

CHAPTER ONE

The Evolution of U.S. Nuclear Doctrine

THE CLASSICAL Roman adage warns, *Qui desiderat pacem, praeparet bellum*—"If you want peace, prepare for war." For the past forty years of the nuclear age, the government of the United States has followed that advice with a vengeance. This chapter examines the evolution of U.S. nuclear doctrine since 1945. It is the history of senior American political officials, and the complex military organizations beneath them, attempting to maintain a precarious nuclear peace by planning to fight a nuclear war if deterrence fails.

A thorough examination of nuclear war planning and targeting doctrine is central to any discussion of U.S. nuclear strategy. Targeting doctrine is, after all, a reflection of the government's judgments about the requirements of deterrence: What targets inside the Soviet Union must U.S. nuclear forces hold at risk, that is, threaten to destroy in a retaliatory strike, in order to deter Soviet aggression? Should the United States threaten to strike first or only threaten nuclear retaliation? Should the United States maintain nuclear forces capable only of destroying Soviet urban-industrial areas, or should the United States build nuclear forces designed to destroy Soviet military forces, including their offensive nuclear capabilities, and the Soviet leadership itself with its political control apparatus? Finally, if deterrence does fail, how should U.S. nuclear forces be used? Should the United States plan and build the capabilities for limited nuclear wars or only for total conflicts, for prolonged wars or only for a brief spasm of destruction?

This chapter examines how different American administrations have answered these perplexing questions. It

traces the evolution of actual U.S. nuclear doctrine and war plans to the extent that the currently unclassified record permits. How and why has American nuclear strategy changed over the past forty years, and what areas of continuity remain? It is important to examine thoroughly this history of U.S. nuclear strategy in order to illuminate our current dilemmas and future choices. It is, in short, necessary to know where we have been in this dangerous arena of nuclear strategy, in order to understand where we should be heading.

TWO MYTHS ABOUT MAD

One common perspective on nuclear strategy equates nuclear deterrence with the threat of indiscriminate destruction of cities. This view, that war is best deterred by threats to destroy a significant portion of an adversary's population and industry, is called the doctrine of *Assured Destruction*. The belief that stable deterrence is best maintained when both the United States and the Soviet Union have such a strategy is called the doctrine of *Mutual Assured Destruction*, or MAD. This chapter will dispel two widely held myths about MAD.

The first myth about MAD is the layman's myth—the long-standing and persistent notion that the United States based its security solely on the Assured Destruction threat to attack Soviet cities in the 1960s, but later switched to a "war-fighting" counterforce nuclear doctrine.¹ As this history of U.S. nuclear strategy will demonstrate, this view greatly exaggerates the degree of change in targeting policy over time. For over thirty-five years, the United States has had, to a significant degree, a counterforce nuclear doctrine. Since the Soviet Union first developed nuclear weapons, as Secretary of Defense Harold Brown has acknowledged, "we have always considered it important, in the event of war, to be able to attack the forces that could do damage to the United States and its allies."²

The second mistaken view, however, is the expert's

myth about MAD—that Assured Destruction was merely reassuring rhetoric for public consumption and, at most, a force-sizing criterion used by Secretary of Defense Robert McNamara to fend off Air Force and congressional demands for increased counterforce capabilities in the 1960s. In this view, Assured Destruction was merely U.S. *declaratory policy*; it was not a serious element in U.S. nuclear doctrine.³ This chapter will demonstrate that, in fact, Assured Destruction has influenced U.S. nuclear strategy and targeting doctrine in three important ways.

First, it has shaped war plans indirectly by affecting both the quantity and the quality of U.S. weapons procurement over time. The size of the Minuteman force in the 1960s and the pace of accuracy improvements in the early 1970s, for example, were both influenced by beliefs that meeting Assured Destruction criteria was the primary requirement for strategic deterrence.⁴ Second, Assured Destruction had a direct influence on nuclear war planning under Secretary of Defense Robert McNamara. According to a recently declassified top secret 1961 Draft Presidential Memorandum (DPM), the maintenance of “protected reserve forces capable of destroying the Soviet urban society, if necessary, in a controlled and deliberate way” was the “highest priority” in McNamara’s nuclear strategy.⁵ While the McNamara policy throughout the 1960s did not exclude counterforce targeting, it also clearly included countercity targeting with these withheld nuclear forces. In short, while the McNamara targeting policy was not Assured Destruction *only*, it clearly did have an Assured Destruction component.

Finally, the concept of Assured Destruction also played a critical role in targeting policy in the mid-1970s, when “an important objective of the assured retaliation mission,” according to Secretary of Defense Donald Rumsfeld, was “to retard significantly the ability of the U.S.S.R. to recover from a nuclear exchange and regain the status of a 20th century military and industrial power.”⁶ As will be demonstrated in this chapter, “counter-recovery” targeting was the priority mission of U.S. nuclear forces in

the mid-1970s and required very significant numbers of weapons. Although Soviet military forces continued to be targeted during this period, the guidance given to military war planners to “retard” the Soviet Union’s recovery from a nuclear exchange moved American nuclear strategy much closer to MAD than is often realized.

The two myths about MAD are mirror images of one another. One overestimates the degree of change in U.S. doctrine; the other exaggerates the degree of continuity. The layman’s view, by focusing on McNamara’s public statements about Assured Destruction, underestimates the degree to which counterforce remained an important component in U.S. nuclear doctrine in the 1960s. The expert’s view, however, by focusing on the discussions of “limited nuclear options” and the maintenance of counterforce capabilities in the 1960s and 1970s, both overlooks the important emphasis placed on counterindustrial targeting in that period and underestimates the significance of the changes in nuclear doctrine implemented in the 1980s. Indeed, as this chapter demonstrates, the United States moved significantly away from such a MAD-oriented doctrine in the 1980s. Under what has been called the “countervailing strategy,” U.S. security was no longer based on the ability to retard Soviet economic recovery. Instead, in the words of Secretary of Defense Caspar Weinberger, deterrence was based “on the threat to destroy what the Soviet leadership values most highly: namely, itself, its military power and political control capabilities, and its industrial ability to wage war.”⁷ The concluding section of this chapter will examine the origins of this doctrine; the next chapter will provide a detailed examination of the current countervailing doctrine and an assessment of its implications for the future of U.S. national security.

1945–1950: THE AMERICAN NUCLEAR MONOPLY

Among some professional military analysts after World War II, there was a tendency to underestimate the destructive potential of atomic weapons. Maj. Alexander P. de

Seversky, for example, told *Reader's Digest* readers in February 1946 that the effect of the bombs that struck Hiroshima and Nagasaki "had been wildly exaggerated." He claimed, "The same bombs dropped on New York or Chicago, Pittsburgh or Detroit, would have exacted no more toll in life than one of our big blockbusters, and the property damage might have been limited to broken window glass over a wide area."⁸ As late as 1949 the director of the Navy's Aviation Ordnance Branch similarly reported to the House Armed Services Committee that "you could stand in the open at one end of the north-south runway at the Washington National Airport, with no more protection than the clothes you now have on, and have an atom bomb explode at the other end of the runway without serious injury to you."⁹

At the highest levels of the government, however, U.S. military and political leaders quickly recognized the revolutionary character of atomic power. For example, the Joint Chiefs of Staff (JCS) evaluation board for the Bikini tests reported in July 1947 that "in conjunction with the other mass destruction weapons it is possible to depopulate vast areas of the earth's surface, leaving only vestigial remnants of man's material works."¹⁰ After the Hiroshima and Nagasaki attacks, President Truman also viewed the bomb as a weapon of terror, not a traditional part of the military arsenal. "You have got to understand," he told a group of advisers in July 1948, "that this isn't a military weapon. It is used to wipe out women and children and unarmed people, and not for military uses. So we have got to treat this differently from rifles and cannons and ordinary things like that."¹¹ Truman's initial impulse, therefore, was to seek an agreement to internationalize the control of atomic weapons through the Baruch Plan in the United Nations, rather than to plan for their potential use against the Soviet Union. Indeed, the early war planning that did take place within the Pentagon was devoid of political guidance. Truman was not even informed of the size of the atomic arsenal from 1945 to the spring of 1947 and,

when he was briefed on the JCS nuclear war planning document "Halfmoon" in May 1948, he ordered that an alternative contingency plan be developed that would rely entirely on conventional weapons.¹²

Early War Planning

The Berlin crisis of 1948 forced a change of policy.¹³ On June 24, the Soviets shut off all ground access to Berlin, and Truman immediately ordered an airlift of supplies into the beleaguered city. On June 27, the Strategic Air Command (SAC) was placed on initial alert, and in mid-July the Administration resorted to atomic "gunboat diplomacy," sending what government press releases pointedly described as two "atomic capable" B-29 squadrons to Great Britain.¹⁴ Although these specific bombers had not, in fact, been modified to enable them to deliver atomic weapons, few reports of the action noted this fact. At the same time, however, all the SAC B-29s that had been modified to accommodate the arsenal's huge atomic bombs were placed on a twenty-four-hour alert back in the United States.¹⁵

These readiness measures and atomic "signals" took place in the absence of any agreed-upon plans for potential use of atomic bombs in a war with the Soviet Union. When senior Pentagon and National Security Council (NSC) officials met on June 30 to discuss the U.S. responses to the Soviet placement of barrage balloons in the airlift's flight corridors, the Chief of Staff of the Air Force was not even certain if the Air Staff was studying targeting options. Secretary of Defense Forrestal wondered whether "a reduction of Moscow and Leningrad would be a powerful enough impact to stop a war," and Admiral Souers from the NSC suggested that in the event of war the United States should "just kill ten million people and make them [the Soviets] get a political decision now" to surrender.¹⁶ With the prospect of conflict on the horizon, the critical need for advance planning—and indeed some

fundamental strategic thinking—about the potential use of atomic weapons was painfully obvious.

