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# Arms Control Agreements in International Relations

Some of the most significant decisions on the final negotiation of the US–Soviet Intermediate-Range Nuclear Forces (INF) Treaty took place during a highly unusual and memorable moment – a hotel room meeting between President Reagan and his top advisors. The president was in Miami on September 10, 1987, to meet with Pope John Paul II. The two met privately in the afternoon to discuss a range of topics, including arms control. Earlier that day, a group of high-level US officials had huddled with the president in his hotel to discuss the same issue, though in far greater technical detail. They presented the President a list of remaining issues on the draft INF treaty. Negotiations with the Soviets had stalled, and they sought the president's guidance on the best course of action. Topping the list was how to ensure treaty compliance – what level of verification should the agreement include? The officials argued over whether the new leaders they saw coming to power in the USSR really intended to cooperate on arming limits.[1]

In Moscow around the same time, Soviet leaders were very likely asking themselves similar questions. With the United States, they faced an adversary which had indicated highly aggressive views in the years preceding the negotiations. Reagan wanted to pursue missile defense and called the USSR the "evil empire." There was good reason to doubt US commitments to restraint. However, Soviet leaders had also recently observed other political indicators which raised questions. In memos prepared in late 1986, Mikhail Gorbachev's senior advisors tried to interpret Reagan's declining popularity, the problems of the Iran–Contra scandal, and the Republican loss in the 1986 midterm election.

[1] Howard Baker, interview by Don Oberdorfer (Public Policy Papers, Department of Special Collections, Princeton University Library, June 26, 1990); Frank Carlucci, interview by Don Oberdorfer (Public Policy Papers, Department of Special Collections, Princeton University Library, March 5, 1990).

They noted that Reagan was in a "serious position" domestically.[2] Though precise accounts are scarce, Soviet leaders must have wondered whether in facing new pressures, the United States was now serious about significantly curbing its competitive approach, including removing what the USSR perceived to be an intermediate-range missile threat in Europe.

Doubts on both sides did not preclude success in arms control negotiations. The INF treaty was signed on December 8, 1987, during Gorbachev's first visit to the United States. The doubts likely enabled it.

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## Introduction

Adversarial states compete for resources, power, and influence, but they also occasionally cooperate to mitigate that competition using institutional arrangements. These institutions, which include both full-fledged treaties and political or military agreements, have the goal of restraining states' military capabilities or behaviors in order to limit the intensity or extent of security competition. States agree to refrain from a security activity, a choice that is beneficial due to the expectation that the adversary will be likewise restrained by its commitment.

Though the term "arms control" sometimes elicits images of US–Soviet Cold War treaties, it has long had a broader and more meaningful definition. The most generally accepted definition, developed by Thomas Schelling and Morton Halperin in 1961, focuses on the goals of agreements rather than their content. Arms control includes all military cooperation between "potential enemies in the interest of reducing the likelihood of war, its scope and violence if it occurs, and the political and economic costs of being prepared for it."[3] More specifically, this kind of cooperation includes limits on the numbers or types of armaments, on the locations or movement of deployed weapons and troops, the use of armaments, or "measures designed to reduce the danger of accidental war, or reduce concern about surprise attack."[4]

[2] Paraphrased by the author from Russian language document. Vitalii Kataev, "Evaluation of the Military-Political Situation," December 18, 1986, *Vitalii Leonidovich Kataev Papers* (1966–2001), Hoover Institution Library & Archives: Box 4, Folder 15.

[3] Thomas C. Schelling and Morton H. Halperin, *Strategy and Arms Control* (Washington, DC: Pergamon-Brassey, 1985).

[4] Coit D. Blacker and Gloria Duffy, *International Arms Control: Issues and Agreements*, ISIS Studies in International Security and Arms Control (Stanford, CA: Stanford University Press, 1984).

