SIOP-62: The Nuclear War Plan Briefing to President Kennedy

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On September 13, 1961, President John F. Kennedy received a top secret military briefing from General Lyman L. Lemnitzer, Chairman of the Joint Chiefs of Staff, on the U.S. plan for nuclear war. Also present at the White House meeting were Secretary of Defense Robert McNamara, Military Representative to the President General Maxwell Taylor, and Deputy Special Assistant to the President for National Security Affairs Walt W. Rostow.[1] A new war plan, the Single Integrated Operational Plan for Fiscal Year 1962, or SIOP-62, had come into effect on April 15, 1961,[2] and General Lemnitzer explained in considerable detail how the complex war plan was built, the kinds of targets in the "Sino–Soviet bloc" that would be attacked, and the mechanics of the execution of the SIOP. His conclusion was simple and chilling: execution of SIOP-62 "should permit the United States to prevail in the event of general nuclear war." Yet General Lemnitzer also sounded a strong cautionary note, informing the President that "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."[3]

The SIOP is one of the most highly classified and closely held documents in the U.S. government. Even nuclear war plans that are over twenty-five years old, such as SIOP-62, remain classified because they could provide the Soviet Union with insights into current nuclear targeting plans, intelligence sources, and crisis or wartime military operations. General Lemnitzer's September 1961 SIOP *briefing*, however, was declassified by the Declassification and Archival Branch of the Joint Chiefs of Staff on August 15, 1986, with

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1. President's Appointment Book, July–December 1961, Wednesday, September 13, 1961, 4:30 p.m., John F. Kennedy Library (JFKL), Boston, Mass.
2. Briefing for the President, SIOP-62, p. 6. SIOP-62 thus came into effect just prior to the start of fiscal year 1962. Subsequent references to this document will also include page numbers in this journal since the document is reprinted below. (*IS*, p. 44.)
3. Ibid., pp. 18–19; *IS*, pp. 50–51.

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minor deletions to protect sensitive information.[4] It is the first Presidential SIOP briefing to be made available to scholars and the general public.

Two issues will be discussed in this introduction to the briefing. First, what was the balance of strategic nuclear forces in 1961? U.S. and Soviet nuclear forces and their relative alert levels will be examined in order to shed light on the Joint Chiefs' position that while the United States could "prevail" in a nuclear war, they could not guarantee that a U.S. preemptive strike would destroy all Soviet nuclear forces. Second, what military options did the President have in the event of a nuclear confrontation with the Soviet Union in 1961? General Lemnitzer's briefing demonstrates the degree to which SIOP-62 was a highly inflexible plan for massive retaliation, or massive preemption, against all categories of targets within the Sino–Soviet bloc and helps explain why the Kennedy Administration sought to increase the options available to the President in a crisis or war, when he might face, in McGeorge Bundy's phrase, "the moment of thermonuclear truth."[5] Indeed, by documenting the extraordinarily rigid and mechanical approach to war planning taken by the U.S. military in 1961—constructing a SIOP that maximized operational simplicity but at great costs to the plan's strategic rationale—the briefing underscores the vital need for close and continual civilian and military cooperation in the difficult task of ensuring that U.S. nuclear forces and operational plans meet our national security objectives.

The Strategic Imbalance

Since 1948, the U.S. military has been authorized to prepare plans for the potential use of nuclear weapons.[6] Prior to 1960, however, each of the Com-

4. The briefing can be found in CCS 3105 Joint Planning, 13 September 1961, Box 31, Records of the U.S. Joint Chiefs of Staff 1961, RG218 National Archives (hereinafter JCS).

5. On July 7, 1961, as the Berlin crisis raised U.S. fears of a conflict with the Soviet Union, Bundy warned President Kennedy that the SIOP was extremely inflexible: "The current war plan is dangerously rigid and, if continued without amendment, may leave you with very little choice as to how you face the moment of thermonuclear truth. We believe you may want to raise this question with Bob McNamara in order to have a prompt review and new orders if necessary. In essence, the current plan calls for shooting off everything we have in one shot, and is so constructed as to make any more flexible course very difficult." Covering Note on Henry Kissinger's memo on Berlin, National Security Files, Box 81, Germany–Berlin–General, 7/7/61, JFKL.

