty of the Tallinn threat (Newhouse 1973, 65).

Rather than overtly shoring up the right to develop offensive-ABM-penetrating technology (MIRV) under the Nixon Administration the unresolved Tallinn issue led to proposals that deliberately included non-provocative language regarding MIRV, with no suggestion of any real limitation on MIRV in the final agreements.

Intelligence sources are most commonly adept at estimating capabilities: intelligence provides hard data concerning weaponry visible by satellite. During the SALT negotiations, the CIA was responsible for “keeping other players up to date on the numbers and performance characteristics of Soviet systems” (Newhouse 1973, 36). With all of the Pentagon intelligence groups either collecting or coordinating information on Soviet weapons developments, according to Adrian ‘Butch’ Fisher, Deputy Director of the ACDA under Johnson; the CIA’s estimates were the only neutral ones:

[T]he CIA was set up to evaluate intelligence with no axe to grind. Service-related intelligence units...tend to fit assessments to the interests of the respective services, a tendency deeply disturbing to those who must live with it” (Newhouse 1973, 117).

In 1970 the CIA estimated that Soviet ABM systems could defend all of Moscow and would be fully operational within two years. This meant that U.S. nuclear strategy, which relied on parity to ensure deterrence, would require the U.S. to develop comparable ABM capability—immediately.

However, not everyone had confidence in the CIA.<sup>15</sup> Under Nixon, the CIA would “operate well out of the new Administration’s favor, partly—perhaps mainly—because its work on SALT was thought to have lacked detachment, to have reflected uncritical support for arms control,” responsible for less than rigorous proposals assembled by the Johnson Administration (Newhouse 1973, 149). Under Nixon, the CIA was “less and less a center stage figure in SALT,” and expended a great deal of effort protecting its role in the intelligence community “against encroachment by other parts of the intelligence community as well as Department of Defense Research and Engineering (DDR&E)” (Newhouse 1973, 36). Whereas the CIA’s technical judgments were based on intelligence (reasonably hard information), DDR&E assessments of Soviet capabilities relied less on hard information from intelligence efforts and more on “extrapolation from technology” to estimate future trends or eventual capabilities (Newhouse 1973, 36).<sup>16</sup> The DDR&E also

---

<sup>15</sup> Other agencies and their intelligence groups argued that the CIA was off-base about Soviet weapons development and intentions, judging them to be more advanced, capable and harmful than they actually were. The agency had, after all, underestimated Soviet weapons buildup in the run up to the Cuban Missile Crisis, although most agreed that the CIA had indeed reliably “forecasted the character and quality of the weapons themselves” at that time (Newhouse 1973, 117).

<sup>16</sup> This refers to Tallinn upgrade potential specifically.

had a vested organizational interest in making the best possible case for "procuring the advanced systems it is nudging along," and therefore in overestimating Soviet capabilities – or making worst-case-scenario estimations of future and current Soviet capabilities (Newhouse 1973, 37).<sup>17</sup> This actually precipitated an aggressive reaction on the part of the U.S., if not an arms race. Under Johnson, it provided rationale for further developing MIRV technology (essentially, ABM penetrators) and exerted pressure for further ABM development.

Nixon, having low confidence in CIA intelligence reports that suggested the Soviets had robust ABM capability, largely dismissed the agency's recommendations for arms control as an appropriate response. As a result, Newhouse suggests that, even though Nixon may have ultimately concluded that the Soviets were indeed in possession of functional ABM technology, he struggled with how to proceed and grappled with a course of action on ABM for quite a while. Eventually, contrary to CIA recommendations to prevent ABM expansion to greater coverage of Moscow and extension to other areas in the Soviet Union, he chose the path of ABM development for the U.S. It was only later that he changed his mind, pursuing instead an ABM ban through an agreement with Soviet Union. This may suggest he either eventually took CIA estimates at face value, responding to the threat they identified, or chose to hedge against uncertainty by pursuing ABM technology to use as a bargaining chip—a notion Newhouse corroborates (Newhouse 1973, 78).

There were additional factors driving U.S. decision-making. In Congress, the great ABM debate of 1969 actually led to Nixon becoming more willing to negotiate away ABM. On March 14 of that year, Nixon had announced plans for a new ABM deployment program called "Safeguard." Whereas its predecessor, "Sentinel," had been designed under the Johnson Administration to defend the U.S. against China, Safeguard was designed to defend ICBM silos (Garthoff 1985, 131). ABM systems are decidedly costly and complicated, due to the radar technology and data centers they require. Because of the great cost as well as the availability of cheaper, simpler alternatives, U.S. public opinion and elected leadership largely "took a 180" and eventually came to decry ABM development. U.S. leadership would soon follow suit. Newhouse writes:

If for rather different reasons, both Washington and Moscow would seek a limitation, perhaps even a ban, on ABMs. The bargaining would be tough and erratic, but the goals were roughly the same, because neither side could be sure of the other's intentions on ABM deployment, and each was sensitive to its own limitations. The Russians knew that the Americans could build better ABMs at less cost; they were especially laggard in the critical computer technology. And the White House was now alerted to the declining public and congressional tolerance of ABMs, even though it would continue pressing Congress for more Safeguard sites while negotiating with Moscow (Newhouse 1973, 157).

Galosh, ultimately, turned out to be "technically deplorable" and CIA estimates proved overly pessimistic, grossly overestimating Soviet weapons' efficacy (Newhouse 1973, 117). Eventually, fears of Soviet build-up and the desire for the MIRVs (and arms race) they

---

<sup>17</sup> Newhouse implies that the combination of these two approaches was essential, though.

inspired would begin to subside when the kind of big ABM radars that would have been required for such ABM technology failed to appear beyond Galosh.

### Quantitative Reductions

While it can be difficult to calculate overall weapon force or effectiveness, it can be even more complicated to establish what constitutes parity. This was particularly true in the case of SALT I because U.S. and Soviet weapon systems were so different: “To compare American and Russian systems...is to talk about apples and oranges,” writes Newhouse. Yet, when they came to the negotiation table this is exactly what both sides did: both the U.S. and Soviet Union were ready to discuss the number of weapons each side had, and were much less prepared to talk about quality or effectiveness (Newhouse 1973, 173), a classic response to cognitive complexity.<sup>18</sup> Jervis explains how this can lead to a kind of preoccupation with number of weapons, as well as who is trailing whom by how many (Jervis 1993, 350). Newhouse corroborates this argument with evidence from SALT:

Even on ABMs, the issue to which [the Russians] were most sensitive, they would discuss only numbers of interceptor missiles, but not their performance or that of the radars and other elements vital to the system; such matters, they said, were simply too complex for negotiation (Newhouse 1973, 174).

Additionally, the debate between the U.S. and the Soviet Union became increasingly focused on the question of who was ahead in the development of new or advanced weaponry. Jervis explains that this, too, is a more manageable question than “how to estimate the quantity of weapons sufficient to deter, and how various configurations of forces could have contributed to terminating a war in the least possible unfavorable way (Jervis 1993, 351).

The two sides even differed on such fundamental definitions as “strategic weapons.” For the Soviets it meant including forward-based missiles and aircraft systems, which have the ability to affect the strategic balance and therefore “equal security” (Savel’ev and Detinov 1995, 10).

Nixon and his administration sought “to determine their military requirements and program before deciding on arms limitations,” which was a savvy approach because establishing goals for limitations prior to conducting these assessments “could have ended up unwisely constraining or unnecessarily embarrassing the administration, should it have to change either the defense program or the arms control position to bring them into line” (Garthoff 1985, 128). Nixon opted to first hone his strategy for a defense program then bring arms control goals in line with the needs of the program.

The Soviet Union would seem to have set sights on limitations and further reductions even prior to the talks (Zamyatin and Novikov 1969, A8), likely to curtail the rapid (and costly)

---

<sup>18</sup> Jervis predicts that for cognitively complex calculations like those required to estimate parity, individuals resort to the use of cognitive shortcuts, or heuristics because the calculations are actually too complex to perform. The need for complex calculations, therefore, is often accompanied by uncertainty that cannot be attenuated.

expansion of their own arsenal which had transpired in the previous years. However, there is comparatively less information on the bureaucratic process that resulted in establishing these goals.

It is interesting to note that it was the Soviets who proposed "decoupling" offensive and defensive weapons issues during the second round of the SALT I talks (in December 1970) (Garthoff 1985, 146). Separating potential agreements into parts is a classic risk reduction tactic. However, instead of looking to minimize the risk and potential loss due to defection or withdrawal, this may have been an effort to focus the dialog on an ABM agreement—freeing the negotiations from the discussion of ICBMs, SLBMs and MIRVs. The Soviets had their sights set on an ABM treaty so that they could freely continue to test and develop their own ABM technology to match the effectiveness of the U.S. system. Unbeknownst to the U.S., the Soviets were very much behind in developing this capability. Also, the Soviets wanted to limit the additional deployment of U.S. ABM systems. Finally, separating the agreements—and essentially pressing only for an ABM agreement—would allow the Soviets to maintain their SLBM and heavy ICBM advantage. Dobrynin would also suggest inserting vague language into an ABM treaty that would suggest an "understanding" that there would be limitations established to ICBMs at a future date (Dobrynin 1995, 213-214; Savel'ev and Detinov 1995, 24).

**(3) High uncertainty about the future along multiple dimensions implicitly affects the ability to reach an agreement.**

**(3a) High environmental uncertainty can make it difficult for the proposals put forth to contribute to security in an adequate way.**

Without a doubt, there were sources of uncertainty beyond the SALT negotiations that influenced both parties' goal setting and decisions. First, Sino-Soviet tension loomed in the background, as evidenced by a series of border clashes between the Soviet Union and China for 6 months during 1969, which were largely initiated by the Chinese. Not only were the Soviets distracted by these events, but the U.S. also viewed the clashes as an impediment to the negotiations. Second, the Soviet invasion of Czechoslovakia and the implementation of the Brezhnev Doctrine on the Continent, gave the U.S. pause concerning Soviet intentions. The U.S. went so far as to issue "veiled warnings" against any further Soviet military involvement in Europe—particularly as far as Yugoslavia and Romania were concerned (Garthoff 1985, 201). Finally, both Nixon's visit to Romania and the U.S. involvement in the Vietnam War made the Soviets equally wary of U.S. intentions. These issues are revisited below in the "Sincerity" section.

**(3b) High complexity may make it difficult to put forth meaningful proposals that could meaningfully contribute to security.**

SALT goals were actually relatively modest given the specter of nuclear annihilation. Moreover the resulting agreements were relatively narrow compared to initial proposals. However, goals were actually constructed with crafting subsequent agreements in mind, intended as a building block or a first step in an era of détente. This initial step alone—narrow as it was—provided enormous relief in terms of augmenting security. Additionally,

the narrowness of the scope of facilitated reaching an agreement. Narrow as the goals were, in such a high-uncertainty situation, such goals may facilitate reaching an agreement and may be the best that we can hope for.

### **(3c) High mistrust or suspicion can make it impossible to reach an agreement.**

Unique attributes of the Soviet Union as a negotiating partner contributed to the ambiguity and uncertainty for the U.S. Indeed, the Soviet Union was said to have a “passion for secrecy” (Newhouse, 1973, 63). The Russian penchant for *maskirovka* consisted of concealing Soviet intentions by misleading adversaries about the “nature, scope and timing of an operation” (Hansen 2007,49). A CIA intelligence report also reveals that the Soviet missile development program was cloaked in elaborate denial and deception efforts from its inception (Hansen 2007, 49).<sup>19</sup>

Neither the U.S. nor the Soviet Union was certain of what the other side was hoping to accomplish during the negotiations. Newhouse writes: “each side was reliably certain only that the other was ready to talk. Neither knew precisely why” (Newhouse 1973, 167). Washington was arguably more uncertain than Moscow, entirely at a loss concerning Soviet attitudes toward the negotiation (Newhouse 1973, 125). In the absence of confidence in information about Soviet goals, Nixon’s uncertainty may be said to have manifested as suspicion:

Neither in 1968 [at the time of the Senate Preparedness Subcommittee hearings], nor again in 1969 [when Nixon took office], did Washington really know why Moscow had opted for SALT. The Kremlin could have believed that the talks would serve to curb what had become a 'freewheeling military attitude.' Or, it could have engaged in talks with a concern for reigning in defense spending, which had reached epic levels (and Russians had typically spent three times as much money on defense than offense). The Russians, likewise, may have been daunted by U.S. spending on sophisticated hardware, and the anticipation of an “endless competition for strategic advantage” (Newhouse 1973, 107).

To complicate matters further, when Nixon arrived at the White House, he found the Soviet Union simultaneously pursuing a tough line in its foreign policy—as evidenced by the Czechoslovakia invasion—and a soft line—as evidenced by its efforts to improve relations with the West (Newhouse 1973, 140). On any particular issue, Soviet interest could be defined in two possible ways, and SALT negotiations proved no exception. As far as Nixon was concerned, Soviet desire to reach an agreement could have as easily been a way of buying time with which to achieve parity or improve its image as much as it could have been a legitimate attempt to actually obtain an agreement to slow or halt an arms race. At worst, Soviet eagerness to enter into talks could have been an elaborate ruse to dupe the U.S. into curbing its own arms development while the Soviets defaulted on the agreement and raced ahead. Compliance is always a concern in the pursuit of international agreement,

---

<sup>19</sup> The Cuban Missile Crisis had certainly been Khrushchev’s exercise in denying the U.S. information on the deployment of the missiles and in deceiving U.S. policymakers about the Soviet Union’s intentions.

and in this case, there was the concern that the “SALT agreements might give Moscow an incentive to conceal its activities” (Newhouse 1973, 55).

Even if the Soviets had no malintent in pursuing an agreement, their sincerity for actually reaching a productive agreement seemed doubtful, as evidenced by Soviet negotiators’ ignorance about their own capabilities. Americans knew that Soviet negotiators were not well informed of their own capabilities—they lacked critical information about the locations of their own ICBMs, the number of missiles in the field (deployed), as well as information about their own radars (Newhouse 1973, 56). Not only did this create a unique challenge for U.S. negotiators dealing with a negotiating team so poorly instructed and informed, it also made it appear unlikely that Brezhnev could be sincere in pursuing disarmament goals.

In response to this uncertainty about intentions, Nixon and Kissinger delayed talks and sought to collect more information:

Nixon and Kissinger felt a need to know much more about Soviet purposes before committing themselves to a negotiation that might serve to promote [cheating and obtaining a strategic advantage] (Newhouse 1973, 142).

Uncertainty about Soviet intentions in coming to the table with the U.S. in turn affected U.S. judgment about the likelihood of reaching an agreement,<sup>20</sup> resulting in doubt or pessimistic thinking on the part of Nixon and his team. This judgment was actually more pessimistic than justified at the time. Only hindsight revealed that “prospects for agreement were brighter than they appeared [because] SALT fitted the needs and purposes of the two countries more closely than their governments understood at the time” (Newhouse 1973, 167). This was largely due to the fact that the U.S. feared that Moscow would exploit the conditions of parity, which would better serve the Soviets than the Americans, who would be giving up strategic and political supremacy to achieve it.

However, it was also unclear whether the Soviets even accepted parity as a strategy for stability and deterrence. U.S. uncertainty about the Soviet intention to negotiate likely was, at least in part, secondary to uncertainty about Soviet nuclear policy. If, for example, the Soviets had the military objective of seeking strategic superiority, the U.S. would be justified in being suspicious of Soviet intentions to negotiate. If they accepted parity as the path to stability, however, both sides would have roughly equal capabilities. Thus, if the Soviets did not accept parity, their negotiation intentions would in turn be suspect. But, why was there so much uncertainty surrounding Soviet strategy and what caused it? There was a great deal of expert disagreement concerning Soviet strategy. U.S. officials had continually “expressed contrasting opinions on the question of Soviet acceptance of strategic parity” (Hines, Mishulovich, and Shull 1995, 10). Some believed the Soviets accepted the concept of parity, as opposed to strategic superiority because there was no great advantage to be gained in a nuclear conflict by obtaining a greater number of weapons. Others believed that by the early 1970s the Soviet Union was exceeding parity by

---

<sup>20</sup> Or it precipitated uncertainty about the ability to find a zone of agreement.

acquiring counterforce capabilities with SS-18 and SS-19 missiles (Hines, Mishulovich, and Shull 1995, 10).

Nixon and Kissinger believed it was imperative that they learn more about the motives of the Soviet military in particular, as opposed to Soviet political leaders. They already knew some of what Soviet political leaders thought: they favored parity and an easing of strategic arms development, and also dreaded the cost of another round of strategic arms spending. For the Nixon Administration:

[It was] essential to know more about the motives of the Soviet military, especially whether and to what degree these diverged from the thinking of the political leaders. Why, for example, might both groups favor parity and a letup in strategic arms development? How valid was the assumption that Soviet leaders feared the harsh economic penalties that another major round of strategic spending would impose? Did Soviet leaders reckon parity would allow them to mount a more aggressive diplomacy with reduced risks of confrontation with the United States? (Newhouse 1973, 142)

Uncertain about Soviet strategy, goals and sincerity, Nixon deferred coming to the table. In lieu of engaging the Soviets at the start of his presidency in January 1969, he postponed talks until he could learn more about the motives of the Soviet military, convening a "Red Team" to assess the goals of the Soviet military and gauge whether the U.S. had sufficient military power.

### Soviet Union

The Soviets were equally wary of U.S. intentions. Nixon's initial plans for ABM development and MIRV testing (despite public opinion in favor of a moratorium on testing) caused the Soviets, likewise, to delay coming to the table in 1969 (Garthoff 1985, 131). Garthoff explains that wariness about U.S. intentions did not quell Soviet enthusiasm for the talks, but rather led the USSR to become more "wary" of Nixon's intentions and to want to take the time to possibly reconsider their own positions and proposals going forward. This may account for the "information gathering" that took place during the first round of talks, when the Soviet negotiators showed up without any proposals to table.

In addition, Nixon's June announcement of his visit to Romania that would take place August precipitated further wariness in the Soviets, who were concerned that the U.S. would try to exert its influence over the political development of the region (Garthoff 1985, 132). In response, the Soviet delegation indicated its reluctance to begin talks during the first round of negotiations until the U.S. showed a "serious interest" in uninvolving itself from these political matters (Garthoff 1985, 133).

**(4) The management of these multiple forms of uncertainty—including uncertainty tied to regional instability, regime change, technological change, and the evolution of military strategy—tends to facilitate reaching agreement and produce durable agreements.**

**(4b) If external events or sources of uncertainty cannot be managed through arms control, it is likely an agreement won't be reached.**

### Reaching an Agreement

U.S. efforts towards attenuating this uncertainty prior to negotiations had not been entirely unsuccessful. Although Nixon's Red Team was organized to try to anticipate what the Soviets might be willing to offer or accept, the group ended up “groping with unknowns and ambiguities” (Newhouse 1973, 125). In the end, about the Soviets, “Washington knew only that they were ready to talk” (Newhouse 1973, 125). Ultimately, when the Nixon Administration agreed to negotiate, it employed three strategies. First, it set a pace for the negotiations that would help manage uncertainty concerning both the ability to find zone of agreement and Soviet intentions. Nixon had “decided against proceeding with haste, and the pace of the negotiations would necessarily be slow” (Newhouse 1973, 148). The feeling was mutual. Newhouse explains that a “frank mistrust on either side of the other's motives would help to restrain the pace of the talks” (Newhouse 1973, 166). In addition, insiders were prepared for SALT negotiations to last a long while, even under Johnson. Dean Rusk, Secretary of State under Johnson, has called SALT negotiations “history's longest permanent floating crap game,” meaning that he knew the process could go on indefinitely like trade and tariff negotiations (Newhouse 1973, 103).

Second, Nixon made arms reduction negotiations contingent on other issues. A week after Nixon took office he indicated his willingness to eventually enter into talks to the Soviet Union with this issue-linkage as a precondition. In no uncertain terms, he communicated his desire to the Soviet ambassador that the talks should focus on making progress on existing political problems: “Progress on SALT would be linked to political progress on matters of immediate concern—Vietnam, as well as the Middle East” (Newhouse 1973, 141). By treating arms control as one of a number of interrelated issues, the Nixon Administration may have been working to obtain additional information about Soviet intentions through access to information provided by the discussion of other issues, or it may have been looking to hedge against or ensure Soviet sincerity by making the key issues in SALT necessarily of greater consequence to the Soviets.

Third, Nixon used the first round of talks for “exploratory purposes,” while his negotiating team sorted through nine possible options for arms limitation proposals, while seeking the greatest amount of flexibility possible. Newhouse writes:

The White House regarded its options as ‘building blocks.’ The idea was that the elements of each could be shuffled into various combinations and packages, giving great flexibility to the U.S. negotiating position. If the Russians frowned on some parts of a proposal when it was offered, the other parts could be speedily mixed into some alternative without dictating a renegotiation within the U.S. defense

establishment of the entire U.S. position. The building blocks, in short, would permit a swift reaction to the Soviets, while minimizing bureaucratic conflict in Washington. The building blocks were, moreover, yet another device by which White House control of SALT would be assured (Newhouse 1973, 171).

In this way, the U.S. had what it believed to be an effective strategy for managing uncertainty: information gathering during the negotiation meeting combined with multiple options for maximum flexibility. This strategy allowed for adaptability to the Soviet position, when that position would ultimately be revealed. The outcome of these negotiation behaviors was successful agenda setting that moved the negotiations further along. Following this first round, which lasted 35 days, an understanding was reached on the “general range of topics that would be the subject of further U.S.-Soviet exchanges” (Newhouse 1973, 172).

One factor contributing to overcoming uncertainty about Soviet goals may have occurred by chance. Because the first round of SALT talks focused on the central weapons systems—both offensive and defensive—the U.S. was able to learn of Soviet worries about ABMs at an early stage in the process, which it had previously assumed were not of concern to the Soviet Union. In the first round, the Russians articulated three potential ABM agreement options: heavy deployment, limited deployment and none at all (the zero option). They then expressed a preference for the zero and limited coverage options over heavy deployment. This was a good surprise for the Nixon Administration because it indicated that the Soviets shared the U.S. concern over ABMs.

### Durability of Agreement

The ABM agreement that was eventually reached was of unlimited duration with a clause providing for review at five-year intervals and withdrawal provisions, both of which afforded flexibility. The offensive weapons agreement reached was intended as merely an ‘interim arrangement.’ Both sides even struggled to agree on a duration provision (Koremenos 2005).<sup>21</sup> Neither was durable. While the Interim Agreement was temporary by design and would have been replaced by a successor agreement had SALT II been ratified, the U.S. withdrew from the ABM Treaty in 2002 to pursue its missile defense plan.

**(5) For arms control, the management of uncertainty calls for a strategy that pursues flexible agreements that may be characterized as vague, broad, shallow, and loaded with confidence- and security-building measures.**

The SALT treaty is a decidedly narrow set of agreements, but it is unprecedented with respect to verification provisions, as limited as they are. From the outset it was believed that verification would have to be a component of any SALT agreement. Once negotiation began, the Nixon Administration remained uncertain as to whether agreement verified by national means only was a better and safer alternative than no agreement at all. Newhouse writes that the U.S. side could “neither propose nor accept anything that cannot be verified with reasonably high confidence” (Newhouse 1973, 14). Therefore, although the U.S. had

---

<sup>21</sup> This is consistent with Barbara Koremenos’ empirical work on treaty terms and uncertainty: negotiations dealing with high-uncertainty issues tend to avoid hands-tying clauses in treaties.

agreed to negotiate and had entered the first round with a set of proposals, there was reason enough to believe that nothing would come of the talks should the Soviets reject verification provisions. Although President Nixon originally took a hard line regarding his proposal for on-site inspections to verify MIRV limits, he knew these to be totally unacceptable to the Soviet Union:

The Soviets strenuously oppose on-site inspection, partly because it is intrusive; partly because of an understandable aversion to parading their technological inferiority vis-à-vis the United States; partly because they suspect Americans of seeking targeting information not otherwise available or of just wanting to pry, and perhaps partly because of a concern that to disclose one thing could mean disclosing other things they prefer to keep secret” (Newhouse 1973, 180).

In order to appease the Soviets, therefore, and to keep them at the negotiating table, on-site inspections were quickly removed from proposals, even though they would have been the sole means of eliminating uncertainty about compliance and, therefore, the intention to cheat.<sup>22</sup> Verification for whatever agreement reached would come down to national technical means (NTM)—the ability of each country to verify compliance with limits on arms from afar using satellite surveillance. Both countries also agreed on a policy of non-interference with each other’s satellite surveillance (Garthoff 1978, 16). With this unprecedented maneuver, the two countries perhaps reduced uncertainty enough to proceed with negotiations even though taking on-site inspection off the table meant agreeing to a kind of built-in level of uncertainty. Regardless, formal treaty provisions regarding any mode of verification was considered unprecedented at this point.

The agreement to rely on NTM for verification also had considerable implications for negotiated treaty outcomes. Agreeing to satellite surveillance with non-interference essentially meant that concern about compliance no longer applied equally to all types of weapons, but would instead be limited to weapons that could not be verified by national means. The CIA’s ability to verify the existence of a number of weapons was fairly robust. In particular, American surveillance techniques were reasonably foolproof for large, fixed ICBM and ABM installations. Land-based ICBMs require extensive launch-site construction to provide the hardening required to make them nuclear explosion resistant, which can be detected by satellites. In addition, because construction for these launch sites requires many months, there is ample time to detect such weaponry (Newhouse 1973, 15). SLBMs also require large and distinctive facilities for their construction. Likewise, ABMs, which are complicated and extensive defensive systems, require large radars that have high visibility. They take a long time to construct, and radiate energy continuously, which

---

<sup>22</sup> Nixon solicited reports from the CIA on the verifiability of compliance by national means—essentially satellite surveillance. However, CIA bias and positions resulted in a clash with the Nixon Administration on the subject of verification. While the CIA essentially took an optimistic view on verification, promoting its position that “most parts of any currently imaginable SALT package could be verified with reasonable confidence” and that cheating on any meaningful scale would be readily detectable (Newhouse 1973, 45), the White House also suspected the CIA of having ulterior motives in providing positive endorsement for a broad agreement that included numerous types of weapons, mostly because it sought to procure funds for additional and more advanced monitoring systems. “A broad agreement...might require certain detection systems not presently ‘on the shelf,’” explains Newhouse (Newhouse 1973, 45).

makes them all the more detectable. They also require a large number of high performance defensive missiles and extensive training exercises to ensure effective operation. All of this makes possible a verification of a freeze on ABMs.<sup>23</sup>

Mobile ICBMs, however, can easily elude missile accounting by the opposing side. If the missiles have no fixed launching point, it is nearly impossible to know how many ICBMs exist. Likewise, MIRVs also cannot be easily detected because they reside on warheads that are attached to missiles. It is therefore difficult to verify—by national means or even on-site inspections—whether a deployed missile has multiple warheads (Newhouse 1973, 16). Removing uncertainty about compliance entirely for MIRVs would have required truly invasive measures—on-site inspections combined with the use of x-ray, for example, to determine the number of warheads present on the reentry vehicle. Therefore, in order to control MIRVs, it would have been necessary to negotiate a total ban on their testing instead, as testing is critical to functional operationalization of these weapons (which, when effective, have an impact so great that they can do damage to hardened ICBM sites). Without a ban on testing, a lack of compliance with a ban on MIRV have not have been detectable.

The inability to verify particular weapons and technologies could have had two possible outcomes. On one hand, both sides might have motivated to reach agreement about limits on weapons that cannot be effectively monitored by satellite—using cooperation and agreement to reduce remaining uncertainty. On the other hand, if there is significant mistrust or suspicion, unmonitorable weapons may not make it into any agreement simply because enforcement becomes impossible. In the case of SALT, a lack of ability to verify mobile ICBMs actually drove the U.S. (under Johnson) to propose a ban on mobile ICBMs, which would have made it incredibly easy to detect any ICBM development (Newhouse 1973, 26). This proposal, however, was not met with enthusiasm: the Soviet Union rejected it. Eventually, though, under Nixon, the parties came to an agreement on ICBMs and ABMs—both verifiable technologies—but not mobile ICBMs.<sup>24</sup>

The two sides reached no agreement on MIRV testing or development. In the end both parties were uncertain about just how reliable a ban on MIRV testing could be.<sup>25</sup> However, not imposing a ban on MIRV development may just have been strategic for the U.S.: halting or slowing the MIRV development program was thought to reduce U.S. bargaining strength against the Soviets because U.S. strategic advantage lay in its greater number of warheads, which was a product of MIRV (Newhouse 1973, 20). In the end, both governments avoided dealing with MIRV reductions head-on in SALT I, and the issue was left hanging by tacit agreement (Newhouse 1973, 31).

---

<sup>23</sup> However, verification can potentially be difficult in the absence of a ban on large radar nets, and when the number of defensive missiles is not effectively restricted. ABM radars with nationwide coverage make verification of ABM limitations difficult. When defensive missiles are not subject to limitations, they can easily be produced (secretly) and rapidly deployed.

<sup>24</sup> Informally, the U.S. made it clear to the Soviets that the U.S. would consider the deployment of mobile ICBM launchers during the period of the Interim Agreement to be inconsistent with the objectives of the Agreement.

<sup>25</sup> Kissinger had convened a MIRV panel that indicated that the reliability of a ban on MIRV testing was subject to disagreement.

Finally, while the ABM Treaty was narrow and, ultimately, not durable, it serves as a model of the effective use of arms control for reinforcing restraint, which is preferable to those agreements that instead reinforce the "numerology" of matching capabilities (Schelling 1985/1986).

### **What Has Happened Since: Implementation, Follow-On Negotiations, Violations and Withdrawals**

SALT I remained in force for the planned five year period. Negotiations for SALT II began in November of 1972, six months after SALT I was signed. SALT II would finally place limitations on destabilizing MIRV technology in addition to setting a combined ceiling for all types of strategic launchers. 1,320 of those launchers could be equipped with MIRV technology. FBS and other NATO-held weapons were again omitted from the agreement. SALT II shared SALT I's provisions for verification by NTM. The ABM Treaty remained in force until 2002, when U.S. President George W. Bush unceremoniously withdrew in order to deploy a new defensive ballistic missile system. U.S. withdrawal from ABM Treaty was met with a "muted" global response (Boese 2002). The withdrawal and U.S. plans for a new missile defense system have negatively affected U.S.-Russian relations in recent years.

### **Violations and Loopholes**

Arnold Beichman assessed that that the ABM Treaty and SALT I have been violated a total of ten times by the Soviets (Beichman 1991, 278). Many of these violations, he explains, were due to the lack of a clear distinction between missiles and launchers, which led to the Soviet Union exceeding limitations on ICBMs. In truth, the violations were of little consequence, given that the treaty was replaced a short five years later.

Whether inadvertently or by design, the treaties also permitted the development of certain destabilizing technologies. First, the Interim Agreement prevented the conversion of existing ICBM launchers from light-missile capable to heavy-missile capable, which was intended to prevent the Soviet Union from upgrading its older, lighter missiles with the newer, heavier SS-9, which was at that time "the largest, most powerful missile in the Soviet inventory and source of particular concern to the United States" (U.S. Department of State's Bureau of International Security and Nonproliferation Narrative Document 1972). SS-9s were replaced three years later 1975 by SS-18s (Ssatans), which were highly accurate and larger than the heaviest U.S. ICBM (the Peacekeeper). The significance of these missiles was that U.S. Minuteman silos were not capable of surviving their attack. The SS-18s were deployed in modified SS-9 silos per expansion that the treaty permitted when it included the language that ICBM silo launchers could not be "significantly increased," which was defined as not greater than 10-15 percent larger than the dimensions of current silo launchers. These missiles were so threatening that they limiting them was a primary U.S. goal for the START II Treaty and the Nunn-Lugar Program. Nixon's Administration was perhaps duped into accepting the language that permitted this.

Second, limitations to MIRV technology remained outside the scope of the agreements. MIRV technology was particularly destabilizing issue because, if deployed, it could increase the deliverable nuclear throw weight multiple times without the use of any additional

launchers. In this way, it became a way to "beat the system" (Shoumikhin 2008, 14). MIRV-ed missiles was destabilizing because it made the nuclear balance less predictable. That it was unrestrained gave the U.S, who was ahead in the development of this technology, an advantage.

Finally, neither mobile ICBMs, which were exceptionally difficult to detect via NTM, were left out of the agreements, as were FBS and NATO forces.

## Conclusion

A great many decision-critical issues in the SALT case may be classified as derived from various uncertainties. This analysis identifies two drivers of a particular treaty outcome specific to this case, both of which are derived from uncertainty. First, uncertainty about the offensive-defensive nature of the Tallinn system led to an insistence on ABM limitations in U.S. proposals and also motivated the desire to omit MIRV technology (ABM penetrators) from a possible agreement. At the same time, uncertainty about compliance largely dictated that MIRV, an unverifiable technology remain unaddressed by the agreement.

What from the SALT talks might be generalizable to high-uncertainty negotiations? First, the SALT I agreement is both a "detailed" and a "narrow" one. It is detailed in that it addresses specific arms and limits their development and use with unambiguous language. However, it is "limited" inasmuch as it only covers only a subset of the arms that were discussed during the talks, and that were believed to affect state security. Negotiations over high-uncertainty weapons (that are difficult to verify) in high uncertainty security situations that are characterized by high in mistrust, suspicion, and missing information about capabilities, may be more likely to produce treaties that can be classified as limited in this way: these kinds of limited treaties may be the best we can get under such circumstances.

Despite the high levels of secrecy and uncertainty, however, the U.S. and Soviet Union were able to reach an agreement. Did uncertainty present significant obstacles that were ultimately overcome? Was negotiation used to effectively dissipate uncertainty in this particular case? Perhaps, but SALT I ought not necessarily be interpreted as a tremendous triumph over uncertainty. Indeed, there were as many roadblocks as there were breakthroughs during the negotiations. Although it was clearly a "serious process," the negotiations resulted in a merely "modest agreement" (Newhouse 1973, 269).

Additionally, SALT may have concluded successfully (albeit modestly), owing to the fact that it occurred during a moment of transition, on the tail end of what had been a scary and pessimistic time. Newhouse explains that SALT "coincides with one of the more transitional moments [in history], a time when the mass of cold-war tensions and differences is starting to shift" (Newhouse 1973, 170). Perhaps, in the face of so much uncertainty, negotiators forged ahead with more determination than they would have otherwise because the talks followed a period of conflict. SALT I, therefore, may be illustrative of when uncertainty-tolerance and management is preferred to no agreement at all.

Finally, the possibility of an agreement became more of a reality when the U.S. and Soviet Union reached an agreement on nuclear doctrine, providing a critical point of agreement from which negotiations could proceed: “Moscow had come more than halfway towards accepting the favorite apothegm of Washington’s assured-destruction school of strategy: “Offense is defense, defense is offense. Killing people is good, killing weapons is bad” (Newhouse 1973, 176). Limiting ABMs, of course, limits the killing of weapons. This particular reduction of uncertainty may have contributed to the success of the SALT negotiations: finding a critical point of agreement against a backdrop of uncertainty may help foster successful negotiations, particularly since limitations to ABM systems were a fundamental goal of the Soviet Union.

## Strategic Arms Limitation Talks I Timeline

January 1964 – The U.S. along with Geneva-based Eighteen-Nation Disarmament Committee, proposes bilateral negotiations to “freeze” the number and characteristics of U.S. and Soviet offensive and defensive vehicles. Soviet Union rejects proposal due to U.S. superiority in number of weapons.

July 1, 1968 – At the signing of the Non-Proliferation Treaty, President Johnson announces that the Soviet Union has agreed to meet to discuss potential nuclear weapons limitations and reductions to defense against ballistic missiles.

January 20, 1969 – The Foreign Ministry of the Soviet Union announces its commitment to discuss the limitations on strategic arms with newly elected President Nixon.

January 27, 1969 – President Nixon’s first press conference, in which he mentions his concern about “outstanding political problems” and thus signals his intention to link arms control with political concerns.

January 31, 1969 – Gerard Smith's name submitted to Senate for confirmation as the Director of ACDA. Smith also designated as future chief negotiator of SALT.

February 17, 1969 – President Nixon holds first meeting with Soviet Ambassador Anatoly Dobrynin. Nixon questions whether the timing for strategic arms limitations talks is right and suggests that defusing the world’s current political situations will require more than a freeze on strategic weapons. Dobrynin seeks to clarify Nixon’s position on issue linkage find out when Nixon might be prepared to discuss the “missile problem.”

March 13, 1969 – Nixon commissions first study on SALT.

March 14, 1969 – Nixon announces intentions to pursue ABM and MIRV testing.

June 11, 1969- Secretary of State Bill Rogers and Soviet Ambassador Anatoly Dobrynin meet in Washington. Rogers indicates that the U.S. would be prepared to begin talks at the end of July.

September 22, 26, 30, 1969 – Rogers and Soviet Minister of Foreign Affairs Andrei Gromyko hold a series of talks regarding the opening of SALT talks.

October 17, 1969 – Dobrynin meets with Nixon regarding SALT talks and U.S.-Soviet relations.

October 20, 1969 – Nixon, Dobrynin and Kissinger meet in Washington, where Dobrynin proposes November 17 as the beginning of SALT talks in Helsinki. The U.S. accepts..

October 25, 1969 – Joint statement announcing plans for the start of strategic arms talks to begin in Helsinki on November 17, 1969.

November 17, 1969 – First round of talks begin and run until December 22. Parties examine issues at stake and gain improved understanding of views, concerns, and

questions of both sides. Agree that talks will be private. The next round set to open in Vienna in April of 1970.

November 28, 1969 – Head of the Soviet delegation, Vladimir Semyonov, contradicts Kosygin's statement from June 1967 by saying that ABMs are no longer acceptable since they can become a threat to stability.

December 22, 1969 – First Helsinki round of talks ends.

December 22, 1969 – Kissinger meets with Dobrynin to further discuss SALT.

December 29, 1969 – Kissinger and Dobrynin meet again for continued discussions on SALT.

February 1970 – Nixon sends Foreign Policy Report to Congress indicating need for extensive investigation and preparation by the Verification Panel and the NSC.

February 9, 1970 – Parts of both delegations meet in Washington. Dobrynin and Vorontsov put ABMs back on the table and U.S.'s MIRVs come into question. Both parties backed the advantages of a simple SALT agreement as a "starter." On-site inspections were not acceptable at this stage for the Soviets, but are not ruled out.

February 18, 1970 – Kissinger and Dobrynin meet in Washington and discuss whether to pursue a limited or comprehensive agreement. Kissinger suggests establishing the back channel.

March 10, 1970 – Kissinger, Dobrynin, and DASD Laurence E. Lynn meet in Washington where Dobrynin raises concern over the U.S. Safeguard program (widespread missile defense).

March 25, 1970 – Nixon requests that four options for proposals be devised for the next round in Vienna

April 7, 1970 – Kissinger and Dobrynin meet in Washington.

April 8, 1970 – Four options presented to Nixon at NSC meeting.

April 9, 1970 – Kissinger and Dobrynin meet in Washington where Kissinger assures Dobrynin that the U.S. is taking the upcoming round of talks seriously; reveals U.S. intention to present qualitative and quantitative proposals.

April 16-17, 1970 – Opening statements read by the U.S. (Smith) and Soviet (Semyonov).

April 18, 1970 – Second round begins; lasts until August 13.

April 20, 1970 – Soviet delegation tables their comprehensive proposal. U.S. delegation tables "Option C."

June 10, 1970 – Kissinger and Dobrynin meet in Washington where they discuss the current standing of SALT and whether a limited agreement may still be achievable. Agree

that the talks in Vienna should continue for another three weeks and that Dobrynin and Kissinger should continue to work on general principles.

June 20, 1970 – Proposal of an initial agreement was outlined between the parties.

July 7, 1970 – Kissinger and Dobrynin meet in Washington to discuss the possibility of reaching an agreement on ABMs.

July 24, 1970 – Both parties agree to focus negotiating a permanent treaty to limit ABM systems and to continue to work on reaching an agreement on limitations to offensive systems.

August 4, 1970 – The U.S. tables a detailed written “Description of the U.S. Proposal for an Initial Strategic Arms Limitation Agreement.” Soviet reaction is characterized as “reserved.”

August 14, 1970 – Vienna talks end without an agreement.

August 14 to November 2, 1970 – Stalemate in the talks.

October 22, 1970 – Nixon, Kissinger, and Rogers met with Gromyko and Dobrynin in Washington DC wherein both parties reaffirm their commitments to continue the talks in Helsinki and to resume in early November.

November 3, 1970 – Round three begins in Helsinki.

November 10, 1970 – Soviets propose that the term “strategic” refer to ballistic missiles, which could remove SLCMs from the SALT agenda.

December 1, 1970 – Soviets propose ABMs be negotiated in a separate agreement.

December 16, 1970 – DOD spokesman discloses that the Soviets are slowing the deployment of SS-9 missiles.

December 18, 1970 – Third round of talks concludes.

January 8, 1971 – Kissinger and Dobrynin meet come to a tentative agreement on an ABM limitations.

January 23, 1971 – Kissinger and Dobrynin meet again regarding ABM limitations and Kissinger reaffirms that the U.S. position is the zero ABM option.

