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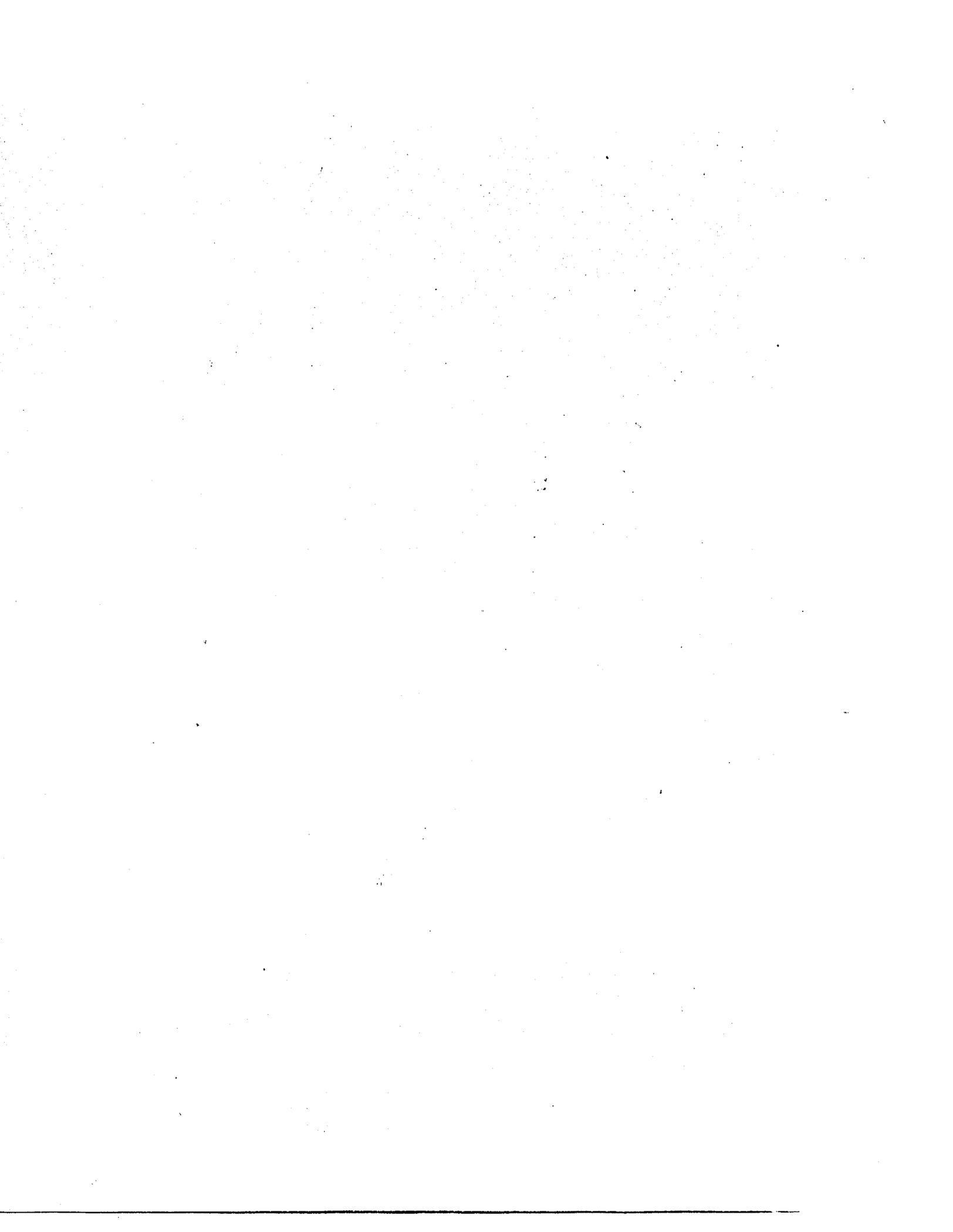
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**The limits of mutual restraint: Arms control and the strategic  
balance**

**Miller, Steven Edward, Ph.D.**

**Fletcher School of Law and Diplomacy (Tufts University), 1988**

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**THE LIMITS OF MUTUAL RESTRAINT:  
ARMS CONTROL AND THE STRATEGIC BALANCE**

A thesis

Presented to the Faculty

of

The Fletcher School of Law and Diplomacy

by

**STEVEN EDWARD MILLER**

In partial fulfillment of the requirements for the  
Degree of Doctor of Philosophy

April 1988

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## Abstract

This dissertation seeks to examine the origins and content of the modern theory of nuclear arms control and to explain why this theory has proven so difficult to implement in practice. Part I shows that the new body of arms control theory that emerged in the late 1950s and early 1960s had its origins in the national security crisis that was borne of fears of Soviet surprise attack in the aftermath of Sputnik. Alarm that the United States was hugely vulnerable to a disarming nuclear surprise attack led to an obsession with that problem and to a belief, widely held among the early nuclear strategists, that minimizing surprise attack incentives should be the highest aim of nuclear strategy. The arms control theorists concluded that a condition of mutual deterrence best satisfied that aim by eliminating both preemptive and preventive incentives to launch a nuclear strike.

The modern theory of arms control was a byproduct of the notion of mutual deterrence. It was argued that arms control could help create, codify, and sustain an environment based on mutual deterrence; the latter, in turn, was thought to render arms control more feasible

in the international arena and more acceptable domestically by creating compatible interests among the nuclear superpowers and by giving military policy and arms control policy the same objective. Modern arms control theory, in short, was predicated upon a specific doctrinal choice.

In Part II, it is demonstrated that the doctrinal choice prescribed and required by the modern theory of arms control has not been embraced by either superpower. Rather, each has preferred doctrines that conflict with the basic edicts of arms control theory, doctrines that are based on completely different logics than that which serves as the foundation of the modern theory of arms control. Consequently, arms control has not been able to play the role posited for it by the early theorists, but has instead been pursued for a variety of other domestic political and diplomatic reasons. Thus, arms control has come to play an important political role but has been unable to serve as a major determinant of the character of the strategic balance, as the arms control theorists hoped it might, because of the constraints imposed by the strategic doctrines of the superpowers.

Dedicated

to my insurpassable wife,

Deborah

who was with me every step of the long journey,

who made it all possible,

and, more importantly, who made it all worthwhile

and

to my valiant sister,

Denise

whose courage and fierce love of life

are such an inspiration

Contents

Introduction.....1

Part I: The Origins and Content of Modern Arms Control Theory

Chapter 1 .....17

    Why a New Theory of Arms Control ?

        A. Why Attention to Arms Control Theory?

        B. The Inheritance: Six Dismal Decades of Arms Control

        C. The State of Soviet-American Relations

        D. Strategic Dangers and the National Security Crisis

Chapter 2 .....92

    Nuclear Strategy and Mutual Restraint: The Content of Modern Arms Control Theory

        A. The Preoccupation With Surprise Attack

        B. The Strategic Implications of Invulnerable Forces

        C. Elusive Stability and the Road to Arms Control

        D. Stability and the Modern Theory of Arms Control

        E. Conclusion

Part II: Theory Collides With Reality

Chapter 3 .....224

    Arms Control Theory Versus Doctrinal Reality

        A. The Reality of Soviet Strategic Doctrine

        B. The Reality of American Strategic Doctrine

Chapter 4 .....298

Alternative Logics, Alternative Purposes

    A. Why Was Arms Control Theory Rejected By  
        Military Policy?

    B. Why, Then, Arms Control?

    C. Conclusion

Conclusion .....387

Bibliography .....398

## Introduction

In the late 1950s, there emerged a sudden outburst of thinking about nuclear arms control. For a period of roughly five years, from 1958 to 1963, there appeared a remarkable outpouring of writing on this subject, remarkable both in volume and in quality.<sup>1</sup> In most important respects, this body of work laid the intellectual foundations for arms control as it has been pursued over the past quarter of a century. The earliest of these writings coincided with the first serious, albeit abortive, efforts on the part of the United States and the Soviet Union to negotiate meaningful restraints (at the Surprise Attack Conference and the Test Ban Conference in 1958). Taken together, this combination of diplomatic and intellectual activity with respect to arms

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<sup>1</sup> Prominent examples include Thomas C. Schelling and Morton H. Halperin, Strategy and Arms Control (New York: The Twentieth Century Fund, 1961); Hedley Bull, The Control of the Arms Race: Disarmament and Arms Control in the Missile Age (New York: Praeger, 1961); Donald Brennan, Arms Control, Disarmament, and National Security (New York: George Braziller, 1961); J. David Singer, Deterrence, Arms Control, and Disarmament: Toward a Synthesis in National Security Policy (Columbus: Ohio State University Press, 1962); and Louis Henkin, Arms Control: Issues for the Public (New York: Prentice-Hall, 1961). Several of these works remain classics in the field.

control induced a period of hope and optimism about its prospects: hope that arms control could play a larger and more significant role in American security policy and optimism that it could be a major determinant of the strategic balance, one that would reduce the dangers of the nuclear age.

As it turned out, the hope was realized but the optimism was unwarranted. Arms control did in fact come to play a central role in American security policy, probably beyond any expectation. Indeed, since the beginning of the Strategic Arms Limitation Talks (SALT) in November 1969, nuclear arms control has been an important consideration in American nuclear weapons policy, in Soviet-American relations, in NATO affairs, and even in domestic politics. It has become an issue that inevitably figures prominently on the agendas of top leaders in both the United States and the Soviet Union. There can be no doubt that nuclear arms negotiations are the centerpiece of superpower diplomacy.

Nevertheless, the results of this arms control process have been disappointing, to say the least. Despite years of diplomatic activity, despite the intensive study and debate that have been devoted to this issue, despite the agreements that have been reached,

arms control has not become a primary determinant of the shape and character of the strategic balance. Although some negotiated restraints have been achieved, the number of nuclear weapons is not only high but growing, modernization continues apace, dangerous instabilities that provide incentives to attack have not been eliminated (at least not by arms control), while relations between the superpowers are tense and frayed.

By the time the Soviet Union walked out of the negotiations in Geneva on strategic and intermediate range forces in December 1983, it had come to be widely believed that negotiated arms control between the superpowers was largely a failure. Prominent commentators proclaimed "the general collapse of arms control."<sup>2</sup> Experts have openly doubted whether arms control is worth the effort.<sup>3</sup> And there have already been calls for postmortems in search of clues about arms control's demise. New York Times columnist Flora Lewis, for example, observed in 1985 that it was "time to look

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<sup>2</sup> The phrase is William Hyland's, from his paper "The US and USSR: Rebuilding Relations," RAND/UCLA Conference on "US-Soviet Relations: The Next Phase," October 1984, p. 10.

<sup>3</sup> See, for example, Robert Toth, "Some Experts Doubt the Value of Arms Pacts," Los Angeles Times, May 27, 1984.

back on the history of nuclear arms control and try to understand why it has been such a failure."<sup>4</sup> Clearly, nuclear arms control has not made the contribution to national and international security that its early proponents thought it could and hoped it might.

Why not? How are we to understand this state of affairs? Or, more precisely, what ideas have governed the pursuit of strategic arms control and why have they proven so difficult to achieve in practice? These are the questions that I wish to explore in this dissertation. Answering them, I believe, will not only help to explain the limited impact of strategic arms control, but should also cast some light on the problem of what it can realistically be expected to contribute in the future.

In order to adequately address these questions, it is necessary, first, to gain some understanding of the intellectual framework established for arms control twenty-five years ago and of the strategic context which shaped that framework. Here it will suffice to say that two concepts were preeminent in the formative thinking about strategic arms control: management and stability.

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<sup>4</sup> Flora Lewis, "From There to Here," New York Times, January 15, 1985.

According to the former precept, arms control was a technique for managing the nuclear arms competition, for steering it onto safer paths and away from more dangerous ones. Implicit in this notion was the idea that the arms competition was amenable to such steering; in effect, it posited for arms control a role as a major determinant of the strategic environment.

More important to the development of arms control theory, however, was the second concept, the idea of stability. If management was the method, stability was the goal, the criterion according to which the arms competition was to be shaped. In purest form, it referred to a condition in which the nuclear forces of each superpower were invulnerable to attack by the nuclear forces of the other. In such a world, there would exist no incentive to attack because striking first would bring no improvement in terms of relative military capability. This was believed to be the safest of all possible nuclear worlds. Heartened by technological developments that appeared to make such a strategic world possible (and perhaps even inevitable), proponents of arms control in this early period hoped, if not presumed, that this putative safest nuclear environment would be recognized by the superpowers as

mutually desirable, and that arms control could play a prominent role in creating, codifying, and sustaining such an environment.

Obviously, this has not come to pass; neither of these ideas has fared well when tested in the harsh arena of superpower diplomacy. Indeed, when we say that strategic arms control has failed, what we really mean is that these concepts have been found wanting. Why is this so? What did the arms control theorists of the late 1950s overlook or get wrong? This is the puzzle that I propose to explore in this dissertation.

There are some commonly voiced answers to these questions. It is sometimes said that the asymmetric force postures of the two superpowers renders rapid or significant progress impossible because equitable deals are too complex to create and too difficult to recognize. The pace of technological change is sometimes identified as the culprit; the weapons change so rapidly, goes this logic, that negotiations are unable to cope.

Verification raises vexing obstacles to the pursuit of arms control because meaningful limitations are not possible if cheating cannot be detected. The Soviet Union is a difficult negotiating partner, obstinate and opaque. Factors such as these certainly contribute to

the difficulty of the enterprise of arms control. But I do not believe that they are the heart of the issue.

The argument that I wish to develop in this dissertation suggests that the future envisioned by the early arms control theorists did not come to pass for one overriding reason. The early arms control theorists erred in the assumption (or the hope) that the conditions of stability as they defined them would be tolerable and even desirable to the superpowers. They were hopeful that arms control policies aimed at mutual stability would be found compatible with, indeed, complementary to, national security policy. This has proven not to be the case. Soviet strategic doctrine, in particular, has been influenced very little, if at all, by the notions central to the modern theory of arms control; instead it has been built around the concepts of preemption and warfighting, and the Soviets have sought to acquire the forces appropriate to such doctrinal precepts.<sup>5</sup> This fact alone would prevent strategic arms negotiations from playing the role posited for them by arms control theory, since they were intended to prohibit or discourage just

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<sup>5</sup> An excellent concise overview of Soviet doctrine that supports this point is Benjamin Lambeth, "How to Think About Soviet Doctrine," in John Baylis and Gerald Segal, eds., Soviet Strategy (London: Croom Helm, 1981), pp. 105-123.

such doctrines and capabilities. Whatever American policy might be, the Soviet failure to embrace arms control theory was an insurmountable blow to the hope that mutual limitations could be the centerpiece of a regime of superpower stability.

But American strategic doctrine, while not identical to Soviet doctrine, also failed to accord with that prescribed by the arms control theorists. The American case is more complex than the Soviet, because the ideas of the arms control theorists have had a significant impact on the U.S. strategic debate and because the more pluralistic policymaking process in the United States allowed (via public opinion, Congress, and the participation of civilian experts) these ideas to have some (and occasionally considerable) impact on American policy. Nevertheless, it now seems clear that whatever the predominant view in Congress or in the public discourse on strategic weapons policy, American strategic targeting doctrine has always given high (if not highest) priority to the destruction of Soviet nuclear forces - despite the clear injunction of the arms control theorists that this is dangerous and destabilizing.<sup>6</sup>

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<sup>6</sup> Recent scholarship on U.S. targeting doctrine has clearly demonstrated this point. See in particular David Allan Rosenberg, "The Origins of Overkill: Nuclear

There are a variety of reasons why this has been the case: the U.S. needs credible retaliatory options and striking Soviet cities seems suicidal in a world of large Soviet nuclear capabilities; the U.S. needs first-strike options in order to extend deterrence to its NATO allies; many believe that an effective deterrent posture must threaten that which Soviet leaders value most, including Soviet military power. These strategic considerations, which a majority of American defense policymakers have found compelling, clash with the edicts of arms control theory.

Thus, each in its own way and for its own reasons both superpowers have pursued, to the maximum possible extent permitted by the constraints of politics, technology and budget, precisely those strategic doctrines that are at odds with the essential aims of arms control, which is to say that neither has been willing to accept the invulnerability of its opponent's strategic forces as the foundation of stability. Rather, each has pursued counterforce strategic doctrines intended to provide warfighting options should war come.

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Weapons and American Strategy, 1945-1960," International Security 7 (Spring 1983): pp. 3-71; and Desmond Ball, "U.S. Strategic Forces: How Would They Be Used?," International Security 7 (Winter 1982-1983): pp. 31-60.

If one views the past quarter century of strategic arms control diplomacy as a process in which arms control collided with the preferred strategic doctrines and forces of the two superpowers, then the modest accomplishments and slow progress are not surprising; arms control is very unlikely to (and should not) prevail in such a collision. The point, in short, is that the United States and the Soviet Union have embraced strategic doctrines that are inconsistent with the pursuit of negotiated strategic arms control as it was envisioned in the late 1950s; this has been the decisive development for arms control in the past quarter of a century.

In large measure because they failed to anticipate the doctrinal preferences of the two superpowers, the early theorists underestimated the potential for friction between arms control and strategic policy. Given the assumption that the superpowers would, in their strategic policy choices, avoid "destabilizing" doctrines and capabilities, it was easy to presume that strategic policy would be consistent with the requirements of arms control and that negotiated agreements would be compatible with strategic policy. Under such conditions, it is possible to imagine a large role for arms control

and any number of arms control outcomes would suffice to help create and/or buttress such a regime. Reality, however, has been more complicated. Far from being always compatible, arms control has often been (or been seen as) a potential impediment to necessary force posture improvements and force modernization has often been (or been seen as) an obstacle to arms agreements. Schelling and Halperin, in their famous book, state that theirs "is an effort to fit arms control into our foreign and military policy, and to demonstrate how naturally it fits...."<sup>7</sup> Two decades later we can see that the fit has not been so natural after all.

Furthermore, because the superpowers chose strategic doctrines others than those recommended by the arms control theorists and because there was often tension between strategic policy and arms control, there has always been concern about, criticism of, and opposition to the pursuit of arms control. This has caused domestic political considerations to loom large (at least in the United States) as a determinant of the pace and scope of arms control; the early theorists of nuclear arms control overlooked the pervasive effect of this factor. This was a damaging oversight, because in the United

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<sup>7</sup> Strategy and Arms Control, p. 1.

States the conditions for the domestic success of arms control are demanding and rarely in evidence - as illustrated by the fact that nearly two decades of strenuous arms control diplomacy have resulted in only a single signed and ratified strategic arms agreement. Critics and opponents, for example, have substantial leverage in the domestic politics of arms control, not least because a minority consisting of one-third plus one of the Senate is sufficient to prevent the ratification of a treaty. Further, and in some ways more important to this argument, the arms control policy process is heavily influenced, if not dominated, by those responsible for national security policy. This is not surprising or unnatural given that arms negotiations deal directly and explicitly with weapons that are components of the national defense establishment of the state, but it does mean that many senior officials and influential bureaucracies will be in a position to enforce compatibility between strategic policy preferences and arms control policy. It is both inevitable and appropriate that strategic doctrinal choices heavily influence and circumscribe the possibilities and prospects of arms control; even the arms control theorists would agree that arms control policy should be

subordinate to strategy and not the other way around. The nature of the domestic political process related to arms control guarantees that this linkage will exist. In the context of the strategic doctrines previously and presently held by the superpowers, this means that negotiated arms control cannot fulfill the role posited for it by the early theorists.

This line of argument not only explains the modest accomplishments of strategic arms control to date, but it also has profound implications for its future prospects. It suggests that the role of arms control will inevitably be quite circumscribed, that it will be no more than a secondary determinant of the size and character of the strategic balance. Stability, if there is to be any, will continue to be much more the product of defense policy than of arms control policy: it will result from the efforts of both sides to ensure the survivability of their own forces rather than from a conscious effort at mutual restraint.

Essentially, then, this dissertation will be an examination of why the modern theory of arms control emerged when it did, what its substantive content was, and why it has proven so difficult to implement in practice. Surprisingly little attention has been devoted

to these questions, and it is this lacuna that I hope my work will help to fill.<sup>8</sup>

In Part I of what follows, we will examine the circumstances that gave rise to the modern theory of arms control and will explore in detail its substantive content. The discussion will emphasize that this approach to arms control was dependent, for both its purpose and its viability, on the doctrine of mutual deterrence. In Part II, the doctrines actually chosen by the two superpowers will be delineated, and it will be evident that the doctrinal prerequisite for translating the modern theory of arms control into practice has not existed; the superpowers have not found acceptance of mutual deterrence to be compatible with their foreign and military policy requirements. This, I suggest, is the most basic explanation for the limited success of arms control to date, and represents the most important constraint on the present and future practice of arms control. In Chapter 4 we then turn to the ideas that have prevailed over the modern theory of arms control in

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<sup>8</sup> Partial exceptions to this point are Edward Luttwak, "Why Arms Control Has Failed," Commentary, January 1978, pp. 19-28; and Thomas Schelling, "What Went Wrong With Arms Control?," Foreign Affairs 64 (Winter 1985/86): pp. 219-233. Neither of these essays, however, makes the argument offered here.

shaping the strategic environment, and assess their implications for that theory. We will see that the doctrinal notions that have triumphed in the policy arena are fundamentally incompatible with the essential edicts of the modern theory of arms control. Finally, we turn to the question of what purpose arms control actually serves in the world of policy, since it obviously cannot, for doctrinal reasons, serve the purpose posited by the arms control theorists. Here we will see that it is not surprising to have witnessed so much arms control activity in the past quarter century, for it is a quite flexible instrument of policy that can fulfill a variety of useful purposes even if it cannot fulfill the objective established for it by the theorists who reinvented it.

Part I

The Origins and Content of Modern Arms Control Theory

## Chapter One

### Why a New Theory of Arms Control?

"It is common knowledge, indeed notorious, that the Strategic Air Force is exceedingly vulnerable....The present American retaliatory force fulfills few of the demands for an invulnerable force in an acceptable manner."<sup>1</sup>

Oscar Morgenstern

In the late 1950s, there was a tremendous upsurge of interest in and writings about arms control. It is not going too far to suggest that this outburst of attention both redefined and revitalized arms control. But why did this happen? What caused strategic analysts in this period to turn anew to this subject and to create a new body of thought about the prospects and the possibilities for arms control? Answering these questions will illustrate both how unusual this development was and why this new thinking assumed the form that it did.

In the course of this chapter, we will see that this preoccupation was a remarkable and surprising development because at that time there was little in the history of

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<sup>1</sup> Oscar Morgenstern, The Question of National Defense (New York: Vintage Books, 1959), pp. 40,44.

arms control, recent or distant, to suggest that it was a potentially promising diplomatic or intellectual enterprise. Indeed, the record of arms control then consisted of nearly six decades of extensive but largely fruitless efforts that provided few indications that it was a significant barrier to war, that it could play a significant pacifying role in relations between major powers, or that it could be an important determinant of the military environment. The preceding decade had been particularly barren, as disarmament discussions between the United States and the Soviet Union had never come close to reaching a successful conclusion and the positions of the two superpowers were understood to be almost entirely propagandistic in nature. Furthermore, despite the occasional thaw in relations, the superpowers were for the most part still relentlessly hostile toward and suspicious of one another, which meant that the diplomatic environment was not especially favorable to a new push for arms control.

And yet, beginning in about 1958, and continuing for half a decade thereafter, there emerged the first serious arms control negotiations of the nuclear age. Perhaps more importantly, there emerged in this period a body of theoretical and policy-oriented writings on arms control

that, taken together, constituted a distinct new approach to that subject, one specially tailored to the peculiar dangers of the nuclear age. This modern theory of arms control established the basic framework that has governed thinking about strategic arms control down to the present day.

Why did these ideas emerge when they did? What was the content of this modern theory of arms control? And what are its implications for the contemporary pursuit of arms control? These are the questions that will be addressed in this chapter and the next. This chapter will focus on the first of these questions.

A. Why Attention to Arms Control Theory?

It is interesting and illuminating both that the upsurge of interest in arms control occurred, and that it occurred when it did, rather than ten years earlier or ten years later. One must begin with the proposition that this intellectual outburst on arms control need never have happened. To the extent that the intellectual focus on arms control in the late 1950s and early 1960s introduced ideas that were new and different (and they were certainly thought to be and represented as if they

were so), these were ideas that statesmen and strategists had lived without throughout modern history; one must suppose that they could have lived another year, decade, or century without them as well. So that this preoccupation with the theory of arms control happened at all is something to be noticed - particularly since, as we shall see below, the times were not propitious.

It is also striking that this focus on arms control theory occurred not at the outset of the nuclear age, but a decade and a half into it. Somehow it would be intuitively more understandable if this development had taken place ten years earlier, in proximate response to the development of nuclear weapons. That it did not means that we can easily dismiss one obvious potential explanation for the intense interest in arms control: it was not a reaction to the mere existence of nuclear weapons. This is not to say that the atomic revolution did not spur, in the late 1940s, an interest in military restraint, for it did. But this early interest focussed on more radical, more utopian answers: "One World or None;" World Government; international control of atomic energy; nuclear or even general and complete disarmament; these were the concepts that caught hold in the late 1940s. The ideas offered by the arms control theorists

of the late 1950s were of a different nature. Indeed, to a considerable extent, they were, whether explicitly or implicitly, a reaction against, a rejection of, the ideas that found favor in the late 1940s and that were frequently voiced at the United Nations throughout the 1950s. Thus, not simply the arrival of the nuclear weapon, but something else must explain the timing and the nature of the modern theory of arms control.

There are three other possible explanations, not mutually exclusive, that might explain why the half decade from 1958 to 1963 witnessed an extraordinary and unprecedented outpouring of writing on arms control. First, it is possible that the record of arms control was sufficiently promising to scholars who studied it in the late 1950s that they were inspired to address the subject anew. Second, perhaps Soviet-American relations had improved to the point that large-scale cooperation on the most sensitive security issues could be envisioned. Third, it is conceivable that the early arms control theorists were stirred by dangers and/or opportunities that resided in the strategic environment of the moment. In what follows, each of these explanations is examined in turn. As we shall see, the first two are almost entirely without merit, and the answer lies with the

third. The questions "why?" and "why then?" are intimately connected.

B. The Inheritance: Six Dismal Decades of Arms Control

In order to understand why it is puzzling that the subject of arms control was the object of such attention in the late 1950s and early 1960s, it is necessary to examine the legacy of arms control to see what, if any, hopeful signs it contained that might have inspired the theorists of twenty-five years ago to spend their energies thinking and writing about it. The first point to be made is that arms control negotiations have played virtually no role in relations among major powers throughout most of the several hundred year history of the modern nation-state system. Looking at the broad sweep of history, then, provides little sustenance to the notion that arms control is a promising avenue of scholarly inquiry or diplomatic activity.

Because arms control is a relatively recent invention, however, the broad sweep of history may not be a relevant test of its value. The most significant evidence available to arms control analysts in the late 1950s was the six decades of experience with the

diplomacy of arms control in the twentieth century, beginning with the Hague Conference of 1899 and continuing through the Soviet-American disarmament discussions (largely under United Nations auspices) in the 1950s. Were there reasons for optimism about the future of arms control to be found in this history?

In fact, the record of arms control over this long period of time is such that it is impossible to avoid negative conclusions about the possibilities of and the prospects for negotiated arms restraint. Despite an enormous investment of diplomatic attention and energy and despite the signing of several agreements, arms control did not achieve any substantial accomplishments in this period. Indeed, one could easily conclude from this history that arms control is a woefully inadequate instrument for dealing with great power rivalries and arms races.

At the same time, however, this previous experience did legitimize "disarmament" diplomacy as a plausible activity among major powers; it had come to be viewed as an accepted, a routine, and even a desirable form of behavior, and this acceptance was sufficiently deep that even the collapse of the inter-war treaty regime and the experience of the Second World War did not dramatically

undermine it. Furthermore, one can see, in some of the early attempts to introduce negotiated restraints as important factors in relations among major power adversaries, harbingers of some of the intellectual constructs that would come to figure prominently in the modern theory of arms control. True, these foreshadowings of theory to come remained, in this earlier period, inchoate and largely unarticulated, but the implicit premises of pre-nuclear age arms negotiations and treaty regimes - the idea that diplomacy could supplement military policy in the provision of security, that security itself was as much a mutual as a unilateral concept, that the military environment could be influenced (or, to use the contemporary parlance, managed) via negotiations - all came to figure prominently and explicitly in the body of arms control theory that was to emerge beginning in the late 1950s. The difference in the more recent period was that these underlying premises were laid bare and were adapted to the particular circumstances of not only the nuclear, but also the missile, age.

Consequently and paradoxically, the bleak saga of arms limitation efforts before the nuclear age represented not only a source of discouraging conclusions

about the prospects for arms control, but also, in an indirect way, a precursor of things to come. In briefly examining this early history, I shall emphasize the grounds for pessimism that resided in this unhappy story, for this explains both why it is surprising that the subject of arms control attracted the attention that it did and why it was that the early arms control theorists felt obliged to explain why it was that they believed arms control would be more productive and successful in the future than it had been in the past. But I shall also be attentive to the hints of the modern theory of arms control that are found here.

The modern era of arms control was initiated on August 29, 1898 by Czar Nicholas II of Russia, who issued a call for a conference on the limitation of armaments. This initiative resulted in the First Hague Conference, held in the early summer of 1899.<sup>2</sup> The Russian motive in

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<sup>2</sup> The best account of the Hague Conferences is Barbara Tuchman, "The Steady Drummer: The Hague, 1899 and 1907," in her The Proud Tower: A Portrait of the World Before the War, 1890-1914 (New York: Macmillan, 1966), pp. 227-288. For an analysis of the forces and ideas that formed the backdrop to the two Hague Conferences, see Merze Tate, The Disarmament Illusion: The Movement for a Limitation of Armaments to 1907 (New York: Macmillan, 1942). For an account of American participation, see Calvin Davis, The United States and the First Hague Peace Conference (Ithaca: Cornell University Press, 1962). For a very brief assessment of the results of the Hague Conferences, see Coit D. Blacker

making this proposal was not altruism or any great love of peace, but rather concern that it would not be able to afford to keep pace with the military modernization program of its great rival for primacy in the Balkans, Austria-Hungary. The Russian hope was that a freeze on military budgets and forces could be achieved, thereby allowing it to avoid falling further behind its adversary.<sup>3</sup> Thus, even in its origins, the Hague Conference was more an expression of great power rivalry than an alternative to it or an abatement of it.

Similarly, the two months of negotiations were dominated by the maneuverings of the major powers intended to prevent the limitation of any weapons which were to their advantage (while of course favoring limitations on those weapons which advantaged their adversaries). Most of the states in attendance participated with a singular lack of enthusiasm and had as their aim the avoidance of any significant agreement.

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and Gloria Duffy, eds., International Arms Control: Issues and Agreements (Stanford, California: Stanford University Press, 1984), pp. 83-84.

<sup>3</sup> It is interesting to note that Henry Kissinger offers a similar rationale for American participation in SALT I. In his memoir, White House Years (Boston: Little Brown, 1979), he comments that "arresting the Soviet buildup is the U.S. government's most urgent concern," and he claims that "I saw in SALT an opportunity to redress the strategic balance." See p. 550.

Germany, in particular was more than willing to play the ogre at this conference, believing as its government did that it was likely to be the chief victim of any successful agreement that limited forces and/or sought to replace coercion with arbitration as the means of resolving crises and diplomatic disputes.<sup>4</sup> From Germany's perspective, any such agreement would have the effect of thwarting its vigorous military buildup, which was transforming it into the leading military power on the continent and into an increasingly influential global player.<sup>5</sup> Further, agreeing to the peaceful settlement of disputes would deprive Germany of the diplomatic fruits of its military buildup. Indeed, much of the German political elite held views that entirely precluded any significant result at the Hague Conference: they

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<sup>4</sup> See, for example, Tuchman, "The Steady Drummer: The Hague, 1899 and 1907," p. 264.

<sup>5</sup> For data on the German buildup, the engine of which was Germany's extraordinary economic growth after 1885, see Michael Balfour, The Kaiser and His Times (New York: W.W. Norton, 1972), pp. 437-447. The links between Germany's economic and military strength and her diplomatic ambitions is explored in Paul M. Kennedy, "The First World War and the International Power System," in Steven E. Miller, ed., Military Strategy and the Origins of the First World War (Princeton: Princeton University Press, 1985), pp. 7-40. For discussion of Germany's arms race challenge to Britain, see Paul M. Kennedy, "Strategic Aspects of the Anglo-German Naval Race," in his Strategy and Diplomacy, 1870-1945 (Boston: George Allen and Unwin, 1983), pp. 129-160.

believed that Germany's best interest was served not by codifying the political-military status quo but by upsetting it, and they firmly believed that peace was not always in the interest of a great power.<sup>6</sup> Here we encounter one of the fundamental constraints on the pursuit of arms control: it must be compatible with the foreign and military policies of the relevant powers or it cannot succeed in being an important factor in relations among major powers.<sup>7</sup>

Not only did the Hague Conference founder on the intractable realities of great power politics, it also collided with the organizational interests of the participating militaries. Prominent in the American delegation, for example, was a Navy Captain by the name of Alfred Thayer Mahan, who took it as his mission to

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<sup>6</sup> On views prevalent in Germany before the First World War, see Stephen Van Evera, "The Cult of the Offensive and the Origins of the First World War," in Miller, ed., Military Strategy and the Origins of the First World War, pp. 58-107. Also illuminating is Isabell Hull, The Entourage of Kaiser Wilhelm II, 1888-1918 (New York: Cambridge University Press, 1982).

<sup>7</sup> As we shall see in Chapter 3 below, it is precisely the incompatibility of the modern theory of arms control with the doctrinal and policy preferences of the superpowers that accounts for its disappointing record.

prevent any discussion whatsoever of naval limitations.<sup>8</sup> He was joined in this successful effort by Admiral John Fisher of the British Navy, who as First Sea Lord after 1904 was to preside over the tremendous modernization of the British fleet in the early years of this century. Similarly, the British were firmly opposed to the banning of expanding bullets because, while they were inhumane in causing horrible wounds, they were quite useful to those small outposts of British power responsible for policing the empire.<sup>9</sup> Thus, just as states were unwilling to forsake reliance on their own military power or to transcend their often ambitious self-interests, so were militaries unwilling to accept constraints on any significant weapon of war.

The Hague Conference of 1899 did not fail to produce any meaningful result; it was quite important, in fact, in establishing the foundation for the modern international law and customs of war. From the point of view of limiting weapons and defense spending and of reducing the role of force in diplomacy, however, the First Hague Conference was an utter failure, as evidenced

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<sup>8</sup> Tuchman, "The Steady Drummer: The Hague, 1899 and 1907," P. 250,260.

<sup>9</sup> Ibid., p. 262.

by the fact that the subsequent years leading up to the First World War witnessed one of the most intense arms races in modern history.

The Second Hague Conference, held in 1907 at the initiative of American President Theodore Roosevelt, met with a similar fate. No arms limitation agreement emerged from this conference, and indeed, there was virtually no discussion of arms limitations at the meeting. The major diplomatic effort, an attempt to make arbitration compulsory, also failed. Germany again served as the most vivid reminder that great powers often do not find the pursuit of arms control to be consistent with their interests or policies. Having made some further contributions to the law of war but no progress whatsoever on arms limitations, the Second Hague Conference adjourned in October 1907 with a call for another meeting to be held in 1915. The summer of 1915, however, was marked not by the Third Hague conference, which was never held, but by the battles of Neuve Chapelle, Ypres, Arras, and Gallipoli, the first in the series of bloody and often senseless battles that characterized World War I. Thus, the initial effort to employ arms control to moderate great power rivalries was brought to an end by the outbreak of a global conflict.

This was not an auspicious beginning for arms control.

Efforts to achieve arms limitations were resumed, nevertheless, after the end of World War I, and the fifteen years between 1921 and 1936 stand as one of the great periods of arms control activity in this century.<sup>10</sup> This era, more than the Hague Conference period, had a triumphant and promising beginning, but by the mid-1930s arms control had been shattered, a major arms race was under way, the dictators were on the march, and the slide toward world war had begun.

The stage for much of the arms control effort of this entire period was set by the Washington Conference, which met from November 1921 to February 1922.<sup>11</sup> At the time

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<sup>10</sup> For a recent, detailed overview of this period, see Christopher Hall, Britain, America and Arms Control, 1921-1937 (New York: St. Martin's, 1987).

<sup>11</sup> There are a number of useful accounts of the interwar naval limitation conferences and agreements. Robert Hoover, Arms Control: The Interwar Naval Limitation Agreements, Monograph Series in International Affairs, Volume 17, Number 3, Graduate School of International Studies, University of Denver, 1980, emphasizes the international and domestic political contexts out of which the agreements emerged and in which they had to function. Hedley Bull, "Strategic Arms Limitation: The Precedent of the Washington and London Naval Treaties," in Morton A. Kaplan, ed., SALT: Problems and Prospects (General Learning Press, 1973), pp. 26-52, focuses on the parallels between the interwar negotiations and the SALT I talks. The implications of the Washington Conference for U.S. naval policy are considered in Harold and Margaret Sprout, Toward a New Order of Sea Power: American Naval Policy, 1918-1922,

that the conference convened, the United States was engaged in a serious naval race with Britain. In 1916, in a decision heavily influenced by the World War and by the challenges to American shipping on the high seas by the belligerents, including Britain, the United States adopted a naval policy of pursuing a "Navy second to none." This represented, of course, a frontal challenge to Britain's naval supremacy, which had been unequalled at least since the wars of Napoleon, and Britain responded with an ambitious naval building program of its own. Neither wanted to reduce their own program while the other continued to build, but neither wished to sustain the resulting heavy naval expenditures indefinitely in peacetime.

Simultaneously, the United States was involved in a bitter conflict of interest with Japan in the Pacific (frictions which led eventually to war between the two

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(Princeton: Princeton University Press, 1943). A contemporary account is Raymond L. Buell, The Washington Conference (New York: Russell and Russell, 1922). A very critical assessment of the Washington Conference is Dudley W. Knox, The Eclipse of American Sea Power (New York: American Army & Navy Journal, 1922). An excellent account of British policy can be found in Stephen Roskill, Naval Policy Between the Wars: The Period of Anglo-American Antagonism, 1919-1929 (London: Collins Publishing Co., 1968). For a careful study of U.S. policy, see Thomas Buckley, The United States and the Washington Conference (Knoxville: University of Tennessee Press, 1970).

powers). Not only were these two powers engaged in a naval competition, but there were periodic war scares in both countries. Because the Japanese and the British were tied together by the Anglo-Japanese alliance of 1902, America's difficulties with these two countries were intertwined, and in particular there was great concern in Washington about what role the British would play should war break out between the United States and Japan. The Washington Conference was an effort to sort out these difficulties.

The conference had a dramatic opening. On November 12, 1921, U.S. Secretary of State Charles Evans Hughes addressed the first session and delivered a speech that left the participants stunned. The way to disarm, Hughes suggested with irrefutable logic, is to disarm, and the time to begin is immediately. He then proceeded to offer a series of specific proposals on naval limitations and reductions, including a ten year moratorium on capital ship construction and the scrapping of 66 ships by the United States, Britain, and Japan in order to preserve their existing ratio of naval power of 5:5:3 at lower levels of forces. Hughes's shocking proposal left men "babbling incoherently," according to one contemporary account, and it was said that his scheme would destroy

more ships than had all the admirals in the world over several centuries.<sup>12</sup> Nevertheless, these measures came to be included in the Five Power Naval Agreement, which limited the competition in capital ships (but left all other categories of naval vessels - destroyer, cruisers, submarines, etc. - unrestricted) and which represented the most substantial act of disarmament in the modern annals of arms control.<sup>13</sup>

In the subsequent decade, serious if not always successful efforts were made to extend the Washington Conference naval limitations regime to other categories of naval capability. This was thought desirable not least because an arms race had developed in the largest

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<sup>12</sup> Quoted in Thomas Bailey's brief but vivid account of the Washington Conference in A Diplomatic History of the American People (New York: Appleton-Century-Crofts, 1969), p. 640.

<sup>13</sup> The Washington Conference also addressed great power politics in the Pacific and produced two political agreements in addition to the Five Power Naval Agreement. The Four Power Treaty among the U.S., Britain, Japan, and France terminated the Anglo-Japanese Treaty and called for joint consultation on peacekeeping in the Pacific. This agreement ended the American fear of war against an Anglo-Japanese coalition in the Pacific. In the Nine Power Treaty, signatories pledged to respect the sovereignty and independence of China and to observe America's "Open Door" policy of equal access to Chinese markets. While it was hoped that these accords would reduce the potential for conflict in the Pacific, they did not deflect American and Japanese policies from their collision course.

unrestricted category of naval vessels, cruisers. The first attempt to build upon the Washington Treaty regime (much as SALT II attempted to build upon SALT I) was the Geneva Naval Disarmament Conference of 1927 (also known as the Coolidge Conference because President Calvin Coolidge had initiated it).<sup>14</sup> The thought of the American government was that the ratios established in 1922 for capital ships could simply be applied to other types of naval vessels. But the apparent simplicity and attractiveness of this scheme was deceptive; it failed to take into account the differing strategic requirements of the conferees. The American position put it at odds with Britain, which held that it could not accept parity in cruisers because it required larger numbers of vessels to ensure the security of its global empire. This stalemate could not be overcome and the conference ended a disastrous failure, with Anglo-American relations significantly worsened as a result. In the aftermath, the U.S. Congress passed a Cruiser Construction Bill

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<sup>14</sup> For a very interesting account, see David Carlton, "Great Britain and the Coolidge Naval Disarmament Conference of 1927," Political Science Quarterly 83 (December 1968): pp. 573-598. See also Hoover, Arms Control: The Interwar Naval Limitation Agreements, pp. 81-88. Perhaps because it ended in failure, this conference has attracted much less scholarly attention than the other interwar naval disarmament conferences.

which seemed to guarantee an Anglo-American naval race; only changes of government in both countries prevented that outcome.<sup>15</sup> The Coolidge Conference is at least one case where arms control, unsuccessfully pursued, made things considerably worse.<sup>16</sup>

With the coming of the Great Depression, the financial pressure on the governments of the major powers became acute and the burden imposed by the naval competition became even more onerous. By 1930 there was concern not only about the cruiser race but also about the imminent end to the moratorium on battleship construction, which was scheduled to expire in 1931. This could bring an even more costly competition in capital ships. These pressures led to the convening of the London Naval Conference of 1930. It was considerably

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<sup>15</sup> For an article decrying the Anglo-American naval race, see Allen Dulles, "Anglo-American Naval Rivalry," Foreign Affairs 7 (1929): pp. 173-182.

<sup>16</sup> It is worth noting that the controversies at the Coolidge Conference include some striking parallels with the SALT negotiations. There was, for example, a struggle to define "parity," in this case, in cruisers. There were problems with what we would now call counting rules, that is to say, how to most appropriately count the capabilities in question. There were also technical disputes over the capabilities of weapons that were reminiscent of SALT. The Anglo-American disagreement over the range of light cruisers, for example, is strikingly similar to the Soviet-American dispute over the range of the Backfire bomber.

more successful at extending the Washington Conference regime than was the 1927 conference but appears in historical retrospect to have been advantageous to the emerging aggressor states, Germany and Japan, and hence, an ill-advised step.<sup>17</sup>

The London Conference resulted in a treaty, signed on April 22, 1930, that prolonged the moratorium on capital ship construction to 1936 and applied the Washington Conference ratios to cruisers, allowing the United States parity with the British but at levels so high that the U.S. would have to undertake a substantial building program to reach them.<sup>18</sup> The conference also succeeded

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<sup>17</sup> The essential source on the London Naval Conference is Raymond G. O'Conner, Perilous Equilibrium: The United States and the London Naval Conference of 1930 (Lawrence, Kansas: University of Kansas Press, 1962). An interesting contemporary assessment is Walter Lippman, "The London Naval Disarmament Conference: An American View," Foreign Affairs, 8 (1930): pp. 499-518. Stephen Roskill, Naval Policy Between the Wars: The Period of Reluctant Rearmament (Annapolis: Naval Institute Press, 1976), has an excellent chapter on the conference from a British perspective. Hoover, Arms Control: The Interwar Naval Limitation Agreements, pp. 91-98, provides a concise account of the conference.

<sup>18</sup> This outcome resembles that of the Vladivostok accord between the Soviet Union and the United States, which allowed both sides equal numbers of strategic nuclear delivery vehicles, but at a level of forces (2400) higher than the U.S. possessed or intended to possess. In 1930, this result provoked considerable domestic opposition to the treaty. See, for example, Bailey, A Diplomatic History of the American People, p. 652.

in limiting smaller vessels such as destroyers and submarines, but could do so only by allowing the Japanese greater equality of capability in these categories, thus helping to alter the balance of naval power in the Pacific in favor of Japan. The treaty also contained a significant loophole: if any nonsignatory took steps to jeopardize the naval balance, the signatories would no longer be bound.

Perhaps the most significant consequence of the treaty, however, lay in its effects within Japan. The opposition to the acceptance of continued inferiority in major naval vessels was so intense that it provoked a series of assassinations that spelled the end of moderate governance in Japan and brought the Japanese military to power. Within a short time thereafter, Japan was at war in China and the drift toward war between the United States and Japan in the Pacific was established. Further, Japan undertook a program of circumventions of the treaty limitations, and by 1934 it had renounced completely its adherence to the naval treaty regime. Japan's military leaders had come to believe, as one historian has explained, that "the single greatest impediment to the Japanese navy's mission of defending the empire and the new order in East Asia and the western

Pacific was the treaty regime. Any diplomatic instrument that limited the Japanese navy's ability to make and implement decisions necessary for the defense of the empire was antithetical to Japanese interests."<sup>19</sup>

Naturally, it was impossible for an arms control regime to survive such sentiments on the part of one of the most important participants.

The 1930 treaty did, however, include a provision that called for another conference in 1935. The Second London Naval Conference, held from December 1935 to March 1936, serves as a forlorn coda to the history of interwar naval arms control. One last effort was made to preserve something of the treaty regime even in the face of the Japanese buildup and Japanese expansionism in Asia and of the rapid resurgence of military power in Hitler's Germany. The United States and Britain did sign a treaty in March 1936 which continued some naval limitations, particularly on the size of vessels. But without the adherence of Japan, Germany, and Italy, the treaty was meaningless, a fact captured in the inclusion in the treaty of numerous escape clauses. Within two years of the London Naval Treaty of 1936, the entire naval arms

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<sup>19</sup> Hoover, Arms Control: The Interwar Naval Limitation Agreements, p. 101.

limitation regime had been completely destroyed and all the major powers, including the United States, had embarked on unprecedented naval rearmament programs. Less than four years after the conclusion of the 1936 treaty, the world was again at war.

The effort between the world wars to achieve an effective regime of naval limitations was sustained and extensive; the governments of the major powers made an impressive investment of energy and attention in these negotiations and several agreements were in fact reached. But, as with the earlier efforts at the Hague, the results were bitterly disappointing. Arms control did not abate frictions between the great powers and, indeed, in some instances, as in 1927, seemed to exacerbate them. Nor did the arms limitations that were achieved end the naval arms race; they merely changed its character, and not necessarily for the better. Some have argued, for example, that the advent of the aircraft carrier, with its potential for surprise attack, was hastened by the treaty regime because carriers were not subject to the same severe limitations as battleships.<sup>20</sup> And, as noted,

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<sup>20</sup> See, for example, the severe assessment of interwar arms control by Charles H. Fairbanks, Jr., "The Washington Naval Treaty, 1922-1936," in Robert Art and Kenneth Waltz, eds., The Use of Force: International Politics and Foreign Policy (New York: University Press

a naval race developed in categories of vessels that were unrestricted. As was the case with the Hague Conferences, the outbreak of war demonstrated conclusively that arms control had been inadequate as a barrier to armed conflict or as a guarantor of peace. And, in perhaps the most damning indictment, many historians render the verdict that the pursuit of arms control, especially in the 1930s, was a serious mistake by the United States and Great Britain, that it weakened them relative to their eventual enemies in war by lulling public opinion and undermining building programs while the aggressor states strengthened themselves through tough bargaining, cheating, and finally through abrogation of the treaties.<sup>21</sup> The interwar naval limitation negotiations provide few grounds for optimism about the potential utility of arms control.

The same can be said for the more ambitious arms control undertakings in this period. The Kellogg-Briand Pact of 1928, signed initially by fifteen nations and soon approved by virtually all others, banned war as an

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of America, 1983), pp. 473-478.

<sup>21</sup> For critical verdicts, see O'Connor, Perilous Equilibrium, and Roskill, Naval Policy Between the Wars: The Period of Reluctant Disarmament. A more favorable judgement is rendered by Hoover, Arms Limitations: The Interwar Naval Limitations Agreements, pp. 97-98.

instrument of national policy.<sup>22</sup> Because this agreement was signed on the eve of a decade that was marked by war and that culminated in the Second World War, it stands as a singular testament to the meaninglessness of committing peaceful aspirations to paper; it was, one diplomatic historian has concluded, "a monument to illusion."<sup>23</sup>

Far the most ambitious arms control undertaking of the interwar period was the World Disarmament Conference, held under the auspices of the League of Nations from 1932-1934.<sup>24</sup> Discussion at the conference was dominated by the idea, advanced and publicly endorsed by President Hoover, that all offensive weapons be banned. While in political terms, this idea proved abortive, in conceptual

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<sup>22</sup> The standard history is Robert H. Ferrell, Peace in Their Time: The Origins of the Kellogg-Briand Pact (New Haven: Yale University Press, 1952). The Pact was a consequence of the French effort to secure an alliance with the United States, and hence was more an artifact of power politics than of altruism. See pp. 66-83. For a sample of the ideas that were manifested in the Kellogg-Briand Pact, see Charles Clayton Morrison, The Outlawry of War: A Constructive Policy for World Peace (Chicago: Willett, Clark, and Colby, 1927).

<sup>23</sup> Bailey, A Diplomatic History of the American People, p. 650. The principles of conduct negotiated with the Soviet Union in 1972 by Nixon and Kissinger are sometimes viewed in a similar light.

<sup>24</sup> A detailed account of the substantive discussions at the World Disarmament Conference is Marion William Boggs, Attempts to Define and Limit Aggressive Armament in Diplomacy and Strategy (University of Missouri Studies, Vol. XIV, No. 1, 1941).

terms it represents a precursor to the ideas that came to prominence in the modern theory of arms control of the late 1950s. It showed concern not merely with numbers of weapons but with their character, and sought to utilize the Conference to construct an environment in which weapons of aggression were proscribed. As Marion Boggs, author of the most important analysis of arms control thinking in the pre-World War II period, explained:

According to the dicta of the strategists, offensive operations are ultimately the sole means of achieving political purposes by force, particularly if such purposes include revision of the status quo; hence offensive weapons...must in general be indispensable to successful warlike activity. On the basis of this premise, the advocates of disarmament eventually came to regard the distinction between offensive and defensive armament, and the restriction of the former class, as the main, though not the exclusive, principle of action upon which depended the theoretical validity and practical success of the entire disarmament program.

This notion, labelled the "qualitative approach" to disarmament, is (as we shall see) reminiscent of the thinking that came to constitute the core of the modern theory of arms control. Whereas the latter was focussed on the problem of surprise attack in the nuclear age (with all of the problems unique to that age), "qualitative disarmament" in the interwar period sought to address the problem of aggression in the pre-nuclear era. As Boggs put it, "qualitative disarmament"

proposes to eliminate aggression by denying to national armed forces the weapons indispensable to the offensive. It envisages a future armament equilibrium in which actual resort to hostilities would end in stalemate, and assumes that when the impossibility of successful offensive action becomes apparent, the tendency to attack will disappear.<sup>25</sup>

One can detect here clear glimmerings of later ideas about nuclear arms control: the notion that equilibrium or stalemate represents a safe condition, that attack is unlikely if it can be made to appear unprofitable, that arms control can be employed to eliminate weapons of a dangerous character. The big difference, we shall see, is that the arms control theorists despaired of eliminating nuclear weapons, which were thought to be inherently and inescapably weapons of surprise attack because of their vast destructiveness, and hence focussed on arms control as a means of reducing incentives for attack rather than simply tackling capabilities for attack. But while the intellectual echoes seem clear, there is little evidence that this earlier conceptual approach influenced the modern arms control theorists, perhaps because the attempt at the World Disarmament Conference proved futile and fruitless.

For the practical difficulties in implementing an

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<sup>25</sup> Boggs, Attempts to Define and Limit Aggressive Armament in Diplomacy and Strategy, pp. 8, 14.

agreement based on this idea were enormous: virtually all weapons can be offensive depending upon how they are used and, further, most states tend to see the weapons upon which they depend as defensive and those of their potential adversaries as offensive.<sup>26</sup> Even if the diplomatic environment had been conducive to arms control, it would have been very hard to negotiate an agreement.

But the larger problem confronting the World Disarmament Conference was that its timing could hardly have been less fortuitous. The Japanese were already at war in Manchuria. In Germany, Hitler was consolidating

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<sup>26</sup> These problems are discussed in detail in Boggs, Attempts to Define and Limit Aggressive Armament in Diplomacy and Strategy, passim. The idea of eliminating offensive weapons as a means of reducing the likelihood of conflict has a long history that antedates and postdates the World Disarmament Conference. For an early statement of the argument, see, for example, B.H. Liddell Hart, "Aggression and the Problem of Weapons," English Review, (1932): pp. 71-78. For a recent expression of these notions, see Randall Forsberg, "The Freeze and Beyond: Confining the Military to Defense as a Route to Disarmament," World Policy Journal 24 (1984): pp. 285-318. The theoretical basis for this approach is outlined in Robert Jervis, "Cooperation Under the Security Dilemma," World Politics 30 (January 1978): pp. 167-214, which suggests that clearly defensive postures would enable states to provide for their own security without seeming to threaten that of their neighbors. The difficulties of defining and distinguishing offensive and defensive regimes are analyzed in Jack Levy, "The Offensive/Defensive Balance of Military Technology: A Theoretical and Historical Analysis," International Studies Quarterly 25 (June 1984): pp. 219-238.

his power and embarking on a major rearmament effort. Both Japan and Germany harbored expansionist foreign policy aspirations. The key European participant, France, was recalcitrant because of its fear of Germany, a fear that events of the subsequent decade would show to be well-founded. These were not conditions hospitable to progress in disarmament negotiations. And in October 1933, Hitler withdrew Germany from both the Disarmament Conference and the League of Nations, which spelled the end of any frail hope of disarmament in the interwar period.

The half-decade after the collapse of the World Disarmament Conference in 1934 was marked by the slide to World War II, and not disarmament but rearmament became the hallmark of the policies of most of the major powers. In September 1939, almost exactly four decades after the opening of the First Hague Conference in 1899, war erupted in Europe. Thus, the forty years in which arms control occupied a prominent place on the diplomatic agendas of the major powers witnessed some of the most intense arms races in history and were interrupted by two world wars. Although there was some interesting and prescient conceptual progress in this period, it is hard to see what hopeful conclusions could be drawn from this

record about the possibilities of arms control.<sup>27</sup> Indeed, in retrospect it appears that arms control failed to prevent war, failed to stop arms races, failed to improve relations between hostile powers, and proved inadequate to deal with aggressor states.<sup>28</sup> Whatever promising ideas had been developed had proven impossible to pursue in practice. There was not much here from which the theorists of nuclear arms control could draw inspiration.

The nuclear age opened, nevertheless, with renewed efforts at arms limitations. Barely six months after the use of two atomic bombs against Japan, the United States undertook to formulate a plan for the international control of atomic weapons; the result of this effort, known as the Baruch Plan, was presented to the United

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<sup>27</sup> For a recent analysis that similiarly emphasizes the tendency of arms control to produce negative or counterproductive results, see Bruce D. Berkowitz, Calculated Risks: A Century of Arms Control, Why It Has Failed and How It Can Be Made to Work (New York: Simon and Schuster, 1987), especially pp. 20-48.

<sup>28</sup> Of course, it was not just arms control that failed in the face of militant expansionist powers. Diplomacy and deterrence, appeasement and rearmament, all proved inadequate to deal with the threat posed by Imperial Japan and, especially, by Nazi Germany. This suggests the dangers that status quo powers may face when one or more states in the system are aggressors.

Nations Atomic Energy Commission (UNAEC) in June of 1946.<sup>29</sup> The Baruch Plan called for the creation of an Atomic Development Authority that would own and operate all atomic energy facilities. No nation or organization would be permitted to possess atomic weapons or the capacity to create them. Peaceful uses of atomic energy were to be encouraged, but only under UN auspices. Sanctions, including the use of armed force if necessary, would be imposed against those who violated the treaty, and these sanctions would not be subject to veto by members of the UN Security Council. And, in its most controversial aspect, the Baruch Plan was to be implemented in stages, with the American atomic monopoly preserved until the final stage.

The Baruch Plan soon foundered as a consequence of

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<sup>29</sup> For a detailed account of the negotiations at the United Nations over the international control of atomic energy, see Joseph I. Lieberman, The Scorpion and the Tarantula: The Struggle to Control Atomic Weapons, 1945-1949 (Boston: Little Brown, 1970). On the origins of American policy, see Barton J. Bernstein, "The Quest for Security: American Foreign Policy and International Control of Atomic Energy, 1942-1946," Journal of American History 61 (March 1974). For an interesting analysis of the attitudes that shaped American arms control policy in this early period of the nuclear age, see Larry Gerber, "The Baruch Plan and the Origins of the Cold War," Diplomatic History 6 (Winter 1982): pp. 69-95. For a useful concise account of the Baruch Plan, see Michael Mandelbaum, The Nuclear Question: The United States and Nuclear Weapons, 1946-1976 (New York: Cambridge University Press, 1979), pp. 23-33.

the growing suspicion and friction between the United States and the Soviet Union. The USSR was unwilling to accept an arrangement that prolonged for an unspecified period of time the American nuclear monopoly while the United States was unwilling to forego its monopoly until an effective system of international control was in place. Although discussion of international control continued at the UN until 1949, the likelihood of reaching a successful agreement was very low after the initial failure to make progress in 1946. Efforts at cooperation soon gave way to Cold War, and by the end of 1949 the Soviet Union had exploded its first nuclear weapon. Thereafter, the idea of placing atomic weapons under international control was killed by the extremely hostile relations that emerged between the two superpowers and by the nuclear arms competition that accompanied that hostility; it was never seriously exhumed.

What then ensued was roughly a decade, from the late 1940s to the late 1950s, in which arms control assumed an almost ritualistic propaganda form, with the Soviet Union and the United States competing at the United Nations to profess their respective commitment to general and complete disarmament, but with no real progress and very

little serious negotiation.<sup>30</sup> As one scholar has written,

Nuclear Diplomacy went forward in the 1950s partly because neither the United States nor the Soviet Union wished to seem less devoted than the other to the cause of peace. The leaders of each country strove to impress their own people, and the leaders and citizens of third countries, with their sensitivity to the perils of the nuclear age and their ardent desire to find a way to avoid them. Each, in fact, wanted to put the other in a bad light, and so each put forward proposals that it felt confident the other would reject. Nuclear diplomacy turned into a battleground of the Cold War, and offering proposals and counterproposals became a form of political warfare.<sup>31</sup>

To be sure, some elements of these proposals and counterproposals were more serious and more feasible than others, but for the most part advocates of arms control

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<sup>30</sup> For a thorough account of arms control in this period, see Bernard G. Bechhoefer, Postwar Negotiations for Arms Control (Washington D.C.: The Brookings Institution, 1961). Also useful is John W Spanier and Joseph Nogee, The Politics of Disarmament: A Study in Soviet-American Gamesmanship (New York, 1962). A more positive assessment of arms control efforts in the Eisenhower years is Thomas F. Soapes, "A Cold Warrior Seeks Peace: Eisenhower's Strategy for Nuclear Disarmament," Diplomatic History 4 (Winter 1980): pp. 57-71. President Eisenhower's account may be found in his memoirs, Waging Peace: The White House Years, 1956-1961 (Garden City, N.Y.: Doubleday & Company, 1965), pp. 466-484. Eisenhower himself claims that his Administration's desire to achieve arms control agreements was genuine, but concludes that "In the end, our accomplishments were meager, almost negligible." (p. 468)

<sup>31</sup> Mandelbaum, The Nuclear Question, p. 34. For a brief survey of arms control efforts in this period, see Blacker and Duffy, International Arms Control, pp. 99-107.

were in the position, in the words of one contemporary assessment, of "seeking needles of serious intent amongst haystacks of propaganda."<sup>32</sup>

Nevertheless, as was the case with interwar arms control (but more immediately and with more discernible effect), the arms control discussions that took place at the United Nations did encompass, and put the spotlight on, a problem that was to figure substantially in the modern theory of arms control. As the decade of the 1950s progressed, attention increasingly turned away from the notion of general and complete disarmament and toward what were then called partial measures. Prominent among these was the problem of surprise attack; indeed, the UN discussions helped put the issue of surprise attack at the forefront of the arms control agenda. As President

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<sup>32</sup> William R. Frye, "Characteristics of Recent Arms Control Proposals and Agreements," in Donald G. Brennan, ed., Arms Control, Disarmament, and National Security (New York: George Braziller, 1961), p. 85. For an example of such a search, see Robert E. Matteson, "The Disarmament Dilemma," Orbis 2 (Fall 1958): pp. 285-299, which offers a hopeful interpretation of the London disarmament talks of 1957. Glenn Seaborg, himself a significant participant in many of the arms control efforts from the late 1950s to the early 1970s, confirms this point in more sweeping fashion: "Most arms control proposals advanced by both superpowers have been insincere.... Arms control has thus frequently been 'debased into a species of propaganda' and arms control negotiations into forums for invective." See Seaborg with Benjamin S. Loeb, Stemming the Tide: Arms Control in the Johnson Years (Lexington, Ma: Lexington Books, 1987), p. 456.