6. For detailed examinations of the evolution of U.S. nuclear strategy, see David Alan Rosenberg, "The Origins of Overkill: Nuclear Weapons and American Strategy, 1945–1960," *International Security*, Vol. 7, No. 4 (Spring 1983), pp. 3–71; Desmond J. Ball, *Targeting for Strategic Deterrence*, Adelphi Paper 185 (London: International Institute for Strategic Studies, 1983); Aaron L. Fried-

manders in Chief (CINCs) of the relevant U.S. military commands prepared his own plans for nuclear strikes, and there was often inadequate political guidance given to war planners and insufficient coordination among the various CINCs.[7] During the last years of the Eisenhower Administration, a major effort took place to reexamine and coordinate U.S. nuclear war plans. On August 16, 1960, Secretary of Defense Thomas Gates established a new military organization, the Joint Strategic Target Planning Staff (JSTPS) at Offutt Air Force Base, and authorized it to produce a coordinated nuclear war plan based on extensive guidance documents previously approved by President Eisenhower. The product of the JSTPS's work, SIOP-62, was approved by the Joint Chiefs of Staff in December 1960 and went into effect four months later. It was this coordinated war plan that was presented to President Kennedy on September 13, 1961.

What was the strategic nuclear balance in 1961? Both the United States and the Soviet Union possessed a primitive triad of nuclear forces: bombers capable of reaching targets in each other's homeland, land-based intercontinental ballistic missiles (ICBMs), and submarine-launched nuclear missiles. By any quantitative or qualitative measure of nuclear power, however, the United States possessed massive superiority.

Although General Lemnitzer's actual briefing charts on U.S. forces are not available, a complete breakdown of forces utilized in SIOP-62 has been declassified. The following tables present the SIOP-62 forces in the same detail as they would have been presented to President Kennedy. (The charts were prepared by Deputy Secretary of Defense Cyrus Vance for President Lyndon Johnson in October 1964, in response to Johnson's inquiry concerning increases in U.S. military strength achieved during the Fiscal Year 1962–1965 period.)[8] Alert Forces refer to strategic weapons that could be launched upon tactical warning in the event of a surprise Soviet nuclear attack. An estimated

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berg, "A History of U.S. Strategic 'Doctrine'—1945 to 1980," *The Journal of Strategic Studies*, Vol. 3, No. 3 (December 1980), pp. 37–71; and Scott D. Sagan, "Change and Continuity in U.S. Nuclear Strategy," in Michael Mandelbaum, ed., *American Military Policy* (forthcoming 1987).

7. See Rosenberg, "Origins of Overkill," pp. 61–64; and History and Research Division, Headquarters Strategic Air Command, *History of the Joint Strategic Target Planning Staff: Background and Preparation of SIOP-62* (partially declassified and released by OJCS, April 1980), pp. 1–11.

8. Cyrus Vance, Memorandum for the President, "Military Strength Increases Since Fiscal Year 1961," October 3, 1964, TAB G, National Security Files, Agency Files, Box 11–12, Department of Defense, 11–63, Vol. 1, Lyndon Baines Johnson Library, Austin, Texas. The total megatonnage was 1,798 for the alert force and 7,420 for the fully generated force.

minimum of 14 hours was necessary for the United States to generate all Non-Alert strategic forces for potential SIOP execution.[9]

The information currently available on Soviet strategic nuclear forces in September 1961 is less definitive. This reflects both the continued classifica-

Table 1. U.S. Strategic Nuclear Forces/Alert, July 15, 1961

	Total	SAC	PAC	EUR	LANT
Total Weapons	1530	1236	84	178	32
Aircraft Weapons	1413	1212	75	126	0
Cruise Missiles	31	0	9	22	0
Ballistic Missiles	86	24	0	30	32

Table 2. U.S. Strategic Nuclear Forces/Non-Alert, July 15, 1961

	Total	SAC	PAC	EUR	LANT
Total Weapons	1737	944	337	311	145
Aircraft Weapons	1525	890	277	261	97
Cruise Missiles	110	0	60	50	0
Ballistic Missiles	102	54	0	0	48