Finally, in September, the National Security Council approved a document (NSC-30, "United States Policy on Atomic Weapons") stating that the "National Military Establishment must be ready to utilize promptly and effectively all appropriate means available, including atomic weapons, in the interest of national security and must therefore plan accordingly."¹⁷ At the same time that it approved the inclusion of the atomic bomb in the military's war plans, NSC-30 explicitly maintained the sole authority of the President to make "the decision as to the employment of atomic weapons in the event of war."¹⁸ Truman wanted to make sure, he told Secretary Forrestal, that the United States did not have "some dashing lieutenant colonel decide when would be the proper time to drop one."¹⁹ If atomic weapons were used against the Soviet Union, it would be Truman's decision alone. On September 13, the President told his advisers "that he prayed that he would never have to make such a decision [to use atomic weapons], but if it became necessary, no one need have a misgiving but [that] he [would] do so," and that night Truman confided to his diary, "I have a terrible feeling . . . that we are very close to war."²⁰ The Soviet Union did not, however, challenge the U.S. airlift to Berlin and in May 1949 lifted the blockade without further tests of U.S. military capability or political resolve.

The Berlin crisis had forced the U.S. government to recognize that nuclear use would quickly become necessary in the event of a Soviet attack on Western Europe. The major burden in any future war effort, therefore, would have fallen onto the Strategic Air Command and its newly appointed commander, Curtis LeMay. Now that NSC-30 had given the Air Force the green light for nuclear war planning, the critical question for SAC was what to attack in the event of hostilities, and LeMay clearly applied his Pacific War experience with terror bombing against Japan to SAC's new mission against the USSR: "We should concen-

trate on industry itself *which is located in urban areas*," LeMay told his war planners in 1951, so that even if the specific target was missed, "a bonus will be derived from the use of the bomb."²¹

In December 1948, while the Berlin airlift was still underway, a SAC emergency war plan was formally approved by the JCS calling for "the strategic air offensive" to be implemented "on a first-priority basis" in the event of hostilities. The plan made "the major Soviet urban industrial concentrations" the "highest priority target system": atomic attacks on seventy Soviet cities were planned to take place over an initial thirty-day period producing an estimated 6.7 million casualties. "Destruction of this system," the Joint Chiefs' evaluation of the war plan concluded, "should so cripple the Soviet industrial and control centers as to reduce drastically the offensive and defensive power of their armed forces." Yet, in case this initial air offensive did not end the war, SAC planned a prolonged atomic and conventional bombing campaign against petroleum refining targets in the USSR and Eastern Europe, as well as the Soviet hydroelectric system and inland transportation system.²²

It is important to note, however, that SAC was not prepared to execute this war plan immediately if the Soviets had invaded Western Europe in the late 1940s, for while Truman had allowed military planning for the use of atomic bombs, he had resisted requests to turn actual possession of the weapons over to the military. Although the U.S. atomic stockpile and delivery capability were growing, U.S. military effectiveness was still extremely limited. Only fifty weapons were in possession of the Atomic Energy Commission (AEC) in July 1948. Each of them took approximately forty men more than two days to assemble once presidential authority was granted, and only around thirty SAC B-29s had been specially modified to carry the weapons.²³ Throughout 1948 and 1949, the Air Force lobbied for increased atomic weapons capabilities and direct military custody of the weapons themselves, but Truman

refused to take steps that might compromise civilian control over the awesome new weapon. Under Truman's policy, therefore, SAC anticipated full use of its powerful arsenal in a global conflict, but the planned atomic attack against the USSR would not have been launched until six days after the war had started.²⁴

In May 1949, a special high-level military evaluation of U.S. atomic war plans took place. The Harmon Committee report reached highly pessimistic conclusions: not only would the SAC atomic offensive fail to "bring about capitulation, destroy the roots of Communism or critically weaken the power of Soviet leadership to dominate the people," but the capability of Soviet forces to overrun Western Europe and the Middle East "would not be seriously impaired."²⁵ Civilian authorities did not disagree with this judgment and the National Security Council explicitly expressed concerns that atomic deterrence could fail in the future because of a Soviet "miscalculation of the determination and willingness of the United States to resort to force in order to prevent the development of a threat intolerable to U.S. security."²⁶ By mid-1949, the U.S. military had developed plans for a large-scale atomic strike against Soviet cities in the event of war, and yet neither civilian nor military leaders were confident that global war could either be prevented or won by the relatively small U.S. atomic arsenal. The U.S. nuclear monopoly had not produced great confidence in American security.

1949–1961: MASSIVE RETALIATION

Two events occurred between the summers of 1949 and 1950 that shaped U.S. nuclear strategy throughout the decade: the explosion of the first Soviet atomic bomb and the Truman Administration's decisions to expand the U.S. atomic stockpile and build the hydrogen bomb. The first event forced a major shift in U.S. targeting policy: the requirement for a prompt countermilitary mission against Soviet atomic weapons capability was added to SAC's pro-

longed city-busting strategy. In addition, as the Soviet nuclear stockpile and delivery capability grew in the late 1950s, the vulnerability of U.S. nuclear forces to a surprise Soviet nuclear attack became an increasingly serious problem. The second event, the decision to increase U.S. nuclear capabilities, was in large part determined by the perceived need for more weapons to cover more targets and to ensure that the Soviet Union did not race ahead in the nuclear competition. The resulting growth of the U.S. nuclear arsenal in the 1950s was massive: only an estimated 250 primitive atomic bombs existed in 1949; by 1960 the U.S. fielded approximately 18,000 atomic and thermonuclear weapons.²⁷

The "Blunting" Mission

The Soviet A-bomb test in August 1949 produced two fundamental changes in U.S. nuclear strategy. First, the Soviet Union's atomic weapons, rather than the "war-making" potential of its industries, now posed the greatest threat to the United States. Second, the traditional assumption that the United States could permit an aggressor to decide when and where to start a war, and still have sufficient strength to recover and mobilize for eventual victory, was severely challenged. For example, a February 1950 JCS report, "Implications of Soviet Possession of Atomic Weapons," concluded that "the time is approaching when both the United States and the Soviets will possess capabilities for inflicting devastating atomic attacks on each other. *Were war to break out when this period is reached, a tremendous military advantage would be gained by the power that struck first and succeeded in carrying through an effective first strike.*"²⁸

In its major review of U.S. national security policy in April 1950, the National Security Council rejected, on strategic and moral grounds, the idea of *preventive war*, that is, a war deliberately initiated by the United States before the

Soviet Union could become stronger. The critical document, NSC-68, was blunt on this issue:

It is important that the United States employ military force only if the necessity for its use is clear and compelling and commends itself to the overwhelming majority of our people. The United States cannot therefore engage in war except as a reaction to aggression of so clear and compelling a nature as to bring the overwhelming majority of our people to accept the use of military force.

Furthermore, "It goes without saying that the idea of 'preventive' war—in the sense of a military attack not provoked by a military attack upon us or our allies—is generally unacceptable to Americans."²⁹ This did *not* mean, however, that the U.S. government had decided that the United States would permit the Soviet Union to strike first in a nuclear conflict. Indeed, NSC-68 explicitly accepted the idea of a U.S. *preemptive* attack, a "counter-attack to a blow which is on its way or about to be delivered. . . . The military advantages of landing the first blow become increasingly important with modern weapons, and this is a fact which requires us to be on the alert in order to strike with our full weight as soon as we are attacked, and if possible before the Soviet blow is actually delivered."³⁰

At the level of military planning, the JCS responded to the Soviet A-bomb by making Soviet nuclear capability the priority target in U.S. war plans. In August 1950, the JCS approved three objectives for war-planning purposes:

BRAVO: the *blunting* of Soviet capability to deliver an atomic offensive against the United States and its allies;

ROMEO: the *retardation* of Soviet advances into Western Eurasia;

DELTA: the *disruption* of the vital elements of the Soviet war-making capacity.³¹

The critical importance given to the blunting mission against Soviet nuclear forces throughout the 1950s was by no means a secret. For example, in 1953, General LeMay told Congress that while SAC had been willing, before the

Soviet A-bomb test, to "go about leisurely destroying their war potential," now SAC had "to go back to the rulebook and the principles of war and fight the air battle first, which means that we must as quickly as possible destroy their capability of doing damage to us."³² In 1954, Air Force Chief of Staff Gen. Nathan Twining also publicly stated that the Air Force can "now aim directly to disarm the enemy rather than to destroy him as was so often necessary in wars of the past."³³

A strategy of "disarming" the enemy would be most effective, however, if the United States was striking first or preempting an imminent attack. Could SAC have executed such a strategy in the mid-1950s? Given the small size of the Soviet strategic arsenal, and its low readiness rate and high vulnerability, there was a strong possibility that a surprise American preventive strike would have been successful in the early-to-mid 1950s. Indeed, LeMay now maintains that "there was a time in the 1950s when we could have won a war against Russia. . . . [that] would have cost us essentially the accident rate of the flying time."³⁴ Such an attack would have been most effective, of course, if the United States struck first against an unalerted Soviet adversary. Did American political and military leaders seriously contemplate such a bolt-out-of-the-blue attack?