January 28, 1971 – Kissinger and Dobrynin and meet and draft a Note Verbale for Dobrynin to deliver to Moscow.

February 2 and 4, 1971 – Kissinger and Dobrynin met again to discuss offensive and defensive limitations.

February 10, 1971 – Kissinger and Dobrynin meet and Dobrynin reveals that the Soviets are in favor of formalizing the agreement on ABM.

February 22, 1971 – Kissinger and Dobrynin meet. U.S. and Soviet Union agree to halt the construction of various weapons effective January 1, 1972.

March 16, 1971 – Fourth round of talks begin in Vienna.

May 12-13, 1971 – Kissinger and Dobrynin draft a joint letter for Nixon and Kosygin to sign and make public regarding intentions to reach a SALT agreement.

May 20, 1971 – Joint statement made by Nixon and Kosygin wherein they announced that the negotiations will focus on a permanent treaty to limit ABM systems while both sides continue to work on establishing limitations to offensive systems.

May 20, 1971 – Fourth round ends with Nixon-negotiated agreement for ABM limitations as well as “certain measures with respect to the limitation of offensive strategic weapons.”

June 28, 1971 – Kissinger meets with Dobrynin who indicates that the Soviets are prepared to freeze their ICBMs but that a broader freeze including other offensive weapons will be difficult.

July 8, 1971 – Round five begins in Helsinki.

July 27, 1971 – U.S. tables text for a Draft Agreement in Helsinki.

August 4, 1971 – In Helsinki, U.S. tables proposal to ban ABMs.

September 10, 1971 – Soviets make a formal statement in Helsinki recognizing the linkage between ABM and offensive weapons.

September 13-15, 1971 – The Soviet tabled an ABM proposal in Helsinki.

September 23, 1971 – Fifth round of talks in Helsinki conclude.

September 29, 1971 – Nixon meets with Gromyko to address recent Soviet offensive buildup. Gromyko does not comment on this, but instead emphasizes that the Soviets want to continue negotiations.

September 30, 1971 – U.S. and Soviet Union sign Agreement on Measures to Reduce the Risk of Outbreak of Nuclear War. Both parties also agree to work to improve the U.S.-USSR direct communication link.

October 12, 1971 – Nixon announced plans to meet with Soviet leaders in late May 1972.

October 19, 1971 – Nixon writes a letter to Brezhnev proposing parallel discussions concerning ABM and offensive weapons during next round of talks in Vienna.

November 15, 1971 – Sixth round of talks begins in Vienna.

February 4, 1972 – Sixth round of talks ends in Vienna.

March 9, 1972 – Kissinger and Dobrynin meet and discussed continued Soviet apprehension about the U.S. submarine program. Dobrynin indicates that this may make reaching an agreement more difficult than expected.

March 28, 1972 – Seventh round of talks begin in Helsinki.

March 30, 1972 – In Helsinki, Soviets indicate that an ABM treaty accompanied by an interim freeze limited to ICBMs would be “sufficient.” Smith speaks to Semyonov and suggests including SLBMs in the interim agreement.

April 22, 1972 – Kissinger (with other U.S. officials) meet with their counterparts in Moscow to discuss the interim freeze agreement. Moscow recommends that this agreement last five years.

April 24, 1972 – Brezhnev argues for the inclusion of SLBMs in an agreement on offensive weapons.

May 18, 1972 – Soviets table two separate proposals on replacements and dismantling procedures in Helsinki.

May 19, 1972 – Smith and Semyonov hold private meetings and agreed that SLBMs should be included in an agreement on offensive weapons.

May 22, 1972 – Nixon arrives in Moscow to meet with Brezhnev.

May 22, 1972 – In Helsinki, both sides agree to not increase the size of silos.

May 23, 1972 – General statements made at the Summit.

May 24, 1972 – In Helsinki, both an ABM treaty and an ICBM freeze agreement re in sight.

May 26, 1972 – Summit meeting in Moscow formally ends SALT I negotiations. President Nixon and General Secretary Brezhnev sign the ABM Treaty and the Interim Agreement on Strategic Offensive Arms.

October 3, 1972 – Both agreements enter into force.

## Chapter 6: The Reykjavik Summit (1986)

[Reykjavik was a] violation of all conventional wisdom about sound negotiating tactics and prudent diplomacy.

–Mandelbaum and Talbott, *Reykjavik and Beyond* (1986)

In spite of all its drama, Reykjavik is not a failure—it is a breakthrough, which allowed us for the first time to look over the horizon.”

– General Secretary Mikhail Gorbachev, Post-Reykjavik Summit Press Conference (1986)

### Introduction

The Reykjavik Summit was two-day meeting between President Ronald Reagan and General Secretary Mikhail Gorbachev in Reykjavik, Iceland on October 11 and 12, 1986. Negotiations took place at the Hofti House on the ocean, about a mile outside downtown Reykjavik, Iceland.<sup>1</sup> On the agenda: eliminate all the nuclear weapons in U.S. and U.S.S.R. stockpiles. Despite the fact that Reagan and Gorbachev came incredibly close to reaching an agreement—alarming close, for some—the two-day summit produced no accord. These negotiations are notable for the dominant use of worst-case scenario planning that motivated the desire for an arms control agreement; the fact that Reagan’s refusal to bargain away his strategic defense initiative (SDI), a space-based weapons program, made an agreement impossible to reach; and the “exceptional level of trust” that would have been required by both sides to make an agreement possible (The National Security Archive’s Reykjavik File 2006).

It may go without saying that the extreme scope or aim of the meeting—to eliminate all nuclear weapons—was controversial. On one hand, some hailed Reykjavik as “watershed” moment, which laid the foundation for the subsequent Intermediate Range Nuclear Forces (INF) Treaty, and even for ultimately ending the Cold War. On the other, some in the West decried the Reykjavik Summit as both reckless and inconsistent with NATO’s defense strategy, which relied on the full triad of nuclear capabilities for the defense of the Allies.<sup>2</sup> Regardless of whether the summit is cast as incredible progress or a near miss, it was momentous for breaking with precedents concerning U.S.-Soviet relations, which had soured amidst numerous espionage scandals since the peak of the détente period. (Mandelbaum and Talbott 1986, 215) Gorbachev himself famously acknowledged that while the summit “was not a success, it was a breakthrough...” (Gorbachev 1987a, AA 20).

The Reykjavik Summit has been the subject of numerous articles, books and symposia. It has been addressed at length in the personal memoirs of U.S. and Soviet leaders and advisors alike. A significant number of official documents also detail the negotiations that transpired in Reykjavik and, in contrast to other arms control negotiations, there is a great

---

<sup>1</sup> Fun fact: the Hofti House was believed to be haunted. The Icelandic government took it over after the British sold what had been the British Ambassador’s residence for this reason.

<sup>2</sup> The “triad” includes bombers (plus cruise missiles), submarine-launched ballistic and cruise missiles, and land-based intercontinental ballistic missiles (ICBMs).

deal of information on the Soviet perspective about the Reykjavik Summit. In fact, the positions of both leaders are clear and well documented, which is rare, because arms control agreements are usually negotiated by delegations comprised of appointed negotiators. While both leaders had advisors on hand, the transcripts of Reagan and Gorbachev's dialogue, in combination with letters exchanged and memoirs, document well both of their positions.

There are a number of unique attributes to the Reykjavik summit. First, the summit format is not the traditional framework for arms control negotiations. The exchange of proposals during the Reykjavik Summit occurred in dialogue, rather than the exchange of formal draft proposals. The meetings alternated between private sessions with the two leaders and group meetings that included their foreign ministers, Eduard Shavardnadze and Secretary of State George Shultz<sup>3</sup> (Matlock 2004, 218). While both sides would break to consult with their advisors, there would be no plenary sessions with full delegations.

Second, Reagan was given "maximum negotiating flexibility" for the summit owing to a series of events (U.S. House Committee on Armed Services 1987, 7). First, only days before, the U.S. Senate dropped its opposition to a number of arms control measures that had been passed by the House of Representatives. These included the denial of funding to support deployed forces beyond what was permitted by the SALT II Treaty; an extension on the moratorium on anti-satellite (ASAT) weapons testing, and a new one-year moratorium on higher yield nuclear weapons testing (U.S. House Committee on Armed Services 1987, 7). This gave Reagan "free reign" to negotiate. Gorbachev, likewise, took a number of positions absent input from his military advisors (U.S. House Committee on Armed Services 1987, 19).

Finally, because the Reykjavik summit was proposed less than two weeks before the actual meeting, there was no time available for consultation with the NATO allies (U.S. House Committee on Armed Services 1987, 7). Thus, Reagan was without the consent of U.S. allies in this respect, which is particularly striking, given his proposal to eliminate all nuclear weapons in light of alliance security commitments, and the fact the negotiations predominantly concerned weapons located within Europe.

All of these factors contributed to the "free-wheeling" nature of the summit: "There was no agenda agreed to in advance; indeed, the two sides didn't even exchange a list of who would accompany the two leaders" (Wink 1996, 502). In the end, the two leaders were "improvising, making decisions that would affect the entire globe, as much on chemistry, personal feel, instinct, and emotion, as on crafted policy" (Wink 1986, 510).

---

<sup>3</sup> The chief Soviet negotiator was Marshal Sergei Akhromeyev, chief of the General Staff and first deputy defense minister (Garthoff 1994, 287). Soviet Union: Eduard Shevardnadze, Marshal Sergei Akhromeyev (Chief of Staff of the Soviet Armed Forces), Soviet aide Gyorgy Arbatov, and Viktor Karpov, Yevgeni Velikhov, and Alexandr Bessmertnykh. The U.S. delegation included lead negotiator Paul Nitze, Secretary of State George Schulz, Kenneth Adelman (Head of ACDA and Sr. AC Advisor to Reagan), Admiral John Poindexter (NSA Advisor), Robert Linhard (Air Force colonel and senior National Security Council arms control expert and adviser to Poindexter), Jack Matlock (senior White House arms control adviser), Donald Regan (Reagan's chief of staff), Max Kampelman, and Richard Perle. Assistant Secretary of State Rozanne Ridgway also participated. There were no other senior military representatives (Garthoff 1994; Rhodes 2007, 248).

## Background

The Reykjavik Summit was the second of three summit meetings between Reagan and Gorbachev. The first, the Geneva Summit, would lay the groundwork and the third, the Washington Summit would conclude successfully, eventually resulting in the Intermediate Range Nuclear Forces (INF) Treaty. Reykjavik ultimately amounted to a frustrating exercise, as great strides were made, but no agreement was reached.

Despite the gains made at Geneva, U.S.-Russian relations had reached a low point just prior to the summit. A diplomatic crisis had unfolded in the preceding months, with both countries accusing foreign nationals of spying. Numerous accused spies on both sides were arrested and deported to their home countries. This created a climate of suspicion that resulted in a certain amount of pessimism regarding prospects for arms control in general. Nevertheless, despite the souring of U.S.-Soviet relations, the preparatory work done at Geneva<sup>4</sup> and the momentum that this first summit had generated, combined with the relatively productive exchanges between Gorbachev and Reagan in the interim, all made the reality of reaching an agreement at Reykjavik seem plausible.

Moreover, both leaders felt that they had a good sense of where the other stood, and what the other one wanted based on a series of letters that the two leaders had exchanged in the preceding year. At least Reagan did. Gorbachev's positions at Reykjavik would remain consistent with his letters but offer some surprises and sweeping concessions.

Two months after the Geneva Summit, on January 15, 1986, Gorbachev sent a first letter to Reagan, proposing the complete elimination of all nuclear weapons by 2000, which would be completed in three stages (Shultz 1993, 707). The first stage would eliminate long-range missiles from Europe, excluding British and French missiles (U.S. House Committee on Armed Services 1987, 2). In a reply to Gorbachev dated February 22, 1986, Reagan upped the ante and proposed eliminating all long-range (strategic) missiles worldwide in three years, by 1990.

Correspondence slowed during the diplomatic crisis, but a second series of letters exchanged that summer addressed prospects for arms control vis-à-vis defensive weapons. In a letter dated June 11, 1986, Gorbachev indicated that he would concede to laboratory testing for SDI anti-missile systems research and development, provided that both sides agree to not withdraw from the ABM Treaty for 15 to 20 years. After that, both sides could then agree to reduce strategic weapons by 30 percent.

In a letter dated July 25, 1986, Reagan dropped his proposal for 50 percent reductions in strategic forces and focused instead on strategic defenses. He counter-proposed that the ABM Treaty continue for another seven and a half years, during which time SDI research would also continue. After that period, while both sides would continue to observe a "modified" ABM Treaty, defensive strategic forces would be deployed. Additionally, the U.S. and Soviet Union would share information concerning the development of strategic defense

---

<sup>4</sup> At Geneva, the leaders had tentatively agreed to seek 50% reductions on strategic arms and some kind of interim agreement on a partial reduction to intermediate range nuclear forces (INF) (U.S. House Committee on Armed Services 1987, 2).

technologies. Once this had been achieved both sides could then proceed to eliminate all offensive ballistic missiles<sup>5</sup> (U.S. House Committee on Armed Services 1987, 3).

Finally, at the height of the diplomatic crisis, less than one month before the Reykjavik Summit, in a September 15, 1986 letter to Reagan, Gorbachev questioned U.S. sincerity and asked point blank whether Reagan was truly prepared to pursue agreements that would “lead to the termination of the arms race and to genuine disarmament?” (Mikhail Gorbachev letter to Reagan, 15 September, 1986, 3). In the letter Gorbachev called for a frank discussion on arms control to demonstrate “political will” in light of US “dramatization” of espionage incidents (the Zakharov-Daniloff Affair) (Mikhail Gorbachev letter to Reagan, 15 September 1986, 1). Substantively, Gorbachev unequivocally rejected Reagan’s seven-and-a-half year proposal on ABM non-withdrawal and “expressed confusion” over Reagan’s approach to SDI. He reiterated his position that the testing of SDI be confined to the laboratory, and his belief that the deployment of space weapons would nullify the ABM treaty. He counter-proposed with the following: strict observance of the ABM Treaty for a period of up to 15 years accompanied by a significant reduction in offensive nuclear weapons; completely removing all intermediate (medium) range nuclear weapons from Europe excluding British and French systems; and a complete moratorium on nuclear testing. Gorbachev proposed implementing adequate verification measures, including on-site inspections, to verify this moratorium.<sup>6</sup> In terms of INF, Gorbachev hinted that the Soviet Union might also be willing to entertain reductions to Soviet missiles in Asia. Finally, Gorbachev proposed a meeting in London or Iceland to plan for the next summit (U.S. House Committee on Armed Services 1987, 4)

Thus, the U.S. entered into the talks believing the USSR would pursue “token” INF deployments in Europe, with a likely freeze on existing INF deployments in Asia (Garthoff 1994, 286). Reagan and his team came unprepared to discuss much else.

### Goals, Motivations, and Objectives

Having proposed the meeting, Gorbachev is believed not only to have sincerely wanted to reach an agreement, but also to break the “logjam” in arms control negotiations. Garthoff writes that Gorbachev “correctly saw that the only way to do that was by engaging President Reagan personally” (Garthoff 1994, 286). Like Reagan, Gorbachev also viewed the meeting as an interim summit en route to Washington. However, for Gorbachev, a subsequent Washington Summit would be contingent upon achieving significant progress in Reykjavik.

---

<sup>5</sup> This proposal came directly from the President and a small group of advisors. It was so vague that it was able to garner approval, in the end, of the National Security Planning Group (NSPG).

<sup>6</sup> When Gorbachev entered office in March of 1985, he ushered in a wave of new thinking, including a change in Soviet thinking about verification for arms control. The Soviet Union had traditionally been opposed to “intrusive” verification measures, and suspicious of their use for purposes of information gathering. In his 1986 speech, however, Gorbachev “declared that verification would no longer be an obstacle to arms agreements” (Garthoff 1994, 253).

Gorbachev had laid out his goals ahead of the summit. He had explained to the Politburo that a new arms race would put “inconceivable” pressure on the USSR economy, and stated that the Americans would need to see security advantages in order to sign onto anything (Stanton 2010, 204). He also told the Politburo that the Soviet Union would need to offer significant concessions and compromises at Reykjavik:

“...[W]e have to realize that if our proposals imply weakening U.S. security, then there won’t be any agreement. Our main goal now is to prevent the arms race from entering a new stage [into space and into advanced third-generation nuclear weapons]. If we don’t do that, the danger to us will increase. If we don’t back down on some specific, maybe even important issues, if we don’t budge from the positions we’ve held for a long time, we will lose in the end. We will be drawn into an arms race that we cannot manage. We will lose, because right now we are already at the end of our tether” (Rhodes 2007, 237 citing Gorbachev’s speech to Politburo).

He thus viewed the Summit as an opportunity to present a fresh new package of proposals, consisting of significant concessions and enough new ideas to pique Reagan’s interest (Garthoff 1994, 286). Garthoff writes: “For this reason, the Soviet side did not follow the usual procedure of pre-summit disclosure of new proposals” (Garthoff 1994, 286). Gorbachev’s goals were both broad and ambitious. Garthoff attributes the Gorbachev plan to, among other things, a desire to ensure the survival of mankind (Garthoff 1986, 3). Gorbachev also hoped his proposals would “reduce the arsenals which guaranteed nuclear deterrence to a much lower level” (Gorbachev 1995, 417). He wanted a breakthrough in this regard.

It would seem that Gorbachev had greater plans than did Reagan for Reykjavik as Reagan’s goals were comparatively less ambitious (Rhodes 2007, 237). Among Reagan’s advisors the summit was discussed interim summit, a “routine working session” (Garthoff 1994, 285). Reagan essentially viewed it as a preparatory event for the Washington Summit (Mandelbaum and Talbott 1986, 215-216). Aboard Air Force One en route to Reykjavik Reagan explained:

We will not have large staffs with us nor is it planned that we sign substantive agreements. We will, rather, review the subjects that we intend to pursue...afterward, looking toward a possible full-scale summit (Rhodes 2007, 236).

Nevertheless, according to Jack Matlock, the U.S. Ambassador to the Soviet Union, who was present at the Reykjavik Summit, Reagan came to Reykjavik “with a clear idea of what he wanted” (Matlock 2004, 213). This included coming to an understanding on reductions sufficient to warrant Gorbachev coming to Washington for a full summit. Specifically, he came prepared to discuss INF and to accept a number of variations on a compromise to eliminate this entire class of weapons. He also came prepared to negotiate away at least part of the U.S. ICBM stockpile, provided that Gorbachev reduce his own heavy ICBMs by 50 percent and drop the linkage between strategic nuclear forces and SDI. Finally, he came ready to eliminate all offensive ballistic missiles before preparing to deploy additional defenses (Matlock 2004, 213). Garthoff explains the U.S. position in advance of the summit:

The U.S. proposal prepared for Reykjavik would have set 200 INF missile warheads for each side: 100 each in Europe, and 100 each in the non-European USSR and the United States...the administration was preparing to submit the two limited-testing agreements of 1974 and 1976 for ratification, with reinforced verification. On the subject of strategic offensive and defensive arms, the president intended to stand pat and see what Gorbachev would propose....” (Garthoff 1994, 287).

In short, Reagan came prepared to build upon the existing positions that had been tabled. His proposals were “designed to be incremental rather than new,” the one exception being the proposal to ban all offensive ballistic missiles, which was secondary to banning INF (Matlock 2004, 213). Matlock explains that, overall, the U.S. delegation was generally cautious in establishing goals for the Reykjavik Summit: “Although we thought that the meeting was likely to result in an agreement for Gorbachev to come to the United States, we were careful not to set that as its goal” (Matlock 2004, 216).

### Main Positions and Proposals

Despite each side feeling that they knew well the other’s positions and red lines, the proposals Gorbachev presented at Reykjavik were unprecedented, designed to offer the U.S. an entirely new approach to arms control. Gorbachev opened the Reykjavik Summit by presenting Reagan with his comprehensive package, including proposals on strategic arms, intermediate-range missiles, space weapons, and a testing ban.

### Gorbachev’s Proposal

On the morning of their first day of meetings in Reykjavik, Gorbachev spoke to Reagan of his desire to break the logjam in arms control negotiations:

On the main question that concerns both governments—how to remove the nuclear threat, how to make the use of the helpful impulse of Geneva, how to arrive at concrete agreements—there’s no movement, and that troubles us greatly. We’re very close to a dead end in our negotiations. That’s why we wanted an urgent meeting with you, so that you and I can push the process to arrive at agreements that we can conclude when we meet again in Washington” (U.S. Memorandum of Conversation, Reagan-Gorbachev, (first meeting) 11 October 1986).

First, he proposed that both the U.S. and the Soviet Union cut their strategic offensive nuclear forces (the entire nuclear triad, including ground-based ICBMs, SLBMs and strategic/heavy bombers) by 50 percent<sup>7</sup> (Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (morning) 11 October 1986, 3). These reductions would also apply to ground-based “heavy missiles,” including the Soviets’ SS-20s, which were considered its most powerful class of weapons and about which the U.S. was particularly concerned (Gorbachev 1995, 417). In return for heeding this concern, Gorbachev asserted his expectation that the U.S. reciprocate to address Soviet concern about the U.S.’s 6,500 warheads (800 of which were MIRV-ed) located on submarines worldwide. Previously, in Geneva, Gorbachev had proposed a 50 percent reduction only on strategic offensive arms

---

<sup>7</sup> This would include weapons in the 3,000 to 5,000 km range.

that were capable of reaching each other's territory.<sup>8</sup> These new reductions would not include any short-range weapons (above the 3,000 km range), such as the forward based systems (FBS) that NATO had in Europe (belonging to England and France) (Garthoff 1994, 287). This major reduction would be executed in stages "with the constant retention of equality or parity" as to avoid destabilization. Gorbachev called this first proposal a "great concession" to the U.S. position (Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (morning) 11 October 1986,3).

Second, Gorbachev proposed completely eliminating all intermediate-range nuclear forces in Europe (500-5,000 km range), which had originally be a U.S. proposal for zero intermediate-range nuclear forces in Europe, and freezing existing levels of short-range INF missiles (less than 1000 kilometers), although the Soviet Union only had 120 of these in Europe and NATO had none.<sup>9</sup> This included Soviet SS-20s in Europe (and Asia) and Pershing 2s and ground launched cruise missiles (GLCMs) in Europe. In return for this concession, the U.S. would agree to not withdraw from the Antiballistic Missile (ABM) Treaty for at least ten to fifteen years. By not including the nuclear forces in both England and France in this count, Gorbachev was making another "great concession" he said, and hoped the U.S. would do likewise by taking the question of Soviet missiles in Asia off the table, or "at least [agreeing]to begin talks on nuclear arms—Soviet and American—in Asia" (Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (morning) 11 October 1986,4).

Third, Gorbachev proposed a comprehensive ban on nuclear testing, including the testing of space weapons (SDI). Gorbachev said that he was adopting an "American approach" by proposing the non-exercising of the right to withdraw from the treaty for ten years (a further compromise from Gorbachev's earlier proposal of 15 years). Additionally, research and development for SDI would have to be constrained to the laboratory. The testing of stationary ground-based systems and components would continue to be permitted, per the existing ABM treaty. Gorbachev also proposed that negotiations begin during this time period of non-withdrawal to address the future of SDI following the ten-year ban on testing. Finally, Gorbachev proposed a ban on anti-satellite means, the technology which doubles as anti-missile weapons (ABM), and discussed the Soviet Union's willingness to implement verification measures that included on-site inspections.

### Reagan's Position

Reagan responded quickly with pre-scripted talking points, which he read from notecards. He noted first that the U.S. was "very encouraged" by the Soviet proposal, but reiterated the U.S. position on the importance of removing Soviet INF missiles from Asia. The elimination of NATO's intermediate range weapons from Europe would have to be accompanied by the elimination of Soviet SS-20s in Asia, which are mobile and could easily be moved to Europe during a crisis. Reagan proposed the alternative of a 100-missile limit on Soviet and

---

<sup>8</sup> This was problematic for the U.S. because a reduction to weapons capable of reach each others' territory (long-range weapons) would have left the Soviets capable of attacking NATO allies in Europe and Asia using intermediate range ballistic missiles. In such a scenario U.S. wouldn't have been to strike in return.

<sup>9</sup> This would have allowed Britain and France to retain their 194 (combined) nuclear warheads, which would have technically remained outside NATO's holdings.

American INF missiles in Europe “so that the USA would still have a means of deterrence” (Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (morning) 11 October 1986,5).

Regarding strategic arms, Reagan expressed the desire to eventually entirely eliminate them, a requirement for the pursuit of SDI. He therefore proposed replacing the existing ABM Treaty in order to expand the ability to conduct testing crucial to SDI’s development. Out-of-the-laboratory tests that approach the limit of what is permitted by the ABM Treaty (broadly interpreted) with respect to testing would be conducted in the presence of observers from each party. The new agreement would also obligate the sharing of information critical to any new technologies tested. If a viable defensive system were to be devised in this way, both parties could then agree to “fully liquidate” their strategic arsenals within two to three years.

### The Debate

Gorbachev responded by expressing disappointment in Reagan’s hasty reaction and immediate pushback (Matlock2004, 170). He expected that Reagan and his team would be blown away by his sweeping proposals and grand concessions. He said: “I have just presented entirely new proposals, and they have not yet been discussed at any negotiations. Therefore, I ask you to give them proper attention and to express your reaction later.” Gorbachev was also annoyed that in the face of all this, Reagan seemed to simply be “retreating” to existing (old) U.S. proposals (Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (morning) 11 October 1986, 5).

In response, Reagan disputed Gorbachev’s suggestion that SDI would contribute to an offensive arms race, explaining that there would be no expansion of any defensive system until offensive arms had been reduced (but not yet eliminated). He pushed back on the necessity of a ten-year commitment to ABM, reasoning that it would be easy to build new missiles even if all the current ones were bargained away.

After a lunch break, Reagan pressed for a 50 percent reduction on ICBMs alone (excluding SLBMs and bombers). He also restated his case for making cuts to INF across the board globally, including those that the Soviet Union had in Asia—not just those in Europe (Stanton 2010, 208). Reagan again offered seven and a half years for ABM, which he originally proposed in his July 25 letter.

U.S. and Soviet negotiators (Nitze and Akhromeyev) took over throughout the night, hashing out the details of what a 50-percent cut to strategic arms would constitute. The Soviet Union pushed for a straight 50 percent cut across the board, with each side halving their strategic arsenals “category by category” (Nitze 1989, 430). Nitze, however, insisted on “equal end results.” Negotiating through the evening, Nitze and Akhromeyev came to an agreement on a ceiling of 6,000 strategic offensive warheads, 1,600 delivery vehicles (including ICBMs, SLBMs, and heavy bombers) for each side (U.S. House Committee on Armed Services 1987,9). This amounted to greater cuts required by the Soviets, but reduced the strategic arsenals of each side by half and eliminated asymmetry. Akhromeyev also met the U.S. halfway to 10 years for ABM treaty non-withdrawal, dropped the proposal

that SDI research be entirely banned, offered a limitation on laboratory research instead. He also conceded (again) to exclude English and French weapons from the U.S. count of existing INF in Europe, and agreed to a freeze on INF in the U.S. and Soviet Asia. Akhromeyev also dropped the proposal for an immediate end to nuclear testing and instead urged negotiations towards a comprehensive test ban. Finally, the two sides agreed to the principle of verification requirements, including on-site inspections (Garthoff 1994, 287-288).

Although these were perceived to be “stunning breakthroughs” by both sides, both Reagan and Gorbachev decided the following morning that they wanted more—they wanted to seize the opportune moment (Shultz 1993, 765). Later Sunday morning, Reagan and Gorbachev agreed to reduce all long-range INF outside of Europe (in Asia) to 100—a stunning Soviet concession (U.S. House Committee on Armed Services 1987,10). At this point, it appeared a serious agreement was within reach.

However, the subject of SDI reemerged. Gorbachev had been consistent on this point: reductions to the strategic arsenal had to be linked to constraints on strategic defenses (U.S. House. Committee on Armed Services 1987,11). The U.S. position was wedded to the continued testing of missile defenses for SDI with steady reductions to ballistic missiles. The negotiations then fell apart over SDI.

### **Negotiation Process: Course of the Negotiations**

The proposals tabled by Gorbachev at Reykjavik can be seen as some major concessions to the U.S. position: “Gorbachev’s proposals all moved toward U.S. positions in significant ways,” writes Fredrik Stanton (Stanton 2010, 206). Garthoff corroborates: “Although based on familiar Soviet positions, each part of the package contained some new concessions” (Garthoff1994, 287).

At the beginning of the first meeting on the first day at Reykjavik, Gorbachev offered his position in an hour-long presentation, and then handed Reagan a copy of the proposal. Journalist Jay Wink describes the document as a series of concessions. He explains the concessions in Gorbachev’s proposal:

Gorbachev accepted the 50 percent reduction scheme in heavy offensive missiles, thus harkening back to their earlier meeting in Geneva. He accepted major cuts in the Soviet heavy strategic missiles, an objective of U.S. policy ever since arms talks began in earnest under Richard Nixon and a particular concern to Reagan, and as the meeting wore on agreed to slash them by 50 percent. He accepted the U.S. INF proposal, saying it’s ‘your own zero option of 1981.’ Though he did not want to accept restrictions on mobile missiles in Asia. On ABM and SDI, he proposed a mandatory ten-year period of nonwithdrawal from the treaty, where he had earlier insisted upon a period of up to fifteen to twenty years” (Wink 1996, 504).

The result of the two delegation’s overnight negotiations was significant: “The two sides moved closer to accommodation on a number of issues than their top officials had considered possible beforehand” (Mandelbaum and Talbott 1986, 216). During this

overnight session the Soviets “made significant concessions, leading to the cherished 50 percent cut in offensive weapons (i.e., to equal outcomes), eagerly sought by the Americans. INF was still snagged over missiles in Asia, but this, too, seemed close” (Wink 1986, 508).

However, the tone changed at the end of the second day. The final session “quickly soured,” writes Wink (Wink 1986, 509). The next morning Gorbachev accepted the modified INF proposal that capped mobile Soviet missiles in Asia to 100, while the U.S. retained the right to also deploy 100 within the United States.

By Sunday afternoon, arms control specialists had reached consensus and drafted language for an agreement for an INF Treaty as well as a reduction of strategic nuclear weapons by 50 percent over the first five years (Matlock 2004, 228). The U.S. also agreed to not exercise their right to withdraw from the ABM Treaty for ten years. Unresolved issues concerned the limiting of SDI research to the laboratory and the U.S. proposal to eliminate all ballistic missiles by the end of the ten-year period, while the USSR proposed to eliminate all strategic nuclear weapons on the same timeline. The latter may have been a misunderstanding on Reagan’s part. When he presented the proposal to Gorbachev, who questioned the language proposing a 50 percent reduction to strategic offensive weapons in the first five years and completely eliminating ICBMs in the second five-year period, Reagan replied that he thought it was what Gorbachev wanted. It was not clear that the U.S. was opposed to the elimination of all strategic offensive weapons, per se.

Ultimately, Gorbachev stressed that there would be *no* cutbacks in offensive arms or INF without an agreement on SDI: “It *must* be a package deal,” writes Wink, who explains that this was, in fact, the deal that Nitze and others in the State Department (arms control groups) had long been urging (Wink 1986, 509). Reagan ultimately rejected the compromise on SDI. In the end Gorbachev felt that the U.S. had not made any concessions (Garthoff 1994, 287).

### Agreement Scope

Gorbachev only wanted a broad agreement. After Reykjavik, he stated clearly that was only willing to negotiate an “integrated package,” with both far-reaching and interconnected proposals (Gorbachev statement at USSR CC CPSU Politburo session October 22, 1986). This would include proposals for the INF Treaty, START, the testing of nuclear weapons, and potential SDI/ABM negotiations—a whole package.

The U.S., however, was taken by surprise at Reykjavik, having expected INF to be the focus of the summit as a standalone agreement, not part of a package deal (Mandelbaum and Talbott 1986, 224). If the U.S. was pursuing a broad agreement at all, it came in the form of seeking issue linkages between arms control and such issues as regional conflicts and human rights (Garthoff 1994, 280). This was a consistent policy for Reagan, who had only accepted Gorbachev’s invitation to meet in Reykjavik contingent upon the resolution of the Zakharov-Daniloff affair. Reagan had mentioned the need for linkages in his first remarks at the opening session of Reykjavik. Ultimately, such linkages would be addressed by U.S. and Soviet negotiators on the margins of the Reykjavik Summit, and the U.S. would return to

them immediately following Reykjavik, calling for Soviet progress in human rights as a precondition for any future agreement (Garthoff 1994, 293).

## Hypotheses and Analysis

**(1) A “feeling of security” drives the goal-setting for arms control negotiations, which results from scenario planning. In working through scenarios, negotiators use “security-specific heuristics” that include: (a) worst-case scenario thinking; (b) limited theater of war thinking (one-weapon type planning); and (c) low-dimension (non-complex) scenario thinking. Treaty proposals and goals reflect these forms of thinking, often in counter-productive ways.**

**(2) The goals and strategies that nation states use for reaching arms control agreements focus on reducing uncertainty in order to prevent possible losses via (a) the elimination of threat (e.g., by banning an entire class of weapons that might be used against the nation state), and (b) the reduction of risk of defection (e.g., by establishing verification regimes). This focus on loss and risk reduction has two notable opposing effects. First, in some cases, it facilitates reaching an agreement by providing simple, straightforward, negotiable targets. Second, such a limited focus can actually produce less effective, and therefore less durable, agreements. This is because agreements of limited scope fail to manage the uncertainty about security because proposed reductions don’t map well onto the broader security landscape.**

*(2b) In some cases, when the scope of the goals for a negotiation is too narrow with respect to the security threat perceived, it can be impossible to reach an agreement.*

This section addresses both the goals of the talks and the extent to which they were the product of scenario planning. Negotiators establish goals for arms control in response to their perception of uncertainty about security. The first set of hypotheses speaks to how they arrive at those goals, while the second set addresses the kinds of goals states tend to pursue while employing a particular mode of thinking. I argue that when worst-case scenario-, limited theater of war- and low-dimension scenario thinking are employed, goals set for arms control are more likely to target threat elimination by banning whole classes of weapons and/or eliminating the risk of cheating (defection).

Much like SALT I, the Reykjavik Summit highlights the use of worst-case scenario thinking by both leaders under conditions of missing information about the intention to use nuclear weapons. Reagan’s response also illustrates the use of limited theater of war- or low-dimension scenario thinking. On one hand, Reagan and Gorbachev had similar goals. Indeed, one could argue that Reagan and Gorbachev were supremely focused on eliminating entire classes of weapons, even as they pursued more limited reductions on the way to total elimination. At various times both Reagan and Gorbachev mentioned wanting to pursue total liquidation of nuclear weapons as a solution to the threat of nuclear holocaust. Reagan proposed this in his letter to Gorbachev prior to the Reykjavik Summit (Reagan letter to Gorbachev July 25 1986),<sup>10</sup> and Gorbachev proposed it during the summit

---

<sup>10</sup> The proposal to eliminate nuclear weapons came from directly from Reagan himself (Nitze 1989, 404).

itself. On the other hand, the leaders ultimately pursued a varying breadth of goals for the elimination of uncertainty, which I will argue can be attributed to their modes of thinking about or conceptualizing the threat.

### Reagan's Process

There is ample evidence to support the notion that President Reagan engaged in this kind of worst-case scenario thinking ahead of Reykjavik, which affected his position on nuclear reductions. Dr. Beth A. Fischer describes the relationship between Reagan's learning style and the events leading up to Reykjavik to reveal how they may have affected his thinking (Fischer 1997). First, in 1983 Reagan saw the film *The Day After*,<sup>11</sup> which depicted a small city in Kansas following a nuclear attack launched by the Soviet Union. The film was "unusually graphic," depicting the kinds of burns, radiation sickness, and famine that Americans would likely suffer should such an event come to pass (Fischer 1997, 116).

Fischer argues there is reason to believe the film had a significant impact on Reagan's thinking about the potential outcomes of a nuclear conflict: Reagan was a famously "anecdotal" thinker, who often relied on stories and scenarios to communicate his points.<sup>12</sup> His staff did likewise, using parables and stories to anchor abstract issues to basic principles (Fischer 1997, 116-117). Fischer writes: "Reagan's aids were aware of this presidential trait and knew they had a better chance of getting their points across if they catered to his anecdotal style" (Fischer 1997, 117). The CIA would show Reagan short videos on various countries and leaders in order to educate the President in matters pertaining to foreign affairs (a subject in which he had particularly little interest). Like these films, *The Day After* was "narrative in style" and a visual representation "focused on the lives of everyday Americans". As such, *The Day After* was rather conducive to Reagan's learning style and thought to have affected his thinking in a profound way.<sup>13</sup> Reagan's memoirs corroborate how much the film impacted him. Reagan wrote: "[The film] is very effective and left me greatly depressed...My own reaction: we have to do all we can...to see that there is never a nuclear war" (Reagan 1990, 585).

A second event later that same year, the Soviet bombing of Korean Airlines Flight 007, further exacerbated Reagan's fears about a nuclear holocaust. En route to Japan from

---

<sup>11</sup> *The Day After*. (1993). Dir. Nicholas Meyer. Writ. Edward Hume. Production Co. ABC Circle Films.

<sup>12</sup> Reagan even preferred this format for the delivery of information at Reykjavik, where he used the following scenario to illustrate his own vision to Gorbachev:

Reagan at Reykjavik: "I can imagine both of us in 10 years getting together again in Iceland to destroy the last Soviet and American missiles under triumphant circumstances. By then I'll be so old that you won't even recognize me. And you will ask in surprise, 'Hey Ron, is that really you? What are you doing over here?' And we'll have a big celebration over it" (Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (afternoon) 12 October 1986, 3).

<sup>13</sup> In support of the argument that Reagan was palpably affected by the film, Fischer cites a number of psychological studies that have shown how films can make certain topics more tangible or salient, and that *The Day After*, in particular, caused the issue of nuclear war to become "especially salient" for people—an effect that lasted for weeks and caused public opinion become more favorable towards a "conciliatory approach" to the Soviet Union. This study was conducted by Stanley Feldman and Lee Sigelman (Feldman and Sigelman 1985).

Alaska, the plane veered off course into Soviet airspace. The Soviets presumed it was a hostile breach of its airspace and shot it down, killing 269 innocent passengers (including a U.S. congressman, 60 Americans and 22 children) (Reagan 1990, 582). Reagan writes the event convinced him “how close the world had come to the precipice and how much we needed nuclear arms control” (Fischer 1997, 122). The bombing of the plane also made salient for Reagan the dire consequences of miscalculation. In his memoirs, he describes playing out the following scenario in his mind:

If, as some people speculated, the Soviet pilots simply mistook the airliner for a military plane, what kind of imagination did it take to think of a Soviet military man with his finger close to a nuclear push button making an even more tragic mistake? If mistakes could be made by a fighter pilot, what about a similar miscalculation by the commander of a missile launch crew? (Reagan 1990, 584)

The combination of Reagan’s learning style and these experiences, Fischer argues, contributed to Reagan’s fear of nuclear war.<sup>14</sup> I would also argue that they contributed to the use of worst-case scenario planning in response to this fear. Furthermore, Reagan’s limited fluency with foreign policy and military affairs would contribute to his use of limited theater of war thinking (excluding the use of conventional weapons, for example), and laser-like focus on isolated reductions, the elimination of nuclear weapons, and SDI as the ultimate safeguard. In terms of setting goals for Reykjavik pertinent to managing the perceived threat, Reagan was motivated by the worst possible scenario. This led him to offer proposals aimed at eliminating the possibility of arriving at that particular worst-case outcome. The elimination of nuclear weapons and the advent of the SDI “shield” were both aimed at this end.

Reagan was wedded to the continuation of the testing required to develop SDI, particularly in light of the prospect of the elimination of all strategic nuclear weapons. He explains the perceived necessity of this technology to Gorbachev at Reykjavik:

[W]e need a guarantee that no one will create [offensive weapons] anew, whether this be either of our two sides or some maniac like Hitler, who will want to create offensive weapons. We will need a defense against this. And we propose to protect ourselves once and for all against the rebirth of strategic arms in the world, and on this basis to build our future for many years (Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (morning) 11 October 1986,5).

In further justifying this supreme precaution, Reagan famously invoked his “madman” explanation, which he used so many times it came to irk the Soviet leader:

---

<sup>14</sup> Fischer actually argues that because of these factors, Reagan was susceptible to the use of two heuristics. First, “priming,” by which individuals assimilate new information into a preexisting mental framework, caused Reagan to see all actions in terms of their contributions to increasing the likelihood of nuclear war. Second, “availability” would cause Reagan to “perceive the probability of nuclear war occurring as greater than it objectively was” inasmuch as the film made such images available and he repeatedly rehearsed them in his mind, making scenario of nuclear war seem all the more likely (Fischer 1997).

Who knows what kind of madman might come along after we're gone? We live in a world where governments change; in your own country, there already have been four leaders during my term. I believe you mean it when you say you want peace, but there could be a change...That's why we need insurance that our agreements eliminating nuclear weapons will be kept in the future" (U.S. Memorandum of Conversation, Reagan-Gorbachev, (final Meeting) 12 October 1986).