Since the earliest identifiable arms control agreement in 1713, there have been about 225 multilateral and bilateral agreements, making this form of cooperation just somewhat more frequent than interstate war. The data developed for this book identifies, collects and catalogues these agreements. Arms control agreements can happen between evenly matched rivals, as well as between unbalanced enemies where agreements are imposed on a weaker adversary by the winning side. They include conventional arms limitations, chemical and biological weapons prohibition treaties, war-termination treaties, demilitarization zones, and others. In this sense, the Treaty of Versailles is an arms control agreement, as is the Biological Weapons Convention and the Nuclear Nonproliferation Treaty. Agreements can be signed among a range of current and potential "adversaries" – this includes states engaged in active contestation, as well as states with relatively good relations and relatively aligned foreign policies. No set of national security incentives are indefinitely perfectly aligned. Even today's allies can simultaneously be competitors or turn to fully fledged enemies in the future.[5]

Formal arms control agreements are "international institutions" in that they establish rules of behavior, either on undertaking some action or abstaining from it.[6] As security institutions they set agreed upon constraints on the military capabilities or activities of states. International relations scholars have argued that institutions allow states to reap the benefits of cooperation in a number of ways.[7] For cooperation

[5] In his work on security competition and cooperation, Charles Glaser notes that, "because today's ally could be an adversary in the future, the line between allies and adversaries is not always sharp." Charles L. Glaser, "Realists as Optimists: Cooperation as Self-Help," *International Security* 19, no. 3 (1994): 31.

[6] International institutions constitute, "persistent sets of rules that constrain activity, shape expectations, and prescribe roles." Robert O. Keohane, "International Institutions: Two Approaches," *International Studies Quarterly* 32, no. 4 (December 1988): 379–96. While institutions can be formal or informal, this book focuses on formal agreements. "Formal" is defined broadly to include any agreement that was codified in writing, with the rules spelled out rather than accepted as common practice by participants. This book uses the terms "security institution" and "security agreement" interchangeably. All arms control agreements are institutions in a political science definition, and some also have associated international organizations, such as bureaucratic bodies with leadership, secretariats, and staff, to manage implementation.

[7] Roles of institutions include: lowering the transaction costs of cooperation, making commitment to cooperation stronger by establishing costs to reneging, enhancing likelihood of compliance with cooperation by influencing behaviors of domestic actors with states, helping states coordinate on one approach in lieu of other reasonable options, facilitating bargains by linking issues areas, or even facilitating the diffusion and

on limiting military capability, where even mutually beneficial cooperation is plagued by fears of current or potential future adversaries seeking relative advantages, the information dimensions of institutions are perhaps the most salient – by setting out rules, institutions can help states establish the parameters of their cooperation and better identify when other actors renege.[8]

This book builds on a premise that there are gains from cooperation, which states might nonetheless be unable to attain or choose not to pursue. In contrast, some international relations approaches and policy positions among practitioners adopt the view that states will always want to guarantee their security as a primary goal. Competition, and either relative advantage or highly effective defenses, will be the only reliable way to accomplish that. In this view, arms control, and to an extent institutions in general, do not have specific benefits and either reflect what powerful states already want to do, or are vehicles to pursue secondary goals in diplomacy. This book does not directly engage in this prior debate; it does not make a case for whether benefits of arms control exist or whether they exist only under limited conditions. Rather, it picks up with a different question: If we understand the nature of competition as a costly dynamic where states can benefit from cooperation on mutual restraint, when do they turn to arms control institutions to help them reach bargains over at least some elements of that competition?

## *The Arms Control Puzzle*

The puzzle of arms control is twofold. First, despite the potential benefits, discussed more specifically later in this chapter, arms control is relatively rare. Arms races on the other hand have accounted for huge spending by governments, and states are often concerned that some new capabilities will increase incentives for war. A growing arms race between the United States and China, for example, means extensive investment in capabilities on both sides and may also include increasingly confrontational behaviors like weapons tests and military deployments.

legitimization of certain norms. For one key review of the literature, see Lisa L. Martin and Beth A. Simmons, "Theories and Empirical Studies of International Institutions," in *International Institutions: An International Organization Reader*, ed. Lisa L. Martin and Beth A. Simmons (Cambridge, MA: The MIT Press, 2001).

8 For example, see the discussion on how Nuclear Nonproliferation Treaty as an institution helps maintain the cooperation in Andrew J. Coe and Jane Vaynman, "Collusion and the Nonproliferation Regime," *Journal of Politics* 77, no. 4 (2015): 989.

From some academic perspectives, the failure of states to pursue arms control is puzzling because it leaves them in an inefficient situation, investing resources and running risks while a negotiated solution, at least in principle, exists. For policy practitioners, arms control may have benefits when states mutually agree, but most of the time agreement is exceedingly difficult to attain or seems unrealistic to pursue given the intensity of competition. For example, many of the same experts who bemoan the poor prospects for arms control also implicitly recognize its potential to mitigate the costs of US–China competition, of continued US–Russia strategic nuclear balance, or of escalation risks in regional conflicts and ongoing disputes.