Eisenhower wrote of Khrushchev in the context of the his UN proposal for an inspection scheme intended to safeguard against surprise attack, "with the growing capabilities in the Soviet Union and the United States of massive surprise attack it is necessary to establish measures to allay fears."<sup>33</sup> Or, as US Ambassador to the UN, Henry Cabot Lodge elaborated,

The awesome destructive power of modern armaments makes it at least theoretically possible to wipe out the military capacity of a state - even one of the greatest powers - in a single attack. But such an attack must come without warning if it is to succeed. If there is a way to guard against such massive surprise attack or to allay fear of such an attack - and the United States believes there is - we must leave no stone unturned in our effort to find it.<sup>34</sup>

The problem of nuclear surprise attack arose, in short, in the diplomatic arena, and statesmen began to urge that means be found to safeguard against it. The modern theory of arms control, as we shall see, was largely an effort to address this problem. Fruitless and propagandistic though they were, the UN discussions helped to establish the intellectual agenda for arms

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<sup>33</sup> "Letter from President Eisenhower to the Soviet Premier (Khrushchev), April 28, 1958," in US Department of State, Documents on Disarmament, 1945-1959 [Volume II: 1957-1959] (Washington, D.C.: USGPO, 1960), p. 1006.

<sup>34</sup> "Statement by the United States Representative (Lodge) to the Security Council; Proposed Arctic Security Zone, April 29, 1958," in Documents on Disarmament, 1957-1959, p. 1008.

control in the late 1950s; it raised a problem urgently in need of solution. At the same time, however, the absence of meaningful progress on any front left little room for optimism that new arms control ideas would prove fertile in practice.

Such was the environment in which the sudden outburst of thinking about arms control took place in the late 1950s and early 1960s, and such was the historical record of arms control which was available to them. There are evident in that record forerunners of the problems and ideas that would be central to the modern theory of arms control, and these should not be overlooked; In establishing arms control as a common and acceptable variety of diplomatic behavior, in spawning concepts and identifying roles for it, this historical experience helped, even if sometimes indirectly, to establish the circumstances in which the modern theory of arms control emerged. In intellectual terms, one can see in this history occasional hints of what the modern theory of arms control was to become.

On the other hand, it is probably not much of an overstatement to say that there was virtually nothing in the six decades of experience of arms control by 1960 to suggest that it was likely to be a significant and

fruitful endeavor. Whatever interest or promise the early theorists saw in nuclear arms control, it was not inspired by anything in the track record. Indeed, it is hard to avoid the conclusion that interest in arms control was intensified despite the rather considerable evidence over many decades that arms control was not a very effective instrument for coping with arms races and conflict. Perhaps not surprisingly, the formative writings of this period devote virtually no attention whatsoever to this history.<sup>35</sup>

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<sup>35</sup> Frye, "Characteristics of Recent Arms Control Proposals and Agreements," is a partial exception to this point, but it is a short essay in a book of nearly 500 pages, and it spends only a couple of pages on arms control before World War II. (Interestingly, it says of the history of arms control that "The effort has been very largely futile.") [p. 68] The most influential and enduring of the books written in this period, Thomas C. Schelling and Morton H. Halperin, Strategy and Arms Control (New York: Twentieth Century Fund, 1961), mentions this history not at all. Another classic, Hedley Bull's The Control of the Arms Race: Disarmament and Arms Control in the Missile Age (New York: Praeger (for the International Institute for Strategic Studies), 1961), contains no more than the occasional mention of the historical evidence and provides no sustained treatment of it. Arthur T. Hadley's book, The Nation's Safety and Arms Control (New York: The Viking Press, 1961), contains a short chapter entitled "The Sorry History of Arms Control," but it spends less than two pages on arms control in the pre-nuclear era and is preoccupied with negotiations under UN auspices. It seems as if the first extensive attempt to assess nuclear arms control in the light of previous experience may be Bull's "Strategic Arms Limitation: The Precedent of the Washington and London Naval Treaties," which was published in 1973. The growing disillusionment with arms

C. The State of Soviet-American Relations

Negotiated arms control would require cooperation with the Soviet Union, and it is possible that the early theorists of nuclear arms control were stirred by hopes that improvements in relations between the superpowers would allow the necessary degrees of cooperation to take place. But while there were, in fact, occasional brief "thaws" in Soviet-American relations during the 1950s, overall their relations were sufficiently tense and hostile that they could hardly have served as the wellspring for the preoccupation with arms control that took place in that period. As one prominent scholar wrote in 1959, the superpowers were "two colossi eyeing each other often with hatred and fear, always with suspicion...."<sup>36</sup> Furthermore, it is evident in the work of the arms control theorists themselves that they saw

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control in recent years has drawn attention back to this early history. See, for example, Berkowitz, Calculated Risks, passim; and Charles H. Fairbanks, Jr. and Abram N. Shulsky, "From Arms Control to Arms Reductions: The Historical Experience," The Washington Quarterly 10 (Summer 1987): pp. 59-73.

<sup>36</sup> Kenneth N. Waltz, Man, the State, and War: A Theoretical Analysis (New York: Columbia University Press, 1959), p. 216.

Soviet-American relations not as a source of hope but as the source of grave potential difficulties.<sup>37</sup> In what follows I will sketch briefly the tenor of Soviet-American relations and then examine the ways in which the Soviet Union figured in the formative writings on strategic arms control.

It is not necessary for our purposes here to belabor the point that during the 1950s Soviet-American relations were laden with friction, hostility, and crisis. The decade opened with the Korean War and the attendant fears that it signalled a Soviet/communist willingness to use force to spread communism.<sup>38</sup> It ended with two crises, one over the U-2 incident, the other over Berlin. In between were a series of crises and scares, such that diplomatic historian John Lewis Gaddis labels his account

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<sup>37</sup> This worry led a number of the early theorists to contemplate unilateral as well as negotiated approaches to arms control. The former obviously circumvented any obstacles the USSR might represent (but could not skirt domestic constraints).

<sup>38</sup> For evidence of the pervasive American concern about the possibility of war with the Soviet Union and of the effect of this concern on US policy during the Korean War, see Rosemary Foot, The Wrong War: American Policy and the Dimensions of the Korean Conflict, 1950-1953 (Ithaca, New York: Cornell University Press, 1985).

of this period "From Confrontation to Confrontation."<sup>39</sup> A major premise of American foreign policy in these years, as articulated by Secretary of State John Foster Dulles, held that the favorite tactics of the USSR were violence and guile.<sup>40</sup> So deep were the sources of hostility, wrote one scholar in 1958 despairing of any improvement in superpower relations, that "proposals will be viewed as propaganda, criticisms as intimidation, and concessions as duplicity." Hence, a "staggering number of statesmen and students of international affairs" had concluded that there was no means of escaping from that pattern of deep enmity between the Soviet Union and the United States.<sup>41</sup> Thus in 1952 Dean Acheson, frustrated by his dealings with the Soviet Union, had concluded that

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<sup>39</sup> In his excellent book, Russia, the Soviet Union, and the United States: An Interpretive History (New York: James Wiley & Sons, 1978), pp. 207-240. The crises in this period are systematically examined in Alexander George and Richard Smoke, Deterrence in American Foreign Policy: Theory and Practice (New York: Columbia University Press, 1974).

<sup>40</sup> As described in Adam Ulam, The Rivals: America & Russia Since World War II, New York: The Viking Press, 1971, p. 231.

<sup>41</sup> J. David Singer, "Threat Perception and the Armament-Tension Dilemma," Journal of Conflict Resolution II (March 1958): pp. 94, 103. It should be noted that Singer himself did not accept this pessimistic judgement, and advocated instead a move away from traditional state sovereignty to supranational control of nuclear weaponry. See p. 104.

"we had reached the end of the road as far as disarmament was concerned, certainly for some time to come."<sup>42</sup>

There were, nevertheless, some indications of improvement in Soviet-American relations during the 1950s, particularly after the death of Stalin in 1953. Summit meetings were held in 1955 and 1959, leading to the "Spirit of Geneva" and the "Spirit of Camp David" respectively. But these meetings led to nothing more than a temporary improvement in the atmospherics of Soviet-American relations which was in each case soon overwhelmed by fear and crisis.<sup>43</sup> Even the effort in 1958 to conduct serious negotiations on nuclear testing and on the problem of surprise attack did not provide particularly hopeful evidence because both ended in failure and, in the case of the Surprise Attack Conference, the differences between East and West were so

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<sup>42</sup> Quoted in Barton J. Bernstein, "A Missed 1952 Opportunity to Stop the H-Bomb," unpublished ms., Department of History, Stanford University, 1987, p. 19.

<sup>43</sup> Adam Ulam concludes about the 1955 Geneva Conference, for example, "Geneva is only a minor footnote in the chronicle of the Cold War." The Rivals, p. 236. As for the Camp David summit of 1959, it should be pointed out that it took place in the midst of the unfolding Berlin Crisis, which it attempted, but failed, to resolve. See Jack Schick, The Berlin Crisis, 1958-1962 (Philadelphia: University of Pennsylvania Press, 1971), especially pp. 98-104. Schick notes that "they had decided nothing....The Camp David summit did not dispel the Berlin Crisis...." (p. 104)

great that the meeting was unable even to agree on an agenda.<sup>44</sup> Thus, while the record of Soviet-American relations during the 1950s was not totally bleak, the ultimate verdict about the prospects for meaningful cooperation was quite negative. John Lewis Gaddis writes, for example, of "the general invulnerability of Soviet-American hostility to the usages of traditional diplomacy."<sup>45</sup> And President Eisenhower himself, writing with evident disappointment in his memoirs, stated that "One of my major regrets is that as we left the White House I had to admit to little success in making progress in global disarmament or in reducing the bitterness of

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<sup>44</sup> The most thorough account of the Surprise Attack Conference is Johan Holst, "Strategic Arms Control and Stability: A Retrospective Look," in J. Holst and W. Schneider, Jr., eds., Why ABM? Policy Issues in the Missile Defense Controversy (New York: Pergamon Press, 1969), pp. 245-284. For a brief but amusing account, see Gregg Herken, Counsels of War (New York: Alfred A. Knopf, 1985), pp. 123-125. Although the meeting was a complete diplomatic failure, Thomas Schelling (who was a member of the American delegation to the conference) believes that it was a spur to further thinking on the subject and hence may have contributed to the subsequent arms control renaissance. See Thomas C. Schelling, "What Went Wrong With Arms Control?", Foreign Affairs 64 (Winter 1985/86): p. 221.

<sup>45</sup> Gaddis, Russia, the Soviet Union, and the United States, p. 206.

the East-West struggle."<sup>46</sup> The diplomatic context of Soviet-American relations was not, in short, propitious for arms control.

This reality had a discernible impact on the thinking of those who contributed to the intellectual outpouring on arms control in this period. The conundrum with which the arms control theorists would struggle was foreshadowed in a remarkable report on arms control prepared for the Secretary of State by a Panel of Consultants in 1953; this document represents one of the earliest efforts by the U.S. government to seriously address the arms control issue.<sup>47</sup> It is, in its way, a tragic document, for it essentially concluded that arms control was both urgently needed and impossible. The source of its despairing conclusion was its severe view of Soviet power and policy. "If anything has been made plain since 1945," the Report observes in its

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<sup>46</sup> Eisenhower, Waging Peace, p. 653. Strikingly, Eisenhower describes this failure as "my greatest disappointment." (p. 653)

<sup>47</sup> The report is reprinted, along with a brief introductory essay, in McGeorge Bundy, "Early Thoughts on Controlling the Arms Race: A Report to the Secretary of State, January 1953," International Security 7 (Fall 1982): pp. 3-27. The Panel of Consultants on Disarmament was chaired by Robert Oppenheimer; he was joined on the Panel by Vannevar Bush, John Dickey, Allen Dulles, and Joseph Johnson. McGeorge Bundy was secretary to the Panel and was responsible for drafting the Report.

introductory section, "it is that the world in which the United States finds itself is one in which there also exists a great and hostile power system. Policies that cannot survive in such a world must be discarded."<sup>48</sup> It was by no means certain to the authors of this Report that arms control was a policy choice that could pass this test. The primary reason for doubt was the expectation that the Soviet Union would itself stand in opposition to progress in arms control. "Perhaps the central and most serious obstacle [to arms control]," the Report concluded, "has been the strong likelihood that the Soviet Union simply does not have any interest in a settlement except on terms that would be ruinous for the United States."<sup>49</sup>

But the basis for pessimism lay deeper than just doubt about Soviet interest in the serious pursuit of mutually beneficial arms control. Progress in arms limitation was thought to have as a prerequisite the resolution on a large scale of the political disputes between East and West. In 1953 (as well as later in the decade) the prospects for such a political settlement

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<sup>48</sup> "Early Thoughts on Controlling the Nuclear Arms Race," p. 7.

<sup>49</sup> "Early Thoughts on Controlling the Nuclear Arms Race," p. 15.

seemed remote in the extreme. This reality, combined with the belief that the great and growing power of the nuclear forces of the superpowers made it imperative to pursue some form of what was then called "arms regulation," led directly to the paradoxical conclusion provided by the Report:

We seem to be left with three general propositions which are hard to reconcile with one another. First, no regulation of armaments, however limited, has ever proved feasible except as part of some genuine political settlement....Second, most sorts of understanding with the Kremlin are now either unobtainable or unacceptable or both; even if peaceful coexistence is possible, it cannot be comfortable or cordial, and it certainly seems unlikely to involve anything that could be called a general settlement for some time to come. Third, unless the contest in atomic armaments is in some way moderated, our whole society will come increasingly into peril of the gravest kind.

This formulation captures precisely the conundrum that the early arms control theorists had to face: from their perspective arms control seemed to be both necessary and impossible. Whatever the theoretical potential of arms control, and however imperative arms control might seem to be, there could be no negotiated limitations on nuclear arms if the Soviet Union would not cooperate. The deep and widespread doubt that the Soviet Union would cooperate, combined with the unproven (and, lacking a successful negotiation, unprovable) quality of arguments that the Soviet Union might cooperate, made it extremely

difficult to see how arms control could be considered a realistic policy option. As the 1953 Report concluded at the end of the passage quoted above, in a masterpiece of understatement, "The task of framing and pursuing a national policy based on all three of these propositions cannot be easy."<sup>50</sup> Indeed, to the detached observer, it appears to be impossible to do so. Later in the decade, however, there was less emphasis on the need for a general East-West settlement as a precondition of arms control.

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<sup>50</sup> "Early Thoughts on Controlling the Nuclear Arms Race," p. 16. Some analysts sought to circumvent this powerful pessimistic logic by questioning whether a political settlement was necessarily a prerequisite to arms control. Rather than settlement leading to arms control, they suggested, perhaps arms control agreements could pave the way to a broader political settlement. See, for example, J. David Singer, "Threat Perception and the Armament-Tension Dilemma." As Singer put it (somewhat awkwardly): "The major premise of this paper is that any attempt to break out of the arms-tension circle must successfully reduce threat-perception by addressing itself to the reduction of both military capability and estimated military intent." (pp. 94-95) Singer returns to this issue in Chapter 7 ("Tensions, Political Settlement, and Disarmament") of his too-much overlooked and underrated book, Deterrence, Arms Control, and Disarmament: Toward a Synthesis in National Security Policy (Columbus: Ohio State University Press, 1962). Bull, in The Control of the Arms Race, disputes the proposition that settlement is a prerequisite to arms control, arguing first that arms control is itself a form of political settlement having to do with the balance of military power and further that to await a political settlement is to settle for the indefinite postponement of arms control. See pp. 75-76.

But the central question remained as the modern theory of arms control emerged in the late 1950s: would the Soviet Union engage in serious negotiations? Remarkably, although advocacy of arms control as a major policy option would logically require an affirmative answer to this question, in fact most who addressed the issue were not particularly hopeful.<sup>51</sup> In fact, what is striking is how few illusions existed on this score. The main outlines of the problem were best laid out, in general terms, by Hedley Bull. "However desirable it may be," he wrote, "arms control can occur only if circumstances are such that governments both want it and

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<sup>51</sup> It should be emphasized that some of the early arms control literature ignored rather than confronted this matter. Some of the most influential works focussed on the purposes that arms control might serve and the ways that an arms control regime might function, but skirted entirely this issue of whether the arms control arrangements under consideration were politically feasible and how an arms control regime might be achieved. In the case of Schelling and Halperin's Strategy and Arms Control, this was by design; in their introduction they state clearly that their preoccupation is with the military consequences of arms control. They freely concede, "We have just not covered the whole subject." See p. 6. Likewise, Hadley's The Nation's Security and Arms Control is largely given over to analysis of the need for and the beneficial consequences of arms control and pays little attention to the prerequisites for arms control. In reading this literature, one gets the sense that many of these early theorists felt that they would make arms control more feasible and more likely by demonstrating its strategic benefits. This, of course, did not guarantee that the USSR would behave as required.

can agree on its terms. In this sense, that it is brought about and maintained by the policies of sovereign governments, the conditions of arms control are political." Bull noted that governments might well not wish to participate in the creation of an arms control regime:

The question of establishing a system of arms control does not arise unless the powers concerned regard the pursuit of arms control, as distinct from the conduct of political warfare about arms control, as among the objectives of their policy. It cannot by any means be assumed that they do (nor should it be suggested without regard for other considerations that they always should); and in fact many of them do not, except in the sense that they want other states to disarm.<sup>52</sup>

Bull thus outlined, in an abstract way, the potential obstacle to Soviet-American arms control: it was not clear that the Soviets really wanted it. Bull himself was not entirely gloomy about this, for he believed that the dangers associated with nuclear weapons were sufficiently great that both superpowers should have some motivation to be genuinely interested in arms control, but even in the context of this relatively hopeful interpretation he observed that "the tensions between them are severe, and are founded in the suspicion and distrust which a world-revolutionary power and a

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<sup>52</sup> Bull, The Control of the Arms Race, pp. 65-67.

conservative and potentially counterrevolutionary power rightly feel about each other's intentions."<sup>53</sup>

Most observers placed more accent on the negative than did Bull. One analysis, published in 1961, reports, for example, that "A large number of the observers of the arms control negotiations have concluded that the Soviet Union has no genuine interest in disarmament and that in its approach it is motivated solely by considerations of propaganda."<sup>54</sup> Skeptics of arms control, in particular,

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<sup>53</sup> Bull, The Control of the Arms Race, p. 70.

<sup>54</sup> Bernhard G. Bechhoefer, "Negotiating with the Soviet Union," in Donald G. Brennan, ed., Arms Control, Disarmament, and National Security (New York: George Braziller, 1961), p. 269. Bechhoefer felt this conclusion was "oversimplified" but his own judgement was also very pessimistic. In his conclusions, interestingly, he repeats the paradoxical formulation of the 1953 arms control Report: "No matter how hopeless the prognosis, the Western powers must continue to seek to negotiate. The menace of all-out nuclear warfare is so great that the rest of the world will simply not allow negotiation to die." (p. 281) It is worth noting that pessimism about the prospects for Soviet-American arms control negotiations was fueled by the extensive and mostly unhappy experience of the United States and other Western powers in other post-war diplomatic negotiations with the Soviet Union. For an early, and quite bleak, survey, see Raymond Dennett and Joseph E. Johnson, eds., Negotiating with the Russians (Boston: World Peace Foundation, 1951). The editors observe that many of their authors conclude that "little in the way of positive results can be expected" from negotiations with the USSR. See p. xi. As noted Soviet expert Philip Mosely put it in his conclusory essay, "Some Soviet Techniques of Negotiation," "This is a grim picture." (p. 297)

were quick to point out that the case made by arms control advocates depended, implicitly if not explicitly, on judgements about Soviets interests and intentions, judgements that were often found lacking in empirical basis. Military expert George Fielding Eliot, for example, offered the following criticism, which is worth quoting at length because it is representative of the lines of attack to which the arms control theorists were obviously vulnerable:

Western advocates of arms limitation are thus compelled, inescapably, to subscribe to a theory of Soviet purposes which has little support in the way of hard evidence....They cannot seriously argue for arms limitation at all unless they can persuade themselves that sometime, somehow there is a chance that the Soviet Union will accept - all at once or step by step - the minimum conditions under which substantive accomplishment can be combined with mutual guarantees....If arms limitation is to continue to be taken as a serious objective of Western policy, its advocates are compelled to assume that the aims of Soviet policy are, or can become, such that they can be reconciled with the scaling down of Soviet armaments and the establishment of safeguards which would (1) deprive the Soviets of the capability of surprise nuclear attack...; (2) prevent any future increase in Soviet nuclear armaments; (3) deny the Soviets the weapons systems...upon which Soviet hopes for a growing margin of military advantage over the West are founded....To insist upon the immediate practicability of pursuing disarmament as a major Western objective is simply to equate communist with Western motivations. A Soviet government which could accept and implement the Western disarmament proposals would, by so doing, be

abandoning communist doctrine and objectives.<sup>55</sup>

Criticism of this sort was telling, for in the late 1950s there was little evidence, apart from hopeful interpretations of Soviet disarmament rhetoric, with which to contest such attacks on the practicability of arms control.<sup>56</sup> Proponents of arms control did possess

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<sup>55</sup> George Fielding Eliot, "The X-Factor in Arms Limitation," Orbis 3 (Fall 1958): pp. 300-301. Not surprisingly, Eliot believed that the emphasis in Western policy should be on building "counterweights" to Soviet nuclear forces rather than on arms control. Other analysts pointed out that not only Western arms control policy, but also its strategic options and policies, rested implicitly if not explicitly on judgements about Soviet preferences and likely Soviet behavior. See, for example, Alvin J. Cottrell and James E. Dougherty, "Nuclear Weapons, Policy, and Strategy," Orbis 2 (Summer 1957): especially pp. 148-150, 154, which points out, in the context of the debate then underway on the prospects for limited nuclear war and the related question of the advisability of a policy of "graduated deterrence," that wartime limitations on nuclear use will require Soviet restraint, which might or might not be forthcoming, depending on Soviet perceptions of their interests.

<sup>56</sup> And, of course, the debate over Soviet motivations in participating in arms control negotiations has never gone away; Soviet behavior in the strategic arms control negotiations has not universally dispelled the doubts. See, for example, Richard N. Perle, "The Soviets and Arms Control," Global Affairs (Summer 1986): pp. 1-9. For other salvos in this ongoing debate, see Dmitri K. Simes, "Are the Soviets Interested in Arms Control?," The Washington Quarterly 7 (Spring 1985): pp. 147-157; Jane M.O. Sharp, "Are the Soviets Still Interested in Arms Control?," World Policy Journal (Summer 1984): pp. 813-849; and Michael MccGwire's chapter, "Military Objectives and Arms Control," in his Military Objectives in Soviet Foreign Policy (Washington D.C.: The Brookings Institution, 1987), pp. 232-282.

three arguments that answered, or at least circumvented, such charges. First, they routinely argued that the very existence of nuclear weapons created for both superpowers a powerful common interest in avoiding nuclear war.<sup>57</sup> As we shall see, this presumption was to be a critical component of the belief that arms control could play a significant role in a world of two heavily armed nuclear superpowers; arms control should be attractive and useful to policymakers, Soviet as well as American, because it was a means by which the two powers could collaboratively pursue their compatible self-interests.

Second, in part because the likelihood of serious Soviet participation was unknown, there was emphasis in the early literature on arms control on unilateral steps the could further the cause of arms control; in effect, this view conceived of defense policy as a potential means of pursuing the ends of arms control. As Arthur Hadley explained this notion, "Arms control looks toward the reduction of the threat of war. When military policies go in that direction they may be legitimately regarded as parts of arms control."<sup>58</sup> Schelling felt the

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<sup>57</sup> Because I will return to this point at greater length later in this analysis, I will not document it here.

<sup>58</sup> Hadley, The Nation's Safety and Arms Control, p. 63.

same, arguing that "schemes to avert surprise attack are manifestly compatible with a national military policy, not a renunciation of it."<sup>59</sup> The advantage of unilateral measures, whether taken purely as desirable defense policy choices or as an effort to induce informal reciprocation, was that they did not require Soviet cooperation as a prerequisite to progress.<sup>60</sup> This approach circumvented the potential obstacle of Soviet recalcitrance.

Third, some analysts in the late 1950s argued that the United States and its allies should engage in serious efforts to achieve arms limitations despite doubts about Soviet seriousness because such attempts could serve as a definitive test of Soviet intentions. If the United States offered fair proposals that would improve the security of both the superpowers by reducing the danger of war, and these were rejected by the USSR, then it

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<sup>59</sup> Thomas C. Schelling, "Reciprocal Measures for Arms Stabilization," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 167.

<sup>60</sup> Bull devotes an entire chapter to the subject of "Arms Control and Unilateral Action," (including, however, discussion of unilateral disarmament that is not entirely relevant here). See The Control of the Arms Race, pp. 77-91. Schelling and Halperin give a lot of attention to what they call "informal arms control," that is, arms control without formal negotiations or agreements. See Strategy and Arms Control, pp. 77-82.

would be plain for all the world to see that the Soviet Union stood as the primary impediment to arms control; if the Soviet Union were to accept such proposals, then the feasibility of arms control would be proven. This approach is clearly illustrated in some of the early work of Henry Kissinger. "Surely we cannot fail to make a responsible proposal simply because it may be rejected," he wrote in Foreign Affairs in 1960. If no reasonable proposal should prove negotiable, he continued, then "Mr. Khrushchev's speech at the United Nations in favor of complete disarmament will stand revealed as a cynical propaganda hoax. If no meaningful scheme involving inspection is acceptable, the melancholy conclusion may be that the requirements of the Soviet domestic system are incompatible with serious arms control measures."<sup>61</sup> In the end, Kissinger concludes, "If the Soviet Union rejects proposals which are designed to increase its security together with ours - and this is the essence of any responsible program - it will have given clear proof that there is no alternative to the

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<sup>61</sup> Henry A. Kissinger, "Arms Control, Inspection, and Surprise Attack," Foreign Affairs 37 (July 1960): p. 571. Kissinger employs a similar line of argument in Nuclear Weapons and Foreign Policy, p. 232.

arms race."<sup>62</sup> This line of argumentation, too, skirts the problem of possible Soviet obduracy by assuming that the true Soviet attitude toward arms control would be revealed by the serious pursuit of arms control; doubt about Soviet seriousness hence was no reason not to try.

The most important point, in the context of this discussion, is that each of these three arguments represents a way around the unpromising reality of Soviet behavior and of Soviet-American relations. The first suggested merely that one could construct a rational explanation of why the Soviet Union should be seriously interested in arms control; of course, this did not demonstrate that it actually was seriously interested. The second avoided the problem by focusing on unilateral approaches that made Soviet intentions, preferences, and policies irrelevant to progress in arms control. The third offered the somewhat paradoxical claim that doubts about Soviet seriousness with respect to arms control constituted a reason for attempting it; this was an "experimental" approach to determining Soviet intentions. Each provided grounds for concluding that arms control could and should move forward despite the appearance of

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<sup>62</sup> Kissinger, "Arms Control, Inspection, and Surprise Attack," p. 575.

Soviet disinterest. But none of this suggests that improvements in, or the happy state of, Soviet-American relations served as a source of optimism about arms control, much less that they could have provided the spark for the preoccupation with arms control.

D. Strategic Dangers and the National Security Crisis

Given the sorry record of arms control in modern history and the unpromising state of Soviet-American relations, it is all the more remarkable that arms control attracted so much attention from scholars and strategists.

If these vitally important considerations would lead to pessimistic conclusions, what then explains the explosion of interest in arms control in this period? The answer lies in developments in the strategic nuclear balance at that time. Two new realities were emerging in the late 1950s, and in combination they brought about a revolutionary change in the nuclear environment. These changes in turn brought about both new dangers and new opportunities, and arms control was thought to be both a potential remedy to those dangers and a means of exploiting those opportunities.

The first significant shift in the strategic environment was the growth, real and perceived, of Soviet nuclear capability. Although the USSR had tested its first atomic weapon in 1949, for a number of years thereafter it possessed very little nuclear capability that was deliverable against the United States, while the US continued to add to a large and superior force. There were occasional scares, such as the Bomber Gap of the mid-1950s, in which it was feared that the Soviet Union was going to rapidly increase its intercontinental nuclear capability, but these fears were soon shown to be unfounded. Starting in the late 1950s, however, it was widely believed that the Soviets not only would soon have very large nuclear capabilities, but might well be able to achieve a significant degree of superiority as well.<sup>63</sup>

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<sup>63</sup> For support of this statement, see Lawrence Freedman, US Intelligence and the Soviet Strategic Threat (London: The Macmillan Press, 1977), pp. 62-80; John Prados, The Soviet Estimate: US Intelligence and Russian Military Strength (New York: The Dial Press, 1982), pp. 51-95; and Jack H. Nunn, The Soviet First Strike Threat: The US Perspective (New York: Praeger Publishers, 1982), pp. 155-199. Also relevant on this point are Roy Licklider, "The Missile Gap Controversy," Political Science Quarterly 85 (December 1970); and Colin S. Gray, "Gap Prediction and America's Defense: Arms Race Behavior in the Eisenhower Years," Orbis 16 (Spring 1972): pp. 257-274, both of which provide clear evidence of American perceptions of the strategic balance in the late 1950s. For a sample of contemporary expressions of concern, which are voluminous, see Thomas R. Phillips, "The Growing Missile Gap," The Reporter (January 8,

For the first time, the United States faced the inescapable reality of needing to adjust to a world of two substantial nuclear powers. This not only shook the foundations of American nuclear policy,<sup>64</sup> based as it was on assumptions of US superiority and first use, but it raised new and frightening concerns about US vulnerability and about the adequacy of the US strategic posture.

The event that, more than any other, triggered these fears was the launching into orbit of the Soviet Sputnik satellite in October 1957.<sup>65</sup> This event symbolized the second major shift in the strategic balance, the emergence of the missile age. In the late 1950s, the superpowers were on the eve of this development; in

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1959): pp. 10-16.

<sup>64</sup> For a very early expression of this concern, see William Kaufmann, "The Requirements of Deterrence," in W. Kaufmann, ed., Military Policy and National Security (Princeton: Princeton University Press, 1956), in which he argues that emerging Soviet capability is undermining America's policy of massive retaliation.

<sup>65</sup> For a brief account of the dramatic impact of Sputnik, see Lawrence Freedman, The Evolution of Nuclear Strategy (New York: St. Martin's Press, 1981), pp. 139-140. For a contemporary assessment, see Richard Witkin, ed., The Challenge of Sputnik (Garden City, N.J.: Doubleday & Co., 1958). A detailed reconstruction of this period may be found in Edgar M. Bottome, The Missile Gap: A Study of the Formulation of Military and Political Policy (Fairleigh Dickenson University Press, 1971).

1960, for example, the U.S. strategic force consisted almost exclusively of intercontinental and medium range bombers, whereas by the end of the Johnson Administration only eight years later the heart of the force was approximately 1700 land and sea-based ballistic missiles. The struggle to cope with the transformation from a strategic environment dominated by bombers to one dominated by missiles loomed large in the strategic thinking of the period, for it had a series of dramatic implications. It meant that the timetable of attack was reduced to minutes rather than hours, successful surprise attack seemed more likely, warning was much harder to achieve, and a premium might be put on haste in decisionmaking. The nature of, and the problems associated with, this newly emerging strategic environment were of an entirely new character, a fact which provoked a rethinking in the United States of nuclear strategy.

The immediate effect of the conjunction of these two developments - the perceived growth of Soviet capability and the emergence of the missile age - was a national security crisis in the United States. Sputnik suggested that the USSR had leapt ahead of the US in missilery, the

crucial new technology.<sup>66</sup> More significantly, the possibility that the Soviet Union would soon possess a substantial intercontinental missile force raised fears that the US strategic nuclear arsenal would become vulnerable to surprise attack.<sup>67</sup> In this period, US strategic forces consisted of some 1800 intercontinental and medium range bombers which were never distributed across more than sixty or seventy bases (a significant fraction of which were overseas, within relatively easy reach of Soviet military capability).<sup>68</sup> Since it was

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<sup>66</sup> Among other consequences, this development triggered an interest in and a concern about the problem of "technological surprise," that is, about the possibility that sudden or unexpected technological advances or breakthroughs could dramatically disrupt the nuclear balance in some fashion that provided one side with a significant unilateral advantage. For example, see, notably, Arthur Lee Burns, "The International Consequences of Expecting Surprise," World Politics 9 (July 1958): pp. 512-536. The march of technological progress also had major implications for arms control. See, in particular, Bull's chapter, "The Problem of Continuous Innovation," in The Control of the Arms Race, pp. 195-201.

<sup>67</sup> The classic statement of this fear is Albert Wohlstetter, "The Delicate Balance of Terror," Foreign Affairs 36 (January 1959): pp. 211-234. This was a public version of classified work that had been done at the RAND Corporation throughout the 1950s. See, for example, Albert Wohlstetter, et. al., Selection and Use of Strategic Air Bases, RAND R-266, April 1, 1954.

<sup>68</sup> These numbers are drawn from Office of the Historian, Strategic Air Command, Official History of the Strategic Air Command, 1947-1975.

expected (wrongly, as it turned out) that the USSR would soon have hundreds, if not thousands, of intercontinental ballistic missiles (ICBMs), it was apparent that the Soviet Union would possess the means to destroy most of this relatively small number of SAC bases if it chose to attack.

Moreover, and even more disconcerting, in the late 1950s the US had essentially no warning against ballistic missile attack.<sup>69</sup> This meant that bombers could not resort to escape in response to warning as a means of providing survivability. America's unprotected strategic bombers, sitting soft and vulnerable on their runways, raised fears of a "nuclear Pearl Harbor:" a sudden and unexpected attack could destroy a large fraction of U.S. nuclear forces on the ground. The deep fears raised by this situation are evidenced by the central conclusion of the Gaither Committee (appointed by President Eisenhower in 1957 to evaluate the need for civil defense), which reported to the National Security Council on November 7, 1957 that "By 1959, the USSR may be able to launch an attack with ICBM's carrying megaton warheads, against

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<sup>69</sup> On the absence of warning and efforts to provide warning, see for example Melvin Conant, The Long Polar Watch: Canada and the Defense of North America (New York: Harper and Brothers (for the Council on Foreign Relations), 1962).

which SAC will be almost completely vulnerable under present programs....If we fail to act at once, the risk, in our opinion, will be unacceptable."<sup>70</sup> Although ostensibly secret, the findings of the Gaither Report were leaked to the press and reinforced the dramatic impact of Sputnik on America's strategic consciousness. Albert Wohlstetter's influential article in Foreign Affairs in January 1959 put the spotlight on the same set of concerns, warning ominously that America's retaliatory capability could not be taken for granted and that if the U.S. were not careful in its nuclear weapons policies it would lack an effective deterrent threat.<sup>71</sup>

These concerns had a discernible effect on American defense policy. Indeed, in the several years after the catalytic autumn of 1957, U.S. strategic policy was dominated by concern with America's strategic vulnerability and a number of programs were undertaken or accelerated as part of the effort to reduce vulnerability

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<sup>70</sup> Security Resources Panel of the Science Advisory Committee, Deterrence and Survival in the Nuclear Age, November 1957, p. 25. For a full account of the Gaither Committee episode, see Morton H. Halperin, "The Gaither Committee and the Policy Process," World Politics 12 (April 1961).

<sup>71</sup> Wohlstetter, "The Delicate Balance of Terror."

to surprise attack.<sup>72</sup> Between 1957 and 1961, the United States began to harden command and communications facilities (starting with Cheyenne Mountain in Colorado, which became the headquarters for the North American Air Defense Command). The Ballistic Missile Early Warning System (BMEWS) was undertaken; it was supplemented with the MIDAS reconnaissance satellite program. These efforts to acquire strategic warning capability were combined with measures to improve the alert status of the SAC bomber force. Ground and airborne alert procedures were instituted and by May of 1960 SAC maintained one-third of its bombers and tankers on 15 minute ground alert, thus allowing evacuation on receipt of warning.

Strategic procurement programs were influenced as well. A notable example was the Polaris submarine program, which was accelerated in the aftermath of Sputnik; the first two missile-carrying submarines were

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<sup>72</sup> An extremely useful survey of these developments is found in the annual survey of US defense policy undertaken by the Library of Congress for the House of Representatives, beginning in 1957 and continuing into the early 1960s. The first of these was Library of Congress, United States Defense Policies Since World War II, House of Representatives Document No. 100, Washington D.C.: USGPO, 1957. An overview of a number of the relevant issues and programs may be found in Library of Congress, United States Defense Policies in 1959, House of Representatives Document No.432, Washington D.C.: USGPO, May 27, 1960, pp. 14-18 and 40-45.

operational by the end of 1960. As President Eisenhower put it, Polaris provided the United States with a "practically invulnerable retaliatory capability."<sup>73</sup> Similarly, although there were already a number of missile programs underway<sup>74</sup>, the Air Force was authorized in February 1958 to develop the Minuteman ICBM; the rationale for yet another missile program was the Minuteman's solid-fuel and smaller size made it much more amenable to mobile or hardened deployment, while the fact that it was solid-fueled meant that it could be launched quickly once warning was received (thus, the name:

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<sup>73</sup> Eisenhower, Waging Peace, p. 254. Because of its near-invulnerability, the Polaris program became a great favorite among those worried about America's vulnerability to disarming attack. A prominent example is Oscar Morgenstern, who in his book The Question of National Defense (New York: Vintage Books, 1961), offers a lengthy argument on behalf of what he calls "The Oceanic System: The Invulnerable Force." See pp. 82-106. Morgenstern concludes: "Holding our main retaliatory force at sea makes the greatest immediate contribution to the defense of the country: it protects the force proper and it frees the country thereby from direct and indirect effects of a possible attack on this force itself." (p. 89) Another clear example of this proclivity is George Fielding Eliot, "The X-Factor in Disarmament," Orbis 3 (Fall 1958): pp. 310-314.

<sup>74</sup> For a vivid account of the multiple missile programs pursued by the United States in this period, see Herbert York, Race to Oblivion: A Participants View of the Arms Race (New York: Simon and Schuster, 1970). For a useful concise survey of the relative merits of a number of the systems under consideration, see A.T. Church, Jr., "Deterrence and Delusion," Orbis 4 (Summer 1959): pp. 141-147.

Minuteman) in contrast with liquid-fueled rockets which required up to six hours of countdown before launching. As these examples demonstrate, the national security crisis of the late 1950s was clearly manifest in US defense policy.

Ironically, a number of the steps taken to reduce the vulnerability of US forces raised another troubling set of concerns: those having to do with accidental war. The problem was that reliance on alert, warning and evacuation meant that there was risk of false alarms moving forces into action (which in turn made physical mishaps or unauthorized use more likely) and guaranteed that there would be a premium on haste in the event of warning. Such arrangements were widely believed to dangerously raise the risk of nuclear war.<sup>75</sup>

This issue was vividly highlighted in 1958 when the Soviet Union protested to the United Nations about SAC bombers, on alert, flying over the Arctic toward the USSR - often in response to false indications of warning caused by meteors, geese, or other disturbances of US radar warning systems. In his statement to the UN,

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<sup>75</sup> A fact reflected in the nuclear war fiction of this period. See, for example, Thomas Schelling's review of some of these novels, "Meteors, Mischief, and War," The Bulletin of the Atomic Scientists 16 (September 1960): pp. 292-300.

Soviet Foreign Minister Andrei Gromyko clearly defined the problem:

But what would happen if these generals whose nerves, as the facts show, are often jumpy, fail to perceive in time that a flying meteor is not a guided missile and the United States aircraft continue their flight and approach the frontiers of the Soviet Union? It is surely obvious that in such circumstances the need to ensure the safety of the Soviet people would require the USSR to take immediate measures to remove the approaching threat. And what would happen if the military air forces of the USSR began to act in the same way as the United States air forces are now acting? Naturally, meteors and electronic disturbances cause images on Soviet radar screens too. And if in such instances Soviet aircraft loaded with atomic and hydrogen bombs were to take off in the direction of the United States..., then the air formations of the two sides, seeing each other somewhere over the Arctic wastes, would come to the conclusion - very natural in the circumstances - that there was justification for an outright attack on the enemy and mankind would be plunged into the maelstrom of an atomic war.<sup>76</sup>

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<sup>76</sup> "Statement by the Soviet Foreign Minister (Gromyko) Regarding Arctic Flights by United States Military Aircraft, April 18, 1958," in U.S. Department of State, Documents on Disarmament, 1945-1959, [Volume II: 1957-1959], Washington D.C.: USGPO, 1960, p. 986. To prevent such occurrences, the USSR submitted to the UN a resolution calling for the United States to cease the practice of flying nuclear-armed aircraft in the direction of the Soviet Union. See p. 990. The link between fears of surprise attack and the problem of accidental war is clearly revealed in the American reply to the Soviet statement: "Until all fears of surprise attack are banished by effective international arrangements, we are compelled to take all steps necessary to protect ourselves from being overwhelmed. In order to deter aggression all nations which wish to retain their freedom must maintain strong and alert forces incapable of being destroyed by a surprise attack however skillfully delivered." This may be found in "Statement by the United States Representative (Lodge) to

The Soviet Union's political and propaganda motivations in raising this issue were obvious, but this did not mean that the analytical point being raised could be easily dismissed; on the contrary, it was taken quite seriously by many of the early advocates of arms control and this issue, which has faded from view with the passage of years, loomed large on the arms control agenda in the late 1950s. As Thomas Schelling warned, for example, the premium on haste is "undoubtedly the greatest piece of mischief that can be introduced into military forces."<sup>77</sup> Oscar Morgenstern summarized the great fear of many when he suggested that "Accidental, large-scale war is a

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the Security Council: Arctic Flights of United States Military Aircraft, April 21, 1958," in Documents on Disarmament, 1957-1959, p. 992. It should be pointed out that the US insisted not only that its alert and evacuation procedures were necessary safeguards against surprise attack, but also that they did not raise the risk of accidental war because they were carefully planned and monitored. Neither the Soviet Union nor many American theorists found this latter claim to be wholly reassuring.

<sup>77</sup> Thomas C. Schelling, Arms and Influence (New Haven: Yale University Press, 1966), p. 227. It should be noted that in making this remark Schelling was worried not only about accidental war but about the broader problem of first strike advantages, which is, he suggests, the condition that makes haste and accident so dangerous. Schelling directly addresses the question of accidental war in "Meteors, Mischief, and War," Bulletin of Atomic Scientists 16 (September 1960): pp. 292-297. He returns to it in Schelling and Halperin, Strategy and Arms Control, pp. 14-17.

distinct possibility when one side has a highly vulnerable retaliatory force."<sup>78</sup> For reasons like these, alert and evacuation measures, while perhaps necessary in the short term, were nevertheless consequently thought to be undesirable.

Thus, the vulnerability crisis raised in acute fashion the problem of surprise attack, but some of the remedies to the surprise attack problem raised the danger of accidental war. It was, it seemed, a doubly dangerous time.

American politics, like defense policy, was preoccupied with these issues. President Eisenhower, confident in his own judgement and in the adequacy of his policies, and possessing closely held intelligence (provided in large measure by the highly secret U-2 reconnaissance program) indicating the limited nature of actual Soviet nuclear capability, refused to succumb to the "near-hysteria" that gripped the public and the strategic community in the aftermath of Sputnik.<sup>79</sup> He

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<sup>78</sup> Morgenthau, The Question of National Defense, p. 71. On this general subject, see also Singer's chapter, "Fear, Ambivalence, and Unintended War," in Deterrence, Arms Control, and Disarmament, pp. 89-107.

<sup>79</sup> For Eisenhower's account, see his Waging Peace: The White House Years, 1956-1961 (Garden City, N.Y.: Doubleday, 1965), pp. 205-225. Eisenhower himself describes public reaction to Sputnik as "near-hysteria."

resisted pressures to dramatically increase defense spending or to make sweeping changes in his defense policies, and focused instead on efforts to calm public fears and deflect political attacks. But this was far from easy to do. Despite the steps that were taken, many critics believed that the Eisenhower Administration was not doing enough to confront the perceived crisis in US security policy. Prominent journalist Joseph Alsop wrote in 1958, to cite a characteristic example, that the West was entering a period of "acute danger," that the Soviet Union had come "horribly near" to achieving a first strike capability, and that "it was folly for the Eisenhower Administration's budget-firsters to scamp America's nuclear investments in the last five years." During these years, Alsop complained, "by sheer, silly self-indulgence, the United States has allowed its former

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See p. 211. A brief account that emphasizes Eisenhower's refusal to bend to public pressure is found in Herbert S. Parmet, Eisenhower and the American Crusades (New York: The Macmillan Company, 1972), pp. 535-538. Information on the U-2 program is contained in Michael Beschloss, Mayday: Eisenhower, Khrushchev and the U-2 Affair (New York: Harper & Row, 1986), pp. 135-161. Eisenhower is there described as "agonized" over his inability to confront his many public critics without revealing the covert U-2 program. See especially p. 154. Eisenhower's version of the U-2 story is in Waging Peace, pp. 543-547. Eisenhower claims that information provided by the U-2 flights proved that "the horrors of the alleged bomber gap and the later missile gap were nothing more than imaginative creations of irresponsibility." (p. 547)

great superiority in nuclear striking power to be lost to the Soviet Union."<sup>80</sup>

The Eisenhower Administration was criticized not only for actions it was failing to take but also for the policies and programs it was actually pursuing. One critic complained of the Administration's procurement of medium and intermediate range missiles that it was investing heavily in weapons that were nothing more than "sitting ducks" and concluded that Eisenhower's nuclear programs were "ill suited to keep the peace."<sup>81</sup> Another critic offered that two-thirds of SAC's capability was "obsolescent," commented at length on the troubling "lag" in developing America's missile programs, claimed that these programs had been mismanaged in a way that left many newly produced missiles lacking the launching facilities that rendered them operational, and reported that Administration assertions of progress were greeted

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<sup>80</sup> Joseph Alsop, "The New Balance of Power: War and Peace in a Strange World," Encounter (May 1958): pp. 4,6,10. The recurrent expressions of alarm, and President Eisenhower's resistance to such warnings, is a theme of Gregg Herken's account of this period. See Counsels of War (New York: Alfred A. Knopf, 1985), pp. 88-136.

<sup>81</sup> Robert C. Albrock, "How Good Are Our Missiles?," The Reporter (February 6, 1958): p. 21, 23.

with "derision."<sup>82</sup> One of the most vocal and bitter of the Administration's critics, retired Army General Thomas Phillips, accused it of having a "Maginot Line" mentality (implying, of course, that it had settled for a false sense of security) and argued that it was difficult to understand the Administration's faith in its policies.<sup>83</sup> As these illustrations suggest, during the last several years of his Presidency, Eisenhower's defense policies were under severe and relentless assault.<sup>84</sup> As one historian has written, "during the post-Sputnik period, with the projections of a certain missile lag accepted by just about everybody, [Eisenhower's] position seemed

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<sup>82</sup> Edward Hymoff, "Some of Our Launching Pads Are Missing," The Reporter (June 25, 1959): pp. 27-30.

<sup>83</sup> Thomas R. Phillips, "Mr. McElroy's Maginot Line," The Reporter (February 19, 1959): pp. 25-26. See also Phillips article, "The Widening Missile Gap," The Reporter (January 8, 1959) which accused Eisenhower of letting the United States fall farther behind.

<sup>84</sup> Despite the common allegations about the inadequacy of the Administration's nuclear weapons policies, Eisenhower's defense strategy continued to rely heavily on threats of nuclear use and to use that reliance to justify cuts in conventional "limited war" capabilities. This opened yet another line of major criticism, leading critics to claim that Eisenhower was allowing both nuclear and nonnuclear forces to fall into disrepair, even as the latter were becoming more important because of the emerging "nuclear stalemate." The classic articulation of this position is Maxwell D. Taylor, The Uncertain Trumpet (New York, Harper & Brothers, 1959). Taylor referred to Eisenhower's approach to defense as "The Great Fallacy." See pp. 4-5.

harder and harder to defend without giving the impression that the President was underestimating - or ignoring - the threat."<sup>85</sup>

Indeed, in the minds of many, the danger was clear and Eisenhower's complacency was incomprehensible. Inevitably, the issue became heavily politicized. Even within the Republican party, Nelson Rockefeller, his eyes firmly fixed on the 1960 Republican Presidential nomination (and with the assistance of one Henry Kissinger), was critical of the inadequacy of American defense policy under Eisenhower.<sup>86</sup> The more frontal political attack, of course, was mounted by the Democratic party. What was perceived as a combination of jeopardy in the military environment and inactivity on the part of the Eisenhower Administration was seized upon by the Democrats as a line of attack against the Eisenhower Administration. Senate Majority Leader Lyndon Johnson, for example, held well publicized hearings on

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<sup>85</sup> Parmet, Eisenhower and the American Crusades, p. 537.

<sup>86</sup> See, for example, the Rockefeller Brothers Fund Report of 1960, which was written by Kissinger. See also Nelson A. Rockefeller, "Purpose and Policy," Foreign Affairs 38 (April 1960): pp. 370-391. Rockefeller argued that the growth of Soviet nuclear capability compelled a reassessment of US security policy. See p. 377.

the adequacy of the U.S. defense posture.<sup>87</sup> John Kennedy used missile gap rhetoric prominently in his campaign for the Presidency in 1959 and 1960.

Thus, in the aftermath of Sputnik, as the dawn of a new strategic era raised its disturbing possibilities, both the world of defense policy and the world of defense politics became troubled and turbulent. For the first time, American policymakers and strategists began to feel with full force the effects of the nuclear revolution. The vulnerability of American society to Soviet nuclear attack had long been recognized,<sup>88</sup> but now America's nuclear forces too were thought to be vulnerable to, and hence to invite, nuclear surprise attack. It was in this

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<sup>87</sup> See U.S. Congress, Senate Committee on Armed Forces, Preparedness Investigating Subcommittee, Inquiry into Satellite and Missile Programs, 1959.

<sup>88</sup> Richard Betts has demonstrated convincingly that US policymakers early in the 1950s accepted that the United States would suffer enormous damage in the event of a nuclear exchange. See his "A Nuclear Golden Age? The Balance Before Parity," International Security 2 (Winter 1986/87): pp. 3-32. Betts points out that what is striking is that American leaders relied heavily upon nuclear coercion and threats of nuclear first use despite an awareness that the US would suffer enormous damage. See also Richard K. Betts, Nuclear Blackmail and Nuclear Balance (Washington D.C.: The Brookings Institution, 1987), especially pp. 1-9 and 144-171. Also relevant is the article by Carl Kaysen, "The Vulnerability of the United States to Enemy Attack," World Politics 6 (January 1954): pp. 190-208, which provides a contemporary framework for thinking about the vulnerability of American cities and industry to nuclear attack.

environment, and provoked by these concerns, that a number of strategic analysts began to consider anew the subject of arms control.<sup>89</sup>

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<sup>89</sup> Here I disagree entirely with Patrick Glynn, who argues that modern arms control theory is rooted in concerns about and interpretations of the origins of the First World War. See his "The Sarajevo Fallacy: The Historical and Intellectual Origins of Arms Control Theology," The National Interest (Fall 1987): pp. 3-32. Glynn's argument does not explain the timing of the arms control renaissance, inasmuch as the World War I case was available to spur such thinking throughout the nuclear age. Furthermore, there is little indication of preoccupation with 1914 in the formative writings on nuclear strategy and arms control of the 1950s and 1960s; indeed, what is surprising is that it is virtually unmentioned in much of this literature.

## Chapter Two

### Nuclear Strategy and Mutual Restraint: The Content of Modern Arms Control Theory

"[Arms control] is an area worth exploring because our present military policies and prospects, however we feel about the adequacy of current programs, cannot promise security from a major thermonuclear war; and even modest improvements achieved through cooperation with the Soviets should be welcome."<sup>1</sup>

Thomas Schelling

The intellectual world, like the political world, was gripped by the potential dangers portended by the arrival of the missile age and by the anticipated acquisition of substantial missile capability by the Soviet Union. How could this newly emerging strategic environment be made safe? How could the danger of surprise attack be reduced, eliminated, or controlled? How could the risk of accidental war be minimized? These were the large questions that animated strategic theorists of the period. Arms control became a subject of interest because it appeared to many nuclear experts to be a significant (although certainly not the only) part of the answer to these fundamentally important questions. Arms

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<sup>1</sup> "Reciprocal Measures for Arms Stabilization," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 169.

control attracted the attention of the strategic community not because it had proven its utility in the past but because it seemed to be a means of avoiding a dangerous future.

The ferment over strategic nuclear policy in the late 1950s and early 1960s influenced not only the emergence but also the substantive content of the arms control renaissance. What appeared to be ominous movement in the direction of a more dangerous and frightening strategic world unleashed a frenzy of theorizing (by men whose work in this period would make them significant figures in the intellectual history of of strategic thought, including Kissinger, Kahn, Schelling, Brodie, Wohlstetter, Kaufmann, and others) about the problems of surprise attack, accidental war, stable deterrence, and arms control. Much of what we might call "modern" strategic thought about nuclear warfare comes from this period, inspired by the preoccupation with nuclear surprise attack that was a natural consequence of fears of Soviet missile capability.

The body of thought about strategic arms control that emerged in this period was inextricably bound up with this broader discussion of nuclear strategy. Indeed, it emerged as part of a pattern of thinking about how to

manage nuclear weapons policy in a world of two heavily armed nuclear powers. It is critically important to understand that arms control suddenly seemed promising because there came into being an approach to nuclear strategy into which arms control fit, that allowed a role (potentially a substantial role) for some varieties of arms control in determining and preserving the desired strategic environment. In what follows I will outline the relevant components of this approach to nuclear strategy and will examine the linkage between it and modern theory of strategic arms control.

A. The Preoccupation With Surprise Attack

The essential starting point of most thinking on nuclear strategy and arms control lay in a single obvious, almost trite, observation: in a world of two substantial nuclear powers, vulnerable forces are a dangerous invitation to surprise attack while, conversely, an effective deterrent posture absolutely requires the existence of forces capable of surviving surprise attack. Although this is a perfectly straightforward proposition (one that is by now deeply ingrained in thinking about nuclear strategy), in the

late 1950s it inspired a remarkable degree of discussion because its implications for policy and strategy were enormous. Because this notion served as the bedrock upon which was built a hugely influential approach to nuclear doctrine and because this approach to doctrine in turn gave rise to a new approach to strategic arms control, it is worth tracing in some detail the genesis of this issue which was to engulf the political and intellectual life of the United States during Eisenhower's second term.

Even in the late 1950s, this was not a new thought. From the very beginning of the postwar period, it was recognized by at least some observers that retaliation, and hence invulnerable forces, were likely to be essential to security in the nuclear age. Bernard Brodie had written in 1946, for example, that

Reducing vulnerability is at least one way of reducing temptation to potential aggressors. And if the technological realities make reduction of vulnerability largely synonymous with the preservation of striking power, that is a fact that must be faced. Under those circumstances any domestic measures which effectively guaranteed such preservation of striking power under attack would contribute to a more solid basis for the operation of an international security system.<sup>2</sup>

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<sup>2</sup> Bernard Brodie, ed., The Absolute Weapon: Atomic Power and World Order (New York: Harcourt, Brace, and Company, 1946), pp. 77. See also Brodie's earlier formulation of the problem in "The Atomic Bomb and American Security," Yale Institute of International

Similarly, in the first substantial public analysis of vulnerability in the nuclear age, published in February 1947, Ansley Coale had argued that it was vital that "the atomic weapons and the conveyances that deliver them must be made inaccessible to the destructive efforts of the enemy."<sup>3</sup>

Awareness of the need to possess secure nuclear forces was evident in official thinking as well. In December 1948, for example, the Advanced Study Branch of the Army General Staff produced a study on "The Pattern of War in the Atomic Age" which stated that the enemy "would attempt an initial knockout blow" and recommended that active and passive defensive measures be taken to give "as near to 100 percent protection as may be possible" to US counteroffensive forces.<sup>4</sup>

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Studies Memorandum, Number 18, November 1, 1945, p. 24.

<sup>3</sup> Ansley J. Coale, The Problem of Reducing Vulnerability to Atomic Bombs (Princeton: Princeton University Press, 1947), pp. 49-50. For a brief overview of Coale's work, see his "Reducing Vulnerability to Atomic Attack," Bulletin of Atomic Scientists 3 (March 1947): pp. 17-74.

<sup>4</sup> Advanced Study Branch, Plans Group, of the US Army General Staff, "Brief on the Pattern of War in the Atomic Age," December 16, 1948, in Thomas Etzold and John Gaddis, eds., Containment: Documents on American Policy and Strategy, 1945-1950 (New York: Columbia University Press, 1978), pp. 348-349.

Similarly, in early 1950 (not long after the first Soviet nuclear weapons test in the fall of 1949) National Security Memorandum 68 assessed the state of America's security policy and expressed concern about the incipient vulnerability of US nuclear forces. "As the atomic capability of the USSR increases," NSC 68 warned, "it will have an increased ability to hit at our atomic bases and installations and thus seriously hamper the ability of the United States to carry out [nuclear] attack." The report cautioned that without adjustments in US defense policy "the possibility of a decisive initial attack cannot be excluded." Given these ominous findings, NSC 68 recommended that the United States undertake measures that "could safeguard and increase our retaliatory power and thus put off for some time the date when the Soviet Union could calculate that a surprise blow would be advantageous."<sup>5</sup> Even during the earliest stages of the nuclear age, in short, it was evident that there was recognition of the importance of ensuring that

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<sup>5</sup> NSC68. It is perhaps worth mentioning that the authors of NSC 68 were persuaded of the Soviet willingness to strike first if the opportunity arose, suggesting that "when it calculates that it has sufficient atomic capability to make a surprise attack on us, nullifying our atomic superiority and creating a military situation decisively in its favor, the Kremlin might be tempted to strike swiftly and with stealth."

American nuclear forces could survive a surprise attack.

Throughout the decade of the 1950s, furthermore, there was recurrent attention to and concern about this problem, much of it within government and often at the highest levels. In 1951, for example, the RAND Corporation undertook a study, headed by Albert Wohlstetter, of how best to base America's strategic bombers. The study soon identified the vulnerability of bases to surprise attack as one of the most important criteria - if not the most important criterion - in both base selection and force planning. Wohlstetter warned that US strategic air bases, especially those located overseas in close proximity to the Soviet Union, were vulnerable to Soviet attack and he believed that by the mid-1950s the USSR would possess the capability to mount a major strike against US strategic air power in which "We can expect the majority of the force to suffer serious damage on the ground."<sup>6</sup> Wohlstetter emphatically urged the acceptance of the idea that what was of

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<sup>6</sup> A. Wohlstetter, F. Hoffmann, R. Lutz, and H. Rowen, Selection and Use of Strategic Air Bases, Rand Report R-266, April 1954, p. viii. The saga of Wohlstetter and the Rand basing study is a much-told tale. See Herken, Counsels of War, pp. 88-101; Fred Kaplan, The Wizards of Armageddon (New York: Simon and Schuster, 1983), pp. 85-110; and Jack H. Nunn, The Soviet First Strike Threat: The U.S. Perspective (New York: Praeger Publishers, 1982), pp. 116-124.

importance in the strategic balance was not the number of bombers in possession in peacetime, but the number of bombers which would survive a surprise attack; a smaller force that was more effectively protected would be a sounder investment. The RAND report, which was widely disseminated if not widely accepted in the Air Force and the Defense Department, also offered a number of suggestions for reducing the vulnerability of US strategic forces; these initially met with more resistance than acceptance, although eventually a number of them were adopted in the crisis atmosphere of the late 1950s.