In truth, Reagan was also suspicious of Soviet intentions and saw SDI as an effective tool for keeping the Soviets honest. He wrote:

We knew from intelligence information that the Soviets were secretly researching a missile defense system similar to SDI; their technology was inferior to ours, but if we stopped work on the SDI and they continued work on their system, it meant we might wake up one morning to learn they alone had a defense against missiles. We couldn't afford that. The SDI was an insurance policy to guarantee that the Soviets kept the commitments Gorbachev and I were making at Reykjavik. We had enough experience with Soviet treaty violations to know that kind of insurance was necessary (Reagan 1990, 677 and 678).

As Reagan presents it, SDI was the ultimate insurance policy. For him, it would eliminate any potential future threat—from the Soviet Union or any other madman. Reykjavik presents an interesting case due in large measure to the role of the SDI program, which was rather unique at that point in the history of arms control.

### Gorbachev's Process

Gorbachev may have thought similarly to Reagan, at least in some respect. He was clearly concerned with the survival of mankind and shared Reagan's desire to eliminate the threat of nuclear war, which he documented in a letter to Reagan in September 1985 (Reagan 1990, 647; Gorbachev 1995). Further, both the Chernobyl accident and the fire that broke out aboard and sank a Soviet nuclear submarine seemed to have contributed to or exacerbated his concern. Indeed, by Gorbachev's own account, the Chernobyl accident motivated Gorbachev to invite Reagan to talks to eliminate nuclear testing. In a televised speech, he told the Soviet people "This is one more tolling of the bell, and the new terrible warning that in the nuclear age what is needed is new political thinking and new policies" (Gorbachev 1986). However, while Gorbachev shared Reagan's goal of eliminating nuclear weapons—perhaps even as a product of these events—he pursued a more "practical solution" than that which could be found in Reagan's proposals. (Reagan 1990, 626)

First, Gorbachev pursued a broader arms control agreement than did Reagan (Garthoff 1994, 253; Garthoff 1986). Specifically, he pursued a broad set of interconnected proposals, which he believed worked together as a "package." This package included a ban on nuclear testing, a freeze on strategic nuclear weapons and the elimination of INF from Europe. He refused to agree to a reduction of strategic nuclear weapons absent the ban on testing and the commitment to ABM non-withdrawal. During the second day of negotiations at Reykjavik, Gorbachev said plainly to Reagan:

The Soviet leadership is convinced that the problems must be looked at with a broad view and we must demonstrate political will power and readiness for large-scale decisions to get out of this dead-end. We think that our major proposals, which are based on the principle of equal security, are appropriate to this. We expect the same of the United States (Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (morning) 12 October 1986, 2).

Moreover, whereas Reagan's proposals came to focus on reductions to and the eventual elimination of ballistic missiles, Gorbachev wanted reductions to the entire triad.

Second, Gorbachev also had additional goals in mind for the negotiations. His goal for Reykjavik was to achieve the "non-militarization of space." Gorbachev was, essentially, hedging against uncertainty about the ability of technology to drive the arms race in the future. He therefore viewed any potential agreement on the non-militarization of space as "the only road to the most radical reductions of nuclear arms" (Reagan 1990, 625). This meant that along with the ban on nuclear testing came the prohibition on SDI testing outside of the laboratory and non-withdrawal from the ABM treaty—and with this a prohibition on the militarization of space. Namely, Gorbachev argued that the development of an SDI program would "not solve the problem of nuclear arms, it will only aggravate it, and have the most negative consequences for the whole process of the limitation and reduction of nuclear arms" (Reagan 1990, 626).

Third, Gorbachev's proposal on ABM was rather savvy with respect to the management of uncertainty about the future and the future of SDI. He proposed to break the agreement parts, implement reductions in stages, and presented the option to reassess in ten years. Gorbachev's January 15, 1986 speech also revealed a flexible approach to arms control. In the speech, he proposed a package with three stages of reductions that could be implemented separately. This proposal allowed for each stage to stand on its own; subsequent stages wouldn't be implemented until that stage had been completed (Garthoff 1986, 3). Reiterating his proposal at Reykjavik, Gorbachev said to Reagan:

After the 10-year period the two sides will, over the course of several years work out through negotiations further mutually acceptable decisions in this sphere. As you see, we are offering a broad formula of what we can do after the 10 years. If you should deem it essential to continue SDI, we can discuss that. And so, why deal with the question in advance, right now?" (Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (afternoon) 12 October 1986, 2).

Finally, Gorbachev was wholeheartedly committed to the implementation of verification measures—a real first in Soviet history. In his memoirs, Gorbachev explained the significance of this position for the U.S.:

In all the previous negotiations, the Americans had always viewed verification procedures as the most important factor. And suddenly they started manoeuvring on this issue. Our position was clear: if we were to begin dismantling nuclear weapons, we necessarily had to intensify inspection and verification to prevent either side from attaining military superiority. Hence, slackening existing arms

control and verification mechanisms—and the ABM treaty in the first place—was out of the question” (Gorbachev 1995, 418).

In his press conference following the Reykjavik Summit, Gorbachev reiterated the importance of verifications:

In view of our readiness to make deep cuts in nuclear weapons, we put the question as follows: As soon as we enter the concrete phase of the elimination of nuclear weapons, we must be absolutely clear on the question of verification. Verification must now become stricter. The Soviet Union stands for triple verification, which would enable each side to feel perfectly confident that it would not be led into a trap. We reaffirmed our readiness for any form of verification” (Gorbachev's reflections on Reykjavik on the flight to Moscow, 12 October 1986; Gorbachev 1987, 20).

Notably, Reagan failed to address explicitly the issue of verification before or during the Reykjavik Summit.

Reagan was employing a strategy more akin to risk reduction, which resulted from worst-case scenario planning. In one of his rebuttals to Gorbachev at Reykjavik, he said:

We want right now to provide for the possibility of defense in case, 10 years from now, when we no longer have missiles, someone should decide to re-create nuclear missiles...Our aim is to safeguard ourselves from a revival of missiles after they have been destroyed, in order to make a kind of gas mask against nuclear missiles and deploy a defense system. Moreover we view this variant only as a possibility, as one probable outcome. I have already spoken of this. And I have spoken of the danger of nuclear maniacs” (Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (morning) 12 October 1986, 8).

Reagan and Gorbachev would seem to have shared the opinion that no one could know what the world would be like in 10 years, but differed in how to approach the problem. Gorbachev sought the flexibility to alter the course at a later date, pending more information. Reagan, at least on the surface, appeared to adopt worst-case scenario thinking and pursue options to hedge against the most lethal outcome.

Further, Gorbachev was in favor of a package proposal. He saw a strengthening of the ABM going hand-in-hand with the elimination of nuclear weapons. Reagan saw a weakening and proliferation of defensive systems. Gorbachev even criticized the scope of Reagan's proposals. In a televised address to his nation following the Reykjavik summit, Gorbachev said:

The scope of our partners' approach was not broad enough. They did not grasp the uniqueness of the moment and, ultimately, they did not have enough courage, sense of responsibility or political resolve, which are all so needed to settle key and pressing issues in world politics. They stuck to old positions which had already eroded with time and did not correspond to the realities of today” (Gorbachev 1987, 59).

### **(3) High uncertainty about the future along multiple dimensions implicitly affects the ability to reach an agreement.**

*(3a) High environmental uncertainty can make it difficult for the proposals put forth to contribute to security in an adequate way.*

*(3b) High complexity may make it difficult to put forth meaningful proposals that could meaningfully contribute to security.*

*(3c) High mistrust or suspicion can make it impossible to reach an agreement.*

*(4) The management of these multiple forms of uncertainty—including uncertainty tied to regional instability, regime change, technological change, and the evolution of military strategy—tends to facilitate reaching agreement and produce durable agreements.*

*(4b) If external events or sources of uncertainty cannot be managed through arms control, it is likely an agreement won't be reached.*

*(5) For arms control, the management of uncertainty calls for a strategy that pursues flexible agreements that may be characterized as vague, broad, shallow, and loaded with confidence- and security-building measures.*

This section addresses the extent to which uncertainty about factors other than capabilities affect the ability to reach a negotiated agreement. In the case of the Reykjavik Summit, the inability to reach an agreement was the result of (a) the prevalence of a significant degree of mistrust and suspicion, (b) uncertainty stemming from changing technology, and (c) the general timing.

#### **High Uncertainty Atmospherics: Sincerity, Suspicion and Propaganda**

First, the atmospherics of the negotiations at Reykjavik presented an initial obstacle to reaching an accord. Shultz describes the climate of the preparations leading up to the hastily convened summit: “There was a unique sense of uncertainty in the air. The meeting had come about so suddenly. Nothing seemed predictable...The atmosphere was one of hectic pace, divided opinion on important issues of foreign policy, and challenge to the political preeminence of the president” (Shultz 1993, 753).

Second, despite the strong impetus for the meeting, there was no escaping the extreme suspicion and wariness each side had for the other. The Zakharov-Daniloff Affair and other diplomatic crises had left both sides with a sense of mistrust and suspicion; Mandelbaum and Talbott (1986) write of the “depth of hostility and mistrust between the superpowers” (Mandelbaum and Talbott 1986, 215 and 221).

Although the two leaders respected one another,<sup>15</sup> they were not immune to suspicion of sinister intentions in coming to the table. Gorbachev, in no uncertain terms, doubted

---

<sup>15</sup> Of Reagan Gorbachev has said: “Our dialogue...was frank, and increasingly friendly the better we got to know each other. Tempers became heated whenever we touched upon topics such as human rights, regional

Reagan's sincerity in seeking an agreement. In a meeting with the Politburo following Shevardnadze's meeting with President Reagan in the month before the Reykjavik Summit, Gorbachev said:

I am convinced—we can speak about it now—that in U.S. governing circles they do not want to allow a relaxation of tensions, a slowing down of the arms race. This is most important for then now. Not to allow us to expand our plans. Not to let us increase the dynamism of our system. Not to let us strengthen our democracy” (USSR CC CPSU Politburo discussion of Reagan's response to Gorbachev's initiative to meet in Reykjavik and strategic disarmament proposals, 22 September 1986).

Likewise, many Americans and other Westerners viewed Gorbachev's call for the total elimination of nuclear weapons with skepticism, dismissing it as propaganda (Garthoff 1994, 252 and 253). Garthoff writes that Gorbachev's overtures were “dismissed by skeptics, and at best cautiously welcomed by some” (Garthoff 1994, 265). Reagan himself suspected Gorbachev of trickery at the summit, which was noted by Gorbachev:

Our far-reaching proposals seemed to have caught President Reagan off guard... Since this proposal [to reduce our arsenals] was part of a package, the American President apparently feared some sort of trick (Gorbachev 1995, 417).

Indeed, trust was a major obstacle to getting an agreement out of the Reykjavik Summit. During staff discussions at Reykjavik, Soviet aide Gyorgy Arbatov told U.S. official Paul Nitze that the U.S. proposals would require “an exceptional level of trust.” Because this didn't exist, explained Arbatov, “we cannot accept your position” (The National Security Archive's Reykjavik File 2006).

### Changing and Emerging Technology: the Strategic Defense Initiative

Gorbachev saw SDI as augmenting uncertainty by contributing to the militarization of space—a new frontier for nuclear war. He explained this to both Reagan and the world. During the summit Gorbachev said to Reagan: “SDI would mean a transfer of the arms race to a new environment, its elevation to a new stage, the creation of new types of weapons which would destabilize the strategic situation in the world” (Russian transcript of Reagan-

---

conflicts and the notorious Strategic Defense Initiative (SDI). Nonetheless, I realized by the end of our two-day meeting [in Geneva] that Ronald Reagan was a man ‘you could do business with” (Gorbachev 1995, 405)

Likewise, about Gorbachev's 1985 meeting with Reagan at the Geneva Summit, Soviet Foreign Minister Eduard Shevardnadze wrote: “We saw that Reagan was a person you could deal with, although it was very hard to win him over, to persuade him of the other point of view. But we had the impression that this is a man who keeps his word and that he's someone you can deal with and negotiate with and reach accord” (Oberdorfer 1998, 154).

Reagan likewise found Gorbachev to be likeable. In his memoirs Reagan wrote: “Looking back now, it's clear that there was a chemistry between Gorbachev and me that produced something very close to friendship. He was a tough, hard bargainer... But there was a chemistry that kept our conversations on a man-to-man basis, without hate or hostility. I liked Gorbachev even though he was a dedicated communist and I was a confirmed capitalist” (Reagan 1990, 707).

Gorbachev Summit in Reykjavik, (morning) 11 October 1986, 5). In his press conference following the summit, Gorbachev further elaborated:

But what is the danger involved in SDI? For one thing, there is political danger. Right away a situation is created which lends itself to uncertainty and stirs up mistrust and suspicion of one another...Second, we must not forget about the military side of the issue. SDI can lead to the appearance of new types of weapons. This we can also say with competence. It can bring about an entirely new stage of the arms race, which can have very serious consequences (Gorbachev 1987, 31).

### Timing and Elections

As always, timing was a crucial factor. Looming elections can often introduce uncertainty (and ulterior motives) into the negotiating climate. Indeed, for the U.S., elections were on the horizon. The next presidential elections would begin to take shape the following year (in 1987), and a focus on arms control could create vulnerabilities for any Republican candidate during their campaign. Moreover, congressional elections were to take place in the month following the Reykjavik Summit, and unpopular concessions could make elections difficult for Republicans, as well as affect prospects for the ratification of any arms control agreement. On SDI, Reagan would seem to have had the electorate in mind when he said to Gorbachev: “I promised the American people I would not give up SDI” (Oberdorfer 1992, 203). The meeting ended shortly thereafter.

Alternatively, it could be said that Reagan had every impetus to make a deal. Gorbachev commented on this: “[For Reagan] there was a tempting opportunity to go down in history as the ‘President of peace’—and the elections were drawing nearer” (Gorbachev 1995, 415).

### Why the talks failed

#### 1. SDI and the Testing (Laboratory) Issue

Despite the fact that the leaders agreed on the pressing need to reduce nuclear arsenals, there was no deal to be made. Reagan and Gorbachev were able to reach a deal on the reduction of ballistic missiles; however SDI was the deal-breaker. Reagan commented on this disconnect: “This is a very strange situation. You want a ten-year period. I won’t give up SDI. But both of us insist that the most important issue is eliminating our nuclear arsenals” (Rhodes 2007, 261).

Potential workarounds proved useless in the service of reaching an agreement. First, Reagan’s promise to share SDI technology fell flat with Gorbachev, who protested:

Excuse me, Mr. President, but I cannot take your idea of sharing SDI seriously. You are not willing to share with us oil well equipment, digitally guided machine tools, or even milking machines. Sharing SDI would provoke a second American revolution! Let’s be realistic and pragmatic (Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (afternoon) 11 October 1986, 6).

Second, the potential compromise on SDI testing restricted to the laboratory proved no more successful. Gorbachev maintained his objections to removing the word “laboratory” from the provisions on ABM testing until the very end of the second day at Reykjavik. He insisted that ten years of testing in the laboratory would not harm Reagan’s dream of strategic defense, and maintained that all he was asking was that testing not be carried out in space for the ten-year period.<sup>16</sup> In this argument, writes Matlock, “Gorbachev had a point: ten years in laboratories would not have killed SDI, but Reagan had been convinced by Caspar Weinberger, among others, that Congress would not fund SDI if it was limited to laboratories” (Matlock 2004, 229). When Reagan consulted Richard Perle in the final hours of the summit and accepted his position that SDI could not be developed in the laboratory (despite prodding from Shultz and Nitze), any would-be deal at Reykjavik was dead. This stumbling block effectively ended the summit. Reagan wrote:

I realized [Gorbachev] had brought me to Iceland with one purpose: to kill the Strategic Defense Initiative. He must have known from the beginning he was going to bring it up at the last minute....This meeting is over...Let’s go George, we’re leaving (Reagan 1990, 679).

## **2. US Failure to Bargain or Hard Bargaining?**

The Soviets were clearly perturbed by what they perceived to be the U.S. failure to make concessions. Gorbachev said:

When will the United States start making concession of its own? (U.S. Memorandum of Conversation, Reagan-Gorbachev, (third meeting) 12 October 1986)

This notion—that the U.S. failed to make any concessions at Reykjavik—was fairly surprising (even baffling) to the Soviets, who had expected the U.S. to be bowled over by breadth and depth of Soviet concessions:

I don’t understand what’s going on,” [Alexander Bessmertnykh] confided. “We thought we were offering you everything you really wanted, including the 50-percent cut in heavy ICBMs, but your guys aren’t moving. They are haggling over every point. Gorbachev has gone out on a limb to get an agreement, and it won’t be good for any of us if he has to go back to Moscow empty-handed (Matlock 2004, 223).

Nevertheless, Matlock argues that it would have hardly been fair to attribute the lack of agreement to the “stubbornness” of either Reagan or Gorbachev. In Reagan’s defense, Matlock explains how a concession on SDI need not have entailed a viable, durable treaty:

“Those who have accused Reagan of passing up a unique opportunity to rid the world of nuclear weapons must assume that, once there had been a broad agreement in principle, a treaty would have been forthcoming—automatically as it were—and that this treaty would have been ratified by the legislatures of both countries and then

---

<sup>16</sup> The refusal to condone out-of-the laboratory testing was Gorbachev’s own mandate—it had not come from his military (Matlock 2004, 236).

faithfully implemented regardless of other events or the policies of other countries. Nothing in the history of U.S.-Soviet relations up to then would have provided any encouragement for such expectations. They were based on wishful thinking, not a sober appraisal of the likelihood that the agreements Regan and Gorbachev nearly made in Reykjavik could have been implemented” (Matlock 2004, 241).

### **3. Leaders Pursuing Different Goals and Using Different Approaches**

Despite agreeing on the imperative to eliminate or reduce their nuclear arsenals, evidence would suggest that Gorbachev and Reagan were pursuing different goals and employing different strategies in the service of those goals. Whereas fear of a nuclear holocaust motivated Reagan to eliminate the threat of nuclear war, Gorbachev was instead motivated by the desire to usher in a new age in Soviet politics and to open up to the West, in part by creating long-term, durable solutions to nuclear-strategic problems. In the same vein, Gorbachev was pursuing a relatively broader kind of agreement than Reagan was. This incompatibility, which ultimately translated into an inability to reach an agreement, suggests the following: when one side is pursuing risk reduction and the other is pursuing uncertainty management, it is less likely that an agreement can be reached.

Rhodes has also described how Gorbachev and Reagan were pursuing different strategies. He wrote:

The difference between Gorbachev’s approach and that of Reagan’s advisers was the difference between common security and the adversarial, zero-sum ‘realism’ that both sides had stubbornly maintained throughout the Cold War and that had stalled meaningful arms negotiations for decades (Rhodes 2007, 238).

Along similar lines, the two leaders had different “political” needs. Garthoff explains why Gorbachev needed success at the summit and Reagan didn’t. He writes:

Gorbachev needed the summit as well as an arms agreement to justify the changes in Soviet foreign and security policy that he considered necessary. Reagan did not plan any changes in policy and did not need a summit; he could easily rest on his open invitation and blame Soviet recalcitrance for the absence of one (Garthoff 1994, 286).

Fundamentally, Gorbachev recognized the difference between his and Reagan’s political goals. Knowing this, he sought a way around it. Rhodes explains: “Gorbachev wanted change. Most of Reagan’s advisers did not. Gorbachev’s goal then must be to push past the president’s advisers and somehow engage the president directly” (Rhodes 2007, 238).

Finally, in terms of an approach to military strategy, the U.S. was focused on eliminating offensive capability while preserving defensive capability. The Soviets, on the other hand, were focused on adding restraints to existing defensive systems, which further exacerbated the divide between their approaches and proposals (Mandelbaum and Talbott 1986, 227).

#### 4. High Uncertainty, Suspicion

In the end, each side blamed the other for the failure to reach an agreement. Gorbachev suggested that the negotiation process was derailed by the “American quest for superiority.” Reagan likewise suggested that Gorbachev only brought him to Reykjavik to force his hand in abandoning SDI. Post-Reykjavik recriminations took place at follow-up negotiations in Vienna between Shultz and Shevardnadze, with both sides blaming the other for failure to make a deal. All of this is symptomatic of the climate of high uncertainty about intentions and extreme suspicion that made reaching an agreement too difficult (Matlock 2004 244-245).

#### 5. Goals Too Broad or Far-Reaching

It has been said that arms control mimics the political climate of the time (Singer 1962). This was a turbulent time, with U.S.-Soviet relations “oscillating sharply between conciliation and acrimony” (Mandelbaum and Talbott 1986, 215). As a result, it may have been premature to expect an agreement in Reykjavik. In his press conference at Reykjavik at the conclusion of the summit, Gorbachev said:

The situation has worsened [since we initiated talks on the arms race]; once again there is growing anxiety around the world. I think it’s no exaggeration to say—you yourselves are witnesses to it—that the state of the world is in turmoil. The world is in a state of turmoil, and it demands that the leaders of all countries, above all the major powers, primarily the Soviet Union and the United States, display political will and determination so that the dangerous trends can be halted (Gorbachev 1987, 15).

Although high uncertainty was a motivation for coming to the table, reaching an agreement was perhaps simply too unmanageable a goal in that context.

#### Further Negotiation and Renegotiations

Although no agreement was reached in Geneva, Reykjavik, or Vienna, Reagan and Gorbachev reached an agreement at the Washington Summit on December 8, 1987 on INF weapons, which would be codified in the INF Treaty.<sup>17</sup> The agreement was a landmark insofar as it was the first arms control agreement to actually reduce the number of existing arms rather than set a ceiling (it actually eliminated *all* INF missiles in the 500 to 5,500 kilometers range), and because it included unprecedentedly intrusive on-site inspections. Within two years, by May 1991, all intermediate- and shorter-range missiles (including U.S. Pershing II and Soviet SS-20 missiles), launchers, related support equipment, and support structures were completely eliminated from Europe. Inspections lasted through June of

---

<sup>17</sup> To get to this, Gorbachev conceded...“Politburo notes from October 30, two weeks after the summit, show that Gorbachev by then had largely accepted Reagan's formulation for further SDI research, but by that point it was too late for a deal” (The National Security Archive's Reykjavik File 2006).

2001 (Intermediate-Range Nuclear Forces [INF]). The INF Treaty is still in force today, although inspections have ceased to occur.

## Conclusion

So, whose approach was the right one? Would risk reduction in the form of eliminating ballistic missiles, for example, have proven an effective response to the threat faced by the two sides? Would that have resulted in a meaningful, durable agreement? On one hand, Matlock seems to argue that it would have. He writes:

By their very nature, ballistic missiles are surprise weapons. They have a short flight time and are most effective against fixed targets. They have little use against mobile military targets once a war starts, but can ravage a country's civilian population and infrastructure. They would be the weapons of choice to start a war, and they are the only plausible vehicles for disarming first strike in a nuclear war. They are dangerous even if they do not have nuclear warheads since they can be used for surprise attacks with conventional warheads and can also deliver chemical and biological weapons. Eliminating ballistic missiles would remove any possibility of first-strike strategy that Gorbachev claimed had to be behind the Strategic Defense Initiative (Matlock 2004, 184).

Further, the elimination of ballistic missiles would have prevented the militarization of outer space, Matlock explains, because "After all, ballistic missiles, unlike aircraft and cruise missiles, travel through space" (Matlock 2004, 184-185). This was, therefore, a reasonable goal for the Soviets, who had objected to the militarization of outer space since 1983.

On the other hand, John Steinbruner would seem to argue that the elimination of ballistic missiles alone would not have been sufficient to eliminate uncertainty about security. Such a solution would seem to be an oversimplified fix. Steinbruner explains why uncertainty about security instead requires more complex thinking:

Strategic force reductions are a promising means of protecting deterrence and controlling the pressures for preemption, but they must be combined with other measures to be fully effective: notably, with the removal of forward-based nuclear weapons in the European theater, with arrangements for stabilizing the conventional balance in that theater, with restraints on the pace and scale of force modernization, and with mutually agreed-upon restrictions on strategic defense. Such a 'full package' is what is required to produce more stable international security arrangements (Steinbruner 1988, 18).

Reagan's compartmentalized thinking about the subject—proposing to reduce strategic nuclear weapons independent of plans for SDI and focus on achieving unilaterally deployed strategic defense—was not conducive to facilitating the "stable path toward the elimination of nuclear weapons," writes Panofsky (Panofsky 1988, 2).

Moreover, one of the proposals put forth by both leaders faltered with respect to this kind of strategically complex thinking. Although Gorbachev said the Soviets had adopted the U.S. point of view in constructing their strategic arms reduction proposal, which consisted

of a 50 percent reduction in nuclear weapons capable of reaching each other's territory, they agreed to turn a blind eye to the potential destructive power INF and forward-based systems in Europe could create (both in Europe and the Soviet Union). This deliberately simplified scenario likewise would have, in all likelihood, threatened the durability of the agreement in the long run.

## The Reykjavik Summit Timeline

November 19-20, 1985 – Reagan and Gorbachev meet briefly in Geneva and write a joint statement indicating the shared view that “nuclear war cannot be won and must never be fought.” The leaders agree to meet again at a future date.

January 16, 1986 – Gorbachev issues Declaration of the General Secretary, in which he lays out a plan for the elimination of all nuclear weapons by the year 2000. The plan included provisions for flexibility in establishing more limited arms control agreements.

February 25, 1986 – Gorbachev’s speech to the Party Congress, in which he reveals his suspicion that the U.S. government is not sincere in its desire to pursue arms control agreements.

June 16, 1986 – Gorbachev gives his report to Central Committee of the Communist Party of the Soviet Union. In it, he lays out his three goals for arms control negotiations.

June 19, 1986 – In a graduation speech Reagan acknowledged the Soviet efforts towards progress in arms control, and suggested that the U.S. and Russia might have reached a turning point for strategic arms control. He also, however, advocated SDI and indicated he would not compromise on the issue.

June 23, 1986 – Soviet envoy to Washington, Ambassador Yury V. Dubinin, delivers a letter to Reagan from Gorbachev insisting that sufficient progress in arms control and reductions be made to justify a summit.

July 25, 1986 – Reagan sends letter to Gorbachev, which includes Defense Secretary Weinberger’s proposal to eliminate all ballistic missiles—an alternative to Gorbachev’s proposal to eliminate all nuclear weapons—as well as a protective clause for SDI.

July 25-28, 1986 – Bilateral expert-level meetings in Washington leads to setting an agenda for the upcoming summit.

August 11-12, 1986 – Consultations between high level U.S. and Soviet experts in Moscow addressing nuclear and space arms issues.

August 23, 1986 – Soviet physicist Gennadi Zakharav arrested in U.S. while attempting to purchase intelligence secrets from former FBI agent.

August 30, 1986 – U.S. journalist Nicholas Daniloff is arrested in Russia and accused of espionage.

September 5-6, 1986 – Consultations between high level U.S. and Soviet experts in Washington addressing nuclear and space arms issues.

September 15, 1986 – Gorbachev sends a four-page letter to Reagan, noting the deterioration in U.S.-Russian relations (diplomatic crises, charges of espionage), and stresses the need for leadership to change this course. Gorbachev advocates direct efforts

to end the arms race and achieve disarmament, and proposes a one-on-one meeting in Iceland or London to this end.

September 19, 1986 – Pre-summit meeting between Shevardnadze and Shultz and Shevardnadze and Reagan.

September 22, 1986 - Reagan accepts Gorbachev's offer to meet to discuss disarmament on the condition that Gorbachev release 25 political prisoners, as well as release Nicholas Daniloff, a reporter who had been seized by the KGB for espionage.

September 29, 1986 – Daniloff released without trial.

September 30, 1986 – Reagan holds a press conference and announces that he will meet Gorbachev in Iceland on October 11 and 12, 1986 for a “preliminary meeting” in advance of the General Secretary's visit to the United States. Zakharov released after pleading *nolo contendere*.

October 4, 1986 – Gorbachev lays out goals for the Summit to his team.

October 6, 1986 – State Department announces plans for the Office of Disinformation Analysis and Response to examine Soviet projects of disinformation.

October 9, 1986 – Reagan arrives in Iceland.

October 10, 1986 – Gorbachev arrives in Iceland.

October 11-12 – Reykjavik Summit.

November 5-6 – Shultz and Shevardnadze meet in Vienna to continue talks. This time, the entire top level of the U.S. military team participated. There were no senior military officials present from the Soviet Union. The meeting yielded no significant progress.

## Chapter 7: Data and Analysis

While numerous theories address uncertainty about capabilities and intentions as drivers of state behaviors, few scholars have empirically analyzed their effects and none have done so comprehensively for arms control: there is little data available that can inform best practices for setting goals for these kinds of agreement. This project makes a contribution to this “data gap.” This chapter introduces a new dataset of 42 bilateral and multilateral arms control negotiations (43 cases)<sup>1</sup> negotiated between 1945 and 2010, all involving the United States. The dataset was produced to enhance the state of quantitative research on arms control in three ways. First, it includes the most detailed data on the subject to date, with data for the negotiation process of each negotiating state. Second, cases include successful negotiations (resulting in an agreement) and unsuccessful negotiations (not resulting in an agreement), as well as all of the agreements that were reached. Third, the dataset has variables that operationalize concepts associated with generating and managing climates of uncertainty during these negotiations.<sup>2</sup> This includes variables for factors that contribute to and mitigate uncertainty, as well as those that code for responses to uncertainty. This chapter first describes the how this dataset builds upon previous research. Second, it discusses the operationalization of risk and uncertainty in this context of security and arms control. Third, it presents the cases included in the dataset (by type) and discusses both the case selection and coding process. Finally, empirical findings are presented for the following three arms control-related processes and phenomena: 1) the ability to or ease of reaching an agreement; 2) the kind of agreement reached; and 3) the durability of the resulting agreement.

### Introduction

States tend to enter into arms control negotiations to augment their own security by reducing uncertainty about other states' capabilities and intentions of. While the effects of missing information on the decision-making of individuals have been studied for quite some time, the effects of uncertainty on arms control efforts have not been adequately addressed. Further, because no comprehensive dataset of arms control negotiations and agreements exists, it is difficult to determine what constitutes “good” arms control. What makes negotiations and agreements successful? What are the tradeoffs in achieving these successful outcomes? We need more information in order to effectively set goals for arms control agreements going forward.

Moreover, arms control negotiations are beset with and motivated by uncertainty. The missing information and high uncertainty that characterize these situations beg the

---

<sup>1</sup> The SALT I negotiation process resulted in two separate agreements—the Antibalistic Missile (ABM) Treaty and the Interim Agreement—which had distinct provisions and implementation details.

<sup>2</sup> Variables code for factors that contribute to generating uncertainty (such as a state's prior history of conflict; the presence of volatility across the leadership, regions, and economies of participating states; and a change in negotiating delegation), as well as the use of strategies designed to reduce risk (limit the likelihood and cost of potential losses given an imagined worst-case future state of the world) versus those designed to manage uncertainty (maintain dynamic flexibility given an unknown state of the world).

following questions: (1) How does uncertainty affect the process of the negotiation of arms control agreements? (2) How does uncertainty affect the kinds of agreements reached when negotiations are successful? (3) How effectively do the resulting agreements endure and manage uncertainty in the long run?

### Prior Work

Several data-driven research projects have examined international negotiations. These projects collected information on both negotiation processes and outcomes, the duration of negotiations, and the duration and durability of resulting agreements. No studies, however, have focused exclusively on cases of arms control, nor have any collected a comprehensive set of data derived from the universe of cases of arms control. To assemble the dataset for this project, I build on the ideas, modes of analysis, concepts and variables described in the following works:

Koremenos (2005) evaluates the use of duration and flexibility provisions for treaties in response to high uncertainty situations. She uses cases of major and minor international agreements across four issue areas (economics, environment, human rights, and security), drawn from the United Nations Treaty Series. Security cases include arms control as well as mutual security (the formation of alliances). Koremenos finds that high uncertainty cases are more likely to result in the use of treaty provisions that can be described as “flexible,” which is defined as setting a finite duration and allowing for the flexibility to renegotiate, than in the use of non-expiration provisions.

While I use some arms control cases that are included in the United Nations Treaty Series, that set of cases does not include all cases of arms control between 1945 and 2010. Further, my commitment to the notion that arms control negotiations—which explicitly seek to manage uncertainty about capabilities and intentions—precludes a generalization from other types of security cases, including alliance formation. I also evaluate a broader range of flexibility provisions specific to arms control. Finally, Koremenos derives a measure for risk aversion uniformly for all participating states based on the attributes of the states and their environment. This project does not assume that states have an endogenous level of risk aversion and, consequently, does not presume that states make rational decisions. In this way, it allows for the use of heuristics under conditions of missing information, as well as biased responses to uncertainty.

This project also builds upon Daniel Druckman’s empirical work, which spans a 25-year period. In their review of approaches to the study international negotiation, Druckman and Terrance Hopmann (1989) make the case that a focus on the process of international arms control negotiation, as opposed to the substantive obstacles to reaching an agreement, has been overlooked. The piece serves to integrate existing approaches and broaden the scope of factors believed to affect the negotiation process, including those that pertain to the pre-negotiation phase, those relevant to the bargaining process, and contextual (external) influences on the negotiation.

Druckman (1997) tests the relevance of these factors for negotiations in multiple issue areas. Druckman collects data on factors affecting the processes of 23 cases of international negotiation by coding for the negotiation structure, the composition of

delegations, the presence of bureaucratic support, the presence of a third-party facilitator, the issues addressed, the overall negotiating situation, the course of the negotiations, negotiation outcomes, and external events. He obtains this information from interviews with Austrian diplomats (former negotiators). With respect to outcomes, Druckman codes for the kind of agreement reached (formal treaty versus non-binding agreement), as well as the overall breadth of resulting agreement. Druckman then uses multidimensional scaling (MDS) analysis to find overlapping similarities among these cases, which span the issue areas of arms control, trade and politics, and the environment. He finds that bilateral talks are more likely to be associated with a successful treaty outcome than are multilateral talks, and that external factors are more likely to impact reaching an agreement than is domestic bureaucratic support. He includes only three cases of arms control negotiations: the Antiballistic Missile Treaty and Interim Agreement from the SALT process, and the Test Ban Treaty). While Druckman examines the role of variables related to both the process and outcomes associated with the negotiations, he includes only 35 variables in all, and doesn't address the use of strategy, the management of uncertainty or the response to potential security threats, risks, or losses.<sup>3</sup>

Druckman (2001) explores the negotiation process again, this time examining 34 cases of international negotiation using "turning point analysis" to identify when changes in the negotiation process occur. This set of cases, selected from the Pew Case Studies in International Affairs Series, includes security negotiations (defense, strategic policy-making, arms control, and war termination), political negotiations (environmental, the formation of alliances, conflict management and resolution, global resources, energy and the environment, international law and organizations), and economic negotiations (economic development, money and finance, trade and investment, and science and technology development). As in some of his earlier work, Druckman includes variables for both procedural and substantive factors affecting the negotiations, in addition to external factors. For security cases, he finds that the negotiation process is particularly vulnerable to external factors, which cause "abrupt departures" that help facilitate reaching an agreement.

Most recently, Druckman and Albin (2011) examine the durability of negotiated peace agreements. Using Downs and Stedman's dataset of peace agreements ending civil wars that were negotiated in the 1980s and 1990s,<sup>4</sup> they explore the effect of the presence of principles of distributive justice (DJ) on the durability of negotiated agreements. DJ consists of four principles: equality, proportionality, compensation, and need. Durability is defined by the duration of the agreement combined with the effective "implementation of and adherence to the agreement by parties." While Druckman and Albin focus on peace agreements rather than arms control, their analysis of durability directly informs my work. They code for two aspects of durability: (1) the overall duration of the agreement, (2) "the

---

<sup>3</sup> There is a great deal of overlap between my dataset and Druckman's. Druckman's was, unfortunately, not available for distribution.

<sup>4</sup>See Downs, G. & Stedman, S. J. (2002). "Evaluation issues in peace implementation." In *Ending Civil Wars: The Implementation of Peace Agreements*, eds. J. S. Stedman, D. Rothchild, and E. M. Cousens. Lynne Rienner Publishers: 43-69.

implementation of and adherence to the agreement by parties.” This way, they allow for violations, but consider the agreement durable provided it continues to be successful, by and large, in fulfilling original goals. The latter part of their definition is particularly relevant for arms control—treaties frequently sustain violations, which are rarely a cause for abrogation.

Finally, Simonelli (2011) assembled a large dataset comprised of 168 multilateral agreements, which she divides into two categories: security and non-security issues. She examines the duration of these negotiations and finds that the involvement of third-party facilitators can prolong negotiations for security-related agreements, but that the opposite is true for non-security-related agreements.

### **Project Justification and Goals: Codifying Risk and Uncertainty in Arms Control**

My dataset includes a number of variables that code aspects of the negotiation such as the negotiation process, strategies employed, duration of the talks, number of rounds, and number of negotiating states. It also includes variables that code for attributes of the agreements reached, such as terms to which all parties agreed, including weapons limitations, verification provisions, and the duration of the agreement. The novel contribution of this dataset is that it allows for exploration into how states are affected by and pursue negotiation strategies associated with risk and uncertainty (among other factors), including the biased estimations and responses that result.

### **Risk Reduction**

Often, the specter of potential loss is what brings states to the negotiation table. This is particularly true of the security risks that bring states to the table for arms control negotiations. I argue that states frequently behave as if they are under risk during arms control negotiations as a result of the process they use to assess potential threats and to then set goals for these negotiations—a kind of biased response. The risk reduction or threat elimination strategies that result from this process include the following: (1) setting thresholds for weapons and eliminating whole categories of weapons; and (2) limiting scope, scale, and duration of agreements. In this project these goals and strategies are coded in the following categories: (1) limiting the damage of a potential conflict, (2) limiting the costs of cheating, defection, or hands tying.

1. When states pursue options for limiting the damage of a potential conflict, they often seek to limit the amount of hardware (weapons) other states may have. Corresponding goals include: (a) setting thresholds for the maximum number of weapons a state may have by establishing a schedule of eliminations; (b) eliminating an entire category or class of existing weapons; (c) setting a ceiling (upper limit) for weapons for future weapons production; and (d) freezing current weapons levels (maintaining status quo).
2. When states seek to limit the costs of another state defecting or the costs of entering into an agreement or of tying their own hands, they may seek to: (a) limit the size or scope of an agreement (relative to their initial position or to that of another

negotiating state)<sup>5</sup>; (b) limit the importance of the subject matter (also relative to their initial position or that of another negotiating state); (c) limit the duration of the agreement; or (d) break the agreement into parts or components.

3. When states strategize to eliminate the costs of hands tying, they may pursue: (a) a non-binding agreement; (b) an agreement to agree; (c) an option agreement, which grants the option to commit to an agreement at some point in the future; or (d) provisions for the unilateral withdrawal from the agreement.

### Uncertainty Management

Variables associated with “uncertainty management” are also included in the dataset. Uncertainty management, as an alternative to risk reduction, consists of a set of goals and strategies designed to increase the amount of information about security-related matters to which negotiators have access, and to allow for responses to changes over time that affect security.<sup>6</sup> Employing uncertainty management strategies means that states “accept” the notion that that states are missing information and, therefore, pursue formal treaty provisions that allow for adaptation to a changing security landscape. These treaty provisions include: (1) treaty terms that provide flexibility (without withdrawal); (2) agreements with a broad scope that afford a great degree of transparency in order to manage uncertainty from a variety of weapons or additional sources; and (3) a vague agreement, which allows for future adaptations or reinterpretations.

1. Formal treaty terms that provide flexibility include the following: (a) exceptions clauses; (b) trial periods; (c) allowing for amendments, protocols or other revisions; (d) establishing a body for dispute settlement (via a standing consultative or judicial commission or tribunal); and (e) providing flexibility on entry-into-force requirements.
2. Formal treaty terms that make the agreement broad include multiple restrictions or restrictions across multiple weapons types. States may also establish a range of comprehensive confidence- and security-building measures (CSBMs), including systems of notification, routine inspections, and data exchange.
3. Vague agreements are characterized by a lack of detail rely on ambiguous language that can be reinterpreted for purposes of adaptation.

An overlap does occur with respect to establishing verification regimes, which augment transparency and contribute to the enhanced breadth of an agreement, as well as lower the risk of defection. In this way, verification regimes contribute to uncertainty management by contributing to a state's ability to respond to or adapt to changes, and contribute to risk reduction by lowering the likelihood of cheating. For this reason, I am reluctant to pass judgment just yet on which category is the most appropriate for the following strategies that eliminate the costs of hands tying.

---

<sup>5</sup> They pursue a narrower size or scope relative to either initial goals for an agreement or the goals of another negotiating state.

<sup>6</sup> Edwin Smith refers to agreements comprised of terms that allow for this kind of flexibility “dynamic obligations” (Smith 1991, 1549).

### Environmental Uncertainty

External factors affect not only the desire to reach an agreement, but also whether states will uphold or renew an existing agreement. For the dataset, these "environmental" factors include: (1) the propensity for volatility, (2) changes in leadership, (3) the potential for conflict, and (4) change in weapons technology.