A classic dilemma plagues cooperation between states with opposing interests. Even if all parties would, in theory, be better off cooperating with repeated interaction, at each moment members have incentives to gain a relative advantage over their adversaries. In the security context, some behaviors, such as development of new military capabilities, can often be done in secret, which exacerbates the problem. Mistakenly expecting mutual restraint, and then failing to match an adversary's threat, can have security repercussions that outweigh investing in arming in the first place.

In principle, states should be able to use agreement design to address this problem; agreements could include provisions for observing relevant activities of the other parties. Indeed, while numerous elements of variation in arms control design are of interest to scholars and practitioners, the information dimension – how states observe whether agreement terms are followed – plays a privileged role.[9] Information provisions, such as agreement rules on monitoring and verification, address the problem of detecting violations and in doing so may deter cheating, or at least allow states to respond promptly if cheating occurs. More intrusive provisions increase both the probability and the speed of detecting a violation. Indeed, many scholars and practitioners believe that agreements with monitoring and verification measures are more likely to be effective.

But, in designing arms control, states face trade-offs between the assurance information provides and the costs it incurs.[10] First, it takes

[9] Other agreement design elements include provisions around flexibility, control, membership, centralization, and scope. For example for flexibility, relevant agreement provisions would be rules about exit and renegotiation. Barbara Koremenos, Charles Lipson, and Duncan Snidal, "The Rational Design of International Institutions," *International Organization* 55, no. 4 (2001): 761–99.

[10] Kenneth W. Abbott, "Trust But Verify: The Production of Information in Arms Control Treaties and Other International Agreements," *Cornell International Law Journal* 26,

material resources for states to technically implement information collection. While these can be relatively low when states are submitting reports on their activities, they are considerably higher for frequent inspections, additional satellites, or equipment installed for ongoing detection. Second, monitoring creates costs by revealing vulnerabilities.[11] With more intrusive monitoring, an adversary might collect information beyond the purview of the deal, which gives it an advantage in a future conflict.[12] US policymakers have seen these trade-offs quite clearly. When deliberating the provisions for a possible treaty with the USSR in 1988, then Secretary of State George Shultz noted "we will need to make a judgment on the balance of the intrusiveness of inspections we require and the impact of the intrusiveness [on] our own security."[13] Because of its costs, the utility and necessity of various information tools is closely related to how much states fear that others will be tempted to violate.

These monitoring trade-offs reveal the second puzzle. In practice, arms control is quite varied in its form; while some agreements include extensive monitoring, others rely on weaker tools such as self-reporting. Why do states sometimes accept the costs of intrusive and likely more effective monitoring, and at other times seem to settle for lower-level measures, and most often avoid both options in favor of the competitive status quo?

The two elements of the puzzle are integrally related because the form of cooperation can determine whether states will see it as beneficial or detrimental to their security. The challenge of whether to pursue arms control is also a question about what kind of agreement. An agreement that is insufficient for detecting cheating by the other side, or one that

no. 1 (1993): 1–58; Ronald B. Mitchell, "Sources of Transparency: Information Systems in International Regimes," *International Studies Quarterly* 42, no. 1 (1998): 109–30; Lewis A. Dunn, "Arms Control Verification: Living with Uncertainty," *International Security* 14, no. 4 (1990): 165–75.

11 Andrew J. Coe and Jane Vaynman, "Why Arms Control Is So Rare," *American Political Science Review* 114, no. 2 (2020): 342–55.

12 Schelling and Halperin, *Strategy and Arms Control*, 103. For examples of extra information which could be collected by the USSR through intrusive inspections of US facilities: Dunn, "Arms Control Verification."

13 The committee meeting minutes say, "impact of the intrusiveness of our own security" where the "of" is likely a typo in the original. Minutes of a National Security Planning Group Meeting (US Options for Arms Control at the Summit), February 9, 1988, *Foreign Relations of the United States* (hereafter *FRUS*), 1981–1988, vol. VI, Soviet Union, October 1986–January 1989, ed. James Graham Wilson (Washington, DC, 2016), doc. 120.

creates security vulnerabilities through the information it provides, may leave states worse off than they were in the unconstrained status quo.