Thus, by the mid-1950s, the implications of strategic vulnerability had been explored both in public discourse and in secret government studies. Apparent Soviet advances in long range bombers in 1954 and 1955 combined to accentuate this issue even more dramatically. Since the United States had yet to deploy its early warning radars, the fear was that the USSR might soon be able to attack without warning and, further, that the Soviet leadership might calculate that this was the moment to attack - before American defenses were in place. In this atmosphere, President Eisenhower himself was personally concerned about the problem of surprise attack. On March

27, 1954, he held a meeting with his Science Advisory Committee at which he "directed the discussion to the danger of surprise attack on the US and stressed the high priority he gave to reducing the probability of military surprise."<sup>7</sup>

Out of this meeting came the Technological Capabilities Panel, specially created to study ways of avoiding surprise attack. After deliberating for nearly a year, the Panel presented its report, entitled "Meeting the Threat of Surprise Attack," to the National Security Council on February 17, 1955. Like the RAND study, the report expressed grave concern about the existing state of affairs and foresaw grave dangers in the near future if appropriate action were not undertaken. In terse language, it noted that there was "No reliable US early warning; our defense system is inadequate; therefore SAC is vulnerable....Because of our vulnerability, Soviets might be tempted to try a surprise attack."<sup>8</sup> Moreover, the report warned that there was a possibility that Soviet strategic power might reach decisive levels before the United States implemented measures to reduce the

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<sup>7</sup> James R. Killian, Jr., Sputnik, Scientists, and Eisenhower (Cambridge: MIT Press, 1977), p. 68.

<sup>8</sup> Quoted in Killian, Sputnik, Scientists, and Eisenhower, pp. 72-73.

vulnerability of its strategic forces; in which case the danger of surprise attack would be significant and the US would be faced with the possibility of defeat.

As these illustrations suggest, it is obvious that by the mid 1950s the vulnerability of US strategic forces was a problem that was well-studied, widely understood to be of great importance, and occasionally regarded with urgency.<sup>9</sup> Despite the years of analysis and attention devoted to this issue, however, in the late 1950s both the political and the intellectual worlds were overwhelmed with concern about strategic vulnerability. Writes one historian of this period, for example, "vulnerability began to loom as the preoccupying issue, the virtual obsession, of strategic analysis."<sup>10</sup> Thus,

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<sup>9</sup> I disagree with Enthoven and Smith, who claim that the vulnerability problem was not well understood when the Kennedy Administration came to power in 1961. See Alain Enthoven and Wayne Smith, How Much Is Enough? Shaping the Defense Program, 1961-1969 (New York: Harper & Row, 1971), pp. 166-167. I think it is more true to say that by 1961 appreciation of the vulnerability problem was so pervasive that it was the source of many of the strategic weapons decisions of the Kennedy Administration

<sup>10</sup> Kaplan, The Wizards of Armageddon, p. 122. On the same point, see p. 110. Amazingly, William T.R. Fox, writing only a few short years earlier, complained of "a dearth of studies contributing to the formulation of public policy designed to reduce vulnerability to atomic attack." See his "Civil-Military Relations Research: The SSRC Committee and Its Research Survey," World Politics 6 (January 1954): p. 279. In the subsequent half decade the grounds for his complaint would be

the vulnerability crisis of the late 1950s can be seen not as a new development but as the crescendo of a mounting, decade-long concern with this issue. Indeed, given the substantial amount of attention this problem had received in earlier years, the interesting question is why it achieved such a galvanizing prominence in the late 1950s. There are at least two explanations for this.

First, US operational nuclear war plans during the 1950s were built around the expectation that the United States would be the first to use nuclear weapons; SAC would inflict a surprise attack, not suffer one.<sup>11</sup> This

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eliminated, to say the least.

<sup>11</sup> There is now considerable evidence to this effect. See, for example, Kaplan, The Wizards of Armageddon, pp. 104,108. Herken, in Counsels of War, observes: "The notion that the United States and not the Soviet Union would be the first nation to use nuclear weapons in the next war was not only the expectation of SAC planners; it was also the principal idea upon which most of their planning was based....It is likely that few in government or at Rand actually knew enough details of Air Force war planning to appreciate the extent to which American nuclear strategy by the mid-1950s was based upon the premise that the United States would land the first blow with the bomb." See pp. 96-97. Also important in confirming this fact is the work of David Rosenberg. See "The Origins of Overkill: Nuclear Weapons and American Strategy, 1945-1960," International Security 7 (Spring 1983): pp. 33-35; and "A Smoking Radiating Ruin at the End of Two Hours: Documents on American Plans for Nuclear War with the Soviet Union, 1945-1955," International Security 6 (Winter 1981/1982): pp. 3-38, and especially p. 13.

meant that despite the kinds of studies, warnings, and recommendations cited above, many measures to reduce American vulnerability to surprise attack simply had not been implemented by the late 1950s.<sup>12</sup> SAC preferred to invest its budget in offensive striking capability (that is, in more and better airplanes) rather than in measures to protect its force.<sup>13</sup> Thus, early warning systems were neglected, hardened shelters were never provided for aircraft, and so on. Indications of its vulnerability merely reaffirmed for SAC the importance of preemption; all the more vital to go first if one is vulnerable!<sup>14</sup>

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<sup>12</sup> Wohlstetter's frustration at SAC's resistance to his analysis and recommendations is recounted in Herken, Counsels of War, pp. 93-94; and Kaplan, The Wizards of Armageddon, pp. 104-105. The latter reports that Wohlstetter, with mounting exasperation, gave his vulnerability briefing more than ninety times during the summer of 1953. Similarly, in the two years after the Surprise Attack report of 1955, "nothing seemed to have happened to SAC's readiness...." Kaplan, p. 131. Freedman also comments on the opposition to recommendations on the subject of vulnerability reduction. See U.S. Intelligence and the Soviet Strategic Threat, pp. 96-97.

<sup>13</sup> On this point, see King, "Airpower in the Missile Gap," p. 634.

<sup>14</sup> Kaplan comments, for example, that for General LeMay and his staff assertions of SAC vulnerability "meant that SAC should make sure to get in the initial blow instead of waiting around for the Soviets to strike first." See The Wizards of Armageddon, p. 104. According to Kaplan's account, LeMay was quite explicit about his belief that the way to deal with a potential Soviet surprise attack was to destroy their forces before they

Hence, the sense of panic that many felt in the aftermath of Sputnik about the growth of Soviet strategic capability was intensified by the shock of discovering how little had been done during the early and mid 1950s to prepare for the eventuality of a significant Soviet surprise attack capability. Consequently, if one did not share SAC's blithe assumption that it would, under all conceivable conditions, be able to launch a preemptive first strike in response to warning, then there appeared to be serious cause for alarm. To the extent that the USSR did indeed acquire the forces that would allow it to contemplate a surprise attack, SAC was indeed considerably if not disastrously vulnerable, and analysts in the late 1950s, in the context of missile gap fears, could not know with any certainty that it would in fact be years before the Soviet Union really possessed a large intercontinental delivery capability.

Second, concern about surprise attack increased as the difficulties in achieving an adequate retaliatory force came to be more frequently asserted and accepted.

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left the ground; he claimed to have the intelligence capability that would allow such a preemptive strategy to be effective. See pp. 133-134. Rosenberg quotes Eisenhower as concluding in 1957, "We must not allow the enemy to strike the first blow." See "The Origins of Overkill," p. 47.

During the 1950s it had come to be believed widely that it was easy, perhaps nearly automatic in an era of large nuclear arsenals, to achieve a deterrent retaliatory capability. This view was completely at odds with the periodic concern about surprise attack that was simultaneously in evidence, but the two instincts coexisted in both the public and the secret consideration of the nuclear environment;<sup>15</sup> and the notion of an easily achieved deterrent exerted considerable and generally predominant appeal (another reason, perhaps, for the neglect of measures that would improve SAC's survivability). After all, nuclear weapons are so destructive, so few had to survive an enemy attack in order to pose a severe, or even a mortal, threat to the adversary's society, that the challenge of acquiring a daunting retaliatory capability did not seem great.

Joseph Alsop clearly articulated this view in 1958 in outlining what he called a "set of rules" for nuclear

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<sup>15</sup> Oscar Morgenstern nicely conveys this duality. He wrote in 1959, "In this time of peril we find distressing confusion wherever we look: one day we are assured that this country is so strong that no one will dare to attack it; the next day we are told that we are in mortal danger. Some of our military and political leaders tell us that the plans and provisions to cope with hostile intents are entirely satisfactory; others, equally competent and also highly placed, deny this vigorously." See The Question of National Defense, p. 4.

war. The first rule was that a nuclear attacker must achieve a complete knockout punch because "if there is an exchange of blows in nuclear war, the aggressor will pay for his enemy's destruction with his own destruction - which is too high a price." The second rule suggested that it was "astronomically difficult" for the attacker to achieve this knockout blow because the nuclear striking power of the enemy presents "a nightmarish multiplicity of targets spread out over very great areas." These two rules led logically to a third: "The problem of retaliation is relatively easy," particularly because, given the vast destructiveness of the weapons and the great vulnerability of societies, "retaliation will succeed if a quite modest force survives the aggressor's first blow." Alsop's fourth and final rule of nuclear war summarized this basic position: "The certainty that a modest retaliatory force will survive the first blow is a certain deterrent of nuclear aggression."<sup>16</sup> Clearly, those who accepted this logic would find it hard to become overly exercised about vulnerable forces or possibilities of surprise attack.<sup>17</sup>

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<sup>16</sup> Alsop, "The New Balance of Power," p. 5.

<sup>17</sup> For another articulation of the view that "retaliation will be cheap and easy," see Arthur Lee Burns, "From Balance to Deterrence: A Theoretical

And, as noted, this logic was widely accepted.

But this sanguine view of the nuclear balance came under increasingly open and direct assault as the decade waned. Bernard Brodie wrote in 1959 in his influential Strategy in the Missile Age, for example,

The degree to which the automaticity of our retaliation has been taken for granted by the public, unfortunately including most leaders of opinion and even military officers, is for those who have any knowledge of the facts both incredible and dangerous....If in this book we have frequently reiterated the importance of the security of the retaliatory force, it is because our ability to retaliate in great force to a direct Soviet attack is taken far too much for granted by almost everybody, including our highest national policymakers.<sup>18</sup>

With even more dramatic effect, Albert Wohlstetter drew attention to the same set of concerns in his famous article, "The Delicate Balance of Terror." In it he inveighed against "the nearly universal optimism about the stability of deterrence," and argued that Western analysis of the issue had both exaggerated the problems of Soviet surprise attack and underestimated the difficulties for the United States in achieving a

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Analysis," World Politics 8 (July 1957): pp. 509-517. The phrase quoted here is found on p. 511.

<sup>18</sup> Bernard Brodie, Strategy in the Missile Age (Princeton, N.J.: Princeton University Press, 1959), pp. 281-282.

significant retaliatory capability.<sup>19</sup>

Retaliation, Wohlstetter explained, required more than the mere existence of nuclear forces-in-being; those forces must have some capacity to survive an enemy attack, must remain amenable and responsive to command even in stressful wartime conditions, must have the capacity to penetrate enemy defenses and to reach relevant targets, and must have the ability to destroy targets of interest even when those targets have been provided passive protection against atomic attack. He showed that significant problems for the United States could arise in connection with each of these "hurdles." "Prizes for a retaliatory capability are not distributed for getting over one of these jumps," Wohlstetter concluded. "A system must get over all...."<sup>20</sup> If the United States was not attentive to the substantial and

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<sup>19</sup> Albert Wohlstetter, "The Delicate Balance of Terror," Foreign Affairs 37 (January 1959): p. 213. Wohlstetter explicitly attacks the Alsop article described above. On the "huge sensation" caused by Wohlstetter's article, see Kaplan, The Wizards of Armageddon, pp. 170-173. An earlier Rand report by one of Wohlstetter's colleagues illustrated some of the implications of his analysis. See C.V. Sturdevant, "The Influence of An Aggressor's Attack Effectiveness Upon the Characteristics Desired for a Defender's Air Force," Rand RM-1654, March 12, 1956.

<sup>20</sup> Wohlstetter, "The Delicate Balance of Terror," p. 221.

sustained exertions required to provide itself with such a "system" of deterrent capability, then it was quite plausible that conditions could arise in which the Soviet Union would find it attractive to launch a nuclear attack. Thus, far from being easy or automatic, Wohlstetter believed passionately that "the requirements of deterrence are stringent;" and while it was well within the capacities of the United States to fulfill those requirements, Wohlstetter was not wholly confident that it would cope successfully with "a world of persistent dangers, concluding grimly, "It is by no means certain that we will meet the test."<sup>21</sup> Analyses such as those provided by Brodie and Wohlstetter, in short, severely called into question any complacency about the adequacy of the American retaliatory force.<sup>22</sup>

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<sup>21</sup> Wohlstetter, "The Delicate Balance of Terror," pp. 211, 234.

<sup>22</sup> For further evidence on this point, consult Robert E. Osgood's discussion of "The Decline of Confidence in Stability" in his "Stabilizing the Military Environment," American Political Science Review 55 (March 1961): pp. 26-27. Osgood writes that "the great Western powers have been inclined, until recently, to assume that the stability of the military environment is an automatic result of technological advance in the means of destruction....A marked decline of Western confidence in automatic stability has set in." See p. 26. Hadley, in The Nation's Safety and Arms Control, p. 16, adds his voice to the litany: "Until recently the extreme vulnerability of the nation's strategic bombers went almost completely unrecognized." Likewise, Malcolm Hoag,

Thus, to summarize, although the problem of surprise attack had received regular and even urgent attention from the very dawning of the nuclear age, several developments combined to thrust this question dramatically into the limelight in the late 1950s: after Sputnik, the Soviet surprise attack threat seemed larger and more immediate than had previously been the case; SAC seemed alarmingly vulnerable, largely because measures to reduce its vulnerability had been neglected; while the nonchalance that many felt about the ease of achieving an adequate retaliatory force was under assault from influential and shocking analyses that argued that this was neither simple nor automatic. The unthinkable was suddenly all too thinkable and the United States suddenly appeared to be in grave jeopardy, if not immediately then in the not-too-distant future. The magnitude and immediacy of these problems caught the strategic studies community in the United States in an iron grip, and provoked the work that has ever since provided the intellectual foundations for thinking about nuclear strategy and strategic arms control. The content

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in "Complexities in Military Planning," World Politics 10 (July 1959) warns "there is no room for complacency about our having reached nearly the ultimate in retaliatory power." (p. 557)

of this work was heavily influenced by the fact that it was in no small measure a product of the perceived vulnerability crisis of the late 1950s.

This remarkable intellectual outpouring included most of the works that are now considered classics in the field.<sup>23</sup> Kaufmann's Military Policy and National Security, published in 1956, was perhaps the first of this torrent; in addressing the requirements of deterrence in the face of growing Soviet capability, it was certainly a harbinger of things to come. It was soon followed by Kissinger's Nuclear Weapons and Foreign Policy, Brodie's Strategy in the Missile Age, Schelling's The Strategy of Conflict, Kahn's On Thermonuclear War, and Snyder's Deterrence and Defense, to list only a few of the more prominent works published at that time. These volumes were accompanied, naturally, by a vigorous and substantial periodical literature addressing the same concerns.

One cannot delve into this literature without being struck by how pervasive, and how fundamental, was the preoccupation with vulnerable forces and the intimately

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<sup>23</sup> For this reason this period is known as the "Golden Age" of American strategic studies. See, for example, Colin Gray, Strategic Studies: A Critical Assessment (Westport, Connecticut: Greenwood Press, 1982), p. 15.

related problem of surprise attack. All dealt, to one degree or another, with this overriding problem. Indeed, the way in which this issue was handled became a measure by which this work was judged. Kissinger's book, for example, was severely attacked for underestimating this problem. William Kaufmann wrote in his very critical review, Kissinger "belabors our military and civilian leadership for being obsessed with the memory of Pearl Harbor; but his analysis here is the stuff of which Pearl Harbors are made....To imply, as most of his chapter on all-out war does, both that the situation is well in hand and the the task of keeping it in hand for the future is relatively simple is to encourage a complacency that could lead us to disaster."<sup>24</sup> Brodie's book, on the other hand, was lauded for having emphasized it: "Running like a red thread throughout [Brodie's] book is the plea for a better defense of our retaliatory

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<sup>24</sup> See William Kaufmann, "The Crisis in Military Affairs," World Politics 9 (July 1958): pp. 588-592. Throughout this period, Kissinger's was one of the most optimistic voices among the group of analysts concerned with nuclear weapons issues. In 1958, for example, he wrote, "The tendency has been to equate vulnerability with strategic inferiority and to equate a temporary inferiority with a Soviet capability to deliver an overwhelming blow. Neither postulate is correct....We should not make our deficiencies seem greater than they are...." See Henry Kissinger, "Missiles and the Western Alliance," Foreign Affairs 37 (April 1958): p. 386.

force....The big question today is not whether we need more bombers and missiles but whether SAC can suffer the first blow which our current strategy postulates and still remain an effective deterrent force." Brodie, the anonymous reviewer noted with approval, described the first and most basic principle of action in the thermonuclear age to be guaranteeing survival of the retaliatory force under attack.<sup>25</sup>

We have established, in this section, the centrality of the surprise attack problem as both a cause and a subject of the burgeoning literature on nuclear strategy and arms control. It is the taproot of the new thinking that emerged in the late 1950s on arms control. We must turn now to an examination of the impact that this preoccupation with surprise attack had on thinking about nuclear strategy. Then we will take up the question of how it was that the strategic implications of the surprise attack problem led to a new body of thought about arms control.

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<sup>25</sup> "Review of Strategy in the Missile Age," Journal of International Affairs 1 (1960): p. 91. This issue also pervades the review of Brodie's book by James E. King, Jr., "Airpower in the Missile Gap," World Politics 11 (July 1960): pp. 628-639.

B. The Strategic Implications of Invulnerable Forces

How then does this conceptual puzzle fit together? What is the intellectual connection between the problem of surprise attack and the new interest in arms control? The road from the one to the other, while not immediately obvious, is a fairly direct one, and it is a journey that the strategists traversed while struggling (for the first time, really) with the issue of how the nuclear balance, which presently seemed so perilous, could be made safe in an age of ballistic missiles and in a world of two heavily armed nuclear powers. It turns out that while the solution to the threat of surprise attack is, conceptually, quite simple and - at first glance - not all that interesting, the full implications of this solution for strategy and policy were quite profound.

As we have seen, the immediate problem was the apparent present or imminent vulnerability of America's Strategic Air Command, and the strategic minds concentrated by this perception rapidly arrived at the obvious answer, which was soon universally proclaimed in the strategic literature as the cardinal rule of the nuclear age: vulnerable forces allow dangerous possibilities of surprise attack while deterrence

requires survivable retaliatory capability. There therefore exists an overwhelming imperative to ensure the survivability of America's strategic forces. This basic axiom now seems so unexceptionable and rudimentary that it is hard to fathom the frequency, the urgency, indeed the relentlessness with which it was repeated in the literature of the time. It was featured in virtually every prominent analysis, by virtually every prominent analyst, in a number of easily recognizable guises.

The point can be easily documented with a few illustrations, chosen from a vast sample. Wrote Bernard Brodie in 1957, for example, "The providing of an incomparably strong SAC - as far as possible protected against surprise attack - must remain a primary charge on the American defense budget. Nothing can be permitted to displace it in priority."<sup>26</sup> As noted above, this was the central theme of Brodie's Strategy in the Missile Age, published two years later. "It is absolutely essential," he wrote there, "to defend our retaliatory force....It should be obvious that what counts...is not so much the size and efficiency of one's striking force before it is hit as the size and condition to which the enemy thinks

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<sup>26</sup> Bernard Brodie, "Nuclear Weapons and Changing Strategic Outlooks," Bulletin of Atomic Scientists 12 (February 1957): p. 59.

he can reduce it by a surprise attack...[This] dictates primary concern with the survival of a retaliatory force of adequate size following enemy attack."<sup>27</sup>

Brodie was far from alone in this obsession. Henry Kissinger observed in the pages of Foreign Affairs, for example, that "Since the penalty for being surprised can be national catastrophe, the need to protect the retaliatory force may over-ride all other considerations."<sup>28</sup> Or, as William Kaufmann more dramatically put it, "failure to ensure the ability of our forces to survive a first blow and strike back with great power at the enemy...would constitute a degree of folly almost without parallel in history."<sup>29</sup> Albert Wohlstetter closed out the decade voicing the same concerns that he had first begun to raise at the beginning of the 1950s: "Guaranteeing a second-strike capability is the most critical item on our agenda for the 1960s."<sup>30</sup> Nor was this concern limited to Americans; British strategist John Strachey warned, for instance,

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<sup>27</sup> Brodie, Strategy in the Missile Age, pp. 185,281,283.

<sup>28</sup> Kissinger, "Arms Control, Inspection, and Surprise Attack," p. 558.

<sup>29</sup> Kaufmann, "The Crisis in Military Affairs," p. 588.

<sup>30</sup> Albert Wohlstetter, "On the Value of Overseas Bases," RAND Report, P-1877, January 5, 1960, p. 4.

that "promoting the invulnerability of the deterrent is of the utmost importance today. Indeed, nothing else quite compares with this in urgency...."<sup>31</sup> French analyst Pierre Gallois suggested that vulnerability was the equivalent of defeat, because if a defender "has no means of retaliation, he must yield to an aggressor who now can threaten to use his arsenal of nuclear weapons without fear of reprisals."<sup>32</sup>

By the early 1960s, there could be no doubt, in the face of the ceaseless invocation of this rule, what was the great imperative of the nuclear age, as evidenced by the fact that President Kennedy had embraced this analysis as his own. "Our strategic arms and defenses must be adequate to deter any deliberate nuclear attack on the United States or our allies," he stated on March 28, 1961, in his first message to Congress on defense issues,

by making clear to any potential aggressor that sufficient retaliatory forces will be able to survive a first strike and penetrate his defenses in order to inflict unacceptable losses upon him....What we have and must continue to have is the ability to survive a first blow and respond with devastating power. This

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<sup>31</sup> John Strachey, "Is Our Deterrent Vulnerable?," International Affairs 37 (January 1961): p. 7.

<sup>32</sup> Pierre M. Gallois, "Nuclear Aggression and National Suicide," The Reporter (September 18, 1958): p. 25.

deterrent power depends not only on the number of our missiles and bombers, but on their state of readiness, their ability to survive attack....<sup>33</sup>

The initial strategic weapons procurement decisions of the Kennedy Administration were almost entirely governed by this consideration, as survivable systems like hardened Minuteman ICBMs and Polaris submarines were accelerated and vulnerable systems were cancelled. The American government got the message.<sup>34</sup>

What led to interesting lines of strategic analysis was not this but rather the realization that the Soviet government was likely to get the message too. Why, after all, should one expect that the Soviet Union would ignore what had come to be seen as the overwhelming compulsion to ensure survivable forces? Surely the Soviet government would heed the same worries about national security and national survival that motivated American

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<sup>33</sup> "Special Message to the Congress on the Defense Budget," March 28, 1961, in Public Papers of the Presidents: John F. Kennedy, 1961, p. 231.

<sup>34</sup> Furthermore, not all analysts believed that it was going to be an inordinately taxing task to ensure that the United States retained an adequate retaliatory force. See, for example, the relatively optimistic assessment offered by Amos Jordan, "Basic Deterrence and the New Balance of Power," Journal of International Affairs 1 (1960): pp. 49-60. After reviewing US capabilities in the near and intermediate futures, Jordan concludes, "Surely the Soviet leaders cannot feel that their chances of disarming us...are near enough to certainty to risk their national survival...." (p. 58)

analysts and policymakers. Furthermore, there was nothing that could be done about this; as Brodie observed, "We have no way of stopping the opponent from making his force more secure."<sup>35</sup>

It was only a short distance from this realization to some rather dramatic conclusions. If the Soviet Union possessed an assured retaliatory capability, then it would have the ability to annihilate American society no matter what military capability or strategy the US government adopted.<sup>36</sup> No matter what military protection was procured, America's safety ultimately was at the mercy of Soviet decisionmakers; survival depended on the restraint of the adversary. As Kenneth Boulding put it in an article inspired largely by this dilemma, "The peculiar crisis of national defense today is a result of the loss of unconditional viability even by the largest nations in the light of the nuclear threat. If we are to exist at all, it must be on conditions of conditional viability, in which each organization can destroy the

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<sup>35</sup> Brodie, Strategy in the Missile Age, p. 302.

<sup>36</sup> Analysts of this period assumed that defense of society against nuclear attack was so difficult and hence unpromising that it would not alter this fact.

other but refrains from doing so."<sup>37</sup> This is what Robert Jervis calls the nuclear revolution, a condition that derives from "the inability of the superpowers to protect themselves from each other."<sup>38</sup> As Jervis explains,

Because nuclear weapons enable the state that is losing a war to destroy the other side, they have produced a true revolution in strategy. In the past, military advantage allowed a state both to harm the other and to protect itself. Now protection is possible only with the other's cooperation....The forces that inflict damage on the adversary no longer protect the state....This situation makes no sense in traditional military terms.<sup>39</sup>

A fundamental aim of American security policy, therefore,

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<sup>37</sup> Kenneth E. Boulding, "Towards a Pure Theory of Threat Systems," American Economic Review, Papers and Proceedings (May 1963): p. 431. (Emphasis added.) Boulding draws an interesting parallel with interpersonal relations, in which, because each individual has the capacity to kill any other individual, human beings "live in a world in which we are literally all at each other's mercy."

<sup>38</sup> Robert Jervis, The Illogic of American Nuclear Strategy (Ithaca, New York: Cornell University Press, 1984), p. 22. In my opinion, Jervis provides far the best analysis of this condition.

<sup>39</sup> Jervis, The Illogic of American Nuclear Strategy, pp. 12,22,23. (Emphasis added.) See also the related discussion in Thomas C. Schelling, Arms and Influence (New Haven: Yale University Press, 1966), pp. 19-24. Morgenstern also emphasizes the unprecedented nature of the nuclear environment, observing that "Politically and diplomatically new phenomena also have arisen which do not fit into any of the well-known patterns of behavior. New threats have become possible and are likely to be employed, to which any and every response is fraught with extreme danger." In The Question of National Defense, pp. 3-4.

must be to encourage Soviet restraint. (And, as Jervis's analysis implies, this might require moving beyond unilateral solutions to a more mutual concept of security.)

This led, in turn, to a consideration of conditions in which there might exist incentives to launch a nuclear attack and to an analysis of the ways in which American policy could reduce or eliminate Soviet first-strike incentives; since an opponent in possession of a secure second-strike capability by definition will always have the capability to destroy one's society, what really matters are his choices, his decisions, his perceptions of his options. It is these that a state must hope to influence when it cannot, by investment in military power, protect itself from an adversary's ability to inflict pain. Each state in such a relationship has a powerful motive to try to influence the decisions and the behavior of its adversary, to convince its adversary that restraint ought to be its preferred course.

In fact, the achievement of this influence becomes, in the logic of this argument, a major (if not the major) objective of the military power and the military strategy of the state.

In this context, the strategy and policy of

deterrence, of preventing attack by threatening costly retaliation, came to be conceived of as an exercise in bargaining and persuasion. Thomas Schelling, for example, says that deterrence "is concerned with influencing the choices that another party will make, and doing it by influencing his expectations of how we will behave. It involves confronting him with evidence for believing that our behavior will be determined by his behavior."<sup>40</sup> Deterrence, in short, involves the making of contingent threats for the purpose of affecting an opponent's calculus of decision: if you do X, we'll do Y, if you attack us with nuclear weapons, we will, in reply, destroy you with nuclear weapons. As Schelling, on another occasion, further explained,

Modern strategy is not mainly concerned with how to destroy an enemy. It is more concerned with how to influence potential enemies. Deterrence is persuading an enemy that, when he takes our response into account, he should prefer to behave in ways we prefer him to behave....We usually think of deterrence as just a threat, but there is a promise involved too - not just 'If you do this I'll do that,' but also, 'And if you don't, I won't.' In other words, military strategy is bargaining strategy.<sup>41</sup>

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<sup>40</sup> Schelling, "The Retarded Science of International Strategy," in his The Strategy of Conflict, p. 13.

<sup>41</sup> Thomas C. Schelling, "The Future of Arms Control," Operations Research (September/October 1961): p. 726. (Emphasis in original.) This little-known

Glenn Snyder provided a similar formulation.

"Deterrence," he wrote in 1960, "is the power to dissuade...." It operates by affecting the "risk calculus" in the collective "mind" of a potential attacker.<sup>42</sup> The aim of American policy was thus to structure Soviet incentives with respect to nuclear use, to persuade Soviet leaders that nuclear attack was an unprofitable course of action.

The vulnerability or invulnerability of American strategic forces was relevant to this exercise in two critically important ways. First, vulnerable forces constituted a temptation to attack; they caused exactly the wrong sort of Soviet incentives. Second, invulnerable forces were the agent of persuasion, the basis of the contingent threat that was intended to serve as the powerful disincentive to Soviet nuclear attack. Once a retaliatory capability was assured, one still had

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article is, I believe, the best concise distillation of the key ideas to emerge in this period.

<sup>42</sup> Glenn H. Snyder, Deterrence and Defense: Toward a Theory of National Security (Princeton: Princeton University Press, 1961), pp. 9, 12. Snyder begins his analysis with the proposition that "Deterrence works on the enemy's intentions." See p. 3. (Emphasis in original.) On this point, see also Hadley, The Nation's Safety and Arms Control, which notes that "The key fact about deterrence is that it is a psychological as well as a military concept. It rests upon a state of mind in the Russians...." See p. 12.

to worry about making one's deterrent threat believable to the adversary (the credibility issue) and about whether the size and character of the second-strike was adequate to deter (indeed, much of the literature on deterrence is given over to these questions); but in the absence of an assured retaliatory capability the major barrier, the disincentive, to Soviet surprise attack would not exist. The fixation in the late 1950s with the survivability of American strategic forces was motivated by the desire to ensure, in the face of growing Soviet nuclear capability, that there would exist no incentive for the Soviets to strike first in the hope of essentially disarming the United States. Instead, there would be the enormous disincentive of a devastating second-strike capability to persuade the Soviet Union not to choose what was called preventive (or premeditated) attack. This was one important response to the nuclear revolution, to the need to "encourage" restraint on the part of one's adversary.

But this did not completely solve the problem of eliminating incentives to attack in the age of the nuclear revolution. The strategic analysts addressing these issues realized that fear could be as powerful a motivation as opportunity. If Soviet forces were

vulnerable, Soviet leaders might fear an American surprise attack and, as a result of crisis or miscalculation, consequently feel compelled to launch a preemptive attack, to "use them rather than lose them."<sup>43</sup> Robert Osgood put the spotlight on this issue as explicitly as anyone. "There is another possibility of a massive Soviet first strike," he cautioned,

the possibility of a defensive strike launched in anticipation of an imminent American attack....One cannot dismiss the danger that Russia might strike at the United States because she expected the United States to strike her first, especially during some intense international crisis or a limited war.<sup>44</sup>

Or, as Brodie more vividly put it, "if the opponent feels insecure, we suffer the hazard of his being more trigger-happy."<sup>45</sup>

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<sup>43</sup> The distinction between preventive and preemptive motivations are carefully examined in Jack S. Levy, "Declining Power and the Preventive Motivation for War," World Politics 39 (October 1987): pp. 90-95.

<sup>44</sup> Osgood, "Stabilizing the Military Environment," p. 32.

<sup>45</sup> Brodie, Strategy in the Missile Age, p. 302. George Kennan carries the point about Soviet preemptive incentives to its extreme, suggesting that this is the primary reason why the USSR might use nuclear weapons: "If there is any incentive for the Russians to use such [nuclear] weapons against us, it surely comes in overwhelming degree - probably, in fact, entirely - from our own enormous deployment of them." See his "Two Views of the Soviet Problem," The New Yorker (November 2, 1981): p. 62. Kennan argues therefore for the elimination of nuclear weapons.

This danger was taken very seriously. Hedley Bull, for example, rated it the most severe problem of the nuclear age, "clearly more serious than that of premeditated war." This was because, as Bull explained,

The decision to launch preemptive war need not be based on the pursuit of victory; it may be based merely on the belief that the destruction of as large a proportion as possible of the opponent's retaliatory forces will secure a very much less disastrous outcome of the war than that which would result from passively awaiting the attack....It is arguable that [preemptive war] represents the most serious danger to the peace of the world in the near future.<sup>46</sup>

Thinking about the elimination of this incentive for launching a nuclear attack produced two related paradoxical conclusions. First, the invulnerability of Soviet forces could be in the interest of the United States, whose security would be increased by the reduced Soviet incentive to use its nuclear weapons. In Schelling's formulation, "His own manifest

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<sup>46</sup> Bull, The Control of the Arms Race, p. 165. Richard Betts, in "Surprise Attack and Preemption," in G. Allison, A. Carnesale, and J. Nye, Jr., eds. Hawks, Doves, and Owls (New York: Norton, 1985), pp. 54-79, also rates the preemptive danger as greater. Hoag, in "Some Complexities In Military Planning," pp. 556-557, offers an explanation of the preemptive motive that resembles Bull's. He notes suggestively that while a preemptive attack is a gamble, for the vulnerable state refraining from attack during periods of crisis or tension is also a gamble, one whose risks are also very high and whose costs, if one is wrong, are even higher than if the state had attacked.

invulnerability to our first strike could be to our advantage if it relieved him of a principal concern that might motivate him to try striking first. If he has to worry about the exposure of his strategic force to a surprise attack by us, we have to worry about it too."<sup>47</sup>

Morgenstern made the same point more baldly. "In view of modern technology...", he concluded, "it is in the interest of the United States for Russia to have an invulnerable retaliatory force, and vice versa."<sup>48</sup>

Second, a logical corollary of the first, it was in the self-interest of the United States to refrain from threatening Soviet forces; foregoing first-strike strategies and capabilities would, according to this argument, ensure that the Soviet Union had no incentive to preempt. As is so frequently the case, Schelling expressed the point with great clarity: "there may be secrets we prefer not to keep, capabilities we prefer not to have...."<sup>49</sup> Kissinger framed the problem in the most

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<sup>47</sup> Schelling, "Surprise Attack and Disarmament," in The Strategy of Conflict, p. 238. (Emphasis in original.) Or, as he put it in "The Retarded Science of International Strategy," "Too great a capacity to strike him by surprise may induce him to strike first to avoid being disarmed by a first strike from us." See p. 7.

<sup>48</sup> Morgenstern, The Question of National Defense, p. 77.

<sup>49</sup> Schelling, "The Future of Arms Control," p. 726.

alarming fashion: "Any attempt to deprive an enemy of his retaliatory force would inevitably bring on all-out war."<sup>50</sup> J. David Singer similarly, if not very gracefully, emphasized the dangers of possessing first-strike, surprise attack capabilities: "To the degree that each infers an intention to strike first from the weapon system of the other, his incentive to opt for that first strike himself will grow....The side which chooses counterforce capabilities...is causing that incentive to grow by persuading the other that a first strike is a distinct, if not dominant, element in his strategy."<sup>51</sup> Osgood thought that this problem implied a need for what he called "preventive assurance," a policy "which aims to discourage a first strike by assuring the adversary that one does not intend to strike him first."<sup>52</sup> In order to minimize Soviet preemptive incentives, in short, the United States should not only welcome invulnerable Soviet forces but should facilitate the emergence of such forces

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<sup>50</sup> Henry A. Kissinger, "Strategy and Organization," Foreign Affairs 37 (April 1957): p. 388.

<sup>51</sup> Singer, Deterrence, Arms Control, and Disarmament, p. 88. Singer concludes unambiguously, "Such choices have little place in a sophisticated strategy of deterrence."

<sup>52</sup> Osgood, "Stabilizing the Military Environment," p. 32. (Emphasis in original.)

by avoiding the acquisition of counterforce capability. This was a conclusion that was destined to remain permanently controversial, but it was integral to the body of strategic thought that led to the modern theory of arms control.

The focus on eliminating preventive or preemptive incentives for nuclear attack provided a powerful logic for thinking about what kind of strategic environment was to be preferred and hence about what kinds of nuclear weapons policies were desirable. The link between this logic and conclusions about the character of the preferred strategic balance can be clearly seen in Malcolm Hoag's 1961 analysis of alternative strategic worlds.<sup>53</sup> Although he does not himself employ the device, the framework of the analysis can be represented in a simple 2x2 matrix. (See below.)

For the sake of clarity, it is useful to begin with the premise that Soviet and American nuclear forces can be either completely vulnerable or perfectly invulnerable. These possibilities combine to produce the four worlds defined by the matrix. It is rather

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<sup>53</sup> The discussion which follows is inspired by, although it does not follow exactly, Malcolm Hoag, "On Stability in Deterrent Races," World Politics 13 (July 1961): pp. 505-527.

straightforward, in analyzing these four worlds, to show that only one is desirable given the primary goal of minimizing incentives to attack. The first of these worlds, in which the forces of both sides are completely vulnerable, is the worst of all possible environments. In this case, as with the proverbial gunfighters at high noon, whoever fires first wins by disarming his opponent.

		<u>United States</u>	
		vulnerable	invulnerable
<u>USSR</u>	vulnerable	1	2
	invulnerable	3	4

Each may be driven to attack by both incentives, by both temptation and fear, by both preventive and preemptive instincts. Most disturbing, in the view of some analysts, was the prospect that in this world circumstances could arise in which states had no choice

but to launch a nuclear attack because it represented their best among a set of gravely unattractive options. As Oscar Morgenstern explained this fearfully inexorable dynamic,

The essential point is that in case of a hostile act by the enemy, or if rightly or wrongly some phenomenon is taken for a hostile act, the vulnerable retaliatory force has to attack its specific targets immediately and in full strength. This is the application of the principle of involuntary reaction....Our own vulnerability forces upon us the complete unleashing in the most ruthless manner of whatever power is at our command. We have no choice. We cannot graduate our action. We cannot deliberate; we have to react by reflex.<sup>54</sup>

In this world, obviously, there exist precisely the opposite of the incentives one would wish states to have in the nuclear age.

Furthermore, the danger in such an environment may compound itself, as each side will fear the other's fear and hence a state may be driven to preempt in order to avoid the other's preemption. (This is the famous "reciprocal fear of surprise attack" problem.)<sup>55</sup>

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<sup>54</sup> Morgenstern, The Question of National Defense, pp. 38-39. (Emphasis added.)

<sup>55</sup> Thomas Schelling drew attention to this problem in his essay, "The Reciprocal Fear of Surprise Attack," in The Strategy of Conflict, pp. 207-229. The phrase and the notion have caught on, but I doubt that the article, which is a quite mathematical, game theoretic analysis is read nearly so often as the use of the phrase would imply. It might be noted that Stephen Van Evera claims that the reciprocal fear of surprise attack danger is

Finally, in such a hair-trigger world, the related problem of accidental war will assume its most severe form; preemption in response to false alarm is much more likely to occur. In this world, crises will be especially dangerous, war will be likely, disaster will be hard to avoid.

In the second world (in which American forces are invulnerable, Soviet forces are vulnerable) and the third (in which the positions in the second world are reversed), one side or the other is in a position to win if it can fire first. But the more important point in connection with the train of thought we are here reconstructing is that in these two cases both powers still have an incentive to strike first. Unlike the first environment, however, the incentives of the two sides are not symmetrical; here the invulnerable party will be motivated by the preventive incentive, the vulnerable party by the preemptive incentive. But the result is still unattractive, for these are worlds in which there exist rationales for both states to choose nuclear war if crisis or hostility between them makes war

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purely theoretical, there being no historical cases that he can discover of this phenomenon. See his Causes of War, Ph.D. Dissertation, University of California, Berkeley, November 1984, pp. 22-24.

seem at all likely.

One is left, then, only with the fourth of the four worlds defined by the matrix. Here the forces of the two sides are completely invulnerable. In this circumstance, neither has any incentive to launch a nuclear surprise attack, for to do so brings no advantage in terms of altering the balance of nuclear capability; indeed, it was conceivable that attacking a highly survivable force would leave the attacker worse off in terms of relative capability. This is the ideal disincentive, the most effective way to "persuade" one's adversary that nuclear restraint is preferable to surprise attack. (And, of course, under these conditions to strike first against cities simply invites the destruction of one's own cities by retaliatory strike.) If, then, one must live in a world of two large nuclear powers, this was the safest way to arrange such a world. Importantly, it was thought to be in the best interest of both superpowers to end up in this world.

Of course, the real world is not as tidy or clear-cut as these theoretical worlds, and, given the vast destructiveness of nuclear weapons and the frailties of men and machines, this desirable world of completely invulnerable forces is unlikely ever to be achieved.

This point did not go unrecognized in the development of this logic. Hoag warned, for example, that "the system with no vulnerable places anywhere in the entire complex of retaliation, with respect to all its components, is but an ideal. Some less hard places will always be present, and there may even be an Achilles' heel in the system. Accordingly, there will always be some scope for militarily rewarding counterforce ...operations."<sup>56</sup>

Morgenstern offered a bridge between theory and reality by refining the conception of "invulnerability." It is, he suggested, "only a relative term, meaning mostly that surprise is virtually impossible and that our counteraction is assured."<sup>57</sup> The impossibility of realizing the ideal world did not negate the analysis, however. It simply meant that efforts had to be undertaken in the real world to make it approximate as much as possible the idealized theoretical world; this could be either easy or difficult, depending on technological developments and the policy choices of the two sides. The closer the real world could come to the desired but abstract world of completely invulnerable

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<sup>56</sup> Hoag, "On Stability in Deterrent Races," p. 518.

<sup>57</sup> Morgenstern, The Question of National Defense, p. 63.

forces, the safer the environment would be.

Thus, in this body of work one of the fundamental questions confronting both strategists and policymakers in the late 1950s and early 1960s - how to arrange the strategic nuclear environment safely - was provided a clear and unambiguous answer. The superpowers could and should construct a world in which incentives to use nuclear weapons were eliminated or at least minimized; this world would be characterized by the substantial possession by both sides of invulnerable forces.

This line of analysis was captured in, and has come to be symbolized by, a single, central concept: strategic stability. The criterion of stability has served for many over the subsequent years as the single canonical measure of the attractiveness or undesirability of nuclear weapons and nuclear strategies. In precise definition it has been variously described, sometimes by the same analyst. Schelling has provided perhaps the most famous definition: "The balance is stable only when neither, in striking first, can destroy the other's ability to strike back."<sup>58</sup> Elsewhere he put it in slightly different terms, referring to stability as "the

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<sup>58</sup> Schelling, "Surprise Attack and Disarmament," in The Strategy of Conflict, p. 232.

assurance against being caught by surprise, the safety in waiting, the absence of a premium on jumping the gun."<sup>59</sup> In Strategy and Arms Control, Schelling and Halperin introduce yet a third, somewhat different formulation: "A 'balance of deterrence' - a situation in which the incentives on both sides to initiate war are outweighed by the disincentives - is described as 'stable' when it is reasonably secure against shocks, alarms, and perturbations."<sup>60</sup> In Brodie's version, "Stability is achieved when each nation believes that the strategic advantage of striking first is overshadowed by the tremendous cost of doing so."<sup>61</sup> While a careful reader will detect differences among these definitions, the common element is plain: Stability is the condition in which there is little or no incentive to strike first, in

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<sup>59</sup> Schelling, Arms and Influence, p. 234.

<sup>60</sup> Schelling and Halperin, Strategy and Arms Control, p. 50. For more from Schelling on this subject, see his short chapter, "The Idea of Stability," in The Stability of Total Disarmament, Study Memorandum Number 1, Institute for Defense Analyses, Washington D.C., October 6, 1961, pp. 5-7.

<sup>61</sup> Brodie, Strategy in the Missile Age, p. 303. See also Snyder, who provides the most extensive discussion of "The Conditions of Stability" in Deterrence and Defense, pp. 97-103.

which the likelihood of surprise attack is minimized.<sup>62</sup>

To summarize, the analysis we are examining here started by considering a danger: surprise attack. To this danger it provided a remedy: survivable forces. But the mutual possession of assured retaliatory capability brought with it a portentuous implication: the survival of each depended on the restraint of the other. This led in turn to a focus on the eradication of incentives for nuclear attack, for the best guarantee that an opponent would choose restraint was the absence of any incentive to do otherwise. These incentives arose out of two vulnerabilities: the vulnerability of one's own forces (leading to fear that an opponent would launch a premeditated - preventive - surprise attack) and the vulnerability of the opponent's forces (leading to fear that an opponent would launch a preemptive attack). There followed from this a clear, albeit somewhat paradoxical, conclusion: since incentives for nuclear

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<sup>62</sup> In a number of instances, as with the third of Schelling's definitions above, "stability" is also used to refer to the ease or difficulty of maintaining an environment in which there is no incentive to attack. Snyder, for example, also employs the term this way, commenting that "the balance would be unstable if either side required only a small additional expenditure of resources to achieve a first strike capability which could reduce the opponent's retaliation to acceptable proportions." Deterrence and Defense, p. 97.

surprise attack were nonexistent only when the forces of both sides were invulnerable, each side had an interest in encouraging the other to develop survivable forces and in refraining from threatening an opponent's forces. If the superpowers behaved accordingly, a stable environment would be created: this was the safest of all possible nuclear worlds. Here, then, were rules to govern strategic policy; here was a world to aspire to.

C. Elusive Stability and The Road to Arms Control

What I have called the modern theory of arms control was a direct offspring of this line of strategic thought. In this strategic context, one could make a case for both the utility and the feasibility of arms control. It was believed that arms control could make a useful, perhaps an essential, contribution in helping the superpowers move from a world of danger to one of relative safety. There would probably have been less interest in arms control if it seemed that stability were easy to achieve; it would have been unnecessary even if perhaps useful.<sup>63</sup>

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<sup>63</sup> Indeed, this outcome was not excluded from the range of possible outcomes. "We may get stability without cooperation," he wrote in "Surprise Attack and Disarmament." But the opposite, and far more frightening outcome was also possible: "Or we may not find it even

But, however desirable it might be, in the late 1950s stability did not appear to be an easily attainable goal. A number of complications stood in the way of its attainment. These complications left room for arms control, raised problems to which it might be the solution.

The first, and most basic, of these complications was that reality fell considerably short of the goal of total and mutual invulnerability, of complete stability. The abstract form of the argument for stability, which posits forces that are either completely vulnerable or totally invulnerable, contains a circularity. The mutual possession of assured retaliatory capability meant that the survival of each depended on the restraint of the other, but the hypothesized complete invulnerability of those forces meant that there were no incentives to attack, that the incentives to prefer restraint were maximized. In theoretical terms, then, that which created the problem also provided the solution. In the real world, alas, this circularity does not exist. Therein lies one of the major reasons for renewed interest in arms control.

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with cooperation." In The Strategy of Conflict, p. 251.

When one allowed for the ways in which reality departed from the pristine constructs of theory, the problem of minimizing incentives to attack, far from being automatically or inherently solved, became vexing and worrisome. In the real world, strategic forces were not completely invulnerable even if the imperative to acquire survivable forces had been heeded. Even a force thought to provide certain retaliatory capability would possess substantial vulnerabilities. If one adapts the matrix employed above to incorporate this possibility, one ends up with a more complex mapping of possible worlds, but one that includes more realism than the

		<u>United States</u>		
		vulnerable	part. vuln.	invulnerable
USSR	vuln.	1	2	3
	part. vuln.	4	5	6
	invuln.	7	8	9

simple contrast of complete vulnerability and complete invulnerability. Here a third column, labelled partially vulnerable, has been added to the matrix; this reflects the fact that in reality the forces of the two superpowers are likely never to be completely invulnerable; the perfectly stable environment (number 9 in this matrix) is purely theoretical. By the same token, it will likely be rare that the forces of either side are completely vulnerable either (given the strong motivation both sides should have to make efforts to acquire forces with at least some retaliatory capability). If one accepts these propositions, then the fifth of these nine possible nuclear environments, in which both sides are partially vulnerable but possess some retaliatory capability, will be the one most commonly found in reality (and the four worlds of our previous matrix will rarely be seen). In this world, there will always be some prospect of retaliation, but more importantly for the analysis here, always some temptation to strike first in certain conditions to exploit the opponent's vulnerabilities or to compensate for one's own vulnerabilities.

The critical question, in terms of the stability of

this fifth world, will be whether the decisionmakers that inhabit it view it as inclining toward the vulnerable or the invulnerable ends of the spectrum. Because this is a matter of perception, there is considerable potential for first strike incentives to persist in this world.

Governments and statesmen are notoriously poor at seeing the world clearly or accurately<sup>64</sup>, and this is especially true in the kind of intense crisis that is most likely to raise consideration of preemptive or preventive surprise attack.<sup>65</sup> Policymakers' (perhaps exaggerated) fear of their own force vulnerabilities or their (perhaps exaggerated) sense of their opponent's vulnerabilities will to a considerable extent determine the degree of stability in this environment. The greatest potential danger to arise from this is probably the tendency to

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<sup>64</sup> The canonical footnote on this point is, of course, Robert Jervis, Perception and Misperception in International Politics (Princeton, N.J.: Princeton University Press, 1976).

<sup>65</sup> A detailed, and chastening, study of decisionmaking in crises, which provides considerable evidence of the role of misperception and irrationality in crisis decisionmaking, is Richard Ned Lebow, Between Peace and War: The Nature of International Crisis (Baltimore, Md: The Johns Hopkins University Press, 1981). For a brief treatment of crisis decisionmaking, see William Ury and Richard Smoke, Beyond the Hotline: Controlling a Nuclear Crisis, Report to the US Arms Control and Disarmament Agency, Nuclear Negotiation Project, Harvard Law School, 1984, pp. 20-24.

combine expectations of hostile behavior by the other party with worst-case perceptions of one's own vulnerability; this could plausibly lead, particularly in time of crisis, to preemptive war, even if both perceptions were mistaken.<sup>66</sup> As a result of considerations like these, there was considerable concern among the early arms control theorists about what was variously called unintended war, inadvertent war, war by misunderstanding, miscalculation, or misapprehension.<sup>67</sup>

Excluding the extreme cases and introducing the idea that there is a spectrum of force vulnerability ranging from nearly invulnerable to nearly vulnerable led logically to an awareness that stability could be viewed not as a simple dichotomous concept - it exists or it

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<sup>66</sup> If the perceptions of both sides are configured in this way, then one again runs into the reciprocal fear of surprise attack problem. As Schelling explains, "it looks as though a modest temptation on each side to sneak in a first blow - a temptation too small by itself to motivate an attack - might become compounded through a process of interacting expectations, with additional motive for attack being produced by successive cycles of 'he thinks we think he thinks we think...he thinks we think he'll attack; so he thinks we shall; so he will; so we must.'" Schelling, "The Reciprocal Fear of Surprise Attack," in The Strategy of Conflict, p. 207.

<sup>67</sup> See, for example; Kissinger, "Arms Control, Inspection and Surprise Attack," pp. 566-567; Schelling, "Surprise Attack and Disarmament," in The Strategy of Conflict, p. 247; and Singer, Deterrence, Arms Control, and Disarmament, pp. 89-104.

doesn't - but as a sliding scale in which the degree of stability (or instability) is directly correlated to the extent or magnitude of the (perceived) vulnerability. This is what J. David Singer was getting at when he wrote, "The more convinced the attacker is that he can obliterate a great portion of his victim's vehicles of retribution, the greater his incentive to strike the first blow."<sup>68</sup>

On this score, the actual state of affairs in the late 1950s was far from reassuring. As Brodie observed, "Today the surpreme advantage of the initiative in launching an unrestricted thermonuclear war can hardly be contested, for the side possessing it can hope, reasonably under some circumstances, to obliterate the opponent's power to retaliate."<sup>69</sup> This was, of course, the worst case; but in fact, much analysis of this issue assumed that a large fraction of the strategic force would be destroyed if an opponent attacked, and concentrated on the question of whether the forces that could be expected to survive - the residual force - would be adequate to deter. Even here, some found grounds for

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<sup>68</sup> Singer, Deterrence, Arms Control, and Disarmament, p. 39.

<sup>69</sup> Brodie, Strategy in the Missile Age, p. 176. (Emphasis added.)

worry. When strategic force postures contained large vulnerabilities, an opponent might calculate that the cost of an attack could be reduced sufficiently, and the benefit might be perceived to be so great (particularly, say, in the heat of crisis), that it could seem worth the risk to launch a surprise attack. When a potential attacker's subjective cost-benefit calculus did not show expected costs to considerably exceed expected benefits, then, as one analyst put it, "a moderate shift in his subjective probabilities might easily incline a calculating and amoral decision-maker toward the first strike gamble."<sup>70</sup>

Moreover, if the survival of the residual force depended to any considerable extent on warning - as was the case for SAC bombers in the late 1950s - there was always the possibility that an opponent could find a way (or at least convince itself, accurately or not, that it had found a way) to circumvent one's capacity to provide warning, whether by imaginative attack tactics or technological breakthrough (as when Soviet missiles seemed to remove the warning time on which SAC bombers relied). Herman Kahn cautioned, for example, that

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<sup>70</sup> Singer, Deterrence, Arms Control, and Disarmament, p. 28.

reliance on warning and reaction "seems particularly susceptible to degradation by clever tactics on the part of the enemy that have been overlooked or underestimated."<sup>71</sup> This consideration could cause a strategic force to seem, or even to be, hugely vulnerable, even if it had some prospect, if all went well, of providing a residual force.

Retaliatory capabilities reliant upon warning and escape for survival, though perhaps adequate for deterrence, also had the liability that they created a hair-trigger world in which accidental war was a serious danger. In such a world, preemptive attack might be provoked by false alarms, mechanical mishaps, or misinterpretation of an opponent's behavior - because it is dangerous to wait when quick reaction is the key to survival. Attempting to solve one problem thus resulted in another. As Hadley put it, "The dangerous instability of the world is thus increased both by the vulnerability of SAC and by the measures the United States is forced to take to counteract that vulnerability."<sup>72</sup> It was not

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<sup>71</sup> Herman Kahn, On Thermonuclear War, New York: The Free Press, 1960, p. 256-257.

<sup>72</sup> Hadley, The Nation's Safety and Arms Control, p.17. See also Kahn, On Thermonuclear War, pp. 256-257, in which he draws attention to the unpleasant tradeoff between the risk of reacting unnecessarily to false alarm

very satisfactory to trade one danger for another. This problem represented, therefore, an additional obstacle to the creation of a stable environment. Schelling explained,

Accidental war...puts an added burden on deterrence. It is not enough to make a war that he starts look unattractive compared to no war at all; a war that he starts must look unattractive even as insurance against the much worse war that - in a crisis, or after an accident, or due to some mischief or in misapprehension of our intent - he thinks may be started against him or has already started. Deterrence has to make it never appear conservative to elect, as the lesser danger, preemptive war.<sup>73</sup>

This problem was thought to be so severe that Schelling described it as "the greatest source of danger that peace will explode into all-out war."<sup>74</sup>

In addition, there was the everpresent concern, particularly in view of the previous points, that an opponent would find some Achilles' Heel which, if attacked, would cripple one's retaliatory capability; the frailties of command and control systems seemed to offer one such scenario. Kahn, for example, noted that because of the difficulty in creating an effective system of

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versus the risk of failing to react "adequately" in the face of a real attack.

<sup>73</sup> Schelling, Arms and Influence, p. 230-231. (Emphasis in original.)

<sup>74</sup> Schelling, Arms and Influence, p. 227.

command and control over nuclear weapons, "there is a potential weak spot in the system if the enemy can destroy certain headquarters or interrupt or delay communications...." Furthermore, Kahn suggested, an adversary might tailor forces to exploit this (and by implication, other) "weak spots" in the US deterrent posture.<sup>75</sup> Kaufmann perhaps summed it up best when he wrote, "We should not fool ourselves by thinking that the task of maintaining the strategic deterrent will suddenly become easy and automatic. There is too much ingenuity in the world for that."<sup>76</sup>

In the real world inhabited by imperfect and imperfectly informed decisionmakers, in short, there would always be some, and perhaps considerable, incentive to strike first because the nuclear balance would always include some, and perhaps considerable, vulnerabilities in the forces of the two sides. A survivable force, which could provide some assurance of residual capability after an attack, was not equivalent to, and was probably a good distance from being, an invulnerable force of the sort so easy to posit in theory. And while the hope and

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<sup>75</sup> Kahn, On Thermonuclear War, pp. 269-270.

<sup>76</sup> Kaufmann, "The Crisis in Military Affairs," p. 592.

theoretical prediction was that an opponent would be dissuaded from attack by the damage the residual force could wreak<sup>77</sup>, one could not completely discount the possibility that he might convince himself (whether rightly or wrongly did not much matter in terms of his incentives) either that he really could launch a disarming strike or, more plausibly, that he could reduce to "acceptable" levels the damage threatened by the residual force. It was very difficult to completely banish first strike incentives from the real world; and hence every effort must be undertaken to minimize them.

A second complication, related to the first, was that many of the steps that one side might take to bolster its deterrent retaliatory force could appear to the other side to be very threatening to its forces. Keeping forces in a high state of readiness, increasing the size and capability of the strategic force, augmenting the destructive power of one's force in order to make the retaliatory threat as fearsome as possible, could all appear, to a suspicious and fearful adversary, to be

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<sup>77</sup> Singer notes, for example, that "in theory there is no reason to expect that the meeting of such [deterrent] conditions will produce anything but success." But he also indicates that this is not an ironclad guarantee against failure. See Deterrence, Arms Control, and Disarmament, p. 22.

possible moves in the direction of a first strike capability; in view of the vulnerabilities that, for reasons just discussed, probably would exist in one's own force, such moves had to be watched warily and taken seriously, and could under some circumstances provoke preemptive inclinations. As Brodie noted, "the methods of seeking security of the retaliatory force, even if that is all one seeks, may...vary widely in degree and certainly in appearance of aggressiveness. They are therefore always a matter of concern to the other side."<sup>78</sup>

In the abstract, this problem would seem readily soluble by the simple expedient of seeking to acquire purely retaliatory capabilities. In reality, the problem was nearly intractable for the reason that most weapons one could buy would have some utility in a first strike. Schelling explained the difficulty:

Between the extremes of the 'pure' strike-first weapon and the 'pure' strike-back weapon, there are the weapons that can strike first but do not need to, that can survive and serve the retaliatory purpose but that also might have an important effect on the other side's retaliatory forces if used first. Perhaps most weapons fall in this category....So we cannot make a nice distinction between first-strike and second-strike weapons, extolling the one and disparaging the other in our approach to the surprise

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<sup>78</sup> Brodie, Strategy in the Missile Age, p. 302.

attack problem.<sup>79</sup>

As if this were not enough, there was still another messy complexity to consider, another way in which the line between first and second strike capabilities was blurred: some analysts believed that, for deterrent purposes, the United States needed second strike counterforce, that is, the ability to destroy Soviet nuclear capability in a retaliatory strike. Naturally, any such capability could be used, and probably more effectively, in a first as well as a second strike. As Singer pointed out, this could easily look alarming to a Soviet strategist: "Would he wonder...whether a counterforce capability might not suggest a strike-first rather than a strike-back commitment...? He might wonder why, if the United States is really interested only in deterrence, it pursues a capability designed for victory."<sup>80</sup> The concept of

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<sup>79</sup> Schelling, "Surprise Attack and Disarmament," in The Strategy of Conflict, pp. 240-241. The issue is also addressed in Schelling and Halperin, Strategy and Arms Control, pp. 51-52 ("Almost any weapon capable of firing back in retaliation is worth something in a first strike or can be adapted to the purpose.")

<sup>80</sup> Singer, Deterrence, Arms Control, and Disarmament, pp. 73-74. On pp. 68-74, Singer reviews the debate over retaliatory targeting. Snyder also discusses the question of counterforce retaliation. See Deterrence and Defense, pp. 69, 73-74. Arthur I. Waskow devotes a (very critical) chapter to what he calls "The Counterforce Theory of Deterrence," in The Limits of Defense (Garden City, New York: Doubleday & Company,

second strike counterforce for deterrence further exacerbated the problem that one side's efforts to improve its deterrent capabilities could alarm the other side in ways that were destabilizing.