1. Propensity for volatility is coded as variables that record whether other negotiating states: (a) are in a volatile region; (b) have a volatile or erratic leader; and (c) have experienced a volatile economy, characterized by a recent rapid expansion or contraction.
2. Change in leadership is coded as variables for: (a) a change in state leadership via potential reelection, imminent end of term, or other means (such as by coup or death) and (b) a change in the negotiating delegation.
3. Potential for conflict is coded as a function of: (a) a prior history of conflict (hot or cold) with another negotiating state and (b) current involvement in a militarized (hot) conflict with any non-negotiating state.

### Uncertainty about Capabilities and Intentions

The dataset does include variables that aim to capture "traditional" uncertainty about capabilities and intentions. They fall into one of the following three categories: (1) uncertainty about the weapons another state holds, (2) uncertainty about the sincerity of another negotiating state, and (3) uncertainty about the capabilities (capacity for destruction) of weapons known to be held.

1. The variables that code for uncertainty about the weapons another state holds capture simply whether any negotiating state is uncertain about any other negotiating state's weapons holdings.
2. Uncertainty about sincerity can be one of the following three types: (a) uncertainty about the sincerity of another negotiating state for reaching a meaningful agreement; (b) suspicion of another negotiating state having intentions to cheat on or defect from the agreement; and (c) uncertainty about whether the data on holdings presented by another negotiating state are truthful (trust in data).
3. Uncertainty about the capacity of capabilities can occur in any one of the following three categories: (a) uncertainty about parity, or the difficulty comparing any negotiating state's weapons with those of another negotiating state; (b) uncertainty about the impact or performance of one's own weapons (due to ongoing research or the inability to test viable weapons); and (c) uncertainty about the impact or performance of another negotiating state's weapons.

This last category addresses variables pertaining to changing technology, which is believed to contribute to uncertainty, but is not "environmental" per se. However, change due to evolving weapons technology is not thought about the same way as missing information about capabilities—in this way, the dataset seeks to extend the scope of a traditional approach to missing information about capabilities.

## Case Selection

Cases of arms control were culled from and cross-checked across numerous sources including: Jozef Goldblat's list from his seminal 1994 (2002) book, *Arms Control: A Guide to Negotiations and Agreements*; the United Nations Treaty Series, the Pew-Johns Hopkins Case Studies series; a number of Daniel Druckman's articles (see above); and Simonelli (2011).

Negotiations included in the dataset accomplish arms control by any of the following means: (a) a freeze, limitation, reduction or elimination of certain categories of weapons; (b) a ban on the testing of certain weapons; (c) the prohibition of certain dangerous military activities; (d) the regulation or prohibition of transfers of arms or dual use materials; and (e) transparency and confidence- and security-building measures.<sup>7</sup> Cases include negotiations over nuclear, conventional, chemical, and biological weapons and materials. Agreements range from formal treaties<sup>8</sup> to political (non-binding) agreements.

## Coding and Questions

Coding was done by students in the Undergraduate Research Apprenticeship Program (URAP) at the University of California, Berkeley and student interns at SIPRI North America in Washington, DC. Coders conducted preliminary research on each negotiation, and collected primary and secondary source documents on the each. They first coded "by hand" and then coded electronically using a computer-assisted coding device. Coders researched and entered information for questions pertaining to the negotiation process and outcome (including treaty terms when applicable), with responses entered for both the negotiation itself and the goals, strategies, "beliefs" and concerns of each negotiating state. We had weekly meetings during this process.<sup>9</sup>

---

<sup>7</sup> Adapted from Goldblat 2002.

<sup>8</sup> Subject to the Vienna Law of Treaties.

<sup>9</sup> A second coding to establish inter-coder reliability would be ideal.

## Negotiations Included

The dataset includes 21 bilateral negotiations and 22 multilateral negotiations, listed below in chronological order.

### Bilateral Negotiations

1. The Baruch Plan (1946)
2. The Hotline Agreement (1963)
3. The Accidents Measures Agreement (1971)
4. The INCSEA Agreement (1972)
5. SALT I (1972)
6. The Antiballistic Missile (ABM) Treaty (1972)
7. The Prevention of Nuclear War Agreement (1973)
8. The Threshold Test Ban Treaty (TTBT) (1974)
9. The Peaceful Nuclear Explosions Treaty (PNET) (1977)
10. SALT II (1979)
11. The Antisatellite (ASAT) Agreement (1979)
12. The Conventional Arms Transfer (CAT) Talks (1979)
13. The Geneva Summit (1985)
14. The Reykjavik Summit (1986)
15. The INF Treaty (1987)
16. The Dangerous Military Activities (DMA) Agreement (1989)
17. The Bilateral Destruction Agreement (1990)
18. START I (1991)
19. START II (1993)
20. SORT (2002)
21. New START (2010)

### Multilateral Negotiations

1. COCOM (1949)
2. The Geneva Surprise Attack Conference (1958)
3. The Partial Test Ban Treaty (PTBT) (1963)
4. The Outer Space Treaty (1967)
5. The Non-Proliferation Treaty (NPT) (1968)
6. The Seabed Treaty (1971)
7. The Biological Weapons Convention (BWC) (1972)
8. The Helsinki Conference on Security and Cooperation in Europe (CSCE) (1975)
9. The ENMOD Agreement (1978)
10. The Moon Agreement (1979)
11. The Trilateral Comprehensive Test Ban Negotiations (CTB) (1981)
12. The Stockholm Conference on Disarmament in Europe (CDE) Agreement (1986)
13. The Missile Technology Control Regime (MTCR) (1987)
14. The Mutual and Balanced Force Reduction (MBFR) Talks (1989)
15. The Conventional Forces in Europe (CFE) Treaty (1990)
16. The Vienna Document (1990)
17. The Chemical Weapons Convention (CWC) (1992)
18. The Lisbon Protocol (1992)
19. The Open Skies Treaty (1992)
20. The OSCE Code of Conduct (1994)
21. The Comprehensive Test Ban Treaty (CTBT) (1996)
22. The Wassenaar Arrangement (1996)

### Negotiations and Agreements Outside Criteria for Inclusion

Cases of arms control negotiations and agreements that occurred from 1945 to 2010 were excluded from the dataset if: (a) goals for negotiations were significantly broader than arms control (such as the Antarctic Treaty and the Geneva Conventions); (b) the negotiations were motivated primarily by humanitarian concerns and advocated for by non-governmental organizations rather than by security concerns and states (such as the Convention on Cluster Munitions, the Ottawa Landmine Treaty and the Convention on Certain Conventional Weapons); (c) the United States was not a negotiating state, there was insufficient documentation available on the negotiation, or documentation was not in English (such as the Treaty of Tlatelolco and the Treaty of Rarotonga); (d) the negotiation focused on producing a security alliance rather than on arms control (The Charter of the United Nations and various UN Security Council resolutions); or (e) goals were related but peripheral to arms control (such as those establishing basing rights or sanctions).

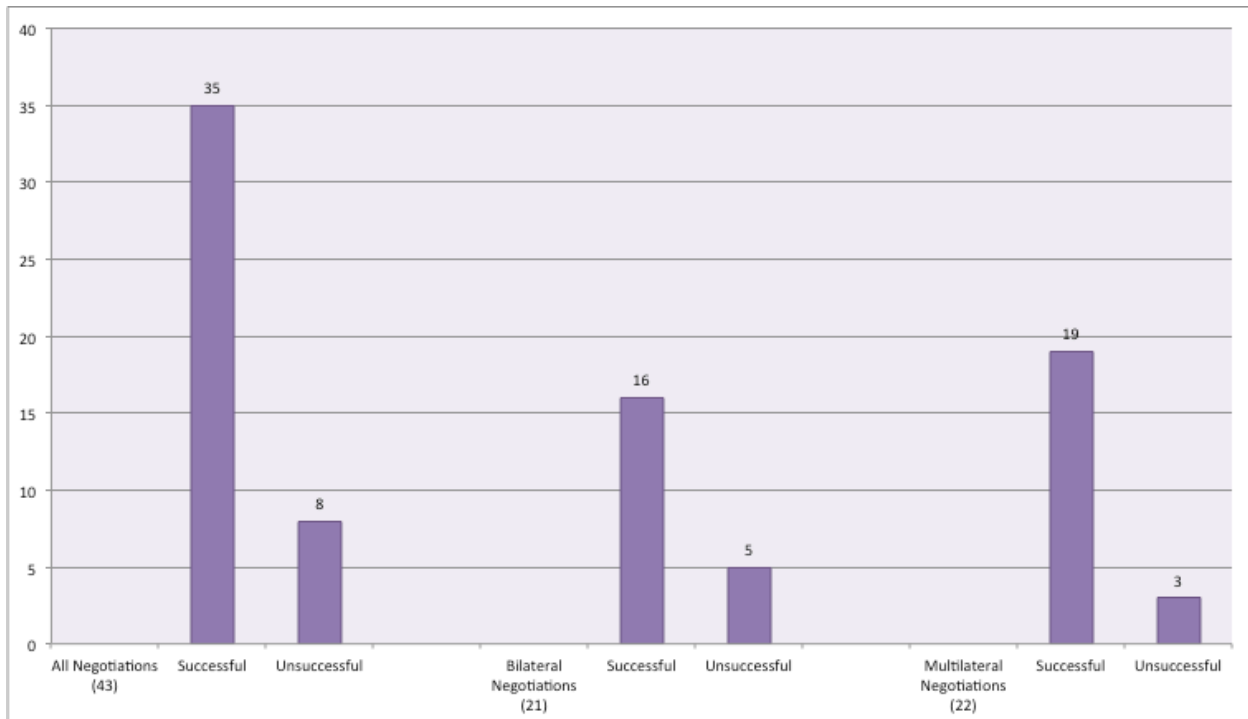
Additionally, unilateral (non-negotiated) statements and cases of arms reduction were excluded, as were joint statements and guidelines for future negotiations. Finally, the electronic coding device could not handle negotiations that had over 55 negotiating states (such as the Convention on the Physical Protection of Nuclear Material), nor could it capture protocols, follow-on agreements, or the renegotiation of existing agreements (such as the 1974 ABM Protocol and the Conventional Forces in Europe 1A Agreement), which were also, therefore, excluded.

## Negotiation Data Part I: Success and Failure in Negotiating an Agreement

### Effect of Number of Negotiating States

Figure 1 details the number of successful and unsuccessful negotiations by number of negotiating states. Of the 43 total negotiations, 35 were concluded successfully, producing agreements 78 percent of the time. Eight ended unsuccessfully, yielding no agreement. Of the 21 bilateral negotiations, 16 were concluded successfully (76 percent) and five were not. Of the 22 multilateral negotiations, 19 concluded successfully (86 percent) with an agreement and three did not, suggesting that multilateral negotiations have a higher success rate.

Figure 1. Successful and Unsuccessful Negotiations by Number of Negotiating States



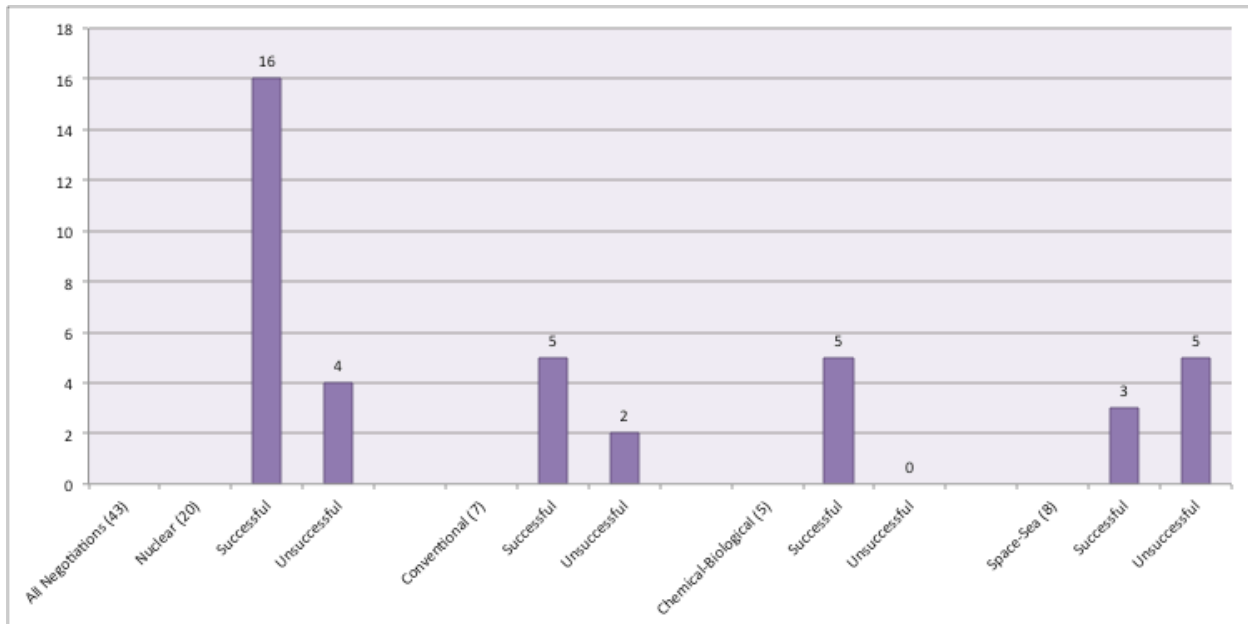
Whereas Druckman (1997) finds bilateral negotiations are more often successful than multilateral ones across a range of issues areas, I find that multilateral arms control negotiations are more likely to conclude successfully with an agreement. This suggests that the presence of more than two participating state parties may not heighten uncertainty or complexity in a way that inhibits reaching an agreement. Perhaps an increase in stakeholders augments the political will (or sunk costs), providing greater incentive to conclude successfully. For security issues, generally speaking, states have more to lose by walking away from the table.

### Effect of Arms Control Issue Area

Figure 2 shows that, when negotiations are examined for success or failure as a function of arms control issue area, five out of seven negotiations, including the issue of conventional weapons (71 percent) were found to be successful, and 16 out of 20 negotiations that included the issue of nuclear weapons were successful (80 percent). For chemical-

biological weapons cases, all five negotiations were successfully concluded (100 percent).<sup>10</sup> For the category of sea and space weapons and warfare, negotiations were successful for three out of the eight total cases (38 percent).

Figure 2. Successful and Unsuccessful Negotiations by Type of Arms Control Issue Area



Conventional weapons negotiations are revealed to be slightly less likely to result in an agreement than are nuclear weapons negotiations, although the sample sizes differed. This is not surprising, given the "high uncertainty" nature of conventional arms control negotiations, particularly ones involving the control or transfer of new technology.<sup>11</sup> While nuclear weapons are potentially more destructive, total devastation is often used as a proxy for outcomes when targeting policy is presumed to be known. By contrast, conventional conflicts have a greater number of trajectories leading to alternate outcomes. Conventional weapons technology also changes at a faster rate than nuclear weapons, adding to likelihood that proposals exchanged will not be meaningful for reducing potential loss and in turn, lowering the likelihood of reaching an agreement.<sup>12</sup> Negotiations falling into the sea and space category of arms control were less likely to result in an agreement,

<sup>10</sup> Other categories of negotiations from which cases were omitted in the four categories included CSBM- or transparency-only negotiations, which were not examined here, and environmental and radiological warfare or weapons negotiations, and the creation of denuclearized zones, which had only one case per category.

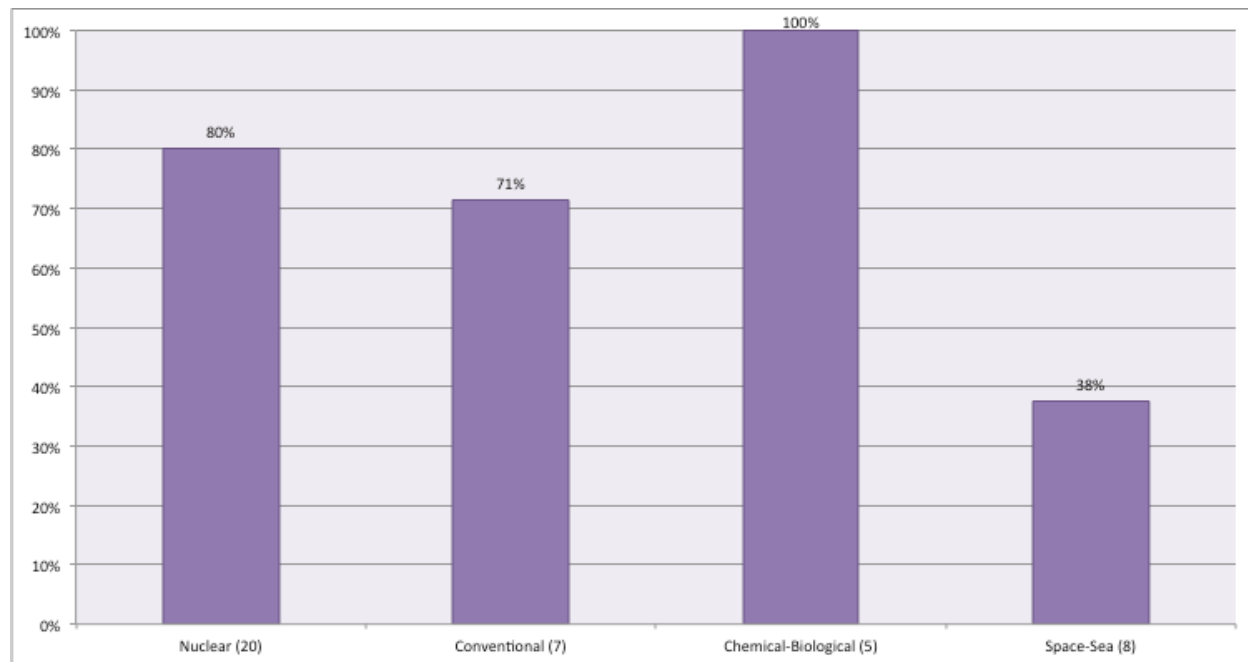
<sup>11</sup> Of conventional weapons, Foerster et al. explain how there are more factors at play in determining the threat they pose than for nuclear weapons. These include "Both sides' ability to generate force over time—time to prepare for an attack, time for operational warning and political response, and time to mobilize defenses," which they argues "is more important than static force levels deployed in peacetime" (Foerster et al. 1989, 5). Further empirical analysis of the relative uncertainty of conventional versus nuclear arms control negotiations is planned as a follow-on project.

<sup>12</sup> A proposed follow-on analysis will examine the relative uncertainty of conventional versus nuclear arms control negotiations.

with the lowest success rate of only 38 percent. This may also be because of the high uncertainty nature of these weapons and scenarios, which hinge largely on events never before seen.

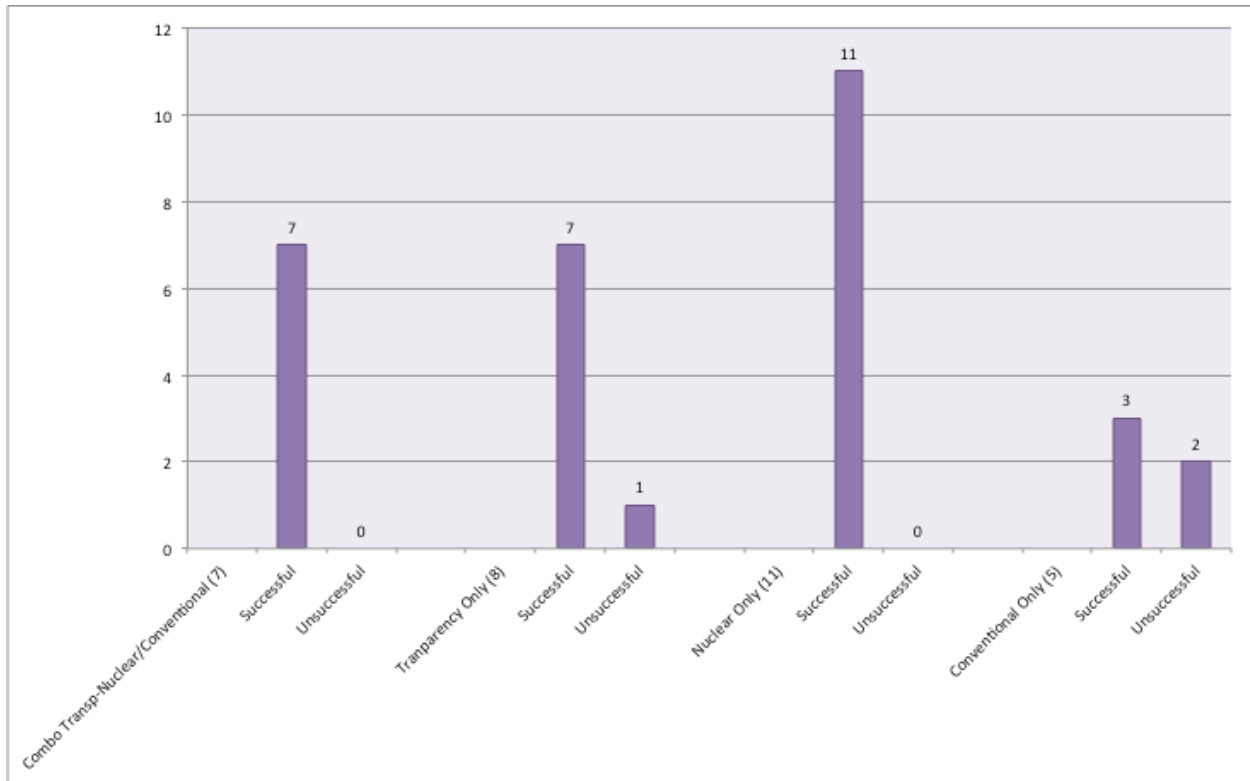
Figure 3 shows the success rates of each of the arms control type categories.

*Figure 3. Percentage of Successful Cases by Arms Control Type*



When the cases are broken down into categories specifying whether the negotiations address nuclear-only, conventional-only, transparency-only, or a combination of transparency and conventional or nuclear arms control, the results are mixed (see Figure 4.). All seven of such "combination" cases were negotiated successfully (100 percent). While all 11 nuclear-only cases were also negotiated successfully (100 percent), only three out of five conventional-only cases (60 percent) successfully resulted in an agreement. Interestingly, CFE was the only successfully negotiated conventional arms control-only treaty—the other successful conventional cases dealt with arms and technology transfers. Seven out of eight transparency-only negotiations (88 percent) were concluded successfully.

Figure 4. Successful and Unsuccessful Negotiations for Nuclear, Conventional, Transparency and Nuclear-Conventional-Transparency Combination Cases

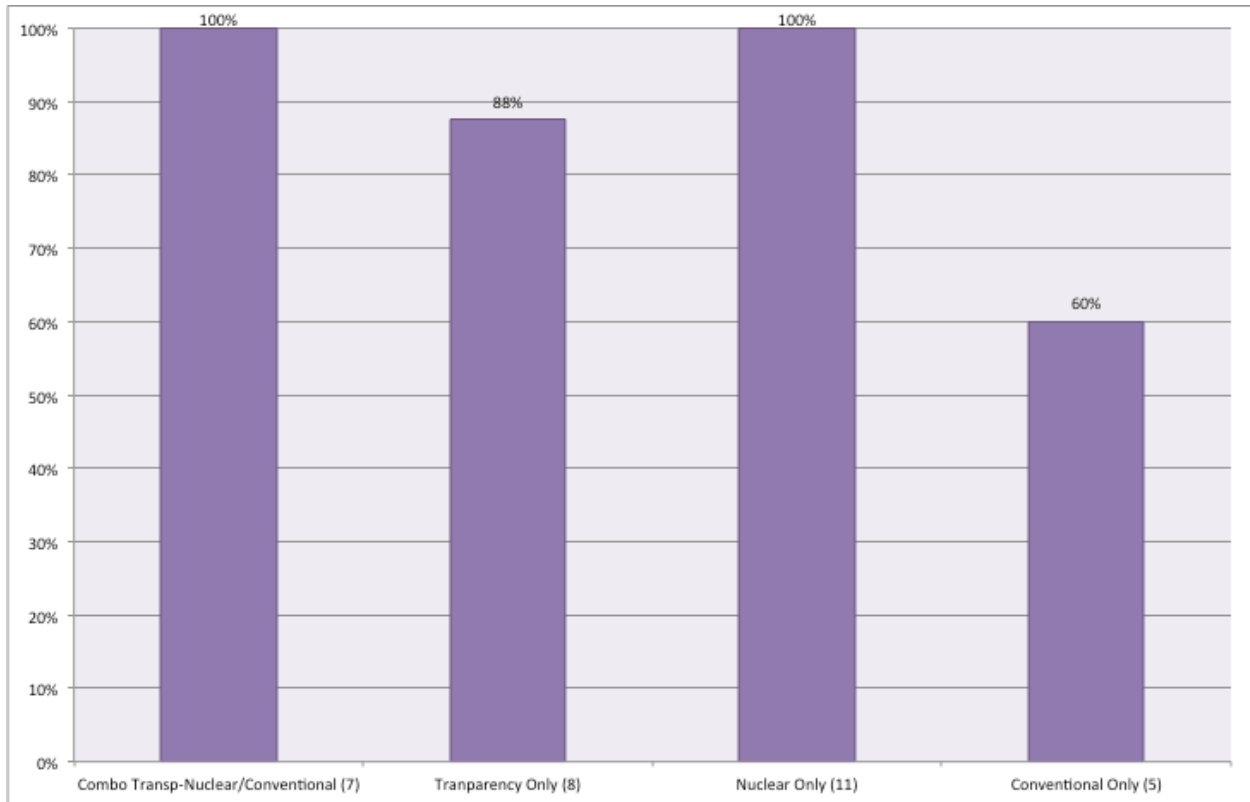


These data don't illuminate very much.<sup>13</sup> They reflect cases for which increasing transparency in addition to providing limitations to nuclear or conventional weapons were fundamental aims of the negotiations, regardless of whether the negotiations successfully concluded in an agreement. However, the data here may be a good indicator that these kinds of combination agreements are as likely to conclude successfully as transparency-only agreements. If this is true, it would suggest that states either don't bother discussing CSBMs unless they have reached an agreement on reductions (the agreement is already a success), or that states have every motivation to successfully conclude negotiations when they stand to gain the benefits of transparency.<sup>14</sup> Figure 5 below shows the same results in terms of percent successful for each category.

<sup>13</sup> They may even indicate a problem with either coding or the category of "arms control type." A better indicator may be the treaty terms themselves because the successful "combination" category doesn't include those cases that produced agreements that have verification provisions in conjunction with limitations to nuclear or conventional weapons. A follow-on analysis is planned.

<sup>14</sup> Further analysis is anticipated.

Figure 5. Percentage of Successful Cases for Limitation Type versus Transparency-Combination Agreements



Digging a bit deeper into nuclear negotiations by exploring the three nuclear categories reveals that 20 cases had states pursuing arms control for nuclear weapons, not necessarily exclusively. Arms control for nuclear weapons included agreements that placed limitations on nuclear weapons, agreements that limited or banned the testing of nuclear weapons (explosions), and agreements that attempted to curb the proliferation of nuclear weapons or nuclear material capable of being weaponized. I first examine the success rates of these 20 nuclear-plus cases: 16 reached an agreement (80 percent) and four did not. Of those 16 successful nuclear cases, ten were bilateral and six were multilateral, with bilateral nuclear negotiations having 77 percent success rate and multilateral negotiations an 85 percent success rate (see Figure 6 and 7).

Figure 6. Successful and Unsuccessful Nuclear Negotiations by Number of Negotiating States

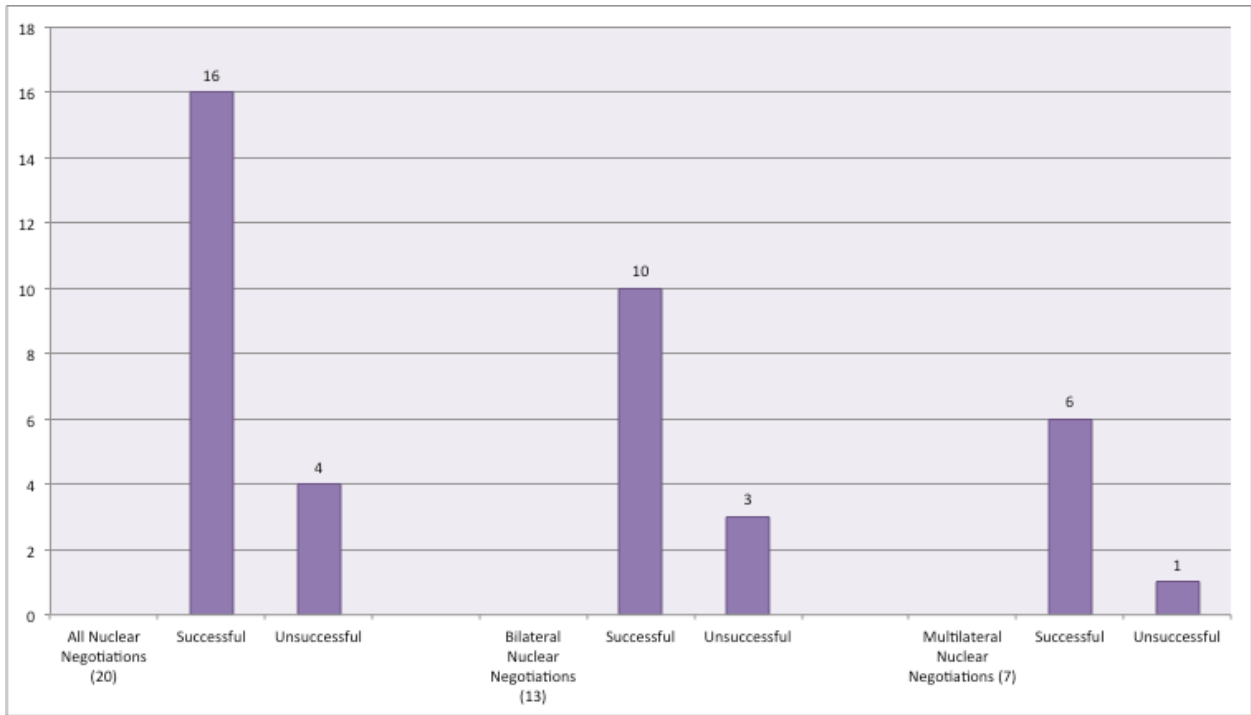
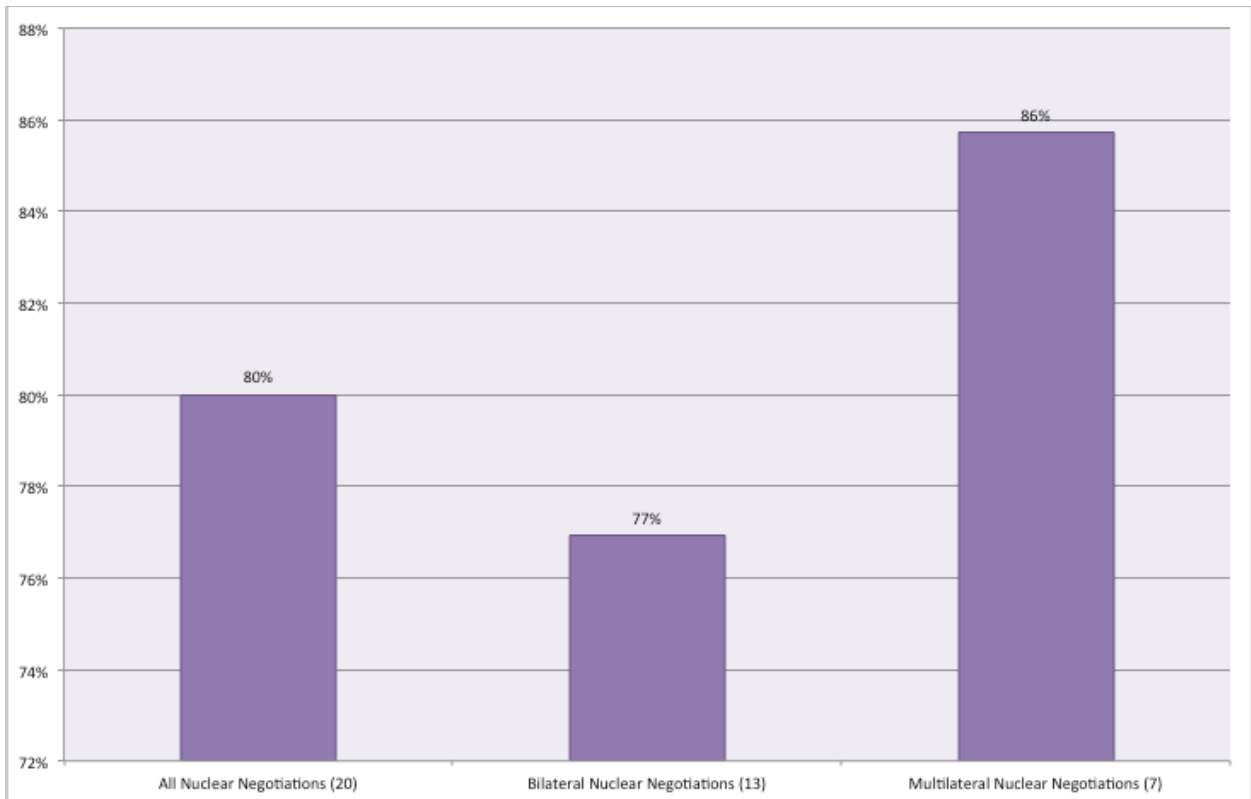


Figure 7. Percentage of Successful Nuclear Arms Control Cases by Number of Negotiating States



These success rates are consistent with the general success rates of bilateral and multilateral negotiations.

But were threshold-setting negotiations any more successful than other types of nuclear negotiations, which arguably confront the same kind of catastrophic threat but have no comparable heuristic to drive the negotiations forward? To assess this, the nuclear-only category was broken down into three categories: nuclear weapons limitations, restrictions on nuclear proliferation, and restrictions on the transfer of nuclear materials. The success rate for all cases with a nuclear component is still 80 percent, with 16 of these 20 negotiations concluding successfully. The success rate for negotiations that include setting limitations to nuclear weapons is lower at 73 percent, with eight out of 11 of these negotiations concluding successfully. Restrictions on nuclear proliferation had a 100 percent success rate with all five of these negotiations successfully concluded. Negotiations addressing restrictions on the testing of nuclear weapons, which limit the development of new weaponry, had the lowest success rate of the nuclear cases, with only 57 percent of these cases (four out of seven) successfully concluded. Figure 9 shows the success rates for each subcategory of nuclear arms control in percentages.

Figure 8. Successful and Unsuccessful Nuclear Negotiations by Type of Arms Control

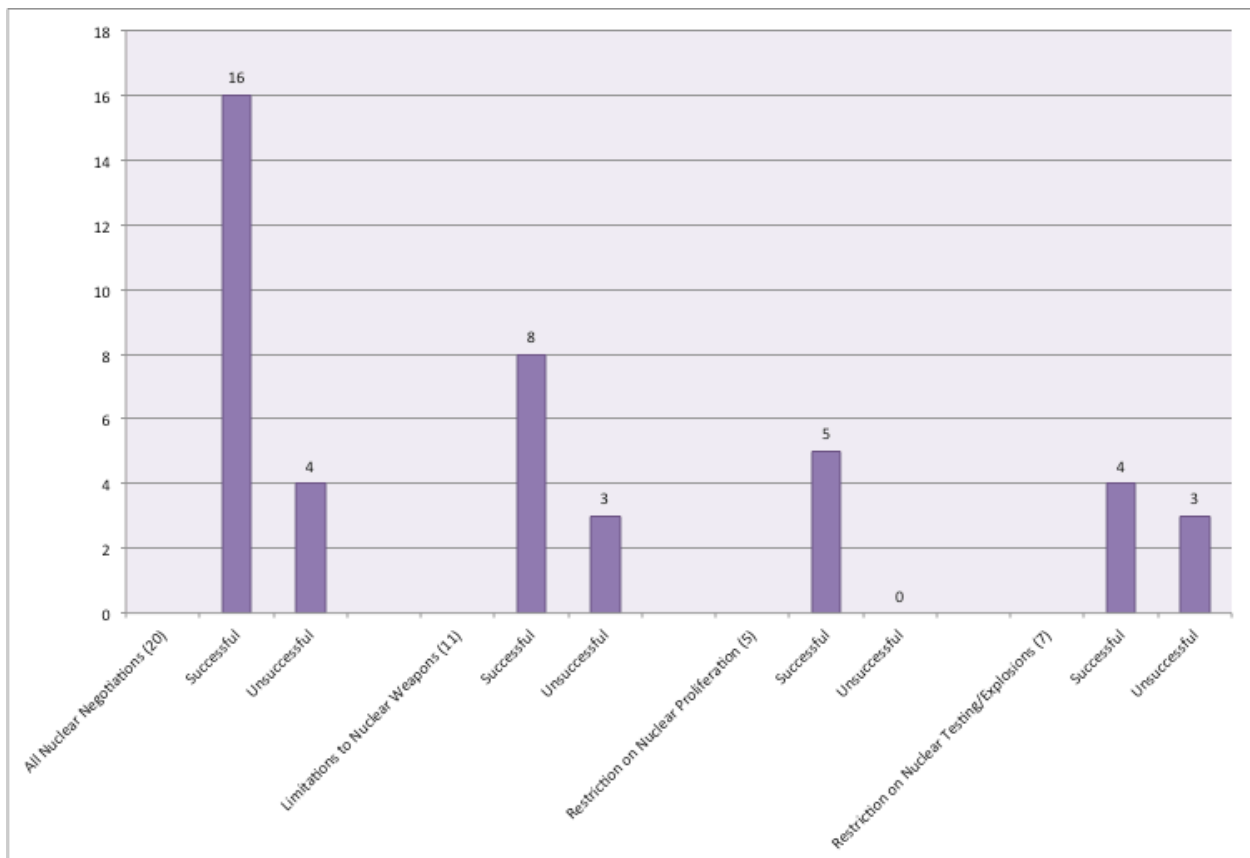
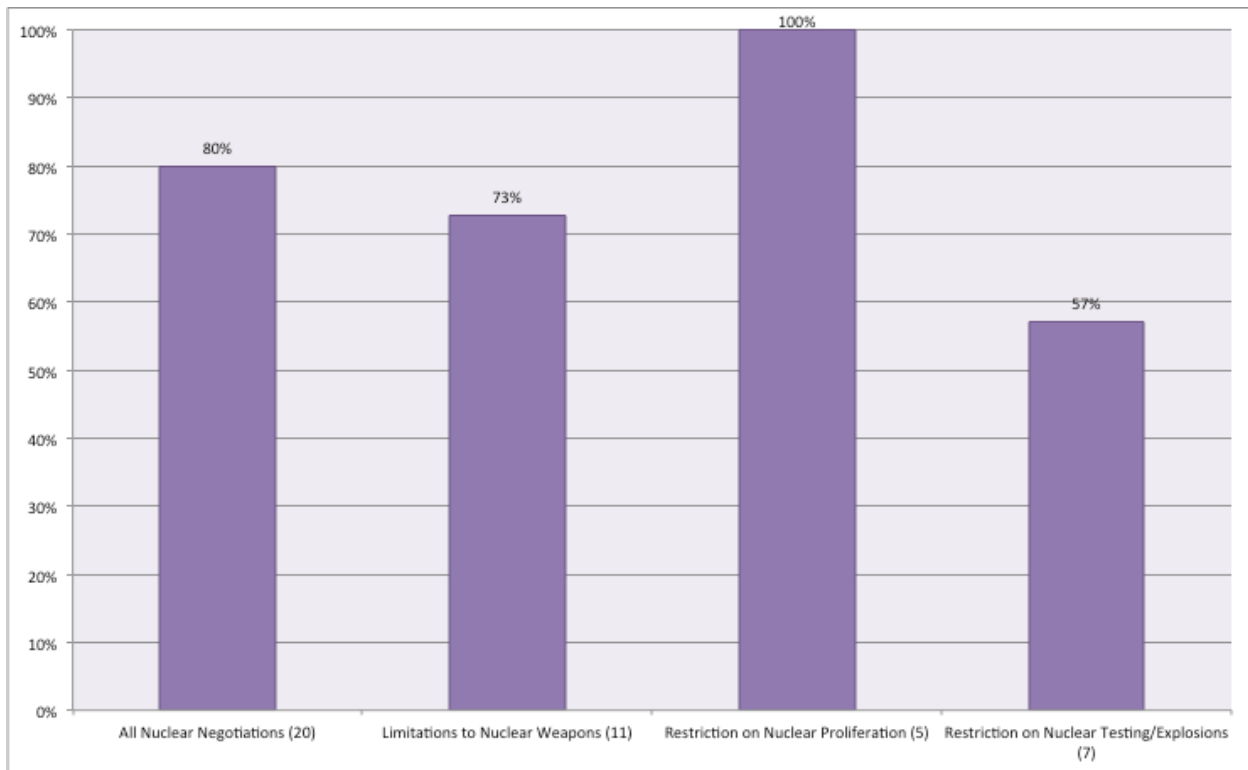


Figure 9. Percentage of Successful Nuclear Arms Control Cases by Subcategory



This means that threshold-setting type negotiations may be no more likely to conclude successfully than other types of nuclear negotiations. Interestingly, it may be more difficult to negotiate agreements that restrict the test of nuclear weapons (explosions) than it is to negotiate limitations to these weapons.<sup>15</sup> Whereas the former restricts the development of next generation nuclear weapons—essentially preventing states from acquiring new technology—the latter may simply reduce the number of weapons a state has without affecting the ability to successfully launch a first or second strike (and to deter an attack). Either way, states seem to "feel an imperative" to curb the changing technology of nuclear weapons. Compared to conventional weapons, limiting development is straightforward for nuclear weapons: banning testing halts development.