Table 3. U.S. Strategic Nuclear Forces/Fully Generated Alert Level, July 15, 1961

	Total	SAC	PAC	EUR	LANT
Total Weapons	3267	2180	421	489	177
Aircraft Weapons	2938	2102	352	387	97
Cruise Missiles	141	0	69	72	0
Ballistic Missiles	188	78	0	30	80

9. Briefing for the President, SIOP-62, pp. 13–14; *IS*, p. 48.

tion of some intelligence information, as well as the strong disagreements on Soviet force levels among U.S. intelligence agencies in 1961, which was evident in the range of intelligence estimates provided to the President. What is clear, however, is that while Soviet nuclear forces capable of attacking Europe were large, Soviet intercontinental forces were far inferior to those of the United States.

The Soviet ICBM forces have received considerable attention because of the missile gap controversy. U.S. fears of an impending missile gap favoring the Soviet Union, fears that John Kennedy exploited during the 1960 Presidential campaign, were the product of U.S. intelligence shortfalls in this period, inevitable uncertainties about Soviet procurement plans, and Khrushchev's blustering attempts to gain political advantage through nuclear bluff and intimidation.[10] The National Intelligence Estimate (NIE) of December 1958 had estimated that the Soviets could have 500 ICBMs in 1961, but such estimates were repeatedly lowered in subsequent NIEs as improved intelligence became available.[11] By September 1961, however, it was clear to U.S. policymakers that the missile gap actually favored the United States. On September 6, the CIA informed the President that earlier estimates that 50 to 100 Soviet missiles were operational were "probably too high," and the NIE published on September 21 placed the number of Soviet ICBMs on launchers as only 10 to 25 with no marked increase considered likely during the immediately succeeding months.[12]

It is critical to remember, however, that ICBMs were only a small part of the Soviet strategic force posture in 1961. The ICBM force was not as large as had been previously estimated, the CIA reported on September 6; but "nevertheless, the present capabilities, along with those of bombers and

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10. The best sources on the missile gap are Lawrence C. McQuade, Memorandum for Mr. Nitze, "But Where Did the Missile Gap Go?," 31 May 1963, National Security Files, Box 298, Missile Gap, 2/63–5/63, JFKL; John Prados, *The Soviet Estimate: U.S. Intelligence Analysis and Soviet Strategic Forces* (Princeton, N.J.: Princeton University Press, 1986), pp. 110–126; and Arnold L. Horelick and Myron Rush, *Strategic Power and Soviet Foreign Policy* (Chicago: University of Chicago Press, 1966), pp. 35–102.

11. NIE 11–4–58 (23 December 1958), as cited in McQuade memo, "But Where Did the Missile Gap Go?," pp. 7–8. NIE 11–4–59 (9 February 1960) estimated 140–200 ICBMs on launchers by mid-1961, and NIE 11–8–61 (7 June 1961) reported the intelligence community's consensus that the Soviets "might already have fifty to one hundred operational ICBM launchers," as cited in ibid., pp. 9–10, 14.

12. Central Intelligence Agency Memorandum, "Current Status of Soviet and Satellite Military Forces and Indications of Military Intentions," 6 September 1961, President's Office Files, Countries, Box 117, German Security 8/61–12/61, p. 4, JFKL; NIE 11–8/1–61 (21 September 1961), cited in McQuade memo, "But Where Did the Missile Gap Go?," p. 15.

submarines, pose a great threat to U.S. urban areas, but a more limited threat during the months immediately ahead to our nuclear striking forces."[13] What were U.S. estimates of the other two legs of the Soviet triad?

In 1961, the bulk of the Soviet Union's strategic nuclear weapons resided on its long-range bomber force. Declassified material prepared for special high-level war games held during the Berlin crisis in early September 1961 estimated that "the Soviets could put about 200 bombers over North America" in an initial first strike, an estimate that is consistent with Secretary McNamara's testimony in executive sessions of the Committee on Foreign Relations in February and September 1962.[14] This estimate included BISON and BEAR heavy bombers as well as BADGER and BLINDER medium-range bombers but excluded combat attrition from U.S. air defenses, which would have existed since, as Secretary McNamara testified in February 1962, "such an attack could not be launched without our receiving warning more than adequate to alert our strategic force and air defenses."[15]