This dilemma is, of course, the nuclear age version of what Robert Jervis has called the security dilemma: the chronic problem that measures taken by one state for its own self-defense often threaten the security of other states - even when all are status quo powers. This problem is most acute when it is difficult to distinguish between offensive and defensive (or, in nuclear terms, first strike and second strike) capabilities and when there was thought to be an advantage in striking first. We have seen how the former condition obtains in the nuclear age, and how the latter could, for any number of reasons, be thought to be the case. It was not that difficult for the nuclear balance to approximate the

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Inc., 1962), pp. 13-30. One of the most confused treatments of America's nuclear requirements, surprisingly, is found in Brodie. Although he advocated a policy of stable deterrence, he also believed that US needed a first strike capability and hence that "our retaliatory capability must also be capable of striking first." In Strategy in the Missile Age, pp. 270,277. Needless to say, there is a rather large internal contradiction in this formulation.

condition that Jervis describes as "doubly dangerous."<sup>81</sup>

In sum, the first complication suggested that there would always be some vulnerable forces in the nuclear balance; the second indicates that there would always be some first strike capability. The conjunction of the two points compounded the difficulty of minimizing surprise attack incentives. (And so much for the ideal world in which vulnerabilities are eliminated and first strike capabilities eschewed.)

The third complication was that the acquisition of a strategic force sufficient to ensure the survival of a substantial residual capability did not happen easily or naturally. It required a certain amount of wisdom and foresight on the part of governments, along with intelligent investments in often very costly programs. It could not be taken for granted that these would be forthcoming. Of this, the strategic analysts of the

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<sup>81</sup> Robert Jervis, "Cooperation Under the Security Dilemma," World Politics 29 (January 1978): pp. 206-214. My analysis here differs somewhat from Jervis's in that he believes states will rarely see first strike temptations in a world of mutual deterrence, and hence nuclear age decisionmakers will not see themselves in this doubly dangerous condition. The difference results from my effort to reconstruct the perspective of the early arms control theorists, who wrote in a period when stable deterrence was thought a goal, not a fact, when strategic forces were thought hugely vulnerable and surprise attack a dangerous temptation.

period were acutely aware, since much of their interest and motivation derived from what was widely regarded as the irresponsibility of the US government in just these respects.<sup>82</sup> Its neglect of measures to safeguard the American deterrent force had placed its retaliatory capability in potential, if not actual, jeopardy. The frequent and impassioned exhortations (amply documented above) that high priority be given to reducing the vulnerability of US strategic forces were driven by the evident fact that, however obvious this might seem, it had not been done.<sup>83</sup> Creating a stable world was

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<sup>82</sup> A discouraged Morgenstern would complain in 1959, for example, that "The most frightening part of the picture is not the danger itself, but the fact that it is so little appreciated. Many a good effort has been made to tell the nation what the true conditions are....Yet all these events, reports and studies vanish in short time....It is distressing that too few government leaders, most of them in Congress, give signs of continued hard thinking." See The Question of National Defense, p. 323.

<sup>83</sup> Interestingly, and perhaps surprisingly, the Soviets also did a bad job initially in attending to the survivability of its strategic forces, with the result that throughout the early and mid 1960s it was hugely vulnerable to an American first strike. In the context of the Berlin Crisis in the Fall of 1961, for example, the Kennedy Administration did a study of US nuclear options (as part of the contingency planning for the eventuality that the crisis escalated) which concluded, in Kaplan's words, "that a counterforce first strike was indeed very feasible, that we could pull it off with high confidence." See Wizards of Armageddon, p. 299. Henry Rowen has also commented on this point, observing that in the 1950s and 1960s, "because the Soviets were slow in

difficult enough, but this was doubly so if governments went about it badly. Incentives for surprise attack would inevitably arise if shortsighted, careless or mistaken policies allowed vulnerabilities to arise or to stand uncorrected.<sup>84</sup>

And, lastly, there was a fourth serious complication that hindered any easy accomplishment of stability. Such

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reducing the vulnerability of their nuclear forces, it was feasible for the US to assign weapons to nuclear threat targets with high damage expectations...." See his "The Evolution of Strategic Nuclear Doctrine," in Laurence Martin, ed., Strategic Thought in the Nuclear Age (London: Heinemann, 1979), p. 139. It is curious that both superpowers should have made the same grave mistake (the Soviet being more severe than the American since US capability actually existed whereas the US vulnerability crisis in the late 1950s was a reaction to potential Soviet capability) and one wonders whether this suggests some common organizational malady or strategic preference that caused the two defense establishments to acquire sheer striking power with so little regard for the requirement of retaliation. Brodie, for instance, drew attention to what he believed was a traditional bias of militaries in favor of offensive doctrines, a tradition that was deeply rooted and especially strong in relation to air power. See Strategy in the Missile Age, pp. 174-180.

<sup>84</sup> Singer went so far as to chide that anything less than the maximum effort to achieve invulnerability represented a contribution to instability: "If it is true that...each side's second strike capability improves with reduced vulnerability, and that such a capability adds to stability, does it also follow that failure to build an optimum degree of invulnerability into one's delivery systems helps to destabilize the environment? I believe that it does, and that every such failure - be it in the name of speed or economy - is a discernible contribution to the probability of nuclear war." In Deterrence, Arms Control, and Disarmament, p. 113.

stability as could be achieved at any given moment would not necessarily, indeed probably would not, endure indefinitely, yet safety required that it persist across time. After all, one had to be concerned not only about the present but about the long run, about dangers that don't exist today but might exist tomorrow. This meant that the balance had to be constantly "tended," stability had to be sheltered from forces and factors that threatened to erode or undo it. Thus Schelling observed that "the problem of instability does not necessarily stay solved. It may be kept solved, but only by conscious efforts to keep it solved."<sup>85</sup> This requirement was another of the omnipresent subjects in the formative literature on nuclear strategy and arms control; indeed this problem contributed to the notion that arms control might help to manage the balance in such a way as to avoid instabilities. And while the strategists did not limit their concerns about threats to stability to a single factor, they did have an overwhelmingly favorite culprit: technology.<sup>86</sup>

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<sup>85</sup> Schelling, Arms and Influence, p. 247.

<sup>86</sup> Nuclear proliferation, for example, was considered to be another worrying "threat to stability," although it did not receive as much attention in the early literature as the problem of technological change. Osgood nicely illustrates the concern, writing that "one

The nature of the problem could be vividly demonstrated by examining the recent past. Kahn, who could be said to be obsessed with this issue, dramatised the problem by noting that "Now, for the first time in history, we are having a complete technological revolution in the art of war approximately every five years." This meant, of course, that past and present solutions to the challenges of national security policy in the nuclear age would rapidly obsolesce; and one had to worry not only about outdated equipment but about obsolete ideas: "While doctrine has evolved with meteoric speed as contrasted with the rates before World War II, it has been hopelessly behind events rather than successful in anticipating the future.... Technological progress is so rapid that there are almost bound to be doctrinal lags. These doctrinal lags will in themselves be dangerous, leading to important gaps in our preparations...and, possibly most important of all,

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must expect the diffusion of independent nuclear capabilities to other powers - and especially to powers not aligned with the United States - to create instabilities of a new order of magnitude and complexity." In "Stabilizing the Military Environment," p. 36. An example of a specific technological source of concern was the question of weapons in space (ie, nuclear weapons deployed on orbiting satellites). See, for example, the discussion in Hadley, The Nation's Safety and Arms Control, pp. 94-100; and Brown, "Invulnerable Retaliatory Capability and Arms Control," pp. 540-542.

heightened possibilities of serious miscalculations or accidents because we have not had time to understand and make provisions for the requirements of the newly installed systems."<sup>87</sup> Schelling also believed that the process of technological change could have problematic consequences and, like Kahn, he illustrated the point by remarking on the implications of remarkable technological developments that had been witnessed since the Second World War:

We and the Russians are trapped by our military technology. Weapon developments of the last fifteen years...have themselves been responsible for the most alarming aspects of the present strategic situation. They have enhanced the advantage, in the event war should come, of being the one to start it. They have have inhumanly compressed the time available to make the most terrible decisions. They have almost eliminated any belief that a really big war either could be or should be limited....They have greatly reduced the confidence of either side that it can predict the weapons its enemy has or will have in the future. In these and other ways the evolution of military technology has exacerbated whatever propensities toward war inherent in the political conflict between us and our enemies.<sup>88</sup>

Of course, the whole point of seeking stability was to

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<sup>87</sup> Herman Kahn, "The Arms Race and Some of Its Hazards," in Brennan, ed., Arms Control, Disarmament, and National Security, pp. 109,120. On pp. 110-117, Kahn describes the several technological revolutions as he sees them.

<sup>88</sup> Schelling, "Reciprocal Measures for Arms Stabilization," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 170.

counter such effects. The problem was that the continuing evolution of technology might be forever undermining the quest for stability. Hadley, in any case a pessimist on the question of how much stability could really be achieved, noted that even if a period of stability occurs, "at any instant a scientific breakthrough might destabilize the situation."<sup>89</sup>

Almost to a man, the early arms control theorists embraced this leitmotif. Kissinger commented, "A major cause of instability is the very rate of technological change. Every country lives with the nightmare that even if it puts forth its best efforts its survival may be jeopardized by a technological breakthrough on the part of its opponent."<sup>90</sup> Osgood warned that "Stability is ...jeopardized by the rapidly changing and untried weapons systems upon which deterrence must now be based....One configuration of capabilities that seems to assure stability can be rapidly supplanted by another

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<sup>89</sup> Hadley, The Nation's Safety and Arms Control, p. 23. See also Hadley's discussion of "The Research Breakthrough," pp. 119-122. Insightfully, he drew attention to missile accuracy as an area with significant implications.

<sup>90</sup> Kissinger, "Arms Control, Inspection and Surprise Attack," p. 557.

that undermines stability."<sup>91</sup> Or, as Schelling himself put it, "Events could occur - technological events or political events - that would make the balance of deterrence much more unstable than it is now, or that would cause a drastic reappraisal of the instability that has existed all along...."<sup>92</sup> Boulding, for reasons as much political as technological, concurred: "Perhaps the

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<sup>91</sup> Osgood, "Stabilizing the Military Environment," p. 25.

<sup>92</sup> Thomas Schelling, "Arms Control: Proposal for a Special Surveillance Force," World Politics 12 (October 1960): p. 1. For more, see the discussion of "Technology" in Schelling and Halperin, Strategy and Arms Control, pp. 37-38. Kaufmann addresses this matter in "The Crisis in Military Affairs," pp. 579, 591-592. Bull devotes an entire chapter to "The Problem of Continuous Innovation," in The Control of the Arms Race, pp. 195-206. Kissinger, once again out of step with predominant views, downplayed (in his early work) the problems associated with the ongoing process of technological modernization, largely on the grounds that future advances were quite unlikely to be as revolutionary as the introduction of nuclear weapons and ballistic missiles. (He did however discuss at some length the implications of the nuclear-powered airplane!) This was of course true as far as it went, but overlooked the serious strategic implications of technological improvements in areas such as the range, accuracy, and payload of ballistic missiles, in space-based capabilities, etc. It was also contradicted by Kissinger himself in the work cited above. See Nuclear Weapons and Foreign Policy, pp. 118-125. In at least one analysis, it was also noted that technology might develop in helpful ways, and make stability easier rather than more difficult to achieve. See Schelling, "Surprise Attack and Disarmament," in The Strategy of Conflict, p. 251. But, as we have seen, this was not the dominant perspective even in Schelling's own work.

most important single feature of systems of deterrence is their long run instability."<sup>93</sup> Maintaining stability could be as difficult as achieving it.

There were, in sum, four broad reasons why stability seemed as if it would be elusive. There were the irreducible vulnerabilities that were likely always to exist even when retaliation seemed assured; these were accompanied by first strike incentives that might loom large in crisis or as a result of misperception or miscalculation. There was the difficulty in distinguishing between retaliatory and first strike capabilities, which meant that one side's efforts to enhance deterrence could seem frighteningly destabilizing to the other side. There were the follies of government policy with respect to national security, which had once already contributed to a vulnerability crisis and might do so again. And there was a strong possibility of changes, most likely of a technological variety, that would be destabilizing in their consequences. What these points suggested was that, while there were many unilateral steps that could (and should!) be taken to reduce the vulnerability of one's forces and hence to

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<sup>93</sup> Boulding, "Towards a Pure Theory of Threat Systems," p. 429.

enhance stability,<sup>94</sup> these measures would not fully or permanently address or resolve the problem of living safely in the nuclear age. Consequently, anything else that might be done, in addition to undertaking stabilizing unilateral measures, was very much worth exploring; the dangers of the nuclear age are so great, the stakes are so high, that all potential sources of stability (and hence, safety) ought to be investigated. This logic led inexorably to an interest in arms control as a possible means of enhancing and preserving

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<sup>94</sup> Although I have not emphasized it here because it is unnecessary to the argument, the literature we are examining was replete with detailed analyses of various unilateral defense policy options for reducing vulnerability to surprise attack, including discussion of the merits and demerits of different delivery systems, the advantages of diversity in the strategic force posture, the problems associated with acquiring and acting upon warning, the relative advantages and disadvantages of hardening, mobility, dispersal, and numbers as means of protecting the force, the prospects for providing meaningful active defense of retaliatory forces, and so on. Among authors cited above, Brodie, Wohlstetter, Morgenstern, Kahn and Singer all provide fairly extensive discussion of these questions. The conceptual analysis on which I have focused was accompanied by this much more specific, policy-oriented analysis. (Those who investigated these issues generally ended up recommending something akin to "all of the above." While some measures were better, more feasible, more affordable, or more congenial than others, guaranteeing the survival of a retaliatory force was so important that anything that contributed to that end ought to be pursued. As Brodie put it, "The chances are...that any comprehensive system for protection would have to depend on a combination of several schemes or devices...." See Strategy in the Missile Age, p. 220.

stability. Problems that were not fully amenable to unilateral solution might be more susceptible to collaborative resolution.

The more gloomy among these analysts suggested that arms control was not simply useful, but necessary, even imperative, if the United States (or, more altruistically, mankind) were to survive the dangers posed by nuclear weapons. This is implied, for example, by Kenneth Boulding's heartfelt comment on the urgency of developing a "science" of deterrence, the better to bring the "threat system" under control. "Because of the development of the nuclear weapons....," he wrote, "the whole threat system, that is, the system of national defense, is suffering a grave crisis - indeed, I would argue, a breakdown. The control of the threat system, therefore, is a matter of the topmost priority for the human race."<sup>95</sup> A more unlikely source of such sentiments was Herman Kahn, who, confounding his rather bloodthirsty reputation, argued that "If we are to reach the year 2000, or even 1975, without a cataclysm of some sort..., we will almost undoubtedly require extensive arms control measures in addition to unilateral security measures."

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<sup>95</sup> Boulding, "Towards a Pure Theory of Threat Systems," p. 434. (Emphasis added.)

In Kahn's view, the nuclear age was full of frightful dangers (to which he may have been particularly sensitive since he took the possibility of actually having to fight a nuclear war more seriously than most), but he believed "that many of the ominous possibilities...might be alleviated by proper arms control measures."<sup>96</sup> Henry Kissinger doubted that stability could be achieved without arms control: "To seek to protect the retaliatory force solely through unilateral measures is almost certain to produce an arms race. If the goal is stability, negotiated arms control schemes must therefore accompany unilateral measures."<sup>97</sup> Naturally, if one believed arms control were necessary to the construction of a safe nuclear environment, then it was also inevitably an imperative that could be ignored only at peril.

More common, however, were theorists who made less extreme claims about the value of arms control; it was represented more often as an aid, a useful supplement, rather than as a need or a sole salvation. Schelling

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<sup>96</sup> Kahn, On Thermonuclear War, p. 224, 231. Kahn reiterates the point in his essay, "The Arms Race and Some of Its Hazards," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 89.

<sup>97</sup> Kissinger, "Arms Control, Inspection, and Surprise Attack," p. 560. (Emphasis added.)

expressed it simply when he said that in constructing a stable nuclear environment, "conscious accommodation between potential enemies may help."<sup>98</sup> Particularly in retrospect, this does not appear to be an extravagant claim; most today would probably find it unobjectionable. At a time of great hostility between the United States and the Soviet Union, however, and in a period when there was little indication that arms control could be anything more than a ritualistic propaganda exercise at the United Nations, this was a strange and alien notion to take seriously, and the early arms control theorists went to some pains to justify it. The most trenchant elaboration is found in Strategy and Arms Control, in which Schelling and Halperin explain that arms control may be attractive and useful because

There may be opportunities to exchange facilities or understandings with our enemies, or to design and deploy our forces differently by agreement with our enemies who do likewise, in a way that enhances those aspects of technology that we like and that helps to nullify those that we do not....We do believe that much can be done through careful design of our military strategy, our weaponry, our military deployments and doctrines, to reduce the military danger... to our security. We believe that, in addition to what can be accomplished unilaterally in this regard, there are actions and restraints for which the inducements are greater on each side if the other side reciprocates or leads in some way. And we believe that something in the way of rules,

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<sup>98</sup> Schelling, "The Future of Arms Control," p. 723.

traditions, and clearer expectations about each other's reactions and modes of behavior may reduce the likelihood of military action based on mistake or misunderstanding.<sup>99</sup>

Here we see the utility of arms control asserted. Often, the claim of utility was conjoined with expressions of peril. According to this formulation, arms control ought to be attempted, despite many evident difficulties in doing so, because it held some promise of helping to tame the special hazards of the nuclear age; if this represented a departure from the past, if it required an alteration of traditional expectations, well perhaps unprecedented times called for unprecedented actions. Brodie, for example, concludes his discussion of arms control with the following exhortation:

Technological progress could...push us rapidly towards a position of almost intolerable mutual menace. Unless something is done politically to alter the environment, each side before many years will have thousands of missiles accurately pointed at targets in the other's territory ready to be fired at a moment's notice....Nothing which has any promise of obviating or alleviating the tensions of such situations should be overlooked.<sup>100</sup>

Others similarly emphasized the grave peril of the nuclear environment in urging that the potential utility of arms control be exploited. Morgenstern offered this

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<sup>99</sup> Schelling and Halperin, Strategy and Arms Control, p. 2.

<sup>100</sup> Brodie, Strategy in the Missile Age, p. 304.

linkage in a particularly compressed fashion: "The current situation is fraught with unique dangers: this only points up the need to persist in our efforts to reach arms limitation agreements."<sup>101</sup> Richard Leghorn, a prominent advocate of arms control in the late 1950s, believed optimistically that the distinctive dangers of the nuclear age could spur new thinking: "The time has clearly come to do a little inventing in a novel field." What was required, he continued, was to "invent a rational world system to provide security from war....Technology has brought the greatest threat from war the world has ever known....But there is substantial hope of securing a stable peace by a sensible organization of the world's deterrent power and arms

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<sup>101</sup> Morgenthorn, The Question of National Defense, p. 320. Morgenthorn, it might be pointed out, was bleakly pessimistic in his conclusions about the state of nuclear affairs. "I see no justification for making...hopeful statements now," he said at the outset of the concluding chapter to his book. "This country is at the most difficult point in its long and glorious history. It is approaching a peak of danger the like of which has never been experienced by a great nation." It faced "mortal peril from an avowed enemy who is constantly getting stronger...; capability of mutual annihilation; great possibility of surprise attack against our vulnerable deterrent retaliatory force...." See pp. 322-323. It is not surprising that those who held such views would be inclined to reach for any instrument that might help to ameliorate the great dangers that were thought to exist.

controls."<sup>102</sup>

If the arms control theorists had expected their analyses and recommendations to find a receptive, welcoming audience, they would not have felt the need to so frequently and so fervently justify themselves. Instead, arguments such as these were made in order to persuade a polity and more specifically a political leadership that was generally sceptical of, indifferent toward, or even hostile toward arms control that it was worthy of careful attention. Clearly, the appeal being made by the early arms control theorists was that their subject be taken seriously, that its potential contribution to stability be recognized, and that it be genuinely included in the array of policy options entertained by the government in grappling with the implications of the nuclear revolution.

But suggesting the utility of arms control, and even putting arms control on the policy agenda, was not enough, however, if the actual pursuit of arms control

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<sup>102</sup> Richard S. Leghorn, "How the Arms Race Can Be Checked," The Reporter, March 6, 1958, p. 19. See also Leghorn's earlier article, "The Approach to a Rational World Security System," Bulletin of Atomic Scientists 12 (June 1957): pp. 195-200, in which he voices the same sentiment: "Could we not achieve a rational world security system based on a stable mixture of deterrents and arms controls, which would relieve the madness of the current headlong arms race...?" [p. 195.]

turned out to be fruitless as it had been in the past. Why did the arms control theorists believe that there might now be internal support for and bilateral interest in serious arms control negotiations, agreements and arrangements? If there were no answer to this question, then much of the argumentation described above would be moot, for if arms control was not feasible in the real world its contributions would never move beyond the realm of theory. But there was an answer, and again it was rooted in the concept of stability. There were two parts to this answer.

First, a stable nuclear environment (often described as stable mutual deterrence in recognition of the adequacy of both retaliatory forces in a stable world)<sup>103</sup> was thought to be in the obvious best interest of both superpowers. After all, isn't it preferable for each to live in an environment in which one's nuclear adversary has no incentive to use his nuclear weapons? Indeed, as the nuclear arsenals of both grew to large proportions, it seemed increasingly likely that nuclear war, if it occurred, would devastate both with little meaningful distinction between winner and loser; this was a world,

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<sup>103</sup> And known later, in a more despised incarnation, as mutual assured destruction, or MAD.

to use Robert Jervis's phrase, of "mutual kill," a world characterized by the ability of the "losers" to annihilate the "winners."<sup>104</sup> If one accepted this logic (and, as we shall see, many did not), then nuclear war itself was the overwhelming threat, the common "enemy" of both superpowers.

This conclusion that there existed a powerful common interest shared by the superpowers, that there was a single objective that both should prefer, was critically important in encouraging thinking about arms control and is pervasively evident in the arms control writings of the period.<sup>105</sup> It was this notion that offered the hope that the nuclear superpowers actually could, tacitly or explicitly, collaborate in ways that minimized the nuclear danger that threatened both. Arms control was, in a sense, an expression of that common interest. As Thomas Schelling put it, "In responding to each other's

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<sup>104</sup> Jervis, The Illogic of American Nuclear Strategy, p. 26.

<sup>105</sup> A dissenter on this point, however, was Kenneth Boulding. He did believe that there exists a category of response in threat relationships "which establishes community between the threatener and the threatened and produces common values and a common interest." However, Boulding felt that this was unlikely to obtain in a deterrent relationship because "counterthreat divides the threatener from the threatened, breaks any bond which might develop between them...." See "Towards a Pure Theory of Threat Systems," p. 430.

military programs we and our potential enemies are not solely interested in frustrating and outsmarting each other. We are in the same boat together and in spite of our conflicts have some interest in cooperating to keep the boat stable. Arms control is simply acknowledging this fact, emphasizing it, making the process more conscious, more articulate, more imaginative, more legitimate, and more responsive to the other side's behavior."<sup>106</sup> Or, as Schelling and Halperin state in Strategy and Arms Control, "The essential feature of arms control is the recognition of the common interest, of the possibility of reciprocation and cooperation even between potential enemies with respect to their military establishments."<sup>107</sup> The implication of such arguments,

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<sup>106</sup> Thomas C. Schelling, "The Future of Arms Control," Operations Research (September/October 1961): p. 727. (Emphasis added.)

<sup>107</sup> Schelling and Halperin, Strategy and Arms Control, p. 2. (Emphasis added.) Hedley Bull also emphasized the element of common interest: "Both must have an interest, whether or not they are aware of it, in arrangements mutually arrived at which promise to reduce these [nuclear] dangers." See The Control of the Arms Race, p. 70. Further demonstrating the pervasiveness of this belief among the early arms control theorists is Henry Kissinger's vivid statement of the same point: "The primary bridge between the two sides is a common fear. The Soviet bloc and the free world may not agree on any positive goals, but they have at least one interest in common: given the horror of thermonuclear weapons, neither side can be interested in an all-out war." This is from his discussion of arms control diplomacy in

of course, was that the rational pursuit of self-interest by the two superpowers should lead to the serious pursuit of arms control because each had a strong incentive to avoid nuclear war and arms control was an important means by which this could be achieved.<sup>108</sup>

Arms control might thus be a more attractive policy option to the superpowers. But, in addition, this common interest made arms control seem more feasible. Because it was rooted in self-interest, the collaborative pursuit of stability did not require that the superpowers

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Nuclear Weapons and Foreign Policy (New York: Harper & Brothers for the Council on Foreign Relations, 1957), p. 205. Morgenstern, commenting on the 1958 Surprise Attack Conference, observed, "There is here a germ of recognition of common interest among the hostile camps." (He warned, however, "But the time is short to let it develop.") See The Question of National Defense, p. 78. More recently, Robert Jervis has argued that the nuclear revolution imposes cooperation on the superpowers. See his The Illogic of American Nuclear Strategy (Ithaca, N.Y.: Cornell University Press, 1984), pp. 26-37.

<sup>108</sup> To be fair, it should be pointed out that the arms control theorists were not predicting that this would happen; rather they were arguing that there existed conditions in which this could conceivably happen and they recommended that it should be attempted. In making this recommendation, most were willing to acknowledge the distinct possibility of failure. Schelling, for example, noted that there were many difficult obstacles in the path of arms control, observed that "it is still an unanswered question whether the Russians are at all disposed to participate in any 'mutual arms accommodation' with us," and concluded merely, "But it is worth trying." See "Reciprocal Measures for Arms Stabilization," in Brennan, ed., Arms Control, Disarmament and National Security, pp. 179-180.

transcend their deep hostility, resolve their political differences, or establish a high level of trust in their relations with one another. Those who believed that these were prerequisites to progress in arms control found few grounds for optimism.<sup>109</sup> But the belief that there existed a mutually desirable goal caused many to think that collaboration could occur without any large-scale modification of the superpower relationship. Robert Bowie, for example, explained quite explicitly how the threat of mutual annihilation raised by nuclear weapons might allow the superpowers to cooperate regardless of their deep differences: "If large-scale war meant mutual destruction, it would not advance the political interests of either side; both would be better served, despite basic political hostility, by preventing

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<sup>109</sup> This perspective is discussed in Singer's "Threat Perception and the Armament-Tension Dilemma," which distinguishes between a "tensions-first" approach (reducing Soviet-American tensions as the necessary first step to arms control), the "political settlements" approach, and what he calls the "armaments first" approach. Singer argues that the latter, by reducing perceived military threats, may reduce tension and ease the way to political settlement. But, as Singer himself points out, many believed that the sequence should go in the other direction. For an elaboration of Singer's analysis, see his chapter "Tensions, Political Settlement, and Disarmament," in Deterrence, Arms Control, and Disarmament, pp. 168-191.

its occurrence."<sup>110</sup> Schelling explained that trust had little to do with the situation:

This common interest does not depend on trust and good faith. In fact it seems likely that unless thoroughgoing distrust can be acknowledged on both sides, it may be hard to reach any real understanding on the subject. The intellectual clarity required to recognize the nature of the common interest may be incompatible with the pretense that we trust each other....<sup>111</sup>

Jeremy Stone summarizes the point very nicely:

There is a persistent tendency among many concerned with arms control, and a persistent hope in the world at large, that the dangers of war are sufficiently great to induce important measures of arms reduction; that important measures to alleviate the dangers of war might go forward despite outstanding political differences, despite accumulated suspicion, despite the complications of technology, and despite the other pressures that produced the arms themselves.<sup>112</sup>

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<sup>110</sup> Robert Bowie, "Basic Requirements of Arms Control," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 45. (Emphasis in original.) Bowie further argues that any arms control regime, if it is to be feasible and effective, must be consistent with the self-interest of both parties. See pp. 46-47. Like Schelling and others, Bowie postulated that the nuclear threat was so grave that it could create the requisite compatible self-interests.

<sup>111</sup> Schelling, "Reciprocal Measures for Arms Stabilization," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 169. Schelling offers an almost identical formulation in "Arms Control: Proposal for a Special Surveillance Force," World Politics 12 (October 1960): pp.8-9.

<sup>112</sup> Jeremy J. Stone, Strategic Persuasion: Arms Limitation Through Dialogue (New York: Columbia University Press, 1967), p. vii. It should be noted that Stone was writing a few years after the high point of the intellectual arms control renaissance, and some of the

In this conception, clearly, Soviet-American relations need not be transformed, the two powers would remain hostile adversaries, but nevertheless they could collaborate in pursuit of a shared objective. Schelling and Halperin concede that "Military collaboration with potential enemies is not a concept that comes naturally."<sup>113</sup> But precisely such collaboration was the essence of arms control, and the mutual preference for a stable nuclear environment was the common bond that would make it possible.

There was a second part of the answer to the question of why the arms control theorists thought there was reason to be more hopeful about the future of arms control than seemed to be indicated by its past; it had to do with another sort of common interest. In the literature that was produced during the heyday of the arms control renaissance, stability is established as the primary objective of both nuclear weapons policy and arms control. Traditionally, efforts at "disarmament" had

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notions raised in the late 1950s had already lost some of their luster. Stone outlines this "tendency" in order to dismiss it: "History has so far shown this to be unlikely."

<sup>113</sup> Schelling and Halperin, Strategy and Arms Control, p. 142.

clashed with national security interests and policies, since it usually sought to limit or eliminate weapons and/or options that the military establishment wished to preserve. And generally disarmament fared poorly in such clashes. This was a real and fundamental constraint on the possibilities for arms limitation.

If one accepted the stability argument, this clash did not arise, for the aims and methods of arms control and military policy were compatible, even in some respects identical. If this reality came to be widely recognized and accepted, then arms control could be viewed as more acceptable component of national strategy, a natural complement to military policies. This was another crucial element of the case that this time, unlike the past, arms control really could play a serious and constructive role in the policies of the major powers, and it was consequently a point that received more than passing attention in the literature. Schelling and Halperin, for example, put the spotlight on this notion in both the opening and the closing of their book. In the introduction they comment,

What is striking is not how novel the methods and purposes of arms control are, and how different from the methods and purposes of national military policy; what is striking is how much overlap there is. There is hardly an objective of arms control to be described in this study that is not equally a

continuing urgent objective of national military strategy - of our unilateral military plans and policies. What this study tries to do is to suggest those points at which these unilateral actions can be extended or supplemented through joint understandings with our potential enemies.

They reiterate the point even more strongly in the conclusion of the book:

What we have tried to emphasize more than anything else is that arms control, if properly conceived, is not necessarily hostile to, or incompatible with, or an alternative to, a military policy properly conceived. The view we have taken is that arms control is essentially a means of supplementing unilateral military strategy by some kind of collaboration with the countries that are potential enemies. The aims of arms control and the aims of a national military strategy should be substantially the same.<sup>114</sup>

To cite just one further example, Arthur Hadley raises the same general point, but (displaying a fairly common variation on the theme) reverses the formula by suggesting that stabilizing military policies could be

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<sup>114</sup> Schelling and Halperin, Strategy and Arms Control, pp. 4 and 141-142. (Emphasis added.) This point is a major theme in Schelling's work on arms control. See also his "The Future of Arms Control," p.727 ("Arms control fits into, and is a proper part of, a national military strategy...."); and his "Reciprocal Measures for Arms Stabilization," in Brennan, ed., Arms Control, Disarmament and National Security, p. 167 (in which he states that stabilizing arms control schemes "are manifestly compatible with a national military policy, not a renunciation of it....To propose...that military cooperation with potential enemies may offer opportunities to improve our military posture opens a new field for imaginative scientific and military thinking and may eventually enlist the support of the military services themselves.")

viewed as arms control:

Even as the distinctions between political and military decisions blur in the nuclear world, so do the distinctions between military policies and arms control. Arms control looks toward the reduction of the threat of war. When military policies go in that direction they may often be legitimately regarded as parts of arms control.<sup>115</sup>

This identity of aims for arms control and military policy, it was suggested (and perhaps hoped), would make arms control more palatable, even congenial to national security policymakers, a breed that traditionally harbored antipathy towards "disarmament" because it generally was insensitive to the requirements of national security.<sup>116</sup> This was not true of arms control as conceived by the theorists, and consequently, one could conclude, with Arthur Hadley, that "arms control can be genuinely espoused by those whose oath and training obligate them first to defend the United States." He continues, in a passage that captures and summarizes both

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<sup>115</sup> Hadley, The Nation's Safety and Arms Control, p. 63. Arthur Lee Burns also draws attention to the overlap between arms control and military policy in "Disarmament or the Balance of Terror?," World Politics 11 (October 1959): p. 144 ("It should be evident that the subject matter of strategic studies and of studies in arms control are identical.")

<sup>116</sup> Kahn believed, for example, that "It is psychologically very difficult for responsible military planners to take arms control seriously and constructively." On Thermonuclear War, p. 232.

of the points made here about common interests, "For the first goal of arms control also is America's security. However, in the nuclear age American and Russian security have certain links."<sup>117</sup>

To conclude, in the previous section we traced the logic of of an influential school of strategic thought, beginning with problem of surprise attack, leading to concern with minimizing first strike incentives, and culminating with the enshrinement of a well defined conception of stability as the preferred strategic environment, the preeminent goal, of the nuclear age. In this section we have seen how the elusiveness of stability, the difficulty of attaining and sustaining it, created an opportunity, perhaps even a need, for arms control to make a contribution. And while the elusiveness of stability allowed a role for arms control, the attractiveness of stability made arms control seem more feasible; Soviet and American policies, military and arms control policies, all were - if "properly conceived" - aimed at the same alluring objective. The notion of stability thus bridged huge differences, differences that had previously represented serious

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<sup>117</sup> Hadley, The Nation's Safety and Arms Control, p. 75.

impediments to the successful implementation of arms control policies.

The argument as reconstructed so far has shown how, in the late 1950s and early 1960s, stability theory led those who embraced it to an upward revision in their assessment of the utility and the practicability of arms control. It remains to examine in some detail the conception of arms control that derived from this line of thought. It too was inextricably linked to the idea of stability.

D. Stability and the Modern Theory of Arms Control

A small number of ideas were critical to the framework for nuclear strategy provided by the concept of stability. The heart of this concept is captured by five propositions:

\* Surprise attack is the predominant problem and danger of the nuclear age.

\* Eliminating or reducing incentives for surprise attack should therefore be the highest priority of national security policy.

\* Incentives for surprise attack are minimized by eliminating or reducing the vulnerability of forces which makes a first strike seem advantageous (and by reducing the likelihood of misperceptions or miscalculations that might cause decisionmakers to think a first strike was advantageous).

\* The nuclear environment is safest when both superpowers heed these rules because then neither side has either preventive or preemptive incentives to use its nuclear weapons even in times of intense crisis.

\* The main effort of strategic policy should therefore be to construct this stable nuclear environment, in which both sides possessed secure retaliatory forces, surprise attack incentives were held to a minimum, and a condition of mutual deterrence consequently obtained.

This collection of ideas represented an approach, and (as we shall see in the next chapter) certainly not the only approach, to nuclear strategy.<sup>118</sup> The critical point to emphasize here is that the modern theory of arms control was predicated on exactly the same set of propositions. It arose in lockstep with the emergence of the doctrine of mutual deterrence; indeed, in its essential formulation, the modern theory of arms control had as its overwhelming purpose and aim the creation, codification, or stabilization of an environment marked by mutual deterrence.

This is one of the primary messages that the early arms control theorists sought to convey and to explain. Because this notion is so central to content of the

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<sup>118</sup> For a contemporary exegesis of the range of thought on nuclear strategy, see Robert A. Levine, The Arms Debate (Cambridge, Ma.: Harvard University Press, 1963). Arms control does not figure prominently in Levine's analysis, however.

modern theory of arms control, and acceptance of it is so central to my argument, it is worth documenting at some length. One analysis, for example, described arms control itself as a "theory of deterrence," and explained it in a manner that rather concisely, if not very elegantly, summarized a lot of the main ideas:

The new element contributed by this theory is its proposal for a consciously controlled defense plan, arrived at by agreement with the Soviet Union, that would prevent both the United States and the Soviet Union from becoming 'too strong.' The argument is that through 'arms control' the dangers of a failure of deterrence could be averted while the weapons of deterrence were preserved. The stated goal of arms control...is to achieve an international situation that would be 'stable' in the eyes of rational governments on both sides of the cold war. Stability in this particular view would mean...the end of the fear of a first atomic strike. At the same time, arms control measures to prevent surprise attack would ease the great tension and fear that accompany political crisis when each side fears that the other might strike first....Every possible discouragement would be applied against any nation's choosing to be the first to use atomic weapons. Thus, arms control...would attempt to institutionalize the atomic stalemate and make it as safe as possible.<sup>119</sup>

In various forms and combinations, with varying degrees of grace and clarity, this basic characterization would recur again and again, and constituted the conceptual core of the modern theory of arms control. "A stable deterrence system...", Hadley averred, was "the theoretical crux of the arms control system. Arms

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<sup>119</sup> Waskow, The Limits of Defense, pp. 60, 64.

control does not try to alter human nature and usher in perpetual peace. Its interest is in avoiding war by increasing the stability between nations."<sup>120</sup> J. David Singer built his discussion of arms control around what he called "promising approaches to stability-producing arrangements."<sup>121</sup> Malcolm Hoag noted that a commitment to "stable deterrence of thermonuclear war...implies a kind of arms control policy. It tries, in essence, to institutionalize a less precarious balance of terror rather than to supplant it. The goal is stable mutual deterrence...."<sup>122</sup> Clearly, this idea was at the heart of the modern theory of arms control.

Further evidence on this point is found in the work of Thomas Schelling; in fact, this evidence is especially significant because his work was the most important and influential in the development of the modern theory of arms control. The key point, of course, is that this idea was prominent in his articulation of the subject. "The epitome of arms control," he wrote in 1961, "is usually

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<sup>120</sup> Hadley, The Nation's Safety and Arms Control, p. 108. Later he states: "Stable deterrence is the goal of arms control." See p. 111.

<sup>121</sup> Singer, Deterrence, Arms Control, and Disarmament, p. 122.

<sup>122</sup> Hoag, "On Stability in Deterrent Races," p. 522.

some idea of 'stabilized mutual deterrence.'<sup>123</sup> Arms control, he wrote on another occasion, "assumes deterrence as the keystone of our security policy and tries to improve it."<sup>124</sup> He elaborated on this basic idea in his formative article, "Surprise Attack and Disarmament," explaining that "Surprise attack [arms control] schemes...are based on deterrence as the fundamental protection against attack. They seek to perfect and to stabilize mutual deterrence - to enhance the integrity of particular weapons systems." He recognized that this conception would affront usual expectations of mutual restraint, but believed that dilemma should be squarely faced:

Can we initially take cooperative measures to perfect and safeguard each side's capacity to retaliate massively, in the interest of mutual deterrence, and do it as a step toward eliminating the threat of massive retaliation from a tense and troubled world? Or should we instead recognize measures to safeguard against surprise attack as a compromise - an implicit acceptance of 'mutual deterrence' as the best source of military stability we are likely to find - and a recognition that though we may not be able to replace the balance of terror with anything better, there may be much we can do to make that balance stable rather

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<sup>123</sup> Schelling, "The Future of Arms Control," p. 723.

<sup>124</sup> Schelling, "Reciprocal Measures for Arms Stabilization," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 167.

than unstable.<sup>125</sup>

And, in Strategy and Arms Control, he spelled out the nature and value of stable deterrence pursued via arms control:

Efforts to stabilize deterrence are efforts to tranquilize anxieties and decisions, to strengthen the incentive towards deliberate rather than hasty action, to minimize the alarms and mistakes. To make the initiation of war manifestly profitless, and to provide each side sufficient control over its own decisions to eliminate the inadvertent initiation of war, may substantially deflate the fearsomeness of the balance.<sup>126</sup>

The evidence is rather conclusive, therefore, about what the arms control theorists had in mind as the central purpose of arms control. They might have offered a body of thought that focused on saving money, reducing or eliminating weapons, or detoxifying Soviet-American relations, but they did not.<sup>127</sup> The purpose of arms

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<sup>125</sup> Schelling, "Surprise Attack and Disarmament," in The Strategy of Conflict, pp. 233-234. (First emphasis in original; second emphasis added.)

<sup>126</sup> Schelling and Halperin, Strategy and Arms Control, pp. 58-59.

<sup>127</sup> Of course, arms control might have any or all of these effects as a byproduct of pursuing stability. But not necessarily, for as we shall see stabilizing deterrence could require more weapons and more expense. For an example of a conception of arms control that focuses on something other than mutual deterrence, see Bernard Brodie, "On the Objectives of Arms Control," International Security 1 (Summer 1976). Brodie argues that "in a pragmatic approach to arms control the object of saving money really deserves a superior rating to that

control was to "perfect and stabilize mutual deterrence."

There are two important points to be made about this focus on stable mutual deterrence as the essence of arms control: it was a dramatic contrast with existing thinking about arms limitation, focusing as it did not on arms control as an alternative to the arms race but as a means of managing the arms race, of shaping the nuclear balance; and its logic, when broken into its constituent parts, derived almost entirely from stability theory, for stability provided by criteria by which one would shape the balance. Each of these points will be examined in what follows.

First, one cannot fully understand the attention that the modern theory of arms control attracted in the late 1950s, nor the perceived need to analyze, articulate, and advertise it, without recognizing that the ideas it offered in the late 1950s and early 1960s about the promise of and the possibilities for mutual restraint represented a shift in direction, a new approach. The

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of saving the world" and he later concludes that "Arms control should be conceived as an important and fruitful means of avoiding waste." See pp. 19, 34. As further evidence that there exist alternative conceptions of arms control, Schelling complains that in fact US arms control policy has been based on a concern about numbers rather than stability. See "What Went Wrong With Arms Control?," p. 225.

focus on mutual deterrence was viewed as a significant departure from previous thinking about what had, up to that point, generally been called "disarmament." Schelling wrote in an article first published in 1960, for example, that "There has been a widespread change in the thinking on arms control in the last year or so. Much of it is due to the focus of attention on 'measures to safeguard against surprise attack.'" This represented, he believed, a "revolution in thinking about arms control," a revolution which had "barely started."<sup>128</sup> Similarly, Fred Ikle (who, writing in 1962, dated the shift to 1959) wrote that "the extension of all the refined concepts of deterrence into arms control and disarmament is new, and the fantastic revolutions in technology have been at least partially absorbed...."<sup>129</sup> The term "arms control" was itself coined largely to differentiate this approach from traditional conceptions of disarmament.

Furthermore, the distinctiveness of this new notion

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<sup>128</sup> Schelling, "Reciprocal Measures for Arms Stabilization," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 167-168.

<sup>129</sup> Fred Ikle, "Arms Control and Disarmament," World Politics 13 (July 1962): p. 721. Nevertheless, Ikle was not convinced that enormous intellectual progress was being made.

of arms control was often explained by way of contrast with traditional disarmament. The latter was, by this time, considerably if not completely discredited as anything other than a propaganda activity; this was particularly so with respect to the most extreme form of the traditional approach, which called for general and comprehensive disarmament<sup>130</sup>, but was also true with respect to a common and popular incarnation, nuclear disarmament. The arms controllers were quite negative about, and almost contemptuously dismissive of disarmament. "It seems by now abundantly clear," Brodie wrote, "that total nuclear disarmament is not a reasonable objective."<sup>131</sup> Morgenthorn announced peremptorily, "Complete disarmament all around is another false goal."<sup>132</sup> Kahn worried that the acceptance of arms control would be retarded by the tendency to

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<sup>130</sup> Spurred, I suppose, by the large amount of attention that this idea was receiving at the United Nations, Bull devoted an entire chapter to a critique of the notion of general and complete disarmament. He was particularly concerned that preoccupation with it not interfere with less grandiose but far more realistic measures that might actually be achieved. See The Control of the Arms Race, pp. 137-144.

<sup>131</sup> Brodie, Strategy in the Missile Age, p. 300.

<sup>132</sup> Morgenthorn, The Question of National Defense, p. 304.

confuse it with disarmament.<sup>133</sup>

Not surprisingly, in view of such rejections of traditional disarmament, there was a certain amount of tension that arose between the arms controllers and the champions of disarmament. The "retreat" from idealistic (if not utopian) conceptions of disarmament could be represented as a sordid or cynical acceptance of the arms race and its dangers. Naturally, the arms controllers bitterly objected to such a characterization. But one cannot help but notice their sensitivity to these charges. Donald Brennan, for example, rejected what he called the "false dichotomy" of arms control versus disarmament and complained, "In the recent past, unfortunately, a few writers have been attempting to create a new meaning of their own for 'arms control'....The writers hold that 'arms control' (in their limited sense of the term) is a distinctly wicked doctrine, and those who advocate it (as opposed to 'disarmament') are made to appear immoral proponents of the continuation of the arms race." By Brennan's reckoning, this was "absurd."<sup>134</sup> Schelling,

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<sup>133</sup> Kahn, On Thermonuclear War, p. 232.

<sup>134</sup> Donald Brennan, "Editor's Preface," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 10.

interestingly, reversed his position in the course of this dispute between arms controllers and disarmers. In his earlier work on arms control (as we will see shortly) he drew a sharp and clear distinction between arms control and disarmament, but from about 1961 onwards he went to great lengths to emphasize the similarity between the two. Thus he wrote in "The Stability of Total Disarmament," "This paper argues that the two concepts are closer than is usually assumed, that similar criteria apply in the evaluation of 'total disarmament' as in other forms of arms control...."<sup>135</sup> Conflating the differences was, one suspects, the best answer to charges of immorality and wickedness.

This clash of arms control with disarmament is of

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<sup>135</sup> "The Stability of Total Disarmament," p. 1. See also his "The Role of Deterrence in Total Disarmament," Foreign Affairs 39 (April 1962): pp. 392-406. Schelling also treats this subject in Arms and Influence, pp. 248-251. Schelling began to minimize the difference between arms control and disarmament when he came to the realization that concern about stability and deterrence were as relevant to total disarmament as to more limited arms control measures. As he pointed out, at very low levels of armament one could have terrible instability because the military "balance" would be easily disturbed by relatively small increases in capability. One therefore had to worry about deterring such increases (in the case of total disarmament this involved deterrence of rearmament). It turned out, in Schelling's framework, that disarmament resembled arms control! But it should be emphasized that Schelling's framework for disarmament was not that which obtained in the early years of the nuclear age.

interest here because it brings starkly into view the ideas, concepts, and possibilities associated with arms control that were thought to be fresh, different, and promising. What was it that caused Schelling, in his earlier writings, to suggest that "measures against surprise attack differ drastically from more conventional notions of disarmament,"<sup>136</sup> Why did he believe that "there is a vast new area to be explored once we break out of the traditional confinement of 'disarmament'?"<sup>137</sup>

This brings us to the second of the points to be discussed here, for the answer lies in the parallel of arms control theory with stability theory: whereas traditional disarmament was concerned almost exclusively with the elimination or reduction of weapons, arms control, like the doctrine of mutual deterrence, was concerned almost exclusively with reducing incentives to attack. "Providing incentives to minimize recourse to violence," exclaim Schelling and Halperin, "is the

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<sup>136</sup> Schelling, "Surprise Attack and Disarmament," in The Strategy of Conflict, p. 233. (Emphasis added.)

<sup>137</sup> Schelling, "Reciprocal Measures for Arms Stabilization," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 169.

eternal challenge."<sup>138</sup> This meant that one cared not about levels of forces per se but about the character of the forces in a military balance. It was not the existence of an arms race per se that was of concern, but rather the direction of an arms race. Arms control, in short, was a means not simply of getting rid of weapons or of stopping the arms race, but of shaping the military environment, shaping it in accord with the dictates of stability theory.

In this conception, arms control was viewed as a kind of management technique, a means of steering the Soviet-American nuclear competition onto safer paths and away from more dangerous ones. As Malcolm Hoag put it, "Some roads are surely far less dismaying in prospect than others. While we may have little choice about being in an arms race, we may and do exercise a great influence over the kind of race it will be."<sup>139</sup> Schelling laid

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<sup>138</sup> Schelling and Halperin, Strategy and Arms Control, p. 5. See also Singer, Deterrence, Arms Control, and Disarmament, in which one of his chapters on arms control begins by asking, "If it is true that we have generated an environment which attaches a powerful incentive to getting in the preventive or preemptive strike, what possible measures might be introduced to diminish that incentive or to produce disincentives?" From his chapter entitled, "Reducing the First Strike Incentive," p. 108.

<sup>139</sup> Hoag, "On Stability in Deterrent Races," p. 523. (Emphasis added.)

out this conception with notable clarity and thoroughness. It was an error in thinking about arms races, he began, to assume

that all military preparations can be aggregated into a single index involving just 'more' and 'less,' with 'more' being invariably and simultaneously more expensive, more hostile, and more dangerous. A missile-hardening race or a bomber dispersal race may involve greater outlays on both sides, and what looks like 'more' military potency; it is not necessarily destabilizing, and probably not usefully characterized as a 'race' at all. The interaction may be intense; but what one wants to look for is whether it is mutually beneficial, mutually self-defeating, or of no mutual consequence.

Traditional notions of disarmament, in short, were generally based on the premise that the "arms race" is bad, something to be stopped, and all weapons are a danger, best eliminated. Schelling and the arms control theorists, in contrast, differentiated between good and bad arms races and hence between good and bad weapons and capabilities. Especially if one believed that the arms race was unlikely to be stopped in any reasonable foreseeable future, it was very useful to have this distinction, for it meant that one could seek security and safety by encouraging, via arms control (and, of course, sound unilateral policies), the nuclear adversaries to run "good" arms races. As Schelling explained,

Many proposals for arms control, if not all of them,

can be viewed as efforts to shift certain parameters in the 'arms race' to make the interaction less mutually self-defeating. It is sometimes said of arms limitations that they would simply cause the arms race to bulge in some different direction; This is a useful observation; but, instead of settling the matter, it just identifies what arms control is about. Does the arms race...get diverted into less dangerous, more self-stabilizing, less self-aggravating directions, or does it merely bulge in a direction that is perhaps more expensive but otherwise no different?

Arms races, Schelling summarized, consisted of "a variety of interactions, some benign, some malignant, some neutral."<sup>140</sup> Arms control was a way of collaborating with a potential adversary to encourage the benign and preclude the malignant.

Translating this conception into substantive terms led the new thinking about nuclear arms control, like the doctrine of mutual deterrence, to be preoccupied with the problem of surprise attack;<sup>141</sup> arms interactions which increased the likelihood of surprise attack were, without doubt, the most "malignant." The most important of the arms control literature to emerge in this period

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<sup>140</sup> All these quotations are from Thomas C. Schelling, "War Without Pain and Other Models," World Politics 14 (April 1963): pp. 474-475.

<sup>141</sup> I don't mean to suggest here that this was the only arms control concern; there were obviously others, including nuclear proliferation and the nuclear test ban, that were only indirectly related to the surprise attack problem, if at all. But surprise attack was, without a doubt, at the core of thinking about strategic arms control.

was centered upon what some called "anti-first strike measures," others "schemes to avert surprise attack" or "measures to safeguard against surprise attack."<sup>142</sup> Arms control should attempt to provide what Osgood called "mutual assurance against surprise attack."<sup>143</sup>

This was viewed as the logical focus of arms control efforts if it were to be useful and relevant in the quest for stable mutual deterrence, and of course this had to be the case because the possibility of surprise attack represented the great threat to stability. Indeed, addressing this issue was soon seen both as the basic rationale for arms control and as a fundamental test of the utility of arms control. Hedley Bull, for example, said of surprise attack that "If arms control arrangements are to be concerned with the immediate dangers that exist in the world now, as well as with prescribing the conditions under which they would not arise, this subject deserves highest consideration."<sup>144</sup>

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<sup>142</sup> The former phrase is Osgood's, from "Stabilizing the Military Environment," p. 30; the latter two are Schelling's, used throughout his work. See, for example, "Reciprocal Measures for Arms Stabilization," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 167.

<sup>143</sup> Osgood, "Stabilizing the Military Environment," p. 35.

<sup>144</sup> Bull, The Control of the Arms Race, p. 158.

Henry Kissinger put the same point more strongly. "If arms control is to have any meaning, he argued in 1960, "a method of coping with the problem of surprise attack must be devised." Kissinger suggested further that if arms control could not help resolve the vulnerability problem, then it would probably be of little value in the future. Arms control's contribution to resolving the surprise attack problem, Kissinger continued,

is important not only as a means to stabilize the arms race; it is even more significant for the future of other arms control negotiations. If the two sides cannot act constructively on the basis of this manifestly common interest, the danger is real that future arms control negotiations will be reduced to a largely symbolic effort, devoted to ritualistic incantations of general goals and producing agreement on measures that are meaningless.<sup>145</sup>

The focus of arms control on the problem of minimizing incentives for surprise attack accentuated the divergence from traditional disarmament because it led, by the logic discussed above, inexorably to concern with the survivability of strategic nuclear weapons. Thus, far from attempting to rid the world of nuclear arms, arms control was concerned with their safety. Arms control, Thomas Schelling explained,

accepts a retaliatory capability as something to be enhanced, not degraded - something to be made more

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<sup>145</sup> Kissinger, "Arms Control, Inspection, and Surprise Attack," p. 567. (Emphasis added.)

secure, less accident-prone, less in need of striking quickly to avoid its own destruction, less capable of gaining advantage from a sudden attack of its own. An anomaly of this approach to arms control is that it does not necessarily involve 'disarmament' in the literal sense.<sup>146</sup>

Indeed, this line of thinking could easily lead to prescriptions that were the opposite of the aims of traditional disarmament, that called for larger forces and more costly measures to guarantee the survivability of the retaliatory force. Furthermore, whereas disarmament sought to reduce the threat to man and society represented by nuclear arms, in the logic of stable mutual deterrence the retaliatory threat was the basis of safety, the guarantor of an opponent's restraint, and hence should be made as devastating as possible. And since it was destabilizing to threaten forces, it stood to reason that the retaliatory threat would be directed at the civilian population and the civil economy. As Schelling explained,

Another anomaly, which rather shakes the disarmament tradition, is that weapons may be more stabilizing and less aggressive if they are capable of civilian reprisal rather than of military engagement. A standoff between two retaliatory forces is in some ways equivalent to an exchange of hostages; and 'inhumane' weapons, capable of inflicting damage but not able to go after the enemy's strategic forces,

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<sup>146</sup> Schelling, "Reciprocal Measures for Arms Stabilization," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 167.

acquire virtue because of their clearly deterrent function and the lack of temptation they give either side to strike first.<sup>147</sup>

One can see clearly in such analyses both why the arms controllers felt that they were introducing innovative new ideas and the extent to which those ideas found their source in the notion of stable mutual deterrence.

This line of reasoning led directly to discussion and advocacy of several families of specific arms control measures that would reduce the vulnerability of strategic nuclear forces. One approach tackled the issue directly at the level of doctrine: perhaps the two superpowers could renunciate, even if only by informal agreement, first strike strategies. Robert Osgood suggested, for example, that because of the self interest in avoiding first strike strategies and the economic cost (and probable impossibility, given even moderately prudent behavior by the opponent) of acquiring first strike capabilities, "it is conceivable that the nuclear powers might, through a tacit or informal agreement, abandon massive first strike strategies."<sup>148</sup> Malcolm Hoag spelled

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<sup>147</sup> Schelling, "Reciprocal Measures of Arms Stabilization," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 167.

<sup>148</sup> Osgood, "Stabilizing the Military Environment," pp. 30-31. "The primary objective of promoting a tacit

out this logic as well, similarly emphasizing that since each side would be determined to prevent the other from achieving a first strike capability, they might as well forego the effort to achieve it. Outlining what he called a "radical version" of the "arms control as stable mutual deterrence" policy, he provided an account of the message that ought to be conveyed ("announced" is the word he uses) to the Soviet Union:

We shall maintain a retaliatory capability so big, mixed in composition, and securely protected in all ways that we are confident that we could, at the least, smash most of the cities of any nation or coalition of nations that tried to cripple our retaliatory power by any conceivable attack. We expect, in short, to hold most of your industry and people in perpetual hostage, and to this end shall effectively counter by increased offensive power your defensive measures to remove our hostages. We expect you to do the same. As a joint result, any rational grounds for surprise or preemptive mass thermonuclear strikes by either of us should disappear. The open question is the strategic budgetary scale, and the consequent public image of arms intensity and political tension, on which we shall attain this condition. We propose that it be low in our mutual interest. Confident of our ability to protect our retaliatory power against even superior numbers and surprise, we are willing to tolerate rough parity in offensive power; pessimistic about the cost of further reductions in civilian vulnerability...relative to the costs of offensive improvements that negate them, we are prepared, if you are, to settle for cities whose direct defenses are inadequate. If you agree, we must both, of

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agreement against first strike strategies," Osgood explained, "would be, not to diminish or end the arms race, but rather to stabilize its effect upon the military environment."

course, be assured that the implied measures of disarmament are taken reciprocally. If they are, we shall by joint action have pledged the safety of our obviously vulnerable peoples to the elimination of general thermonuclear war.<sup>149</sup>

It is apparent, although Hoag expresses the point less directly than Osgood, that this is a call for the codification, by arms control, of the doctrine of mutual deterrence. In this variant of the argument, the logic is that if one is in any case going to end up in a world of mutual deterrence as a "joint result" of unilateral policies, then this result may as well be achieved more easily and more cheaply through collaboration in arms control, by "joint action" to reject counterforce strategies and rely instead on the safety provided by the existence of vulnerable hostages. Hoag referred to this as a "radical version" because it assumed an ease and certainty of achieving survivable forces that most analysts (including Hoag) simply did not accept. But the more difficult one assumed it would be to ensure adequate retaliatory forces, the more compelling became the arguments for mutual abandonment of first strike strategies, because it then appeared in some measure to

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<sup>149</sup> Hoag, "On Stability in Deterrent Races," pp. 522-523. (Emphasis added.) I should emphasize that Hoag was summarizing and analyzing, not advocating, this policy, which he believed "unpardonably overlooked" the difficulty of achieving invulnerable forces.

be important, even necessary, rather than merely useful in creating a stable environment. What might be called "doctrinal collaboration" was, in short, one way to buttress stability through arms control.

Other approaches were more narrow, more focussed on specific problems or dangers in the strategic environment. One very prominent strand of thought had to do with various schemes of surveillance or inspection for the purpose of providing warning. Since the strategic systems of the day (chiefly bombers) depended for their safety primarily on warning and evacuation measures, increased or improved warning meant increased survivability. Better intelligence and surveillance capabilities would reduce the likelihood of successfully achieving surprise, while more and better information about an opponent's forces and behavior could reduce the chances of preemptive or accidental war based on mistaken judgements or false perceptions. Once again, as an approach to arms control, this represented an effort to do collaboratively what it made eminently good (and even urgent) sense to do unilaterally. Singer's analysis perfectly illustrates the point. "The most pressing problem," he wrote, "is that of providing each side with maximum reliable warning time so as to minimize the

insecurity that could lead to false preemption."

Accordingly, he urged that the United States increase its early warning efforts. But he also noted, in an argument very much in keeping with stability theory, that the environment would be safest if both sides had the best possible surveillance, warning, and intelligence capabilities. He therefore argued, assuming an American advantage in these technologies, that the US should consider providing such means to the Soviet Union:

"Despite the domestic furor it could create and the possible advantage it might give to them, we might do an exceedingly wise thing in providing the Soviets with whatever knowledge and equipment they would require to produce and operate an early warning system as effective as our own." This was, Singer conceded, a "highly unorthodox" suggestion, but one that he believed would "immediately demonstrate our peaceful intentions and add considerably to the stability of our standoff."<sup>150</sup>

While some ability to achieve warning of surprise attack was clearly good, the literature addressing this subject found complicating problems as well. One was the sheer (and growing) difficulty in inventing effective and

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<sup>150</sup> Singer, Deterrence, Arms Control, and Disarmament, pp. 114-118.

feasible inspection schemes. The growth in numbers and destructiveness of thermonuclear weapons, the extensive proliferation of their means of delivery, the compression of relevant time horizons by ballistic missiles whose intercontinental flight times were measured in minutes rather than hours, the move to mobile and concealed systems for protection of the retaliatory force, all were factors that rendered it difficult to come up with arms control inspection schemes that really addressed the problem. As Schelling concluded, "The problem now would seem to be one of intensive surveillance of strategic forces by a vast organization that could transmit authentic messages reporting suspicious activity within at most a few hours, and eventually within a few minutes, in a way that is not intolerably susceptible to false alarms. There is no practical assurance that this could be done."<sup>151</sup>

But there was another, equally daunting problem: information that could provide warning against attack might also provide strategic intelligence necessary for an attack. In the pre-satellite era, the uncertainty as to the precise size and location of an opponent's nuclear

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<sup>151</sup> Schelling, "Surprise Attack and Disarmament," in The Strategy of Conflict, pp. 242-243.

forces could serve as an impediment to surprise attack. Devising negotiated inspection schemes could thus do more harm than good if the result was to provide a potential attacker with reliable information that he could get no other way. Kissinger made this point emphatically. "Continuous surveillance of the retaliatory forces may help a potential aggressor more than the defender, thus violating one of the cardinal principles of arms control....The conclusion is inescapable that inspection to obtain tactical warning may detract from stability rather than add to it."<sup>152</sup> Seyom Brown similarly warned that inspection systems, if not carefully constructed, "might directly contradict a deterrent strategy stressing retaliatory force invulnerability."<sup>153</sup> When these kinds of considerations were taken into account, even the emerging satellite technology, on which both sides have come to depend for intelligence, warning, and verification of arms control agreements, was viewed with suspicion. Schelling described the reason for hesitation: "Whether we would like to see reconnaissance satellites banned or encouraged may depend...on whether

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<sup>152</sup> Kissinger, "Arms Control, Inspection, and Surprise Attack," p. 563.