### Negotiation Data Part II: Duration of Negotiations as an Indicator of Difficulty in Reaching an Agreement

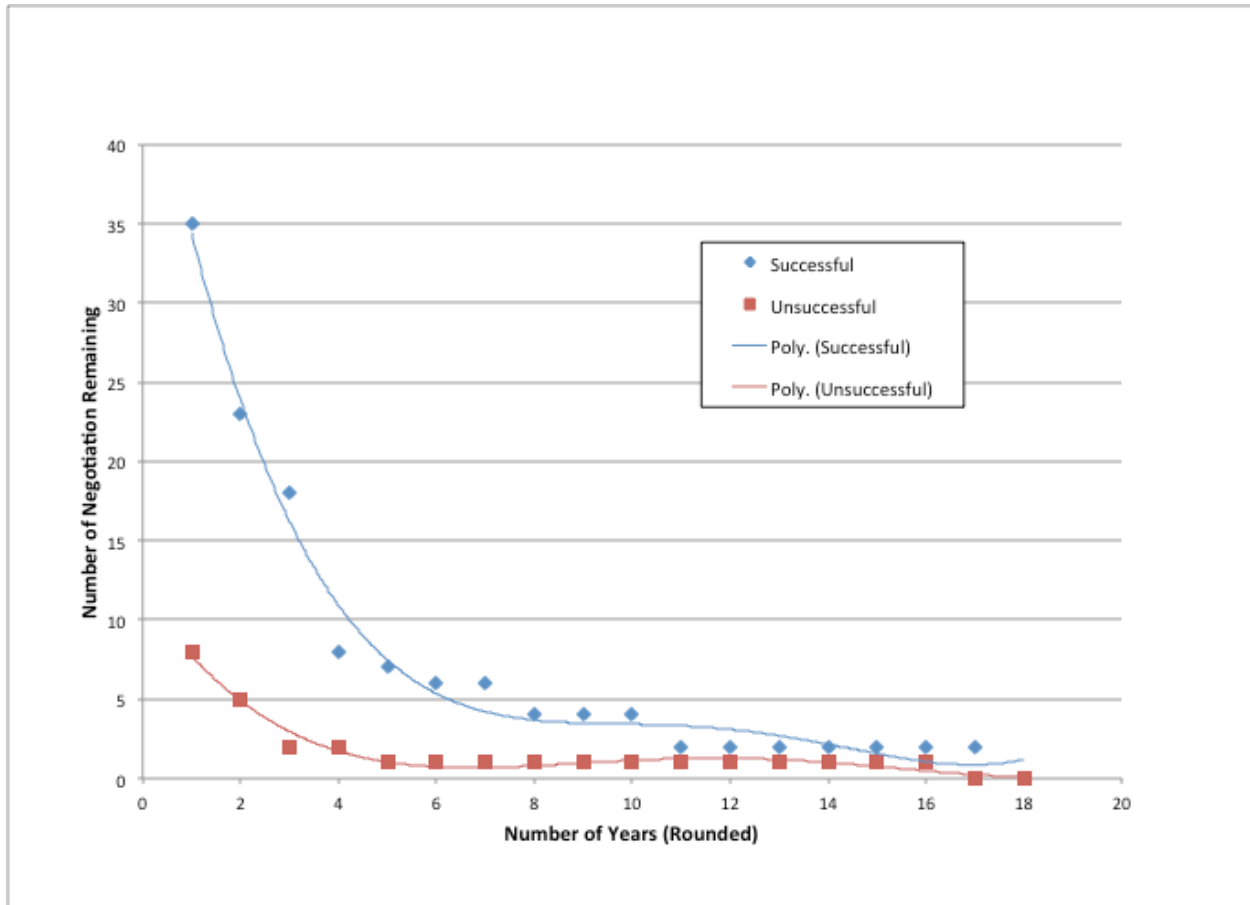
An alternative approach to studying whether arms control negotiations conclude successfully considers the duration of the negotiations as an indicator of difficulty experienced in reaching an agreement. Whereas success or failure is a binary outcome, duration is defined categorically here in years, where the duration of the negotiations is rounded up to the nearest year such that the shortest negotiation duration is one year and

<sup>15</sup> A follow-on analysis using variables from resulting agreements is planned.

the longest is 17 years.<sup>16</sup> Survival analysis was done to calculate a pattern of decay for the negotiation process for each of these cases.

First, the relationship between duration and success or failure of the negotiations is explored to assess the extent to which they may co-vary. Figure 10 presents the raw data adjusted for survival analysis to show remaining observations at each ending year for both successful and unsuccessful negotiations, which have different population sizes of 35 and eight respectively. A fourth order polynomial is fitted to each curve.

Figure 10. Survival Analysis of Successful and Unsuccessful Negotiations by Year

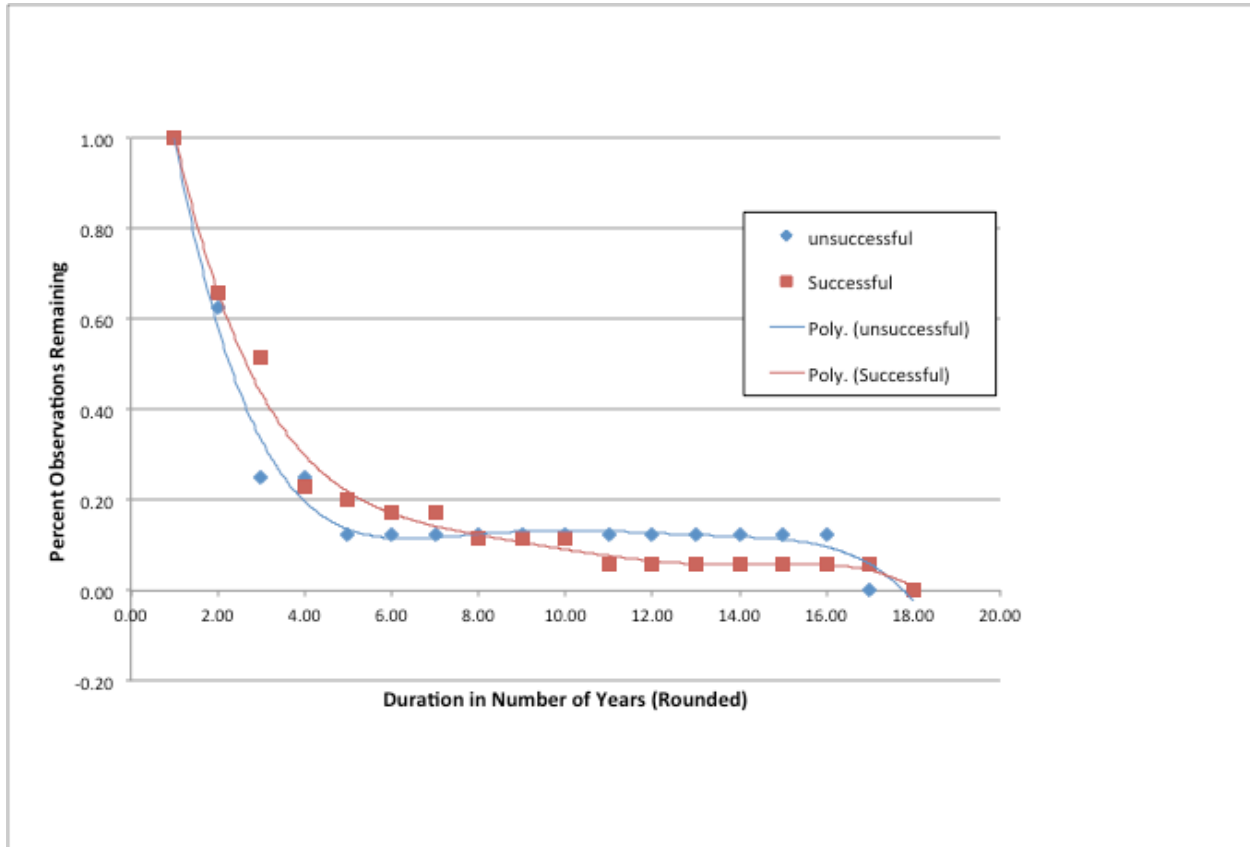


The curves reveal how most failures happen in the first four years, with only 25 percent of negotiations (whether successful or unsuccessful) remaining intact. Another drop-off occurs at ten years with about only 14 percent of cases remaining for successful cases.

<sup>16</sup> In a subsequent analysis, I'd like to try using months, which will yield more data points.

Figure 11 below shows the normalized cases and assumes the sample sizes of both successful and unsuccessful cases are total (populations) and equal to 100 percent.

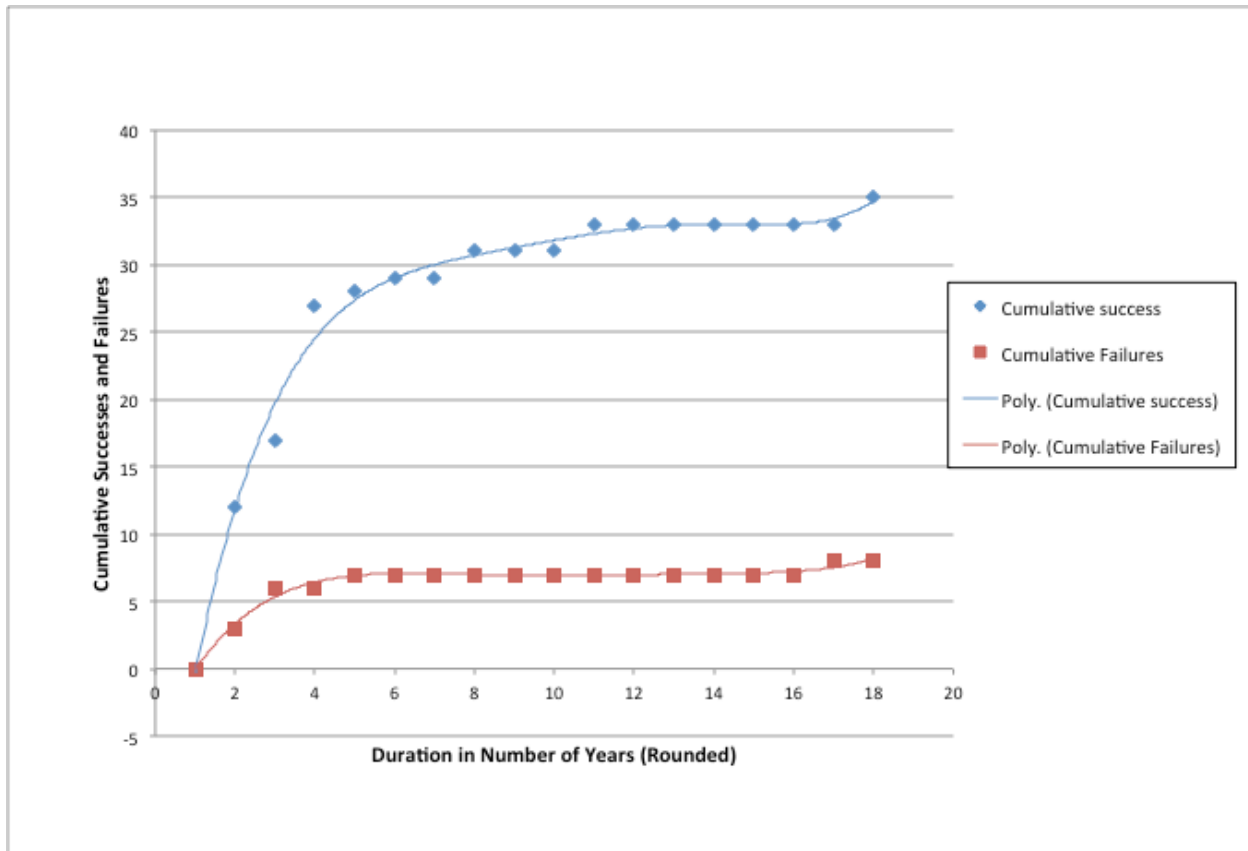
*Figure 11. Normalized Survival Analysis of Successful and Unsuccessful Negotiations by Year*



The chart shows the similarities of the two curves. For both successful and unsuccessful cases, almost everything has transpired before the end of four years.

Finally, Figure 12 shows the cumulative successes and failures on the number of cases (the inverse of Figure 10). At four years, three-quarters of the cumulative cases have already occurred. In the next six years there is only a 50 percent success rate for the remaining cases.

Figure 12. Cumulative Success and Failures for Successful and Unsuccessful of Cases by Year



These results suggest that negotiators should aim to conclude negotiations within four years to achieve the optimal outcome of reaching a negotiated agreement. After four years, it may behoove officials to downgrade their efforts and expenditures given the declining likelihood of reaching an agreement.<sup>17</sup>

### Effect of CSBMs

However, are CSBM-loaded negotiations more difficult to reach? Do they take longer or are they less likely to conclude successfully? Survival analysis is used to determine whether there is a relationship between combining the pursuit of transparency in conjunction with the pursuit of nuclear or conventional arms control and the success rate of these negotiations.<sup>18</sup> Figure 13 shows results for the raw data. There are seven cases in the combination transparency nuclear-conventional category, eight in the transparency-only category, 13 in the nuclear-only category, and cases in the conventional-only category. Figure 14 shows results for the normalized data.

<sup>17</sup> The graphs also suggest that "natural" categories of durations of negotiations useful in future analyses might be zero to four years, four to ten years, and ten years and over.

<sup>18</sup> A follow-on analysis using data from agreements instead of negotiation-goal variable is planned, but will limit cases to successful agreements.

Figure 13. Survival Analysis of Combination versus Non-Combination Negotiations by Negotiation Duration in Years (Raw Data)

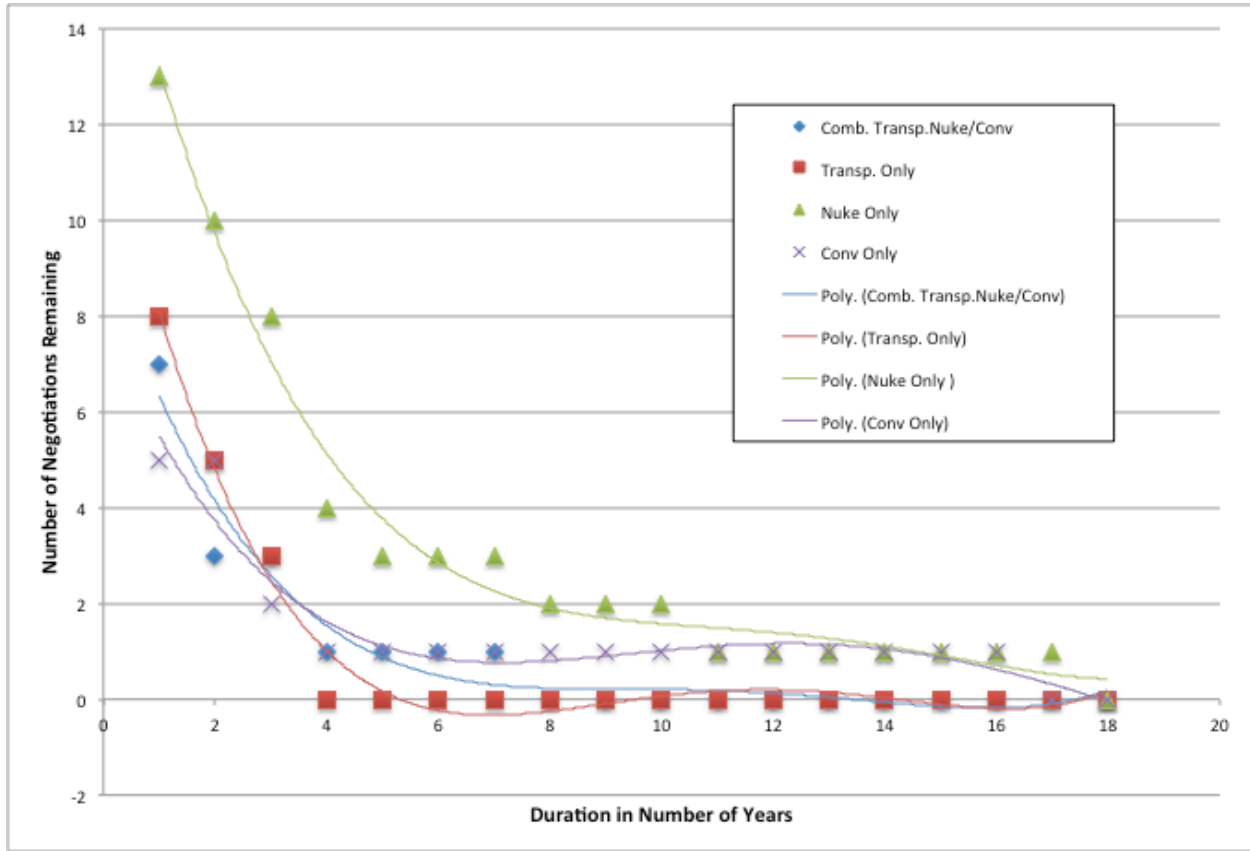
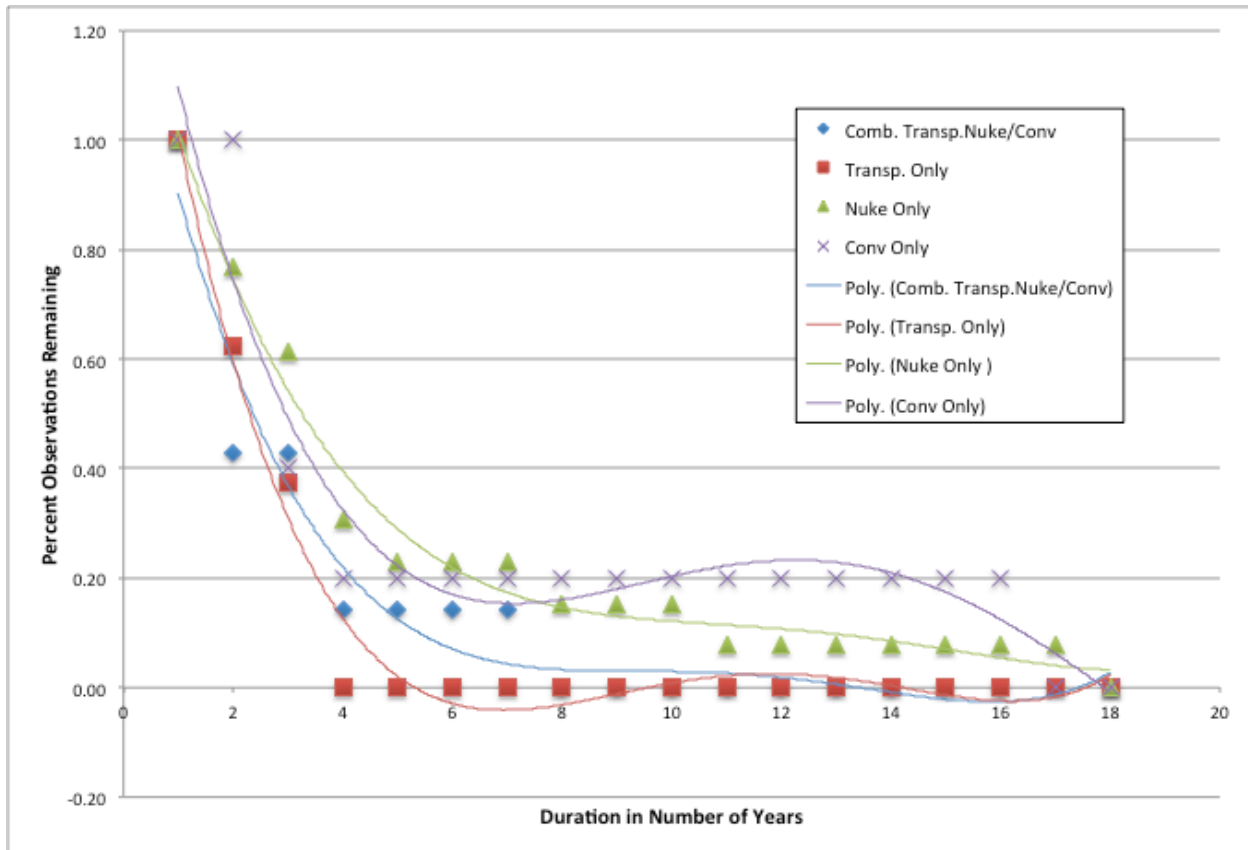


Figure 14. *Normalized Survival Analysis of Combination versus Non-Combination Negotiations Negotiations by Negotiation Duration in Years*



The addition of CSBMs to nuclear arms control does not appear to cause negotiations to take longer. All types of cases do appear to have the same "drop-off" phenomenon at four years, meaning most cases are completed by the end of four years—whether successfully or not.

### Negotiation Data Part III: Uncertainty Conditions and Agreements Reached

A central premise of this project is that multiple factors affect arms control negotiations through by increasing uncertainty. Whereas a traditional approach dictates high uncertainty negotiations be characterized with respect to missing information about capabilities and intentions, a broader approach—as advocated by this project—suggests additional (environmental) factors also affect arms control negotiations, as does change (or potential change) in weapons technology. Data were collected, therefore, on multiple factors that can contribute to uncertainty about capabilities, intentions and to environmental uncertainty. The full analysis of these data is reserved for an ongoing project and forthcoming paper.

### Agreement Data Part I: Kinds of Agreements Reached

This section first explores the factors that affect the kinds of agreements reached. "Kind" in this case refers to: (a) whether an agreement is legally binding or not; (b) duration provisions (whether an agreement was designed to be permanent, to expire, or to

potentially be renewed); and (c) whether or not it includes provisions for withdrawal.<sup>19</sup> Each is examined as a function of arms control type—bilateral versus multilateral, etc.—in order to determine whether there are any natural groupings.

### Legally Binding

Of the 35 agreements reached, 34 had data for this question (one nuclear-only case was coded as "don't know"). Of those 34, 24 (71 percent) were legally binding and ten were not. Of the ten nuclear-only agreements, nine (90 percent) were legally binding and one was not. Of the three conventional-only agreements, one (33 percent) was legally binding and two were not. Of the seven transparency-only agreements, three (43 percent) were legally binding and four were not. Of the seven transparency-nuclear/conventional combination agreements, six (86 percent) were legally binding and one was not (see Figure 15).

Figure 15. Number of Legally Binding Agreements by Arms Control Type

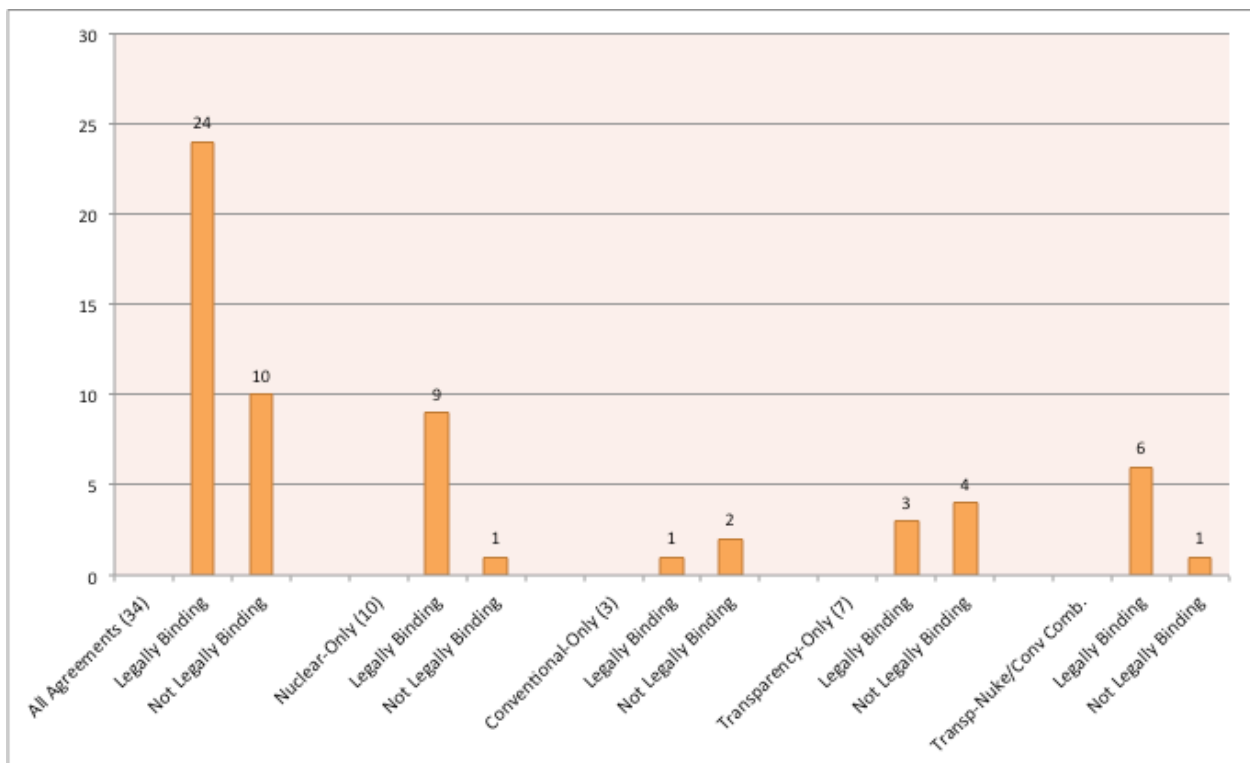
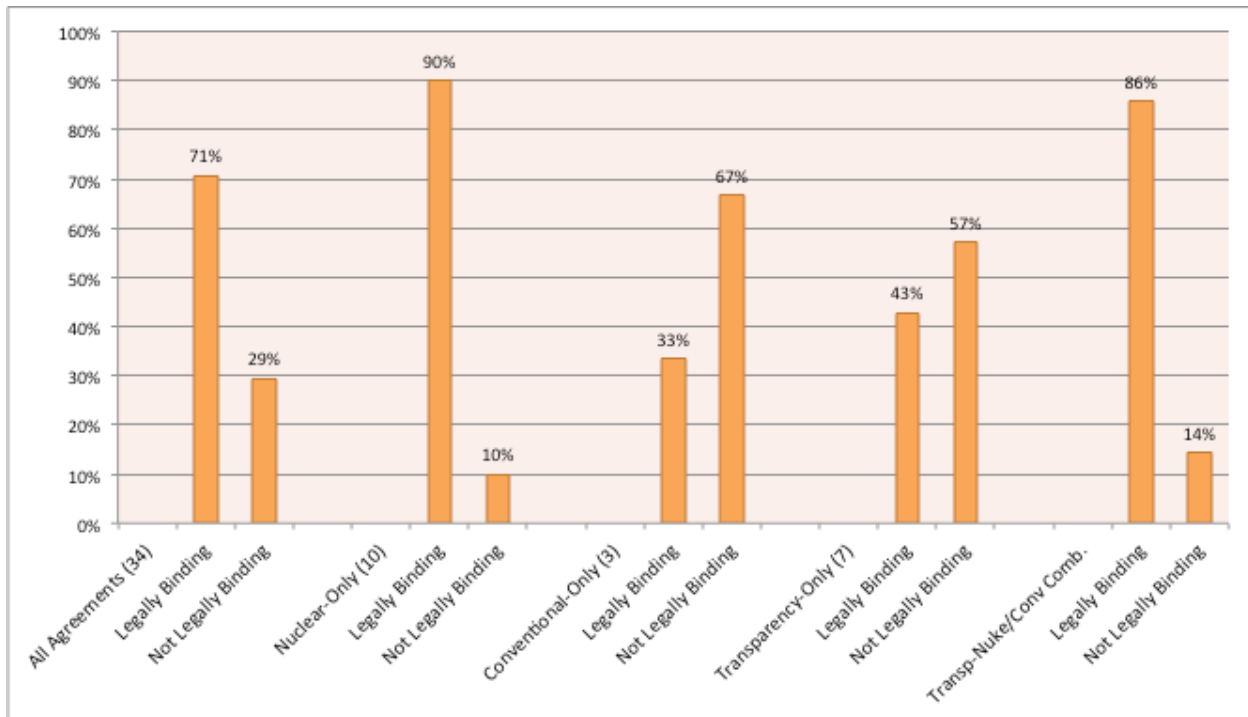


Figure 16. Percentage of Legally Binding Agreements by Arms Control Type

<sup>19</sup> A follow-on analysis planned will also examine the arms control provisions (treaty terms) in the agreements.



While the majority of all agreements tended to be legally binding (71 percent), nuclear-only agreements far exceeded this rate, with 90 percent of all nuclear-only cases classified as legally binding. Although there were too few conventional cases (three) to draw any meaningful conclusions, the majority of these agreements (two) were actually not legally binding. Transparency-only agreements also tended to not be legally binding with only 43 percent of all of these cases classified as such. Combination agreements tended to be legally binding at a rate of 86 percent. This suggests that agreements that place limitations on nuclear weapons, development and materials tend to be legally binding, combination agreements tend to follow the "nuclear" pattern, but transparency-only agreements tend to not be legally binding. Nuclear agreements may be useless without this provision, while transparency-only agreements tend to be a security "bonus" and not a necessity.

### Duration Provisions

Arms control treaties are generally designed to be permanent, to be renewed at regular intervals, or to expire on a specific date. Of the 35 agreements, 20 (57 percent) were designed to be permanent, five (14 percent) were established with renewal provisions, six (17 percent) were set to expire, and four (11 percent) fell into the "other" category. Of the 11 successful nuclear-only cases, three (27 percent) were designed to be permanent, three (27 percent) were established with renewal clauses, four (36 percent) were given a definitive expiration date and one (9 percent) fell into the "other" category. Of the three successful conventional-only cases, all three (100 percent) were designed to be permanent, none were established with either a renewal option or an expiration date, and none fell into the "other" category. Of the seven successful transparency-only cases, four (57 percent) were designed to be permanent, one (14 percent) was established with the option to renew, none were set to expire and two (29 percent) fell into the "other" category. Of the seven successful transparency-nuclear/conventional combination cases, four (57 percent)

were designed to be permanent, one (14 percent) was established with the option to renew, two (29 percent) were set to expire and none fell into the "other" category (see Figures 17 and 18).

Figure 17. Number of Arms Control Agreements by Duration Provisions

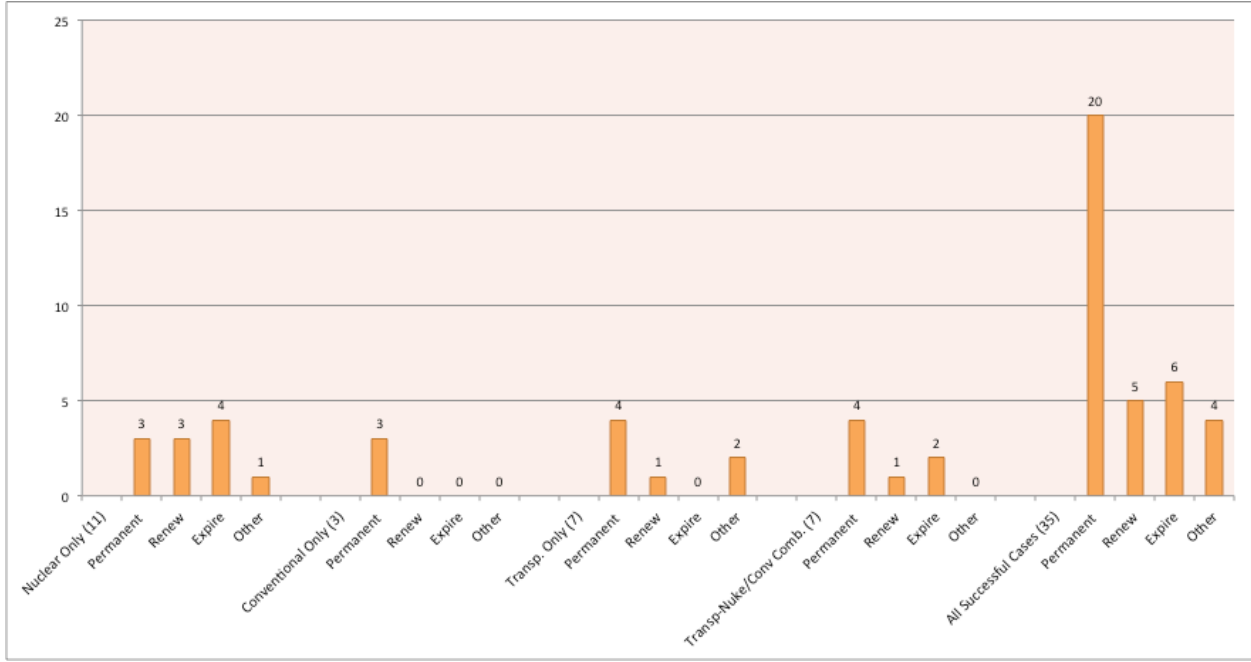
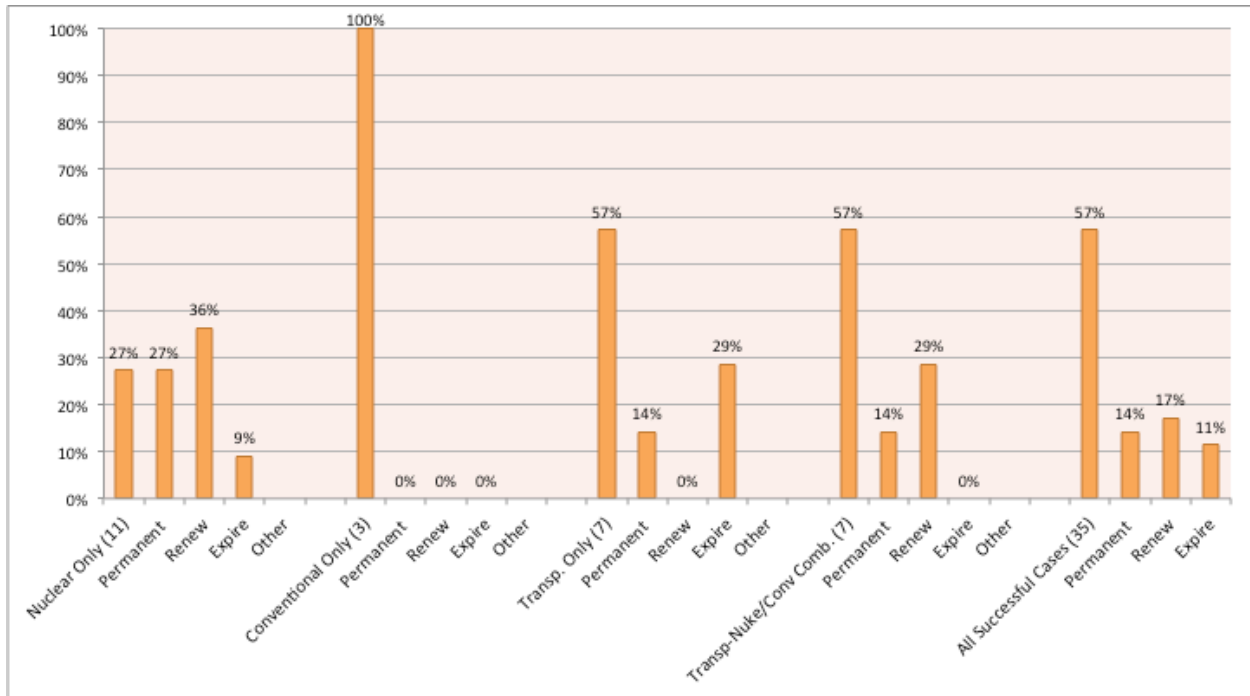


Figure 18. Percentage of Arms Control Agreements by Duration Provisions



Based on the percentages for all successfully negotiated cases, you would expect just over half of the agreements to be permanent (57 percent). It is interesting to note that nuclear-only cases fall well below that at almost half the rate (at 27 percent) with most nuclear-only agreements established with expiration dates (36 percent). Conventional-only cases exceeded the average rate of having a permanent duration: 100 percent of those cases (only three) were designed to be permanent. One explanation for this may be that for nuclear-only cases that function to limit the number of nuclear weapons, additional reductions are often anticipated in the near future. As a result agreements are crafted to be "replaced." However, because 27 percent of nuclear-only cases were also designed to be renewed after an initial period (which exceeds the all-cases rate of 14 percent renewal) this may reflect a desire to avoid hands tying under high-uncertainty.<sup>20</sup>

This tendency to pursue agreements that expire or require renewal to continue does not apply to cases of arms control that place limitations on conventional armaments or restrict the flow of conventional weapons, as 100 percent of these agreements were designed to be permanent. Both transparency-only and transparency-combination agreements were consistent with the all-cases rate with 57 percent of these kinds of agreements designed to be permanent. It is also interesting that the majority of transparency-only agreements

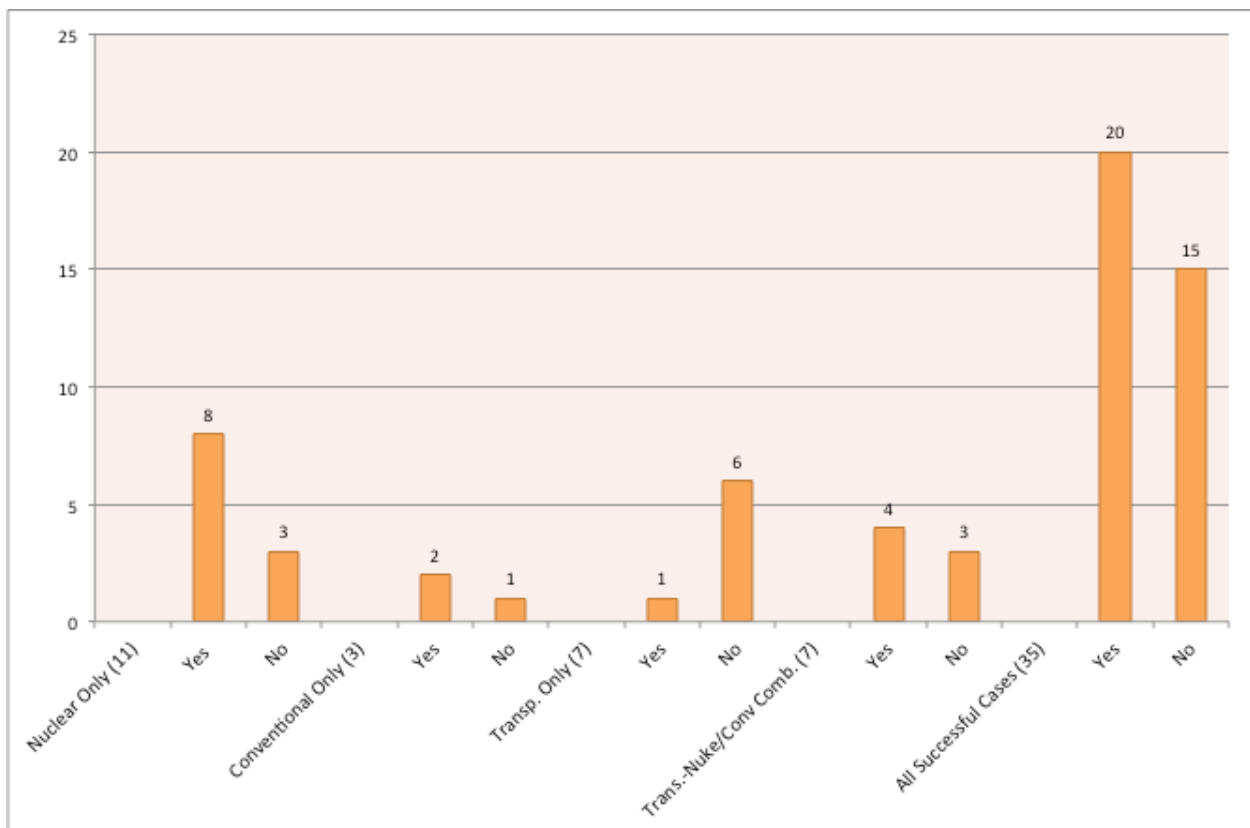
<sup>20</sup> A potential follow-on analysis might look to see if agreements cluster by arms control type on whether an agreement is legally binding, whether it is designed to be permanent and whether it includes withdrawal provisions. States may need the legally binding guarantee for nuclear agreements to be meaningful, but they may also be reluctant to tie their own hands.

were designed to be permanent (57 percent), which perhaps indicates that states have little to lose and much to gain by agreeing to increase transparency in the long run.<sup>21</sup>

### Provision for Withdrawal

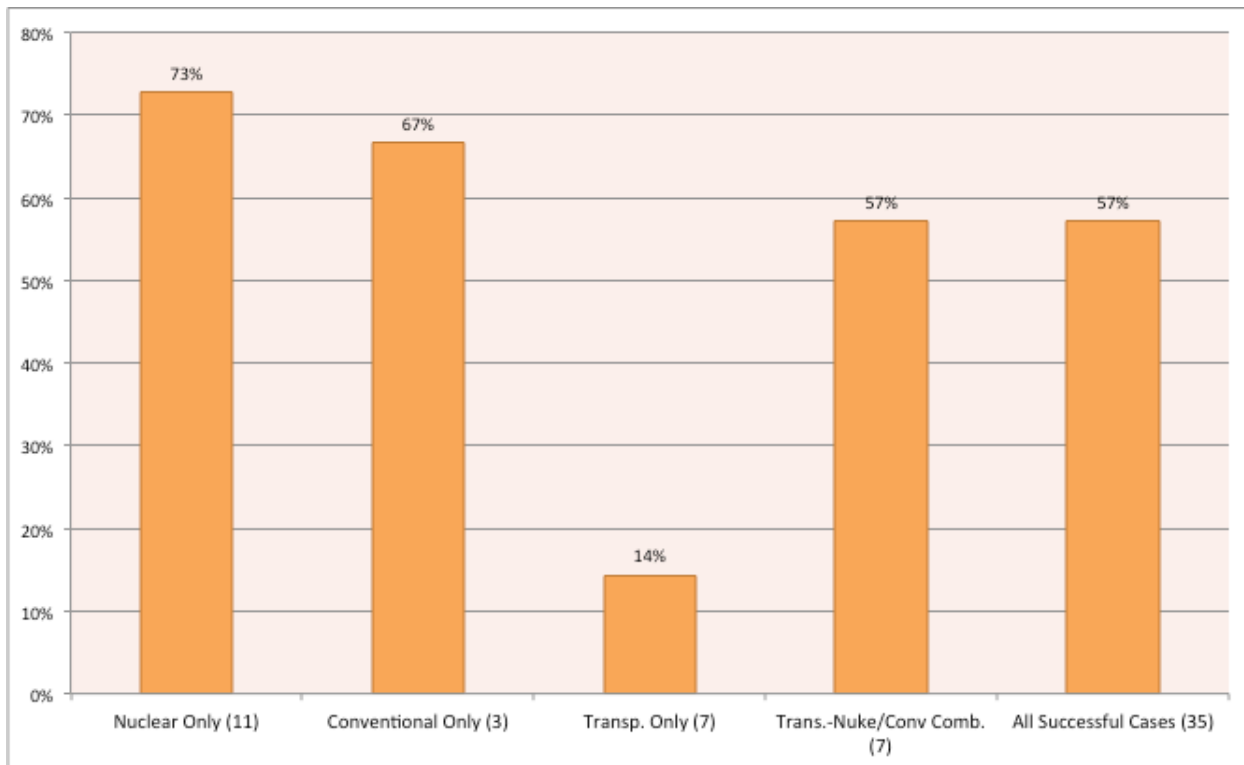
Of all 35 successfully negotiated agreements, 20 included provisions for withdrawal (57 percent), which would define a set of circumstances and procedure for legally withdrawing from the agreement. For nuclear-only cases, the rate of withdrawal provisions was higher at 73 percent, with eight out of 11 cases including these provisions. For the three conventional-only cases, two out of three included withdrawal provisions (67 percent). For transparency-only agreements, only one out of seven agreements included withdrawal provisions (14 percent). Four out of seven transparency-combination agreements (57 percent) included withdrawal provisions. Figure 19 shows the raw data and Figure 20 shows the percentages of agreements that included withdrawal provisions.