Turning to U.S. estimates of Soviet submarine-launched nuclear missiles, the September 1961 Berlin crisis war game material stated that there were approximately twenty-eight Soviet long-range submarines (twenty-one diesel electric-powered, seven nuclear-powered) capable of launching "about seventy-eight" nuclear missiles against United States coastal targets.[16] In Feb-

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13. CIA memo, "Current Status of Soviet and Satellite Military Forces," p. 5.
14. Materials Prepared for NATO Planning Conference, 9 September 1961, Red Strategic Forces, OSD-FOI; Executive Sessions of the Senate Foreign Relations Committee Together with Joint Sessions with the Senate Armed Services Committee (Historical Series), Vol. 14, 87th Congress, 2nd session, 1962 (Washington, D.C.: U.S. Government Printing Office, 1986), pp. 145, 694. McNamara testified on September 5, 1962 that the Soviets have about 165 long-range bombers and tankers, and about 950 medium-range bombers and tankers, and "out of that total bomber tanker force of something on the order of 1,100 or 1,200 aircraft, they could put about 200 bombers, we believe, over North America today." Ibid., p. 694.
15. NATO Planning Conference Materials, Red Strategic Forces; and Executive Sessions of the Senate Foreign Relations Committee, Vol. 14, p. 145. No official estimates of the expected effectiveness of the NORAD (North American Air Defense Command) air defense against such a Soviet attack are available, but NORAD exercises in the early 1960s revealed that U.S. air defenses were far from perfect in defending against a concerted Soviet attack. See HQ NORAD, Sky Shield III, "Conclusions and/or Recommendations," December 6, 1962. CCS 3150 Joint and Combined Exercises, 20 December 1961, Sec. 2, Box 66, JCS 1961.
16. NATO Planning Conference Material, Red Strategic Forces. This material appears to have been based upon official U.S. estimates of the rapidly growing Soviet submarine force. NIE 11–8–62 (July 6, 1962) stated that in mid-1962 the Soviets had ten H-class nuclear submarines (three ballistic missiles each), four E-class nuclear submarines (six cruise missiles each), seven Z-class (diesel-electric) submarines (two ballistic missiles each), 25 G-Class (diesel-electric) submarines (three ballistic missiles each), and six converted W-class (diesel-electric) submarines (three cruise missiles each). The total was therefore 155 nuclear missiles on 52 submarines. Figures in Ray-

ruary 1962, McNamara testified that thirty Soviet submarines could deliver approximately ninety nuclear missiles.[17] This submarine force was an extremely primitive one, however, equipped with short-range SS-N-3 cruise missiles and SS-N-4 ballistic missiles, both of which required the submarine to approach within 150–350 nautical miles of the U.S. coast and surface prior to launching an attack.[18] If one collects these estimates, the resulting estimated total Soviet strategic nuclear force at the time of the SIOP-62 briefing is given in Table 4.

When one examines the relative alert levels of U.S. and Soviet strategic nuclear forces in 1961, the imbalance appears even more pronounced. In late 1961, approximately half of the Strategic Air Command (SAC) bomber force was kept on fifteen minute ground-runway alert with a small number of B-52s on airborne alert at all times through the continuous airborne alert training program. Two of the Atlantic Command's five Polaris submarines (each with sixteen missiles on board) and about one-third of SAC's ICBM force (twenty-four out of seventy-eight missiles) were also routinely kept on alert. In September 1961, the Chairman reported that execution of the alert option

Table 4. Estimated Soviet Strategic Nuclear Forces, September 1961

Type	Number
ICBMs	10–25
Submarine-launched missiles (ballistic and cruise missiles)	about 78
Bombers	200

mond L. Garthoff, *Intelligence Assessment and Policymaking: A Decision Point in the Kennedy Administration* (Washington, D.C.: Brookings Institution, 1984), p. 55.

17. Executive Sessions of the Senate Foreign Relations Committee Together with Joint Sessions with the Senate Armed Services Committee (Historical Series), Vol. 14, 87th Congress, 2nd Session, 1962 (Washington, D.C.: U.S. Government Printing Office, 1986), p. 145.