<sup>153</sup> Brown, "Invulnerable Retaliatory Capability and Arms Control," p. 538.

we think they will mainly provide targeting information to the initiator of war or mainly provide warning to a potential defender so that a potential attacker is the more deterred." Furthermore, Schelling warned, there was always the possibility that one's judgement in such matters could be wrong, especially in a period when technology was changing very rapidly. "The friendly warning satellite," he commented by way of illustration, "appears, a year later, as a vicious targeting aid to the surprise attacker."<sup>154</sup> So if arms control was to help with the problem of warning, it had to successfully tackle the very tricky challenge of inventing a scheme that provided enough information to allow reliable warning of attack without allowing so much information that it was useful in implementing an attack. It is extremely unlikely that this balance could ever have been struck. It is undoubtedly a stroke of good fortune that the advent of reconnaissance satellites rendered this a moot issue.

But there was still another complication in thinking

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<sup>154</sup> Schelling, "Reciprocal Measures for Arms Stabilization," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 172. Schelling points out another potential complication of this sort: "The network of warning systems originally designed for mutual reassurance proves in operation to have too high a false-alarm rate."

through the issue of warning: it was only half the problem. As Schelling pointed out, "the value of the system depends on what we can do if we do get warning."<sup>155</sup> Warning was a mere opportunity that had to be exploited, and this was not so straightforward or easy to do, especially if one took into account the problem of false alarms. Reaction to warning could not be made too hasty or automatic without greatly increasing the risk of accidental war, but too much hesitation negated the value of warning. Schelling, in the end, reaches the inevitable conclusion: "Warning by itself may not be enough."<sup>156</sup> Thus, although a tremendous amount of attention was paid to the matter of arms control solutions to the problem of warning (reflecting, clearly, the importance of warning to the American strategic force at the time and the fears that existing US warning capabilities were inadequate), careful analyses exposed as much potential for problems as for progress.

Desire to upgrade warning had to do with reducing the likelihood of an opponent achieving surprise. Another approach confronted the issue of reducing one's

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<sup>155</sup> Schelling, "Surprise Attack and Disarmament," in The Strategy of Conflict, p. 246.

<sup>156</sup> Schelling, "Surprise Attack and Disarmament," in The Strategy of Conflict, p. 245.

vulnerability even if the opponent did succeed in launching a surprise attack.<sup>157</sup> Attention here was focused on the types of weapons in the force postures of the two sides. Here the arms control theorists provided both some general rules and discussion of some specific proposals. The general rules were identical to those provided by stability theory as criteria for unilateral military policy choices. First, vulnerable forces should be discouraged, in fact, eliminated by agreement if possible; this was especially true of weapons that introduced the element of haste as a consequence of their vulnerability. Second, forces and capabilities especially useful for counterforce attacks should be restricted. As Schelling summarized these points, "An aim of arms control might be to get both East and West to concentrate on secure, slow-reacting retaliatory forces with minimum capabilities for preclusive attack."<sup>158</sup>

In terms of specific proposals, the favorite target for restriction was the ballistic missile. As early as 1956, Richard Leghorn was arguing that banning ballistic

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<sup>157</sup> Schelling and Halperin explicitly employ this distinction in Strategy and Arms Control, p. 13.

<sup>158</sup> Schelling, "The Future of Arms Control," p. 724. See also his "Disarmament and Surprise Attack," in The Strategy of Conflict, p. 241; and Schelling and Halperin, Strategy and Arms Control, pp. 10-11, 50-52.

missiles could help prevent "critical dangers" for American security.<sup>159</sup> Hedley Bull explained the rationale: "Clearly..., surprise is endemic in the missile, and the danger arising from the possibility of a disarming attack would be greatly reduced by the restoration of the bomber age. The situation in which both sides can deter but neither can disarm the other might be brought nearer by the complete elimination of military missiles."<sup>160</sup> But the transition to the missile age came so rapidly that analysts soon despaired that it was too late to preclude their development and deployment. Writing only four years after Leghorn, for example, Henry Kissinger commented that "In the early stages of the missile age it might have been possible to arrest the proliferation of rockets, either by a ban on testing or through a severe limitation on production, or both. But neither side sufficiently understood the

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<sup>159</sup> Richard Leghorn, "Controlling the Nuclear Threat in the Second Atomic Decade," Bulletin of Atomic Scientists 12 (June 1956): p. 195. It appears that Leghorn was one of the very first to advocate this measure. He also favored restrictions on the deployment of all long-range systems, which was perhaps still plausible at the time he was writing since neither side had much in the way of true intercontinental capability. Supporting Leghorn's proposal was David Inglis, "National Security with the Arms Race Limited," Bulletin of Atomic Scientists 12 (June 1956): p. 199.

<sup>160</sup> Bull, The Control of the Arms Race, p. 167.

implications of missile technology for this proposal ever to be seriously advanced. Today, measures to control the missile race are infinitely more complicated."<sup>161</sup>

Attention therefore turned from abolishing ballistic missiles to limiting its numbers and capabilities. With respect to capabilities, there was hope of slowing or preventing the improvement of ICBM accuracy. The reason, of course, was that inaccurate missiles were not effective at threatening the other side's forces. In fact, for all the concern over the arrival of the missile age, some of the early reactions to this development were quite hopeful, believing that inaccurate missiles would serve an almost exclusively deterrent function. The source of this notion seems to have been a small but influential article by Warren Amster, who worked as an analyst at the Convair Corporation. Writing in 1956, he offered the following analysis:

Some day soon, people are going to be able to do a great deal of damage with missiles, but not to other people's missiles or the men who can launch them....Guided missiles are going to be remarkably poor at fighting each other...It appears that missiles will be most effective for their threat value and least effective in bringing about anything

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<sup>161</sup> Kissinger, "Arms Control, Inspection, and Surprise Attack," p. 573. Singer, in Deterrence, Arms Control, and Disarmament, pp. 229-232, is somewhat more hopeful about the prospects of restricting missiles - but not much.

approaching an acceptable decision by force. Everything about them will probably be affected by these facts of life. We may well expect that the conversion to intercontinental missiles will be followed shortly by the development of military strategies which are fundamentally deterrent.

In his conclusion, Amster offers a vision that can fairly be described as utopian: "Eventually the missiles may cease to be regarded as weapons entirely. They may become simply machines to keep international peace and at a price sharply reduced from the old fashioned way of winning a war to do it."<sup>162</sup> This line of argument was predicated on the substantial inaccuracy of early missiles, but it soon became apparent that improvements in accuracy could be expected if nothing was done to prevent it. This led to interest in banning missile tests and controlling the proliferation of missile guidance systems.<sup>163</sup> Singer was a characteristic

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<sup>162</sup> Warren Amster, "Design for Deterrence," Bulletin of Atomic Scientists 12 (May 1956): pp. 164-165. Amster's ideas received the enthusiastic endorsement of and elaboration by C.W. Sherwin, "Securing Peace Through Military Technology," Bulletin of Atomic Scientists 12 (May 1956): pp. 159-164. Freedman identifies Amster as the originator of the idea of stable deterrence. See The Evolution of Nuclear Strategy, pp. 191-192. See also Jerome Wiesner, "Comprehensive Arms Limitation Systems," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 215, in which he observes that "missiles are the favorite weapon for planning deterrent systems."

<sup>163</sup> On the latter point, see John B. Walsh, "Technical Considerations Relating to the Covert Production and Employment of Electronic Missile Guidance

advocate: "At this writing both we and the Soviet Union are still quite some distance from achieving the sort of missile accuracy which would be required for a really reliable, pinpoint, counterforce capability. Without such accuracy..., the attacker has little chance of eliminating enough of the victim's retaliatory sites to insure only a minor blow of reprisal."<sup>164</sup> The stabilizing, deterrent effects of missiles might be preserved, in other words, if missile accuracies could be constrained. There was some hope that improvements in missile accuracy would be a technological development that the Soviet Union and the United States would "jointly deplore."<sup>165</sup>

There was also interest in controlling numbers of ballistic missiles. It was widely believed that it would be useful for stability to reach agreement allowing only equal (or at least roughly equal) numbers of ICBMs,

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Systems under a Massive Disarmament Inspection;" and Eugene A. Avallone, "Inspection for Disarmament: High Precision Gyroscopes and Accelerometers," both in Seymour Melman, ed., Inspection for Disarmament (New York: Columbia University Press, 1958).

<sup>164</sup> Singer, Deterrence, Arms Control, and Disarmament, pp. 129-130.

<sup>165</sup> The phrase is Schelling's, from "Reciprocal Measures for Arms Stabilization," in Brennan, ed., Arms Control, Disarmament, and National Security, pp. 171-172.

because in a time when each missile had only a single warhead and missile inaccuracy was such that several missiles had to be fired at every target, a first strike made sense only if the potential attacker possessed an enormous advantage in numbers of missiles. Hedley Bull provides a clear illustration of this line of thought in his discussion of missile limitations:

Each side should have a missile armoury which enables it to make a retaliatory attack on cities and populations, but does not enable it to make a disarming attack on opposing forces. This...is part of the logic of 'mutual deterrence'....The only approach which appears at all fruitful lies in the limitation of the numbers of missiles.

It is arguable that if each side possesses a certain number missiles, it will be capable of the one kind of action but not the other....One side can be sure of destroying the other side's missiles only if it has a very heavy preponderance of missiles....Therefore both sides should have roughly the same number of missiles.<sup>166</sup>

The early arms control theorists were also emphatic in pointing out, in direct contrast to the edicts of traditional disarmament, that it was preferable that this number be large rather than small. Schelling put the

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<sup>166</sup> Bull, The Control of the Arms Race, pp. 168-169. (Emphasis in original.) On this point, see also Schelling, "Surprise Attack and Disarmament," in The Strategy of Conflict, pp. 235-236; and Hadley, The Nation's Safety and Arms Control, pp. 107-109. In a speculation that proved fairly accurate, Hadley discussed the virtues of an arms control regime which limited the Soviet Union and the United States to 1000 missiles each (he called it, somewhat clumsily, a "controlled 1000-secure-missile system.)

point baldly. "A limitation on the number of missiles would appear to be more stabilizing," he wrote, "the larger the number permitted."<sup>167</sup> Herman Kahn, worried that "the burning need for stable, long-term arrangements" would be neglected if the national security establishment feared "premature disarmament," likewise emphasized that "successful and responsible short-run control measures are more likely to require large military establishments on both sides than the opposite."

An important reason, he explained, was "that a small residue of a large force can still be very destructive."<sup>168</sup> In addition, it was often noted that at high levels of forces small changes in relative capability did not dramatically perturb or destabilize the environment, whereas at low levels of forces (including especially zero-zero) such changes certainly would be very upsetting.<sup>169</sup>

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<sup>167</sup> Schelling, "Surprise Attack and Disarmament," in The Strategy of Conflict, p. 236. (Emphasis in original.) See also Schelling and Halperin, Strategy and Arms Control, pp. 56-57. ("Beyond a certain point further reduction may increase both the fears and the temptations that aggravate the likelihood of war.") [Emphasis in original.]

<sup>168</sup> Kahn, On Thermonuclear War, pp. 232-233. (Emphasis in original.)

<sup>169</sup> See, for example, Schelling, "Surprise Attack and Disarmament," in The Strategy of Conflict, p.236. The problems associated with an environment characterized

The advent of the ballistic missile was the greatest, and most worrying, technological development of the time in the area of strategic weaponry. It is clear that extensive effort was invested by the arms control theorists in the problem of how to ensure that the transition to the missile occurred safely and resulted in a stable environment. Because missiles threatened existing bomber forces, which for a time would remain the heart of the strategic nuclear forces (especially for the United States), they sought, without enormous success, to find ways of employing arms control to help provide warning time for those bombers. Because a missile-based environment could be stable if the missiles of each were not effective or efficient at attacking the missiles of the other, they sought, with greater conceptual success if no more tangible progress than in the case of warning, arms control schemes that could help to make it so. One can see clearly in these attempts the effort to employ arms control to enhance stability.

There was one other family of arms control measures that were thought worthy of exploring because of its potential to dampen incentives for surprise attack,

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by very low levels of forces is discussed at length in Schelling, "The Stability of Total Disarmament."

especially of the preemptive or inadvertent variety. Today these would fall under the heading of crisis management, but in the late 1950s were called measures to "tranquilize" crises and to provide "reassurance" to an adversary who might be tempted to consider preemptive attack on the basis of false or incomplete information. This subset of ideas about arms control flowed naturally from the conception, discussed above, that deterrence was an exercise in communication (of both threats and promises), persuasion, and bargaining aimed at influencing an opponent's decisions about nuclear use, at minimizing his incentives to attack. Here again, the modern theory of arms control ran in parallel to the conception of nuclear policy provided by the theory of stable deterrence. Schelling elaborates:

Arms control is a recognition that nearly all serious diplomacy involves sanctions, coercions, and assurances involving some kind of power or force, and that a main function of a military force is to influence the behavior of other countries, not simply to spend itself in their destruction. Arms control is an effort to make this bargaining process a more explicit one. It is a recognition that the 'promises' or 'reassurances' side of the deterrence equation needs emphasis.<sup>170</sup>

The reassurance that one especially wanted to convey, the one that was relevant to "tranquilizing" crises and

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<sup>170</sup> Schelling, "The Future of Arms Control," p. 727.

reducing the chance of accidental or inadvertent war, was that one had no intention of launching a first strike oneself; if the opponent could be convinced of this, then he would not confront the urge to preempt. Singer expresses the point explicitly: "The most important message to convey to the opponent is one's intention, and capacity, to refrain from surprise attack."<sup>171</sup>

This seems straightforward enough. The problem, however, is that communication between nations, and particularly between potential adversaries is very difficult. Schelling and Halperin comment that "Even in the case of formal diplomatic negotiation, culminating in a treaty, communicating with the partner (potential enemy) country is a complex matter." Modern governments are large, complex bureaucracies that do not speak with a single voice. The human beings who populate these bureaucracies are subject to a variety of perceptual deficiencies and pathologies. Moreover, an adversary will normally take into account actions as well as words, including things undone as well as steps taken. "Even silence," Schelling and Halperin observe, "is a mode of communication; failure to deny rumors, refusal to answer

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<sup>171</sup> Singer, Deterrence, Arms Control, and Disarmament, p. 127.

questions, attempts to take emphasis away from certain issues, all tend to communicate something to the enemy." The matter of concern is that one cannot be sure that one is communicating what one wishes to communicate, or more importantly, what one needs to communicate in order to successfully deter or effectively reassure an opponent.<sup>172</sup> "In some cases," Schelling and Halperin continue,

the communication is of reasonably high fidelity; in other cases it is inadvertent but nevertheless revealing or confusing; in other cases it is deliberately confusing; in other cases it may be deliberately deceptive. But all of these actions and statements and inactions and silences convey something to the Soviets about the circumstances in

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<sup>172</sup> These problems are attracting increasing attention in the deterrence theory literature. Patrick Morgan, for example, offers the following arresting passage on the difficulty in effectively communicating a deterrent threat: "From a bureaucratic politics perspective a deterrent threat is probably not a coherent message composed of precise verbal statements and suitable military actions. Instead, it is a jumble of messages, half-messages, and hints, confused and contradictory, emanating from numerous sources, tossed up and out by the rough and tumble bureaucratic struggle, while the drive for consensus turns formal official messages into mush. Such a 'threat' is received in the same way: piecemeal; with some messages (real or unintended) stressed over others...." See his Deterrence: A Conceptual Analysis (Beverly Hill, Ca.: Sage Publications, 1983), p. 69. See also Robert Jervis, "Perceiving and Coping With Threat," and Richard Ned Lebow, "Conclusions," both in Robert Jervis, Richard Ned Lebow, and Janice Gross Stein, Psychology and Deterrence (Baltimore: The Johns Hopkins University Press, 1985), pp.13-33 and pp. 203-232, who emphasize psychological/perceptual barriers to clear communication.

which we would use nuclear weapons, how we would use them, for what purposes and in what quantities.<sup>173</sup>

Seeking to convince an adversary, during a crisis, that he need not fear suffering a surprise attack, and hence need not contemplate preemption, may be acutely difficult: almost by definition, in a crisis, hostility will be high, nerves will be on edge, suspicions will run deep, and the consequences of being wrong will be fateful. The adversary, we should not forget, is trying to divine our intentions in very dangerous circumstances;<sup>174</sup> his security and perhaps his survival may seem to him to hang in the balance. Furthermore, many of the precautionary steps - putting forces on alert, altering deployment patterns, mobilizing additional capability - one might take in a crisis to safeguard forces or to put oneself in a better position in the event war does occur, could easily and often will look alarming, threatening to an adversary; indeed, if it really is true that actions speak louder than words, these actions might overwhelm any reassuring gestures one

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<sup>173</sup> Schelling and Halperin, Strategy and Arms Control, pp. 81-82.

<sup>174</sup> It is worth recalling Jervis's caution: "Judging others' intentions is notoriously difficult. Any number of methods of inference can be used, all of them fallible." See his "Perceiving and Coping With Threat," p. 14.

might make.

It is in this context that arms control ideas relating to crisis "tranquilization" and "reassurance" arose. Perhaps there was information that could be exchanged, explicit means of communication organized, modes of interaction pre-arranged, or tranquilizing institutions created, so that if or when a crisis occurred, preemptive fears could be dampened. Again, Schelling aptly illustrates the point:

If...we acknowledge that unpremeditated war, or inadvertent war, or accidental war, or war resulting from a crisis of some sort is a significant possibility..., we can assimilate this possibility to the general problem of surprise attack; and there may be a basis for discussing fairly openly just what kinds of joint measures could be taken to reduce misunderstanding in those cases where war cause by misunderstanding is imminent. It may be possible to begin with a list of reasonably innocuous hypothetical occurrences that could lead to a misunderstanding of each other's strategic intentions, and to discuss the kinds of measures that might lead to mutual reassurance and improved understanding.<sup>175</sup>

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<sup>175</sup> Schelling, "Arms Control: Proposal for a Special Surveillance Force," p. 18. This article is entirely devoted to what Schelling calls "arms-tranquilization measures." His proposal for a special surveillance force was intended to provide a reliable source of reassuring information about adversary behavior during a crisis. See also his "Reciprocal Measures for Arms Stabilization," in Brennan, ed., Arms Control, Disarmament, and National Security, which also devotes considerable attention to these sorts of measures. It includes sections on such issues as "Exchange of Stabilizing Information," and "Measures for Reassurance on the Brink of War."

Here, then, is another arms control spinoff from the preoccupation with incentives for surprise attack. Like the other three families of proposals (doctrinal collaboration, provision of warning, and preservation of a stable missile balance), this was another approach to arms control that derived directly from the concern of stability theory to enshrine mutual deterrence. What we have seen, then, is that beginning with the concept of stable mutual deterrence as the central aim of arms control, one can trace the pervasive impact of stability theory in both the general contours of arms control theory and in the specific proposals that were offered.

#### E. Conclusion

In chapters one and two I have tried to show that the modern theory of arms control was a derivative of two developments: the vulnerability crisis of the late 1950s and the body of thought about nuclear strategy that developed in response to the vulnerability crisis. That crisis put the problem of nuclear surprise attack, in all its variants, at the top of the list of concerns for many strategists (and policymakers), and it gave rise to a body of thought about nuclear strategy centered on the

concept of stable mutual deterrence.

I have sought to emphasize, in this chapter, the extent to which the content of the modern theory of arms control was a byproduct of that basic doctrinal conception. In the logic of this intellectual framework, stability defined the very purpose of arms control. Indeed, it was precisely the potential difficulties in achieving and sustaining stability that left room for a contribution from arms control, that allowed it a potentially significant role.

The premise that the two superpowers might prefer a stable environment played a critical role, we have seen, in the elaboration of the modern theory of arms control. It served as the common interest that might allow the two superpowers to surmount their differences and pursue their compatible self-interests in a collaborative fashion. It also served as the link between military policy and arms control; if both sought the same objective, then the latter would become a more acceptable instrument of national policy and the potential for friction between the two was greatly diminished if not eliminated.

We have further seen that the detailed proposals derived from arms control theory were determined by the

presumption that the aim of the exercise was to enhance stable deterrence by reducing surprise attack incentives. This led, for example, to discussion of banning counterforce doctrines, eliminating counterforce capabilities, providing additional warning, offering assurance to one's adversary to dampen preemptive incentives, and so on. The stuff of arms control had to do with stability.

In short, the modern theory of arms control, as originally conceived, is wedded to a particular nuclear doctrine; the role and purpose, the feasibility, and the policy contents of arms control were predicated on the premise that this doctrine, of stable mutual deterrence, would (or at least might) come to be preferred by the superpowers and hence would govern the structuring of the nuclear environment. This was a coherent, logical, powerful intellectual construct, as demonstrated by the resilience of these ideas down to the present day.

There was only one problem: the premise was wrong. The superpowers did not prefer a world of stable mutual deterrence. To demonstrate this fact is the purpose of the next chapter.

## Part II

### Theory Collides With Reality

"The volume of literature on arms control contrasts sharply with the dearth of results in actual armaments limitation or control. This huge disparity between fullness of advice and leanness of practical results suggests a good deal about both the character of that advice and the magnitude of the practical difficulties - and especially about the failure of the former to adjust to the latter."

Bernard Brodie

## Chapter 3

### Arms Control Theory Versus Doctrinal Reality

"As long as the counterforce doctrine is governing, it will be hard to impose a reciprocal denial of substantial preemptive capabilities....How this doctrine might be squared with arms control has never been clear to me...."<sup>1</sup>

Thomas Schelling

"The credibility of a first strike strategy is bound to wither in an atmosphere of mutual deterrence."<sup>2</sup>

Robert Osgood

"How one thinks about nuclear war decisively affects force deployments, force structure, weapons acquisition, and, above all, arms reduction agreements."<sup>3</sup>

Caspar Weinberger

We have seen that the fundamental and necessary premise of the modern theory of arms control was the condition of mutual deterrence. If the superpowers, in

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<sup>1</sup> Thomas C. Schelling, "What Went Wrong With Arms Control?," Foreign Affairs 64 (Winter 1985/1986): pp. 230-231.

<sup>2</sup> Robert E. Osgood, "Stabilizing the Military Environment," American Political Science Review 55 (March 1961): p. 38.

<sup>3</sup> Caspar W. Weinberger, "Why Offense Needs Defense," Foreign Policy 68 (Fall 1987): p. 6.

their strategic policies, sought this goal, then arms control became useful, desirable, and feasible. Indeed, the more the superpowers pursued the objective of mutual deterrence, the easier arms control between them would become. It was assumed that both sides might come to see the enormous benefit to be derived from, the self-interest that resided in, a stable nuclear environment. Arms control could play a prominent role in such an environment in contributing to the stability of the balance.

That was the premise. The reality of Soviet and American nuclear doctrine was very different. To be sure, each came to recognize and to act upon the imperative of acquiring survivable forces to protect itself against nuclear surprise attack. The essence of stability theory, however, involved not only the mere concern with the survivability of one's own nuclear forces (this was nothing more than the unilateral pursuit of a deterrent capability), but also the recognition that it was desirable for one's opponent to possess survivable forces as well. The (mostly unsuccessful) efforts, particularly by the United States, to use strategic arms control to solve unilateral force vulnerability problems have often been mistakenly viewed

as attempts to enhance stability. This is simply not the case: while redressing one's own vulnerability problems was certainly desirable and necessary, this one-sided approach diverged considerably from the animating idea of modern arms control theory, the notion that the superpowers could collaborate to fix the vulnerability problems of both, in order to preclude both preventive and preemptive incentives for nuclear surprise attack.

Rather, the idea of mutual deterrence, of stability, as the preeminent aim of strategic policy, never came to dominate the nuclear doctrines of the superpowers in the way that the early arms control theorists hoped it might and thought it should. Mutual deterrence might have to be accepted as a fact, the perhaps inescapable outcome of unilateral policies of the two sides, but it did not come about because they preferred this outcome and chose policies accordingly. Instead, each in its own way and for its own reasons, chose doctrines and forces that violated at least some of the rules of choice provided by the concept of stability.

The problem was that stability theory, and arms control theory with it, was preoccupied with reducing all possible incentives to use nuclear weapons. This, it was implicitly posited, must be the foremost objective in an

age of two heavily armed nuclear powers, neither of whom could wholly protect themselves against the nuclear reprisal capability of the other; the magnitude of the danger, of the potential pain, was so great as to foreordain the primacy of this objective. The governments of the two superpowers, however, while not blind to the need to fulfill the requirements of deterrence, had other competing, and sometimes contradictory, objectives in choosing strategic doctrines and acquiring nuclear forces. Stability was not the only or even always the highest goal of strategic policy; vulnerability was not the only and not always the most important criterion in deploying strategic forces. Minimizing all incentives for nuclear surprise attack, in short, was not the only thing governments had on their minds when making strategic policy. They were interested also in the potential political utility of nuclear weapons, in incorporating nuclear weapons into various schemes of regional defense, in anticipating the most desirable posture in the event one actually had to fight a nuclear war. Each superpower came to identify circumstances under which it might wish to strike first and hence, although taboo in stability theory, saw a need for capability to threaten the nuclear forces of the

other side.

In this chapter, we will examine Soviet and American nuclear doctrine in order to demonstrate that neither has conformed to the doctrinal prescriptions offered by stability theory, and therefore the conditions in which arms control could play the role envisioned for it by its intellectual creators have never existed. The intention is not to provide a full-blown account of the evolution of the strategic nuclear doctrines of the two sides, but rather to provide enough evidence to document the the divergence of the doctrines preferred by the superpowers from that which is prescribed by the modern theory of arms control. Having established that, we will then turn, in the subsequent chapter to an examination of the reasons why the superpowers preferred doctrines other than that recommended by the arms control theorists and their followers. Why were their arguments, impeccably logical and (they believed) compelling, not persuasive in the world of policy? And a final question arises out of this analysis: if the conditions did not exist in which arms control could perform its intended function as theoretically conceived, why then has it played such a visible role in superpower diplomacy over the past quarter of a century?

A. The Reality of Soviet Strategic Doctrine

The doctrinal edicts of stability theory, on which arms control depended and which arms control was meant to buttress, can be boiled down to a small number of simple but powerful rules of choice:

\* Survivable forces are good; vulnerable forces are bad. Possession of adequate<sup>4</sup> survivable forces removes an opponent's preventive incentive to attack by eliminating the possibility of a disarming strike; the opportunity to strike gainfully does not exist.

\* An opponent with vulnerable forces is a dangerous opponent due to the problem of preemption. The acquisition by an opponent of survivable force is desirable because this eliminates the preemptive incentive to attack; he will not have to strike out of fear that his own vulnerable forces will be struck.

\* Therefore, nuclear powers should eschew first strike doctrines and capabilities.

\* Furthermore, they should seek to communicate convincingly to their opponents that they have done so (in order to minimize the chance of preemption caused by misperception).

Playing by these rules, it should be noted, involved abandoning any effort to achieve nuclear advantage. As Hoag put it, "The goal is stable mutual deterrence, which

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<sup>4</sup> The question of what is an adequate retaliatory capability, in terms of both size and character, is of course a very contentious one, but it is not necessary to address it here.

in practice amounts to playing for a stalemate rather than a win in the grimmest of games...."<sup>5</sup> This might be offered then as a final rule:

\* Nuclear powers should forego the quest for advantage in the nuclear balance for the sake of stable mutual deterrence. This should be acceptable because nuclear wars are in any case unwinnable, so the quest for advantage is pointless.

If the two superpowers would heed these rules, and would collaborate in the implementation of them, they could manage their strategic relations in such a way that a safe and stable environment would then exist, one in which incentives for nuclear surprise attack would have been virtually eliminated.

The first, and completely insuperable, obstacle in the path to such a world was and is the fact that the Soviet Union has never embraced this set of ideas, has never allowed its strategic priorities to be governed by this set of rules. No matter what policy choices the United States had made, the pure world of stable mutual deterrence would have been impossible to achieve or to reinforce via arms control so long as the USSR adhered to anything like the policies that have been in evidence over the past several decades; and consequently, arms

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<sup>5</sup> Hoag, "On Stability in Deterrent Races," p. 522. Hoag comments that this approach "affronts an even deeper military conception about proper objectives."

control, of course, could not play the role envisioned for it since that role was predicated on a different set of Soviet choices. Not only formal agreements, but also other favorite notions of the arms control theorists, intended to circumvent expected difficulties in successfully reaching negotiated agreements, such as tacit arrangements or informal attempts at reciprocal restraints, were rendered impossible by the reality of Soviet doctrinal choices.

The unsuitability of Soviet doctrine and strategic policy, from the perspective of stability theory, can be seen in two ways: in the Soviet reaction to stability theory itself (that is to say, to Western notions of mutual deterrence as a desirable state of affairs); and in the strategic behavior of the USSR, in terms of both doctrine and procurement.<sup>6</sup> While there is not universal

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<sup>6</sup> In what follows I shall rely heavily on the work of Western scholars of Soviet military policy, who provide far more in the way of citations from Soviet sources than I have room for here. I believe this defensible because of the widespread consensus that existed until recently on the broad outlines of Soviet doctrine. Those in need of more direct evidence on some of the points that are made in coming pages are encouraged to consult the sources identified in subsequent footnotes. There is also a large amount of Soviet material available in English translation, and I shall make occasional recourse to these as well.

consensus among Western analysts on these points<sup>7</sup>, the predominant weight of Western scholarly opinion and of Soviet evidence suggests that the Soviets reject the former while preferring doctrines and policies that violate most of the rules offered by stability theory.

One survey of Soviet attitudes toward Western conceptions of nuclear strategy concludes, for example,

Soviet strategic commentators accept virtually none of these notions. In fact, the center of gravity of

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<sup>7</sup> The most notable dissenter is Raymond L. Garthoff. See his "Mutual Deterrence and Strategic Arms Limitation in Soviet Policy," International Security 2 (Summer 1978): pp. 112-147, in which he suggests that since the late 1960s "the Soviet political and military leadership has recognized that under contemporary conditions there is a strategic balance between the two superpowers which provides mutual deterrence....The Soviet leaders demonstrate their recognition that the need to avoid a nuclear war can best be served by prudent actions within a framework of mutual strategic deterrence...." [pp. 112-113] But parts of Garthoff's analysis are not far from those of the opposing school of thought. He writes, for example, that prominent Soviet military writings are "quite forthright in recognizing the fact of mutual deterrence, despite some reticence to endorse the concept as formulated in the West." [p. 124] As we shall see below, this sentence could, with minor changes, have been written by Garthoff's bitter critic, Richard Pipes. For a sample of the Garthoff-Pipes dispute, see Raymond L. Garthoff, "Mutual Deterrence and Strategic Arms Limitation in Soviet Policy," and Richard Pipes, "Soviet Strategic Doctrine: Another View," both in Strategic Review 10 (Fall 1982): pp. 36-51 and 52-63. Also arguing that the Soviets have moved grudgingly in the direction of accepting mutual deterrence is Dmitri Simes, in "Deterrence and Coercion in Soviet Policy," International Security 4 (Winter 1980/1981): p. 86 ("The Soviet leadership has gradually but steadily, albeit with zigzags, moved toward acceptance of mutual deterrence....")

Soviet doctrinal discussions is decidedly hostile to this way of thinking. Although the Soviets are attentive to the requirements of maintaining the survivability of their own nuclear deterrent, they pay no homage whatsoever to the abstract concept of stability in the Western sense of maintaining a mutual assured destruction capability.<sup>8</sup>

Similarly, John Erickson writes that "Soviet opinion from the outset was not inclined to accept what might be called the metaphysics of deterrence...."<sup>9</sup> Robert Legvold has suggested that American theories of deterrence are simply irrelevant to Soviet conceptions of nuclear strategy: "The American theory of deterrence," he writes,

is a theory of bargaining; the Soviet notion of deterrence is without a theory and substitutes instead the science of war....The essential difference is that the United States has, or aspires to have, a strategic doctrine; the Soviet Union does not. She persists with only the operational concepts of war....The essential point is that the Soviet Union not only rejects American doctrines, it rejects the idea of 'strategic doctrine' as it is understood in the West.<sup>10</sup>

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<sup>8</sup> Jack L. Snyder, "The Soviet Strategic Culture: Implications for Limited Nuclear Options," RAND Report, R-2154-AF, September 1977, p. 18. (Emphasis in original.)

<sup>9</sup> John Erickson, "The Soviet View of Deterrence: A General View," Survival 24 (November/December 1982): p. 249. See also Erickson's "The Chimera of Mutual Deterrence," Strategic Review 6 (Spring 1978).

<sup>10</sup> Robert Legvold, "Strategic 'Doctrine' and SALT: Soviet and American Views," Survival 21 (January/February 1979): pp. 8-9. (Emphasis in original.) Similarly, Steve F. Kime, in "The Soviet View of War," Comparative Strategy 2 (1980): p. 212, comments, "The Russian mind

David Holloway, writing in the relatively hopeful time of the first SALT negotiation, said that

Soviet military theorists do not deny that there may exist at a given time a situation in which either the Soviet Union or the United States could inflict enormous damage on the other in a retaliatory strike. But what they seek to do...is to prevent any acceptance of mutual deterrence as a normal state of affairs....There seems to be in Soviet thinking...an unwillingness to accept mutual deterrence as in any way sacrosanct.<sup>11</sup>

Richard Pipes, in his famous description of Soviet doctrine, noted that it entailed "the unequivocal rejection of the notion of the 'absolute weapon' and all the theories that U.S. strategists had deduced from it." Because, for internal and external reasons, Pipes continued, the Soviet Union relied heavily on military power, "the Soviet leadership could not accept the theory of mutual deterrence." And at this point in his analysis, Pipes offered an illuminating footnote of elaboration:

I would like to stress the word 'theory,' for the

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understands 'mutual assured destruction' for its political utility: it is simply not good military strategy."

<sup>11</sup> David Holloway, "Strategic Concepts and Soviet Policy," Survival 13 (November 1971): p. 366. Holloway was hopeful that Soviet participation in SALT was a sign of change in its approach to these issues. See pp. 368-369. For a more recent and comprehensive articulation of Holloway's views, see his chapter on "Thinking About Nuclear War," in his The Soviet Union and the Arms Race (New Haven: Yale University Press, 1983), pp. 29-64.

Russians certainly accept the fact of deterrence. The difference is that whereas American theorists of mutual deterrence regard this condition as mutually desirable and permanent, Soviet strategists regard it as undesirable and transient: they are entirely disinclined to allow us the capability of deterring them.<sup>12</sup>

Likewise, Fritz Ermarth, in his influential comparison of Soviet and American doctrine, wrote,

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<sup>12</sup> Richard Pipes, "Why the Soviet Union Thinks It Could Fight and Win a Nuclear War," Commentary (July 1977): p. 28-29. Pipes was extremely exercised, in this article, by the thought that his characterization of Soviet doctrine was rarely voiced and was not widely appreciated. In fact, such characterizations were fairly common in the Western literature on Soviet nuclear doctrine. Pipes himself notes that the earliest work on Soviet doctrine (in the 1950s), notably by Dinerstein and Garthoff, accorded with his views, but he asserts that this work was "largely ignored." [p. 27] However, Stephen Van Evera surveyed a considerable portion of the Western literature in his chapter on "Soviet Militarism" and concluded, "Most authors concur with Pipes." See his Causes of War, p. 579. But for a dissent from the Pipes interpretation, see Robert L. Arnett, "Soviet Attitudes Towards Nuclear War: Do They Really Think They Can Win?," Journal of Strategic Studies 2 (September 1979): pp. 172-191, which argues that Soviet expectations of devastating consequences to the USSR from any conceivable strategic nuclear exchange constitutes a de facto acceptance of mutual deterrence. Also voicing doubt about the Pipes interpretation are David R. Jones, "Nuclear War and Soviet Policy," International Perspectives (November/December 1982): especially pp. 18-20 (which sees a shift in Soviet attitudes beginning in 1979); and John M. Weinstein, "Soviet Offensive Strategic Nuclear Forces: Evolution and Prospects," Parameters 15 (Winter 1985): p. 34. These authors emphasize Soviet recognition of the destructiveness of nuclear war as the basis for doubting the Pipes interpretation, but each notes that because nuclear war is always possible, the Soviets continue to prepare to fight it as well as they can - thereby vitiating somewhat their point.

Strategic stability is a concept that is very difficult to treat in a comparative manner because it is so vital to US strategic thinking, but hardly identifiable in Soviet strategic writings....Soviet failure to embrace these notions is sufficiently evident not to require much elaboration. One may argue about Soviet ability to overturn stability in US terms, but not about Soviet disinclination to accept the idea as a governing principle of strategic behavior.<sup>13</sup>

There is ample evidence in the work of Western students of Soviet military affairs, in short, to suggest that the ideas associated with stability theory have not found favor in Soviet military thinking throughout most of the postwar era. In offering this judgement, I do not mean to imply that Soviet doctrine has remained completely static over all these years, for clearly it has not.<sup>14</sup> Nor do I wish to suggest that the Soviet

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<sup>13</sup> Fritz Ermarth, "Contrasts in American and Soviet Strategic Thought," International Security 2 (Fall 1978): pp. 144-145. Similarly, Arnold Horelick has written, "In American strategic thought, the MAD standoff appears as the least miserable alternative in a dangerous world - a reasonable, if not altogether palatable, contract of mutually shared liability; in Soviet strategic thinking, it is an unconscionable mortgaging of the future to one's enemies." In his "The Strategic Mind-Set of the Soviet Military," Problems of Communism 26 (March/April 1977): p. 85.

<sup>14</sup> For example, the Soviets, who early on in the nuclear age claimed that an East-West conflict would automatically be nuclear in character, have taken increasingly seriously the possibility of a protracted conventional phase in such a conflict. Stephen Meyer documents this shift in his Soviet Theatre Nuclear Forces: Part I: Development of Doctrine and Objectives,

Union does not fear nuclear war or believes that it could manage to make a nuclear war a relatively painless affair, for there is ample evidence to demonstrate that Soviet leaders have come to have a proper respect for the destructiveness of nuclear weapons.<sup>15</sup> The point is

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Adelphi Paper No. 187, (London: International Institute of Strategic Studies), Winter 1983/1984. Similarly, John G. Hines, Phillip A. Petersen, and Notra Trulock, III, in an analysis based in part on Voroshilov General Staff Academy lecture materials, note this evolution in Soviet military thinking. See "Soviet Military Theory from 1945-2000: Implications for NATO," Washington Quarterly 9 (Fall 1986): especially pp. 121-125. The two most recent Chiefs of the Soviet General Staff, Marshals Ogarkov and Akhromeyev, have believed that, because use of nuclear weapons could have "catastrophic consequences," the role of conventional forces has gained in importance. See Dale R. Herspring, "Marshal Akhromeyev and the Future of Soviet Armed Forces," Survival 28 (November/December 1986): pp.527-528, 533. Such changes, which clearly reflect the fact of mutual deterrence, do not nevertheless mean that the Soviets have embraced stability arguments. Michael McGwire comments in his interpretation of the evolution of Soviet doctrine, for example, that the notion of a conventional phase was simply added to existing ideas about nuclear strategy: "The new strategy...did not replace the previous strategy designed to wage global nuclear war. Both strategies remain in force, with the original one to be resorted to if escalation becomes unavoidable." See Military Objectives in Soviet Foreign Policy, p. 34.

<sup>15</sup> Arnett, for example, provides considerable evidence on this point. See "Soviet Attitudes Towards Nuclear War: Do They Really Think They Can Win?." See also the analysis by Dan L. Strode and Rebecca V. Strode, "Diplomacy and Defense in Soviet National Security Policy," International Security 7 (Fall 1983): pp. 91-116. Even before the rise of Gorbachev, the Strodes detected signs of internal dispute on these questions in the divergent interpretations of nuclear issues that appeared in the Soviet literature. They doubt that

simply that neither the evolution of Soviet doctrine nor the Soviet recognition of the destructiveness of nuclear war have led it to embrace stability theory as a solution to the dangers of the nuclear age. While it is possible that, with the Gorbachev "revolution," this will change,<sup>16</sup> even the very recent literature on this subject

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Western-sounding pronouncements about the dangers of nuclear war by high level Soviet officials indicate a significant change in Soviet doctrine: "Despite these seemingly authoritative pronouncements..., there is substantial evidence of continuity in Soviet strategic thought." [p. 92] (This is not a surprising finding; as we shall see below, the pronouncements of American politicians have similarly obscured the reality of US doctrine.) To the extent that differences in the Soviet approach to nuclear weapons issues reflect a split between civilian and military, some have taken heart in Gorbachev's apparent reduction of military influence, which is thought to bode well for superpower arms control. See, for example, Joseph Nye Jr. and John Edwin Mroz, "Let's Not Squander the Promise of Glasnost," Washington Post, October 4, 1987, which attributes recent changes in Soviet arms control policy in part to a "fundamental change" in the Soviet Union: "There has been a reduction in the Soviet military's role and influence in the highest policy-making councils...." But Condoleezza Rice, in her discussion of the relation of civilian and military authority in making defense policy, "The Party, the Military, and Decision Authority in the Soviet Union," World Politics 11 (October 1987): pp. 55-81, comes to a much more guarded conclusion, noting, for example, that on matters pertaining to strategy and force posture there are no sources of expertise and advice other than the military.

<sup>16</sup> George Kennan suggests, for example, that the outlines of a more cooperative approach to nuclear weapons issues may be glimpsed in Gorbachev's perspectives. See Kennan's review of Gorbachev's book, Perestroika: New Thinking for Our Country and the World (New York: Harper and Row, 1988), "The Gorbachev

suggests that this is not yet the case, or at least that it is premature to conclude confidently that it is the case.<sup>17</sup> One recent commentator, for example, wrote in

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Prospect," New York Review of Books, January 21, 1988, pp. 3-7. For an extensive discussion of the possibility that the ascendancy of Gorbachev will mark a significant turning point in Soviet foreign and military policy, see Jack L. Snyder, "The Gorbachev Revolution: The Waning of Soviet Expansionism?," International Security 11 (Winter 1987/1988): pp. 93-131. On these points, see also Matthew Evangelista, "The New Soviet Approach to Security," World Policy Journal 3 (Fall 1986): p. 561-599, which argues that Gorbachev's new directions in Soviet policy should be taken seriously. For a much more skeptical view, see David B. Rivkin, Jr., "The Soviet Approach to Nuclear Arms Control: Continuity and Change," Survival 29 (November/December 1987): pp. 483-511. Rivkin sees considerable continuity, believes that an overly benign view of Gorbachev's intentions should not be accepted, and attributes modifications in the recent Soviet line at least in part to the tough policies of the Reagan Administration.

<sup>17</sup> Snyder comments, for example, "A definitive analysis of the Gorbachev revolution is hardly possible at this stage, since the process is still only beginning to unfold." In "The Gorbachev Revolution: The Waning of Soviet Expansionism?," p. 94. Marshall Shulman, in his assessment of the impact of the Gorbachev moves, in "The Superpowers: Dance of the Dinosaurs," Foreign Affairs 66 (America and the World, 1987/1988), sees hints of an evolution in Soviet thinking that would have dramatic implications for the argument being developed here. He writes that "there are indications in military writings, both by civilians and the professional military, that the Soviets have come to assign a higher value to stability and predictability as a result of arms control negotiations with the United States." [p. 505] However, Shulman concludes about these "new security concepts" that "It remains to be seen how and to what extent these ideas will be translated into action in Soviet foreign policy." [p. 503] Interestingly, at the Soviet-American Defense Ministers meeting in Bern, Switzerland, in March 1988, Soviet Defense Minister Yazov apparently sought to

1987 in words that echo many of the judgements cited above: "Soviet military and political leaders have never accepted the policy of mutual assured destruction - at least, not the 'mutual' part of it....This [Soviet] perspective clearly rejects mutual deterrence...."<sup>18</sup> Or, as one of the leading scholars of Soviet military affairs has more generally observed, "Though both [superpowers] recognize that they must avoid nuclear war, they are far from agreeing on the nature of the problem, or its solution."<sup>19</sup>

The ideas that governed thinking about the modern theory of arms control, in sum, do not seem to have made

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emphasize the new Soviet focus on "parity and equal security," but Secretary of Defense Carlucci was unconvinced: "There has been no change in the Soviet modernization program," he said. "There has been no change in the Soviet force structure." As reported in John H. Cushman, Jr., "Carlucci Says Soviet Talks Built Bridge," New York Times, March 18, 1988. Furthermore, some strongly object to the notion that there is any meaningful doctrinal change evident in Soviet military writings. See, for example, Joseph Churba, "Soviet Military Doctrine Still Stresses Offense," New York Times, March 23, 1988.

<sup>18</sup> Steven P. Adragna, On Guard for Victory: Military Doctrine and Ballistic Missile Defense in the USSR (Washington D.C.: Pergamon Brassey's for the Institute for Foreign Policy Analysis, 1987), p. 8.

<sup>19</sup> Stephen M. Meyer, "Soviet Perspectives on the Paths to Nuclear War," in Allison, Carnesale, and Nye, eds., Hawks, Doves, and Owls, p. 163.

a substantial impact on Soviet thinking<sup>20</sup>, a fact that has had an enormous impact on the course of strategic arms control over the last several decades. The possibility that there may be Soviet doctrinal changes associated with the Gorbachev revolution does not undermine this point. To the extent that the USSR actually accepts a doctrine more compatible with the tenets of stability theory, there will be greater prospects for arms control to truly fulfill the role envisioned for it by the arms control theorists.<sup>21</sup> While

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<sup>20</sup> In an interview, Soviet expert (and US Army General) William Odom was asked, "Experts point out that you can search Soviet military writing and find there no analogue for this Western concept of deterrence. Do you agree with that?" Odom replied: "I agree with that completely." See Michael Charlton, From Deterrence to Defense: The Inside Story of Strategic Policy (Cambridge, Ma.: Harvard University Press, 1987), p. 13. Odom reiterates the point in several guises throughout his discussion. See pp. 12-15.

<sup>21</sup> This fact is reflected in the hopefulness expressed by arms control advocates in the United States as a consequence of the Gorbachev reforms. An excellent example is The Task Force on Soviet New Thinking, How Should American Respond to Gorbachev's Challenge?, New York: Institute for East-West Security Studies, 1987. It suggests that as a result of a major Soviet reexamination of security policy, arms control has assumed a higher priority, resulting in a Soviet willingness to move in the direction of Western positions to facilitate negotiations. See pp. 17, 25. See also the discussion in Bernard Trainor, "Soviet Doctrine in Flux: An Emphasis on the Defense," New York Times, March 7, 1988. Trainor, relying on nameless US government experts, reports that "they think the new defensive doctrine could account for Soviet willingness to reduce nuclear arms in treaties

I remain skeptical, I do not wish to exclude this possibility. But heretofore Soviet thinking about nuclear strategy has been an impediment.

If there is room for large doubts about the Soviet willingness to embrace the tenets of stability theory on the basis of ideas they seem to have rejected or never even to have recognized, there is even more cause for skepticism in the doctrine the Soviets have actually promulgated. Judging from both Soviet military writings themselves and from Western analyses of Soviet military writings, Soviet strategic doctrine and policy reads like a stability theorist's primer on how not to construct a safe and stabilizing doctrine. For example, A.A. Sidorenko, author of a well known Soviet treatise on the offensive, writes of nuclear war, "With the employment of nuclear weapons, the decisiveness and scope of the offensive are increased, the times for attainment of its

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with the United States...." But even when the Soviets do alter their arms control policies, the problem of interpreting their motives remains. See, for a recent example, Marisol Touraine, "Le Retrait des FNI Sovietiques: Offensive Diplomatique ou Mutation Strategique?," Politique Etrangere, No. 3, Automne 1987, pp. 699-712. For a sample of the Soviet commentary that is giving rise to this discussion in the West, see, for example, "Akhromeyev on Further Arms Control," and "Reasonable Sufficiency Instead of Mutual Deterrence," both reprinted in English in Strategic Review 16 (Winter 1988): pp. 79-84.

goals are reduced, and the significance of surprise and the time factor increases even more."<sup>22</sup> Clearly, far from embracing nuclear stalemate or mutual deterrence, Siderenko is championing the growing importance of surprise attack in the nuclear age. Or, as another Soviet officer echoed, "Nuclear weapons have established even more firmly the role of attack as the decisive form of military action."<sup>23</sup>

Moreover, across time, the Soviets have not observed very well any of the rules of choice offered by stability theory, and some of the key rules they seem not to have heeded at all. Sketching some of the main elements of Soviet strategic policy and doctrine will suffice to illustrate this fact.

First, the Soviets have at times seemed remarkably sloppy or complacent about the most rudimentary and fundamental rule of all, that which calls for the provision of survivable forces and the minimization of force vulnerabilities. As noted briefly in the previous chapter, the Soviets allowed enormous force

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<sup>22</sup> A.A. Sidorenko, The Offensive (Washington D.C.: USGPO, n.d.), p. 42. [Translated by the US Air Force.]

<sup>23</sup> Lt. General I.G. Zav'yalov, "The New Weapon and Military Art," in William F. Scott, ed., Selected Soviet Military Writings, 1970-1975 (Washington D.C.: USGPO, 1976), p. 209.

vulnerabilities to persist over a long period of time, stretching into the mid-to-late 1960s. Henry Rowen has commented that "the Soviets were slow in reducing the vulnerability of their nuclear forces...."<sup>24</sup> Former Secretary of State Robert McNamara has linked the US declaratory interest in counterforce doctrines in the early 1960s to the meager and vulnerable condition of Soviet strategic forces.<sup>25</sup> Stephen Meyer has examined this issue in some detail. During the first half of the nuclear age, he writes, the Soviet Union

did not have a reliable delivery capability against the US homeland that would survive a US surprise attack.... Curiously, although surprise attack played such a crucial role in Soviet military doctrine during this period, the Soviet strategic force posture did not reflect that concern. No Soviet bombers were ever placed on ready alert.... Their nuclear bombs were stored in depots guarded by KGB troops....Some were even located as far as fifty miles from missile launch areas....This was hardly a posture consistent with fear of a bolt-from-the-blue strategic attack.<sup>26</sup>

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<sup>24</sup> Rowen, "The Evolution of Strategic Nuclear Doctrine," in Martin, ed., Strategic Thought in the Nuclear Age, p. 139.

<sup>25</sup> Charlton, From Deterrence to Defense, p. 18. McNamara relates his own shift from counterforce to assured destruction to the growth in Soviet capability that he believed made counterforce doctrines inappropriate.

<sup>26</sup> Meyer, "Soviet Perspectives on the Paths to Nuclear War," in Allison, Carnesale, and Nye, eds., Hawks, Doves, and Owls, pp. 170-171. Meyer also offers speculations about why the Soviets were so sluggish in addressing their vulnerability problems. See p. 171.

Eventually the Soviet performance on this score improved, as it greatly enlarged, modernized, and hardened its ICBM force and adopted a launch-under-attack strategy, and as it gradually moved, during the 1970s, to a more diversified force. Nevertheless, the Soviet Union seems never to have matched the United States in the intensity of its day-to-day efforts to safeguard its retaliatory capability. As Meyer notes, although the Soviet ICBM force is held at the ready, "other elements of the Soviet strategic posture do not reflect states of readiness consistent with a perceived threat of surprise strategic attack....Today, with the notable exception of the ICBM force, Soviet strategic offensive nuclear forces, theater nuclear forces, strategic defense forces, civil defense, and command, control, and communications networks are kept in peacetime readiness states significantly below their full (wartime) potential."<sup>27</sup> While this posture might be accounted for by an emphasis on the threat of preemptive attack against Soviet forces arising out of a crisis and hence on the expectation of strategic warning, in fact the Soviets have apparently never undertaken to put their forces on a higher state of

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<sup>27</sup> Meyer, "Soviet Perspectives on the Paths to Nuclear War," in Allison, Carnesale, and Nye, eds., Hawks, Doves, and Owls, pp. 173,177.

alert, even during serious crises.<sup>28</sup>

This point should not be overstated. Particularly in the last two decades, there are many indications of Soviet attentiveness to the survivability of its forces: the investment in large forces, the improvements in hardening, the evident interest in mobile ICBMs, the acquisition of a large and rapidly modernized strategic submarine force, all bespeak an awareness of the need to possess survivable forces. My point is merely that if the USSR shared the canonical fervor of the arms control theorists about the danger and undesirability of force vulnerabilities, it could have done better much sooner than it did and there are still ways in which it could do better in heeding this edict.

Second, and more importantly, far from trying to rid the nuclear environment of preemptive incentives, the Soviet Union has consistently preferred and adopted an avowedly preemptive doctrine. On this point, there is

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<sup>28</sup> Marc Trachtenberg points out, for example, that even at the height of the Cuban missile crisis, the Soviet Union took no alerting actions to reduce the vulnerability of its forces. Trachtenberg argues that this is evidence of the impact of US strategic superiority at the time, that the Soviets refrained from taking sensible and prudent precautions to safeguard their nuclear forces because they feared triggering an American preemptive attack. See his "The Influence of Nuclear Weapons in the Cuban Missile Crisis," International Security 9 (Summer 1985): pp. 156-161.

virtually universal agreement in the literature.<sup>29</sup> Indeed, even some among the early theorists recognized and were troubled by this fact.<sup>30</sup> Robert Osgood, for example, invoking the work of Herbert Dinerstein and Raymond Garthoff, drew attention to the Soviet Union's preemptive doctrine and argued that this validated the great concern about that subject.<sup>31</sup> Recognizing the character of Soviet doctrine at the time was not seen to eviscerate arguments for stabilizing arms control because of the hope (and even, for some analysts, the

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<sup>29</sup> For some early indications of this, see Herbert Dinerstein, War and the Soviet Union: Nuclear Weapons and the Revolution in Soviet Military and Political Thinking (New York: Praeger, 1959), pp. 167-214; and Thomas Wolfe, Soviet Strategy at the Crossroads (Cambridge: Harvard University Press, 1964), pp. 64-67. See also William C. Green, "The Early Formulation of Soviet Strategic Nuclear Doctrine," Comparative Strategy 4 (1984): pp. 369-386, which argues that basic Soviet doctrinal instincts can be traced back into the Stalinist period.

<sup>30</sup> Perhaps as significant is the fact that some of the early theorists neither noticed nor noted that the USSR was adopting preemptive doctrines, although this fact was readily available in Western analyses of Soviet doctrine. For example, Snyder, in Deterrence and Defense, pp. 104-109, and Singer, Deterrence, Arms Control, and Disarmament, pp. 74-77, offer discussions of preemption, and even posit hypothetical Soviet preemptive incentives, without observing that the Soviets actually seemed to have chosen such a doctrine. Brodie, in Strategy in the Missile Age, pp. 241-248, likewise analyses preemption without directly discussing actual Soviet doctrine.

<sup>31</sup> Osgood, "Stabilizing the Military Environment," p. 33.

expectation) that Soviet doctrine would change, that there could be a "convergence" of Soviet and American thinking on nuclear strategy, that while Soviet strategic thinking "lagged" behind that of the United States, eventually Soviet strategists would, perhaps with some education from Americans, arrive at similar conclusions. In a discussion of his early interest in strategic arms control in the mid-1960s, for example, former Secretary of Defense Robert McNamara was asked: "Isn't a shared perception of doctrine more or less essential to the pursuit of arms control?" He replied: "Absolutely - and what I assumed was that while [the Soviets] might not at that moment subscribe to that [mutual deterrence] doctrine, the negotiations themselves would lead to acceptance of a common doctrine, on the basis of which one could build arms control agreements."<sup>32</sup> But this assumption turned out to be wrong. While the early

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<sup>32</sup> Charlton, From Deterrence to Defense, p. 5. (Emphasis in original.) The greatest exponent of the idea of strategic convergence was Roman Kolkowicz. See his "Strategic Parity and Beyond," World Politics 22 (April 1971); and "Strategic Elites and Politics of Superpower," Journal of International Affairs, 26 (1972): pp. 40-59. (By the late 1970s, this idea had been turned on its head and, in what some have called "reverse convergence," there was interest in having the United States emulate Soviet doctrine rather than the other way around. This notion is examined in detail in Donald Hanson, "Is Soviet Strategic Doctrine Superior?," International Security 6 (Winter 1982/1983): pp. 61-83.)

theorists entertained hopes that with time Soviet doctrine would change, in fact the perception of a Soviet embrace of preemption has overwhelmingly remained at the core of Western understanding of Soviet doctrine.<sup>33</sup>

One cannot delve for long in this literature without emphatically encountering this fact. "The notion of anticipating and preempting the attack," writes Desmond Ball, "is pervasive throughout the Soviet literature."<sup>34</sup> (And, a weary researcher might add, pervasive in the Western literature on the Soviet literature.) Stephen Meyer concludes that "Soviet military thinking is strongly predisposed towards preemption..."<sup>35</sup> During the 1970s and early 1980s, according to another recent analysis, Soviet military thought suggested that "In the

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<sup>33</sup> It should be noted, however, that some Western analysts believe that the Soviet emphasis on preemption has diminished (not disappeared) over the years. See, for example, Holloway, The Soviet Union and the Arms Race, p. 57.

<sup>34</sup> Desmond Ball, "Soviet Strategic Planning and the Control of Nuclear War," Soviet Union/Union Sovietique, vol. 10, nos. 2&3, 1983, p. 203.

<sup>35</sup> Meyer, "Soviet Perspectives on the Paths to Nuclear War," in Allison, Carnesale, and Nye, eds., Hawks, Doves, and Owls, p. 191. See also Meyer's discussion in "Soviet Nuclear Operations," in Aston Carter, John Steinbruner, and Charles Zraket, eds., Managing Nuclear Operations (Washington D.C.: The Brookings Institution, 1987), especially pp. 497-512, where he analyzes the "anticipated strategic nuclear attack" scenario.

event of war, they sought to avoid extensive homeland damage through the development of an effective preemptive nuclear strike capability...."<sup>36</sup> Stephen Van Evera summarized his impression after surveying this literature as follows: "Soviet officers assert that the side striking first generally has the advantage in warfare, and they claim that nuclear weapons actually magnify this advantage. They recommend preemption once war seems likely, since holding the initiative can be decisive."<sup>37</sup> Richard Pipes comments that preemption receives tremendous emphasis in the Soviet literature and says that Soviet theorists insist that "once it had concluded that an attack upon it was imminent, it would not hesitate to preempt."<sup>38</sup> The point is as obvious as it is inescapable.

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<sup>36</sup> Hines, Petersen, and Trulock, "Soviet Military Theory from 1945-2000: Implications for NATO," p. 125.

<sup>37</sup> Van Evera, Causes of War, p. 609.

<sup>38</sup> Pipes, "Why the Soviet Union Thinks It Could Fight and Win a Nuclear War," p. 31. Others stressing the Soviet emphasis on preemption include Albert L. Weeks, "The Garthoff-Pipes Debate on Soviet Doctrine: Another Perspective," Strategic Review 11 (Winter 1983): pp. 57-64. (Weeks concludes: "The overall emphasis on the offense in the Soviet literature ...adds up to a picture that reads uncomfortably like preemptive war." [p. 62]); and Peter King, "Two Eyes for a Tooth: The State of Soviet Strategic Doctrine," Survey 24 (Winter 1979): pp. 46-47. ("Preemption of an American nuclear attack has been received Soviet doctrine for twenty years or so.")

It is generally believed, furthermore, that the Soviet force posture reflects this doctrinal inclination. Stephen Meyer has pointed out, for example, that the evidence of Soviet force acquisition leads "consistently to decisions to purchase a force mix that maximizes preemptive capabilities." Particularly arresting is Meyer's further point, that the Soviets prefer a force tailored for preemption even if this leaves them more vulnerable to American preemption (because Soviet preemptive capability is centered on its ICBMs, which can themselves be rendered vulnerable). Meyer writes, "Ironically, these same Soviet force mixes tend also to maximize American preemptive capabilities. Thus, the Soviet military must assume that, all else being equal, it will be able to anticipate an American nuclear attack and beat the Americans in the draw."<sup>39</sup>

The implications of this point could hardly be more dramatic for the analysis being developed here, because it suggests that the Soviets prefer an environment in which both superpowers have preemptive possibilities to one in which neither do. This is exactly the opposite of what is called for by stability theory and required by

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<sup>39</sup> Meyer, "Soviet Perspectives on the Paths to Nuclear War," in Allison, Carnesale, and Nye, eds., Hawks, Doves, and Owls, p. 177.

the modern theory of arms control. The Soviets, in short, appear to be deeply committed to a strategic doctrine that violates one of the basic rules derived from stability theory. Arms control in the service of stability had as one of its basic aims the elimination of preemptive incentives, but the Soviet Union has had as one of its basic aims the acquisition of a preemptive capability - even, perhaps, at the cost of allowing the United States to possess one as well!