In the first year of the Eisenhower Administration, there were, in fact, numerous examinations of the preventive war option, and in May 1954 the President was briefed on a Joint Chiefs of Staff Advance Study Group report that specifically recommended that the United States consider "deliberately precipitating a war with the U.S.S.R. in the near future," before the Soviet nuclear forces became "a real menace" to U.S. security.³⁵ Senior military advisers were not, however, uniformly supportive of such considerations. Army Chief of Staff Matthew Ridgway argued to Eisenhower, for example, that deliberately precipitating a war with the Soviet Union would be "contrary to every principle upon which our Nation had been founded" and "abhorrent to the great mass of American people."³⁶ In

December 1954, the National Security Council finally rejected, as a policy option, "the concept of preventive war or acts intended to provoke war."³⁷

Preemption, however, was clearly not ruled out. If warning that a war was imminent existed in a crisis or if actual combat broke out, Eisenhower was apparently quite certain about the appropriate response. At a December 1954 meeting, the President "expressed his firm intention to launch a strategic attack *in case of alert of actual attack*," adding that a "major war will be an atom war."³⁸ A March 1955 National Security Council report listed a number of specific tactical warning indicators that would, it was maintained, provide "clear evidence that Soviet attack upon the continental U.S. is certain or imminent": the penetration of the U.S. air warning system by Soviet aircraft in hostile flight patterns; a Soviet attack against U.S. overseas territories, military bases, or NATO allies; the concentration of Soviet submarines "in a position and in sufficient numbers to permit effective attacks on major U.S. ports"; or the laying of Soviet minefields near U.S. ports or continental shipping routes.³⁹ Throughout the 1950s, Eisenhower repeatedly emphasized the need for immediate U.S. action under extreme emergency conditions. Strategic Air Command bombers would be launched, he told the JCS in March 1956, "as soon as he found out that Russian troops were on the move."⁴⁰ SAC must understand, the President repeated in November 1957, that "we must not allow the enemy to strike the first blow."⁴¹ Eisenhower apparently maintained this position until he left office, telling a State Department official in late 1960 that he could not "see any chance of keeping any war in Europe from not becoming a general war," and that "for this reason he thought we must be ready to throw the book at the Russians should they jump us."⁴²

"To Retaliate Instantly"

Publicly, the Eisenhower Administration's strategy became known as the "massive retaliation" doctrine. Presi-

dent Eisenhower and Secretary of State John Foster Dulles, convinced that their threat to use atomic weapons in Korea had ended the stalemate there, believed future conventional wars could also be deterred by the threat of rapid escalation. As Dulles argued in a speech at the Council on Foreign Relations in January 1954, nuclear weapons offered "more security at less cost," and the best way to deter aggression, was "to depend primarily upon a great capacity to retaliate instantly by means and at places of our own choosing."⁴³ Eisenhower privately was more blunt in his description of massive retaliation, telling a congressional delegation in late 1954 that the basic idea of the strategy was "to blow the hell out of them in a hurry if they start anything."⁴⁴

By the mid-1950s, the rapid growth in the U.S. nuclear arsenal and delivery capabilities permitted SAC to build a war plan that targeted both Soviet nuclear forces and industry in a massive fashion. In 1955, SAC's BRAVO mission included attacks on 645 Soviet bloc airfields, with twenty-five weapons aimed to destroy Soviet atomic energy installations. Under the DELTA mission against urban-industrial targets, SAC planned attacks on 118 of the 134 major cities in the Soviet Union. Overall "Sino-Soviet bloc" casualties were expected to be seventy-seven million, of which approximately sixty million would be fatalities. "Such casualties, coupled with the other effects of the atomic offensives, may have an important bearing on the will of the Soviets to continue to wage war," the JCS were coolly informed in April 1955. In the 118 major Soviet cities, fatalities were estimated to range from 75 to 84 percent. Given such high levels of fatalities in urban areas, it was reported that "industries located in such heavily damaged cities are assumed to have no production or recuperative capability during the period D to D + 6 months [D-Day plus six months] regardless of what plant capacity survives." The ROMEO mission against the Red Army in Europe received the lowest priority in terms of weapons allocated, and it was estimated that such attacks could not

prevent the Soviet Union from overrunning Western defenses.⁴⁵

SAC's capability to strike rapidly—preempting Soviet nuclear attacks against the United States and Western Europe—was absolutely critical to the success of the plan. Air Force Intelligence maintained that the Soviet Union could launch sufficient one-way long-range aircraft on missions to deliver its entire estimated arsenal of 284 atomic weapons against the United States. Therefore, as SAC war planners noted, "The factor of timing is of vital importance in the blunting mission. . . . [I]f the Soviets launch such a strike before our offensive is begun, or before our bombs fall on targets, the U.S. offensive may not materially reduce the Soviet atomic capabilities."⁴⁶ Privately, General LeMay was adamant on the need for preemption: "I want to make it clear that I am not advocating a preventive war," he told a top secret military planning group in March 1954; "however, I believe that if the United States is pushed in the corner far enough we would not hesitate to strike first."⁴⁷ Gen. Thomas White was only slightly less direct in his public testimony to Congress in February 1959: "the first priority" if the United States took the initiative after receiving "tactical or strategic warning" would be to "destroy the enemy's capability to destroy us."⁴⁸

SIOP-62

The Eisenhower Administration, in its final years, presided over a major effort to restructure the massive retaliation war plan. Prior to 1960, each U.S. Commander in Chief (CINC) of a unified or specified command had in essence prepared his own nuclear war plan, and the Administration sought to rationalize the highly redundant targeting under the newly created Joint Strategic Target Planning Staff (JSTPS).⁴⁹ The first *national* nuclear war plan, SIOP-62 (Single Integrated Operational Plan), was produced by the JSTPS in 1960 and 1961, under civilian guidance, to cover the "optimum mix" of military and ur-

ban-industrial targets in the Sino-Soviet bloc. When the war plan was finally completed, however, its rigid overkill proportions, Eisenhower admitted to an aide, "frighten[ed] the devil out of me."⁵⁰

A recently declassified military briefing for President Kennedy fully reveals the stunning inflexibility of SIOP-62.⁵¹ The plan permitted retaliation if necessary and preemption if possible, but both on an utterly massive scale. If the United States was attacked or war appeared imminent, the President would have, ostensibly, fourteen "options." Each so-called option, however, simply provided for alerting more U.S. nuclear missiles and bombers and then launching *all* available forces against *every nation* in the Sino-Soviet bloc. If sufficient strategic warning existed to alert all U.S. forces, and a decision was reached to preempt or retaliate before Soviet forces reached the United States, the entire force of 3,267 nuclear weapons would be launched against the Soviet Union and the People's Republic of China, plus the satellite nations of Eastern Europe, North Korea, and North Vietnam. The first SIOP maintained no readily available reserve forces, and had no provision for completely avoiding attacks on any individual enemy nation. Although only approximately 15 to 20 percent of the DGZs (Designated Ground Zeros) in SIOP-62 were urban-industrial targets, such nuclear attacks, coupled with the significant collocation of military targets and population centers, ensured that Communist bloc casualties would have been horrendous beyond historical precedent.

It is critical to note, however, that despite the lopsided nuclear balance at the time (see fig. 1-1), the Joint Chiefs of Staff could not be confident that SIOP-62 forces would completely protect the United States from a Soviet attack if deterrence failed. Not only might the Soviets launch their nuclear bombers and missiles against the United States first, but even if the United States preempted a Soviet attack, the size and unknown location of some Soviet nuclear forces prevented the American military from being

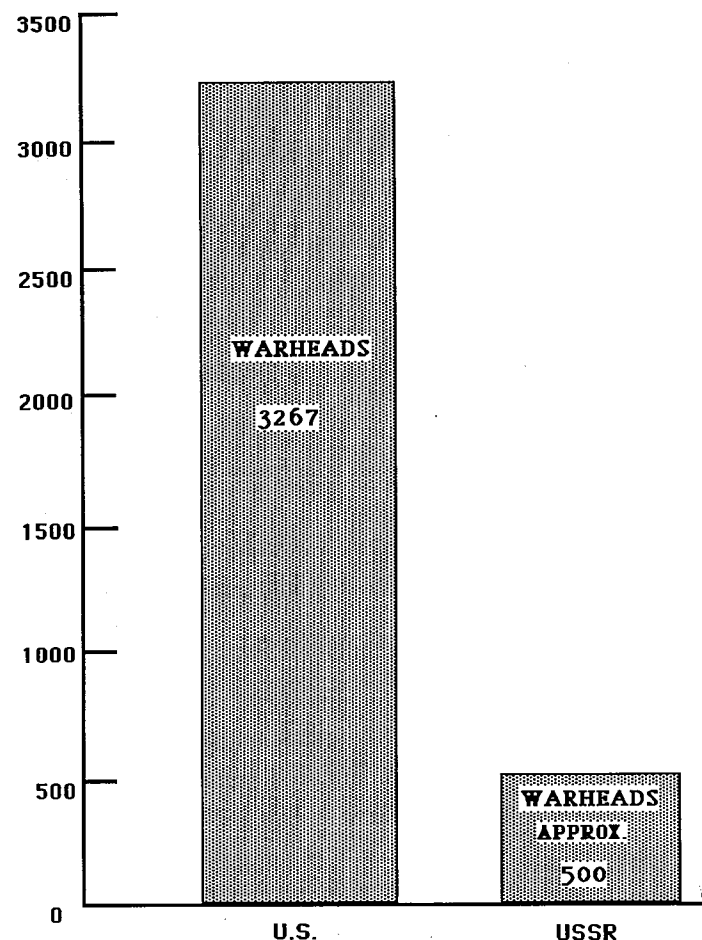
certain that the entire Soviet nuclear arsenal would be destroyed. "Under any circumstances—even a preemptive attack by the U.S.—it would be expected that some portion of the Soviet long-range nuclear force would strike the United States," the Chairman of the Joint Chiefs of Staff appropriately warned the President in September 1961. He did not, however, provide the President with estimates of U.S. casualties under the different scenarios for a nuclear exchange, but only noted that "clearly the most important factor affecting damage to the U.S. is that of whether the U.S. acts in retaliation or preemption."⁵²

Nevertheless, President Kennedy was also informed that execution of SIOP-62 "should permit the United States to prevail in [the] event of general nuclear war."⁵³ What did the Joint Chiefs mean by this? The available evidence suggests that this judgment was based upon a very narrow military perspective: to prevail meant to be able to carry out U.S. war plans successfully. The military planners had been ordered to construct plans that would give the United States a 75-percent probability of delivering a weapon on each Soviet target in order to "destroy or neutralize" Soviet nuclear delivery capability as well as urban-industrial centers. These war objectives could be met regardless of who struck first. Therefore, in this narrow military sense, the JCS believed that the United States would prevail in any nuclear war against the Soviet Union.⁵⁴

1961-1974: ASSURED DESTRUCTION AND DAMAGE LIMITATION

Fundamental problems with the Eisenhower Administration's nuclear strategy were made apparent to President John F. Kennedy within his first year in office. In July 1961, when the Berlin crisis forced a high-level review of U.S. nuclear options in the event of war, McGeorge Bundy, the Special Assistant for National Security Affairs, reported to Kennedy that "in essence, the current plan [SIOP-62] calls for shooting off everything we have in one