Figure 19. Number of Agreements with Provision for Withdrawal by Arms Control Category



<sup>21</sup> A follow-on analysis is planned to explore the effect of uncertainty on (or conditions under which) the crafting of agreements reached.

Figure 20. Percentage of Agreements with Provisions for Withdrawal by Arms Control Category



The results show the rate of transparency-combination agreements with withdrawal provisions is consistent with the rate of withdrawal provisions for all successfully negotiated agreements at 57 percent. The rates for this treaty term for both nuclear- and conventional-only cases exceeded the average at 73 and 67 percent respectively, which indicates that when states agree to measures that limit their weapons or capacity to develop weapons, they prefer to not tie their hands entirely or indefinitely. For transparency-only cases the rate was much lower than the general average at 14 percent, which is not surprising given that most transparency-only agreements are not legally binding anyway.

### Agreement Data Part II: Duration and Robustness of Successfully Negotiated Agreements

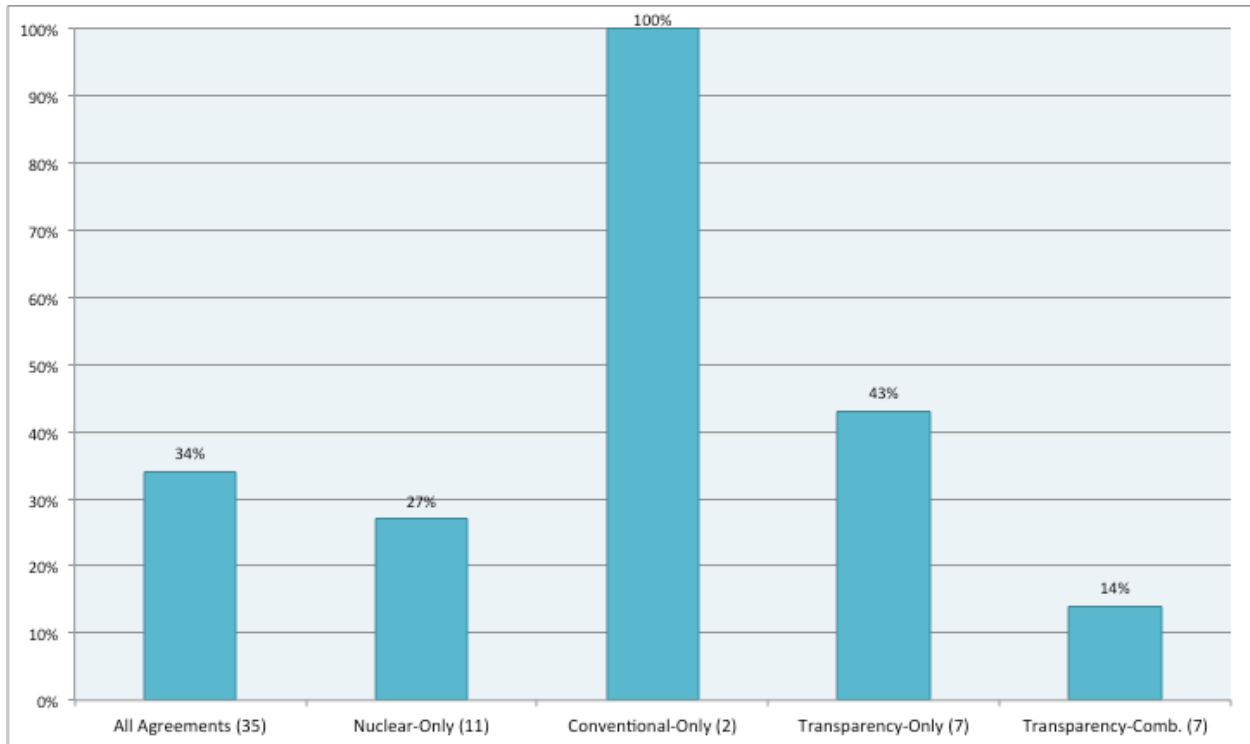
Finally, I examine the robustness of agreements, where "robustness" is a function of the violations experienced (and sustained), whether states withdrew from the agreement, and overall duration of the agreement.

#### Violations

Of the 35 agreements, 12 (34 percent) sustained violations, 22 did not and one was coded as "don't know." What types of arms control treaties are most susceptible to violations? Of the 11 nuclear-only agreements, three (27 percent) sustained violations. Of the two conventional-only agreements (not coded as "don't know"), both (100 percent) sustained

violations. Of the seven transparency-only agreements, three (43 percent) sustained violations. And of the seven transparency-combination agreements, only one (14 percent) sustained a violation (see Figure 21).

*Figure 21. Percentage of Arms Control Agreements Violated by Type*



Once again, there are too few conventional agreements to draw any conclusions. The high rate of violations on transparency-only agreements was a surprise, however, but two out of three violations were relatively minor. Russia violated Open Skies, first, when the restrictions it placed on observation flights was not in compliance with the treaty and second, when filming equipment of a Russian flight over the U.S. was incapable of producing duplicates of the images it took, which is not in compliance with the obligations of the treaty. The Stockholm CDE Agreement was also violated when Austria provided late notification of a military movement that was subject to the jurisdiction of the agreement, and again when Yugoslavia provided late notification of its military movements.

The third violation, which was not minor, occurred when the USSR violated the CSCE Helsinki Final Act by invading Afghanistan, thus violating the rights inherent in the sovereignty of a country, violating the commitment to refrain from the threat or use of force, the rights of peoples to self-determination, and the acceptance principles of international conduct as stipulated in the agreement. This speaks to the limitations of arms control in general and of CSBM agreements in particular to halt the initiation of conflict. This is an unusual violation, atypical of arms control.

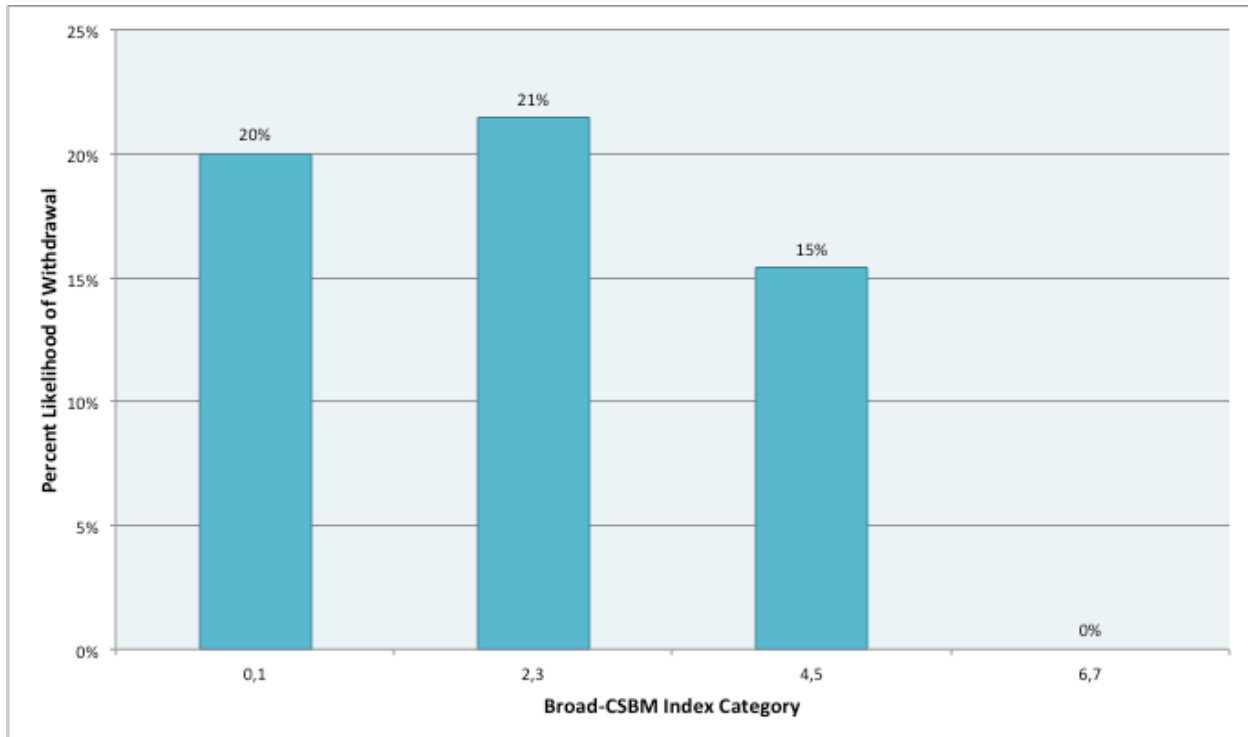
There is an interesting comparison to be made among nuclear-only, conventional-only and transparency-nuclear/conventional combination agreements. While 27 percent of nuclear-

only cases sustained violations, only 14 percent of combination agreements did likewise. Although there are too few cases of conventional-only agreements to draw any real conclusions, the 27 percent violation-rate is indeed lower than the 100 percent for conventional cases. Altogether, however, this might suggest that when transparency provisions are combined with nuclear or conventional arms control, agreements are less likely to be violated.

### Withdrawal

To evaluate whether broad agreements that are loaded with CSBMs are less susceptible to withdrawal, an index variable was created that increased in value by "1" for each of the following that characterized or were included in the final agreement: whether the agreement was broad, whether the agreement established provisions for verification, data exchange, review conferences, a system of warnings, opening lines of communication and "other" CSBMs. The broad-CSBM index could have a value from 0 to 7. The agreement that had the highest index value (7) was that which came out of the Stockholm Conference on Disarmament in Europe. The agreement that had the lowest index value (0) was the Lisbon Protocol, which brought Belarus, Ukraine, and Kazakhstan into compliance with the START I nuclear disarmament treaty after the dissolution of the Soviet Union. Observations were then binned in pairs, resulting in the following index categories: 0 and 1 (5 cases), 2 and 3 (14 cases), 4 and 5 (13 cases), and 6 and 7 (3 cases). The percent likelihood of withdrawal from an agreement is indicated below in Figure 22.

Figure 22. Percent Likelihood of Withdrawal from an Agreement



The graph shows how the percent-likelihood of withdrawal decreases after the breadth-CSBM index value passes the 2 and 3 category, suggesting that the broad agreements that are "loaded" with CSBMS are indeed less likely to result in withdrawal.

### Duration of Agreement

It is difficult to say much about the duration of arms control agreements given that, of the 35 successfully negotiated ones, 24 are still in force today. Of the six that entered into force and have since terminated, two were designed to be permanent, three were set to expire and one was "other." Of the two that were designed to be permanent, the ABM Treaty and the COCOM Agreement, the ABM Treaty after nearly 30 years when the U.S. withdrew in 2002 to pursue plans for a new missile defense system and the COCOM Agreement was replaced after 45 years by the Wassenaar Arrangement in 1996. The three agreements that expired—SALT I's Interim Agreement, START I and SORT—were all bilateral U.S.-Russian nuclear reduction agreements. The Interim Agreement expired in 1977 after 5 years, START I expired in 2009 after 15 years (although both sides agreed to continue to observe the terms of the Treaty until New START was successfully negotiated and entered into force in 2011), and SORT was in force nearly 8 years and was also superseded by New START (in 2011). New START is slated to expire in 2021. The one agreement coded as "other" for withdrawal was the Lisbon Protocol which was indeed an unusual arms control agreement. It required three post-Soviet states—Kazakhstan, Belarus and Ukraine—to return nuclear weapons to Russia by 1996. These weapons would then fall under the limitations for Russia specified in the START I Treaty.

### Conclusion

The dataset was assembled to test a number of hypotheses related to how states respond to or overtly seek to manage situations of missing information in ways that affect state security. I argue that when states focus on loss and risk reduction by producing narrow agreements that set limitations on weapons, for example, absent additional transparency measures, agreements are more easily reached (or more likely to be reached), but that these agreements are less durable.

The analysis here compares negotiations that seek to that curb the number, transfer or testing of weapons with those that incorporate transparency goals. There were too few unsuccessful cases in some of these categories, but based on success rate for all of these cases, it would seem that adding the pursuit of transparency measures does not lower the rate of success. Transparency-only cases were as likely to conclude successfully as transparency combination agreements. This could indicate that states either don't bother discussing CSBMs unless they have reached an agreement on reductions (the agreement is already a success), or that states have every reason to successfully conclude negotiations when they stand to gain the benefits of transparency. Analysis that focused on the relative difficulty of reaching an agreement (or duration) revealed no significant difference among these categories of cases, with the majority of all types ending within four years. Interestingly, however, results suggest that negotiators should aim to conclude negotiations within four years to achieve the optimal outcomes of reaching a negotiated agreement. After four years, it may behoove officials to downgrade their efforts and expenditures given the declining likelihood of reaching an agreement.

I also argue that limited, narrow agreements are less durable, or that broad agreements that are loaded with CSBMs are less susceptible to withdrawals.<sup>22</sup> Indeed, I find this to be the case. As agreements increase in breadth and number of CSBMs (after an index value of "3"), states are less likely to withdraw from them.

My findings also highlight the fact that agreements that place limitations on nuclear weapons, development and materials all tend to be legally binding. Nuclear-combination agreements also follow this "nuclear" pattern of tending to be legally binding. Transparency-only agreements, however, tend to not be legally binding, which is interesting because states have little to lose by tying their hands in these situations. It may be that nuclear agreements are considered ineffective without a legally binding "guarantee," while transparency-only agreements tend to be a security "bonus" but not necessity.

With respect to duration provisions, I find that nuclear-only arms control negotiations establish permanent agreements at a rate that is half that for all agreements. Most nuclear-only agreements are set to expire instead. This may be because additional reductions are often anticipated for nuclear-only cases, particularly for those that limit the number of nuclear weapons. This means that these kinds of agreements are crafted to be "replaced." However, because twenty-seven percent of nuclear-only cases were also designed to be renewed after an initial period, this may reflect a desire to avoid hands tying in these nuclear situations or, at the very least, caution.<sup>23</sup>

---

<sup>22</sup> I could also examine robustness to violations for this—number of violations sustained when agreements persisted. However, I don't think I would have enough data for this.

<sup>23</sup> A follow-on project planned that will evaluate the effect of uncertainty on the negotiation of arms control agreements.

## Chapter 8: Conclusion

In this project, I explore three aspects of arms control negotiations with the aim of informing and improving best practices for both negotiation and agreement goal setting, while also highlighting the need to consider the role missing information plays in these processes. I also argue that a comprehensive approach that incorporates these factors is more effective at managing uncertainty in the long run, relative to alternative approaches that focus on reducing various risks.

First, I examine factors that affect the ability to reach an agreement, with particular attention paid to the role of missing information about capabilities and intentions, the ability of environmental factors and mistrust to heighten uncertainty, and the kind of arms control (issue area) being pursued. Second, I explore the kinds of agreements reached under these conditions. Third, I evaluate the durability of resulting agreements.

### Reaching an Agreement

I look at factors that affect the ability to reach an agreement, including: missing information about capabilities and intentions; the objectives of the negotiating parties; the type of arms control being pursued; and environmental factors that come from outside the substance or dialog of the negotiations. The case studies highlight how missing information about capabilities, which results from a perceived dishonesty or insincerity, can severely hinder the ability to reach an agreement and hamper the ability to conclude negotiations in a timely manner. The Mutual and Balanced Force Reduction (MBFR) talks, which focused on reducing the possibility of a conventional conflict in Europe, are emblematic of this point. The "data dispute" made reaching an agreement impossible and contributed to the long duration (16 years) of the negotiations. This was also exacerbated by concerns about and differing perceptions of "parity" along with doubts regarding sincerity. Likewise, it has been said that the Reykjavik Summit failed to end in an agreement due to the "exceptional level of trust" that would have been required, which did not exist among the two nations.

However, states do employ strategies that successfully result in an agreement under these conditions. The SALT negotiations also took place under extraordinarily high uncertainty, and the study of these talks reveals the numerous strategies used to get past this potential stumbling block. Using preliminary rounds for information gathering, coming to the table with a flexible set of proposals to hedge against uncertainty, and the use of the back channel (which provided top-level reassurances) helped foster the successful negotiation of an agreement. Alternatively, the CFE Treaty illuminates how an agreement is successfully reached when this kind of uncertainty is reduced.

The scope of the negotiations and the proposals exchanged can also contribute to difficulty in reaching an agreement, particularly when either fails to adequately manage the threat posed by existing capabilities. When this is the case, the proposals are insufficient to ensure a satisfactory feeling of security, and the scope of the negotiations is too narrow. This is common in high environmental uncertainty or high complexity situations, and can also occur when all parties are (a) not in agreement about the threat faced; (b) in

agreement about the threat, but have differing security concerns or priorities; or (c) present proposals motivated by ulterior—often domestic—priorities. For MBFR, many of these factors were at play. High environmental uncertainty due to missing data about forces, high complexity due to the numerous ways in which a conventional attack could manifest, and general mistrust all contributed to the inability of the proposals exchanged to meaningfully contribute to security. The course of the MBFR negotiations also saw a narrowing in scope of the substantive proposals. While the two sides came close to reaching an agreement in the end, that agreement would have been comprised of small, token reductions, absent any CBSMs (Associated Measures) to make it all worthwhile. CFE negotiations were successful, by contrast, once the data dispute had been resolved and intermediate-range nuclear weapons had been removed from Europe, which altered the strategic landscape and, in turn, the ability of an agreement to manage the threat of escalation more effectively. The CFE Treaty was also designed to encompass a broader expanse of territory in Europe than an MBFR Treaty would have which also assisted in this way.

At Reykjavik, the initial scope of the negotiations—eliminating all nuclear weapons—was extraordinarily ambitious. Once it began to narrow to encompass select ICBMs, for example, there was no deal to be made. Scope can also refer to the breadth of the proposed agreement and negotiations can falter when states differ on their approach to breadth how it relates to achieving security goals. Interestingly, Gorbachev pursued a more comprehensive package that included proposals on strategic arms, intermediate-range missiles, space weapons and a testing ban, while Reagan held onto less ambitious goals (an INF deal) and piecemeal solutions that hinged on keeping his SDI program. In this way, Reagan took a "risk reduction" approach, while Gorbachev held a broader view on managing the threats at hand, the combination of which did not yield success.

I have also argued that in setting goals for arms control negotiations, leaders and negotiators frequently fall victim to the "threshold fallacy," employing a series of shortcuts in high-risk situations that result in setting thresholds for the reduction of armaments in order to avoid sustaining security losses. When successful, this produces agreements focused on reducing, eliminating or freezing the number of weapons negotiating states may have. Although I have argued this improves the likelihood of reaching an agreement, it would be an overstatement to say the data support that claim. Anecdotal evidence from the case studies suggests the pursuit of weapons limitations provides a workable solution to reaching an agreement under conditions of high uncertainty more than anything else, but that negotiations are no more likely to result in an agreement when states do this. In fact, negotiations that only pursue transparency are most often successful, as well. It is worth considering, however, that these additional measures pose no additional "cost" in terms of time added to negotiations.

Empirical findings also suggest that it may be easier to reach a nuclear arms control agreement than a conventional one because states may be more willing to reduce their nuclear arsenals, which are already self-detering, than to hinder their ability to keep pace with conventional weapons development. However, it would seem that states are less

reluctant to limit their nuclear arsenals than they are to restrict their capacity to develop new ones.

Finally, I find that the majority of negotiations conclude within the first four years, and that the likelihood of success declines thereafter. There was no difference in the effect for types of arms control or whether or not the negotiations included the pursuit of transparency measures. The results suggest, however, that for all kinds of arms control, it would behoove negotiators to either set a deadline for the end of negotiations within a four year period, or if willing to negotiate longer than this amount of time, to downgrade efforts and expenditures after four years, given the low likelihood of reaching an agreement thereafter. That said, it would appear the "epic" kind of negotiations that lasted between four and 16 years and were so popular during the "era of negotiation" are no longer the norm.

### Agreement Type and Provisions

Although not part of the initial scope of my project, it became apparent that there was something to be said about the types of agreements that are reached—the number and kinds of treaty terms that comprised them, for example—and under what types of conditions particular types of agreements were reached. Evidence from case studies suggests that that high uncertainty negotiations—particularly those that are high in uncertainty about capabilities—are more likely to result in agreements that may be characterized by weapons limitations alone because these quantification processes are critical to moving these kinds negotiations forward. Of course, missing information about capabilities and intentions is often what motivates these negotiations to commence. This was most true for the SALT I negotiations, which produced two agreements that established limitations to offensive and defensive weapons. The Interim Agreement, which limited offensive weapons of certain types, was designed to be temporary—a stepping stone to further, perhaps more significant, reductions in the future. The ABM Treaty was established to be permanent, but included a withdrawal clause designed to hedge against future uncertainty regarding "supreme national interest" (as did the Interim Agreement), and was the root cause of the agreement's eventual demise. The agreements were supplemented by no CSBMs, but rather simply an agreement to leave verification to national technical means. However, we tend to hail SALT as a major achievement—a stepping-stone in the détente process on the heels of the "era of confrontation." This notion raises the possibility that these kinds of agreements, comprised of piecemeal limitations, may be the best we can hope for in high uncertainty situations.

It may also be that CSBMs are successfully negotiated: (a) when limitations have already successfully been achieved, or (b) when transparency is the primary or sole goal. The CFE Treaty illustrates both of these phenomena. First, the Vienna Document, the OSCE Code of Conduct, and the Open Skies Treaty—all of which increased transparency through the exchange of information, notifications and inspections—were successfully negotiated *after* the CFE Treaty, which set limitations to five categories of conventional weapons. Second, the negotiations for these CSBM agreements were held independently of the CFE negotiations, in parallel but separate forums. Although I don't explore these CSBM agreements in detail here, it is plausible to think that when states came to the table to

negotiate an agreement that would heighten transparency, there is every reason to believe they would walk away having successfully reached an agreement.

The MBFR case highlights the fact that while states may have the goal of pursuing broad agreements that include transparency and verification measures, negotiations may not include a discussion of these goals or proposals explicitly. In the case of MBFR, the "Associated Measures" the U.S. desired would have been contingent upon any agreement reached regarding armament reductions. Because no agreement could be reached, the discussion never really turned to CSBMs. This means that it can be difficult—even impossible—to account for the substantive content of verification and transparency goals pursued during negotiations.

Empirical analysis concerning the provisions of the agreement reached focused on whether or not agreements were legally binding and whether they were designed to be permanent, to be renewed, or to expire. Most nuclear cases were legally binding, while most transparency-only agreements were not and combination agreements, comprised of either nuclear or conventional weapons reductions and CSBMs, tended to be legally binding at a rate nearly as high as that for nuclear weapons. There were too few conventional-only cases to draw any meaningful conclusions about these cases. This sum total of these results may mean that states require the "guarantee" of legal accountability for cases involving weapons reductions, but that transparency-only agreements are simply a bonus when successfully implemented.

Finally, I find that nuclear-only cases are the least likely to be established with permanent duration provisions. Conventional arms control agreements—the majority of which concern the transfer of technology (2 out of three) are 100 percent likely to include permanent duration provisions. It may that states require the guarantee that other states will uphold an agreement, which the legally binding status confers, but that they themselves do not want to be constrained by a permanent duration.

### **Agreement Durability**

Third, I examine how successfully negotiated agreements were as a function of durability, where durability is characterized by the duration of the resulting agreement combined with its robustness to violations and withdrawals. Of the four case studies, both the SALT I and CFE negotiation processes produced agreements. While the latter is still in force today, the former is long gone. While the Interim Agreement of SALT I was designed to be temporary and replaceable and the ABM Treaty proved to be non-robust to withdrawal, the CFE Treaty was negotiated for the long haul in an effort to maintain perpetual peace and stability on the European continent. That it comprises a broad regime, loaded with CSBMs is not unrelated. Most states party to the CFE Treaty today have treaty limited equipment below the levels specified by the agreement, which is to say that the threat of the widespread outbreak of conventional war by means of a sudden attack no longer exists. Although the CFE Treaty itself has sustained the withdrawal of the Russian Federation and countermeasures to this action, which has placed its future viability in question, Open Skies and the Vienna Document remain "urgent" according to the Russian Federation.

I have argued that broad agreements loaded with CSBMs are more durable. The most compelling results of the data analysis likewise suggest that as agreements become increasingly broad and loaded with CSBMs, the likelihood of a state withdrawing from them diminishes to zero.

Additionally, I find that other factors beyond the scope of existing capabilities can affect the desire to uphold or renew an agreement. Vulnerability to technological change plays a big role here and draws attention to both the need for a broader approach to arms control as well as a critical difference between conventional and nuclear threats. In reducing uncertainty about capabilities, arms control treaty negotiators need to consider "capabilities" more broadly defined, particularly for conventional weapons. This is what Foerster et al. (1989) define as the ability to generate force over time, and take into account the time required to prepare for an attack, as well as the time to mobilize defenses. These factors are more critical, they argue, than static force levels deployed during peacetime. The difference between nuclear and conventional weapons, therefore, comes down to kind of the uncertainty they create. Both hinge on intention to use, but for conventional weapons, uncertainty about intention to use is augmented by uncertainty regarding how quickly these forces can mobilize to mount an attack, and uncertainty about their overall effects, which are less predictable—albeit less destructive—than nuclear weapons. Moreover, conventional weapons technology actually evolves faster (and at a more profound level) than changes in nuclear weapons technology, which are themselves self-detering. Perhaps for conventional arms control—more so than for nuclear—it is critical that proposed reductions effectively reduce or eliminate the threat posed by weapons.

### Security Specific Heuristics

I have also argued that planners tend to use shortcuts, which I call "security-specific heuristics" in assessing the threats that arms control seeks to manage. These heuristics include worst-case scenario thinking, limited-theater of war thinking and non-complex scenario thinking. This is most prominent in the nuclear cases explored here. The Reykjavik Summit and the period leading up to it highlight the use of these shortcuts, particularly for U.S. President Ronald Reagan. Although Reagan was not initially a fan of U.S.-Soviet cooperation, he became so horrified at the prospect of nuclear annihilation upon seeing the film *The Day After* and following the Soviet bombing of Korean Airlines flight 007 that he moved meetings with Gorbachev to the top of his foreign policy agenda. Gorbachev, likewise, became concerned with the "survival of mankind" and his desire to completely eliminate the threat of nuclear war would seem to have been exacerbated by the Chernobyl incident and a fire that broke out aboard a Soviet submarine, both of which drew attention to the devastating consequences of nuclear accidents.

For SALT, the use of these heuristics is evident in both the "gloomy" calculations that occurred about the capabilities of both sides and the fact that both sides consistently resorted to that which was most easily quantified, rather than pursuing a more nuanced approach to parity in capabilities or broader scope.

## Silo-ed Thinking about Arms Control

My findings also highlight the fact that we tend to have a difficult time conceptualizing security across modalities: if we continue to use arms control negotiations to focus on the reduction or elimination of weapons, we should either broaden the scope of these efforts or pursue reductions in coordination with additional agreements capable of managing additional threats. Oftentimes, the specter of a threat beyond the arms control negotiation agenda has had the capacity to derail the talks by affecting the feeling of security proposals could provide. Along these lines, the Russian Federation has stated plainly that any further negotiated reductions to their nuclear arsenals would have to be contingent upon an agreement on the U.S.'s position on missile defense—the issues are inseparable from a security perspective. Additionally, some of the most successful reduction-only agreements have survived as long as they have because they are accompanied by "companion" agreements that broaden their scope and increase transparency. We need to consider how arms control agreements can work in concert to effectively manage threats posed by weapons, as well as additional forms of uncertainty, and dispense with agreements informed by a Cold War mentality.

## When to Not Engage in Arms Control Negotiations

Finally, a brief word of caution regarding the effectiveness of arms control treaties as solutions to security problems: arms control is not a panacea for security threats. Rather, it is a tool for increasing state security that is particularly effective tool for enhancing transparency and encouraging restraint on the part of state signatories. However, pursuing the goal of arms control for arms control's sake is a mistake. Even the most strident advocates of arms control would do well to temper their cries for slashing numbers of weapons without considering the full spectrum of state security goals. For example, the idea that nuclear weapons states should reduce their nuclear arsenals to "zero" does not necessarily enhance security so much as serve as a security-specific heuristic in the extreme. Goals of this kind fail to augment security in any meaningful way.

## Summary

The evaluation of the arms control agreements discussed here, both collectively and through a historical lens, suggests that the role for arms control in international security is changing along with the global geopolitical landscape. Bilateral agreements between superpowers on strategic nuclear weapons dictated by legacy agreements and preexisting frameworks no longer effectively manage the uncertainty created by capabilities the world over. Emerging threats, regional and sub-regional conflicts, shifting force structures, and evolving military strategies and technologies all point to the fact that we would do well to reconsider our approach to arms control going forward. While targeted reductions to arsenals lower the likelihood of some potential losses, broader, more dynamic agreements that provide intrusive CSBMs, increase transparency and flexibly—in a way that is conducive to the effective management of uncertainty over time. Such agreements, therefore, are more durable, last longer, and are more robust to violations and withdrawals.

However, because targeted negotiations do remove obstacles to reaching an agreement by focusing discussion on more readily negotiable issue areas, it would be prudent to identify

the kinds of situations in which these kinds of agreements may be the best outcomes that we can hope for—such as high uncertainty ones. That said, we should consider the fact that there is no added "costs" to including the discussion of CSBMs in negotiations that focus on weapons limitations.

The issues raised in this dissertation suggest the idea that we could codify long-term arrangements that affect security based on a slice of information available about the present-day world is at best short-sighted. Given the current administration's favorable predisposition toward the practice arms control, we would do well to make the most of this opportunity by allowing the data inform our goals-setting and by incorporating the best practices suggested here.

## References

### Chapter 2: From Risk Reduction to Uncertainty Management

- Adelman, K. (1984). "Arms Control with and without Agreements." *Foreign Affairs*, 63(2) 240-263.
- Bilder, R. (1981). *Managing the Risks of International Agreement*. University of Wisconsin Press.
- Brennan, D. (1961). *Arms Control, Disarmament and National Security*. Kessinger Publishing.
- Carter, A. (1989). *Success and Failure in Arms Control Negotiations*. Oxford University Press.
- Chasek, P. (1997). "A comparative analysis of multilateral environmental negotiations." *Group Decision and Negotiation*, 6(5) 437-461.
- Cioffi-Revilla, C. (1998). *Politics and Uncertainty: Theory, Models and Application*. Cambridge University Press.
- Cohen, M., March, J., & Olsen, J. (1972). "A Garbage Can Model of Organizational Choice." *Administrative Science Quarterly*, 17(1) 1-25.
- Collina, T. Arms Control Today. [http://www.armscontrol.org/act/2010\\_03/NewSTART](http://www.armscontrol.org/act/2010_03/NewSTART)
- Daase, C., & Kessler, O. (2007). "Knowns and Unknowns in the 'War on Terror': Uncertainty and the Political Construction of Danger." *Security Dialogue*, 38, 411-434.
- Duncan, R. (1972). "Characteristics of Organizational Environments and Perceived Environmental Security." *Administrative Science Quarterly*, 17(3) 313-327.
- Ellsberg, D. (1961). "Risk, Ambiguity and the Savage Axioms." *The Quarterly Journal of Economics*, 75(4) 643-669.
- Farnham, B. (1997). *Avoiding Losses, Taking Risks: Prospect Theory and International Conflict*. The University of Michigan.
- Glaser, C. (1994). "Realists as Optimists: Cooperation as Self-Help." *International Security*, 19(3) 50-90.
- Goldblat, J. (2002). *Arms Control: The New Guide to Negotiations and Agreements*. Sage Publications.
- Gottemoeller, R. (2002). "Arms Control in A New Era." *The Washington Quarterly*, 25(2) 45-58.
- Hansen, J. H. (2007). Soviet Deception in the Cuban Missile Crisis [Report]. *Studies in Intelligence*, 46(1).

- Herszenhorn, D.M. NY Times: Russia Elevates Warning About U.S. Missile-Defense Plan in Europe, November 23, 2011. Last accessed August 13, 2012.  
<http://www.nytimes.com/2011/11/24/world/europe/russia-elevates-warning-about-us-missile-defense-shield-plan.html>
- Jervis, R. (1978). "Cooperation under the Security Dilemma." *World Politics: A Quarterly Journal of International Relations*, 30(2), 167–214.
- Jervis, R. (1993). "The Drunkard's Search." In (chap. 12) *Explorations in Political Psychology*. Duke University Press.
- Jervis, R. (2010). *Why intelligence fails: Lessons from the Iranian revolution and the Iraq war*. Cornell University Press.
- Kahneman, D., Slovic, P., & Tversky, A. (1982). *Judgment under Uncertainty: Heuristics and Biases*. Cambridge University Press.
- Kanwisher, N. (1989). "Cognitive Heuristics and American Security Policy." *The Journal of Conflict Resolution*. 33(4), 652-675.
- Koremenos, B. (2005). Contracting around international uncertainty. *American Political Science Review*, 99(04), 549-565.
- Knight, F. (1921). *Risk, Uncertainty and Profit*. Houghton Mifflin.
- Kull, S. (1990). *Minds at War: Nuclear Reality and the Conflicts of Defense Policymakers*. Basic Books.
- Larsen, J. (2002). *Arms Control: Cooperative Security in a Changing Environment*. Lynne Reiner Publishers.
- Lax D. & Sebenius, J. (1986). *The Manager as Negotiator*. Simon and Schuster, Inc.
- Levy, J. (1997). "Prospect theory, rational choice, and international relations." *International Studies Quarterly*, 41(1) 87-112.
- Lindblom, C. (1959). "The Science of 'Muddling Through'." *Public Administration Review*, 19(2) 79-88.
- Luce, R., & Raiffa, H. (1957). *Games and Decisions: Introduction and Critical Survey*. Dover Publications.
- McDermott, R. (1998). *Risk-Taking in International Politics: Prospect Theory in American Foreign Policy*. The University of Michigan Press.
- McDermott, R. (2001). "The Psychological Ideas of Amos Tversky and their Relevance for Political Science." *Journal of Theoretical Politics*, 13(1), 5.
- Mearsheimer, J. (1994). "The False Promise of International Institutions." *International Security*, 19(3), 5–49.

- Milliken, F. (1987). "Three Types of Perceived Uncertainty about the Environment: State, effect, and response uncertainty." *Academy of Management Review*, 133–143.
- Mitzen, J. & Schweller, R. (2011). "Knowing the Unknown Unknowns: Misplaced Certainty and the Onset of War," *Security Studies*, 20(1) 2-35.
- Newhouse, J. (1973). *Cold dawn: the Story of SALT*. Holt, Rinehart and Winston.
- Newhouse, J. (1989). *War and Peace in the Nuclear Age*. Knopf.
- Nye, J. "Nuclear Risk Reduction Measures and U.S.-Soviet Relations," in Barry Blechman, ed., *Preventing Nuclear War*. Bloomington, IN: Indiana University Press, 1985.
- O'Neill, B. (2001). "Risk Aversion in International Relations Theory," *International Studies Quarterly*, 45(4) 617-640.
- Pennings, J. (1981). "Strategically Interdependent Organizations." In *Handbook of Organization Design*. Oxford University Press.
- Perminova, O., Gustafsson, M., & Wikstrom, K. (2008). "Defining Uncertainty in Projects—a New Perspective." *International Journal of Project Management*, 26(1), 73–79.
- Pfeffer, J. & Salancik, G. R. (1978). *The External Control of Organizations: A Resource Dependence Perspective*. Harper and Row.
- Pifer, S. & O'Hanlon, M. (2012). *The Opportunity: Next Steps in Reducing Nuclear Arms*. Brookings Institution Press.
- Raiffa, H. (2002). *Negotiation Analysis*. Harvard University Press.
- Rathbun, C. (2007). "Uncertain about Uncertainty: Understanding the Multiple Meanings of a Crucial Concept in International Relations Theory," *International Studies Quarterly*, 51(3), 533-557.
- Reagan, R. (1990). *An American Life*. Gallery Books.
- Rotfeld, A. & Anthony, I. (1999). *A Future Arms Control Agenda: Proceedings of Nobel Symposium 118*. Oxford University Press.
- Schelling, T. & Halperin, M. (1985). *Strategy and Arms Control*. Twentieth Century Fund, New York.
- Smith, E. (1991). "Understanding Dynamic Obligations: Arms Control Agreements." *Southern California Law Review*. 64, 1549.
- Smith, G. (1985). *Doubletalk: The Story of SALT*. University Press of America.
- Starkey, B., Boyer, M., & Wilkenfeld, J. (2005). *Negotiation in a Complex World: An introduction to international negotiation*. Rowman & Littlefield Publishers.
- Talbott, S. (1980). *Endgame: The Inside Story of SALT II*. Harper & Row.

Tversky, A. & Kahneman, D. (1974). "Judgment under Uncertainty: Heuristics and Biases," *Science New Series*, 185(4157) 1124-1131.

Underdal, A. (1991). "The Outcome of Negotiation." in Kremenyuk, V. ed. *International Negotiation*. Jossey-Bass.

Wallander, C., & Keohane, R. (2002). *Risk, Threat and Security Institutions*. Psychology Press.

Winham, G. (1977). "Negotiation as a Management Process." *World Politics*. 30(01), 87-114.

Woolf, A.F. (2011). "Monitoring and Verification in Arms Control," *Congressional Research Service*, R41201. Last accessed August 13, 2012.  
<http://www.fas.org/sgp/crs/nuke/R41201.pdf>

### Chapter 3: The Mutual and Balanced Force Reduction Talks (1973-1989)

Blacker, C & Duffy, G. (1984). *International Arms Control: Issues and Agreements*. 2<sup>nd</sup> ed. Stanford University Press.

Borawski, J. (1979). "Mutual Force Reductions in Europe from a Soviet Perspective," *Orbis*, 22(4): 845-73.

Carter, A. (1989). *Success and failure in arms control negotiations*. Oxford University Press.

Dean, J. (1983). "MBFR: From Apathy to Accord," *International Security*, 7(4): 116-139.

Dean, J. (1982). "MBFR: Ten Years of Negotiating Security in Europe," *Arms Control Today*, 18(8): 1-4.