18. For a discussion of Soviet submarine missile launching capabilities in the early 1960s, see K.J. Moore, Mark Flanigan, and Robert D. Helsel, "Developments in Submarine Systems, 1956–1976," in Michael MccGwire and John McDonnell, eds., *Soviet Naval Influence: Domestic and Foreign Dimensions* (New York: Praeger, 1977), pp. 154–162; and Robert G. Weinland, "The Evolution of Soviet Requirements for Naval Forces: Solving the Problems of the Early 1960s," *Survival*, Vol. 26, No. 1 (Jan./Feb. 1984), pp. 16–25. The Soviet navy may have also included torpedo-firing submarines in their strategic delivery forces. See Michael MccGwire, "Soviet Naval Procurement," in *The Soviet Union in Europe and the Near East: Her Capabilities and Intentions* (London: Royal United Services Institute, 1970), pp. 79–81. U.S. intelligence estimates after 1962 dropped cruise missile submarines from the strategic-attack force estimates on the grounds that they were likely to be used for anti-carrier operations, not land attack missions. Garthoff, *Intelligence Assessment and Policymaking*, p. 22.

in SIOP-62 would launch 1,004 delivery systems with 1,685 nuclear weapons against the Sino–Soviet bloc.[19]

In stark contrast, none of the Soviet ICBMs were kept on routine high states of alert in 1961: nuclear warheads were controlled by the KGB and kept physically separated from the rocket forces; the missiles' non-storable liquid propellant was unstable; and the September 1961 war game material suggested that it might take one to three hours to warm up the electrical equipment and fuel the early Soviet ICBMs.[20] As a special interdepartmental intelligence report for President Kennedy stated in August 1962: "present Soviet procedures for firing initial and subsequent salvos are relatively slow and complicated, and design limitations of their current missile systems appear to preclude attainment of readiness conditions approaching those of U.S. systems."[21] The Soviet bomber forces' alert status was similar: no bombers were ever on routine day-to-day runway alert and no Soviet airborne alert program existed.[22] Finally, no precise estimate on the day-to-day readiness of the Soviet nuclear-armed submarine force appears to have been available in 1961, and the 1962 special intelligence report could only state that the Soviet submarine fleet was "for the most part" kept in port during peacetime and that "*virtually* none would be in position to launch *immediately* against the United States under day-to-day alert conditions."[23]

Preemption and Warning

Given the size of the Soviet strategic nuclear force by 1961, it is understandable that U.S. officials believed that the effects of a Soviet first strike would

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19. Briefing to the President, SIOP-62, p. 14; *IS*, p. 48.
20. Stephen M. Meyer, "Soviet Nuclear Operations," in Ashton B. Carter, John D. Steinbruner, and Charles A. Zraket, eds., *Managing Nuclear Operations* (Washington, D.C.: Brookings Institution, 1987), p. 487; Robert P. Berman and John C. Baker, *Soviet Strategic Forces: Requirements and Responses* (Washington, D.C.: Brookings Institution, 1982), p. 49; and NATO Planning Conference Materials, Red Strategic Forces. Fred Kaplan has reported that U.S. intelligence estimated in 1961 that it would take at least six hours to load warheads on Soviet ICBMs. Fred M. Kaplan, *The Wizards of Armageddon* (New York: Simon and Schuster, 1983), p. 295.
21. "Report of the Special Inter-Departmental Committee on Implications of NIE 11–8–62 and Related Intelligence Assessment and Policy Making," in Garthoff, *Intelligence Assessment and Policymaking*, p. 49.
22. Meyer, "Soviet Nuclear Operations," p. 488. The NATO Planning Conference Material states, in contrast, that 10 percent of the Soviet bomber force was on ground alert, but according to Thomas Schelling, the coordinator of the games, this estimate may have been an artifice of the gaming exercise. Interview, 11/6/86.
23. "Report of the Special Inter-Departmental Committee," in Garthoff, *Intelligence Assessment and Policymaking*, p. 47 (emphasis added).