FIGURE 1-1
The U.S. and USSR Nuclear Balance, 1961



Source: Derived from "SIOP-62: The Nuclear War Plan Briefing to President Kennedy," Scott D. Sagan, *International Security*, vol. 12, no. 1, Summer 1987, pp. 23-29.

shot, and is so constructed as to make any more flexible course very difficult."⁵⁵ At the height of the crisis, when Kennedy was briefed on SIOP-62 by the Chairman of the Joint Chiefs, according to a witness he "emerged thoroughly persuaded that there was insufficient capability for the President to exercise discrimination and control should nuclear conflict come."⁵⁶

In early 1961, Secretary of Defense Robert McNamara requested that the JCS assess the feasibility of building controlled responses and negotiating pauses into the war plan. McNamara's objectives were made clear in a memorandum drafted for the President that September. In this document, McNamara explicitly rejected "minimum deterrence," a posture in which, "after a Soviet attack, we would have a capability to retaliate, and with a high degree of assurance be able to destroy most of Soviet urban society, but in which we would not have a capability to counter-attack against Soviet military forces." Minimum deterrence should be rejected, McNamara recommended, for two basic reasons:

Deterrence may fail, or war may break out for accidental or unintended reasons, and if it does, a capability to counter-attack against high-priority Soviet military targets can make a major contribution to the objectives of limiting damage and terminating the war on acceptable terms;

By reducing to a minimum the possibility of a U.S. nuclear attack in response to Soviet aggression against our Allies, a "minimum deterrence" posture would weaken our ability to deter such Soviet attacks.⁵⁷

At the same time, however, McNamara also rejected the opposite extreme, the Air Force's preferred posture of a "full first-strike capability" that would enable the United States "to attack and reduce Soviet retaliatory power to the point at which it could not cause severe damage to U.S. population and industry." There were three arguments against U.S. acquisition of such a "full first-strike capability," McNamara wrote: it was extremely costly; U.S. ef-

orts to achieve it would risk "the provocation of an arms race"; and it was "almost certainly infeasible" since the Soviets could counter it by deploying invulnerable submarines and hardened ICBMs. McNamara's alternative was to plan to attack only Soviet military targets in any initial strike, but to maintain a capability to destroy Soviet cities if necessary. Thus, the memorandum reported:

The forces I am recommending have been chosen to provide the United States with the capability, in the event of a Soviet nuclear attack, first to strike back against Soviet bomber bases, missile sites, and other installations associated with long-range nuclear forces, in order to reduce Soviet power and limit the damage that can be done to us by vulnerable Soviet follow-on forces, while, second, holding protected reserve forces capable of destroying the Soviet urban society, if necessary, in a controlled and deliberate way.⁵⁸

McNamara, therefore, rejected Air Force requests for more bombers, but recommended the initial acquisition of more ICBMs and SLBMs (submarine-launched ballistic missiles). Although vulnerable bombers could *not* be "held in reserve to be used in a controlled and deliberate way," McNamara noted that "Polaris is ideal for counter-city retaliation." Moreover, the speed of the missile force was very advantageous for the counterforce mission: "In the case of the military targets, the missiles reach their targets much faster than do bombers, and therefore would be more effective in catching enemy bombers and missiles on the ground."⁵⁹

Guidance drafted by McNamara's assistants in 1961 was used by the JSTPS to build a new nuclear war plan, SIOP-63, which separated the "optimum mix" into three target sets—(1) nuclear-threat targets, (2) other military targets, and (3) urban-industrial targets—and provided new options, including the capability to withhold direct attack against urban industrial targets and withhold nuclear attacks against any individual country.⁶⁰ The counterforce and countermilitary options in SIOP-63, however, re-

quired the use of massive numbers of nuclear weapons, and civilian damage would have been enormous, even without direct attacks on urban-industrial targets.⁶¹ Finally, McNamara explicitly maintained the option of launching the whole SIOP "to strike back decisively at the entire Soviet target system simultaneously."⁶²

Counterforce and Countercity Targeting

The outlines of this new strategy were made public by McNamara in his address at the University of Michigan commencement in June 1962 in Ann Arbor:

The U.S. has come to the conclusion that to the extent feasible, basic military strategy in a possible general nuclear war should be approached in much the same way that more conventional military operations have been regarded in the past. That is to say, principal military objectives, in the event of nuclear war stemming from a major attack on the Alliance, should be the destruction of the enemy's military forces, not his civilian population.⁶³

The new McNamara nuclear doctrine became known as the "no-cities" strategy, a misleading term since the strategy explicitly included the option of attacking the urban-industrial centers of the Soviet Union if U.S. cities were attacked. In addition, despite the Administration's public emphasis on its "second-strike" policy, the new SIOP did not eliminate the option to strike first or preempt. The U.S. counterforce capability "would be used," the JCS reported to McNamara in late 1963, "in case of pre-emption, to provide a first strike option of reasonable size against the Soviet military targets," and SIOP-63 included counter-military options specifically designed for a preemptive response.⁶⁴ Although McNamara reported to President Kennedy in 1962 that he believed the U.S. "would not be able to achieve tactical surprise, especially in the kinds of crisis circumstances in which a first strike capability might be relevant,"⁶⁵ the senior members of the

Administration were undoubtedly aware that the Soviet Union remained very vulnerable to a U.S. first strike. Indeed, despite the changes in the nuclear war plan, the Kennedy Administration was not unwilling to emphasize American nuclear superiority and the fear of a massive U.S. first strike for coercive political purposes. During the Cuban Missile Crisis in October 1962, for example, Kennedy publicly threatened a "full retaliatory response" against the USSR if a single missile was launched from Cuba against any country in the Western Hemisphere.⁶⁶

Given both the great numerical inferiority of Soviet nuclear forces, and their extraordinary low state of day-to-day readiness (neither Soviet bombers nor ICBMs were kept on day-to-day alert in the early 1960s),⁶⁷ under many scenarios an American counterforce strike would have significantly limited damage to the United States in the early 1960s. Even if the United States refrained from preempting a Soviet attack, counterforce retaliation might still destroy many Soviet nonalert, follow-on, or reserve nuclear forces. This was especially the case with respect to the Soviet long-range bomber force, which, in the early 1960s, held the largest number of Soviet nuclear weapons then believed capable of reaching the United States. U.S. prompt counterforce threats against Soviet bomber bases would be highly effective, since to mount a bomber attack against the United States, as McNamara explained to Congress in early 1963, the Soviets would first be required either to deploy their bomber force to their Arctic air bases or stage them through those bases in successive waves. "Such action," the Secretary of Defense reported, "would greatly jeopardize their chance of surprising us and, equally important, their bombers would become vulnerable to our missile attack during the staging operation."⁶⁸

The available evidence is clear, however, that McNamara remained opposed to the development of a "full first-strike capability" and did not believe the United States had such a capability in the early 1960s. As early as December 1963, McNamara argued that a disarming first-

strike capability was not only extremely expensive and probably infeasible, but that excessive U.S. counterforce might actually be detrimental to U.S. security. If the United States had such a "full first-strike capability," *crisis stability* might be undermined, it was argued, since the Soviets might then be more likely to launch first in a tense crisis out of fear that a disarming American attack was imminent. As McNamara wrote in his December 1963 top secret Draft Presidential Memorandum to President Johnson, decreased Soviet vulnerability to an American counterforce attack "may be desirable from the point of view of creating a more stable posture, reducing their incentive . . . to make a preemptive strike against us."⁶⁹ With respect to the U.S. inability to disarm the USSR in a first strike, McNamara's position was clear in his classified testimony to Congress in February 1962: "Even if we attempted to destroy the enemy nuclear strike capability at its source, using all available resources, some portion of the Soviet force would strike back."⁷⁰

Nevertheless, McNamara maintained in his 1963 memorandum for the President, counterforce strikes, under any condition of war initiation, "might help to limit the damage to the United States by destroying some of the Soviet nuclear delivery systems, and by disrupting the coordination of the rest, thereby easing the task for our defensive forces."⁷¹ Even without a disarming first-strike capability, initial counterforce strikes were useful, as McNamara put it, "to make the best of a bad situation": the goal of such an attack would be "to knock out most of the Soviet strategic nuclear forces, while keeping Russian cities intact, and then coercing the Soviets into avoiding attacks on our cities (by the threat of controlled reprisal) and accepting peace terms."⁷²

At the same time that McNamara insisted on the utility of counterforce, he also developed specific Assured Destruction criteria to help measure the adequacy of planned strategic forces: the official *minimum* requirements during the 1960s ranged from the capability to destroy 20 to 30

percent of the USSR's population and also 50 to 66 percent of its industrial capability.⁷³ These specific criteria were not based on thorough studies of the Soviet leadership's values or the Soviet military's war plans. Instead, the Assured Destruction criteria represented the "flat of the curve" on the nuclear damage charts at the Pentagon: for every marginal increase in destructive capability after that point, increasingly larger and more expensive U.S. nuclear forces would be required. If all U.S. nuclear forces remaining after a Soviet first strike were targeted against Soviet urban-industrial areas, which McNamara argued the Soviets would have to postulate under conservative worst-case planning assumptions, the Assured Destruction criteria could easily be met by projected U.S. nuclear forces. Throughout the mid-1960s, McNamara utilized such arguments in his efforts to fend off congressional and Air Force requests for further offensive forces: after a certain point, extra missiles would add so marginally to U.S. Assured Destruction capabilities, he argued, that their cost could not be justified.