### *The Argument: Uncertainty as an Opportunity, Domestic Politics as a Driver*

This book argues that uncertainty about the adversary's incentives for cooperation, and specifically uncertainty created by domestic political volatility, helps explain why states sometimes create security institutions with extensive monitoring and even inspection and other times are satisfied with scant self-reporting and other far less intrusive mechanisms. Domestic political volatility – defined as significant changes in a state's political conditions that raise the possibility of shifts in foreign policy – makes international observers less certain about whether a state's prior approach to security cooperation will continue. Uncertainty creates opportunities for the types of international cooperation which were either unnecessary or unacceptable without it.[14] Arms control agreements can surely also occur during stable conditions, but states have greater incentive to pursue them and select monitoring tools during moments of change. In a real-world sense, the argument implies that agreements can arise out of seemingly unlikely moments, amid changing political conditions and doubts about compliance.

In response to new uncertainty about incentives for cooperation, agreements become more likely to develop through two pathways, *hedging* and *risking*. When states already expect one another to have aligned interests and incentives, coordination on restraint can exist informally without monitoring, which itself incurs costs.[15] However, increased uncertainty about the opponent leads previously cooperative states to hedge. Rather than relying on informal arrangements, they have incentives to create formal agreements with low-level information exchange

[14] In this broad theme, the argument aligns with elements of other work on security agreement design. Scott Wolford finds that another type of security institution, neutrality agreements, are most likely to be created and to matter for behavior when states are doubtful about the other side's incentives. Andrew Kydd considers the case of NATO and shows that design choices over membership scope affect prospects for cooperation mostly under conditions of high uncertainty. Scott Wolford, "Neutrality Regimes," *Security Studies* 28, no. 4 (2019): 807–32; Andrew Kydd, "Trust Building, Trust Breaking: The Dilemma of NATO Enlargement," *International Organization* 55, no. 4 (2001): 801–28.

[15] Coe and Vaynman, "Why Arms Control Is So Rare."

provisions. These give additional assurance that future compliance can be observed without substantially increasing the costs of cooperation.

Alternatively, in cases where adversaries are perceived as seeking relative advantages and likely to secretly renege on cooperation, no agreements are signed. From this starting point, an increase in uncertainty makes taking a risk on cooperation worthwhile because there is now a possibility the gains of cooperation could be attained. However, states are only willing to take this risk with a high level of monitoring to guard against the continued threat of violations. Thus, the effect of uncertainty on agreement form is conditional on prior beliefs about the adversary, with both pathways leading to an increase in arms control from the status quo of no formal agreement. Monitoring design elements are integral to whether agreements occur because they allow states to benefit from cooperation while mitigating the danger of encountering cheaters.

The characterization of uncertainty used in this book is a simple one, but worth stating explicitly. Uncertainty occurs when states have low confidence in their ability to accurately assess incentives for cooperation. Abstractly, if states can have two types of incentives to violate a possible deal – high or low – then uncertainty is highest when there is a 50 percent chance of facing a high incentive state and a 50 percent chance of facing a low incentive state. At either end of the beliefs spectrum, such as when states believe an opponent is 90 percent or 10 percent likely to be the kind with high incentives to violate a deal, states are sure of their beliefs and have strongly held expectations.

An "increase in uncertainty" is therefore a particular type of belief change: one toward the opposite direction of strongly held previous beliefs. When a shift occurs from either certain extreme toward the uncertain middle, the belief is still that, on average, the opponent will be the same type as previously expected. This is not a fundamental shift toward the other side of the spectrum; it is not a sudden expectation that former enemies are now friends eager to forsake arming, or that former friends are now rivals scheming to leverage some military advantage. This logic of an uncertain middle also implies that the reason for the shift toward uncertainty should be one that provides confounding rather than clarifying information about the adversary.

An adversary's domestic political situation is a significant and under-examined driver of exactly this kind of uncertainty. This book argues that domestic politics matters because volatility, or in other words shifts or transitions, gives an observer state reason to think its prior assessment of the adversary's incentives for cooperation may no longer be accurate or may not be accurate in the near future. When a state holds relatively clear beliefs about an adversary's incentives for cooperation, observing a domestic political shift within an adversary's system provides the kinds of mixed and disconfirming information likely to make the state less confident in their prior assessments. Political shifts *may* bring about a change, but they may also lead to more of the same.