Dean, J. (1987). *Watershed in Europe: Dismantling the East-West military confrontation*. Lexington Books.

*Foreign Relations of the United States (FRUS), 1969-1976, Volume XXXIX, European Security*. (2007). Edited by Douglas E. Selva and Edward C. Keefer. Washington: United States Government Printing Office.

Goldblat, J. (2002). *Arms Control: The New Guide to Negotiations and Agreements*. 2<sup>nd</sup> ed. Sage Publications.

Hopmann, T. (1993). "From MBFR to CFE: Negotiating Conventional Arms Control in Europe" in Richard Dean Burns eds., *Encyclopedia of Arms Control and Disarmament*, Vol. II. Charles Scribner's Sons: 967-989.

Keliher, J. (1980). *The Negotiations on the Mutual and Balanced Force Reductions: The Search for Arms Control in Central Europe*. Elmsford, Pergamon Press Inc.

- North Atlantic Treaty Organization (NATO). *Mutual And Balanced Force Reductions: the Reykjavik Signal*, Declaration adopted by Foreign Ministers and Representatives of Countries participating in the NATO Defence Program, North Atlantic Council, Reykjavik 24-25<sup>th</sup>, 1968. <http://www.nato.int/docu/comm/49-95/c680624b.htm> (accessed May 28, 2013).
- Ranger, R. (1979). "An alternative future for MBFR: A European Arm-Control Conference," *Survival: Global Politics and Strategy*, 21(4): 164-171.
- Record, J. (1980). *Force Reductions in Europe: Starting over*. Institute for Foreign Policy Analysis, Inc.
- Schlesinger, J. (1975). *The Theater Nuclear Force Posture in Europe: A Report to the U.S. Congress in Compliance with Public Law 93-365*, Washington, D.C.: Department of Defense.
- Simonelli, N. (2011). "Bargaining over international multilateral agreements: The duration of negotiations." *International Interactions*. 37(2): 147-169.
- Winkler, T. (1982). "Arms Control and the Politics of European Security," *International Institute for Strategic Studies*, Adelphi Papers No. 177.

#### Chapter 4: The Conventional Forces in Europe (CFE) Treaty (1990)

- Copson, M. (1989). *To Strengthen Stability and Security: CFE Negotiation on Conventional Armed Forces in Europe*. Washington, D.C.: U.S. Information Agency, U.S Department of State.
- Federation of American Scientists (FAS). *CFE Chronology: Conventional Forces in Europe Treaty*. <<http://www.fas.org/nuke/control/cfe/chron.htm>> Accessed May 28, 2013.
- Foerster, S., Clontz, W., Lynch, H., & Barry, W. (1989). *Defining stability: conventional arms control in a changing Europe*. Westview Press.
- NATO. (1988). *Conventional Arms Control*. Statement issued by the North Atlantic Council Meeting in Ministerial Session at NATO headquarters. Press Communiqué M3 (88) 75. NATO Press Service, December 8.
- New York Times. (1989). "President's Statement on the New Arms Plan." May 30: A-3.
- Novosti Press Agency. (1989). "Speech by Soviet Foreign Minister Eduard Shevardnadze at CFE Plenum in Vienna." March 6.
- Peters, J. (1997). *CFE and Military Stability in Europe*. Prepared for the Office of the Secretary of Defense by RAND's National Defense Research Institute. RAND Corporation.

- Rohn, L. (1990). *Conventional forces in Europe: a new approach to the balance, stability, and arms control*. RAND Corporation.
- Pravda. (1988). "Warsaw Pact States' Statement on Talks on Armed Forces and Conventional Arms Reduction in Europe." Statement adopted by Political Consultative Committee of the Warsaw Treaty Organization, Warsaw, July 16: 1-2.
- Sharp, J. (1996). *About Turn, Forward March with Europe: New Directions for Defence and Security Policy*. Rivers Oram Press.
- Sharp, J. (2006). *Striving for Military Stability in Europe: Negotiation, Implementation and Adaptation of the CFE Treaty*. Routledge.

### Chapter 5: The Strategic Arms Limitation Talks I (1969-1972)

- Beichman, A. (1991). *The Long Pretense: Soviet Treaty Diplomacy from Lenin to Gorbachev*. Transaction Publishers.
- Bennett, P. (1997). *Russian Negotiating Strategy: Analytical Case Studies from SALT and START*. Nova Science Publishers, Inc.
- Boese, W. (2002). "U.S. Withdraws From ABM Treaty; Global Response Muted," *Arms Control Today*, 32(6).
- Central Intelligence Agency, CIA. (1970). "Soviet ABM – Status and Prospects," *Intelligence Memorandum SR IM 70-27* (Released as sanitized 1999).
- Clearwater, J. (1996). *Johnson, McNamara, and the Birth of SALT and the ABM Treaty 1963-1969*. Universal-Publishers.
- Dobrynin, A. (1995). *In Confidence: Moscow's Ambassador to America's Six Cold War Presidents (1962-1986)*. Times Books, Random House, Inc.
- Foreign Relations of the United States (FRUS), 1969–1976, Volume XXXII* (2010). "SALT I 1969-1972," eds. Erin R. Mahan and Edward C. Keefer. U.S. Government Printing Office.
- Garthoff, R. (2001). *A Journey through the Cold War: A Memoir of Containment and Coexistence*. Brookings Institution Press.
- Garthoff, R. (1984). "BMD and East-West Relations," Chapter 8 In *Ballistic Missile Defense: A study jointly sponsored by the Brookings Institution and the Massachusetts Institute of Technology* eds. Ashton B. Carter and David N. Schwartz. The Brookings Institution.
- Garthoff, R. (1985). *Détente and Confrontation: American-Soviet Relations from Nixon to Reagan*. Brookings Institution.

- Garthoff, R. (1978). "SALT I: An Evaluation," *World Politics* 31(1), 1-25.
- Hansen, J. H. (2007). "Soviet Deception in the Cuban Missile Crisis: Learning from the Past," *Center for the Study of Intelligence: Studies in Intelligence* 46(1), 49-58. Retrieved from <https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/csi-studies/studies/vol46no1/article06.html> (Accessed March 1, 2011).
- Hines, John C.; Mishulovich, Ellis M., & Shull, John F. (1995). "Soviet Intentions 1965-1985," *An Analytical Comparison of U.S.-Soviet Assessment During the Cold War Volume I*. McLean, VA: BDM Federal, Inc.
- Jervis, R. (1993). "The Drunkard's Search." In *Explorations in Political Psychology* eds. Shanto Iyengar and William James MacGuire, 338-360. Duke University Press.
- Kanwisher, N. (1989). "Cognitive Heuristics and American Security Policy," *Journal of Conflict Resolution*, 33(4): 652-676.
- Kissinger, H. (2011). *White House Years*. Simon and Schuster.
- Koremenos, B. (2005). "Contracting around International Uncertainty," *American Political Science Review* 99(04), 549-565.
- National Security Council Files (Richard Nixon Presidential Library, RNPL). (2007). "Henry Kissinger and Anatoly Dobrynin's Notes of Conversation, June 11, 1969," Box 489, (Dobrynin/Kissinger 1969 Part II), In Soviet-American Relations: The Détente Years, 1969-1972 Eds. David C. Geyer and Douglas E. Selvage, U.S. Department of State Publication 11438, 64-70. U.S. Government Printing Office.*
- Newhouse, J. (1973). *Cold Dawn: the Story of SALT*. Holt, Rinehart and Winston.
- Nixon, R. (1968). "Address Accepting the Presidential Nomination at the Republican National Convention in Miami Beach, Florida," August 8, 1968. Online by Gerhard Peters and John T. Woolley, The American Presidency Project. Retrieved from <http://www.presidency.ucsb.edu/ws/?pid=25968>. (Accessed July 1, 2013).
- Payne, S. (1980). *The Soviet Union and SALT*. The MIT Press.
- Savel'ev, A. & Detinov, N. (1995). *The Big Five: Arms Control Decision-making Mechanism in the Soviet Union*. Praeger Publishers.
- Schelling, T. (1985-1986). "What Went Wrong with Arms Control?" *Foreign Affairs* 64(2): 219-233.
- Shoumikhin, A. (2008). *Goals and Methods of Russian Arms Control Policy: Implications for U.S. Security*, National Institute Press.
- Shulman, M. D. (1974). "SALT and the Soviet Union" In *SALT: The Moscow Agreement and Beyond* Eds. Mason Willrich and John B. Rhineland, 101-121. The Free Press.

- Steinbruner, J. D. (1981-1982, Winter). "Nuclear Decapitation," *Foreign Policy* (45), 16-28.
- U.S. Department of State's Bureau of International Security and Nonproliferation. (1972). Interim Agreement Between The United States of America and The Union of Soviet Socialist Republics on Certain Measures With Respect to the Limitation of Strategic Offensive Arms, the Narrative. Retrieved from <http://www.state.gov/t/isn/4795.htm#narrative>, accessed May 28<sup>th</sup>, 2013.
- U.S. Department of State's Bureau of International Security and Nonproliferation. (1972). Interim Agreement Between The United States of America and The Union of Soviet Socialist Republics on Certain Measures With Respect to the Limitation of Strategic Offensive Arms, the Treaty Text. Retrieved from <http://www.state.gov/t/isn/4795.htm#narrative>, accessed May 28<sup>th</sup>, 2013.
- Zamyatin, L.N. & Novikov, K.Y. (1969). "TASS, Radio Moscow, January 20, 1969," In *Foreign Broadcast Information Service, Daily Report: Soviet Union, January 21, 1969*, A8. The formal TASS statement also appeared in *Pravda*, January 21, 1969.

## Chapter 6: The Reykjavik Summit (1986)

- Feldman, S. & Sigelman, L. (1985). "The Political Impact of Prime-Time Television: 'The Day After.'" *The Journal of Politics* 47(2): 556-578.
- Fischer, B. (1997). *The Reagan Reversal: Foreign Policy and the End of the Cold War*. The University of Missouri Press.
- Garthoff, R. (1986). "The Gorbachev Proposal and Prospects for Arms Control," *Arms Control Today* (January/February): 3-6.
- Garthoff, R. (1994). *The Great Transition: American-Soviet Relations and the End of the Cold War*. The Brookings Institution.
- Gorbachev, M. (1987a). "For a Nuclear-Free World, for the Survival of Mankind," *FBIS-SOV*, February 17, 1987.
- Gorbachev, M. (1995). *Memoirs*. Double Day.
- Gorbachev, M. (1986). *Mikhail Gorbachev's speech on Soviet Television, May 14, 1986*, Novosti Press Agency Pub.
- Gorbachev, M. (1987). *Reykjavik: Results and Lessons*. Sphinx Press.
- "Gorbachev's reflections on Reykjavik on the flight to Moscow, 12 October 1986," *The National Security Archive*. (2006). Document 19. In *National Security Archive Electronic Briefing Book No. 203* eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.

- “Gorbachev statement at USSR CC CPSU Politburo session October 22, 1986.” *The National Security Archive. (2006)*. Document 22. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- “Intermediate-Range Nuclear Forces [INF],” *Federation of American Scientists. Retrieved from <http://www.fas.org/nuke/control/inf/>* Accessed July 30, 2013.
- Mandelbaum, M. & Talbott, S. (1986). “Reykjavik and Beyond,” *Foreign Affairs* 65(2): 215-235.
- Matlock Jr., J. (2004). *Reagan and Gorbachev: How the Cold War Ended*. Random House.
- “Mikhail Gorbachev letter to Ronald Reagan, 15 September 1986.” *The National Security Archive. (2006)*. Document 1. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- Nitze, P. (1989) *From Hiroshima to Glasnost: At the Centre of Decision*. Grove Weidenfeld.
- Oberdorfer, D. (1998). *From the Cold War to a New Era: The United States and the Soviet Union 1983-1991*. The John Hopkins University Press.
- Oberdorfer, D. (1992). *The Turn how the Cold War came to an End*. Jonathan Cape.
- Panofsky, W. (1988). “Reykjavik and Beyond: Implications of Deep Reductions in Strategic Nuclear Arsenals and the Future Direction of Arms Control,” In *Reykjavik and Beyond: Deep Reductions in Strategic Nuclear Arsenals and the Future Direction of Arms Control*, Brookings Institution, 1-10.
- Reagan, R. (1990). *An American Life*. Simon and Schuster.
- “Reagan letter to Gorbachev,” classified Secret/Sensitive on July 25, 1986 in *Executive Secretariat NSC: Head of State File: Records, 1981-1989, USSR: General Secretary Gorbachev (8690529)*. Box 40. RRPL.
- Rhodes, R. (2007). *Arsenals of Folly: The Making of the Nuclear Arms Race*. Knopf.
- “Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (morning) 11 October 1986,” Published in FBIS-USR-93-061, 17 May 1993. *The National Security Archive. (2006)*. Document 10. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- “Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (afternoon) 11 October 1986,” Published in FBIS-USR-93-087, 12 July 1993. *The National Security Archive. (2006)*. Document 12. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- “Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (afternoon) 12 October 1986.” Published in FBIS-USR-93-121, 20 September 1993. *The National Security*

- Archive. (2006).* Document 16. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- “Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (morning) 12 October 1986.” Published in FBIS-USR-93-113, 30 August 1993. *The National Security Archive. (2006).* Document 14. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- Shultz, G. (1993). *Turmoil and Triumph: My Years As Secretary of State.* Scribner's.
- Singer, D. J. (1962). *Deterrence, Arms Control, and Disarmament.* University of Ohio Press.
- Stanton, F. (2010). *Great Negotiations: Agreements that Changed the Modern World.* Westholme Publishing.
- Steinbruner, J. D. (1988). “The Purpose and Effect of Deep Strategic Force Reductions,” In *Reykjavik and Beyond: Deep Reductions in Strategic Nuclear Arsenals and the Future Direction of Arms Control,* Brookings Institution, 11-18.
- The National Security Archive. (2006). “The Reykjavik File: Previously Secret Documents from U.S. and Soviet Archives on the 1986 Reagan-Gorbachev Summit,” In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- U.S. House. Committee on Armed Services. (1987). *The Reykjavik Process: Preparation For and Conduct of the Iceland Summit and Its Implications for Arms Control Policy.* Washington: Government Printing Office. (99<sup>th</sup> Congress, 2<sup>nd</sup> Session, No. 25).
- “U.S. Memorandum of Conversation, Reagan-Gorbachev, (first meeting) 11 October 1986.” *The National Security Archive. (2006).* Document 9. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- “U.S. Memorandum of Conversation, Reagan-Gorbachev, (third meeting) 12 October 1986.” *The National Security Archive. (2006).* Document 13. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- “U.S. Memorandum of Conversation, Reagan-Gorbachev, (final meeting) 12 October 1986.” *The National Security Archive. (2006).* Document 15. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- “USSR CC CPSU Politburo discussion of Reagan's response to Gorbachev's initiative to meet in Reykjavik and strategic disarmament proposals, 22 September 1986,” *The National Security Archive. (2006).* Document 2. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.

“USSR CC CPSU Politburo session on results of the Reykjavik Summit, 14 October 1986,” *The National Security Archive*. (2006). Document 21. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.

Wink, J. (1996). *On the Brink: The Dramatic Behind the Scenes Saga of the Reagan Era and the Men and Women who Won the Cold War*. Simon and Schuster.

## Chapter 7: Data and Analysis

Bilder, R. (1981). *Managing the Risks of International Agreement*. University of Wisconsin Press.

Druckman, D. (1997). “Dimensions of International Negotiations: Structures, Processes, and Outcomes,” *Group Decision and Negotiation* 6(5): 395-420.

Druckman, D. (2001). “Turning Points in International Negotiation,” *The Journal of Conflict Resolution* 45(4): 519-544.

Druckman, D. & Albin, C. (2011). “Distributive justice and the durability of peace agreements,” *Review of International Studies* 37(3):1137-1168.

Druckman, D. & Hopmann, T. (1989). “Behavioral Aspects of Negotiations on Mutual Security,” in P. Tetlock, et al. (eds.) *Behavior, Society and Nuclear War*. Oxford University Press.

Ellsberg, D. (1961). “Risk, Ambiguity and the Savage Axioms,” *The Quarterly Journal of Economics* 75(4): 643-669.

Foerster, S., Clontz, W., Lynch, H., & Barry, W. (1989). *Defining stability: conventional arms control in a changing Europe*. Westview Press.

Goldblat, J. (2002). *Arms Control: The New Guide to Negotiations and Agreements*. Sage Publications.

Kanwisher, N. (1989). “Cognitive Heuristics and American Security Policy.” *The Journal of Conflict Resolution*. 33(4): 652-675.

Knight, F. (1921). *Risk, Uncertainty and Profit*. Houghton Mifflin.

Koremenos, B. (2005). “Contracting Around Uncertainty.” *American Political Science Review*. 99(4): 549-565.

McDermott, R. (2001). “The Psychological Ideas of Amos Tversky and their Relevance for Political Science,” *Journal of Theoretical Politics*. 13(1): 5-33.

Schelling, T. & Halperin, M. (1961). *Strategy and Arms Control*. The University of Michigan Press.

Simonelli, N. (2011). "Bargaining over International Multilateral Agreements: The Duration of Negotiations," *International Interactions*. 37(2): 147-169.

Smith, E. (1991). "Understanding Dynamic Obligations: Arms Control Agreements." *Southern California Law Review*. 64, 1549.

Tversky A. & Kahneman, D. (1974). "Judgment under Uncertainty: Heuristics and Biases," *Science* 185(4157): 1124-1131.

## Bibliography

- Adelman, K. (1984). "Arms Control with and without Agreements." *Foreign Affairs*, 63(2) 240-263.
- Beichman, A. (1991). *The Long Pretense: Soviet Treaty Diplomacy from Lenin to Gorbachev*. Transaction Publishers.
- Bennett, P. (1997). *Russian Negotiating Strategy: Analytical Case Studies from SALT and START*. Nova Science Publishers, Inc.
- Bilder, R. (1981). *Managing the Risks of International Agreement*. University of Wisconsin Press.
- Blacker, C & Duffy, G. (1984). *International Arms Control: Issues and Agreements*. 2<sup>nd</sup> ed. Stanford University Press.
- Boese, W. (2002). "U.S. Withdraws From ABM Treaty; Global Response Muted," *Arms Control Today*, 32(6).
- Borawski, J. (1979). "Mutual Force Reductions in Europe from a Soviet Perspective," *Orbis*, 22(4): 845-73.
- Brennan, D. (1961). *Arms Control, Disarmament and National Security*. Kessinger Publishing.
- Carter, A. (1989). *Success and Failure in Arms Control Negotiations*. Oxford University Press.
- Central Intelligence Agency, CIA. (1970). "Soviet ABM – Status and Prospects," *Intelligence Memorandum SR IM 70-27* (Released as sanitized 1999).
- Chasek, P. (1997). "A comparative analysis of multilateral environmental negotiations." *Group Decision and Negotiation*, 6(5) 437-461.
- Cioffi-Revilla, C. (1998). *Politics and Uncertainty: Theory, Models and Application*. Cambridge University Press.
- Clearwater, J. (1996). *Johnson, McNamara, and the Birth of SALT and the ABM Treaty 1963-1969*. Universal-Publishers.
- Cohen, M., March, J., & Olsen, J. (1972). "A Garbage Can Model of Organizational Choice." *Administrative Science Quarterly*, 17(1) 1-25.
- Collina, T. Arms Control Today. [http://www.armscontrol.org/act/2010\\_03/NewSTART](http://www.armscontrol.org/act/2010_03/NewSTART)
- Copson, M. (1989). *To Strengthen Stability and Security: CFE Negotiation on Conventional Armed Forces in Europe*. Washington, D.C.: U.S. Information Agency, U.S Department of State.

- Daase, C., & Kessler, O. (2007). "Knowns and Unknowns in the 'War on Terror': Uncertainty and the Political Construction of Danger." *Security Dialogue*, 38, 411-434.
- Dean, J. (1983). "MBFR: From Apathy to Accord," *International Security*, 7(4): 116-139.
- Dean, J. (1982). "MBFR: Ten Years of Negotiating Security in Europe," *Arms Control Today*, 18(8): 1-4.
- Dean, J. (1987). *Watershed in Europe: Dismantling the East-West military confrontation*. Lexington Books.
- Dobrynin, A. (1995). *In Confidence: Moscow's Ambassador to America's Six Cold War Presidents (1962-1986)*. Times Books, Random House, Inc.
- Druckman, D. (1997). "Dimensions of International Negotiations: Structures, Processes, and Outcomes," *Group Decision and Negotiation* 6(5): 395-420.
- Druckman, D. (2001). "Turning Points in International Negotiation," *The Journal of Conflict Resolution* 45(4): 519-544.
- Druckman, D. & Albin, C. (2011). "Distributive justice and the durability of peace agreements," *Review of International Studies* 37(3):1137-1168.
- Druckman, D. & Hopmann, T. (1989). "Behavioral Aspects of Negotiations on Mutual Security," in P. Tetlock, et al. (eds.) *Behavior, Society and Nuclear War*. Oxford University Press.
- Duncan, R. (1972). "Characteristics of Organizational Environments and Perceived Environmental Security." *Administrative Science Quarterly*, 17(3) 313-327.
- Ellsberg, D. (1961). "Risk, Ambiguity and the Savage Axioms." *The Quarterly Journal of Economics*, 75(4) 643-669.
- Farnham, B. (1997). *Avoiding Losses, Taking Risks: Prospect Theory and International Conflict*. The University of Michigan.
- Federation of American Scientists (FAS). *CFE Chronology: Conventional Forces in Europe Treaty*. <<http://www.fas.org/nuke/control/cfe/chron.htm>> Accessed May 28, 2013.
- Feldman, S. & Sigelman, L. (1985). "The Political Impact of Prime-Time Television: 'The Day After.'" *The Journal of Politics* 47(2): 556-578.
- Fischer, B. (1997). *The Reagan Reversal: Foreign Policy and the End of the Cold War*. The University of Missouri Press.
- Foerster, S., Clontz, W., Lynch, H., & Barry, W. (1989). *Defining stability: conventional arms control in a changing Europe*. Westview Press.

- Foreign Relations of the United States (FRUS), 1969–1976, Volume XXXII* (2010). "SALT I 1969-1972," eds. Erin R. Mahan and Edward C. Keefer. U.S. Government Printing Office.
- Foreign Relations of the United States (FRUS), 1969–1976, Volume XXXIX, European Security.* (2007). Edited by Douglas E. Selvage and Edward C. Keefer. Washington: United States Government Printing Office.
- Garthoff, R. (2001). *A Journey through the Cold War: A Memoir of Containment and Coexistence*. Brookings Institution Press.
- Garthoff, R. (1984). "BMD and East-West Relations," Chapter 8 In *Ballistic Missile Defense: A study jointly sponsored by the Brookings Institution and the Massachusetts Institute of Technology* eds. Ashton B. Carter and David N. Schwartz. The Brookings Institution.
- Garthoff, R. (1985). *Détente and Confrontation: American-Soviet Relations from Nixon to Reagan*. Brookings Institution.
- Garthoff, R. (1978). "SALT I: An Evaluation," *World Politics* 31(1), 1-25.
- Garthoff, R. (1986). "The Gorbachev Proposal and Prospects for Arms Control," *Arms Control Today (January/February)*: 3-6.
- Garthoff, R. (1994). *The Great Transition: American-Soviet Relations and the End of the Cold War*. The Brookings Institution.
- Glaser, C. (1994). "Realists as Optimists: Cooperation as Self-Help." *International Security*, 19(3) 50–90.
- Goldblat, J. (2002). *Arms Control: The New Guide to Negotiations and Agreements*. Sage Publications.
- Gorbachev, M. (1987a). "For a Nuclear-Free World, for the Survival of Mankind," *FBIS-SOV*, February 17, 1987.
- Gorbachev, M. (1995). *Memoirs*. Double Day.
- Gorbachev, M. (1986). *Mikhail Gorbachev's speech on Soviet Television, May 14, 1986*, Novosti Press Agency Pub.
- Gorbachev, M. (1987). *Reykjavik: Results and Lessons*. Sphinx Press.
- "Gorbachev's reflections on Reykjavik on the flight to Moscow, 12 October 1986," *The National Security Archive. (2006)*. Document 19. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- "Gorbachev statement at USSR CC CPSU Politburo session October 22, 1986." *The National Security Archive. (2006)*. Document 22. In National Security Archive Electronic

- Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- Gottemoeller, R. (2002). "Arms Control in A New Era." *The Washington Quarterly*, 25(2) 45-58.
- Hansen, J. H. (2007). "Soviet Deception in the Cuban Missile Crisis: Learning from the Past," *Center for the Study of Intelligence: Studies in Intelligence* 46(1), 49-58. Retrieved from <https://www.cia.gov/library/center-for-the-study-of-intelligence/csi-publications/csi-studies/studies/vol46no1/article06.html> (Accessed March 1, 2011).
- Herszenhorn, D.M. NY Times: Russia Elevates Warning About U.S. Missile-Defense Plan in Europe , November 23, 2011. Last accessed August 13, 2012. <http://www.nytimes.com/2011/11/24/world/europe/russia-elevates-warning-about-us-missile-defense-shield-plan.html>
- Hines, John C.; Mishulovich, Ellis M., & Shull, John F. (1995). "Soviet Intentions 1965-1985," *An Analytical Comparison of U.S.-Soviet Assessment During the Cold War* Volume I. McLean, VA: BDM Federal, Inc.
- Hopmann, T. (1993). "From MBFR to CFE: Negotiating Conventional Arms Control in Europe" in Richard Dean Burns eds., *Encyclopedia of Arms Control and Disarmament*, Vol. II. Charles Scribner's Sons: 967-989.
- "Intermediate-Range Nuclear Forces [INF]," *Federation of American Scientists*. Retrieved from <http://www.fas.org/nuke/control/inf/> Accessed July 30, 2013.
- Jervis, R. (1978). "Cooperation under the Security Dilemma." *World Politics: A Quarterly Journal of International Relations*, 30(2), 167-214.
- Jervis, R. (1993). "The Drunkard's Search." In (chap. 12) *Explorations in Political Psychology*. Duke University Press.
- Jervis, R. (2010). *Why intelligence fails: Lessons from the Iranian revolution and the Iraq war*. Cornell University Press.
- Kahneman, D., Slovic, P., & Tversky, A. (1982). *Judgment under Uncertainty: Heuristics and Biases*. Cambridge University Press.
- Kanwisher, N. (1989). "Cognitive Heuristics and American Security Policy." *The Journal of Conflict Resolution*. 33(4), 652-675.
- Keliher, J. (1980). *The Negotiations on the Mutual and Balanced Force Reductions: The Search for Arms Control in Central Europe*. Elmsford, Pergamon Press Inc.
- Kissinger, H. (2011). *White House Years*. Simon and Schuster.
- Knight, F. (1921). *Risk, Uncertainty and Profit*. Houghton Mifflin.

- Koremenos, B. (2005). Contracting around international uncertainty. *American Political Science Review*, 99(04), 549-565.
- Kull, S. (1990). *Minds at War: Nuclear Reality and the Conflicts of Defense Policymakers*. Basic Books.
- Larsen, J. (2002). *Arms Control: Cooperative Security in a Changing Environment*. Lynne Reiner Publishers.
- Lax D. & Sebenius, J. (1986). *The Manager as Negotiator*. Simon and Schuster, Inc.
- Levy, J. (1997). "Prospect theory, rational choice, and international relations." *International Studies Quarterly*, 41(1) 87-112.
- Lindblom, C. (1959). "The Science of 'Muddling Through'." *Public Administration Review*, 19(2) 79-88.
- Luce, R., & Raiffa, H. (1957). *Games and Decisions: Introduction and Critical Survey*. Dover Publications.
- Mandelbaum, M. & Talbott, S. (1986). "Reykjavik and Beyond," *Foreign Affairs* 65(2): 215-235.
- Matlock Jr., J. (2004). *Reagan and Gorbachev: How the Cold War Ended*. Random House.
- McDermott, R. (1998). *Risk-Taking in International Politics: Prospect Theory in American Foreign Policy*. The University of Michigan Press.
- McDermott, R. (2001). "The Psychological Ideas of Amos Tversky and their Relevance for Political Science." *Journal of Theoretical Politics*, 13(1): 5-33.
- Mearsheimer, J. (1994). "The False Promise of International Institutions." *International Security*, 19(3), 5-49.
- "Mikhail Gorbachev letter to Ronald Reagan, 15 September 1986." *The National Security Archive*. (2006). Document 1. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- Milliken, F. (1987). "Three Types of Perceived Uncertainty about the Environment: State, effect, and response uncertainty." *Academy of Management Review*, 133-143.
- Mitzen, J. & Schweller, R. (2011). "Knowing the Unknown Unknowns: Misplaced Certainty and the Onset of War," *Security Studies*, 20(1) 2-35.
- National Security Council Files (Richard Nixon Presidential Library, RNPL). (2007). "Henry Kissinger and Anatoly Dobrynin's Notes of Conversation, June 11, 1969," Box 489, (Dobrynin/Kissinger 1969 Part II), *In Soviet-American Relations: The Détente Years, 1969-1972* Eds. David C. Geyer and Douglas E. Selvage, U.S. Department of State Publication 11438, 64-70. U.S. Government Printing Office.

- NATO. (1988). *Conventional Arms Control*. Statement issued by the North Atlantic Council Meeting in Ministerial Session at NATO headquarters. Press Communiqué M3 (88) 75. NATO Press Service, December 8.
- Newhouse, J. (1973). *Cold dawn: the Story of SALT*. Holt, Rinehart and Winston.
- Newhouse, J. (1989). *War and Peace in the Nuclear Age*. Knopf.
- New York Times. (1989). "President's Statement on the New Arms Plan." May 30: A-3.
- Nitze, P. (1989) *From Hiroshima to Glasnost: At the Centre of Decision*. Grove Weidenfeld.
- Nixon, R. (1968). "Address Accepting the Presidential Nomination at the Republican National Convention in Miami Beach, Florida," August 8, 1968. Online by Gerhard Peters and John T. Woolley, *The American Presidency Project*. Retrieved from <http://www.presidency.ucsb.edu/ws/?pid=25968>. (Accessed July 1, 2013).
- North Atlantic Treaty Organization (NATO). *Mutual And Balanced Force Reductions: the Reykjavik Signal*, Declaration adopted by Foreign Ministers and Representatives of Countries participating in the NATO Defence Program, North Atlantic Council, Reykjavik 24-25<sup>th</sup>, 1968. <http://www.nato.int/docu/comm/49-95/c680624b.htm> (accessed May 28, 2013).
- Novosti Press Agency. (1989). "Speech by Soviet Foreign Minister Eduard Shevardnadze at CFE Plenum in Vienna." March 6.
- Nye, J. "Nuclear Risk Reduction Measures and U.S.-Soviet Relations," in Barry Blechman, ed., *Preventing Nuclear War*. Bloomington, IN: Indiana University Press, 1985.
- Oberdorfer, D. (1998). *From the Cold War to a New Era: The United States and the Soviet Union 1983-1991*. The John Hopkins University Press.
- Oberdorfer, D. (1992). *The Turn how the Cold War came to an End*. Jonathan Cape.
- O'Neill, B. (2001). "Risk Aversion in International Relations Theory," *International Studies Quarterly*, 45(4) 617-640.
- Panofsky, W. (1988). "Reykjavik and Beyond: Implications of Deep Reductions in Strategic Nuclear Arsenals and the Future Direction of Arms Control," In *Reykjavik and Beyond: Deep Reductions in Strategic Nuclear Arsenals and the Future Direction of Arms Control*, Brooking Institution, 1-10.
- Payne, S. (1980). *The Soviet Union and SALT*. The MIT Press.
- Pennings, J. (1981). "Strategically Interdependent Organizations." In *Handbook of Organization Design*. Oxford University Press.
- Perminova, O., Gustafsson, M., & Wikstrom, K. (2008). "Defining Uncertainty in Projects—a New Perspective." *International Journal of Project Management*, 26(1), 73–79.

- Peters, J. (1997). *CFE and Military Stability in Europe*. Prepared for the Office of the Secretary of Defense by RAND's National Defense Research Institute. RAND Corporation.
- Pfeffer, J. & Salancik, G. R. (1978). *The External Control of Organizations: A Resource Dependence Perspective*. Harper and Row.
- Pifer, S. & O'Hanlon, M. (2012). *The Opportunity: Next Steps in Reducing Nuclear Arms*. Brookings Institution Press.
- Pravda. (1988). "Warsaw Pact States' Statement on Talks on Armed Forces and Conventional Arms Reduction in Europe." Statement adopted by Political Consultative Committee of the Warsaw Treaty Organization, Warsaw, July 16: 1-2.
- Raiffa, H. (2002). *Negotiation Analysis*. Harvard University Press.
- Ranger, R. (1979). "An alternative future for MBFR: A European Arm-Control Conference," *Survival: Global Politics and Strategy*, 21(4): 164-171.
- Rathbun, C. (2007). "Uncertain about Uncertainty: Understanding the Multiple Meanings of a Crucial Concept in International Relations Theory," *International Studies Quarterly*, 51(3), 533-557.
- Reagan, R. (1990). *An American Life*. Simon and Schuster.
- "Reagan letter to Gorbachev," classified Secret/Sensitive on July 25, 1986 in *Executive Secretariat NSC: Head of State File: Records, 1981-1989, USSR: General Secretary Gorbachev (8690529)*. Box 40. RRPL.
- Record, J. (1980). *Force Reductions in Europe: Starting over*. Institute for Foreign Policy Analysis, Inc.
- Rhodes, R. (2007). *Arsenals of Folly: The Making of the Nuclear Arms Race*. Knopf.
- Rohn, L. (1990). *Conventional forces in Europe: a new approach to the balance, stability, and arms control*. RAND Corporation.
- Rotfeld A. & Anthony I. (1999). *A Future Arms Control Agenda: Proceedings of Nobel Symposium 118*. Oxford University Press.
- "Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (morning) 11 October 1986," Published in FBIS-USR-93-061, 17 May 1993. *The National Security Archive. (2006)*. Document 10. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- "Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (afternoon) 11 October 1986," Published in FBIS-USR-93-087, 12 July 1993. *The National Security Archive. (2006)*. Document 12. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.

- “Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (afternoon) 12 October 1986.” Published in FBIS-USR-93-121, 20 September 1993. *The National Security Archive. (2006)*. Document 16. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- “Russian transcript of Reagan-Gorbachev Summit in Reykjavik, (morning) 12 October 1986.” Published in FBIS-USR-93-113, 30 August 1993. *The National Security Archive. (2006)*. Document 14. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- Savel’ev, A. & Detinov, N. (1995). *The Big Five: Arms Control Decision-making Mechanism in the Soviet Union*. Praeger Publishers.
- Schelling, T. (1985-1986). “What Went Wrong with Arms Control?” *Foreign Affairs* 64(2): 219-233.
- Schelling, T. & Halperin, M. (1985). *Strategy and Arms Control*. The University of Michigan Press.
- Sharp, J. (1996). *About Turn, Forward March with Europe: New Directions for Defence and Security Policy*. Rivers Oram Press.
- Sharp, J. (2006). *Striving for Military Stability in Europe: Negotiation, Implementation and Adaptation of the CFE Treaty*. Routledge.
- Shoumikhin, A. (2008). *Goals and Methods of Russian Arms Control Policy: Implications for U.S. Security*, National Institute Press.
- Shulman, M. D. (1974). “SALT and the Soviet Union” In *SALT: The Moscow Agreement and Beyond* Eds. Mason Willrich and John B. Rhineland, 101-121. The Free Press
- Shultz, G. (1993). *Turmoil and Triumph: My Years As Secretary of State*. Scribner's.
- Simonelli, N. (2011). “Bargaining over international multilateral agreements: The duration of negotiations.” *International Interactions*. 37(2): 147-169.
- Singer, D. J. (1962). *Deterrence, Arms Control, and Disarmament*. University of Ohio Press.
- Smith, E. (1991). “Understanding Dynamic Obligations: Arms Control Agreements.” *Southern California Law Review*. 64.
- Smith, G. (1985). *Doubletalk: The Story of SALT*. University Press of America.
- Stanton, F. (2010). *Great Negotiations: Agreements that Changed the Modern World*. Westholme Publishing.
- Starkey, B., Boyer, M., & Wilkenfeld, J. (2005). *Negotiation in a Complex World: An introduction to international negotiation*. Rowman & Littlefield Publishers.

- Steinbruner, J. D. (1981-1982, Winter). "Nuclear Decapitation," *Foreign Policy* (45), 16-28.
- Steinbruner, J. D. (1988). "The Purpose and Effect of Deep Strategic Force Reductions," In *Reykjavik and Beyond: Deep Reductions in Strategic Nuclear Arsenals and the Future Direction of Arms Control*, Brookings Institution, 11-18.
- Talbott, S. (1980). *Endgame: The Inside Story of SALT II*. Harper & Row.
- The National Security Archive. (2006). "The Reykjavik File: Previously Secret Documents from U.S. and Soviet Archives on the 1986 Reagan-Gorbachev Summit," In *National Security Archive Electronic Briefing Book No. 203* eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- Tversky, A. & Kahneman, D. (1974). "Judgment under Uncertainty: Heuristics and Biases," *Science New Series*, 185(4157) 1124-1131.
- Underdal, A. (1991). "The Outcome of Negotiation." in Kremenyuk, V. ed. *International Negotiation*. Jossey-Bass.
- U.S. Department of State's Bureau of International Security and Nonproliferation. (1972). *Interim Agreement Between The United States of America and The Union of Soviet Socialist Republics on Certain Measures With Respect to the Limitation of Strategic Offensive Arms*, the Narrative. Retrieved from <<http://www.state.gov/t/isn/4795.htm#narrative>>, accessed May 28<sup>th</sup>, 2013.
- U.S. Department of State's Bureau of International Security and Nonproliferation. (1972). *Interim Agreement Between The United States of America and The Union of Soviet Socialist Republics on Certain Measures With Respect to the Limitation of Strategic Offensive Arms*, the Treaty Text. Retrieved from <<http://www.state.gov/t/isn/4795.htm#narrative>>, accessed May 28<sup>th</sup>, 2013.
- U.S. House. Committee on Armed Services. (1987). *The Reykjavik Process: Preparation For and Conduct of the Iceland Summit and Its Implications for Arms Control Policy*. Washington: Government Printing Office. (99<sup>th</sup> Congress, 2<sup>nd</sup> Session, No. 25).
- "U.S. Memorandum of Conversation, Reagan-Gorbachev, (first meeting) 11 October 1986." *The National Security Archive. (2006)*. Document 9. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- "U.S. Memorandum of Conversation, Reagan-Gorbachev, (third meeting) 12 October 1986." *The National Security Archive. (2006)*. Document 13. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- "U.S. Memorandum of Conversation, Reagan-Gorbachev, (final Meeting) 12 October 1986." *The National Security Archive. (2006)*. Document 15. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.

- “USSR CC CPSU Politburo discussion of Reagan's response to Gorbachev's initiative to meet in Reykjavik and strategic disarmament proposals, 22 September 1986,” *The National Security Archive*. (2006). Document 2. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- “USSR CC CPSU Politburo session on results of the Reykjavik Summit, 14 October 1986,” *The National Security Archive*. (2006). Document 21. In National Security Archive Electronic Briefing Book No. 203 eds. Svetlana Savranskaya and Thomas Blanton. George Washington University.
- Wallander, C., & Keohane, R. (2002). *Risk, Threat and Security Institutions*. Psychology Press.
- Winham, G. (1977). “Negotiation as a Management Process.” *World Politics*. 30(01), 87-114.
- Wink, J. (1996). *On the Brink: The Dramatic Behind the Scenes Saga of the Reagan Era and the Men and Women who Won the Cold War*. Simon and Schuster.
- Winkler, T. (1982). “Arms Control and the Politics of European Security,” *International Institute for Strategic Studies*, Adelphi Papers No. 177.
- Woolf, A.F. (2011). “Monitoring and Verification in Arms Control,” *Congressional Research Service*, R41201. Last accessed August 13, 2012.  
<http://www.fas.org/sgp/crs/nuke/R41201.pdf>
- Zamyatin, L.N. & Novikov, K.Y. (1969). “TASS, Radio Moscow, January 20, 1969,” In Foreign Broadcast Information Service, *Daily Report: Soviet Union*, January 21, 1969, A8. The formal TASS statement also appeared in Pravda, January 21, 1969.

## Appendix A: Alphabetical List of Arms Control Negotiations and Agreements in Dataset

### 1. Accident Measures Agreement (1971)

A bilateral agreement between the United States and Soviet Union to implement notification and warning systems in order to avoid accidental nuclear disasters or war.

### 2. Antisatellite (ASAT) Agreement (1979)

Negotiations between the United States and Soviet Union regarding a treaty to limit the use of Anti-Satellite technology that were suspended when the Soviet Union invaded Afghanistan in 1979.

### 3. Baruch Plan (1946)

A U.S. Government plan that proposed the elimination of nuclear weapons and other WMDS and the establishment of an International Atomic Development Agency to control and facilitate peaceful nuclear development.

### 4. Bilateral Destruction Agreement (1990)

A bilateral agreement between the US and the USSR calling for the destruction of a large chunk of each state's chemical weapons supply and related production facilities.