Furthermore, as we have seen, the arms control theorists believed that it was wise not only to avoid first strike doctrines, but also to reassure one's opponent that this was the case. After all, what really mattered in determining an adversary's preemptive incentives were his perceptions of your likely behavior, and he could mistakenly fear being the victim of a first strike even if one had no intention of doing so. If one were worried about minimizing an opponent's preemptive incentives, then some effort should be expended to convince him that he had nothing to fear. There is no evidence in Soviet military writings of such a concern. Rather, throughout much of the nuclear age, there has been a tremendous emphasis on the importance of surprise attack, the decisiveness of the initial phase of the war,

the imperative to strike first if war seems imminent. Indeed, it seems plausible to argue, particularly with respect to earlier periods when Soviet forces were more vulnerable, that far from seeking to reassure the United States in order to prevent the reciprocal fear of surprise attack mechanism, the Soviets sought to convince American leaders that it would actually preempt if it appeared that the US was making preparations to attack (and, of course, given the character of American doctrine in these years - including massive retaliation and NATO first-use - the Soviets had every reason to expect and fear that the United States might actually undertake such preparations). This would deter the Americans by making it very dangerous to attempt an attack. Even if (perhaps especially if) Soviet forces were extremely vulnerable, the effect of an American attempt to mount a first strike might be to trigger a Soviet preemptive attack. Such a line of thought is consistent with the Soviet belief that the best deterrent is a capability to fight a nuclear war; Jack Snyder notes, for example, that "Soviet military writings typically equate effective deterrence with superior war-fighting capability."<sup>40</sup> There is a

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<sup>40</sup> Snyder, "The Soviet Strategic Culture," p. 18. See also Erickson, "The Soviet View of Deterrence," especially p. 245, where he says that "the Soviet

discernible logic to this approach, and one can particularly understand its attractions when there were reasons for major concern about the survivability of one's forces, but it is, again, precisely the opposite of the course of behavior recommended by stability theory.

The commitment to preemption leads naturally, furthermore, to other sins against stability. While stability theory holds that it is wise to refrain from threatening an opponent's forces in order to diminish his preemptive incentives, the entire logic of preemption is rooted in the advantage that comes of destroying an opponent's forces before they can be used against you; only thus could one hope to limit damage to oneself. This meant that one must choose, in direct contradiction of the edicts of stability theory, both counterforce targeting strategies and counterforce capabilities. This the Soviets have done. As Ball has written, for the Soviets "The primary strategic mission is to destroy enemy military forces, including most particularly the opposing strategic nuclear forces."<sup>41</sup> Damage limitation

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leadership regards the capability to wage nuclear war...as a major element of a visible 'deterrent'."

<sup>41</sup> Ball, "Soviet Planning and the Control of Nuclear War," p. 205. Ball provides a number of quotations from Soviet sources to support the point.

via counterforce is implied by Meyer's comment that "First and foremost, Soviet military doctrine holds that the primary mission of the Soviet armed forces is to prevent the nuclear devastation of the Soviet homeland - i.e., the armed forces must deter strategic nuclear war and yet be able to limit damage should deterrence fail."<sup>42</sup> Arnold Horelick believes that the Soviet commitment to a counterforce warfighting doctrine transcends recognition of the destructiveness of nuclear war:

Even if general nuclear war under all foreseeable circumstances is perceived as catastrophic and deterrence of such a war is the overriding purpose of Soviet strategic exertions, a sensible policy in the Soviet view must attempt to provide the offensive and defensive ingredients for conducting such a war, maximizing chances of national survival and securing the optimal outcome....The Soviet Union...appears to have chosen a course that leaves open the possibility of various forms of superiority, even if only marginal; it seems prepared to continue to work away at all of the operational problems of war-fighting, even in the absence of any assurance that they can be solved satisfactorily.<sup>43</sup>

Jack Snyder concludes that "the preponderance of Soviet thought...has shown a preference for the unilateral approach to damage limitation by means of unrestrained

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<sup>42</sup> Stephen Meyer, "Soviet Strategic Programs and the U.S. SDI," Survival 25 (November/December 1985): p. 278. (Emphasis added.)

<sup>43</sup> Horelick, "The Strategic Mind-Set of the Soviet Military," p. 84.

counterforce...."<sup>44</sup> According to Van Evera, "Soviet military writings give highest priority to destroying US military targets--strategic missile forces, strategic bomber and submarine bases, nuclear arsenals...."<sup>45</sup>

James Dougherty comments that Soviet doctrine requires "a maximum ability to blunt the nuclear striking power of the adversary if war should break out...."<sup>46</sup>

The Soviets have not merely voiced such doctrinal sentiments, they have invested resources in an effort (not always successful) to acquire requisite

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<sup>44</sup> Snyder, "The Soviet Strategic Culture," p. 38.

<sup>45</sup> Van Evera, Causes of War, p. 540. See also, on this point, Pipes, "Why the Soviet Union Thinks It Could Fight and Win a Nuclear War," pp. 32-33; Keith B. Payne, "The Soviet Union and Strategic Defense: The Failure and Future of Arms Control," Orbis 29 (Winter 1986): especially pp. 677-679; Colin Gray, Strategy and the MX, Washington D.C.: The Heritage Foundation, 1980, pp. 11-18; and Freedman, The Evolution of Nuclear Strategy, Chapter 17 ("The Soviet Approach to Deterrence"), especially pp. 267-269. Also Legvold, "Strategic 'Doctrine' and SALT," especially p. 10, where he notes that the Soviet Union is "bent on putting the American intercontinental ballistic missile force in jeopardy" because she "means to practice a strategy of damage limitation."

<sup>46</sup> James E. Dougherty, "SALT: An Introduction to the Substance and Politics of the Negotiations," in Paul Nitze, James E. Dougherty, and Francis X. Kane, The Fateful Ends and Shades of SALT: Past, Present, and Yet to Come? (New York: Crane, Russak, & Co., 1979), p. 29. Weinstein, in "Soviet Offensive Strategic Nuclear Weapons," p. 31, also notes that the purpose of Soviet nuclear forces is to "assure national survival," (a notion nearly the opposite of mutual assured destruction).

capabilities. A recent study of Soviet missile guidance technologies, for example, concludes that "there can be no doubt that increasing missile accuracy has been a very high priority goal of the Soviet Union, achieved at patently great expense." The purpose of this investment is equally clear: "Accuracy has been pursued because of the commitment to counterforce."<sup>47</sup> Berman and Baker, in their study of Soviet strategic forces, report that by the late 1970s the Soviet ICBM deployment program "offered an increasingly effective, and redundant, capability for countering the US ICBM force." In fact, the deployment of the fourth generation of Soviet ICBMs "made it possible for the USSR to effectively extend its target coverage to the Minuteman [ICBM] silos for the first time."<sup>48</sup>

Such behavior is clearly consistent with the conclusion that, however much the USSR may recognize the great potential destructiveness of nuclear war, nevertheless, it undertakes policies that "try to ensure the survival of the state in the event of general nuclear

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<sup>47</sup> Donald Mackenzie, "The Soviet Union and Strategic Missile Guidance," International Security, forthcoming, [pp. 44, 48 of ms.].

<sup>48</sup> Robert P. Berman and John C. Baker, Soviet Strategic Forces: Requirements and Responses (Washington D.C.: The Brookings Institution, 1982), p. 65.

war"; and furthermore, flowing naturally from this, "It has tried to maximize its own ability to fight a nuclear war, should it come to that."<sup>49</sup> Or, as Dmitri Simes puts it, "the Soviet military is authorized to develop strategy and weapons to fight [nuclear war] in the most efficient way possible."<sup>50</sup> In both word and deed, in short, the Soviet Union signalled its commitment to a preemptive counterforce doctrine. That this had an effect on American perceptions is indicated by the emergence of the ICBM vulnerability problem in the late 1970s. Prominent strategic analyst and policymaker Paul Nitze, for example, wrote, in one of the most dramatic and influential of the alarmed US reactions to the Soviet ICBM modernization in the mid-1970s, that Soviet policy was "designed to produce a theoretical war-winning capability."<sup>51</sup> This is not the kind of environment that

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<sup>49</sup> Holloway, The Soviet Union and the Arms Race, pp. 53-54.

<sup>50</sup> Simes, "Deterrence and Coercion in Soviet Policy," pp. 91-92.

<sup>51</sup> See Paul Nitze, "Assuring Strategic Stability in an Era of Detente," Foreign Affairs 54 (January 1976): p. 207. Note also Meyer's comment: "Deterrence, retaliation, nuclear 'war-fighting,' and damage limitation are fundamental dimensions of the Soviet strategic framework. In contrast to Western strategic theory, however, Soviet political and military leaders perceive these as complementary and not competitive notions.... Thus it is not surprising that Soviet strategy

the arms control theorists had in mind.

Furthermore, while stability theory presumed that nuclear war between two heavily armed nuclear powers was unwinnable and that wisdom therefore entailed an acceptance of nuclear stalemate, the Soviets have been insistent over a long period of time that victory is attainable and advantage is desirable. William Hyland notes, for example, that a major point in Soviet doctrine is that "Nuclear war - as any war - is 'winnable'."<sup>52</sup>

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for nuclear operations makes Western observers nervous." See "Soviet Nuclear Operations," in Carter, Steinbruner, and Zraket, eds., Managing Nuclear Operations, p. 471.

<sup>52</sup> William G. Hyland, "The USSR and Nuclear War," in Barry M. Blechman, ed., Rethinking the US Strategic Posture (Cambridge, Ma.: Ballinger, 1982), p.57. Hyland does note however that this proposition gives the Soviets pause as well, and that it does not appear to be universally accepted by Soviet civilian leaders. Nevertheless, it remains a visible feature of their military writings. Furthermore, there are indications of Soviet debate on this point. One interpretation of the dismissal of Marshal Ogarkov as Chief of the Soviet General Staff, for example, attributes it to Ogarkov's refusal to abandon the "nuclear war is winnable" doctrine despite pressure from civilian leaders to do so. See George G. Weickhardt, "Ustinov versus Ogarkov," Problems of Communism 34 (January/February 1985): pp. 77-82. For further discussion (and support) of this interpretation, see Tsuyoshi Hasegawa, "Soviets on Nuclear War-Fighting," Problems of Communism 35 (January/February 1986): pp. 68-79. Like other analysts, Hasegawa traces the origins of a potential civil-military dispute over nuclear strategy to former General Secretary Brezhnev's 1977 speech in Tula, which seemed to reject superiority as an objective of Soviet policy, implying an end to war-fighting, war-winning strategies. [See pp. 70-71] Importantly for my argument, Hasegawa concludes, "The political leadership

The central theme of Pipes's famous article was, of course, that "our chief adversary views [nuclear war] as feasible and winnable for himself."<sup>53</sup> Van Evera concludes that "Soviet officers quarrel sharply with the view that nuclear wars have no winners. They argue that such a view is wrong and pernicious; and that the Soviet Union can indeed defeat the West in a global nuclear war."<sup>54</sup> Or, as Benjamin Lambeth puts it, Soviet doctrine is informed by "the conviction that some meaningful form of victory, even in high intensity nuclear war, is theoretically attainable if the proper military actions are executed in a timely fashion." This does not mean, Lambeth hastens to add, that the Soviets possess some unfathomable "sublime confidence" about the outcome of a nuclear war, but rather that the Soviet leadership "regards victory as an objective to be consciously

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has so far failed to persuade the military to accept MAD completely at the operational and force postural level." [p. 79] (It is worth mentioning that some Western analysts see in Gorbachev's approach to foreign and military policy the pursuit of Brezhnev's "Tula line." See, for example, Shulman, "The Superpowers: Dance of the Dinosaurs," pp. 504-505.)

<sup>53</sup> Pipes, "Why the Soviet Union Thinks It Could Fight and Win a Nuclear War," p. 34.

<sup>54</sup> Van Evera, Causes of War, p. 579. Van Evera provides a number of illustrations of this point from the Soviet literature.

striven for with every reasonable effort."<sup>55</sup> But the fundamental aim of the modern theory of arms control is to preclude precisely such strivings.

To summarize, I have sought here to provide a brief overview of Soviet nuclear doctrine for the purpose of displaying its rampant violation of the rules of stability theory. It is unnecessary for my needs to sort out every controversy associated with the interpretation of Soviet doctrine.<sup>56</sup> Indeed, as Stephen Meyer points out, various Western images of Soviet doctrine are not

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<sup>55</sup> Benjamin Lambeth, "How to Think About Soviet Military Doctrine," in John Baylis and Gerald Segal, eds., Soviet Strategy (London: Croom Helm, 1981), p. 111. For others who note the Soviet belief in victory, see the following: Kime, "The Soviet View of War," p. 211 ("If there is a war, the Soviet view is that a nation must be able to fight and win. Survival and victory must be assumed possible, even if it is difficult to define or envision 'victory' in the nuclear age."); Horelick, "The Strategic Mind-Set of the Soviet Military," p. 81; King, "The State of Soviet Strategic Doctrine," p. 50; and Uri Ra'an, "Soviet Strategic Doctrine and the Soviet-American Global Contest," Annals 457 (September 1981): pp. 8-17. Ra'an summarizes several germane points: "War is regarded both as feasible and winnable, provided the USSR continues to maintain the initiative, to pursue the offensive, and to utilize surprise and deception. These factors mean that an initial blow against an adversary may prove ultimately decisive...." [p. 8]

<sup>56</sup> For an interesting discussion of the problem of interpreting Soviet doctrine, see Douglas M. Hart, "The Hermeneutics of Soviet Military Doctrine," The Washington Quarterly 7 (Spring 1984): pp. 77-88. Hart stresses the point that in terms of Western policymaking, predominant Western interpretations of Soviet doctrine are more important than the reality of Soviet doctrine.

necessarily mutually exclusive; it is probably unrewarding to seek to characterize Soviet nuclear strategy in terms of a single doctrinal choice, when in fact the Soviet leadership undoubtedly desires a range of options including winning if they can, preempting if they must, launching on warning if necessary, and relying on retaliatory capabilities in the worst case.<sup>57</sup> The important point for my argument is that so long as the Soviets wish to have among their strategic options those that require preventive or preemptive counterforce attacks, their doctrine - whatever else it might entail - is not compatible with stability theory or with the modern theory of arms control. Nor does my argument ride on correctness of every detail of the predominant Western characterization of Soviet doctrine. Rather, what is important is that the broad outline of the Soviet

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<sup>57</sup> Meyer, "Soviet Nuclear Operations," in Carter, Steinbruner, and Zraket, eds., Managing Nuclear Operations, pp. 529-530. As Meyer puts it, "It is unfortunate that Western students of Soviet military affairs continue to attempt to portray Soviet strategic policy in terms of some single strategy. Great efforts are expended in trying to prove that the Soviets are striving single-mindedly to acquire a first-strike capability; that they still subscribe to a doctrine of preemption; that they have switched to a launch-on-warning policy; or that they have come around to accepting mutual assured destruction. In fact, these are all elements in the Soviets' strategic planning and are reflected in their nuclear posture and command and control system." [p. 529]

approach to nuclear strategy has been utterly at odds with the tenets of stability theory. To recapitulate, this can be seen by borrowing the five points that constitute Lambeth's summation of Soviet strategic doctrine. These are:

- \* The best deterrent is an effective war-fighting capability.
- \* Victory is possible.
- \* It pays to strike first.
- \* Restraint is foolhardy.
- \* Numbers matter.<sup>58</sup>

Obviously, there is no way that arms control can help to create and codify a world of stable mutual deterrence so long as the Soviet Union adheres to anything approximating these strategic preferences. Here is a major part of the explanation for why the modern theory of arms control has proved so infertile in the real world

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<sup>58</sup> Lambeth, "How to Think About Soviet Military Doctrine," pp. 109-116. Also illuminating and arresting is Van Evera's comparison of Soviet doctrine to the disastrous German doctrine of the pre-World War I era (a doctrine that played a significant role in transforming a remote assassination in the Balkans into a global war): "Soviet operational plans resemble a thermonuclear Schlieffen Plan drawn to international scale." In Causes of War, p. 533. (Also likening the Soviet military to that of Wilhelmine Germany - with respect to Soviet strategy in Europe - is Richard Ned Lebow, "The Soviet Offensive In Europe: The Schlieffen Plan Revisited?," International Security 8 (Spring 1985): pp. 44-78.

despite its theoretical promise.

B. The Reality of American Strategic Doctrine

While the Soviet case, at least until the advent of Gorbachev, is quite clearcut, the American side of the story is more complex. Here the ideas of the arms control theorists were, if not universally accepted, at least prominent and widely recognized and they attracted a considerable number of adherents. Furthermore, while in the Soviet Union these ideas seem not to have found champions among those with policy influence, in the United States they were accepted and voiced by a number of politically significant players in the policy process, especially although not exclusively in Congress. Furthermore, the notion of stability seems occasionally to have influenced US strategic procurement (primarily through the intervention of members of Congress who sought to impose stability criteria on the weapons acquisition process).

As a consequence, there has arisen a common contrast between Soviet and American strategic doctrine, the former being characterised by the features described above, while the latter was construed as heavily shaped

by the notion of mutual deterrence (commonly labelled mutual assured destruction) and driven by the pursuit of stability. The Soviets, it is often said, have fitted nuclear weapons into a traditional framework of military strategy, in which the quest for advantage is natural and victory continues to be the ultimate objective of military posture and policy. The United States, it is commonly suggested by way of contrast, under the sway of ideas proffered by the arms control theorists, rejected this approach and instead adopted a doctrine based on the premise that nuclear advantage is meaningless, worthwhile victory is not possible, and hence mutual deterrence is the proper aim of military policy. Thus, Colin Gray, in his critique of US strategic doctrine, complains,

The principal intellectual culprit in our pantheon of false strategic gods is the concept of stability....American strategic (and arms control) policy, since the mid-1960s, has been misinformed by stability criteria which rested (and rest) upon a near-total misreading of Soviet phenomena. Soviet leaders are opportunists with a war-waging doctrine as their strategic leitmotiv.<sup>59</sup>

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<sup>59</sup> Colin S. Gray, "Nuclear Strategy: A Case for a Theory of Victory," International Security 3 (Summer 1979): pp. 82-83. Gray believed that the American affinity for stability was allowing the Soviet Union to achieve strategic superiority. The contrast between Soviet and American doctrine, and the belief that the Soviet approach is better, is a pervasive theme in Gray's writings. See, for example, his "National Style in Strategy: The American Approach," International Security 5 (Fall 1981): pp. 21-48, in which he argues that a

Or, as Richard Pipes emphatically and baldly stated, "American and Soviet nuclear doctrines...are starkly at odds."<sup>60</sup>

While this contrast is commonplace and widely accepted, recent scholarship suggests that it is misleading. While the public discourse on nuclear weapons issues has been greatly influenced by stability theory, and while American declaratory doctrine has often (since the mid-1960s) heeded central tenets of stability theory, a growing body of evidence demonstrates that the operational doctrines and capabilities adopted by the

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distinctive American "strategic culture" accounts for the differences. Also, "Strategic Stability Reconsidered," Daedalus 109 (Fall 1980): pp. 135-154, in which he considers at length the "conceptual gap" between the US and Soviet approaches to nuclear strategy; and Strategy and the MX, especially pp. 11-34, in which he notes that "the Soviets do not share any important segments of Western beliefs concerning a World War III." [p. 12] Not surprisingly, given these views, in another prominent strand of Gray's work he advocates that the United States adopt a strategic doctrine which emulates that of the USSR. See, for example, his "War-Fighting for Deterrence," Journal of Strategic Studies 6 (March 1984): pp. 5-28; "Targeting Problems for Central War," Naval War College Review 33 (January/February-1980): pp. 3-21; and, with co-author Keith Payne, "Victory is Possible," Foreign Policy 39 (Summer 1980): pp. 14-27. For a critical assessment of Gray's views, see Hanson, "Is Soviet Doctrine Superior?."

<sup>60</sup> Pipes, "Why the Soviet Union Thinks It Could Fight and Win a Nuclear War," p. 21. It is often forgotten that nearly half of Pipes's article is devoted to a characterization of American doctrine, his purpose being to contrast it unflatteringly with Soviet doctrine.

United States have been closer to those of the Soviet Union than to those recommended by the arms control theorists. That is to say, the United States too found counterforce, first-strike doctrines to be preferable to, more compatible with its interests than, the pristine pursuit of mutual deterrence as prescribed by stability theory.

Despite the counsel of the arms control theorists, American doctrine has almost always had a first-strike component to it. Indeed, not only has this been the case, contrary to common assumptions about US doctrine, but it has been openly and explicitly stated, over many years, that this is so. Massive retaliation - the official doctrine during the 1950s, when the new thinking about arms control first arose - was avowedly a first-strike doctrine. It proclaimed that the United States might initiate nuclear use in response to any communist provocation anywhere. As Bernard Brodie commented in his critique of massive retaliation, "This is, of course, preventive war, save that we have waited for an excuse, a provocation."<sup>61</sup>

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<sup>61</sup> Brodie, Strategy and the Missile Age, p. 257. Brodie goes on to suggest that if one is going to adopt a preventive war strategy, it would be better to seek absolute surprise rather than attacking in the face of provocation. As he put it, "it is to say the least a

Similarly, David Rosenberg writes of the early 1950s that "preventive war was implicit in some of the major policy

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gamble to put into enemy hands the whistle for signalling the beginning of one's preventive attack." The subject of pre-1960 American attitudes toward preventive war has a somewhat tangled history. There is evidence that the notion was considered and rejected; NSC-68 did this explicitly in 1950. Scott D. Sagan, "SIOP-62: The Nuclear War Plan Briefing to President Kennedy," International Security 11 (Summer 1987): pp.30-31 (Note 27), cites indications of this. On the other hand, Marc Trachtenberg, in "A 'Wasting Asset'? American Strategy and the Shifting Nuclear Balance, 1949-1954," (unpublished ms., September 19, 1987) finds considerable evidence in the documentary record (including previously declassified materials) of interest in and advocacy of preventive war in the late 1940s and early 1950s, within as well as outside of government. Eisenhower himself, in a memorandum to Secretary of State Dulles, noted in September 1953 that if it appeared that the nuclear competition would remain intense, costly, and dangerous for an indefinite period, then "In such circumstances, we would be forced to consider whether or not our duty to future generations did not require us to initiate war at the most propitious moment that we could designate." (Emphasis in original.) [p. 33] (On other occasions however, Eisenhower publicly disavowed the idea. See John Gaddis, Strategies of Containment, p.149.) Two recent studies of the Quemoy and Matsu crisis of 1954-1955 indicate, using newly available sources, that the Eisenhower administration was truly prepared to use nuclear weapons in some circumstances (against China, if not the USSR). See Gordon H. Chang, "To the Nuclear Brink: Eisenhower, Dulles, and the Quemoy-Matsu Crisis," and H.W. Brands, Jr., "Testing Massive Retaliation: Credibility and Crisis Management in the Taiwan Strait," both in International Security 11 (Spring 1988): pp. 96-112 and 124-151, respectively. While the role of preventive war in American thinking and policy has yet to be fully explicated, it seems clearly wrong, on the basis of available evidence, to suggest as Jan Lodal does that it was "largely unthinkable." See his "Deterrence and Nuclear Strategy," Daedalus 109 (Fall 1980): p. 155.

deliberations of the time."<sup>62</sup>

The idea was to use the threat or risk of American first use of nuclear weapons to deter Soviet and communist aggression or adventurism, not only in Europe but around the world.<sup>63</sup> While massive retaliation did not not claim that the United States surely would use nuclear weapons, it sought to plant the idea that it might, in unpredictable circumstances, do so; the uncertainty about how the United States would react, about whether it would employ nuclear weapons or not, was thought to provide a deterrent effect that might stay the hand of a communist leader contemplating aggression. Naturally, to be effective, this required convincing America's potential adversaries that it really would initiate nuclear war under some (unspecified) conditions. This task was rendered less difficult by the effort of the Strategic Air Command (SAC) to acquire forces

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<sup>62</sup> Rosenberg, "The Origins of Overkill," p. 33.

<sup>63</sup> For discussion of massive retaliation, see Gaddis, Strategies of Containment, pp. 146-150; Samuel P. Huntington, The Common Defense: Strategic Programs in National Politics (New York: Columbia University Press, 1961), pp. 73-84; Freedman, The Evolution of Nuclear Strategy, pp. 76-90; Richard Smoke, National Security and the Nuclear Dilemma: An Introduction to the American Experience (New York: Random House, 1984), pp. 72-75, 85-94. The most extensive treatment is probably Samuel Wells, "The Origins of Massive Retaliation," Political Science Quarterly 96 (Spring 1981): pp. 31-52.

sufficient to allow it to strike "war-winning blows."<sup>64</sup> In its formative early years, in short, America's strategic nuclear doctrine was considerably at odds with the conceptions that eventually came to define the modern theory of arms control; naturally, it is not surprising that American policy failed to adhere to ideas that had yet to be formulated, but this early doctrinal history is important nevertheless because it established patterns of behavior and preference that would endure long into the future and would eventually conflict with arms control. From the outset, then, US strategic policy was oriented in ways destined to conflict with the modern theory of arms control.

This is all the more true when one takes into account the early and persistent American interest in preemption. By the end of the Truman years, Rosenberg reports, "a series of targeting categories had been approved which emphasized preemption of Soviet nuclear capability."<sup>65</sup> The growing body of archival evidence on the evolution of US strategic doctrine indicates that interest in preemption continued at least two decades beyond the end of the Truman Administration. Preemption was considered

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<sup>64</sup> Rosenberg, "The Origins of Overkill," p. 36.

<sup>65</sup> Rosenberg, "The Origins of Overkill," p. 25.

vital; blunting a Soviet attack, Eisenhower believed, was "first priority."<sup>66</sup> SAC Commander, General Curtis LeMay, commented in a classified briefing in 1954, "I believe that if the US is pushed in the corner far enough we would not hesitate to strike first."<sup>67</sup> As Rosenberg concludes on this point, "By the time Eisenhower left office, the Strategic Air Command had been preparing and training for nearly a decade not only for massive retaliation but for massive preemption. US forces were routinely sized toward the objective of neutralizing Soviet nuclear forces...."<sup>68</sup>

We know, furthermore, that the first integrated nuclear war plan (known as the Single Integrated Operational Plan, or SIOP), SIOP-62, which was formulated at the very end of the Eisenhower Administration and inherited by the Kennedy Administration, similarly

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<sup>66</sup> Rosenberg, "The Origins of Overkill," p. 34.

<sup>67</sup> From "Memorandum: Op36C/jm, March 18, 1954," reprinted in David Alan Rosenberg, "'A Smoking Radiating Ruin at the End of Two Hours:' Documents on American Plans for Nuclear War with the Soviet Union, 1954-1955, International Security 5 (Winter 1981/1982): p. 27. See also the discussion of the preemption issue in Rosenberg's introduction to the documents, pp. 12-16. He concludes that the guidance provided to SAC was did not clearly commit the US to preemption, but did not preclude it, and that SAC continued to plan preemptive attacks.

<sup>68</sup> Rosenberg, "The Origins of Overkill," p. 66.

incorporated the possibility of US preemption. In the briefing that was given to President Kennedy on the nuclear war plan, it was specifically noted that, while it could be the basis of a retaliatory strike, it could also be "executed as a total plan...as a preemptive measure." Moreover, the President's attention was drawn to the fact that limiting damage to the United States in the event of nuclear war depended critically on the decision to preempt or not: "Clearly the most important factor affecting damage to the US is that of whether the US acts in retaliation or preemption."<sup>69</sup> The glimpses that are now available of SIOP-62 are critically important evidence because it served at the basis of American nuclear war planning at least into the mid-1970s. (Writing in December 1974, Desmond Ball stated that "few substantive changes have ever been made to the 1962 SIOP.")<sup>70</sup> The documentary record for more recent

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<sup>69</sup> "JCS 2056/281: SIOP-62 Briefing, 13 September 1961," reprinted in International Security 11 (Summer 1987): pp. 50-51. See also Sagan's accompanying essay, "SIOP-62: The Nuclear War Plan Briefing to President Kennedy," which emphasizes that the SIOP-62 briefing did not claim that the United States could disarm the Soviet Union, although it could eliminate a substantial portion of its force. Consequently, a preemptive attack would bring with it grave risks. See pp. 29-35.

<sup>70</sup> From Ball's extensive, and extremely useful, survey of US doctrine, Deja Vu: The Return to Counterforce in the Nixon Administration, California

years is unavailable, but one suspects that a doctrinal instinct of several decades standing may well have survived into the contemporary period.<sup>71</sup>

Nor would this be surprising (indeed, it would seem likely) because of another dimension of American interest in first-strike doctrines: the NATO commitment to nuclear first-use. NATO formally adopted a nuclear-oriented doctrine in December 1954,<sup>72</sup> and has asserted continuously ever since that it will initiate nuclear strikes if necessary in the event of a Soviet conventional attack on NATO Europe. As with massive retaliation, this position has been and continues to be publicly articulated; and if it is to be an effective

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Seminar on Arms Control and Foreign Policy, December 1974, p. 16. Ball relied not only on published sources but on interviews with high officials in forming his judgments.

<sup>71</sup> Former CIA Director, Admiral Stansfield Turner, explicitly identifies preemption as a part of current US strategic doctrine in a recent analysis of the implications of reductions along the lines discussed in the START negotiations. He suggests that the operational requirement for preemption has driven up the number of US warheads and that this requirement for large numbers of counterforce-capable warheads will be difficult to fulfill in a 50% reductions regime. For this reason (and because he believes it would be difficult for an American president ever to actually order the launch of a preemptive first strike, Turner advocates that the US commitment to preemption be jettisoned. See his very useful article, "Winnowing Our Warheads," New York Times Magazine, March 27, 1988, pp. 46, 68-70.

<sup>72</sup> See Huntington, The Common Defense, pp. 80-81.

deterrent to aggression it requires that the USSR have some respect for the possibility that NATO will do as it says. That NATO is committed to a first-use doctrine is made clear by the intense criticism the doctrine recurrently attracts, and by the firm rejection by NATO officialdom of pleas to adopt no first-use.<sup>73</sup>

Because the no first-use debate is often framed narrowly in terms of theater nuclear weapons deployed in

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<sup>73</sup> See, notably, McGeorge Bundy, George F. Kennan, Robert S. McNamara, and Gerard Smith, "Nuclear Weapons and the Atlantic Alliance," Foreign Affairs 60 (Spring 1982): pp. 753-768, which reopened heated debate on this subject by advocating that NATO adopt a no first-use policy (and which notes "A major element in every [postwar] doctrine has been that the United States has asserted its willingness to be the first - has indeed made plans to be the first if necessary - to use nuclear weapons to defend against aggression in Europe." [p. 754] Another prominent advocate is Morton H. Halperin, Nuclear Fallacy: Dispelling the Myth of Nuclear Strategy (Cambridge, Ma.: Ballinger, 1987), especially pp. 89-114. Important statements of the other side of the debate are Karl Kaiser, Georg Leber, Alois Mertes, and Franz-Josef Schulze, "Nuclear Weapons and the Preservation of Peace: A Response to an American Proposal for Renouncing the First Use of Nuclear Weapons," Foreign Affairs 60 (Summer 1982): pp. 1157-1170; and John J. Mearsheimer, "Nuclear Weapons and Deterrence in Europe," International Security 8 (Winter 1984/1985): pp. 19-46. For an extensive discussion of the issues raised by the no first-use question, see John D. Steinbruner and Leon V. Sigal, eds., Alliance Security: NATO and the No-First-Use Question, (Washington D.C.: The Brookings Institution, 1983).

Europe,<sup>74</sup> the connection between NATO doctrine and US strategic requirements is frequently overlooked or ignored in the public discourse on the issue. But the connection is quite clearly evident, nevertheless, in the professional literature on the subject; for different reasons, both supporters and critics of NATO doctrine draw attention to this linkage.

Critics of the first-use doctrine do so to emphasize the risks and dangers associated with the acceptance of the doctrine: it exposes the United States to heightened risks of nuclear war because the NATO commitment might require the launching of a strategic nuclear attack. Thus Morton Halperin, in his argument that the first use doctrine be abandoned, observes,

If a Soviet conventional attack appeared to be succeeding, NATO might introduce short-range nuclear artillery or long-range theater weapons to attack assets in the enemy rear, such as second-echelon forces. If their use did not turn the tide, strategic nuclear weapons targeted on the Soviet Union would be launched.<sup>75</sup>

Earl Ravenal, in his attack on the US commitment to NATO doctrine, highlights the implications for US strategic

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<sup>74</sup> See, for example, Kaiser, et. al., "Nuclear Weapons and the Preservation of Peace," p. 1158, in which the authors seek to delink the no first-use debate from the question of an American strategic nuclear first strike.

<sup>75</sup> Halperin, Nuclear Fallacy, p. 94. (Emphasis added.)

requirements of needing to be able to fulfill the NATO nuclear commitment:

To grasp the rationale of counterforce, it is necessary to understand the logic of extended deterrence. For ultimately, it is its adherence to alliance commitments that skews United States' strategy toward counterforce weapons and targeting and warps American doctrines of response toward the first use of nuclear weapons....<sup>76</sup>

The risks that critics of first use worry about derive,

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<sup>76</sup> Earl C. Ravenal, "Counterforce and Alliance: The Ultimate Connection," International Security 5 (Spring 1982): p.26. Ravenal argues that extending deterrence to NATO Europe requires effective counterforce capability beyond what is feasible, and he therefore recommends that the NATO commitment be jettisoned. He greatly emphasizes the contradiction between the demands of extended deterrence and the conditions of stability: "There is an essential tension, not an easy complementarity, between achieving safety for Americans through crisis stability and achieving safety for the objects of American protection in the world through deterrent stability." [p. 43] Ravenal also addresses these issues in "No First Use: A View from the United States," Bulletin of Atomic Scientists 39 (April 1983): pp. 11-16; and briefly in "Under the Nuclear Gun: Doing Nothing," Foreign Policy 39 (Summer 1980): especially pp. 34-39. A different, and rather less dramatic solution to the allegedly intractable problem of extending deterrence with nuclear weapons is offered by a distinguished group of arms control advocates in a jointly authored article. M. Bundy, M. Halperin, W. Kaufmann, G. Kennan, R. McNamara, M. O'Donnell, L. Sigal, G. Smith, R. Ullman, and P. Warnke, in "Back From the Brink," The Atlantic, August 1986, pp. 35-41, complain that "It has long been the policy of the United States to retain the option of initiating use of nuclear weapons to defend its security and that of its allies." In order to eliminate the dangers and to circumvent the incredibility of this policy, they recommend that NATO and the United States embrace the assumption that the US will never initiate the use of nuclear weapons; it should rely instead, they believe, on more robust conventional capabilities.

of course, from the enormous growth of Soviet strategic nuclear capability, which makes it dangerous - to say the least - for the United States to contemplate initiating a nuclear strike on behalf of its European allies. But this reality has not led to the abandonment of the first use doctrine, nor, in the opinion of some analysts, is it ever likely to. Warner Schilling has said, for example,

It is clear that parity has not led the United States to back away from plans and preparations for the first use of nuclear weapons in the defense of Western Europe. And the continued interest of the United States in coupling its security with that of Western Europe; the continued willingness of the Europeans to tie their security to the deterrent effect of the American nuclear threat, to the relative exclusion of worries about the consequences if deterrence should fail; and the continued unwillingness of both Americans and Europeans to spend the money required to make major changes in their present defense posture - all suggest that the future military policies of the United States and its allies are far more likely to build on those of the present than to depart from them in any significant degree.<sup>77</sup>

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<sup>77</sup> Warner R. Schilling, "US Strategic Nuclear Concepts in the 1970s: The Search for Sufficiently Equivalent Countervailing Parity," International Security 4 (Fall 1981): pp. 62-63. (Emphasis added.) Schilling, more than most, believes that US nuclear guarantees can be credible even in the context of enormous Soviet capability; as he somewhat guardedly puts it, "the credibility of the threat ought...to be about as good as it ever was...." [p. 63] But for a spirited dissent on this point, see Edward Luttwak's discussion of what he calls "de facto denuclearization," in his "An Approaching Postnuclear Era?," The Washington Quarterly 10 (Winter 1988): pp. 5-15. Luttwak claims that "the political implausibility of the various US extended deterrence guarantees offered to dissuade non-nuclear attack has

If one believes that the American nuclear guarantee to NATO Europe is necessary, desirable, and perhaps even inescapable, then it is natural to be concerned with the extent to which American strategic doctrine and capabilities live up to the extended deterrence requirements. Such concern is a hallmark of champions of NATO's first use doctrine.

For several reasons, proponents of current NATO doctrine assert the linkage to American strategic forces, if anything, even more strongly than do the critics. For one thing, it can buttress NATO's deterrent posture (and thereby reassure allies about the coupling of America's strategic forces to the defense of Europe while frightening the Soviets). Former Supreme Allied Commander in Europe, General Bernard Rogers, for example, has noted "the grave risk of rapid escalation to a general nuclear exchange which could result from the first use of theater nuclear weapons..." and emphasizes the deterrent effect of such risks:

[Soviet] uncertainty as to whether employment of theater nuclear weapons would soon escalate to a

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been gradually exposed, much as high ground is revealed by receding waters....The apparent US readiness to use nuclear weapons against a non-nuclear invasion was greater in the past than it is now, and it is almost certainly greater now than it will be in the future." [p. 12]

strategic exchange is surely as great as ours. I cannot believe that there is any Soviet leader, current or future, who would wish to expose his people to the potential destruction of such an exchange.<sup>78</sup>

Paul Nitze likewise notes the linkage between US strategic nuclear forces, theater nuclear forces, and conventional forces in Europe, commenting that "the balance at each significant level of potential violence...affects and is affected by the balance at higher and lower levels."<sup>79</sup> Or, as another analysis put it, strategic forces serve as "the ultimate deterrent" in a "continuous ladder of escalation options, from conventional forces through theater nuclear forces to

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<sup>78</sup> General Bernard W. Rogers, "The Atlantic Alliance: Prescriptions for a Difficult Decade," Foreign Affairs 60 (Summer 1982): pp. 1151, 1153. General Rogers further believes that NATO's conventional forces are so inadequate that its nuclear deterrent efforts are essential and that early nuclear use is quite likely if war should come in Europe. See pp. 1151-1152. Similarly, Jeffrey Record, while critical of NATO's theater nuclear posture in a number of respects, observes that long-range theater nuclear forces "represent a potentially significant adjunct to US strategic systems...." In his NATO's Theater Nuclear Force Modernization Program: The Real Issues (Cambridge, Ma.: Institute for Foreign Policy Analysis, November 1981), p. 74.

<sup>79</sup> Paul Nitze, "The Relationship of Strategic and Theater Nuclear Forces," International Security 2 (Fall 1977): p. 122. Nitze also draws attention, with apparent approval, to the Soviet view that the strategic nuclear balance constitutes "the fulcrum upon which all other means of influence, coercion, or deterrence depend." [p. 123.]

strategic nuclear forces."<sup>80</sup>

A second reason why supporters of NATO doctrine are attentive to the linkage between the commitment to first use and US strategic doctrine is because of a concern that the United States has not provided itself with sufficient first use options to fulfill its commitment. This has been a particular feature of Colin Gray's advocacy of a truly war-fighting, war-winning nuclear strategy for the United States. As he explains,

American strategic forces...are intended to support US foreign policy, as reflected, for example, in the commitment to preserve Western Europe against aggression. Such a function requires American strategic forces that would enable a president to initiate strategic nuclear use....<sup>81</sup>

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<sup>80</sup> Jean D. Reed, NATO's Theater Nuclear Forces: A Coherent Strategy for the 1980's (Washington D.C.: The National Defense University, 1983), p. 11. See also, for a good overview of these issues, J. Michael Legge, Theater Nuclear Weapons and the NATO Strategy of Flexible Response, Rand Corp., R-2964-FF, April 1983.

<sup>81</sup> Gray and Payne, "Victory is Possible," p. 20. This theme represents one of the foundations of his thinking on nuclear strategy. On another occasion, for example, he wrote, "nuclear weapons can deter with some reliability, particularly on behalf of far-distant allies, only if US and Soviet leaders anticipate some scale of military, and hence political, success following US nuclear employment. If nuclear use can produce only defeat, why would a tolerably rational US government ever have operational resort to them?...The most vital of US foreign policy interests around the periphery of Eurasia can be preserved, in extremis, only by nuclear threats....But how can a United States with a defenseless homeland threaten credibly to take the most severe of risks on behalf of others? Only a United States that has

Those who share Gray's views argue that America's extended deterrence commitments require it to take all measures (including acquisition of counterforce and of ballistic missile defense) that hold promise of reducing its exposure to nuclear attack and thereby make nuclear use something other than suicidal. Writes another analyst of this persuasion,

US vulnerability to Soviet nuclear fire is incompatible with its extended deterrence commitment to escalate to the use of strategic nuclear weapons. How could a US president rationally escalate a conflict, in Europe for example, into a strategic nuclear conflict that could well result in 160 million US casualties?...To base a deterrence threat on an act that clearly would be irrational and self-destructive is to have a manifestly incredible deterrent.<sup>82</sup>

Such analysts concede that the United States has to a considerable extent followed a warfighting doctrine, but they believe it has not gone far enough.

A third strand of pro-first use argumentation raises this issue to illustrate the incompatibility of mutual deterrence with America's security requirements. Albert

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a full nuclear campaign story of national survival would be fitted adequately to bear the kind of extended-deterrence burdens that are accepted at present." See his "Warfighting for Deterrence," in Stephen Cimbala, ed., National Security Strategy: Choices and Limits (New York: Praeger, 1984), pp. 196, 198-199. (Emphasis added.)

<sup>82</sup> Keith B. Payne, "The Deterrence Requirement for Defense," The Washington Quarterly 8 (Winter 1986): p. 140.

Wohlstetter, for example, has severely criticized advocates of stable deterrence for neglecting this reality. Many in Europe and the United States, he writes,

seem to have forgotten that for excellent reasons the United States promises to respond to a Soviet nuclear attack even if it is directed solely at an ally, and promises to do so with a force that has not itself been attacked. Viewed only in the narrow context of the binary relation between the United States and the Soviet Union, that would be a first strike.

Because the condition of mutual deterrence, by definition, makes such a first strike both unprofitable and potentially suicidal, it does not allow meaningful nuclear guarantees to be extended to allies. This situation, Wohlstetter continues, would "erode the credibility of any US response and so undermine the ability of the United States to deter any Soviet attack confined to an ally...."<sup>83</sup>

What can be seen clearly, then, is that a number of analysts, of differing strategic orientations, and for different reasons, confirm the connection between NATO doctrine and American strategic nuclear requirements.

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<sup>83</sup> From his very interesting and important "Swords without Shields," The National Interest 8 (Summer 1987): pp. 38, 36. See also Desmond Ball's commentary in Deja Vu: The Return to Counterforce in the Nixon Administration, p. 18: "US NATO commitments make some counterforce targeting essential."

This squares with the indications of American interest in preemption. It follows logically that if one must, in some wartime circumstances, initiate a nuclear exchange, that a preemptive attack will be the most attractive option. And preemption in turn implies counterforce: striking first will hold little or no appeal if there is no prospect of reducing the adversary's force.<sup>84</sup> If this picture all fits together, one would expect to find that American nuclear targeting included coverage of Soviet nuclear capabilities.

And this is in fact the case. A growing volume of previously classified materials and studies of strategic targetting policy in more recent years overwhelmingly suggests that Soviet nuclear forces have always had a high priority as targets in the US nuclear war plan. The historical record shows that from the time the Soviet Union acquired a nuclear capability, the United States targeted it. As Rosenberg comments about the earliest period in which this was true, President Truman left to President Eisenhower "a pattern of strategic planning which made a first strike on the Soviet Union's nuclear capability the highest priority in the event of nuclear

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<sup>84</sup> Ravenal, in "Counterforce and Alliance," spells out the logic chain that leads from NATO to preemption to counterforce.

war."<sup>85</sup> Indeed, by August 1950, the Joint Chiefs of Staff had officially assigned first priority to the destruction of Soviet nuclear capability. This preference was reconfirmed by the Eisenhower Administration, and it played a major role in driving the large of American strategic nuclear forces during the 1950s.<sup>86</sup> These early years, it seems increasingly clear, set the stage for the entire postwar era in terms of US targeting priorities.

It is often believed otherwise because during the 1960s Secretary of Defense Robert McNamara came to champion the idea of mutual deterrence (as measured by "assured destruction" criteria). This implied a change in US nuclear targeting, to bring it into accord with the canons of stability theory. Much subsequent criticism of

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<sup>85</sup> Rosenberg, "The Origins of Overkill," p. 11. For a detailed reconstruction of the American approach to nuclear weapons in the immediate postwar era, see David Alan Rosenberg, "American Atomic Strategy and the Hydrogen Bomb Decision," Journal of American History 66 (June 1979): pp. 62-87. On the very early emergence of counterforce in US strategic policy, see Scott D. Sagan, "Change and Continuity in US Nuclear Strategy," in Michael Mandelbaum, ed., American Military Policy, (forthcoming). Sagan writes that "the blunting of Soviet capability to deliver an atomic attack...was the priority...for targeting purposes throughout the 1950s and was by no means a secret." [p. 13 of ms.]

<sup>86</sup> Rosenberg, "The Origins of Overkill," pp. 17, 34, 50.

US nuclear doctrine has implicitly or explicitly presumed that the embrace of mutual deterrence in the 1960s had a significant effect on American nuclear strategy. But, in operational terms, it did not. Rather, what happened was that there emerged a gap between US declaratory policy - that is, what its leaders said about the role of nuclear weapons in its military policy - and what is sometimes called its employment or action policy, which has to do with the actual plans for using nuclear weapons.<sup>87</sup>

McNamara's rhetoric about assured destruction did not alter the American commitment to strategic counterforce targeting. As one study of the evolution of American nuclear doctrine puts it, "Even during the sixties, when belief in the wisdom of such a policy was most

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<sup>87</sup> On the distinctions between the various components of nuclear strategy, see especially Desmond Ball, "US Strategic Forces: How Would They Be Used?," International Security 6 (Winter 1982/1983): pp. 32-33. Also on this point see Michael Nacht, The Age of Vulnerability: Threats to Nuclear Stalemate (Washington D.C.: The Brookings Institution, 1985), p. 88. Very informative on nuclear strategy in the McNamara years is Henry Rowen, "The Evolution of Strategic Nuclear Doctrine," in Martin, ed., Strategic Thought in the Nuclear Age, especially pp. 143-151. Commenting on the rise of assured destruction in American nuclear strategy, Rowen writes, "it was never proposed by McNamara or his staff that nuclear weapons actually be used this way." [p. 146] (Emphasis in original.) See also Henry Rowen, "Formulating Strategic Doctrine," in Report of the Commission on the Organization of the Government for the Conduct of Foreign Policy, Washington D.C.: USGPO, 1975, Vol. 4, Appendix K, pp. 219-234.

widespread, the United States did not adhere to a doctrine of mutually assured destruction."<sup>88</sup> Another assessment labels as myth "the long standing and persistent notion that the United States based its security solely on the threat to attack Soviet cities in the 1960s...."<sup>89</sup> And indeed, of SIOP 62, the formative document of the 1960s, it was said to President Kennedy, "The very great majority of targets now covered by the SIOP are military in nature."<sup>90</sup> Despite the widespread focus on assured destruction, the priorities contained in SIOP-62 did not change. As Desmond Ball has written of it, "Even during the depths of assured destruction it weathered possible substantive change."<sup>91</sup>

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<sup>88</sup> Aaron L. Friedberg, "The Evolution of US Strategic 'Doctrine' - 1945-1981," in Samuel P. Huntington, ed., The Strategic Imperative: New Policies for American Security (Cambridge, Ma.: Ballinger, 1982), p. 91.

<sup>89</sup> Sagan, "Change and Continuity in US Nuclear Strategy," p. 3.

<sup>90</sup> JCS 2056/281, "SIOP-62 Briefing, 13 September 1961," p. 50.

<sup>91</sup> Ball, Deja Vu: The Return to Counterforce in the Nixon Administration, p. 16. Additional evidence is provided by Marc Trachtenberg, who found, in an oral history interview, Air Force General Bruce Holloway's answer to the question: What role did McNamara's strategy of "assured destruction" play in the elaboration of the Single Integrated Operational Plan? Holloway, who served on the Joint Strategic Targeting Planning Staff, replied: "This is one place I can certainly say something nice

Thus, the common image of US strategic doctrine coming massively under the influence of the theory of mutual deterrence during the 1960s, thereby diverging dramatically from Soviet preference and practice<sup>92</sup>, and only gradually moving back in the direction of counterforce in more recent years, is inaccurate.

What one now finds in the literature is a pronounced emphasis on the continuity with which the United States has pursued a counterforce targeting doctrine. Scott

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about McNamary. He never reversed us...on the SIOP as it was presented to the JCS and as it was approved." Quoted in Trachtenberg's "The Influence of Nuclear Weapons in the Cuban Missile Crisis," p. 152n. Likewise, General LeMay has testified that the Kennedy Administration did not have an enormous impact on SAC operational orientations. Asked whether Kennedy forced any dramatic changes, Lemay replied, "The administration spouted new phrases and things of that sort, but as far as the Air Force was concerned, we had no radical change in thinking at all. We were all on the same track." Quoted in Richard H. Kohn and Joseph P. Harahan, "US Strategic Air Power, 1948-1962: Excerpts from an Interview With Generals Curtis E. LeMay, Leon W. Johnson, David A. Burchinal, and Jack J. Catton," International Security 11 (Spring 1988): p. 92.

<sup>92</sup> This dramatic contrast is often found in comparisons of Soviet and American doctrine. See for example, Pipes, "Why the Soviet Union Thinks It Could Fight and Win a Nuclear War;" and Ermath, "Contrasts in American and Soviet Strategic Thought." Lambeth, in "How to Think About Soviet Military Doctrine," emphasizes about Soviet doctrine the "marked contrast to prevailing US strategic orthodoxy." [p. 106] I should note that I am not arguing that Soviet and American doctrines are identical in every respect, only that there are substantial resemblances in a number of areas having to do with operational preferences.

Sagan, writing in 1987, concludes that "the US has since 1949 targeted Soviet nuclear forces."<sup>93</sup> Desmond Ball, emphasizing the durability of US targeting categories, comments,

American nuclear war plans have always included a wide range of types of targets - military forces, stockpiles, bases and installations; economic and industrial centers; political and administrative centers; and, after 1950, the Soviet nuclear forces. Despite the frequent and sometimes quite radical changes in avowed US strategic policies and targeting doctrines over the past three decades, these four general target types or categories have remained remarkably resilient in strategic nuclear war plans.<sup>94</sup>

This has become a commonly voiced refrain, often offered in nearly identical phrases. Thus, Warner Schilling writes that "American employment policy has always aimed at the destruction of military as well as non-military targets."<sup>95</sup> Donald Snow begins his discussion of the

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<sup>93</sup> Sagan, "Change and Continuity in US Nuclear Strategy," p. 31.

<sup>94</sup> Ball, "US Strategic Forces: How Would They Be Used?," p. 33. (Emphasis added.) Ball has repeatedly emphasized this point. Of the 40,000 targets in the SIOP, he wrote on another occasion, more than half are military, and "the destruction of these has always been a prime objective." See "Counterforce Targeting: How New? How Viable?," Arms Control Today 11 (February 1981): p. 7. See also Deja Vu: The Return to Counterforce in the Nixon Administration, p. 10. For extensive discussion of the targeting issue, see also Ball's Targeting for Strategic Deterrence, Adelphi Paper No. 185, London: IISS, 1983.

<sup>95</sup> Schilling, "US Strategic Nuclear Concepts," p. 60.

evolution of US strategic doctrine by observing that "Declaratory US nuclear strategy in the 1960s emphasized assured destruction...but the operational plan...has always contained significant counterforce options."<sup>96</sup> Aaron Friedberg concludes, "Soviet military forces, and especially their 'nuclear threat' forces, have apparently made up a majority of the designated targets against which American strategic nuclear weapons would be used in the event of war."<sup>97</sup> Likewise, Leon Sloss, who headed an important targeting study for the National Security Council in the late 1970s, claims "We have targeted Soviet military forces and leadership for decades - even during the time when Secretary McNamara emphasized assured destruction criteria."<sup>98</sup> Thus, while mutual deterrence unquestionably has been more prominent and influential in the United States than in the Soviet Union, the evidence seems increasingly clear that it did not dramatically alter US nuclear war plans or targeting

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<sup>96</sup> Donald M. Snow, The Nuclear Future: Toward A Strategy of Uncertainty (University, Alabama: The University of Alabama Press, 1983), p. 1.

<sup>97</sup> Friedberg, "The Evolution of US Strategic 'Doctrine'," p. 63.

<sup>98</sup> Leon Sloss and Marc Dean Millot, "US Nuclear Strategy in Evolution," Strategic Review 12 (Winter 1984): p. 26.

priorities.

Furthermore, the recent evolution of US strategic doctrine has further accentuated the need for counterforce targeting. The most visible refinements in American nuclear strategy over the past two decades, the "Schlesinger Doctrine" of the early 1970s and the "countervailing strategy" announced in 1980 (and formally codified in Presidential Directive 59, or PD-59 as it is often called), both emphasized the need for forces that could, in a precise and discriminating way, threaten Soviet forces and command and control installations (among other potential targets).<sup>99</sup> Because of the countervailing strategy, one who participated in its

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<sup>99</sup> On the Schlesinger Doctrine, see Ball, Deja Vu: The Return to Counterforce in the Nixon Administration, passim. For a very useful overview of the debate spawned by the Schlesinger Doctrine, see Ted Greenwood and Michael Nacht, "The New Nuclear Debate: Sense or Nonsense?," Foreign Affairs 51 (July 1974): pp. 761-780. As they point out, the debate, couched in terms of "targeting flexibility," was to a considerable extent about how much counterforce the United States needed to possess. On the countervailing strategy, an authoritative account by a participant in its formulation is Walter Slocumbe, "The Countervailing Strategy," International Security 4 (Spring 1981): pp. 18-27. Another important source on the genesis and contents of the countervailing strategy is Sloss and Millot, "US Nuclear Strategy in Evolution," especially pp. 23-27. Former Secretary of Defense Brown's public articulation of this strategy may be found in "Excerpts From Address on War Policy," New York Times, August 21, 1980. See also, for an overview of some of these developments, Schilling, "US Strategic Nuclear Concepts in the 1970s."

development has said, for example, "increased emphasis in US nuclear employment policy was given to the targeting of enemy military forces and political-military leadership."<sup>100</sup>

Indeed, both the Schlesinger Doctrine and the countervailing strategy were greeted with dismay by those in the arms control community who, mistakenly thinking that mutual deterrence dominated American operational preferences, believed that this drift in US thinking represented a step backward to destabilizing counterforce, war-fighting instincts.<sup>101</sup> But in fact these moves did not represent major shifts in US operational policy, in the sense that they did not introduce previously missing targeting categories or turn US targeting priorities upside down; rather they represented the latest manifestations of a long-standing

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<sup>100</sup> Sloss and Millot, "US Nuclear Strategy in Evolution," p. 25.

<sup>101</sup> See, for example, Herbert Scoville, "Flexible Madness," Foreign Policy 14 (Spring 1974): for criticism of the Schlesinger Doctrine. For a sample of such reactions to the countervailing strategy, see George C. Wilson, "US Shift in Nuclear War Strategy Evokes Some Shudders," Washington Post, August 13, 1980. It might be added that those who supported these doctrinal moves often viewed them as moves away from mutual deterrence as the basis of American strategic policy. See for one example among many, Irving Kristol, "The Quiet Death of the MAD Doctrine," Wall Street Journal, August 15, 1980.

and continuous American interest in and operational pursuit of counterforce options. As Walter Slocombe emphasized, the countervailing strategy "is not a radical departure from US strategic policy over the past decade or so. It is, rather, an evolutionary refinement and a recodification of the US strategic policy from which it flows...."<sup>102</sup> Or, as R. James Woolsey more explicitly expressed it, "the counterforce advocates have been winning the targeting debate, such as it is, for some time. PD-59 is just some new evidence of that."<sup>103</sup>

The effect of these doctrinal shifts is thus not to alter US employment policy, but rather to make US declaratory policy more closely reflect actual targeting priorities. Sloss explains it thus: "Since 1971, the public statements of senior US defense officials have increasingly brought declaratory policy in line with actual targeting policy. We have targeted Soviet military forces and leadership for decades....The United States now makes this policy explicit. Moreover, each administration in the past decade has taken concrete

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<sup>102</sup> Slocombe, "The Countervailing Strategy," p. 24. (Emphasis in original.)

<sup>103</sup> R. James Woolsey, "The Counterforce is With Us," Washington Post, August 21, 1980.

steps to make that targeting more effective."<sup>104</sup>

Furthermore, not only American nuclear strategy but also American nuclear forces reflect commitment to counterforce operations. Most of the major strategic modernization programs now being undertaken by the United States, including the MX missile, the Trident II submarine launched ballistic missile (SLBM) and the cruise missile (in both its air- and sea-launched versions), represent augmentations of US counterforce capability because each is highly accurate and therefore potentially effective against hardened Soviet targets. One recent survey of US strategic modernization programs concludes, for example, "The current modernization of US strategic nuclear forces displays one dominant characteristic - the wholesale dedication of those forces to a hard-target counterforce role."<sup>105</sup>

The character of American strategic doctrine and capabilities is central to understanding why the ideas of the arms control theorists fell on deaf ears among American policymakers. Those early theorists not only

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<sup>104</sup> Sloss and Millot, "US Nuclear Strategy in Evolution," p. 26. Similar emphasis may be found in Ball, "Counterforce Targeting: How New? How Viable?"

<sup>105</sup> Clausen, Krass, and Zirkle, In Search of Stability, p. 59.

prescribed, but also predicted and even assumed, that the United States would adopt (or had adopted) a deterrent strategy that did not require counterforce capabilities or first strike options. Wrote Henry Kissinger in 1956, for example, "Our strategic doctrine concedes the first blow to the other side...."<sup>106</sup> Hadley similarly wrote, "America is committed never to strike first...."<sup>107</sup> Morgenstern's voice joined the refrain: "We do not plan to attack the enemy...."<sup>108</sup> Brodie put into italics the "overriding consideration" that "the nation is committed to a deterrence policy....," making the retaliatory force the primary concern of nuclear policy.<sup>109</sup> Singer suggested that a wise American policy would assist the Soviet Union in rendering its forces less vulnerable, concluding that "if ours is not a first strike strategy, such a gesture could both immediately demonstrate our peaceful intentions and add considerably to the stability

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<sup>106</sup> Kissinger, Nuclear Weapons and Foreign Policy, p. 111.

<sup>107</sup> Hadley, The Nation's Safety and Arms Control, p. 18.

<sup>108</sup> Morgenstern, The Question of National Defense, p. 77.

<sup>109</sup> Brodie, Strategy in the Missile Age, p. 283. See also pp 300-301, where he reiterates the point.

of our stand-off."<sup>110</sup> And Schelling forthrightly stated that arms control "assumes deterrence as the keystone of our security policy...."<sup>111</sup>

These statements about American doctrine by the early theorists are peculiar, coming as they did the late 1950s and early 1960s when the United States and NATO had avowedly and publicly articulated first strike doctrines. But they are also important because they reveal a source of the optimism that these analysts had about the prospects for arms control. If the United States had no need or desire to strike first against Soviet forces, then it would cost it little or nothing to stabilize the nuclear balance. Indeed, given these perceptions of American doctrine, it appeared that the United States had nothing to lose and everything to gain by employing arms control to codify a stable environment; it would lose none of the options it required while removing possible Soviet incentives to strike first. One can see how these men, given their presumptions about American doctrine,

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<sup>110</sup> Singer, Deterrence, Arms Control, and Disarmament, pp. 117-118. Obviously, Singer's suggestion was based on the expectation that the United States did not have a first strike doctrine.

<sup>111</sup> Schelling, "Reciprocal Measures for Arms Stabilization," in Brennan, ed., Arms Control, Disarmament, and National Security, p. 167.

might have expected their ideas to fall on fertile ground, at least in the United States.