What was the "operational" significance of the Assured Destruction criteria? Certainly, as has been demonstrated, under the Damage Limitation strategy not *all* U.S. nuclear forces would be used against Soviet cities. Unless responding in kind to a Soviet attack on U.S. cities, *initial* attacks would be designed to destroy counterforce targets, with *withheld* forces used to threaten Soviet urban-industrial society. Although the specific guidance given to the war planners is not available, it is important to note that the numbers of nuclear weapons expected to be assigned to this withheld countercity reserve force (what could be called the Assured Destruction force) were planned to be sufficient to achieve the overall Assured Destruction criteria. McNamara's December 1963 Draft Presidential Memorandum provides the best evidence. The specific Assured Destruction criterion given in DPM-63 was "30% of their population, 50% of their industrial capacity, and 150 of their cities."⁷⁴ Each year, McNamara provided a "projected

Soviet-Bloc target list," which he described as "an approximate expression" of how projected U.S. forces "might be allocated to targets."⁷⁵ The 1963 DPM projected target list (see table 1-1) for fiscal year 1969 had 533 U.S. missiles (332 Polaris, 75 Minuteman, 54 Titan, and 72 Atlas missiles) capable of being withheld in initial attacks and specifically targeted against 150 Soviet "Urban Industry and Government Control" targets. Use of these forces in a retaliatory strike was expected to result in destruction of 60 percent of Soviet industrial capability and fifty million prompt urban fatalities.⁷⁶

The full projected assignment of U.S. nuclear forces against Soviet targets under the McNamara strategy can be seen in this Soviet bloc target list. In this war plan projection, approximately 16 percent of the U.S. nuclear weapons available would have been targeted directly at Soviet urban-industrial areas. In contrast almost 50 percent of the weapons were assigned to Soviet strategic nuclear targets.

Disillusion with Damage Limitation

Even in the late 1960s, by which time Assured Destruction criteria were widely used in declaratory policy and in bureaucratic battles over the nuclear forces budget, U.S. nuclear *employment* policy maintained a heavy emphasis on counterforce for initial attacks on the Soviet Union, with capabilities for urban-industrial destruction to be held in reserve. "Our Assured Destruction capability does not indicate how we would use our forces in a nuclear war," the January 1968 Draft Presidential Memorandum stated. "If we failed to deter nuclear war, we would want to be able to follow a policy of limiting our retaliatory strikes to the enemy's military targets and not attacking his cities if he refrained from attacking ours."⁷⁷ Yet, although such counterforce nuclear options were maintained throughout the 1960s, the ability to limit damage through offensive strikes declined significantly as the rapid growth in the numbers and survivability of the Soviet ICBM and SLBM force made

TABLE 1-1
Soviet Bloc Target List
(Projected for FY 1969)

Targets	Weapons Assigned			
	No. of Targets	ICBMs & SLBMs	Air-to-Surface Missiles ^a	Gravity Bombs ^a
Urban Industry & govt. controls	150	533		
Satellites	65	27 ^b		
<i>Strategic Nuclear</i>				
Bomber bases	210	309		
ICBM soft	122	179		
ICBM hard	100	147		200
IR/MRBM	125	184		
IR/MRBM-hard	113	166		226
Sub bases	35	51		35
Offensive control	45	66		
<i>Defensive and Other Military</i>				
Air defense fields	115	96	65	
Unco-located SAMs	140		280	
Aircraft disp. bases	110			220
Strat./tac. wpns. storage	240			249
Other mil./interdiction	220			220
Total	1,790	1,758	345	1,150

Source: Draft Memorandum for the President, Recommended FY 1965-1969 Strategic Retaliatory Forces, December 6, 1963, p. I-37 (McNamara Recommended Forces), OSD-FOI.

^a The air-to-surface missiles and gravity bombs are associated with the alert bomber force only.

^b These forces could possibly be augmented by missiles in an emergency combat condition, part of the alert bomber force, and the bomber positive control backup force.

the Soviets far less vulnerable to U.S. attack. Moreover, U.S. counterforce options remained extremely large. After the initial efforts to add more flexibility to the war plan, McNamara did not instruct the war planners to build more limited options into the SIOP. Saving his political capital for other fights with the JCS, he gave up on preplanned small options, hoping that such nuclear plans could be prepared, if necessary, in the course of a crisis or war.⁷⁸

McNamara went through a similar disenchantment in the 1960s with the prospect of strategic defense against nuclear attack. In his first years in office, he was a strong advocate of improved American defenses: civil defense fallout shelters, continental air defense against Soviet bombers, and ballistic missile defense. Although there was no expectation that such programs would provide an impenetrable "shield," defenses were a critical component of the original Damage Limitation strategy. "Under any circumstances, even if we had the military advantage of striking first, the price of any nuclear war would be terribly high," McNamara acknowledged in an interview with Stewart Alsop in late 1962. Yet he also argued in the same interview that "you have to recognize that there is a tremendous difference, a vital difference, between say, thirty percent fatalities and sixty percent," adding that "a serious national fallout shelter program could make that sort of difference."⁷⁹ Spending on civil defense, however, became increasingly politically unattractive in the 1960s as Congress deeply cut Administration requests. The strategic significance of continental air defense also decreased rapidly as the Soviet Union placed its major emphasis on land-based ICBMs. As McNamara noted in 1968, "Even a very strong air defense could not save many lives. . . . [because] the Soviets could simply target cities with their missiles."⁸⁰ Finally, despite keen initial interest in the Army's Nike-Zeus anti-ballistic missile system, McNamara soon determined that cost-effective Soviet countermeasures could be easily developed to overcome U.S. defenses. By 1967, the American ABM effort was being justified solely

as a potential defense against a future Chinese nuclear threat, not against an overwhelming Soviet attack.

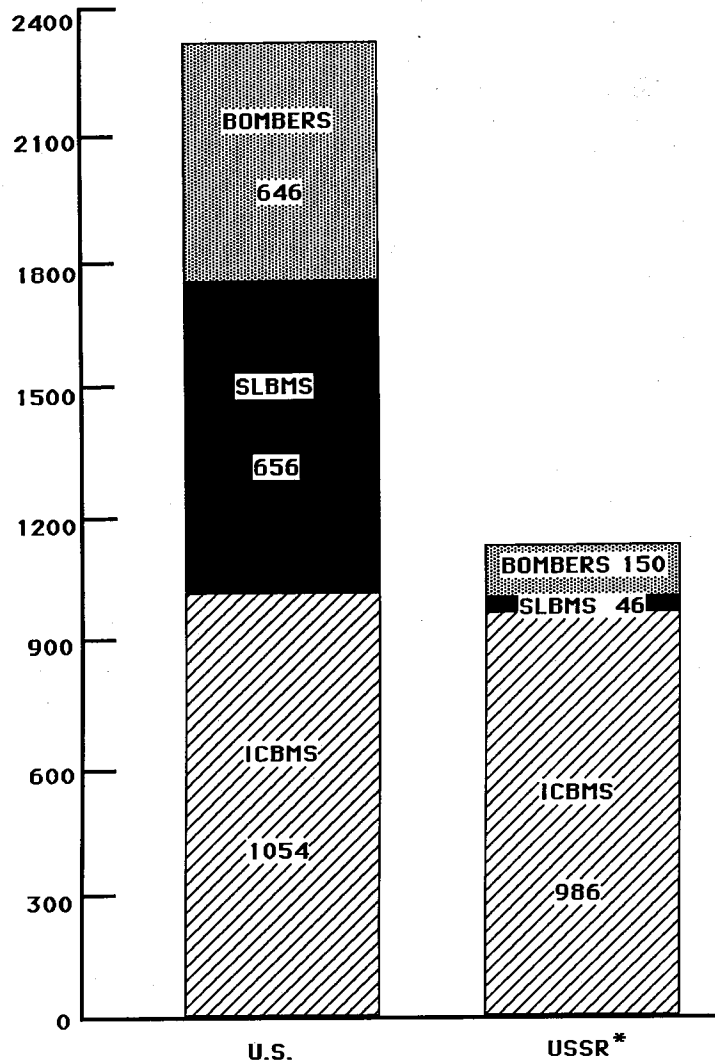
By the end of the decade, official views on the prospects for limiting damage in a nuclear exchange were bluntly pessimistic: "Achieving a significant Damage Limiting capability against the Soviet Union," the Secretary of Defense's January 1969 DPM stated, "does not appear to be feasible with current technology."⁸¹ The Soviet nuclear arsenal was still considerably smaller than the U.S. arsenal (see fig. 1-2). But, for the foreseeable future, it was expected that each side could retain the capability for massive destruction against the other even in a retaliatory second strike.

Flexible Response in NATO

The other major area of change in nuclear strategy under McNamara was in NATO. Under the Eisenhower Administration's Massive Retaliation doctrine, the United States threatened an immediate and massive nuclear response to a Warsaw Pact conventional attack on Western Europe. This strategy, however, came under increasing criticism during the late 1950s and early 1960s as many European and American analysts expressed deep skepticism over the credibility of the U.S. commitment to Europe. McNamara's proposal for a Flexible Response doctrine in NATO explicitly maintained the U.S. commitment to use nuclear weapons first if NATO's conventional defense faltered. "The United States is prepared to respond immediately with nuclear weapons to the use of nuclear weapons against one or more members of the Alliance," McNamara told the NATO defense ministers in a restricted session in May 1962. Furthermore, he added, "the United States is also prepared to counter with nuclear weapons any Soviet conventional attack so strong that it cannot be dealt with by conventional means."⁸²

Flexible Response did, however, call for two important changes in NATO nuclear doctrine. First, nuclear escala-

FIGURE 1-2
The U.S. and USSR Nuclear Balance, 1968



Source: Melvin Laird's statement before the House Armed Services Committee, *Department of Defense Authorization for FY 1971*, March 2, 1970, OSD-FOI, National Security Archives, Washington, D.C.

* Soviet SLBMs include nuclear-powered submarines only.

tion was to come as late as possible, only after considerable efforts at conventional defense had failed. Second, the planned nuclear response at the tactical level would be far more limited in nature than had been planned under Massive Retaliation. Throughout the 1960s, McNamara called for improved NATO conventional capabilities and conventional war plans to enable the alliance to forgo nuclear escalation against all but the most massive Soviet attack. Pentagon studies of the period convinced the Secretary of Defense that NATO conventional forces would be adequate to defend Western Europe against most plausible Warsaw Pact attacks. McNamara acknowledged in a January 1964 memorandum that "despite my confidence in the feasibility and desirability of a major nonnuclear option, we cannot exclude the possibility that, under heavy pressure, NATO's nonnuclear defenses might begin to crumble."⁸³ The American first-use commitment could not, therefore, be abandoned. Although the United States was able to get formal NATO endorsement of Flexible Response in 1967, after the French had pulled out of the alliance's military organization, NATO's conventional strength in the 1960s was not sufficient to quell allied concerns about the need for a nuclear first-use threat. In short, Flexible Response was officially adopted, but doubt about the U.S. commitment to initiate the use of nuclear weapons remained a serious problem.