The focus is on domestic events which have plausible effects on foreign policy. Such events include transitions among elite-level decisionmakers, including new leaders or changes in the composition of cabinets. Leadership-level changes may bring with them new foreign policy calculations, new assessments about the utility of the use of force in general or of certain military capabilities for specific tasks, or even new philosophies on the best tools for increasing national security. All of these may affect incentives for complying with mutual arms control limitations or the allure of unilateral violations on that bargain. Public unrest may also be a volatility event, serving as a sign that a government faces new trade-offs between funding for social welfare versus the military. Domestic political events can affect an external observer's assessment in a relatively immediate way, while other determinants of cooperation, such as resources, power balance, or monitoring costs, remain the same.

Even without a clear expectation of how incentives changed – whether the new leader is better or worse than the last one – the uncertainty created by domestic political shifts makes arms control agreements more likely. The argument suggests that states will not seek to cooperate only with adversaries they know to be now led by reformists or new thinkers. While good information about the real nature of a domestic political change may indeed tell states whether a deal is possible or what form is desirable, estimates on the exact nature of such changes are often poor at the time. Rather, it is the possibility of change that affects assessments of possible cooperation. The significance of the claim here is that opportunity for an agreement arises without trust that the adversary is a good actor ready to comply with arms control. Volatility itself, even lacking in known content, as is the case in most real-life cases, has on average positive effects on arms control agreements by activating those hedging or risking pathways from no agreement to preferences for an institution.

### *Rethinking Core Concepts in International Relations*

At its core, this book is about two fundamental themes in international relations: the role of uncertainty and domestic politics as drivers of international outcomes. Political scientists typically associate uncertainty with conflict and costly competition. Uncertainty poses a threat to cooperation between individuals and groups,[16] underlies the path to conflict,[17] and increases the likelihood of war.[18] International institutions and regimes, some theorists argue, are created because they reduce uncertainty in order to foster better cooperation.[19] Policymakers often hold the same intuition and caution that uncertainty makes crises more likely to escalate and efforts at negotiations futile. This central view of uncertainty as negative has shaped thinking across political science and policy practice, from scholarship on war, trade, and institutions, to assessing real-world threats and flashpoints. In contrast, the theory and evidence presented in this book makes the case that uncertainty also has important, and perhaps unexpected, benefits. Moments of increased uncertainty create opportunities for a critical form of international cooperation.

While uncertainty may also have other drivers, domestic politics is important to consider for several reasons. Domestic politics as a driver of international behavior is one of the most well-known approaches across the field of international relations, from broad and highly influential theory to issue-specific empirical studies. Domestic factors have been used to explain the strength of international commitments, audience costs, resolve, and military effectiveness, as well as other foreign policy characteristics. Volatility in domestic politics, such as change in leadership, may contribute to the likelihood of diversionary war,[20] or trade-offs

16 Robert Axelrod, "The Evolution of Cooperation," in *The Evolution of Cooperation*, ed. Robert Axelrod (New York, NY: Basic Books, 1984).

17 Robert Jervis, *Perception and Misperception in International Politics* (Princeton, NJ: Princeton University Press, 1976); Charles L. Glaser, "The Security Dilemma Revisited," *World Politics* 50, no. 1 (1997): 171–201; Andrew Kydd, "Sheep in Sheep's Clothing: Why Security Seekers Do Not Fight Each Other," *Security Studies* 7, no. 1 (2007): 114–55.

18 Dan Reiter, "Exploring the Bargaining Model of War," *Perspectives on Politics* 1, no. 1 (2003): 27–43; William Reed, "Information, Power, and War," *American Political Science Review* 97, no. 4 (2003): 633–41; Mark Fey and Kristopher W. Ramsay, "Uncertainty and Incentives in Crisis Bargaining: Game-Free Analysis of International Conflict," *American Journal of Political Science* 55, no. 1 (2011): 149–69; Kristopher W. Ramsay, "Information, Uncertainty, and War," *Annual Review of Political Science* 20, no. 1 (2017): 505–27.

19 Robert O. Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy* (Princeton, NJ: Princeton University Press, 1984); Koremenos, Lipson, and Snidal, "The Rational Design of International Institutions."

20 Amy Oakes, *Diversionary War: Domestic Unrest and International Conflict* (Stanford, CA: Stanford University Press, 2012); Jaroslav Tir, "Territorial Diversion: Diversionary Theory of War and Territorial Conflict," *Journal of Politics* 72, no. 2 (2010): 413–25; John