The point here, however, is that while the arms control theorists have had a much larger role to play in the strategic discourse in the United States, and while their ideas have influenced both debate and (sometimes) policy, in the end America's political and military leadership has more or less continuously rejected their doctrinal advice and preferred instead to pursue doctrines and capabilities that arms control theory says should be avoided. When combined with the character of Soviet doctrine over this same period, this reality means that the modern theory of arms control has been at odds with the strategic preferences of both superpowers.<sup>112</sup> It is little wonder, then, that arms control has been unable to play the role posited for it by the arms control theorists: it was designed to help create and

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<sup>112</sup> Since both superpowers have sought counterforce doctrines and capabilities, each has some reason to fear the first strike incentives of the other. This fact animates some of the concerns often voiced in the West about the continuing dangers of the nuclear competition. For example, Robert McNamara, among the most stridently alarmed, has written that "US and USSR reciprocal fears of first-strike vulnerability persist. They are real. And in a crisis, it matters what the other side believes...." In Blundering Into Disaster: Surviving the First Century of the Nuclear Age (New York: Pantheon, 1987), pp. 51-52.

sustain a strategic environment that is incompatible with the military policies chosen by the superpowers.

## Chapter 4

### Alternative Logics, Alternative Purposes

In the logic of stability theory, it was expected that what might materialize was the opposite of the strategic environment that actually emerged. This could happen, it was believed, because both nuclear superpowers would (or at least might) come to realize that their opponent's incentives to use nuclear weapons represented the greatest danger in a world in which both possessed large and (to some degree) survivable nuclear forces. Constructing an environment in which no such incentives, whether preventive or preemptive, existed accordingly would become a high aim of state, a central component of security policy, and arms control could play a substantial role, potentially even a determinative role, in helping to construct this environment. Since the formulation offered by arms control theory is not easily dismissible, but rather is both logical and plausible, the question that naturally arises is why this formulation proved not particularly attractive in the world of policy. Why did this turn out to be the path not taken?

A. Why Was Arms Control Theory Rejected By Military Policy?

There are a number of reasons why this turned out to be the case. A first, necessary part of the explanation, the enabling proposition, as it were, is that the evolution of technology has not precluded counterforce operations, and indeed, has over time repeatedly brought substantial counterforce possibilities into view. It was conceivable that some technological development, like the emergence of the nearly invincible fortress in an earlier century, would result in a strategic balance in which forces were practically invulnerable and incentives to attack consequently nil.<sup>1</sup> At the outset of the missile

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<sup>1</sup> There are two further points to be made about this observation. First, such an environment would not only have to exist, but also be correctly perceived in order to have the expected consequences. Much historical evidence suggests that this can by no means be taken for granted. Note, for example, Jack Snyder's comment about the divergence of perception and reality on the eve of World War I: "Military technology should have made the European strategic balance in July 1914 a model of stability, but offensive military strategies defied those technological realities, trapping European statesmen in a war-causing spiral of insecurity and instability." From "Civil-Military Relations and the Cult of the Offensive, 1914 and 1984," International Security 7 (Summer 1984): p. 108. Second, some analysts believe that, for all practical purposes, this nuclear environment does exist, evident force vulnerabilities notwithstanding, because

age, there was for a short time hope that this might be true of the ICBM: it initially appeared to be a weapon easy to protect (because it could be hidden, rendered mobile, or placed in hardened shelters) and difficult to destroy (because the early ICBMs were very inaccurate and hence not very effective against the forces of the other side). Further, in the age of single warhead missiles, the requirement to allocate two or more warheads per target for high-confidence counterforce attacks meant that the attacker disarmed himself faster than he disarmed his adversary!<sup>2</sup> Had technology stagnated at

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the destructive potential of the residual force of either side, even after the most effective conceivable first strike, is so enormous as to eliminate all incentive to attack in the first place; in this formulation, the great danger is the refusal of the policy elites within the superpowers to recognize or accept this fact. Clearly illustrative of this point is Wolfgang K.H. Panofsky, "The Mutual Hostage Relationship Between America and Russia," Foreign Affairs 51 (October 1973): pp. 109-118. Panofsky complains that critics of mutual deterrence "seem to imply that the mutual-hostage relationship...is a consequence of policy, and would therefore be subject to change if such policy were modified. Yet this relationship is a matter of physical fact and is thus grossly insensitive to any change in strategic policy." [p. 110]

<sup>2</sup> This, of course, is the world envisioned by Warren Amster in "Design for Deterrence," Bulletin of Atomic Scientists 12 (May 1956): pp. 164-165, as discussed in the previous chapter. There is recurrent hope of recapturing this relatively benign environment by moving back to a world of single warhead missiles. In 1983, for example, the Scowcroft Commission recommended that the United States move toward deployment of a single

that point, or had it been possible to codify such a technological environment in an arms control agreement, subsequent pursuit of counterforce and preemptive doctrines would have been fruitless because, however desirable they may have seemed to some, in reality such options would simply have been unavailable.

Instead, of course, the steady advance of technology - especially in terms of missile accuracy, multiple warhead capabilities, and warhead miniaturization (allowing higher yield warheads on multiple warhead missiles) - has preserved considerable room for counterforce operations. And consequently, while the achievement of a stable environment might have been easy, almost automatic, it turned out to be difficult and problematic. As Albert Wohlstetter has written, "For one superpower as against another, getting and keeping a

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warhead missile in the 1990s. The rationale: "From the point of view of enhancing...stability, the Commission believes that there is considerable merit in moving toward an ICBM force structure in which potential targets are of comparatively low value - missiles containing only one warhead. A single warhead ICBM, suitably based, inherently denies an attacker the opportunity to destroy more than one warhead with one attacking warhead." In Report of the President's Commission on Strategic Forces, p. 14. This idea has been championed by an array of significant political figures, including Senator Albert Gore and former Secretary of State Henry Kissinger. For a favorable discussion of the idea and its supporters, see "The Scowcroft Revolution," The New Republic, May 9, 1983, pp. 7-10.

responsible second strike force is feasible but hard. It requires thought, effort, and continuing realistic adjustments to technological change."<sup>3</sup> Implicit in this comment, obviously, is the judgement that technological change will recurrently cause forces to become vulnerable. Even if preventive incentives, which require some prospect of a successful disarming attack, do not arise, preemptive temptations, provoked by the existence of at least some vulnerable forces, will exist.

So technology, as a number of the arms control theorists feared, conspired against the easy or permanent achievement of a stable balance by keeping counterforce options available. But the existence of technological possibilities does not, of course, make inevitable the embrace of counterforce doctrines. In fact, given other doctrinal choices by the two superpowers, arms control itself could have played a role in circumscribing

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<sup>3</sup> Albert Wohlstetter, "The Case for Strategic Force Defense," in Johan Holst and William Schneider, Jr., eds., Why ABM? Policy Issues in the Missile Defense Controversy (New York: Pergamon Press, 1969), p. 122. (Emphasis added.) Further buttressing the point, Wohlstetter noted that early generation ICBMs depended for their protection on the inaccuracy of extant missile guidance systems, which meant that as accuracies improved ICBMs became vulnerable. See pp. 127-128. This was driven home during the 1970s when the modernization of the Soviet ICBM force caused alarm about the survivability of US forces.

technologies that were, by the standards of arms control theory, troubling. This is a considerable part of what the arms control theorists meant when they wrote about "managing the arms race," of steering it onto safer and away from more dangerous paths. As we have seen, what they had in mind was precisely the sort of qualitative arms control that would discriminate against technologies that would allow one or both sides to threaten the forces of the other. The failure to cope with destabilizing technologies is a considerable part of the larger failure of arms control to translate effectively from theory to practice.<sup>4</sup> (In fact, the failure of arms control to deal

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<sup>4</sup> The relationship between arms control and the pace and direction of technological change remains a prominent and vexing issue. There is substantial disagreement about whether it is feasible to use arms control to constrain military technology, and also whether it is desirable. Those who believe, for example, that American technological prowess provides the US with significant military advantage question the advisability of entering into agreements that limit it. For a recent comprehensive discussion, see William Bajusz, Deterrence, Technology, and Strategic Arms Control, Adelphi Paper No. 215, London: International Institute for Strategic Studies, 1987. For more on this issue, see Herbert Lin, "Military Capabilities, Technology, and Arms Control," Issues in Science and Technology (Summer 1987): pp. 73-80; and Bruce D. Berkowitz, "Technological Progress, Strategic Weapons, and American Nuclear Policy," Orbis 30 (Summer 1985). For a skeptical view of the value of constraining military technology via arms control, see Stephen J. Lukasik, "Necessity of Choice: Relationships Between New Technologies and Arms Control," in Uwe Nerlich, ed., Soviet Power and Western Negotiating Policies, Volume 2: The Western Panacea: Constraining

with destabilizing technological modernization has been a major lament of disappointed advocates and has motivated many a search for more effective alternative approaches.<sup>5</sup> Because technology might have been limited if the superpowers had preferred a different sort of strategic world, technological developments themselves, while a necessary part of the story, do not begin to adequately

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Soviet Power Through Negotiation (Cambridge, Ma.: Ballinger, 1983), pp. 215-242. The most systematic discussion of the fundamental issues is Karl Lautenschlager, "Controlling Military Technology," in Russell Hardin, John J. Mearsheimer, Gerald Dworkin, and Robert E. Goodin, eds., Nuclear Deterrence: Ethic and Strategy (Chicago: University of Chicago Press, 1985), pp. 319-338.

<sup>5</sup> For example, a central concern of the nuclear freeze that attracted so much attention several years ago was to stop the process of weapons modernization. As one of the formative developers of the freeze idea, Randall Forsberg, wrote, "The bilateral freeze would preclude the production of a new generation of 'counterforce' weapons...." See "A Bilateral Nuclear Weapon Freeze," Scientific American 247 (November 1982): p. 52. On the same point, see Harold Feiveson and Frank von Hippel, "The Freeze and the Counterforce Race," Physics Today (January 1983): pp. 36-49. Also relevant here is Martin Einhorn, Gordon Kane, and Miroslav Nincic, "Strategic Arms Control Through Test Restraints," International Security 7 (Winter 1983-1984): pp. 108-151, which provides a detailed discussion of the prospects for using limits on weapons testing to dampen or halt the "technological dynamic" they believed to be "fueling military growth." For a brief inventory of ideas about how qualitative improvements might be constrained, see Harvey Brooks, "Potentials for Curbing the Qualitative Arms Race," in Burton H. Weston, ed., Toward Nuclear Disarmament and Global Security: A Search for Alternatives (Boulder, Colorado: Westview Press, 1984), pp. 416-428.

explain the doctrinal outcome we have witnessed. Other factors must explain why it is that counterforce options have been pursued rather than eschewed.

There are several other considerations that I believe explain why most of those responsible for military policy, as well as a large percentage of the civilian strategists, have consistently rejected the doctrinal recommendations of the arms control theorists. It will be suggested that while stability theory sought to neutralize nuclear weapons, politically and militarily, in reality the superpowers have sought to exploit nuclear weapons in their political competition, to extend nuclear protection to allies, to satisfy more demanding conceptions of adequate deterrence, to accept alternative definitions of stability, and to provide some nuclear warfighting capability in order to limit damage should deterrence fail.<sup>6</sup> As we shall see, if and when policymakers incorporate these considerations into their

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<sup>6</sup> I recognize that each of these is a large and (to varying degrees) contentious subject. My aim here is not to provide a complete exegesis of, nor to assess the merits and demerits of, these various conceptions, but rather to sketch in broad contour the ideas that have triumphed over modern arms control theory in shaping policy. I write with the American debate primarily in mind, since it is in the American context that the ideas of the arms control theorists have had the largest impact, but some of the discussion that follows will be obviously translatable into the Soviet setting.

strategic thinking, the doctrinal edicts provided by stability theory are crowded out; they are incompatible with the doctrinal and force posture requirements mandated by these additional concerns. Stability theory is preoccupied with eliminating or minimizing incentives for nuclear use. Policymakers, however, have more than just that on their minds when they choose weapons and strategies. In what follows, we shall briefly examine in turn the strategic formulations with which stability theory has competed - and lost.

There is, first, the fact that nuclear weapons are inextricably bound up in the political competition between the superpowers, and there is always the temptation to attempt to use them to political advantage - behavior that has been routinely evident in the great powers of earlier eras. This is, of course, rendered difficult by the special character of nuclear weapons. As Robert Jervis puts it, "The most important consequence of the nuclear revolution follows from the linked but opposed facts that each side can protect its cities only with the cooperation of its adversary but that each can defend its interests only at some risk of catastrophic

war."<sup>7</sup> Running such risks has been an integral part of the diplomacy of the Cold War. As Malcolm Hoag has written, for example,

The game of 'brinkmanship' is one which we may hope to play in our foreign policy with greater restraint and subtlety in the future than in the past, but we cannot practice containment with playing it. The essence of the game is to demonstrate a willingness to risk paying for a particular foreign policy objective a price that is inordinately high if the probability of our being called upon to pay it is unity or anywhere near unity. By our resoluteness, of course, we expect to drive this probability down and hope to drive it to zero. But where national objectives are conflicting, both players cannot achieve this goal at the same time, which leaves an element of instability that can trigger war.<sup>8</sup>

Inasmuch as it is the fundamental aim of arms control to reduce or eliminate the risk of nuclear war, a tension thus automatically arises between arms control and nuclear weapons policy as soon as nuclear weapons are conceived as linked to the pursuit of the foreign policy interests of the state. One is then concerned not merely with the minimization of nuclear threats and risks, as is true in arms control theory, but with the manipulation of nuclear threats and risks in order to "win" crises or

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<sup>7</sup> Jervis, The Illogic of American Nuclear Strategy, p. 34. (Emphasis added.)

<sup>8</sup> Malcolm W. Hoag, "Some Complexities in Military Planning," World Politics 10 (July 1959): p. 556. (Third emphasis in original; others added.)

defend interests.<sup>9</sup>

Indeed, as we have seen, in the conceptual formulations that led to modern arms control theory, the presumptive end point was nuclear stalemate, the neutralization of nuclear weapons, the creation of an environment in which each nuclear superpower was assured that the other had no incentive or intention to launch a nuclear first-strike under any conditions. This end point is incompatible with a desire or a need to use nuclear weapons for political or military purposes. Thus, for example, it has been long and widely believed that for much of the nuclear age American nuclear advantage stayed the hand of Soviet adventurism. To the extent that this is true, or at least is believed, then nuclear stalemate, far from being desirable or even acceptable, is a clearly negative condition from the perspective of defending America's global interests. As one analyst puts it, many believe that "the US-Soviet strategic balance affects the likelihood of serious

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<sup>9</sup> Indeed, the manipulation of nuclear threats and risks for diplomatic purposes has been the subject of analysis in a number of important works on nuclear strategy. See, notably, Schelling, Arms and Influence, which includes a chapter devoted to "The Manipulation of Risk." For an overview of the theoretical literature and historical evidence on this subject, see Betts, Nuclear Blackmail and Nuclear Balance.

Soviet challenges to American commitments and the chances that such challenges will result either in Soviet victory or war."<sup>10</sup> In such worldviews, nuclear stalemate (also variously labelled in the literature as parity or equality) is not merely unacceptable but dangerous (and of course Soviet superiority, or the appearance thereof, is even worse).<sup>11</sup> The obvious fact, in short, that the superpowers are engaged in an intense political competition in which nuclear weapons have played a prominent role represents a major impediment to the mutual embrace of nuclear stalemate.<sup>12</sup>

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<sup>10</sup> Morgan, Deterrence: A Conceptual Analysis, p. 132.

<sup>11</sup> As Morgan notes, many Americans fear that parity or Soviet superiority are conducive to "a Soviet political-diplomatic offensive." See Deterrence: A Conceptual Analysis, pp. 133-134. These issues are treated at length in Betts, Nuclear Blackmail and Nuclear Balance, passim. See especially, pp. 206-207, where he discusses the "perils of parity."

<sup>12</sup> For a discussion of the intersection of political rivalry and nuclear weapons issues, see Marshall D. Shulman, "US-Soviet Relations and the Control of Nuclear Weapons," in Blechman, ed., Rethinking the US Strategic Posture, pp. 77-100. Shulman emphasizes (sadly, in his view) the extent to which Soviet-American political competition has interfered with what he calls the "rational management" of the strategic balance. See also Betts, "Nuclear Weapons," in Nye, ed., The Making of America's Soviet Policy, pp. 97-127, which surveys a number of relevant issues. For a very critical assessment of the employment of "who's ahead?" logics when thinking about nuclear weapons, see Steven Kull, "Nuclear Nonsense," Foreign Policy 58 (Spring 1985): pp. 28-52.

It is virtually impossible to reconcile the politically-motivated quest for advantage with the tenets of arms control theory. That theory was rooted in the notion that the dangers associated with nuclear weapons would transcend the political rivalries that separated the superpowers. But in reality this has not happened. Instead, as Richard Ned Lebow has complained, "neither superpower was ever reconciled to this vision of security [via mutual deterrence]; both sought instead to maximize their relative strategic advantage."<sup>13</sup> In contrast to the prediction and the requirement of arms control theory, in sum, the superpowers have sought not to negate but to exploit nuclear weapons.

A specific manifestation of this general observation constitutes a second component of any explanation of why the doctrinal advice of the arms control theorists was rejected: that is, the American commitment, noted above<sup>14</sup>, to defend its allies against conventional or nuclear attack with nuclear weapons if necessary. This "extended deterrence" commitment requires that the United

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<sup>13</sup> Lebow, Nuclear Crisis Management, p. 163.

<sup>14</sup> In documenting the American commitment to counterforce and its need for first-strike options, I have discussed the subject of NATO doctrine on pp. 43-50 above. I will recur briefly to this subject here to emphasize a different point.

States have the capacity to use nuclear weapons first<sup>15</sup>; indeed, for deterrent purposes, it must also declare (as it does in endorsing NATO doctrine) its willingness to use nuclear weapons first if the military situation calls for this. As Christoph Bertram has written, extended deterrence, "particularly as long as it has to make up for conventional defense deficits, relies on the credible potential for a nuclear first strike."<sup>16</sup> Or, as Walter

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<sup>15</sup> It is sometimes argued, more broadly, that not only America's NATO commitment in the nuclear age, but all alliance commitments in every age will require offensive doctrines if they are to be meaningful and have some hope of effectiveness. After all, how else can one go to the aid of an attacked ally? See, on this point, Scott D. Sagan, "1914 Revisited: Allies, Offense, and Instability," International Security 10 (Fall 1986): pp. 151-176, which argues that the "cult of the offensive" that existed before World War I was a consequence of strategic imperatives deriving primarily from the alliance commitments of the major powers. Sagan concludes that American decisionmakers in the nuclear age have preferred counterforce doctrines for the same reason. See especially p. 173, where Sagan emphasizes "the perceived need for counterforce options to enhance the credibility of NATO's first-use threat, which is required for extended deterrence...." But see also Jack Snyder's interesting reply to Sagan, "The Origins of Offense and the Consequences of Counterforce," International Security 10 (Winter 1986/1987): pp. 187-193, which argues that even in 1914, offensive doctrines were not always the most effective approach to assisting allies and that the instabilities associated with offensive doctrines suggest, particularly in the nuclear age, that every effort be made to avoid recourse to them.

<sup>16</sup> Christoph Bertram, "The Implications of Theater Nuclear Weapons in Europe," Foreign Affairs 60 (Winter 1981/1982): p. 306. See also, for a thorough discussion of the problems that attend America's nuclear guarantee

Slocombe has written in noting the controversies associated with NATO's nuclear policy, it embraces "a doctrine that inherently contemplates, if it does not count upon, first use of nuclear weapons...."<sup>17</sup>

Albert Wohlstetter has been particularly vigorous in repudiating the idea that the pursuit of stable mutual deterrence can in any way be appropriate for the United States given its commitments in Europe. Embracing stability, and thereby avoiding counterforce, he writes, "raises insoluble military and strategic problems for the alliance." In explicitly contrasting mutual deterrence versus nuclear guarantees to allies, Wohlstetter suggests that the former would "erode the credibility of any US response and so undermine the ability of the United States to deter any Soviet attack confined to an ally...." He further asserts,

A perfectly stable unconditional mutual deterrence between the United States and the Soviet Union would mean that the United States could not respond to, and therefore could not deter, a Soviet nuclear attack on

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to Europe, Gregory F. Treverton, "Managing NATO's Nuclear Dilemma," International Security 6 (Spring 1983): pp. 93-115.

<sup>17</sup> Walter Slocombe, "The United States and Nuclear War," in Blechman, ed., Rethinking the US Strategic Posture, p.24. Slocombe was referring in the quoted passage to first use in Europe, but in the same paragraph he make clear the connection to US strategic forces, identifying them as the "ultimate NATO deterrent."

any allied country....<sup>18</sup>

Similarly, Henry Kissinger has invoked such worries in the context of the debate over the agreement on intermediate nuclear forces. Supporters of NATO, Kissinger states,

have accepted as an article of faith that American nuclear weapons were needed to counterbalance Soviet conventional superiority....But a nuclear standoff puts the side that can escape defeat only by use of nuclear weapons at a clear disadvantage. When nuclear war loses its military rationale, the inevitable question arises whether any nation would risk national suicide for an ally - no matter how close their ties.<sup>19</sup>

The implication of these analyses is clear: the United States, because of its NATO commitment, needs doctrine and capabilities that give nuclear war a "military rationale," not an approach that seeks to completely neutralize nuclear weapons as a factor in superpower

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<sup>18</sup> Wohlstetter, "Swords Without Shields," pp. 34, 36, & 37. See also Colin Gray, "War Fighting for Deterrence," Journal of Strategic Studies 6 (March 1984): pp. 13-15. Gray writes, "The connection between the fairly steady drift towards a war-fighting theory of deterrence and overseas security commitments is as plain as it tends to be underacknowledged." [p. 15] Also relevant are Edward Luttwak, "The Problems of Extending Deterrence," in The Future of Strategic Deterrence, Adelphi Paper No. 160, London: IISS, 1980; and Betts's analysis of the difficulties of preserving credible first strike options in conditions of parity. See Nuclear Blackmail and Nuclear Balance, pp. 194-211.

<sup>19</sup> Henry A. Kissinger, "A New Era For NATO," Newsweek, October 12, 1987, pp. 57-58.

relations.<sup>20</sup>

As these illustrations suggest, so long as the United States wishes to extend nuclear guarantees to its allies and, more deeply, so long as NATO military strategy depends upon such guarantees, there will be a powerful rationale for rejecting the doctrinal prescriptions of the arms control theorists and pursuing instead those made imperative by alliance considerations. To be sure, not all observers accept the counterforce-alliance linkage as inevitable or even as compelling.<sup>21</sup> But for well more than three decades now, alliance considerations have driven American policymakers in the direction of counterforce doctrines and first strike options; in

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<sup>20</sup> This tradeoff was not entirely lost on the early arms control theorists. Osgood, for example, in the somewhat different jargon of the period, commented as follows: "It is not clear that the Eisenhower Administration...took account of the tendency of the stability of...deterrence to make active [i.e., extended] deterrence unstable." In "Stabilizing the Military Environment," p. 31. The early theorists were thus not blind to the problem; they simply thought that the opposite choice - stability over alliance rather than alliance over stability - might (or should) predominate.

<sup>21</sup> See, for example, Robert McNamara, "The Military Role of Nuclear Weapons: Perceptions and Misperceptions," Foreign Affairs 62 (Fall 1983): pp. 59-80, in which he emphatically denies that nuclear weapons have any utility in the defense of NATO except insofar as they deter nuclear attack on the United States. Halperin, in Nuclear Fallacy: Dispelling the Myth of Nuclear Strategy, pp. 89-114, argues that NATO can find security policies that are less dependent on nuclear threats.

policy terms this, and not the body of thought provided by the arms control theorists, has been the prevailing wisdom.

Concerns about the political-military utility of nuclear weapons and the prominence of extended deterrence among the priorities on the American security policy agenda are two powerful reasons why the thinking of the arms control theorists has not been more widely accepted as the governing criteria for American strategic policy. There are, however, other considerations that have also weighed heavily against stability theory as the basis for policy.

The third element in understanding the rejection of the doctrinal advice of the arms control theorists has to do with the existence of a dispute about the requirements of deterrence.<sup>22</sup> Stability theory, as we

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<sup>22</sup> My understanding of this issue has profitted from the work of Charles Glaser, particularly his chapter, "The Requirements of Deterrence Debate," from his forthcoming book, Analyzing Strategic Choices. Also relevant to this discussion are: Robert A. Levine, The Arms Debate (Cambridge, Ma.: Harvard University Press, 1963), which is probably the first sustained effort to analyze alternative schools of thought; Michael Krepon, Strategic Stalemate: Nuclear Weapons and Arms Control in American Politics (New York: St. Martin's, 1984), which sees paralysis emerging from the hawk-dove dichotomy on a number of key issues relating to strategic arms control; and Lawrence Freedman, The Evolution of Nuclear Strategy, especially pp. 331-395, in which he analyzes alternatives to pure mutual deterrence. A concise survey of some

have seen, had at its base a very simple model of deterrence, in which the possession of any sizable retaliatory force was deemed sufficient to deter a rational adversary. In the abstract, the ideal force on each side was unable to threaten the strategic forces of the other, which meant that by definition and by default other, unprotected, targets must be the intended victims of any retaliatory strike. While it was not inevitably necessary that these targets be cities (since conventional military forces or remote industrial facilities could be struck), it was generally presumed of this approach to nuclear strategy that it measured deterrent effect by reference to threatened destruction to the adversary's society. Given the enormous destructiveness of nuclear weapons and the near-total vulnerability of cities to nuclear attack, the requirements of deterrence in this formulation are easy

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important lines of debate is Martin J. Hillenbrand, "Strategic Forces and Deterrence," in Paul Diehl and Loch Johnson, eds., Through the Straits of Armageddon: Arms Control Issues and Prospects (Athens, Georgia: University of Georgia Press, 1987), pp. 49-73. A useful discussion of the basic divide in nuclear strategy may be found in Spurgeon M. Keeny, Jr. and Wolfgang K.H. Panofsky, "MAD Vs. NUTS: The Mutual Hostage Relationship of the Superpowers," Foreign Affairs 60 (Winter 1981/1982): pp. 287-304, which contrasts a pure deterrence-based strategy (mutual assured destruction) with a war-fighting strategy (which they somewhat awkwardly dub nuclear utilization target selection - NUTS).

to meet and, importantly, do not require counterforce capability.<sup>23</sup>

For several reasons, this pristine approach to deterrence has been found wanting by many strategic analysts and by most American defense policymakers. The alternative formulations that are offered share one common feature: they require the possession of at least some, if not considerable, counterforce capability for deterrent purposes, and hence represent moves away from the strategic environment desired by stability theory. One can identify at least five ways of conceiving of the requirements of deterrence that conflict with the traditional stability theory approach to deterrence.

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<sup>23</sup> For a clear expression of this point, see Robert Jervis, "Why Nuclear Superiority Doesn't Matter," Political Science Quarterly 94 (Winter 1979/1980). Jervis writes, "The healthy fear of devastation, which cannot be exorcised short of the attainment of a first strike capability, makes deterrence relatively easy." [p. 617-618] See also Benjamin Lambeth, "Deterrence in the MIRV Era," World Politics 23 (January 1972): especially p. 228: "Until military technology can devise a truly effective and credible means of neutralizing an adversary's deterrent force, the persistence of residual second-strike capabilities in the possession of each superpower, the continued uncertainty of both regarding the probability of success a first strike would have, and the continued unwillingness of either to place its society's livelihood on the scale in an attempt to find out, will all tend to preserve stability as a 'systemic' characteristic of the East-West nuclear balance." For a skeptical analysis of such views, see Francis Hoebler, "How Little is Enough?," International Security 2 (Winter 1978-1979): pp. 53-73.

1. War-winning deterrence. The clearest (and the most extreme repudiation of the tenets of stability theory) argues that the best way to deter Soviet nuclear attack is to be able to win a nuclear war.<sup>24</sup> After all, this logic suggests, the Soviet leadership is very unlikely to initiate a war that it is likely to lose.<sup>25</sup>

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<sup>24</sup> For a thorough discussion, see the chapter on "War-Winning Deterrence," in Paul Stockton, Strategic Stability Between the Superpowers, Adelphi Paper No. 213, London: IISS, Winter 1986, pp. 55-63. As Stockton notes, if the United States possessed a war-winning capability, then "In launching a massive strategic attack, the USSR would simply invite its own defeat." [p. 55]

<sup>25</sup> Essentially, this is a replication at the nuclear level of the more general proposition that statesmen confronting the war-or-peace decision will be highly sensitive both to the anticipated costs of a war and to the perceived likelihood of success. See, for example, John J. Mearsheimer, Conventional Deterrence (Ithaca, New York: Cornell University Press, 1983), pp. 30, 58, 63-65. In the realm of conventional weapons, Mearsheimer argues, deterrence is likely to fail when a potential attacker believes he has found a way (in the form of a military doctrine) to achieve a quick victory at relatively low cost. Obviously, possessing the ability to persuade such an attacker that he will lose the war he contemplates starting is a very effective way of deterring his attack. Applied to the nuclear environment, this logic is similarly unassailable on theoretical grounds, but is called into question by those who doubt that the difference between "winning" and "losing" is very meaningful in a context in which both sides possess devastating retaliatory forces. Recall Jervis, The Illogic of American Nuclear Strategy, pp. 26-27, on this point. In the "stable mutual deterrence" environment, not only are the costs of any nuclear war obviously high, but also the superpowers find themselves in a "both lose if war comes" situation; this is why Jervis and others believe this environment preserves the peace. Rejecting this world, and seeking instead to find

The argument can be further extended if one takes into account what some believe to be the special character of the Soviet adversary: insensitive to costs and damage and swayed primarily by the prospect of defeat.<sup>26</sup> As Colin Gray has written, "First and foremost, the Soviet leadership fears defeat, not the suffering of damage - and defeat...has to entail the forcible demise of the

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ways to win, Jervis calls "the conventionalization" of nuclear strategy - reflecting the application of Mearsheimer-like arguments to the nuclear balance. [See pp. 56-63] It is important to keep in mind, in considering these arguments, that it may make sense to preempt if one believes war to be likely even if one expects to lose, because the choice is no longer war versus peace but bad versus worse. This is why so many arms control theorists feared preemptive incentives above all else.

<sup>26</sup> On Soviet insensitivity to damage, see, for example, Richard Pipes, "Why the Soviet Union Thinks It Can Fight and Win a Nuclear War," p. 34. Pipes writes, "the USSR could absorb the loss of 30 million of its people and be no worse off, in terms of human casualties, than it had been at the conclusion of World War II. In other words, all of the USSR's multimillion cities could be destroyed without trace or survivors, and, provided that its essential cadres had been saved, it would emerge less hurt in terms of casualties than it was in 1945." A society that has endured such experiences, Pipes continues, "must define 'unacceptable damage' differently from the United States which has known no famines or purges, and whose deaths from all the wars waged since 1775 are estimated as 650,000 - fewer casualties than Russia suffered in the 900-day siege of Leningrad in World War II alone." Others, of course, argue that the Soviet Union is more, rather than less, sensitive to war damage as a result of its savage experiences with violence in the twentieth century, but this is irrelevant to my discussion here.

Soviet state."<sup>27</sup> In this formulation, a war-winning capability is not merely desirable for deterrence, but perhaps even necessary.

Naturally, pursuit of a war-winning deterrent strategy requires the almost wholesale violation of classical stability theory. Far from avoiding threats to the adversary's deterrent forces, the war-winning approach calls for the pursuit of all capabilities, offensive or defensive, that hold promise of neutralizing the enemy's nuclear strike capability. Again, Colin Gray expresses this most explicitly in outlining the operational requirements of what he somewhat paradoxically calls "warfighting concepts of stable deterrence":

First, the United States should begin to construct...a multilayered architecture of active and

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<sup>27</sup> Gray, "Nuclear Strategy: A Case for a Theory of Victory," p. 61. (Emphasis in original.) Gray argues that the mere ability to inflict massive damage on the USSR is insufficient for deterrence because such an outcome "might well be compatible with a context defined by a Soviet leadership as victory." [p. 77] He also acknowledges the presence of counterforce capabilities and doctrinal orientations in the American nuclear posture, but suggests that these "make sense, and would have full deterrent value, only if the Soviet Union discerned behind them an American ability and will to prosecute a war to the point of Soviet political defeat." [p. 65] Elsewhere, Gray has suggested that for much of the post-war period the United States actually possessed a war-winning deterrent capability. See his "National Style in Strategy: The American Case," p. 35.

passive strategic defense so that homeland protection in time of war ceases to depend entirely upon the improbable operation of a process of reciprocated targeting restraint....Second, the United States should acquire strategic offensive forces and essential support systems...so that it could do - and keep on doing - what it claims to be necessary in order to fight and prevail in war. The United States needs a hard-target counterforce capability that enjoys enduring survivability ...and nuclear and conventional warheads so designed and so navigated that they would pose a truly credible threat to the deep underground bunker complexes of the Soviet leadership and to other very high-value hard targets.<sup>28</sup>

Stability theory, we have seen, sought to eradicate surprise attack incentives of both the preventive and preemptive varieties by following unilateral and/or cooperative policies that provided for, in Schelling's words, "the safety of the weapons."<sup>29</sup> In dramatic contrast, a war-winning approach to deterrence entails placing an adversary's forces in maximum possible jeopardy. Thus, for those who find war-winning deterrence at all desirable and worth attempting, the rules provided by stability theory are not merely

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<sup>28</sup> Gray, "Warfighting for Deterrence," in Cimbala, ed., National Security Strategy, p. 211.

<sup>29</sup> Schelling, "Surprise Attack and Disarmament," in The Strategy of Conflict, p. 233. In the same paragraph, Schelling warns, "It is the weapons that is designed to destroy 'military' targets - to seek out the enemy's missiles and bombers - that can exploit the advantage of striking first and consequently provide a temptation to do so." (Emphasis in original.)

irrelevant but objectionable, for they are intended to preclude precisely the strategic force posture and doctrine that advocates of war-winning deterrence prefer and advocate.<sup>30</sup>

2. Escalation dominance. Another approach to deterrence, which resembles but is distinguishable from the notion of war-winning deterrence, is built around the idea of escalation dominance.<sup>31</sup> The heart of this concept is that the Soviet Union will be deterred if the United States (along with its NATO allies) possesses military advantage at all significant levels of conflict. As Jervis defines it, this is a condition in which "the West is able to defeat Soviet aggression at all levels of

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<sup>30</sup> This fact may explain the extreme hostility of some analysts to the concepts associated with mutual deterrence. See, for example, Gray, "Nuclear Strategy: A Case for a Theory of Victory," especially p. 58ff, where he dismisses the tenets of stable mutual deterrence as "a sickly breed." See also Albert Wohlstetter, "Between an Unfree World and None: Increasing Our Choices," Foreign Affairs 63 (Summer 1985): pp. 962-994. See particularly p. 976, where Wohlstetter characterizes the mutual deterrence dogma as "mindlessly suicidal" and devoid of intelligence; and p. 989, where he criticizes it as a rationale for what turn out to be one-sided and, he believes, dangerous, self-limitations.

<sup>31</sup> For an extensive discussion and critique of escalation dominance, see Jervis's chapter, "Escalation Dominance and Competition in Risk-Taking," in The Illogic of American Nuclear Strategy, pp. 126-146. Also relevant is Stockton, Strategic Stability Between the Superpowers, pp. 63-71.

violence, short of all out war."<sup>32</sup> More often, however, this notion arises as a consequence of concerns that the Soviets have achieved it. As one analyst has written, "The Soviets increasingly are able to dominate the escalation process, in the sense of forcing upon NATO difficult choices about escalation, choices made more difficult by Soviet military advantages at each level of escalation."<sup>33</sup> Obviously, to deny this capability to the Soviet Union<sup>34</sup>, and further, to achieve it for the United States, involves not the acceptance of stalemate or the

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<sup>32</sup> Jervis, The Illogic of American Nuclear Strategy, p. 59.

<sup>33</sup> James J. Martin, "How the Soviet Union Came to Gain Escalation Dominance: Trends and Asymmetries in the Theater Nuclear Balance," in Uwe Nehrlich, ed., Soviet Power and Western Negotiating Policies, Volume 1: The Soviet Asset: Military Power in the Competition Over Europe (Cambridge, Ma.: Ballinger, 1983), pp. 89-90. Pierre Lellouche makes much the same point in "Theater Nuclear Force Restraints," in Warren Heckrotte and George C. Smith, eds., Arms Control in Transition (Boulder, Colorado: Westview Press, 1983), p. 56. Also relevant are Paul Nitze's comments in Charlton, From Deterrence to Defense, pp. 66-67; and Richard Burt's worried conclusion that, as a result of the momentum of the Soviet nuclear buildup, "the Soviet Union will find itself in a position to dominate the escalation process." In "Reassessing the Strategic Balance," International Security 4 (Summer 1980): p. 43.

<sup>34</sup> As one analysis puts it, one of the important factors in preventing nuclear war is the ability to "deny the Soviets 'victory' at any level of nuclear conflict." Keith B. Payne and Kurt Guthe, "Arms Control in the Absence of Theory," Issues in Science and Technology (Summer 1987): p. 65.

neutralization of nuclear weapons, as stability theory would have it, but rather the quest for military advantage ranging across a spectrum of violence from theater nuclear war to limited intercontinental exchanges. Any who conceive of deterrence as requiring escalation dominance will find stability theory to be unacceptable.

3. Retaliatory counterforce. Another source of dispute over the requirements of deterrence had to do with concerns about the credibility of retaliatory options. Retaliating against urban-industrial targets in the Soviet Union did not, to many analysts, seem a sensible or credible response to a Soviet first strike, particularly if the Soviet attack itself avoided American cities; this was true for the simple reason that even after a large attack against the United States, the Soviet Union would still possess substantial strategic nuclear capability that could be used against American society. The great fear of those worried about this problem was that the American second strike would be deterred and hence its deterrent threats would lack credibility. As Victor Utgoff put it in his argument that the United States needs a counterforce capability:

The business of strategic deterrence is to arrange American strategic forces and potential responses so

that all arguments favoring the initiation of strategic nuclear war against the United States are implausible to any potential opponent who views them. Deterrence is, however, a matter of degree: how credible are American responses? How obviously without gain are all the various possibilities for strategic attack? Many sober experts in the strategic forces area...believe that the possibilities for initiation of strategic nuclear war against the United States are not quite implausible enough.<sup>35</sup>

If America's responses are not credible, in short, the Soviets might therefore calculate that they could launch a nuclear attack against the United States with little likelihood of reprisal. With American cities still at risk, its leaders might well prefer not to invite further nuclear attack by striking Soviet cities.<sup>36</sup>

This problem was thought to be particularly acute with respect to a potential Soviet attack on America's land-based nuclear forces - which during the late 1970s were seen to be increasingly vulnerable to new-generation Soviet ICBM's. Paul Nitze (with whom this scenario is closely identified because his writings played a prominent role in raising it to prominence) has written,

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<sup>35</sup> Victor Utgoff, "In Defense of Counterforce," International Security 5 (Spring 1982): pp. 45-46.

<sup>36</sup> As Henry Kissinger has written, "It was all very well to threaten mutual suicide for purposes of deterrence....But no President could make such a threat credible except by conducting a diplomacy that suggested a high irrationality - and that in turn was precluded by our political system...." In White House Years, p. 216.

for example, that the Soviets "see the importance of deterring our deterrent; in other words, they wish to be able, after a counterforce attack, to maintain sufficient reserve megatonnage to hold US population and industry hostage in a wholly asymmetrical relationship."<sup>37</sup> The scenario was spelled out in detail in a 1978

Congressional Budget Office report:

There is growing concern that...the Soviet Union could use a fraction of its increasingly accurate multiple-warhead ICBMs to attack and destroy the vast majority of the US Minuteman missile force while the United States would not have weapons capable of counterattacking against Soviet ICBMs held in reserve...As long as US cities remained intact, the great majority of Americans would remain alive, thus providing a powerful incentive for US leaders to avoid direct attacks on Soviet cities. In such a limited nuclear war scenario, US retaliation against Soviet cities might be considered an inappropriate -

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<sup>37</sup> Paul H. Nitze, "Deterring Our Deterrent," Foreign Policy 25 (Winter 1976/1977): p. 208. See also his earlier formulation of the problem, "Assuring Strategic Stability in An Era of Detente." Patrick Morgan, in his theoretical critique of deterrence, arrives at a similar, but even more pessimistic, conclusion: "As the number of nuclear weapons available rises, it becomes increasingly difficult to find a rational justification for retaliation....It is irrational to retaliate when the costs of a counterretaliation are unacceptable; it is hard to see how adding to the severe costs one has already borne is rational....But if there is no rational basis for retaliation once deterrence has failed, then there is no disincentive to the opponent who is thinking of attacking." From Deterrence: A Conceptual Analysis, pp. 95-96. (Emphasis in original.)

and incredible - response.<sup>38</sup>

As a result of this logic, the report concludes, "the US threat to carry out a retaliatory strike against Soviet cities might not be a credible deterrent in many conceivable circumstances."

Concerns of this sort led to much more complicated and demanding measures of the adequacy of America's deterrent capabilities. Simply possessing a retaliatory capability was, in this school of thought, no longer enough; retaliatory counterforce capability was required so that the US possessed a more credible option than striking back against Soviet cities and also, importantly, so that the Soviet Union did not possess a significant advantage in nuclear capability after a mutual counterforce exchange; it was thought to be undesirable if not dangerous to allow a situation to develop in which the Soviet Union could greatly improve its relative position in the nuclear balance by initiating a nuclear exchange. In this conception, the acquisition of counterforce capability does not represent unfortunate movement in the direction of instability, but rather is the essence of a credible deterrent posture.

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<sup>38</sup> Robert R. Soule and John B. Shewmaker, Planning US Strategic Nuclear Forces for the 1980s, Washington D.C.: Congressional Budget Office, June 1978, p. 20.

4. Limited nuclear options. A related set of concerns had to do with the realization that, more generally, the United States wished to deter not simply an all-out nuclear attack, but also a wide range of limited nuclear strikes, most of which would be directed against military targets rather than cities. As was the case with large-scale counterforce attacks, retaliating against Soviet cities did not seem a proportionate or a plausible response, leading to fear that such attacks might be undeterred. Again, the answer was flexible counterforce options that would give the United States the ability to reply symmetrically to a wide range of Soviet limited nuclear attacks.<sup>39</sup> This logic was spelled out by former Secretary of Defense James Schlesinger, who began with the twin propositions that "Contingencies other than a massive surprise attack on the United States might arise and should be deterred," and that "the ability and willingness to attack military targets were prerequisites to deterrence." Schlesinger elaborated the underlying reasoning behind these conclusions:

A massive retaliation against cities, in response to

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<sup>39</sup> But for a critique of the need for second strike counterforce capability (as provided by the ICBM force), see Albert Carnesale and Charles Glaser, "ICBM Vulnerability: The Cures are Worse Than the Disease," International Security 6 (Summer 1982): pp. 78-82.

anything less than an all-out attack on the US and its cities, appears less and less credible. Yet...deterrence can fail in many ways. What we need is a series of measured responses to aggression that bear some relation to the provocation....Nuclear threats to our strategic forces, whether limited or large-scale, might well call for an option to respond in kind against the attacker's military forces. In other words, to be credible, and hence effective over the range of possible contingencies, deterrence must rest on many options and on a spectrum of capabilities....<sup>40</sup>

Concern about the deterrence of less than all-out nuclear attacks, in short, led to the belief that limited nuclear options, including particularly second strike counterforce options, were necessary for deterrence.<sup>41</sup> This was another reason why stability theory was deemed insufficient: it precluded the counterforce capability thought imperative for this purpose, leaving reprisal against soft targets the only retaliatory option no

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<sup>40</sup> James Schlesinger, "Limited Nuclear Options," in Art and Waltz, eds., The Use of Force, pp. 151-152.

<sup>41</sup> For a thorough analysis of this issue, which manifest itself most dramatically in the American policy debate in the early 1970s, see Lynn Davis, Limited Nuclear Options, Adelphi Paper No. 121, London: IISS, Winter 1975-1976. Greenwood and Nacht, "The New Nuclear Debate: Sense or Nonsense?," provide an excellent overview of the dispute on this issue. William Baugh, in The Politics of Nuclear Balance: Ambiguity and Continuity in Strategic Policies (New York: Longman's, 1984), pp. 65-71, offers a brief account of the impact of this notion on American policy. And Robert Art, "Between Assured Destruction and Nuclear Victory: The Case for the 'MAD-Plus' Posture," in Hardin, Mearsheimer, Dworkin and Goodin, eds., Nuclear Deterrence: Ethics and Strategy, pp. 121-140, makes a subtle case for this deterrent logic.

matter what the nature of the Soviet attack.

5. Threatening what the opponent values. There was, finally, an additional consideration in thinking about the requirements of deterrence that clashed with stability theory: deterrence is maximized when the retaliatory threat is directed against the assets that the adversary most values. In the case of the Soviet Union, it came to be widely believed, what its leaders most valued were not its cities per se, but the continued dominion of the communist party over the Soviet state and the military power that protected and advanced the interests of the Soviet state. To threaten these targets (including such items as hardened command bunkers for the Soviet leadership) requires counterforce capability.

The Scowcroft Commission laid out this reasoning with great clarity in 1983:

Deterrence is the set of beliefs in the minds of Soviet leaders, given their own values and attitudes, about our capabilities and our will. It requires us to determine, as best we can, what would deter them from considering aggression, even in a crisis - not to determine what would deter us....

In order to deter Soviet threats we must be able to put at risk those types of Soviet targets - including hardened ones such as military command bunkers and facilities, missile silos, nuclear weapons and other storage, and the rest - which the Soviet leaders have given every indication by their actions they value most, and which constitute their tools of control and power. We cannot afford the delusion that Soviet leaders...are going to be deterred by exactly the

same concerns that would dissuade us....Effective deterrence of any Soviet temptation to threaten or launch a massive conventional or a limited nuclear war thus requires us to have a comparable ability to destroy Soviet military targets, hardened and otherwise.<sup>42</sup>

Similarly, Walter Slocombe, in his authoritative account of the countervailing strategy proclaimed by the Carter Administration in 1980, says that an adequate American deterrent force must have the ability to "exact a high cost from the things the Soviets value most - political and military leadership and control, military forces both nuclear and conventional, and the industrial economic capacity to sustain military operations."<sup>43</sup>

Each of these conceptions of the requirements of deterrence - war-winning deterrence, escalation dominance, second strike counterforce, limited nuclear

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<sup>42</sup> Report of the President's Commission on Strategic Forces, pp. 3, 6.

<sup>43</sup> Slocombe, "The Countervailing Strategy," p. 23. See also Harold Brown, "The Countervailing Strategy," in Art and Waltz, eds., The Use of Force, pp. 156-161. Brown emphasizes that "the countervailing strategys is designed with the Soviets in mind." [p. 156] (Emphasis in original.) A very informative account of the efforts of the US government to incorporate this notion (along with some of the others discussed above) into officially declared policy is Jeffrey Richelson, "PD-59, NSDD-13, and the Reagan Strategic Modernization Program," in Haley, Keithly, and Merritt, Nuclear Strategy, Arms Control, and the Future, pp. 120-134. Jervis provides a sustained critique of these ideas in The Illogic of American Nuclear Strategy.

options, and striking what the Soviets value - require the ability to destroy hardened targets, including strategic nuclear forces. What this means is that for all who embrace one or more of these alternative formulations of deterrence there is an irreconcilable tension between an adequate deterrent posture and the rules of stability theory.<sup>44</sup> The critical point for arms control is that American strategic doctrine, as we have seen, has continuously, increasingly, and explicitly incorporated several of these alternative notions; this makes it impossible for stability theory to fully govern American nuclear policy - and of course it has not done so.

Closely related to these more demanding calculations of the requirements of deterrence is a fourth explanation of the repudiation of arms control theory: many analysts and policymakers embrace an entirely different definition of stability.<sup>45</sup> As we have noted, traditional stability theory sought to eliminate all incentives to use nuclear

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<sup>44</sup> To extend the contrast, one might say that advocates of counterforce see deterrence as a coercive outcome: not cooperation, as in arms control theory, but intimidation makes for peace.

<sup>45</sup> For an extensive discussion of this subject, see Stockton, Strategic Stability Between the Superpowers, which is a survey of what are accurately described as "some widely differing concepts of stability." [p. 4]

weapons, giving equal weight to preventive and preemptive motivations; this led to the enshrinement of a world of mutually invulnerable forces as the safest and most desirable strategic environment and hence as the embodiment of stability. Stability, to the arms control theorists, was in essence a world without counterforce.

This conception of stability has been vehemently attacked and completely replaced, in the predominant operational strand of strategic thought, by a different (indeed, an opposite) conception of stability, one that measures stability in terms of the fulfillment of the more demanding requirements of deterrence described above. From this perspective, stability as defined by the modern arms control theorists leaves America's allies unprotected, important attack scenarios undeterred, and credible retaliatory options unavailable. What, ask the critics of classic stability theory, is so "stabilizing" about an environment that leaves Western interests undefended and allows room for aggressive Soviet behavior? Albert Wohlstetter, for example, clearly expresses this line of argument: "A public doctrine and model of stability that became widespread in the mid-1960s ended by eroding the basis for deterring nuclear attack, and most obviously deterring nuclear attack on an

ally. This has been destabilizing."<sup>46</sup> Likewise, Colin Gray asserts that the concept of stability associated with the modern theory of arms control is "gravely deficient," "obsolescent," of "questionable integrity," "wrong or misleading," and "fundamentally unsound" because it fails to accommodate the various deterrent requirements for counterforce and hence precludes the possession of an adequate deterrent force by the United States.<sup>47</sup>

Those who, like Gray and Wohlstetter, subscribe to one of the various counterforce deterrence conceptions advocate an entirely different notion of stability. "The strategic balance would be stable," Colin Gray writes, "if Western governments were allowed to enjoy not-implausible prospects of both defeating their enemy (on his own terms) and ensuring Western political-social survival." And in elaborating this point, Gray demonstrates beyond question the utter incompatibility of what might be called counterforce stability with the

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<sup>46</sup> Wohlstetter, "Swords Without Shields," p. 52. (Emphasis added.)

<sup>47</sup> Colin S. Gray, "Strategic Stability Reconsidered," Daedalus 109 (Fall 1980): pp. 135, 136, 149, and 151. This article is the single most useful analysis for gaining an appreciation of this perspective.

modern theory of arms control:

Strategic stability should not be equated with strategic stalemate. The United States cannot afford a master strategic concept that implies thoroughgoing mutual US-Soviet strategic deterrence. If strategic stability is to retain its preeminence as a US policy goal, it should be redefined for compatibility with the extended deterrent duties that the geopolitics of the Western Alliance place on the US strategic force posture. A stable strategic balance, in US/NATO perspective, is one that would permit the United States to: initiate central strategic nuclear employment in expectation of gain (a requirement of NATO strategy); seize and hold a position of 'escalation dominance'; and deter Soviet escalation, or counterescalation, by a potent threat posed to the most vital assets of the Soviet state and by the ability of the United States to limit damage to itself ....Stability would be enforced through the Soviet perception of the United States as a very tough wartime adversary indeed.<sup>48</sup>

Or, to offer another illustration, an analysis that sees this approach to stability as the prevailing view defines counterforce as an essential ingredient of stability:

'Stability,' which was said to require avoidance of hard-target-kill capability in the early 1970s, now requires greater US hard-target-kill capability, according to more recent developments in theory. Deliberate limits on US ballistic missile accuracy

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<sup>48</sup> Gray, "Strategic Stability Reconsidered," pp. 136, 151-152. (Emphasis in original.) It is evident, in this passage and elsewhere in Gray's writings, that the NATO commitment looms large in his contemplation of nuclear strategy. In a more recent essay, he reveals the source of his intense concern on this score, commenting that NATO strategy presumes "wrongly as it turns out, a permanent margin of US nuclear superiority." Many of Gray's recommendations and preferences in strategic nuclear policy are aimed at restoring that needed margin. The quote is from Colin S. Gray, "NATO: Time to Call It a Day?," The National Interest 10 (Winter 1987/1988): p. 13.

would be utterly contrary to the now-dominant theory of stability.<sup>49</sup>

Similarly, Paul Stockton equates stability with the credibility of extended deterrence, which in turn, he points out, requires that the United States possess a damage-limiting capability, which in turn requires the neutralization of the Soviet deterrent force.<sup>50</sup>

Stability theory, as conceived by the arms control theorists, urged the creation of a mutual deterrence situation; in this alternative formulation of stability, mutual deterrence is rejected as unacceptable. Stability theory prescribed the elimination of all incentives to use nuclear weapons; in this alternative formulation, stability requires that the United States "gain" by the initiation of a strategic nuclear exchange. Stability theory saw safety in a world of completely invulnerable forces on both sides; in this alternative formulation,

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<sup>49</sup> Payne and Guthe, "Arms Control in the Absence of Theory," p. 67.

<sup>50</sup> Stockton, Strategic Stability Between the Superpowers, pp. 3-4. Oddly, although Stockton appears to accept this formulation at the outset of his analysis, he finds fault with all approaches to stability, both of the traditional and of the counterforce variety, and ends up suggesting the need for a continued search "for better concepts of strategic stability." [pp. 85-86] One is hard-pressed to imagine what conceivable approach to stability lies beyond those already found in the strategic debate.

the world grows more stable as Soviet forces grow more vulnerable.<sup>51</sup> Stability theory envisioned an environment that could be created and managed collaboratively, if not cooperatively; in this alternative formulation, stability is "enforced" by one's usable nuclear capability.

Naturally, this head-on collision of thinking about stability spilled over into arms control: a totally contrary conception of stability led inevitably to a completely different vision of the role for arms control. Rather than codify mutual deterrence (and hence, guarantee mutual vulnerability), suggests one analysis of the counterforce stability variety, "arms control should focus on damage limitation...." This means, of course, that instead of using arms control to safeguard the deterrent forces of both sides, as is called for by the modern theory of arms control, the counterforce stability

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<sup>51</sup> And, of course, if the Soviets subscribe (as they appear to do) to the proposition that stability grows with the vulnerability of the adversary's forces, then one ends up with a symmetrical situation in which both sides are seeking to place in jeopardy the nuclear capability of the other side. And in fact, for reasons described earlier in this chapter, I believe this is a more accurate characterization of the strategic balance over the past three decades than any other. Also, one might note that if this proposition is carried to its logical endpoint, then the most stable situation is one in which one's opponent's forces are completely vulnerable. If both sides were to achieve this outcome, the result is precisely that environment defined by traditional stability theory as the most dangerous.

approach would use arms control as an adjunct to efforts to neutralize (with offensive and defensive technologies) the deterrent forces of the other side to the greatest possible extent.<sup>52</sup> The analysis notes that this could cause some difficulties: "If damage limitation replaces [traditional] stability as the overarching goal of arms control, it might seem that any limitations would be difficult or impossible because both superpowers would try to add counterforce offensive forces and defensive systems to strengthen their damage limitation capabilities." But, this argument continues, since both superpowers desire damage limitation capabilities, using arms control in this way would be in both their interests,<sup>53</sup> and in any case even if no agreements resulted, this outcome would be preferable to the

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<sup>52</sup> Again, to push this to its logical endpoint, the best damage-limiting capability is the ability to disarm one's opponent in a first strike - another of the worst environments as defined by the modern theory of arms control since it raises great preventive incentives for one side and severe preemptive pressures for the other.

<sup>53</sup> Notice the similarity here with the argument that the modern theory of arms control might be feasible because it is in the interests of the superpowers to embrace a mutual deterrence environment. One difference, however, in the structure of the two arguments is that mutual deterrence is symmetrical in its strategic effects, whereas in a world of mutual damage limitation capabilities being superior and striking first are both rewarded, and hence it is less likely to be simultaneously attractive to both.

"destabilizing" agreements that accompany the traditional stability theory approach to arms control.<sup>54</sup> Similarly, Albert Wohlstetter, making the case for counterforce deterrence, argues that "Our negotiations and agreements with the Soviets...should be designed to further this policy of exercising discrimination and control, not to assure indiscriminate mutual destruction."<sup>55</sup> This means, of course, designing arms control to further counterforce options in limited nuclear war scenarios; just the sort of thing the modern theory of arms control hope to prevent. Redefining stability, in short, reverses the role of arms control, as it must in dissenting from all the major propositions of stability theory.

What is clearly evident in the clash of different conceptions of stability is that the counterforce stability alternative turns modern arms control theory upside down: the desirable (mutual deterrence) becomes undesirable; the undesirable (counterforce doctrine and capability) becomes desirable. With such completely

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<sup>54</sup> Payne and Guthe, "Arms Control in the Absence of Theory," pp. 71-72.

<sup>55</sup> Wohlstetter, "Between an Unfree World and None," p. 990. This is said in the context of an impassioned argument for greater observance of the requirements of counterforce deterrence. As Wohlstetter puts it, "The West has limited options and needs more and better ones to deter the plausible attacks." [p. 991.]

different, indeed, diametrically opposite, content attached to the same concept, it is little wonder that the widespread use of the concept to justify or assess weapons programs and arms control positions is as much confusing as clarifying, is as much devoid of meaning as meaningful. It is not surprising that virtually everything done in strategic policy over the last several decades has been said to be stabilizing by its advocates and destabilizing by its critics. Whatever the program or policy, advocates and critics were unlikely to be using the same definition of stability and there was always some formulation of that concept by which the same program could be said to be either stabilizing or destabilizing. The simultaneous existence of hostile and incompatible definitions of stability has been an unfortunate source of murkiness and imprecision in the public discourse on strategic weapons issues, for it is by no means self-evident what is meant when the word "stability" is used.

What is clear, however, as we have seen above, is that it certainly is not stability according to modern arms control theory that has governed American or Soviet strategic policy, although in the American case clouds of rhetoric suggest otherwise. But while analysts,

officials, and politicians have paid lip-service to the traditional concept of stability, the reality of policy suggests the pursuit of counterforce stability.

Finally, there is a fifth consideration which has to be set against stability theory in order to understand the failure of the latter to dominate the domain of policy. This has to do with a single arresting question that has haunted many who have ventured into the macabre territory of nuclear strategy: What should be done if deterrence fails? There is no guarantee, as everyone agrees, that deterrence will work effectively forever: whether because of escalation from a conventional conflict, misperception, miscalculation, insanity or accident, nuclear war might occur.<sup>56</sup> Strategists and policymakers must therefore assess not only how to deter but also how a nuclear war should be fought if the awful eventuality should arise. In addressing that issue, a

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<sup>56</sup> Generally relevant here is Leon Wieseltier's article, "When Deterrence Fails," Foreign Affairs 63 (Spring 1985): pp. 827-847, which analyzes the difficulties that the possibility of deterrence failure raise for advocates of mutual deterrence. (In the end, however, Wieseltier, while granting the difficulties, nevertheless endorses mutual deterrence attached to a conception of war-termination as the chief war aim.) Wieseltier writes, "Against a great many alternatives, deterrence may be defended without apology. But there is at least one criticism of deterrence that may not be refuted: it may fail." [p. 827]

number of analysts once again come to the conclusion that stability theory is deficient, that it fails to allow an adequate answer to the problem of fighting a nuclear war. As Gray and Payne express it, "No matter how elegant the deterrence theory, a question that cannot be avoided is what happens if deterrence mechanisms fail?" And they proceed to illustrate the concern by criticizing advocates of mutual deterrence for their neglect of this issue, especially in connection with the possibility of escalation from a conventional conflict: "Theorists whose concept of deterrence is limited to massive retaliation after Soviet attack have nothing of interest to say to a president facing conventional defeat...."<sup>57</sup>

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<sup>57</sup> Gray and Payne, "Victory is Possible," p. 15. In this example, they are concerned about the problem of conventional war raising the prospect that the West would need to initiate a nuclear war. But the question of how nuclear war should be fought is no less pressing in the context of an exchange initiated by the Soviet Union. Gray himself has elsewhere been explicit on this point: he finds mutual deterrence analysis "to be deficient" because "it appears to stop when the buttons are pushed. At the very point where we need strategic thinking most, no recommendations are discernible. Of course it is preferable to deter war rather than to wage it; that is not at issue. But what is the connection between prospective prowess in the conduct of war and pre- or early intra-war deterrent effect? Furthermore, what should we do if war occurs...? To say that our strategy is deterrence is inadmissible - because no one...can guarantee that deterrence will always work, or will even always be relevant." From his "Perspectives on Fighting Nuclear War," International Security 5 (Summer 1981): pp. 185-186.