1974-1980: LIMITED NUCLEAR OPTIONS AND COUNTER-RECOVERY TARGETING

Just as the Kennedy Administration had rapidly revised its predecessors' nuclear policy in 1961, the Nixon Administration came into office determined to resolve what it saw as three related, fundamental problems in the existing U.S. nuclear strategy. The first was the continuing problem of the credibility of extended deterrence in Europe. Although Secretary McNamara had consistently maintained in public that the United States remained committed to use

nuclear forces first to defend NATO, if necessary, under the Flexible Response doctrine, lingering doubts had been raised by his repeated emphasis on Mutual Assured Destruction as the likely outcome of any nuclear war. (Indeed, these doubts may not have been unfounded. McNamara now states that "at that time, in long private conversations with successive Presidents—Kennedy and Johnson—I recommended, without qualification, that they never initiate, under any circumstances, the use of nuclear weapons. I believe they accepted my recommendation.")⁸⁴ There was, in essence, a deep underlying tension between McNamara's statements on mutual nuclear deterrence and NATO military doctrine. As Henry Kissinger, Nixon's national security adviser, queried: "How could the United States hold its allies together as the credibility of its strategy eroded? How would we deal with Soviet conventional forces once the Soviets believed that we meant what we said about basing strategy on the extermination of civilians?"⁸⁵

A second, and related, problem remained. How should the United States respond if directly attacked by the Soviet Union? President Nixon emphasized the dilemma in his 1970 Report to Congress: "Should a President in the event of a nuclear attack be left with the single option of ordering the mass destruction of enemy civilians, in the face of the certainty that it would be followed by the mass slaughter of Americans?"⁸⁶

This question was partly caricature, for virtually no one supported restricting the President to the "single option" of massive destruction, and—as has been shown—McNamara had already added the SIOP option, under the "no-cities" doctrine, of attacking Soviet nuclear forces promptly while withholding attacks on urban-industrial targets. Yet Nixon's statement was not entirely spurious, for, given the size of both the Soviet and American arsenals by the 1970s, the U.S. counterforce option was massive. Indeed, because there were no options in the McNamara SIOPs that were designed as responses below the

level of a major counterforce attack, a number of questions about what to do if deterrence failed remained unanswered.⁸⁷ If the Soviets attacked in a limited nuclear strike, how should the United States respond? In the event that conventional defense failed in a war in Europe, and escalation moved beyond the use of tactical nuclear weapons, how should U.S. strategic forces be used?

The third major problem in nuclear strategy confronting the Nixon Administration was the danger that the Soviet Union might eventually build such a potent combination of offensive forces and strategic defenses that U.S. Assured Destruction capabilities would be threatened. McNamara had not originally foreseen such a possibility. Indeed, he publicly announced in 1965: "The Soviets have decided that they have lost the quantitative [arms] race and they are not seeking to engage us in that contest. . . . There is no indication that the Soviets are seeking to develop a strategic nuclear force as large as ours."⁸⁸

It was apparent to most observers by 1969 that McNamara had been wrong. The Soviet ICBM arsenal had rapidly expanded in the late 1960s, surpassing that of the United States in numbers of launchers (though not in total warheads) by the time Nixon came into office. In addition, an anti-ballistic missile complex was being constructed around Moscow. The Soviets had clearly not settled for inferiority and the new administration was concerned that they would not settle for strategic parity either. Improvements in the U.S. offensive and defensive forces were now considered critical; as Henry Kissinger put it, "The USSR would accept a stabilization of the arms race only if convinced it would not be allowed to achieve superiority."⁸⁹

To counter these Soviet programs, the Nixon Administration pursued a dual track of force modernization and arms control. Most significant, it continued the major program, begun in the Johnson Administration, to add MIRVs (Multiple Independently targetable Reentry Vehicles) to a large portion of the ICBM and SLBM force and pushed the Safeguard ABM Program, a defense of ICBM

sites, through Congress. Finally, in May 1972, Nixon reached a major arms control agreement with the Soviets: under the ABM and SALT (Strategic Arms Limitation Talks) I Interim Agreement on offensive arms, both sides agreed to limit their ABM systems to two sites of one hundred launchers each and froze the number of ICBM and SLBM launchers in both arsenals. The Nixon Administration believed that such an agreement was very much in the United States' interest, since there was little domestic support for an ABM buildup, and therefore was willing to limit U.S. defenses in exchange for restrictions on Soviet offenses and defenses. Thus, by 1972, the emerging threat to the overall American deterrent capability was considered to be relatively contained.

The Schlesinger Doctrine

Early in his tenure in office, President Nixon requested that the Defense Department examine alternative targeting policies and, four years later, after a prolonged Defense Department and interagency study process, National Security Decision Memorandum (NSDM) -242 was signed. The new nuclear doctrine—publicly presented by Secretary of Defense James Schlesinger and soon known as the Schlesinger Doctrine—had two major components. The first was the effort to provide more credible deterrence and escalation control through the development of a wider array of planned limited nuclear options. Schlesinger acknowledged in his public presentations that several response options had existed since the early 1960s, but emphasized that the “limited” nature of such options was more apparent than real:

In the past, we have had massive preplanned nuclear strikes in which one would be dumping *literally thousands of weapons on the Soviet Union*. Some of these strikes could, to some extent, be withheld from going directly against cities, but that was limited even then.

With massive strikes of that sort, it would be impossible to ascertain whether the purpose of a strategic strike was limited or not. *It was virtually indistinguishable from an attack on cities*. One would not have had blast damage in the cities, but one would have considerable fallout and the rest of it.

So what the change in targeting does is give the President of the United States, whoever he may be, the option of limiting strikes down to a few weapons.⁹⁰

Schlesinger's public defense of limited nuclear options emphasized the twin purposes of the new strategy: to enhance the credibility of the NATO threat to use nuclear weapons first, if conventional defense failed, and to provide appropriate responses to limited Soviet nuclear attacks against the United States or NATO allies. Although European governments remained concerned about the reliability of the American nuclear guarantee to NATO, they were generally receptive to the Schlesinger Doctrine. In the United States, however, there were numerous strategic analysts and members of Congress who argued that the development of limited nuclear options was destabilizing, increasing the likelihood of nuclear war.⁹¹ To the degree that such critics were narrowly focused on an American strategic nuclear *response* to a Soviet conventional invasion of Western Europe, they were right: it was precisely because limited options were more likely to be used that the credibility of the American extended deterrent threat was considered to be improved. Schlesinger emphasized precisely this point in an interview on BBC radio in October 1974: “The recognition that a high level of conventional conflict may elicit a nuclear response, be it tactical, or be it strategic, is, I think, a major contributor to the deterrent.” Therefore, he insisted, U.S. strategic nuclear forces are “certainly still coupled to the security of Western Europe; that is a major reason behind the change in our targeting doctrine during this last year.”⁹²

Schlesinger strongly disagreed, however, with the criticism that limited counterforce options were destabilizing

because they might increase American or Soviet incentives to launch a *full-scale* nuclear attack. Limited counterforce or countermilitary options could not, Schlesinger maintained, significantly limit damage to the United States. "There is simply no possibility of reducing civilian damage from a large-scale nuclear exchange sufficiently to make it a tempting prospect for any sane leader," he insisted to Congress in 1974. Limited options might, however, make Soviet conventional aggression less likely and prevent an adversary from "exercising any form of nuclear pressure."⁹³

The second major component of the Schlesinger doctrine—the new guidance for the Assured Destruction mission emphasizing the destruction of Soviet *economic recovery capabilities*—received far less public attention than did the limited nuclear options policy. Schlesinger consistently maintained that the ability to destroy urban-industrial targets was indispensable. In the 1975 Defense Department annual report, for example, he noted that "even after a more brilliantly executed and devastating attack than we believe our potential adversaries could deliver, the United States could retain the capacity to kill more than 30 percent of the Soviet population and destroy more than 75 percent of Soviet industry."⁹⁴ Evidence that there was new guidance for this Assured Destruction mission, however, was not publicly presented until Schlesinger's successor, Donald Rumsfeld, entered office. Under the new rubric of "assured retaliation," Rumsfeld rejected the approach that would "simply target major cities" in favor of one that emphasized the ability to destroy the Soviet Union's capacity "to recover politically and economically" from a nuclear exchange:

If the Soviet Union could emerge from such an exchange with superior military power, and could recuperate from the effects more rapidly than the United States, the U.S. capacity for assured retaliation would be considered inadequate. . . . [A]n important objective of the assured retaliation mission should

be to retard significantly the ability of the USSR to recover from a nuclear exchange and regain the status of a 20th-century military and industrial power more rapidly than the United States.⁹⁵

Under this "counter-recovery" strategy, NSDM-242 provided guidance to military planners mandating the capability to destroy 70 percent of the Soviet industry that would be needed to achieve economic recovery after a nuclear exchange.⁹⁶ For the next six years the counter-recovery mission was the highest priority for the war planners: according to Air Force testimony to Congress, the counter-recovery mission was "the most specific task outlined in the national guidance," which had to be met "under all conditions." In contrast, with respect to the counterforce mission, the Air Force testified that "to the extent we can, we are supposed . . . to attack his forces which threaten us."⁹⁷

Why was this guidance developed and what were the results of this "counter-recovery" emphasis? The authors of NSDM-242 did not anticipate that the new definition of the Assured Destruction mission would significantly alter the SIOP. McNamara's guidance throughout the 1960s, after all, had similarly placed highest priority on the destruction of urban-industrial targets in the Soviet Union.⁹⁸ But destroying 66 percent of the Soviet industrial capability, which was McNamara's definition of Assured Destruction, required relatively few weapons. (Original Pentagon estimates of expected destruction of Soviet industry were calculated using a combined index of war support industries and gross industrial product. Because war support industries were very concentrated geographically, a relatively small number of weapons produced a very high damage estimate.)⁹⁹ The NSDM-242 guidance was meant simply to rationalize—that is, to add some political purpose—to the Assured Destruction component of the force. The results, however, were not as expected.