### 5. Biological Weapons Convention (BWC) (1972)

A multilateral treaty that prohibits the development, production, or stockpiling of biological and toxin weapons; currently it has 168 states party to it.

### 6. Chemical Weapons Convention (CWC) (1993)

A multilateral treaty that bans the development, production, and usage of chemical weapons and requires the destruction of existing stockpiles, building on the 1925 Geneva Protocol.

### 7. Code of Conduct on Politico-Military Aspects of Security (1994)

A multilateral treaty outlining broad rules for encouraging security, including protection of democratic governance of both the state and its military, restrictions on using national military (especially against own civilians), and institutions for increased dialogue among states.

### 8. Conventional Arms Transfer (CAT) Talks (1979)

Bilateral talks between the U.S. and USSR aimed at placing certain restrictions on the conventional arms trade.

### 9. Conventional Forces in Europe (CFE) Treaty (1990)

Multilateral treaty between 29 European states and the US, aimed at placing equal limitations on armaments for NATO member states and former Warsaw Pact states.

10. Coordinating Committee for Multilateral Export Controls (COCOM) (1949)

A 17-member (plus several more associated states) Western bloc committee on export control, created with the express purpose of ensuring an arms embargo on Warsaw Pact states.

11. Comprehensive Test Ban Treaty (CTBT) (1996)

A multilateral treaty that bans all nuclear testing—at any threshold. Many states (including the United States) have still found methods to test nuclear technology without violating it.

12. Dangerous Military Activities (DMA) Agreement (1989)

A bilateral agreement between the US and the USSR aimed at defusing tensions between the two states by establishing some military ground rules to prevent “dangerous” activities such as: entering another state’s territory accidentally, using a laser in a manner which could cause harm, interfering with another state’s command and control, or interfering with military activities in Special Caution Areas.

13. ENMOD Convention (1978)

A multilateral treaty banning the military or other hostile use of environmental modification technology; also bans weather warfare.

14. Geneva Summit (1985)

Summit between the US and USSR to discuss pertinent arms control issues; although no agreement came out of it, Reagan and Gorbachev issued a joint statement and agreed to meet in the future.

15. Geneva Surprise Attack Conference GSAC (1958)

A multilateral conference aimed at preventing surprise attacks by restraining the threat of nuclear confrontation and the spiraling arms race.

16. Helsinki CBM (1975)

A multilateral treaty aimed at increasing global security; covered a number of issues including trade, immigration, scientific cooperation, and most importantly, inter-military confidence building measures.

17. Hotline Agreement (1963)

A bilateral agreement between the US and USSR that establishes a direct emergency communications link between the two capitals to avoid accidental outbreak of (nuclear) conflict.

18. Incidents at Sea Agreement (1972)

A bilateral agreement between the U.S. and USSR that establishes a naval code of conduct in order to prevent miscommunications and accidental hostilities.

19. Intermediate Forces (INF) Treaty (1987)

A bilateral treaty between the US and USSR banning the production or testing of intermediate- or short-range nuclear forces and requiring the elimination of existing stockpiles.

20. Lisbon Protocol (1992)

An agreement to the Treaty on the Non-Proliferation of Nuclear Weapons by the representatives of Russia, Belarus, Ukraine, and Kazakhstan committing the three non-Russian former Soviet states to return their nuclear weapons to Russia.

21. Missile Technology Control Regime (MTCR) (1992)

A non-treaty association of governments (34 member states plus several more “unilateral adherents”) that works to prevent the proliferation of missiles, rocket systems, or UAVs.

22. Moon Agreement (1979)

A multilateral agreement that supplements the Outer Space treaty and confirms the demilitarization of the moon and other celestial bodies.

23. Mutual and Balanced Force Reduction (MBFR) Talks (1989)

A series of talks between NATO and Warsaw Pact states between 1973-1989 aimed at the conventional demilitarization of Europe, with focus on removing conventional weapons from Germany (East and West), the Netherlands, Luxembourg, Belgium, Czechoslovakia, and Poland.

24. New START (2010)

A bilateral treaty between Russia and the U.S. that limits the stockpiles and deployment of certain classes of missiles (ICBMs, SLBMs, heavy bombers); set to expire in 10 years.

25. Non-Proliferation Treaty (NPT) (1968)

A multilateral treaty aimed at preventing the spread of nuclear weapons from the five authorized nuclear states, the gradual disarmament of those nuclear states, and the development of peaceful nuclear technology.

26. Open Skies Treaty (1992)

A multilateral treaty establishing a regime of unarmed observation flights through the airspace of member states (currently 34), in order to increase transparency and information about military forces primarily in Europe.

27. Outer Space Treaty (1967)

A multilateral treaty that prohibits placing nuclear weapons in outer space or the military use of celestial bodies and encourages development of peaceful uses for outer space.

28. Partial Test Ban Treaty (PTBT) (1963)

A multilateral treaty banning all nuclear tests except underground in order to curb an arms race and reduce nuclear fallout in the atmosphere.

29. Peaceful Nuclear Explosions Treaty (PNET) (1976)

A bilateral treaty between the US and the USSR governing all underground nuclear explosions, allowing those for peaceful purposes (although it did not differentiate between technology for weapons and technology for peace).

30. Prevention of Nuclear War Agreement (1973)

A bilateral agreement between the US and the USSR to affirm both states' commitment to avoiding nuclear war and defusing situations that could lead to nuclear war.

31. Reykjavik Summit (1986)

Talks between the United States and the Soviet Union encompassing missile defense, human rights, and the Soviet invasion of Afghanistan; collapsed at the last minute, but led to the INF treaty.

32. SALT I (1972) – Interim Agreement

A bilateral negotiation between the U.S. and Soviet Union that resulted in the Interim Agreement, which placed limitations on ICBMs and SLBMs.

33. SALT I (1972) – ABM Agreement

A product of the same negotiations that resulted in the Interim Agreement, the ABM Treaty between the United States and Soviet Union limited the use of Anti-Ballistic Missile systems in defense against missile-delivered nuclear weapons. The United States withdrew in 2002.

34. SALT II (1979)

A second set of bilateral negotiations between the US and USSR, which resulted in the Vienna Agreement, which aimed to put concrete limits on strategic launchers. Never ratified, although implemented. The US withdrew in 1986.

35. Seabed Treaty (1971)

A multilateral treaty preventing the installment of WMDs on the seabed beyond a 12-mile territorial limit; in the same vein as Outer Space and Antarctica treaties, to prevent an arms race from starting.

36. Strategic Offensive Reductions Treaty (SORT) (2002)

A bilateral treaty between the United States and Russia that affirms START I and further reduces each country's nuclear arsenals.

37. START I (1991)

A multilateral treaty (originally bilateral, but affected by the breakup of the Soviet Union) placing concrete reduction requirements on US and Soviet (then Russian) nuclear arsenals.

38. START II (1993)

A bilateral treaty between the US and Russia placing further restrictions on nuclear arsenals, building on and complementing START I; Russia withdrew in 2002 in response to US withdrawal from ABM treaty.

39. Stockholm CDE (1986)

A multilateral agreement designed to increase transparency and information about military activities in Europe to build stability and confidence.

40. Threshold Test Ban Treaty (1974)

A bilateral treaty between the US and USSR establishing a threshold for nuclear tests: no weapon tested can have a yield greater than 150 kilotons.

41. Trilateral Comprehensive Test Ban Negotiations CTB (1981)

A trilateral agreement that bans all nuclear testing between the United States, the Soviet Union, and the United Kingdom where concerns regarding verification emerged.

42. Vienna Document (1990)

A multilateral agreement on Confidence- and Security-Building Measures (CSBMs) where the evaluation of exchanged military information (AEMI) was introduced.

43. Wassenaar Arrangement (1995)

A multilateral arrangement controlling the production, use, and trade of certain conventional weapons and potentially dual-use technologies.

## Appendix B: Codesheet Part I

Welcome! Thank you for participating in data collection for this project. This survey is a computer assisted coding device designed to facilitate the process. Please read the following instructions carefully!

1. The link you received for the survey is a 'unique identifier' that is tagged to the particular negotiation you are coding. You'll receive a new/separate link for each negotiation.
2. Complete this survey one time for each negotiation you are coding. You must complete the survey for a single negotiation before beginning again for another negotiation.
3. The survey seems to work best using Firefox.
4. Find a bookmarking system that works well for you so that you do not have to code in one sitting. The survey format allows you to save and come back later by providing a link to your saved location. You may want to save the link to your bookmarks and change the bookmark's name to the name of the negotiation you are coding. If you save and come back later, update the name of the bookmark/link to your location in the survey so that you can help yourself keep track of where in the survey you are or which state you are currently coding. You may want to create multiple links as you progress through the survey so that you can come back to previous points.. Alternatively, you may want to simply keep the tab open on your computer if you tend to leave your computer on all the time.
5. You will have the ability to move forward and back through the survey. However, you will only be able to advance or move forward after you've completed the required questions.
6. You should only use documents listed in the primary and secondary source lists for each agreement. Avoid Google or Wikipedia.
7. Most questions require that you include at least one document number. This number should correspond to the document in which you found the information to answer the question, as numbered in the spreadsheet for that negotiation. For all questions for which there is a second document number entry box that is optional.
8. SAVE, SAVE, SAVE. Save often. Save continuously.

**Enter your first and last initials and click 'Next' to begin.**

### Section 1: General Negotiation Information

The following section asks a series of general questions about the negotiation.

**[1.1] What is the full name of the negotiation/agreement?**

Document #s (Reminder: Enter multiple document numbers separated by commas.)

**[1.2] What is the negotiation's nickname or abbreviated name?**

Document #s

**[1.3.1] What is the date the official/formal negotiations began?**

\_\_\_/\_\_\_/\_\_\_ (YYYY/MM/DD)

Document #s

**[1.3.2] What is the date the official/formal negotiations ended?**

Note: for some cases for which agreement was reached, this date may not be the same date as that on which the document was opened for signature.

\_\_\_/\_\_\_/\_\_\_ (YYYY/MM/DD)

Document #s

**[1.4] How many rounds of negotiations were there during these talks?**

Don't know

Document #s

**[1.5] Was there a third party, mediator, or supporting state, organization or institution involved in the negotiation? If "yes," indicate its name.**

Yes \_\_\_\_\_

No

Don't know

Document #s

**[1.6] What type(s) of arms control or restraint best applies to the subject matter of this negotiation?**

First try and choose the "best option." If there are more than one, indicate.

- Nuclear weapon explosions (including testing)
- Nuclear arms limitations (sets number of arms)
- Nuclear weapons proliferation
- Chemical and biological weapons
- Environmental and radiological weapons
- Outer space and celestial bodies
- The sea environment
- Demilitarized areas
- Denuclearized zones
- Conventional arms control
- Constraints on conventional arms and technology transfers
- Confidence-building and security measures (see codebook)
- Restriction on methods of warfare (including elimination of entire class of weapons)
- Prevention of accidental war
- Don't know

Document #s

**[1.7] Were there any negotiations conducted simultaneously with this negotiation for potential parallel agreements?**

Tip: This question asks about a complementary negotiation process, which concerns provisions that are meant to work hand-in-hand with those being pursued in this agreement. This does not refer to cotemporaneous negotiations. If the answer is "yes," indicate which negotiations or agreements. Example: An agreement parallel to the Conventional Forces in Europe Treaty would be the Open Skies Treaty.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[1.8] Are there any associated agreements, including those that directly precede or follow (replace) this negotiation/agreement?**

If "yes," indicate which agreement(s). Example: An agreement associated with SALT II would be SALT I.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[1.9] Was an agreement reached?**

- Yes
- No
- Don't know

Document #s

**[1.9.1] Classify the type of agreement reached.**

- Treaty
- Convention
- Statute
- Articles of Agreement
- Protocol
- Exchange of Notes
- Informal Agreement
- Unilateral Declaration
- Agreement
- Protocol
- Other \_\_\_\_\_

Document #s

**[1.9.2] Did the agreement enter into force (EIF)?**

- Yes
- No
- Don't know

Document #s

**[1.9.2.a] What date did the agreement enter into force (EIF)?**

Leave blank if it never entered into force.

\_\_\_/\_\_\_/\_\_\_ (YYYY/MM/DD)

Document #s

**[1.10] Were negotiations suspended at any point in time?**

- Yes
- No
- Don't know

Document #s

**[1.10.1] Choose the choice option that best applies to suspension of negotiations:**

- Temporary
- Permanent
- Other, please specify... \_\_\_\_\_

Document #s

**[1.11] Did informal talks take place prior to the negotiations?**

- Yes
- No
- Don't know

Document #s

**[1.11.1] What was the date informal talks began?**

\_\_\_/\_\_\_/\_\_\_ (YYYY/MM/DD)

Document #s

**[1.11.2] What was the date informal talks ended?**

\_\_\_/\_\_\_/\_\_\_ (YYYY/MM/DD)

Document #s

**[1.12] Did informal talks take place during the negotiations?**

- Yes
- No
- Don't know

Document #s

**[1.12.1] Were informal talks during the negotiations a singular incident, or ongoing?**

- Singular incident
- Ongoing
- Don't know

Document #s

**[1.12.2] How would you classify the informal talks that took place during the negotiations?**

- Back channel
- On the margins, or side meetings
- Other, please specify... \_\_\_\_\_

Document #s

If you indicated that no agreement was reached for this negotiation, the survey will continue with Section 8, and skip Section 6 (which asks about the durability of the agreement reached) and Section 7 (which asks about treaty terms negotiated).

Click 'Next' to continue.

## Section 6: Durability of Agreement

The next question asks a series of questions regarding the durability of the agreement for the negotiation currently being coded.

### [6.1] Is the agreement in force today?

- Yes
- No, it has ended
- No, it never entered into force
- Don't know

Document #s

### [6.2] Was the agreement designed or intended to be permanent, be renewable, or to expire?

- Permanent
- Renewable
- Expire
- Don't know
- Other, please specify... \_\_\_\_\_
- No agreement reached.

Document #s

### [6.3] How long did the agreement last?

Enter total duration of the agreement (from entry into force until end or withdrawal) in days. If still in force, or there is no expiration date, or if agreement never entered into force, select 'N/A.'

- N/A

Document #s

**[6.4] Would you classify the agreement as "legally binding" (as opposed to a "politically binding" agreement (like the Vienna Document or an informal agreement)?**

- Legally binding
- Politically binding
- Neither
- Don't know
- Other, please specify... \_\_\_\_\_

Document #s

**[6.5] Did any state party to the agreement withdraw from it at any time?**

If "yes," indicate which state party withdrew.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[6.6] What date did the agreement terminate?**

Leave blank if still in force or never entered into force. If still in force and there is an expiration date, enter that instead.

\_\_\_/\_\_\_/\_\_\_ (YYYY/MM/DD)

Document #s

**[6.7] Did any state (including cosigners) violate the terms of the agreement at any time?**

If "yes," indicate how many states violated the agreement.

- Yes
- No
- Don't Know

Document #s

**[6.7.a] How many states violated the agreement?**

Document #s

**[6.7.b] Enter the name of violating state # {{ numStateViolate }}**

**[6.7.b] Explain the nature of state {{ numStateViolate }}'s violation.**

Document #s

**[6.8] Additional coder comments regarding the durability of the {{ nickName }} agreement:**

## **Section 7: Treaty Terms**

This section includes questions regarding details of the final agreement reached.

**[7.1] Could the final agreement be described as “broad” or “elaborate”**

- Yes
- No
- Don't know

Document #s

**[7.1.a] Which of the following describe the nature of the “broad” or “elaborate” agreement?**

- Agreement with multiple restrictions
- Agreement on multiple types of weapons

- Agreement on multiple issues
- Other, please specify... \_\_\_\_\_

Document #s

**[7.2] Could the final agreement that be described as “heavily detailed”?**

If "yes," explain.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[7.3] Could the final agreement be described as “vague” or “ambiguous”?**

If "yes," explain.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[7.4] Does the final agreement cover more, less or exactly what negotiators set out to cover?**

Explain.

- More \_\_\_\_\_
- Less \_\_\_\_\_
- Exactly the same
- Don't know

Document #s

**[7.5] Does the agreement establish thresholds or ceiling limitations of weapons?**

- Yes

- No
- Don't know

Document #s

**[7.5.a] Do the ceilings established do any of the following?**

- Exceed current stockpiles
- Limit holdings at the current number
- Necessitate reduction

Document #s

**[7.5.b] Could you, for any reason, classify the ceilings as "artificially high?"**

If "yes," explain.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[7.6] Does the agreement include a limitation on defensive weaponry?**

- Yes
- No
- Don't know

Document #s

**[7.6.a] Is the defensive limitation symmetric or asymmetric?**

- Symmetric
- Asymmetric
- Other \_\_\_\_\_
- Don't know

Document #s

**[7.7] Does the agreement include a limitation on offensive weaponry?**

- Yes
- No
- Don't know

Document #s

**[7.7.a] Are the limitations symmetric or asymmetric?**

	Symmetric	Asymmetric	Other Configuration	Don't know
Warheads or Missiles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Delivery Vehicles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Offensive Weapon Type	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Document #s

**[7.7.b] If you chose "other" for offensive weapon type, explain what other type of offensive weapon was subject to limitations.**

Document #s

**[7.8] Does the agreement ban or restrict future defensive or offensive weaponry?**

If "yes," explain.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[7.9] Does the agreement ban an entire weapon class or category (such as ASAT or Intermediate Range Missiles)?**

- Yes
- No
- Don't know

Document #s

**[7.10] Does the agreement ban the testing of weapons?**

- Yes
- No
- Don't know

Document #s

**[7.11] Does the agreement establish a system of notification?**

- Yes
- No
- Don't know

Document #s

**[7.12] Does the agreement establish a verification regime?**

- Yes
- No
- Don't know

Document #s

**[7.12.a] Verification is to be executed by which of the following means?**

- National means
- Inspection regime
- Other, please specify... \_\_\_\_\_

Don't know

Document #s

**[7.13] Does the agreement establish a data exchange or data sharing regime?**

- Yes, for public use
- Yes, for private use
- Yes, with annual data exchange/sharing
- None of the above
- Other, please specify... \_\_\_\_\_
- Don't know

Document #s

**[7.14] Does the agreement include provisions for a review conference?**

If "yes," describe: What kind? How often?

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[7.15] Does the agreement establish or draw on an existing international institution or organization for the purposes of implementation?**

- Establish
- Draw on existing
- Neither
- Don't know

Document #s

**[7.16] Does the agreement establish a system for the exchange of warnings?**

- Yes

- No
- Don't know

Document #s

**[7.17] Does the agreement provide for the sharing of intelligence?**

- Yes
- No
- Don't know

Document #s

**[7.18] Does the agreement address reductions/limitations of military bases?**

- Yes
- No
- Don't know

Document #s

**[7.19] Does the agreement reduce or limit quantities of fissionable or other material?**

- Fissionable material
- Other material, please specify... \_\_\_\_\_
- None
- Don't know

Document #s

**[7.20] Does the agreement establish lines of open communication?**

- Yes
- No
- Don't know

Document #s

**[7.21] Does the agreement establish provisions for surveillance?**

- Yes, by national means (explain) \_\_\_\_\_
- Yes, by any other means
- No
- Don't know

Document #s

**[7.22] Does the agreement include a unilateral denunciation or withdrawal clause?**

- Yes
- No
- Don't know

Document #s

**[7.23] Does the agreement establish a buffer (demilitarized) zone?**

- Yes
- No
- Don't know

Document #s

**[7.24] Does the agreement include provisions for confidence building measures not specified above?**

If "yes," explain.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[7.25] Is the agreement non-binding?**

- Yes
- No
- Don't know

Document #s

**[7.26] Does the agreement have a fixed duration?**

If "yes," what is it (in years)?

- No
- Don't know
- Yes \_\_\_\_\_

Document #s

**[7.27] Does the agreement have a trial or provisional application period?**

If yes, what is it?

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[7.28] Regarding the agreement's entry into force provisions, was the {{ nickName }} agreement's entry into force:**

Check all that apply. If none, leave blank.

- Set to begin on a specific date?
- Contingent upon the exchange of instruments of ratification?
- Contingent upon the exchange of instruments of notification?
- Contingent upon a certain number of states ratifying the agreement?
- Contingent upon certain states (or category of states) ratifying the agreement?
- Contingent upon something else? \_\_\_\_\_

Left flexible or to be determined at a future point in time?

Document #s

**[7.29] Did the agreement have any kind of 'provisional application.'**

- Yes
- No

Document #s

**[7.30] Does the agreement include any exception clauses?**

If "yes," explain.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[7.31] Did any state enter into the {{ nickName }} agreement 'with reservation?'**

A reservation is a declaration made by a state by which it purports to exclude or alter the legal effect of certain portions of the treaty insofar as they apply to that state. A reservation enables a state to accept a multilateral treaty as a whole by giving it the possibility not to apply certain provisions--ones to which it does not want to comply.

- Yes
- No
- Don't know

Document #s

**[7.31.a] How many states entered into the agreement with reservation?**

Document #s

**[7.31.b] Enter the name of the {{ rsrvStatesNum }}st/nd/rd state to sign the {{ nickName }} agreement with reservation:**

Document #s

**[7.32] Is the final agreement broken down into parts or components?**

Example: The SALT negotiations were a single process that resulted in two separate agreements (documents)--the ABM Treaty and the Interim Agreement. These are separate components.

- Yes. Explain. \_\_\_\_\_
- No
- Don't know

Document #s

**[7.33] Additional coder comments regarding managing uncertainty and treaty terms:**

Please indicate treaty terms not captured by questions asked in this coding device.

## **Section 8: Negotiation Process**

This section asks a series of questions about factors that pertain to the negotiation process.

**[8.1] Identify all modes through which offers/proposals were exchanged for this negotiation.**

Check all that apply.

- Formal written proposal(s)
- Formal verbal proposal(s) (delegation to delegation, or diplomat to diplomat)
- Informal discussion
- The exchange of a single negotiating text
- Other, please specify... \_\_\_\_\_
- Don't know

Document #s

**[8.2] Is there any evidence to support the notion an agreement was reached following a pattern of concessions?**

If yes, explain who was involved in exchanging concessions and what was conceded.

- Yes. Explain: \_\_\_\_\_
- No
- Don't know

Document #s

**[8.3] Is there evidence of any technological change affecting warfare, weaponry or military strategy addressed by this negotiation?**

- Yes
- No
- Don't know

Document #s

**[8.4] Is there any evidence of a “pattern of concessions” among state parties during negotiation?**

If "yes," explain between which states and why.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[8.5] Were the negotiations conducted in private or were details open to the public and press during the negotiations?**

- Publicly
- Privately
- Both
- Don't know

Document #s

**[8.6] How would you classify the pace of the negotiations?**

- Fast
- Slow
- Don't know
- Other, please specify... \_\_\_\_\_

Document #s

**[8.7] How would you classify parity levels of military equipment and arsenals at the onset of the negotiation?**

- Equal
- Unequal
- Too difficult to calculate
- Don't know
- Other, please specify... \_\_\_\_\_

Document #s

**[8.8] Did agreement allow for additional cosigners?**

- Yes
- No
- Don't Know

Document #s

**[8.8.a] How many additional cosigners does the agreement have to date?**

Document #s

**[8.8.b] Enter the name of additional cosigning state #{{ numAddCosign }}**

Do not include initial negotiating states--only those that signed on after negotiations ended.

Document #s

**[8.8.c] Indicate cosigning state# {{ numAddCosign }}'s ratification status:**

- Signed, but not ratified.
- Signed and ratified.
- Don't know.

## Appendix C: Codesheet Part II

Welcome! Thank you for participating in data collection for this project. This survey is a computer assisted coding device designed to facilitate the process. Please read the following instructions carefully!

1. The link you received for the survey is a 'unique identifier' that is tagged to the particular negotiation you are coding. You'll receive a new/separate link for each negotiation.
2. Complete this survey one time for each negotiation you are coding. You must complete the survey for a single negotiation before beginning again for another negotiation.
3. The survey seems to work best using Firefox.
4. Find a bookmarking system that works well for you so that you do not have to code in one sitting. The survey format allows you to save and come back later by providing a link to your saved location. You may want to save the link to your bookmarks and change the bookmark's name to the name of the negotiation you are coding. If you save and come back later, update the name of the bookmark/link to your location in the survey so that you can help yourself keep track of where in the survey you are or which state you are currently coding. You may want to create multiple links as you progress through the survey so that you can come back to previous points.. Alternatively, you may want to simply keep the tab open on your computer if you tend to leave your computer on all the time.
5. You will have the ability to move forward and back through the survey. However, you will only be able to advance or move forward after you've completed the required questions.
6. You should only use documents listed in the primary and secondary source lists for each agreement. Avoid Google or Wikipedia.
7. Most questions require that you include at least one document number. This number should correspond to the document in which you found the information to answer the question, as numbered in the spreadsheet for that negotiation. For all questions for which there is a second document number entry box that is optional.
8. SAVE, SAVE, SAVE. Save often. Save continuously.

**Enter your first and last initials and click 'Next' to begin.**

### Section 1: General Negotiation Information

The following section asks a series of general questions about the negotiation.

**[1.2] What is the negotiation's nickname or abbreviated name?**

**[1.13] Indicate the number of states party to the negotiation.**

Do not include additional cosigners not involved in the negotiation process.

Document #s

**[1.14] Enter the name of the negotiating state about which you would like to respond to questions. This is negotiating state number {{ negStateNum }}.**

The U.S. should be the first negotiating state entered for all negotiations in which the country participated.

Document #s

**[1.15] Indicate negotiating state# {{ negStateNum }}, {{ statesPartyNeg }}'s, ratification status:**

- Signed, but not ratified.
- Signed and ratified.
- Not signed.
- Don't know.
- Didn't sign, but later acceded.

Document #s

**[1.16] Enter name of the delegation leader for {{ statesPartyNeg }}?**

- Don't know

Document #s

**[1.17] Indicate total delegation size for {{ statesPartyNeg }}.**

Include lead negotiator in your count.

- 1-4 delegates
- 5-8 delegates
- 9 or more
- Don't know

Document #s

## Section 2: Goals and Strategies of states party to the negotiation.

You will now be asked a series of questions about strategies employed by each of the following states you selected as being party to the negotiation in turn. You will be prompted (below) to enter the name of the state about which you wish to answer questions. Enter each state in turn.

**[2.1] For {{ statesPartyNeg }}, does a document publicly announcing, explaining or justifying the negotiations mention any of the following? Check all that apply for each state.**

See press releases, official announcements or statements, newspaper articles, ratification records, diplomatic communiques, etc.

- Preventing the addition, spread or proliferation of either weapons or materials
- Reducing the likelihood of the general expectation of war or surprise attack
- Curbing an arms race
- Reducing the cost of security
- Making militaries more efficient
- Controlling or limiting the theater of war
- Eliminating weapons, either a number or entire class? If so, explain.
- Reducing incidents of false alarm, accidental attack, or accidental or unauthorized launch of weaponry
- Enhancing or improving stability
- Curb the threat of terrorism
- Accomplish gains in other issue areas
- Build confidence, trust or establish a rapport, expand contact, etc.
- Other \_\_\_\_\_
- Don't know
- None

Document #s

**[2.2] For {{ statesPartyNeg }}, is there any evidence from non-public documents that a “closed door” cause, motivation, or justification for the intended agreement included any of the following Check all that apply for each state.**

- Reducing uncertainty or increasing transparency about intentions of one or more rivals/adversaries?
- Avoiding a crisis situation or dealing with a particular crisis directly?
- Increasing transparency about holdings (weapons), military maneuvers, etc.?
- Codifying existing weapons or force asymmetries or maintaining an existing strategic advantage? If so, explain.
- Obtaining a [new] strategic advantage?
- Balancing forces, capabilities or threats?
- Obtaining information about a negotiating partner’s arsenal, capabilities, projects in development?
- Other 'closed door' justification \_\_\_\_\_
- Don't know
- None

Document #s

**[2.3] Is there any evidence that {{ statesPartyNeg }} pursues any of the following risk reduction goals (at outset or during negotiation process)?**

Tip. Consult the most comprehensive document or source. If there exists no evidence for any of the following within that source, then the response should be 'None.' Otherwise, check all that apply.

- Threshold setting (requiring reductions)
- Elimination of an entire class or category of weapons
- Ceiling setting (allowing for additional production within the limit)
- Weapons freeze (at existing levels)
- Don't know
- None

Document #

**[2.4] Is there any evidence that {{ statesPartyNeg }} pursues any of the following risk reduction goals (at outset or during negotiation process)?**

Tip. Consult the most comprehensive document or source. If there exists no evidence for any of the following within that source, then the response should be 'None.' Otherwise, check all that apply.

- Non-binding arrangement
- Agreement to agree
- Option agreement (the option of deciding pursue an agreement at a future date)
- Equivocal agreement (very general, vague, broad, non-technical, non-detail-oriented ambiguous language)
- None
- Don't know

Document #

**[2.5] Is there any evidence that {{ statesPartyNeg }} pursues any of the following risk reduction goals (at the outset of or during the negotiation process)?**

Tip. Consult the most comprehensive document or source. If there exists no evidence for any of the following within that source, then the response should be 'None.' Otherwise, check all that apply.

- Limiting the size or scope of the agreement relative to initial project or negotiating partner's goals
- Limiting the importance of subject matter relative to initial project or negotiating partner's goals (concurrent/simultaneous negotiations over non-security related subjects)
- Limiting the duration of the agreement
- None

Document #

**[2.6] Regarding the scope of the agreement on testing, Is there any evidence that {{ statesPartyNeg }} was pursuing any of the following during test ban negotiations?**

- A full ban on testing
- Some kind of partial ban on testing. Explain. \_\_\_\_\_
- The closure of test sites
- Advocates against a ban entirely
- Other position on scope, please specify... \_\_\_\_\_

None

Document #s

**[2.7] Is there any evidence that {{ statesPartyNeg }} pursued any of the following uncertainty management tools or treaty terms?**

Tip. Consult the most comprehensive document or source. If there exists no evidence for any of the following within that source, then the response should be 'None.' Otherwise, check all that apply, and leave blank if none apply.

- Exceptions clauses and reservations
- Trial period (or provisional application)
- Provisions for unilateral denunciation or withdrawal
- Breaking the agreement into parts (as in the case of SALT I)
- Provisions for making amendments or revisions to the agreement
- Establish a dispute settlement provisions, mechanism, or body
- Rely on existing international organization or institution for dispute resolution, etc.
- Verification and compliance measures (that make non-performance or inadequate performance evident, impossible, costly, or impractical)
- Flexibility in entry into force (EIF) provisions, such as waiver provisions.
- None.

Document #s

**[2.8] Is there any evidence that {{ statesPartyNeg }} was pursuing a broad or elaborate agreement?**

Tip: Broad or elaborate agreements may extend beyond a single provision and include multiple restrictions.

- Yes
- No
- Don't know

Document #s

**[2.8.1] Which of the following describe the nature of the “broad” or “elaborate” agreement pursued?**

- Seeking agreement with multiple restrictions
- Seeking agreement on multiple types of weapons
- Seeking agreement on multiple issues
- Other, please specify... \_\_\_\_\_

Document #s

**[2.9] Is there any evidence that {{ statesPartyNeg }} was pursuing an agreement that could be described as “heavily detailed”?**

Tip: Heavily detailed agreements avoid vague or ambiguous use of language, use precise language, and include a lot of text devoted to specification, disambiguation. If "yes," explain.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[2.10] Is there any evidence that {{ statesPartyNeg }} was pursuing an agreement that could be described as “vague”?**

Tip: Vague agreements may use general language, include broad brush measures or limitations with little specification. Often the details of vague agreements are left to be worked out later, sometimes in working groups responsible for agreement implementation. This can sometimes be due to the 'least common denominator' effect, whereby the vague, general language is the only text to which all parties can agree. If "yes," explain.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[2.11] Is there any evidence that supports the notion that {{ statesPartyNeg }} was using the negotiation process to obtain more information?**

Tip: This question concerns states that come to the negotiating table with ulterior motives--goals other than or in addition to reaching an agreement. Specifically, the question concerns state parties

that come to negotiations with the intention of extracting more information or learning about the capabilities of other states through the negotiating process. The question also applies to states that have somewhat sinister intentions. If "yes," explain what kind of information and how.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[2.12] Can you summarize the main negotiating position or stance taken by {{ statesPartyNeg }}?**

Write as much as you need to capture the full position.

- Yes. It was: \_\_\_\_\_
- No, don't know it.

Document #s

**[2.13] Do you have information about the first position tabled by {{ statesPartyNeg }}?**

If different from above, include all details about the first position tabled.

- Yes. Same as above.
- Yes, but different from above: \_\_\_\_\_
- Don't know.

Document #s

**[2.14] For {{ statesPartyNeg }}, is there evidence that supports the notion that negotiators relied on the use of any kind of preliminary framework?**

If 'yes,' obvious evidence will exist. Only use 'don't know' if you see conflicting reports.

- Yes
- No
- Don't know

Document #s

**[2.15] For {{ statesPartyNeg }}, could their behavior be classified as “negotiating in good faith”?**

Assume good faith unless evidence to the contrary exists. Use 'Don't know' if you have conflicting reports and cannot adjudicate.

- Yes
- No
- Don't know

Document #s

**[2.16] Is there evidence of {{ statesPartyNeg }}'s use of preconditions or “issue linkage” as a bargaining strategy?**

Tip: Use the most comprehensive document or source on the negotiation. If no evidence of the use of preconditions or issue linkage exists in there, choose 'Neither.'

- Issue linkage \_\_\_\_\_
- Preconditions \_\_\_\_\_
- Neither
- Don't know

Document #s

**[2.17] Is there evidence of the use of integrative (soft or cooperative) or distributive (very hard) bargaining tactics by {{ statesPartyNeg }}.**

Tip: Use the most comprehensive document or source on the negotiation. If no evidence of the use of hard/soft bargaining tactics exists in there, choose 'Neither.'

- Integrative, soft or cooperative (also called "joint problem solving")
- Distributive, very hard
- Both
- Neither
- Don't know

Document #s

**[2.18] Is there evidence of {{ statesPartyNeg }}'s use of warnings or threats during the negotiations (credible or not)?**

Tip: Use the most comprehensive document or source on the negotiation. If no evidence of the use of warnings or threats exists in there, check 'Neither.'

- Yes
- No
- Don't know

Document #s

**[2.19] Additional coder comments regarding any state goals or strategies employed by {{ statesPartyNeg }} during the negotiation:**

**Section 3: Environmental Uncertainty**

You will now be asked as series of questions regarding external or environmental sources of uncertainty for each state that was a party to the negotiation.

**[3.1] Select {{ statesPartyNeg }}'s region from the list of options below.**

- Africa
- Antarctic
- Arctic
- Asia
- The Caribbean
- Central America
- Central Balkans
- Eastern Europe
- Europe
- Middle East
- North America
- Oceania (islands of tropical Pacific Ocean)
- South America
- Southeast Asia

Document #s

**[3.2] Is there any evidence that {{ statesPartyNeg }} is in a region that could be considered volatile or unstable?**

- Yes. Explain contributing factors: \_\_\_\_\_
- No
- Don't know

Document #s

**[3.3] Is there any evidence that {{ statesPartyNeg }} is experiencing regime volatility?**

If "yes," explain.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[3.4] Is there evidence of an impending election or other possible cause of regime change for {{ statesPartyNeg }}?**

- Possible re-election
- End of term
- Other \_\_\_\_\_
- None

Document #s

**[3.4.1] Indicate the duration of time from the end of negotiation until the leader of {{ statesPartyNeg }}'s term ends or until election day (in number of months).**

Document #s

**[3.5] For {{ statesPartyNeg }}, was there a change in its leadership over the course of negotiations?**

- Yes
- No
- Don't know

Document #s

**[3.6] Was there a change in the makeup of {{ statesPartyNeg }}'s delegation over the course of the negotiations?**

- Yes
- No
- Don't know

Document #s

**[3.7] Is there any evidence of their having an erratic, volatile, aggressive, insane or unstable leadership personality for {{ statesPartyNeg }}?**

- Yes
- No
- Don't know

Document #s

**[3.8] For {{ statesPartyNeg }}, is there any evidence of their experiencing economic volatility or decline ?**

- Yes
- No
- Don't know

Document #s

**[3.9] For {{ statesPartyNeg }}, is there any evidence that the state was uncertain about the another state's holdings?**

- Yes
- No
- Don't know

Document #s

**[3.9.1] About which state's holdings was {{ statesPartyNeg }} uncertain?**

Document #s

**[3.9.2] To what weapons specifically does this uncertainty apply?**

Document #s

**[3.10] For {{ statesPartyNeg }}, was there a prior history of conflict with any other negotiating state party from WWII (included) onward?**

If "yes" indicate the state parties in pairs and separate with commas.

- Yes, hot \_\_\_\_\_
- Yes, cold \_\_\_\_\_
- None
- Don't know

Document #s

**[3.11] Was {{ statesPartyNeg }} involved in a militarized conflict with any non-negotiating state for the time period leading up to negotiations, during the negotiations, or up to ratification (if applicable)?**

If "yes," indicate with which non-negotiating state party.

- Yes \_\_\_\_\_

- No
- Don't know

Document #s

**[3.12] Additional coder comments regarding environmental uncertainty and {{ statesPartyNeg }}:**

#### Section 4: Reaching Agreement

The next section addresses other factors affecting the ability to reach a negotiated agreement.

**[4.1] For {{ statesPartyNeg }}, was its leader leaving office immediately (within 1.5 years) following the negotiations due to end of term?**

- Yes
- No
- Don't know

Document #s

**[4.2] For {{ statesPartyNeg }}, is there evidence of domestic support (public) or lack thereof for an agreement?**

Check all that apply.

- Evidence of support
- Evidence of a lack of support/against agreement
- Both/Mixed
- Neither

Document #s

**[4.3] For {{ statesPartyNeg }}, indicate support for or opposition to an agreement for each of the following domestic organizations.**

	Support for Agreement	Against Agreement	Split Opinion	Neither For or Against Agreement	Don't Know
Military (including Joint Chiefs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Intelligence community

Department of Defense

Document #s

**[4.4] For {{ statesPartyNeg }}, was the agreement subject to domestic ratification?**

- Yes
- No
- Don't know

Document #s

**[4.4.a] How would you classify the domestic ratification dialog for {{ statesPartyNeg }}?**

- Straightforward
- Contentious
- Technical
- Wary
- Other, please specify... \_\_\_\_\_

Document #s

**[4.4.b] Indicate the duration of the domestic negotiations in days for {{ statesPartyNeg }}.**

You need both start and end dates to calculate this duration. Don't count from the signing of the agreement to the date of ratification. If you only know the date of ratification, put that in the comments section and be sure to include the country's name. Write 'DK' if you don't know.

Document #s

**[4.5] Additional coder comments regarding {{ statesPartyNeg }} and additional factors affecting ability to reach agreement:**

**Section 5: Uncertainty about Capabilities and Intentions**

The section section includes questions about sources of uncertainty concerning capabilities and intentions as they affect each state.

**[5.1] For {{ statesPartyNeg }}, was there any evidence of uncertainty about either the arsenal, holdings, or weapons of any other state?**

If so, indicate the state(s) about which {{ statesPartyNeg }} was uncertain.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[5.1.a] Explain what {{ statesPartyNeg }} was uncertain about--specifically--with respect to the other state(s)'s holdings.**

**[5.2] Is there any evidence to suggest that {{ statesPartyNeg }}, was uncertain about whether any other state was sincere in coming to the table (as opposed to using the negotiations to stall or obtain information)?**

If so, indicate the state about which {{ statesPartyNeg }} was uncertain.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[5.2.a] Explain what {{ statesPartyNeg }} was uncertain about--specifically--with respect to the other state(s)'s sincerity in negotiating.**

**[5.3] Is there any evidence to suggest that {{ statesPartyNeg }}, was uncertain about how to compare its own weapons with those of any another state?**

If so, indicate the state(s) about which {{ statesPartyNeg }} was uncertain.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[5.3.a] Explain what {{ statesPartyNeg }} was uncertain about--specifically--with respect to the comparison of its holdings to that of the other state(s).**

**[5.4] For {{ statesPartyNeg }}, was there any evidence of their being suspicious of potential cheating on an eventual agreement by any other state party.**

If so, indicate the state(s) about which {{ statesPartyNeg }} was uncertain.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[5.4.a] Explain what {{ statesPartyNeg }} was uncertain about--specifically--with respect to the potential cheating of other state(s).**

**[5.5] For {{ statesPartyNeg }}, was there uncertainty about the impact or performance of weapons?**

- Yes, uncertainty about their own weapons.
- Yes, uncertainty about another state's weapons
- Neither/None
- Don't know

Document #s

**[5.6] For {{ statesPartyNeg }}, was there suspicion that another state was not being truthful or forthcoming about their holdings, arsenal, weapons or capabilities?**

If so, explain.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[5.7] For {{ statesPartyNeg }}, was there concern that another state might renege or withdraw from a potential agreement?**

If so, indicate which state.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[5.8] For {{ statesPartyNeg }}, was there concern that another state might use potential verification measures for espionage?**

If so, indicate which state.

- Yes \_\_\_\_\_
- No
- Don't know

Document #s

**[5.9] Additional coder comments regarding {{ statesPartyNeg }}'s uncertainty about capabilities and intentions:**