Worries about how to fight a nuclear war if deterrence fails collided with stability theory in two ways. First, there was the matter of what targets to fire at. Since stability theory forbade targetting the other side's nuclear forces, of necessity other targets must be the intended victims of nuclear strikes. And since mutual deterrence was often conceived of as a mutual hostage relationship in which adequacy was measured in terms of the "assured destruction" of an opponent's society, many interpreted stability theory to call for large-scale strikes against adversary cities in the event of nuclear war. But since by definition in a mutual deterrent relationship the opponent possessed substantial survivable nuclear forces, striking his cities would simply provoke him to attack one's own cities. To behave thus, many strongly believe, is to invite one's own destruction, a course of action that makes no sense whatsoever and that may make capitulation seem like a preferable alternative. As Wohlstetter scornfully says of what he calls the "reckless choice," mutual deterrence,

It is one thing to say that political and military leaders sometimes mindlessly take the most self-destructive course. It is...another thing to recommend mindlessly suicidal behavior on our side, and to rig our preparations so that we could not respond against the source of attack without killing

ourselves. When strategists rely on mutual assured destruction, they assume intelligence can have essentially no influence at all.<sup>58</sup>

And to escape the suicidal outcome in a nuclear war, Wohlstetter recommends, as do many others, that the United States seek "capability to respond by attacking military targets effectively with the least harm done to population that we can manage...."<sup>59</sup> In short, in this argument even if it is accepted that countervalue threats are sufficient for deterrence (and we have seen that this is not universally accepted), when it comes to actually fighting a nuclear war, counterforce is required if the war is to be something other than a large spasm of urban-industrial destruction. In this line of thought, stability theory is incompatible with sensible precautions against the possibility of actually having to fight a nuclear war.

Thinking about the fighting of a nuclear war collided with stability theory in a second way: leaving an adversary's deterrent forces unthreatened left one's own population unprotected. If one assumed that deterrence was effective, then this was perhaps a tolerable

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<sup>58</sup> Wohlstetter, "Between an Unfree World and None," p. 976.

<sup>59</sup> Wohlstetter, "Between an Unfree World and None," p. 993.

arrangement. But in the context of thinking about actually fighting a nuclear war, the idea of being able to limit damage to oneself naturally suggested itself. Indeed, the more seriously one took the problem of how to fight a nuclear war, the more inadequate it seemed to leave one's society completely naked to nuclear attack, as was the result of creating a mutual deterrent relationship in which forces were protected but people and cities were not. Thus, Henry Kissinger incredulously observed:

The doctrine of 'assured destruction' led to the extraordinary conclusion that the vulnerability of our civilian population was an asset reassuring the Soviet Union and guaranteeing its restraint in a crisis. For the first time a major country saw an advantage in enhancing its own vulnerability. 'Assured destruction' was one of those theories that sound impressive in an academic seminar but are horribly unworkable for a decision-maker in the real world and lead to catastrophe if they are ever implemented.<sup>60</sup>

Similarly, Fred Ikle argues that

We must disentrall ourselves of the dogma of consensual, mutual vulnerability - the notion that unrelieved vulnerability of the United States and the Soviet Union to each other's nuclear forces is essential for halting the competition in offensive arms and is the best guarantee against the outbreak

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<sup>60</sup> Kissinger, White House Years, p. 216. (Emphasis in original.)

of nuclear war.<sup>61</sup>

And Gray and Payne complain in more tangible terms that the United States has neglected to provide its citizens with any protection against the horrible but possible prospect of nuclear war:

An Armageddon syndrome lurks behind most concepts of nuclear strategy. It amounts either to the belief that because the United States could lose as many as 20 million people, it should not save the 80 million or more who otherwise would be at risk, or to a disbelief in the serious possibility that 200 million Americans could survive a nuclear war. There is little satisfaction in advocating an operational nuclear doctrine that could result in the deaths of 20 million or more people in an unconstrained nuclear war. However, as long as the United States relies on nuclear threats to deter an increasingly powerful Soviet Union, it is inconceivable that the US defense community can continue to divorce its thinking on deterrence from its planning for the efficient conduct of the war and defense of the country.<sup>62</sup>

Obviously, to heed such concerns and to seek a damage-limitation capability required the ability to destroy Soviet nuclear forces, whether with offensive or defensive means, or both. In the discussion above of the requirements of deterrence, we noted the belief that counterforce is necessary to make deterrence work. Here

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<sup>61</sup> Fred Charles Ikle, "Nuclear Strategy: Can There Be a Happy Ending?," Foreign Affairs 63 (Spring 1985): p. 824.

<sup>62</sup> Gray and Payne, "Victory is Possible," p. 27. For a critique of this view, see Michael E. Howard, "On fighting a Nuclear War," International Security 4 (Spring 1981): pp. 3-17.

we encounter a parallel belief that counterforce is necessary because deterrence might fail. And once again we encounter the inescapable reality that when counterforce is thought necessary, for whatever reason, stability theory becomes irrelevant if not an impediment.

To recapitulate, I have outlined in this section five broad considerations that have influenced thinking, debate, and policy in the realm of strategic nuclear weapons. These were:

- \* Concerns about the political utility of nuclear weapons: the desire of the superpowers to possess strategic nuclear capabilities that would provide diplomatic advantage.

- \* The requirements of extended deterrence: the United States wishes to provide for the nuclear defense of its allies.

- \* Disputes about the requirements of deterrence: many believe that demanding criteria for retaliatory options must be met to have an adequate deterrent.

- \* Alternative conceptions of stability: many believe that stability consists of meeting demanding requirements of deterrence, not of following the rules offered by stability theory.

- \* Worries about deterrence failure: thinking about how to fight a nuclear war leads to concern about damage limitation rather than stability theory.

The common feature of these five alternative, and cumulatively reinforcing, approaches to nuclear strategy is that each provides a rationale for, indeed generates a requirement for, strategic counterforce capabilities.

Taken together, they provide a broad and powerful argument for counterforce capabilities. In contrast, the bedrock of stability theory, and of the modern theory of arms control associated with it, is the injunction to avoid counterforce above all else. Here then in the source of the doctrinal drama of the nuclear age: Stability theory has had to compete, in the marketplace of ideas and in the policy arena, with these other considerations. And it has been unsuccessful in this competition.

For while in the American intellectual discourse on nuclear strategy, stability theory has been a co-equal school of thought (and is even perceived by some to be the dominant school of thought)<sup>63</sup>, the fact is that in terms of policy the struggle between stability theory and the rationales for counterforce has been a rout, has produced a lopsided victory for counterforce thinking<sup>64</sup>;

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<sup>63</sup> In fact, it is a common trait among advocates of counterforce deterrence/counterforce stability approaches to claim that stability theory has been the predominant school of thought among the strategic community and to lament the impact of this thinking on American strategic policy. I believe, however that this perception somewhat overestimates the prominence of stability theory in the debate and greatly exaggerates the impact of stability theory on policy.

<sup>64</sup> According to Stansfield Turner, for example, US strategic doctrine incorporates a number of the counterforce rationales, including damage-limitation,

this has been the single most decisive fact in determining the impact of the modern theory of arms control. In emphasizing the victory of counterforce rationales, I do not mean to suggest that stability theory has had no impact on American policy, for its advocates have sought unceasingly and with intermittent successes to influence policy<sup>65</sup>, but the net outcome in the end is that their efforts have at most slowed and complicated the pursuit of counterforce, not stopped it. Nor do I wish to imply that the counterforce rationales have decisively prevailed in intellectual terms, for in the strategic debate these remain controversial and contentious issues, and the logic of stability theory has

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second strike counterforce, and extended deterrence. See "Winnowing Our Warheads," pp. 68-70. And, as we have seen above, the main public innovations of the past two decades in American strategic doctrine have involved the open adoption of what are here rationales four and five for counterforce: the need for limited counterforce options to deter limited attacks (embodied in the Schlesinger Doctrine of the early 1970s); and the need to threaten targets that the Soviets value (a notion which is at the heart of the countervailing strategy of the 1980s). Confirmation of this fact can be found in Sloss and Millot, "US Nuclear Strategy in Evolution," among other sources.

<sup>65</sup> See, for example, Albert Wohlstetter's inventory of what he considers to be the baleful impact of stability theory on US strategic policy, in "Swords Without Shields," especially pp. 41-45. This is also a main theme of Payne and Guthe, "Arms Control in the Absence of Theory," especially pp. 67-70.

not been definitively confuted; the intense thirty year disagreement between exponents of the one logic and the other continues unabated. But the fact is that the public prominence of stability theory is misleading, for what really matters in terms of both the character of the balance and the prospects for the modern theory of arms control is the weapons that are deployed and the doctrines that would govern their use. Measured by those standards, as we have seen, stability theory has failed dramatically. Influencing the public debate is one thing; dominating the choices that really matter is something altogether different. And even if stability theory has occasionally or regularly succeeded in dominating the rhetoric of nuclear strategy, it has lost the far more important battle.

It is true, of course, that both the Soviet Union and the United States possess significant retaliatory capabilities. This might seem to contradict the argument being advanced here. The truth is, however, the survivable forces exist not because either side or both sides have accepted stability theory, but because each side has invested heavily in large and variously protected nuclear forces in order to thwart the efforts of the other side to acquire counterforce capabilities.

It is the strategic behavior of the Soviet Union, not stability theory, that has stood in the way of greater counterforce capability for the United States; it is the strategic behavior of the United States, not stability theory, that has stood in the way of greater counterforce capability for the Soviet Union. The superpowers have, in effect, observed two rules in fashioning their strategic policies: (1) One's should undertake to make one's own forces substantially survivable; and (2) one should attempt to make the adversary's forces as vulnerable as possible. To the extent that both superpowers accord sufficient respect to rule #1, they thereby negate the efforts of their opponent to observe rule # 2. Indeed, the evolution of the strategic balance can be with some considerable accuracy be characterized by the interaction between one side's efforts to heed rule #1 and the other side's efforts to heed rule #2. The interplay of these two rules has produced large survivable forces on both sides, and hence results in a condition of mutual deterrence (albeit one where preemptive incentives exist because counterforce options are available). It is very important that the fact of mutual deterrence not be confused with the choice of stability theory as the foundation of policy. As

suggested by the operational doctrines preferred by the two superpowers, mutual deterrence is an outcome of the interplay of their strategic policies, not a result of the faithful observance of stability theory.

We have examined, thus, the ideas with which stability theory has competed, and have emphasized the defeat of stability theory in this competition. For the purposes of my argument about the fate of the modern theory of arms control, this is the critical point. One further question remains, one that is intriguing even if ancillary to my argument, and on which I will speculate briefly: Why has the world of policy found rationales for counterforce preferable to the edicts of stability theory? Part of the answer, certainly, lies in the different conception of Soviet and American interests that resides in the competing approaches to nuclear strategy. Stability theory more or less explicitly posits the avoidance of nuclear war as the highest interest of state, and offers a scheme designed to maximize that interest; in this context, Soviet and American interests are indetical and are most easily achieved collaboratively. Counterforce rationales, in contrast, link nuclear weapons to other political-military interests of the state, and more or less

explicitly postulate that there are some interests for which it is worth risking, or fighting, a nuclear war; in this context, Soviet and American interests are overwhelmingly hostile and can only be pursued competitively. It seems fairly obvious that the latter formulation is much more compatible with the overall tenor of Soviet-American relations since the onset of the Cold War. Despite the hopes of the arms control theorists that the awful threat of nuclear war would enable the superpowers to transcend their wide differences at least sufficiently to construct a "safe" nuclear environment, in fact it has proven extremely difficult for arms control to be an island of cooperation in a sea of hostile relations.

In fact (as we shall see below), what has happened is very nearly the reverse of what the arms control theorists hoped: nuclear arms control has been subsumed in the larger pattern of basically conflictual superpower relations, and both superpowers seek to use it to political and military advantage. Strategic policy preferences, in short, have reflected predominant perceptions of diplomatic realities. This is manifest in the American debate: those with more benign views of

Soviet power<sup>66</sup>, or those relatively hopeful about the prospects for improved Soviet-American relations, tend to be champions of stability theory. Those with a more severe view of Soviet power tend to be advocates of one or more counterforce rationales<sup>67</sup> Vietnam may have shattered America's Cold War consensus, but nevertheless

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<sup>66</sup> An extreme example is Helen Caldicott, who combines a less threatening image of the Soviet Union with an urgent appeal for more arms control. See Missile Envy: The Arms Race and Nuclear War (New York: Bantam Books, 1986), p. 167, where Caldicott (an Australian) expresses her alarm at what she sees as the predominant American view of the Soviet Union: "Why are the Soviet Union and the United States such bitter enemies...? I cannot understand America's passionate hatred for communism in general and for the Soviet Union in particular...America's seemingly implacable hatred of the Soviet Union fills me with intense fear. If this enmity is carried to its logical conclusion, we will all be destroyed." I should emphasize that Caldicott is uncharacteristic both in the stridency of her rejection of hostile images of the Soviet Union and in her advocacy, not of stability but of disarmament. But her worldview does illustrate vividly the link between perceptions of the Soviet Union and beliefs about the role and desirability of arms control.

<sup>67</sup> While I believe these tendencies to be quite strong, I do not exclude other combinations; in particular, some who have a quite severe view of the Soviet Union nevertheless accept stability theory on the grounds that avoiding nuclear war is an interest coequal to the containment of Soviet power. See, for example, Barry R. Posen and Stephen Van Evera, "Defense Policy and the Reagan Administration: Departure from Containment," in Steven E. Miller, ed., Conventional Forces and American Defense Policy (Princeton: Princeton University Press, 1986), pp. 23-26; Posen and Van Evera explicitly conjoin the containment of Soviet power and the avoidance of nuclear war as the two basic aims of American policy.

the predominant American perception of the Soviet Union has remained severe, and this has not been conducive to the acceptance of stability theory.

While this explanation, in itself, may go far toward explaining why policymakers have rejected the advice of stability theory, there are others that are worth considering. First, in general, states have preferred to rely on their own power to safeguard their security.<sup>68</sup> Weak states might have no choice but to rely on the strong for security, but powerful states have typically been uneasy about relying on allies, for one could never be sure of the reliability of one's allies to protect one's own interests.<sup>69</sup> The modern theory of arms

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<sup>68</sup> Here I follow Kenneth Waltz in viewing states as "self-regarding units," driven by a powerful "survival motive" in a "self-help" system. As Waltz suggests, "Whether those units live, prosper, or die depends on their own efforts." See Theory of International Politics (Reading, Ma.: Addison-Wesley, 1978), p. 91. On the characteristics of a self-help system, see pp. 105-106. Elsewhere Waltz has written, "With many sovereign states, with no system of law enforceable among them, with each state judging its grievances and ambitions according to the dictates of its own reason or desire - conflict, sometimes leading to war, is bound to occur. To achieve a favorable outcome from such conflict a state has to rely on its own devices, the relative efficiency of which must be its constant concern." From Man, the State, and War (New York: Columbia University Press, 1959), p. 159.

<sup>69</sup> This concern can be seen even within NATO, with worries on both sides of the Atlantic about the reliability of the allies on the other side of the ocean.

control, however, emphasizes that security cannot be produced by unilateral exertions, but requires the cooperation - the restraint - of another power; but this power is not an ally, which is hard enough to depend upon, but the adversary! Another way to put this is that accepting mutual deterrence places the survival of the United States in the hands of the Soviet Union. To be sure, via deterrent threats, each side seeks to shape the perceptions and choices of the other side. But one has no protection against an adversary who nevertheless chooses to attack. This is naturally an uncomfortable and unnatural condition for great powers to find themselves in, and it is perhaps not surprising that they struggle against it rather than accept it.<sup>70</sup> We noted in the previous chapter Schelling and Halperin's comment, "Military collaboration with potential enemies is not a

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<sup>70</sup> Or, to tread again in Waltz's footsteps (see note 176), what I am suggesting here is that the emphasis in the modern theory of arms control on providing security by collaborating with the adversary may conflict with a deeply rooted instinct of states in an anarchic self-help system to rely as much as possible on "their own devices." Advocates of stability theory may believe, however, that the key phrase there is "as much as possible," for, as noted in chapter 2, the arms control theorists believed that the need for mutual deterrent policies was "imposed" by the nature of the nuclear revolution; in this view, such policies are as unavoidable as they are unnatural.

concept that comes naturally. Tradition is against it."<sup>71</sup> This was perhaps more true, and more insuperable, than they realized.

A closely related point is that embracing the canons of stability theory involves embracing the nuclear revolution, accepting its implication that some control over one's security has passed to one's adversary. But for a number of reasons, including those mentioned above, many are inclined not to embrace but to escape the nuclear revolution. As Robert Jervis has written, rejecting the nuclear revolution "is psychologically attractive because it denies many of the new and disturbing elements - the fact that your fate rests in your adversary's hands, the split between what you threaten and what you would want to do...."<sup>72</sup> So people advocate disarmament, defenses, superiority, or otherwise seek ways of eluding the need to accept that the nuclear revolution turns American security into a bilateral affair; accepting the nuclear revolution, relying upon stable mutual deterrence, means forgoing unilateral

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<sup>71</sup> Schelling and Halperin, Strategy and Arms Control, p. 142.

<sup>72</sup> Jervis, The Illogic of American Nuclear Strategy, p. 57. Jervis devotes most of a chapter (pp. 54-63) to a discussion of escapes.

solutions to protecting against the Soviet nuclear threat. This the policy community has found very difficult to do.

Perhaps another part of the explanation for the failure of stability theory to establish itself as a dominant shaper of policy lies in the tendency of military organizations to prefer offensive doctrines.<sup>73</sup> Stability theory was compatible with a relatively limited force posture, implied a passive role for American strategic forces in simply retaliating in a rather primitive way to Soviet attack, and offered no hope of dealing with Soviet forces. This was not an approach that was destined to appeal to the US Air Force, which is custodian of the largest fraction of American strategic capability.<sup>74</sup> Most military organizations define

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<sup>73</sup> This tendency is widely, albeit not universally accepted. For a survey of some of the literature pertaining to this question, see Jack L. Snyder, The Ideology of the Offensive: Military Decision Making and the Disasters of 1914 (Ithaca, N.Y.: Cornell University Press, 1984), pp. 24-25; Van Evera, The Causes of War, Chapter 8; and Barry Posen, The Sources of Military Doctrine: France, Britain, and Germany Between the World Wars (Ithaca, N.Y.: Cornell University Press, 1984), Chapter 2.

<sup>74</sup> As Posen very nicely puts it, "Offense makes soldiers specialists in victory, defense makes them specialists in attrition, and deterrence makes them specialists in slaughter." See The Sources of Military Doctrine, p. 43.

themselves largely in terms of missions oriented around the defeat of an opponent's forces. The ability to perform such missions constitutes an important part of the organization's self-image. Establishing the importance and feasibility of their mission(s) is critically important to the political and budgetary health of the military organization.<sup>75</sup> Given the nature of stability theory, it seems obvious that it would conflict with the Air Force's interests and self-image.<sup>76</sup> After all, it prided itself on, and justified itself by, its ability to destroy Soviet forces. Above it was suggested that perhaps stability theory conflicted with the basic instincts of the state in anarchy; here I am suggesting that it conflicted with deeply grounded organizational instincts. These are two powerful explanations for the rout of stability theory and the failure of arms control theory.

In sum, we have examined here the set of ideas that

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<sup>75</sup> See, for more extensive discussion of these points, Allan R. Millett, Williamson Murray, and Kenneth N. Watman, "The Effectiveness of Military Organizations," International Security 10 (Summer 1986): especially pp. 37-42.

<sup>76</sup> A related argument suggests that there are military-industrial interests in defeating stability theory because counterforce stability generates larger force requirements. See, for example, Baugh, The Politics of Nuclear Balance, pp. 94-103.

have prevailed over stability theory, and have advanced several propositions about why those ideas have prevailed. Those propositions have enormous implications for arms control, because each of the three - the hostile political military relationship between the Soviet Union and the United States, the preference of states to rely on their own resources for the provision of their own security, and the preference of important and powerful organizations for doctrines other than that offered by stability theory - is deeply rooted and not easily changed. This suggests that the future will resemble the past; modern arms control theory will continue to collide with intractable obstacles.

B. Why, Then, Arms Control?

If, for all these reasons, "stable mutual deterrence" was not the genuine, operational goal of the strategic policies of the superpowers, then arms control as conceived by the stability theorists could not play the role or make the contribution that they believed it could. As we have seen, modern arms control theory was "invented" as a means of maximizing the stability of the nuclear environment; but maximum stability was

inconsistent with the security requirements of the superpowers as they conceived them. In this circumstance, according to the framework of analysis that linked stability to arms control, not only the the central role for arms control not exist, but the conditions which would make it more feasible, more practicable, would not exist either; there was no powerful common interest to smooth the way to arms control.

Nevertheless, the past twenty-five years have witnessed a large amount of arms control activity between the superpowers. Indeed, strategic arms negotiations have become a prominent and hugely visibly component of superpower diplomacy. How do we explain this? The obvious answer, if one accepts the argument developed above, is that there are other reasons for the superpowers to be interested in arms control, other purposes to be served than the enhancement of stability.

This might seem a pedestrian, even a trite point to make, but in fact it is one that is very frequently overshadowed by the continued prevalence of stability criteria in the public discourse on both nuclear arms control and strategic policy. Despite the rather evident embrace of counterforce by both superpowers, and the

consequent inability of arms control to have substantial stabilizing impact beyond whatever stability results from unilateral strategic weapons policies, we often continue to talk about and to assess arms negotiations, proposals, and agreements as if the exercise were largely about stability. Although, as noted above, stability means different things to different people, as a generic concept it has been canonized as the great strategic good - after all, in its initial theoretical conception it was identified as the safest of all possible nuclear worlds - and consequently virtually all strategic weapons<sup>77</sup> and virtually all strategic arms control moves are asserted to be stabilizing by whomever is advocating them (regardless of how inconsistent they may be with the

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<sup>77</sup> The stability issue has figured significantly, for example, in the debate over President Reagan's Strategic Defense Initiative. See, for example, the detailed technical analysis in "Dean Wilkening, Kenneth Watman, Michael Kennedy, and Richard Darilek, "Strategic Defences and First Strike Stability," Survival 29 (March/April 1987): pp. 137-165. The issue is also examined in William J. Durch, The Future of the ABM Treaty, Adelphi Paper No. 223, London: IISS, Summer 1987, pp. 57-58. While critics of SDI see conditions under which it would be destabilizing, the President himself, as well as his top advisors, have repeatedly claimed that SDI will be stabilizing. In one exchange with the press, for example, he stated that SDI "would enhance deterrence and stability by discouraging any aggressor from contemplating a first strike." On April 18, 1985, as reported in Department of Defense, Selected Statments, 85-2, April 1985, p. 15.

notion of stability as originally defined), and critics and supporters alike routinely employ stability criteria (of some sort) when discussing, assessing, or taking positions on arms control issues.

The incoherence of public discourse on these matters is often perfectly expressed in arguments that conjoin the preference for counterforce doctrines or capabilities with exaltations of stability. Paul Nitze, for example, argues strongly that the United States should give priority to competing with the Soviet Union in counterforce warfighting capability and then concludes that "we must always keep in mind that the central task of an effective US defense is to maintain stability and overall equivalence with the intercontinental countervalue and counterforce levels."<sup>78</sup> Needless to say, a competition in counterforce capabilities is far from (indeed, is very nearly the opposite of) what the arms control theorists had in mind by the concept of stability. This contradiction is also captured in the Scowcroft Commission report, which asserts that "stability should be the primary objective both of the modernization of our strategic forces and of our arms

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<sup>78</sup> Nitze, "The Relationship Between Strategic and Theater Nuclear Forces," pp. 131-132. (Emphasis added.)

control proposals," but then proceeds to urge the deployment of the counterforce-capable MX and to suggest that it be deployed in vulnerable ICBM silos!<sup>79</sup> Whatever one thinks of the MX, it should be plainly evident that it contravenes the criteria for stability offered by the arms control theorists, and indeed, in the form advocated by the Scowcroft Commission report combines the worst possible features, vulnerability and counterforce capability.

The use of stability criteria in discussions of arms control is pervasive. Opponents of the 1979 SALT II agreement, for example, complained that it could lead to "less stability."<sup>80</sup> Critics of the Reagan Administration's policies in the Strategic Arms Reduction Talks (START) have worried publicly that its proposals

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<sup>79</sup> Report of the President's Commission on Strategic Forces, p. 3.

<sup>80</sup> This phrase is taken from General Edward Rowney's testimony to the Senate Foreign Relations Committee, as reported in Charles Mohr, "Arms Pact Flawed, Critics Tell Senate," New York Times, July 13, 1979. For a fully developed critique of SALT II's failure to enhance stability by solving the ICBM vulnerability problem, see Richard Burt, "The Scope and Limits of SALT," Foreign Affairs, July 1978. See also on this point, Paul H. Nitze, "The Merits and Demerits of a SALT II Agreement," in Nitze, Dougherty, and Kane, The Fateful Ends and Shades of SALT, pp. 39-40, in which he complains that the Carter Administration's strategic arms control policy was resulting in "the sacrifice of crisis stability."

could undermine stability by leaving the United States with a less survivable force.<sup>81</sup> Similarly, Senator Robert Dole has expressed concern about the impact of a potential START agreement, commenting that "if the residual forces on each side are misaligned, if ours are left more vulnerable to attack than theirs; or if we fail to adequately fund programs which insure the survivability and utility of our deterrent forces, under those circumstances - it would be better that we have no START agreement at all."<sup>82</sup> In the aftermath of the Reykjavik Summit in October 1986, prominent voices complained that the Reagan Administration had "swerved onto a different track" from that of "stabilizing arms

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<sup>81</sup> See, for example, Morton M. Kondracke, "The Summit: Who Won," The New Republic, January 4 & 11, 1988, p. 16 (reporting the worries of defense experts such as Messrs. Kissinger, Scowcroft, and Brown).

<sup>82</sup> As quoted in William Safire, "Stopping Start," New York Times, January 31, 1988. Senator Dole's comments are also instructive because they were part of his effort to position himself advantageously for the Presidential election season - thus demonstrating how strategic and electoral considerations become entangled and how politically salient is the notion of stability. For an interesting account of Dole's struggle to find a way to support the Reagan Administration's arms control policies without alienating the politically critical anti-arms control right in the Republican party, see Hedrick Smith, "The Right Against Reagan," New York Times Magazine, January 17, 1988, pp. 72,77.

control measures."<sup>83</sup> The notion of stability, in short, is tossed around casually and with great frequency in public consideration of and debate over arms control, however irrelevant it may be to the actual practice of arms control.

Given the strategic doctrines that the two superpowers have adopted, the question we ought to ask about arms negotiations is: Since in current circumstances arms control is unlikely to have much effect on the stability of the nuclear balance, what else is going on here, what other purpose or purposes are being served? Instead we remain preoccupied with asking: Is it stabilizing or destabilizing? Certainly this question ought not to be forgotten, but the preclusive focus on it tends to greatly obscure other purposes which are more likely to be served by an arms

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<sup>83</sup> Brent Scowcroft, John Deutch and R. James Woolsey, "A Way Out of Reykjavik," New York Times Magazine, January 25, 1987, p. 78. These gentlemen also report that "Most [political] leaders have urged more modest expectations for formal agreements. They have felt that agreements should focus on stabilizing measures that reduce the probability of nuclear war and not on expected earthshaking breakthroughs between two competing superpowers." (p. 82.) This comment strongly buttresses the point I am making here. Other examples include Desmond Ball, et. al., Crisis Stability and Nuclear War, A report published by the American Academy of Arts and Sciences and the Cornell University Peace Studies Program, January 1987; and Clausen, Krass, and Zirkle, In Search of Stability: An Assessment of New US Nuclear Forces.

negotiation or agreement.

Indeed, it is insufficient to evaluate the practice of arms control only in these terms because to do so is to miss the more salient reality that it is an instrument of government policy that can serve a variety of purposes. That is, a government's arms control policy may be serving its intended or primary purpose even if it does not yield a treaty or contribute to stability as conceived by the arms control theorists.

Arms control policy can, for example, help a government cope with domestic political concerns and constraints. An exemplary case (although it falls outside the nuclear realm on which I have been focusing) is the opening of the Mutual and Balanced Force Reduction (MBFR) negotiations, which was a significant factor in enabling the Nixon Administration to turn aside Senator Mansfield's effort to reduce unilaterally the US commitment of troops in Europe; in fact, this was undertaken with the intention of having this effect, and succeeded despite the Administration's limited enthusiasm for the talks and despite the fact that an agreement has never been in sight.<sup>84</sup> In 1972, President Nixon clearly

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<sup>84</sup> Henry Kissinger is clear on this point in White House Years (Boston: Little Brown, 1979), pp. 400-402. He says of this useful initiative, pushed forward

had an eye on the upcoming election in seeking to crown a Soviet-American summit with the completed SALT I accords. In addition, SALT seemed a sensible way of dealing with the pressures imposed on defense policy by an aggressive Congress that was moved by the anti-military sentiments of the Vietnam era. As SALT I negotiator, Gerard Smith, has commented, "Nothing concentrated the minds of American leaders on the advantages of SALT as much as the clear and present danger of one-sided arms control in the form of congressional cuts in US defense budgets."<sup>85</sup> More recently, the Reagan Administration seems to have embarked on the INF and START negotiations at least in part to defuse the vigorous anti-nuclear movement that had arisen in 1980-1981. The INF Agreement signed at the Washington Summit in December 1987 has added to President Reagan's popularity<sup>86</sup>, helped him fend off the perception

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especially by the European allies, "The revival of the idea of mutual reductions was not a passionate commitment to this ambiguous goal but an attempt - not at all discouraged by the Administration - to forestall unilateral American cuts." (p. 400)

<sup>85</sup> Gerard Smith, Doubletalk: The Story of SALT I (New York: Doubleday, 1980), p. 29.

<sup>86</sup> Michael Deaver, former White House aide and Reagan confidante, reveals the influence of domestic political considerations in the course of describing Mrs. Reagan's influence on the policies of the President. Noting that it was in the area of arms control and Soviet-American relations that she had exercised the

that he is a lame duck incapable of any big moves, and has given him a much needed accomplishment in the aftermath of the damaging Iran-Contra controversy.<sup>87</sup> An ongoing negotiation, a shift in arms control policy, or the reaching of any sort of agreement, can in many circumstances be very helpful domestically independent of whether the true cause of stability is furthered.

Similarly, arms control policy can be put in the service of a government's foreign policy. Thus it plays a central role in Soviet-American relations,<sup>88</sup> and can

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greatest influence, Deaver writes, "It was Nancy who pushed everybody on the Geneva Summit. She felt strongly that it was not only in the interest of world peace but the correct move politically. Quoted in Steven V. Roberts, "Insider's Intimate Portrait of a First Lady's Power," New York Times, February 3, 1987. (Emphasis added.) The popularity, and hence, political appeal, of arms control has been demonstrated repeatedly, See, most recently, Fred Kaplan, "Americans Favor Arms Control But Mistrust Soviets, Poll Finds," Boston Globe, January 29, 1988, which reports that 79% of those polled supported the INF treaty and 81% favored the achievement of a START agreement.

<sup>87</sup> In the case of the Reagan Administration's INF arms control policy, these domestic motivations were rather blatantly evident. See, for example, the similar commentary in Bruce D. Berkowitz, "An INF Treaty Discredits Arms Control and Promotes Conflict," Orbis 31 (Winter 1988): p. 119: As a result of the INF agreement, he writes, "The White House gained some breathing space from the Iran/Contra arms affair, and was able to rebut reports of having become a lame duck."

<sup>88</sup> For a thorough discussion of the roles that nuclear weapons can play in Soviet-American relations, see Richard Betts, "Nuclear Weapons," in Joseph S. Nye,

serve as a signal, a barometer of improving or deteriorating relations; there is a symbolic role that it can play which is unrelated to the substantive content of negotiation and agreement.<sup>89</sup> In the early 1970s, for example, SALT was closely bound up with the Nixon Administration's detente policy. As one analysis of those events puts it, "The essential core of detente was arms control."<sup>90</sup> Furthermore, the conduct of the strategic arms negotiations was explicitly linked to specific issues of concern to the United States. Nixon and Kissinger believed that careful manipulation of the SALT negotiation could bring progress in the Berlin talks or perhaps gain Soviet assistance in bringing the Vietnam

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Jr., ed., The Making of America's Soviet Policy (New Haven, Conn.: Yale University Press, 1984), pp. 97-127.

<sup>89</sup> This is not always viewed positively. In the aftermath of the Washington Summit in December 1987, for example, President Reagan claimed proudly that a "crucial point" about the consequences of the summit was that "Soviet-American relations are no longer focused only on arms control issues; they now cover a far broader agenda - one that has, at its root, realism and candor." President Reagan, "The Washington Summit: Progress Toward Peace," Current Policy, No. 1032, Bureau of Public Affairs, US Department of State, December 1987, p. 1.

<sup>90</sup> Coit D. Blacker, Reluctant Warriors: The United States, the Soviet Union, and Arms Control (New York: W.H. Freeman and Co., 1987), p. 101.

War to an end.<sup>91</sup>

Arms control not only occupies a prominent place in Soviet-American relations, but it can be influenced, even motivated, by alliance considerations. The Reagan Administration's deliberations on the INF Talks, for example, were heavily influenced by fears and concerns relating to NATO. Former Assistant Secretary of State Richard Burt commented that "the purpose of this whole exercise is maximum political advantage" and described the INF arms control process as an exercise in "alliance management."<sup>92</sup> Indeed, one of the few points that inspired wide agreement among arms control policymakers in the early years of the Reagan Administration was that American involvement in the INF negotiations was a public relations effort aimed at easing the deployment of NATO's new intermediate-range nuclear forces.<sup>93</sup> Used thus, arms control becomes an instrument for soothing the fears of

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<sup>91</sup> See, for example, Kissinger, White House Years, p. 814.

<sup>92</sup> Strobe Talbott, Deadly Gambits: The Reagan Administration and the Stalemate in Nuclear Arms Control (New York: Alfred A. Knopf, 1984), p. 62.

<sup>93</sup> Talbott, Deadly Gambits, p. 62. See also pp. 45-47 for an account of the effects of West European pressure on the Reagan Administration to resume INF arms control talks.

allies and easing alliance relations.<sup>94</sup>

Arms control is also an instrument which is employed in the pursuit of objectives of military policy - some of which may be compatible with the classical conception of stability, some of which may not. This can be seen quite clearly in the persistent hopes that SALT would help in solving America's ICBM vulnerability problem.<sup>95</sup> This of

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<sup>94</sup> The prevalence of alliance considerations in American arms control policy is also illustrated by the contrary syndrome: the tendency of the NATO allies to be disturbed by the implications of agreements that are actually reached. In the aftermath of the INF agreement of 1987, for example, some prominent Europeans publicly voiced worries that it eroded NATO military doctrine. Thus, one report summarized the views of President Mitterand of France as follows: "Il est urgent de revoir la doctrine de riposte graduee sur laquelle etait basee jusqu'ici la strategie de l'OTAN." See "Mitterand: La Revision de l'OTAN," Le Point, Fevrier 22, 1988, p. 19. Thus, the United States may pursue arms control in part to satisfy allied preferences, but in the aftermath of arms agreements it must expend effort to reassure allies that their interests have not been harmed. The signing of the INF agreement, for example, was followed by a NATO summit meeting, the first in six years, whose primary purpose, according to one analysis, was "to allay European concerns that the American commitment to the defense of Europe may be wavering." See Julie Johnson, "At NATO Parley, Reagan Reassures," New York Times, March 2, 1988. Likewise, members of Congress feel obliged to offer comforting words to the allies once an agreement is reached. See, for example, Howell Raines, "Senators Soothe Europe on Arms Pacts," New York Times, February 9, 1988.

<sup>95</sup> This was a major concern of the United States during SALT II. See Strobe Talbott, Endgame: The Inside Story of SALT II (New York: Harper and Row, 1980), pp. 31, 51, 55.

course is exactly the sort of thing the early arms control theorists had in mind - that is, using arms control to enhance stability by reducing the vulnerability of forces - except that the focus in the negotiations was always one-sided, aiming not at stable mutual deterrence but at the solution of one's own problems. Nevertheless, insofar as arms control and military policy walk hand-in-hand in the direction of less vulnerable forces, the former does contribute to stability.

In addition, negotiations also provide a means of attempting to stop troubling systems of one's adversary or of improving one's competitive position in the arms race.<sup>96</sup> The latter was clearly very much on Henry Kissinger's mind during the SALT I negotiations. He reports in his memoirs that "I saw in SALT an opportunity

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<sup>96</sup> Thus Michael Nacht has introduced the idea of arms control as "threat control." As he put it, "arm control is really threat control..., it concerns the quest for unilateral gains by each party as much as, say, labor-management negotiations, and...it will succeed only if each side sees that the process of arms control reduces security threats in ways that no other method or strategy can." From his chapter, "Arms Control as a Means to Threat Control," in The Age of Vulnerability, p. 119. Similarly, Bajusz comments that arms control "has been able at times to lessen the impact of some (potential) technological advances in Soviet forces on the West's ability to carry out its strategy." In Deterrence, Technology, and Strategic Arms Control, p. 6.

to redress the strategic balance" and claims as one of the advantages of SALT I that it failed to restrain any of the planned US offensive force programs.<sup>97</sup> In fact, during the early 1970s American arms control was very much a response to perceptions of rapid relative decline. As Gerard Smith reports, President Nixon believed "that the SALT negotiation was perhaps the last chance for bargaining with the Soviets from a level of equality."<sup>98</sup> In the Nixon-Kissinger conception, arms control was a means not of restraining or reshaping the arms race but of enabling the United States to compete more effectively (in this instance by seeking to reach agreements that would prevent it from falling behind in the deployment of strategic offensive forces). To the extent that it can successfully contribute to this end, arms control is indeed a very useful instrument of policy; but this has little to do with the purposes envisioned by the early arms control theorists.

Arms negotiations also may contribute to military policy by providing a bargaining chip rationale for desired programs or systems. This argument was decisive in saving the US ABM program in 1969 and 1970, for

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<sup>97</sup> Kissinger, White House Years, pp. 550, 1245.

<sup>98</sup> Smith, Doubletalk, p. 30.

example.<sup>99</sup> In fact, arms control so often effectively performs this function that it becomes hard to discern whether a weapon designated as a bargaining chip is intended to further the progress of arms control or whether arms control is intended to further the progress of the weapons system. This is not surprising, for weapons programs are common and represent the routine stuff of military policy whereas arms control agreements are rare and rarely preclude modernizations that incorporate new systems. Furthermore, the negotiating leverage that might be provided by a weapons system is a legitimate consideration in evaluating procurement choices, which is what makes the bargaining chip rationale effective in justifying weapons.<sup>100</sup> The

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<sup>99</sup> See, for example, Gerard Smith's account in Doubletalk: The Story of SALT I (New York: Doubleday, 1980), pp. 148-149. While he did not wish it to seem as if he were lobbying for Congressional votes for the ABM, he was willing to intervene (decisively, he believes) to influence Senatorial votes in 1970. It seems clear from the account he provides that SALT saved the ABM system at that time, for the telling argument was that defeating ABM in the Congress would hurt SALT. See also Kissinger's bitter description of the intense opposition to ABM and of the links of ABM to SALT in White House Years, pp. 204-210.

<sup>100</sup> Although some analysts express concern that excessive emphasis on this criterion can be damaging. Robert Einhorn comments, for example, that "arguments about the presumed diplomatic value of defense programs have begun to play an inordinately powerful role in the weapons acquisition process....There is a risk of

complication is this: One needs bargaining chips in order to negotiate effectively, but the evidence suggests that the "chips" are more often procured than prohibited; William Hyland, for example, has identified as a noteworthy phenomenon "the transformation of what begin as bargaining chips into solid assets not to be traded at any price."<sup>101</sup> Arms control considerations, in sum, may be helpful in selling military programs.

One can clearly see this process at work in the Reagan Administration. Arms control has been used generally to buttress support for the Reagan rearmament

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distorting US force planning." See his Negotiating from Strength: Leverage in U.S.-Soviet Arms Control Negotiations, Washington Papers No. 113, New York: Praeger, 1985, p. 10. Schelling also warns that a bargaining chip mentality can lead to the procurement of weapons that are otherwise unattractive. See "What Went Wrong With Arms Control?," Foreign Affairs 62 (Winter 1985/1986): p. 228.

<sup>101</sup> In his forward to Einhorn's Negotiating from Strength, p. viii. The literature on bargaining chips is surprisingly sparse, given the importance of the subject to the arms control process. Einhorn provides the most extensive analysis. For other assessments of the bargaining chip argument, which emphasize the tendency of chips to be built rather than bargained, see Jane M.O. Sharp, "Bargaining Chips: Dumb or Devious?," Foreign Service Journal (March 1984); and Robert Bresler and Robert Gray, "The Bargaining Chip and SALT," Political Science Quarterly 92 (Spring 1977). For a clever abstract analysis of bargaining motivations, see Thomas Schelling, "A Framework for the Evaluation of Arms Control Proposals," Daedalus 104 (Summer 1975): pp. 187-200.

program, for as Arnold Horelick has written, the Reagan Administration, after a rocky beginning, eventually learned that "the US arms buildup could not be sustained without a more credible arms control effort."<sup>102</sup> And the bargaining chip argument has been a tremendous boon to specific, controversial weapons programs sought by the Administration, particularly SDI and MX. SDI has gained increased legitimacy and support because of the role it is believed to have played in bringing the Soviet Union back to the negotiating table and because of the leverage it is thought to give the United States in the negotiation - and this despite the candid statements of the President and other high officials that the SDI is not a program that they intend to trade away.<sup>103</sup>

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<sup>102</sup> Arnold Horelick, "US-Soviet Relations: The Return of Arms Control," Foreign Affairs 62 (America and the World, 1984): p. 526. Talbott makes much the same point. See Deadly Gambits, p. 306.

<sup>103</sup> For a strong statement of the argument that strategic defenses can serve as a powerful bargaining chip, see Charles Krauthammer, "Will Star Wars Kill Arms Control?," The New Republic, January 21, 1985, pp. 30-31. On the President's refusal to trade away Star Wars in negotiation, see, for example, Leon Wieseltier, "Nuclear Idealism, Nuclear Realism," The New Republic, March 11, 1985, pp. 24-50. For a passionate statement of the opposite view, that Star Wars will make arms control nearly impossible, see McGeorge Bundy, George Kennan, Robert McNamara, and Gerard Smith, "The Presidents. Choice: Star Wars or Arms Control," Foreign Affairs 62 (Winter 1984/1985): especially pp. 273-276. The Reagan Administration has repeatedly emphasized its commitment

The effectiveness of the bargaining chip rationale is even clearer in the case of the MX ICBM program. From the beginning of the Reagan Administration there had been concern about how to retain the MX program in the face of mounting Congressional opposition; arms control became a major element in the campaign to save MX, again despite the Administration's decision not to trade MX in the START negotiations.<sup>104</sup> As Strobe Talbott explained the Administration's reasoning, "By making the MX a bargaining chip in START, the Administration could put Congress in the position of not daring to end the program."<sup>105</sup>

This turned out to be a strikingly successful strategy. When MX survived its severest test in Congress in the Spring of 1985, its link to the Geneva talks was widely viewed as the decisive factor in its success. Then-Senator Gary Hart, for example, commented after MX

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to pursue SDI whatever happens in the arms negotiations. See, for example, Cass Peterson, "Weinberger: NO Give on Star Wars," Boston Globe, December 24, 1984; Bernard Gwertzman, "JStar Wars Curbs for Soviet Talks Called Unlikely," New York Times, December 30, 1984; David Hoffman, "Reagan Says Star Wars Effort Would Continue Despite Pact," Washington Post, February 13, 1985; and Michael Gordon, "US Spurs Soviet Offer to Negotiate on Star Wars," New York Times, October 17, 1987.

<sup>104</sup> See Talbott, Deadly Gambits, pp. 217, 243.

<sup>105</sup> Talbott, Deadly Gambits, p. 244.

had passed in the Senate that "The vote today would have gone the other way were it not for the talks in Geneva."<sup>106</sup> Congressman Wayne Dowdy (Democrat, Mississippi) illustrated the power of the bargaining chip argument in explaining his vote for MX: "I don't think they could have sold it to me without Geneva. I know they couldn't have. In fact, they knew that. Everyone who talked with me in support of the MX began with Geneva and ended with Geneva. I would hate for Congress to assume the responsibility for dooming these talks, and that's what I was persuaded we were talking about here."<sup>107</sup> Conservative columnist George Will, a strong supporter of the Reagan Administration, revealed the importance of the link between MX and the arms control negotiations when he observed that MX "will survive this year thanks to only one thing - the arms control 'process', in which the Administration says the MX is a bargaining chip."<sup>108</sup>

Clearly, the Administration's military policy was

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<sup>106</sup> Quoted in "Reagan's MX Victory Linked to Arms Talks," Boston Globe, March 28, 1985.

<sup>107</sup> Quoted in Eileen McNamara, "Geneva Influenced MX Votes Differently for Two Democrats," Boston Globe, March 20, 1985.

<sup>108</sup> George Will, "The MX Argument," Boston Globe, March 18, 1985.

well-served by the existence of the Geneva talks. Indeed, some believed that the Administration sought to resume negotiations in 1985, after a year of hiatus in 1984, precisely to influence the MX vote in this way. Whether or not one accepts that interpretation, however, it is evident from the experience of the Reagan Administration that arms control can contribute not only to the limitation of weapons but also to the justification of them.

In short, while from a theoretical point of view the central preoccupation in assessing arms control negotiations and agreements is whether stability has been enhanced, that framework of assessment does not encompass the more complex calculus of purpose which generally serves as the foundation of arms control policy. This accounts for the persistence and the prevalence of arms control in superpower diplomacy despite the fact that, according to the analysis provided by the arms control theorists, the intended role is unavailable and the conditions are unpropitious.

### C. Conclusion

The previous chapter briefly surveyed the literatures

on Soviet and American strategic nuclear doctrine for the purpose of demonstrating the incompatibility of the doctrinal choices made by the superpowers with the basic edicts of arms control theory. The evidence seems rather clear that both superpowers, perhaps for somewhat different sets of reasons, have preferred to embrace just the sort of doctrine that arms control theory says should be avoided and have sought to acquire just the sort of capabilities that arms control theory wants to preclude. This fact, which is often strangely absent from national discourse on strategic and arms control issues, readily explains the failure of arms control to live up to the promise and the expectations that were inspired by modern arms control theory.

In view of the doctrinal reality that has existed over the past three decades, it is truly preposterous to evaluate arms control primarily in terms of its effect on stability as that concept was defined by the theorists. Neither superpower was interested in increasing the survivability of its opponent's nuclear forces, as the theory prescribed for the purpose of reducing preemptive incentives; this was inconsistent with their security requirements as they perceived them. So the "mutual" in mutual deterrence was not going to come about because of

negotiated arms control. Furthermore, and equally important in understanding the futility of much of the arms control debate in the United States, neither superpower can use arms control very effectively to redress its own unilateral vulnerability problems because to do so clashes with the strategic doctrine of the other; even if one sets aside concerns about mutuality, arms control is not very promising as a vehicle for self-interested, one-sided "stabilizing" moves. For arms control to represent a potential solution to the US ICBM vulnerability problem, for example, the Soviet Union would have to abandon doctrinal choices it seems to have preferred over a very long period of time - and vice versa.

If one accepts this argument, much of the arms control debate in the United States appears to be rather fatuous. Arms control advocates inventing stabilizing measures and clamoring for stabilizing agreements must be utterly blind to the extant doctrinal environment to believe that their approaches to arms control have any chance of bilateral acceptance.<sup>109</sup> To change that they

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<sup>109</sup> See, for example, Harold Brown and Lynn Davis, "Nuclear Arms Control: Where Do We Stand?," Foreign Affairs 62 (Summer 1984): pp. 1145-1161. Writing at a time when Soviet-American arms control had completely broken down, Brown and Davis survey a number of such

must seek not merely to influence arms control policy, but to win a far more important and difficult policy fight: they must succeed in changing the doctrinal choices of both superpowers. There is not much in the historical record to suggest optimism on this score.

But arms control critics are often wide of the mark as well. They complain that arms control has failed to solve this or that vulnerability problem, as if there were any reasonable expectation that it could do so.<sup>110</sup> To the extent that forces on each side are vulnerable, this is true at least partly because the other side wishes it to be so. Why, then, would either, in a negotiation, seek to undo a situation it sought (often at

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schemes, and themselves conclude, "Arms control agreements should...be designed to improve the overall survivability of the nuclear forces of both sides." [p. 1159] (Emphasis in original.)

<sup>110</sup> See, for example, Edward Luttwak's complaint that SALT II failed to restrain the Soviet ICBM threat to American ICBMs. It left the "destabilizing" Soviet heavy missiles untouched, he writes, whereas with an effective agreement "the Minuteman vulnerability problem would have receded." From "The Questions About SALT II," in Luttwak's On the Meaning of Victory: Essays on Strategy (New York: Simon and Schuster, 1986), pp. 20, 24. Luttwak is, of course, correct that it would be desirable to use arms control to eliminate force vulnerabilities; as we have seen, this is very much in accord with the role envisioned by the arms control theorists. He errs in presuming that arms control should be expected to actually play this role in the doctrinal environment that really exists.

great expense) to create in the first place? Of course, both sides will try to employ arms control to reduce the other side's counterforce threat, but this will rarely meet with success.<sup>111</sup> Under the circumstances, such failure should be neither surprising nor a particularly damning indictment of arms control. It is rather the natural byproduct of the doctrinal environment in which the arms control process has had to function.

Ironically, then, both advocates and critics of strategic arms control have made the same error of overestimating the role it can play. I have sought to emphasize here, in contrast, the extent to which the doctrinal choices made by the superpowers have circumscribed the role of arms control, have precluded its use as an instrument for creating or enhancing stability as theoretically conceived. As we have

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<sup>111</sup> To offer a recent example, the Soviet Union has lately begun to suggest a number of naval arms control measures designed to reduce the American threat to its strategic submarine force. The United States, which has invested billions in the acquisition of attack submarines capable of placing Soviet strategic submarines in jeopardy and which has proclaimed a maritime strategy that includes the hunting down of Soviet strategic submarines, has shown no interest whatsoever in pursuing such measures. Or, to put the shoe on the other foot, the Soviet Union has likewise been unwilling to forego its large, modern ICBMs, despite years of entreaties by US officials worried about the vulnerability of the US ICBM force.

witnessed in the present chapter, if the superpowers were really committed to preserving mutual stability, they would not be doing many of the things they are presently doing in the area of strategic weapons policy and there would be more room for arms control to play a role in reinforcing the stability of the nuclear regime. Since they are not, however, stability is of only limited utility as an objective of or as a criterion for evaluating strategic arms control. It is simply not reasonable to expect arms control to triumph in a collision with prevailing perceptions of military requirements.

This implies, of course, that such strategic arms control as we have witnessed has served other purposes than the pursuit of stability, despite the clouds of rhetoric that suggest otherwise. I have sought to suggest here that there are a variety of domestic, military, and foreign policy interests that can be served by arms control negotiations and agreements, and that the practice of arms control can be best understood and evaluated by attempting to identify what these are and how and why they are facilitated by arms control.

The essential point of Part II is that the substantive role of arms control as a determinant of the

character of the strategic environment is greatly limited by the doctrinal preferences of the superpowers. Because of the strategic choices they have made, the modern theory of arms control is largely irrelevant to the realities of policy. Nevertheless, while the modern theory of arms control has failed to take root, there are still other roles that arms control can play. As is quite evident from the prominence of arms control in Soviet-American relations, it remains a useful instrument of policy.

## Conclusion

Thirty years ago there emerged a new way of thinking about arms control. This body of thought raised high hopes that arms control could come to play a major, if not a determining, role in shaping the strategic balance between the superpowers. In the intervening years, this has not come to pass, as advocates and skeptics alike judge the practice of arms control disappointing, its fruit meager. What seemed so promising three decades ago seems very much less so today. The aim of this essay has been to provide an explanation of why this is so.

In Part I of this essay we examined the origins and content of this new body of thought. I sought to demonstrate that the modern theory of arms control emerged not in response to the atomic bomb, nor as a consequence of inspiration derived from earlier arms control efforts, nor as a byproduct of improvements in Soviet-American relations, but rather in response to the distinctive circumstances associated with the national security crisis in the United States in the late 1950s. The genesis of this new body of theory in this crisis is of great significance because it had a pervasive impact

on its substantive content.

In particular, the national security crisis of the late 1950s was provoked by two new realities: the coming of the missile age, which meant that the timeline associated with nuclear attacks was compressed to minutes and that sudden, virtually warningless, attacks seemed possible; and the appearance of a sizable, and rapidly growing, Soviet nuclear capability, which seemed to give the USSR the capacity for nuclear reprisal even after an American first strike against Soviet forces. Awareness of these two newly emerging facts of life, coming as they did at a time when American forces were - at least potentially - substantially vulnerable, drew attention in the most dramatic and urgent way to the problem of surprise attack. How could the strategic environment be structured so as to avoid the dangers associated with the existence of first strike incentives in a nuclear-armed world? It was primarily in response to this problem of surprise attack, and in answer to this question about how to create a safe (meaning, in the theorists terms, a stable) nuclear environment in these new conditions, that the modern theory of arms control was created.

As we saw in Chapter 2, a distinctive feature of this theoretical framework was its focus on eliminating or

minimizing incentives to attack rather than being preoccupied with reducing military capabilities, as had been true of earlier approaches to arms limitation. The arms control theorists concluded that there were two basic incentives to initiate a nuclear strike that were of the utmost concern: the preventive motivation, referring to attacks that might result from the opportunity (and hence the perhaps irresistible temptation) to disarm an opponent by striking his vulnerable forces; and the preemptive motivation, referring to attacks that might result from the fear that one's own vulnerable forces would be attacked (the classic "use them or lose them" dilemma). Both incentives for nuclear attack derive from the existence of vulnerable forces, and consequently, the arms control theorists came to define as the safest nuclear environment one in which there were no vulnerable forces. This environment would be stable, even though levels of forces might be high and the capacity for destruction by both sides would be great, because there would be no incentive, whether opportunity or fear, to strike first. A natural corollary of this logic was that one should not only ensure that one's own forces were survivable, but also that one should avoid making the other side's forces

vulnerable (in order to eliminate his preemptive incentive to attack); one of the basic rules of the arms control theorists, therefore, was that counterforce doctrines and capabilities should be eschewed. This, of course, represented a fundamental doctrinal prescription: if both superpowers would abide by these edicts, a condition mutual deterrence, of nuclear stalemate, would result. Stability, the overriding goal established by the arms control theorists, would then exist.

I have attempted to demonstrate that the modern theory of arms control was inextricably linked to, indeed was a byproduct of, this line of strategic analysis. It determined the goal of nuclear arms control: like military policy, it was aimed at creating and sustaining stability, since security and safety depended upon the elimination of one's adversary's incentives to attack. It established the criteria for conducting nuclear arms control: vulnerable forces and counterforce capabilities were negative factors to be eliminated, while stabilizing arms control measures were any that guaranteed or enhanced the survivability of the nuclear forces of both sides. Furthermore, the body of strategic thought associated with the doctrine of mutual deterrence was also significant in making arms control seem both

domestically acceptable and internationally feasible. This was true because, if the logic of mutual deterrence were accepted, both military policy and arms control policy, both the Soviet Union and the United States, would have the same goal: to create an environment characterized by stability. The potential friction between military policy and arms control policy, and the potential clashes of interest between the Soviet Union and the United States, are almost by definition eliminated. This circumstance seemed to allow room for arms control to play a larger and more successful role than had been the case in the past.

In short, the entire intellectual edifice, as well as the practical viability, of the modern theory of arms control was predicated on the acceptance of mutual deterrence as the essential aim of strategic policy by both superpowers.

The argument of this dissertation, however, is that this doctrinal environment, on which modern arms control theory depends and to which it was meant to contribute, has never existed, and therefore arms control has never been able to play the important, determinative role posited for it by the arms control theorists. We have seen, in Chapter 3, that both the Soviet Union and the

United States have both, each for its own reasons, rejected the doctrinal prescriptions of the arms control theorists as incompatible with their self-defined foreign and military policy requirements. Far from accepting the coherent logic of mutual deterrence, which sought to neutralize nuclear weapons in relations between the superpowers, Soviet and American leaders have been sensitive to the role that nuclear weapons play in the political competition between them, have incorporated nuclear weapons into their schemes of defense (including, in the American case, the extension of nuclear guarantees to its allies), and have been far less sanguine than the arms control theorists about the ease with which an adequate deterrent can be achieved. In Chapter 4, we examined the alternative logics that have been prevalent in the policymaking world, and showed how they rendered mutual deterrence and nuclear stalemate unacceptable and required exactly what mutual deterrence and modern arms control theory sought to preclude: counterforce capability sufficient to provide rational nuclear use options. When these additional factors are taken into account, in short, mutual deterrence seems incompatible with the foreign and military policy requirements of the superpowers. It should be obvious that any approach to

arms control that is incompatible with prevailing official definitions of foreign and military policy requirements is destined at best for difficulties and more likely for failure. This is as it should be: even advocates of arms control agree that it should be subordinate to military policy. My point is simply that the arms control theorists wrongly presumed that their doctrinal prescription would or might come to dominate in the world of policy, in which case, as we have noted, there would be an inherent compatibility of arms control and military policy. Instead, very different sorts of doctrinal choices have been made, ones completely at odds with the tenets of arms control theory, and it is these that have so circumscribed the role of arms control. This, I have argued, is the primary explanation for the disappointing record of strategic arms control. The theoretical construct, however impeccable intellectually, was not translatable into practice because the essential prerequisite for its success has never existed. In short, in the context of longstanding and current military policies, it is not possible for arms control to play a major role in shaping and constraining the strategic environment.

For that to change, it is necessary to change the

strategic policies of the superpowers, to get them to abandon the quest for counterforce options. Given the record on both sides to date with respect to operational doctrine, this does not look as if it will happen anytime soon. But if it were to happen, paradoxically, substantial arms control as conceived by the arms control theorists would be more feasible but less necessary, since the strategic policies of the two sides in a world that rejected counterforce doctrines should in themselves produce a highly stable situation. Here, then, is another perverse irony of the nuclear age: meaningful arms control is least likely when it is most needed (to dampen attack incentives in a world of counterforce capabilities) and most likely when it is least needed (that is, in an environment in which the superpowers have already chosen doctrines that will lead to stability).

It should be apparent, then, that the question of doctrinal choice is at the root of the matter: it is this that determines both the character of the balance and the prospects of arms control. Implicitly, the arms control theorists understood this; for their new approach involved the use of arms control to codify a particular doctrinal environment - that of mutual deterrence. The problem is, as we have seen, that one cannot codify that

which is not embraced in the first place. Moreover, I have suggested that mutual stability clashes with deeply rooted instincts, including those of states to rely on their own devices for the provision of their security and those of military organizations who will prefer a less passive role than that given them by the doctrine of mutual deterrence. If one accepts this argument, it leads clearly to the point that the barriers to acceptance of mutual deterrence are very unlikely to be overcome; indeed, they may result from the very nature of states and organizations. The arms control theorists were not only wrong about the likelihood that the two superpowers might come to see mutual deterrence as in their mutual self-interest, they were deeply wrong about the power and endurance of the resistance this doctrine would meet.

If one accepts the argument that the doctrinal environment preferred by the superpowers is inhospitable to the ideas offered by the arms control theorists and is furthermore unlikely to change, this leads inexorably to the conclusion that the theorists overrated arms control as a potential determinant of the character of the strategic balance; as noted above, it becomes most effective only when it is least needed. Additionally,

continuing to debate and assess arms control policy as if it were guided by the modern theory of arms control is at best misleading, and obscures the point that arms control is a prominent activity in superpower relations not because modern arms control theory has been accepted but because it has been found to be of utility in the pursuit of a variety of other purposes. Realistic appraisals of arms control must take these into account.

Does this mean that the superpowers are condemned to a world of unconstrained instability? I do not believe so, for each, in seeking to provide for its own security, provides also some of the essential features of stability. That is to say, in being attentive to the survivability of their own forces and in seeking to prevent their opponent from acquiring a large-scale counterforce capability, the superpowers go far in the direction of stability despite their rejection of many of its tenets. The superpowers have not, as the early arms control theorists hoped they would, worked together to negate the nuclear threat that jeopardizes both. But in working unilaterally to negate the nuclear forces of one another, they achieve something akin to the same result. Arms control as conceived by the theorists may be very unlikely, but it may also be unnecessary. In one of the

few pleasant ironies of the nuclear age, stability can be produced by competitive strategies as well as cooperative, and these competitive strategies are, as we have seen, very much acceptable in the policy arena.

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