This priority counterindustrial recovery strategy pro-

duced a huge analytic effort to understand Soviet economic recovery capabilities after a nuclear war.¹⁰⁰ The resulting studies showed that significantly larger numbers of weapons were required to achieve the counter-recovery objective. Moreover, although the United States had officially abstained from targeting "population per se" since 1973, the pristine econometric models of the Soviet economy that were developed for targeting purposes belied the gruesome nature of the counter-recovery strategy. To give the most dramatic example, fertilizer factories were widely reported to be one of the industrial targets to be destroyed to impede economic recovery. Plans to attack such factories may not have been targeting the Soviet population per se, but since the purpose was to destroy the Soviet post-war food supply, in reality the population was being targeted indirectly.

An abbreviated list of the kinds of economic targets, as well as military targets, that were included in the SIOP under NSDM-242 guidance was released by the Defense Department in March 1980, and is presented in table 1-2. Because the actual plans remain classified, an estimate of the precise emphasis placed on the economic recovery mission is not available. Yet, in open congressional testimony, Under Secretary of Defense William Perry testified that "a significant portion of the forces . . . are dedicated to being able to accomplish that mission."¹⁰¹

The general scope, though not the precise degree, of the counter-recovery emphasis can be seen in the targeting assumptions used in official government studies of the period. For example, table 1-3 presents the targeting assumptions used in an Arms Control and Disarmament Agency (ACDA) study on Soviet civil defense. Just as estimates given in McNamara's 1963 Draft Presidential Memorandum (table 1-1) outline the heavy 1960s counterforce emphasis (16 percent of the weapons were aimed at urban targets), this ACDA study suggests the degree to which there was a very significant shift toward urban-industrial

TABLE 1-2
Unclassified U.S. Nuclear Targeting List, March 1980

<i>War Supporting Industry</i>
Ammunition factories
Tank and armored personnel carrier factories
Petroleum refineries
Railway yards and repair facilities
<i>Industry That Contributes to Economic Recovery</i>
Coal
Basic steel
Basic aluminium
Cement
Electric power
<i>Conventional Military Forces</i>
Caserns
Supply depots
Marshaling points
Conventional airfields
Ammunition storage facilities
Tank and vehicle storage yards
<i>Nuclear Forces</i>
ICBMs/IRBMs and launch facilities and launch command centers
Nuclear weapon storage sites
Long-range aviation bases (nuclear-capable aircraft)
SSBN bases
<i>Command and Control</i>
Command posts
Key communications facilities

Source: Department of Defense Authorization for Appropriations for Fiscal Year 1981, Hearings before the Committee on Armed Services, U.S. Senate, 96th Congress, 2d session, part 5, p. 2721.

targeting (over 50 percent industrial targets in the fully generated case, *in this ACDA study*) by the late 1970s.

Thus, ironically, although the Nixon Administration de-emphasized the rhetoric of MAD and Assured Destruction, it produced guidance that apparently resulted in a

TABLE 1-3
Counter-Recovery Targeting

	Generated Case	Day-to-Day Alert Case
Nuclear	2,018	1,761
OMT (other military targets)	1,603	935
Leadership	736	423
E/I (economic-industrial)	4,400	2,300
	8,757	5,419

Source: U.S. Arms Control and Disarmament Agency (ACDA), *Effectiveness of Soviet Civil Defense in Limiting Damage to Population* (Washington, Nov 16, 1977), pp. 18–20, cited in Desmond Ball, "Development of the SIOP, 1960–1983," in Desmond Ball and Jeffrey Richelson (eds.), *Strategic Nuclear Targeting* (Ithaca: Cornell University Press, 1986), p. 81.

war plan that put greater emphasis on urban-industrial targets than had been the case under McNamara.

1980–1987: CARTER'S COUNTERVAILING STRATEGY AND THE REAGAN REFINEMENTS

When the Carter Administration entered office in January 1977, disturbing trends in the military balance had emerged. Despite its adherence to the 1972 ABM Treaty restrictions on active ballistic missile defense, the Soviet Union was continuing vigorous strategic defensive programs in air defense against U.S. bombers and in civil defense leadership-sheltering capabilities. Soviet offensive improvements had also continued despite the SALT process. Most important, the huge Soviet MIRVed-ICBM force was rapidly achieving sufficient accuracy to threaten a large portion of the American Minuteman ICBMs. Because the United States had, of course, also MIRVed its ICBM and SLBM force, adding thousands of warheads to its arsenal in the 1970s, there was little doubt that the United States retained the capability, even after receiving a massive Soviet first strike, to retaliate against large numbers of

Soviet urban-industrial targets. But further doubts were emerging among senior officials about whether this capability was a sufficient deterrent upon which to base American security.

In August 1977, the Carter Administration gave temporary endorsement to the war-planning guidance in NSDM-242, but simultaneously called for a major review of U.S. nuclear targeting policy. Over the next eighteen months, a comprehensive reexamination of targeting policy took place under the Nuclear Targeting Policy Review (NTPR). In June 1980, the study effort resulted in a new guidance for nuclear targeting—Presidential Directive (PD) 59—and in August Secretary of Defense Harold Brown publicly presented the outlines of what he called "the countervailing strategy." This concept remains at the center of U.S. nuclear strategy today, for while the Reagan Administration did not use the "countervailing" title and altered some of the details of nuclear planning guidance in its nuclear force employment policy (as distinct from its arms control and strategic defense policy), the Administration followed its predecessor relatively closely.

What is the countervailing strategy and why was it adopted? According to Leon Sloss, the director of the NTPR, perhaps the most important contribution of the review effort was "an extensive survey of Soviet nuclear doctrine and plans, including recent developments in their defensive program."¹⁰² These studies convinced American political leaders that a new strategic doctrine was necessary, one more directly designed to take into account the specific values of the Soviet leadership, and specific operations for which the Soviet military prepares, in an effort to deny the perceived war aims of the Soviet government. "The biggest difference . . . that PD59 introduces," Secretary of Defense Harold Brown explained to Congress in September 1980, "is a specific recognition that our strategy has to be aimed at what the *Soviets* think is important to them, not just what *we* might think would be important to *us* in their view."¹⁰³ As Brown explained the policy:

What we have done in the past three and a half years is to look more closely at our capabilities, our doctrine and our plans in the light of what we know about Soviet forces, doctrine and plans. The Soviet leadership appears to contemplate at least the possibility of a relatively prolonged exchange if war comes, and in some circles at least, they seem to take seriously the theoretical possibility of victory in such a war. We cannot afford to ignore these views—even if we think differently, as I do.¹⁰⁴

The NTPR and subsequent examinations of Soviet military writings, exercises, and force deployments thus focused on Soviet plans for nuclear war and Soviet political-military objectives in such a conflict. In his first public presentation of the countervailing strategy, Harold Brown emphasized that the U.S. capability to deny the Soviets confidence in achieving these specific war aims was now considered an essential component of nuclear deterrence:

We must have forces, contingency plans, and command and control capabilities that will convince the Soviet leadership that no war and no course of aggression by them that led to use of nuclear weapons—on any scale of attack and at any stage of conflict—could lead to victory, however they may define victory. Firmly convincing them of that fundamental truth is the surest restraint against their being tempted to aggression.¹⁰⁵

Leadership, Military, and Industrial Targets

Three specific changes were implemented after PD-59 to ensure that no Soviet government could believe that “victory” was possible in a nuclear war. The first change was to increase the emphasis given to *counterleadership targeting*. This was by no means an entirely new concept. Indeed, as early as 1955 the United States targeted the Soviet political and military leadership under the BRAVO mission, which included “military headquarters and government control centers,” and McNamara’s definition of the Assured Destruction targets in his 1963 Draft Presidential

Memorandum included “the Soviet government and military controls.”¹⁰⁶ What was new was both a recognition that this objective was becoming increasingly difficult, because of extensive Soviet efforts to protect the country’s leadership cadre from the effects of nuclear attacks, and a belief that the existence of this leadership-cadre sheltering program provided an important insight into Soviet values and war objectives. Brown’s testimony to Congress best presented the new view of what the Soviet leadership valued most highly:

I believe that they are motivated by all the same human emotions as the rest of us. They love their kids and so forth, and they don’t want to see their country destroyed. What motivates them most, however, is their personal power in a way that is not easily understood by someone who has come up through the American system. . . . In a time of great crisis what they must need to be deterred by is the thought that their power structure will not survive. That is even more important to them than their personal survival or survival of 10, 20, or 30 million, or even 50 million of their fellow countrymen.¹⁰⁷

Brown also went public with the first estimate of the scope of the leadership-targeting problem—and an admission of the intelligence problem that existed at the time—in his fiscal year 1981 annual report:

Hardened command posts have been constructed near Moscow and other cities. For the some 100,000 people we define as the Soviet leadership, there are hardened underground shelters near places of work, and at relocation sites outside the cities. The relatively few leadership shelters we have identified would be vulnerable to direct attack.¹⁰⁸

The Reagan Administration shared this belief in the necessity of holding the Soviet leadership directly at risk, and released updated estimates of the Soviet program in 1985. According to official CIA testimony to Congress, “There are at least 800, perhaps as many as 1,500 relocation facilities for leaders at the national and regional levels.

Deep underground facilities for top national leadership might enable the top leadership to survive—a key objective of their wartime management plans.¹⁰⁹ By 1987, according to the Defense Department publication *Soviet Military Power*, there were estimated to be approximately fifteen hundred hardened alternative facilities for over 175,000 key party and government personnel throughout the USSR.¹¹⁰

The second major change resulting from PD-59 was in *countermilitary targeting*. As has been shown, U.S. nuclear strategy under both McNamara and Schlesinger continued to target Soviet military forces, including nuclear forces. Given the growth of the Soviet nuclear arsenal and the increased hardness of its ICBM force, however, U.S. counterforce capabilities decreased significantly in the 1970s.¹¹¹ The total nuclear warhead count still favored the United States by the end of the decade, but the number of Soviet launchers, especially ICBMs, had long surpassed that of the U.S. arsenal. The countervailing strategy called for improvements in the American counterforce capability to attack both Soviet nuclear and conventional military targets and improvements in capabilities (including especially the command and control capabilities) to be able to fight if necessary (and therefore, it was hoped, deter) a prolonged nuclear war. Such counterforce programs as the MX and Trident D5 were accelerated as both the Carter and Reagan administrations sought to make force-acquisition policy better serve the purposes of U.S. targeting doctrine.¹¹²

The primary objective behind this reemphasis on countermilitary, nuclear and conventional, targeting was not, however, to limit damage to the United States.¹¹³ It was to enhance deterrence by denying Soviet war aims. There was an increased concern, resulting from the NTPR and related studies, that the Soviet military was developing plans and capabilities to fight a prolonged war in the event that deterrence failed. Many Soviet ICBM launchers could be reloaded and fired again, and sufficient numbers of weapons had come into the arsenal to provide large re-

serve forces and capabilities for sequential attacks. Moreover, according to the Defense Department, Soviet military doctrine called for forces able to occupy the NATO countries as well as deter, if possible, and defeat, if necessary, Chinese military forces in a global war.¹¹⁴ Improved U.S. counterforce capabilities against nuclear and conventional targets would, it was hoped, deny the Soviet Union the ability to achieve such goals.

The third and final change in U.S. nuclear doctrine was the reduced emphasis and new objectives with respect to *industrial targeting*. The Carter Administration, as part of its review of targeting policy, had examined and rejected an alternative strategy that would “rely more heavily on assured destruction.”¹¹⁵ Instead, the annual reports of both Harold Brown (after PD-59) and Caspar Weinberger suggest that a smaller subject of economic targets—“the economic base needed to sustain a war” (Brown) or “the industrial ability to wage war” (Weinberger)—eventually came to be considered critical, rather than the larger set of “economic recovery” assets stressed under NSDM-242.¹¹⁶ The studies of the NTPR had revealed that not only were the analytic tools for understanding how to impede Soviet recovery very weak, but also that very large numbers of U.S. nuclear weapons would be required. Therefore, under the countervailing strategy, as Leon Sloss noted, “instead of targeting to impede recovery, economic targeting focused on the better understood problems of destroying logistics and industries providing immediate support to the enemy war effort.”¹¹⁷

The precise changes in targeting emphasis caused by this change in guidance are not available in unclassified sources, but the number of industrial targets is considerably smaller and the planned attacks correspondingly more discriminate. Indeed, Gen. Larry Welch, Air Force Chief of Staff, told a Harvard University seminar in March 1987 that “literally thousands of industrial targets have been dropped from the SIOP.”¹¹⁸ Thus, it appears that urban-industrial targeting receives considerably less empha-

sis in U.S. war plans than was the case in the late 1970s. In addition, Secretary of Defense Caspar Weinberger also stressed that the Reagan Administration "accelerated the development of more selective, discriminate, and controlled responses" and specifically rejected the belief that "deterrence must rest on the threat to destroy a certain high percentage of the Soviet population."¹¹⁹

American nuclear strategy changed considerably during the 1980s. If NSDM-242 produced war plans that were closer to Mutual Assured Destruction than is usually recognized, PD-59 and the subsequent Reagan Administration refinements of the countervailing strategy moved further away from MAD than is often realized. Although urban destruction and civilian casualties would undoubtedly be massive in a full nuclear exchange, U.S. nuclear doctrine is no longer deliberately designed to threaten the Soviet population directly, as under extreme Assured Destruction calculations, or indirectly, by retarding Soviet recovery from a nuclear attack.

CONTINUITY, CHANGE, AND CONTROL

This examination of the evolution of U.S. nuclear doctrine has revealed strong currents of both continuity and change. The two central objectives of U.S. nuclear strategy have remained quite constant over the past forty years. First, every administration has sought to utilize the threat of nuclear retaliation to deter Soviet aggression against both the United States and its allies. Second, each administration has developed plans to protect U.S. interests and limit the damage, to the degree possible, if war occurs despite all efforts to prevent it.

The means by which the U.S. government has sought to achieve these twin objectives have, however, changed considerably over the past forty years. Although there has been considerable continuity in the general categories of targets that the United States has threatened to attack—from the BRAVO, DELTA, and ROMEO missions in the

1950s to the set of Soviet nuclear forces, industrial, and other military targets today—the relative emphasis given to those different kinds of targets has changed. Urban-industrial targets received moderate emphasis in the optimum-mix strategy of early SIOP planning, heavier emphasis in the 1970s, and, again, reduced emphasis in the 1980s. Although the Soviet leadership was targeted as early as 1955, much greater weight has been placed on this objective in the 1980s. Soviet conventional force capabilities have also been a U.S. strategic nuclear target for many years, but increased emphasis has again recently been placed on this targeting objective. Finally, the targeting of Soviet nuclear forces has always taken place since 1949, but higher prominence was given to this mission in the early 1960s and 1980s than in the decade in between.

Why has the United States maintained significant counterforce capabilities and plans over the past decades? The evidence presented in this chapter suggests that, contrary to widespread academic opinion, the continuation of U.S. counterforce doctrine was not driven primarily by the parochial interests of the U.S. military services.¹²⁰ Indeed, American civilian authorities—including every Secretary of Defense—have consistently believed that it was in the U.S. national interest to maintain a significant counterforce capability and have provided, accordingly, such guidance to military officers. Although U.S. military services have undoubtedly sought to maximize their budget under different variations of counterforce, civilian authorities have approved of the basic targeting doctrine for a mixture of three reasons: to limit damage in the event of war, to maximize the credibility of the extended deterrent commitment to NATO allies, and to enhance central deterrence by denying Soviet war aims. Significant shifts have occurred, however, with respect to the relative importance of these motives, as well as in the flexibility and discrimination available in counterforce options. U.S. war plans in the 1950s and early 1960s sought to limit damage to the United States and its allies through massive prompt coun-

terforce strikes, upon receipt of unambiguous warning of imminent attack, if possible. Starting in a very limited fashion under McNamara's "no-cities doctrine," and increasing under the guidance of the Schlesinger Doctrine, the U.S. shifted to a strategy of protecting its interests and limiting damage through escalation control and early war termination. Many limited options were made available to the President in the event of an initial nuclear strike against the United States or, in the more likely scenario, in response to nuclear or conventional attacks against NATO Europe.

In the 1970s, counterforce strikes were still an important part of war plans, but the ability of the United States to limit damage to itself through counterforce attacks had become diminishingly small as the Soviet nuclear arsenal became larger and less vulnerable. Although there was a consensus within the U.S. government during the past decade that the Soviet government seeks to avoid nuclear war, if possible, a widespread conviction also grew that, in the event that war occurs, the Soviet leadership would attempt to survive and prevail, leaving itself and its political control apparatus intact, Soviet residual conventional and nuclear military power still in existence, and Soviet forces prevailing in Eurasia. The increased emphasis placed on counterforce and counterleadership targeting in the 1980s was, therefore, designed less to limit damage to the United States than to enhance deterrence by convincing the Soviet leadership that the belief in a possible Soviet "victory" in a nuclear war—however theoretical the belief and however strained the definition of "victory"—remains a dangerous illusion.

Finally, while civilian authorities have consistently approved of a U.S. counterforce doctrine, strong elements of both continuity and change can be seen in the degree to which civilian officials have controlled the details of U.S. nuclear doctrine and operational plans. A central and disturbing continuity is obvious: each major shift in U.S. doctrine since 1960 has produced operational plans that did

not fully meet the desires and expectations of civilian leaders. Eisenhower certainly provided guidance calling for a large, simultaneous nuclear offensive under the Massive Retaliation strategy, but was nonetheless shocked by the enormous overkill in SIOP-62. In the 1960s, McNamara was able to get a modicum of flexibility built into the plan, but the counterforce strikes were so large that they were "virtually indistinguishable" from countercity attacks. The Schlesinger Doctrine, in the 1970s, did produce many more limited options, but it also resulted in an unanticipated excessive emphasis on urban-industrial targeting because of the counter-recovery guidance. In short, American political authorities made their own nuclear doctrine, but they did not make it just as they desired.

A positive element of change, however, exists in the depth of civilian involvement and oversight in the development of U.S. nuclear operational plans. There was minimal civilian guidance given to military planners in the late 1940s and 1950s, and less than adequate oversight of the implementation of employment policy guidance existed in the 1960s and 1970s. In the 1980s, civilian Pentagon officials gradually became much more deeply involved in the details of nuclear doctrine and war planning. This increase in civilian involvement and oversight certainly increases the likelihood that further doctrinal improvements will be properly designed and implemented to meet the security interests of the United States. It does not, however, guarantee that we will make the right decisions in developing U.S. nuclear strategy for the 1990s.

Moving Targets

NUCLEAR STRATEGY AND
NATIONAL SECURITY

Scott D. Sagan

A Council on Foreign Relations Book

PRINCETON UNIVERSITY PRESS
PRINCETON, NEW JERSEY

Copyright © 1989 by Princeton University Press
Published by Princeton University Press, 41 William Street,
Princeton, New Jersey 08540
In the United Kingdom: Princeton University Press, Guildford, Surrey

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Library of Congress Cataloging-in-Publication Data

Sagan, Scott Douglas.

Moving targets : nuclear strategy and national security / Scott D. Sagan.

p. cm.

"A Council on Foreign Relations book."

Bibliography: p.

Includes index.

ISBN 0-691-07815-7 (alk. paper)

1. United States—Military policy. 2. Nuclear warfare.

I. Title.

UA23.S215 1989

355'.0217'0973—dc19 88-34038

This book has been composed in Linotron Palatino

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Printed in the United States of America by Princeton University Press, Princeton, New Jersey

*In memory of my grandfather
Bishop J. Waskom Pickett*