be horrendous. What bears special attention is General Lemnitzer's discussion of U.S. preemption. It should by no means be surprising that the Chairman of the Joint Chiefs discussed nuclear preemption with President Kennedy in 1961: the existence of such capabilities and options was common knowledge in the late 1950s and early 1960s, and senior U.S. officials publicly discussed such a possibility.[24] Indeed, what might be surprising, given the imbalance of forces outlined above and the extraordinarily low readiness states of Soviet forces, is General Lemnitzer's warning that "under any circumstances—even 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."[25]

Why was this the case? The briefing does not present the Joint Chiefs' calculations, but a number of possibilities can be examined. First, one must consider the scenario under discussion. At no point in the SIOP-62 briefing does General Lemnitzer appear to be discussing a U.S. "bolt out of the blue" surprise attack against the Soviet Union.[26] Instead, what the preemptive option appears to refer to is the possibility that the United States might preempt, i.e., launch an offensive strike, upon receiving warning that the Soviet Union was about to launch an attack.[27] Yet, military activities that

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24. For example, Air Force Chief of Staff General Thomas White discussed the United States taking the "initiative" in a nuclear war in the event of "tactical or strategic warning" in open Congressional testimony in 1959. President Kennedy also told Stewart Alsop in March 1961 that "in some circumstances we might have to take the 'initiative'" in nuclear war, apparently referring to a Soviet conventional attack on NATO. *Department of Defense Appropriations for 1960*, Hearings before the Subcommittee of the Committee on Appropriations, House of Representatives, 86th Congress, 1st Session, Part 1, pp. 928–929; and Stewart Alsop, "Kennedy's Grand Strategy," *Saturday Evening Post*, March 31, 1962. Also see "First Strike?," *Newsweek*, April 9, 1962, p. 26.

25. Briefing to the President, SIOP-62, p. 18; *IS*, p. 50.

26. There appears to have been some discussion of a surprise counterforce option, not utilizing inflexible SIOP structures, among civilian planners during the Berlin crisis, but the incident is still shrouded in mystery. Kaplan states that U.S. fatalities in a successful first strike were estimated by Pentagon civilians at two to fifteen million (the scenario used is unclear), but also notes the great operational uncertainties involved and the expectation that European allies would suffer far greater damage due to the large number of Soviet theater nuclear forces. See Kaplan, *Wizards of Armageddon*, pp. 294–301; and Gregg Herken, *Counsels of War* (New York: Knopf, 1985), pp. 159–162.

27. A portion of the draft 1959 Joint Strategic Objectives Plan has been declassified and confirms this view: "U.S. national policy precludes the concept of preventive war or acts intended to provoke war. However, in recognition of the clear differentiation between preventive war and the exercise of the initiative, U.S. forces may be required to take the initiative if so directed by the President in response to knowledge that a Soviet attack against the United States is imminent." CCS 3130, JSOP, 25 November 1959, Box 14, JCS 1959. As early as April 1950, for example, the U.S. government rejected the possibility of preventive war. As NSC-68 put it, "it goes

would constitute strategic warning that a Soviet nuclear attack was imminent—such as matching warheads to the ICBMs, fueling the missiles, loading and dispersing bombers, or sending bombers to Arctic staging bases[28]—were precisely the Soviet actions that would reduce the effectiveness of a U.S. preemptive strike. Moreover, if the United States alerted its missile forces or placed SAC or European Command bombers on higher states of alert in order to increase coverage and effectiveness of SIOP-62, such actions would constitute strategic warning for the Soviets and increase the likelihood of corresponding Soviet alert measures.[29] Indeed, McNamara expressed precisely such concerns in late 1962 in a draft memorandum for the President:

I am convinced that we would not be able to achieve tactical surprise, especially in the kinds of crisis circumstances in which a first-strike capability might be relevant. Thus, the Soviets would be able to launch some of their retaliatory forces before we had destroyed their bases.[30]

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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." Moral and political considerations "rule out an attack unless it is demonstrably in the nature of a counter-attack to a blow which is on its way or about to be delivered." NSC-68 in Thomas H. Etzold and John Lewis Gaddis, eds., *Containment: Documents on American Policy and Strategy, 1945–1950* (New York: Columbia University Press, 1978), pp. 431–432. In 1957, three members of the Gaither Committee advocated a reconsideration of the preventive war option, but Eisenhower apparently did not follow that advice at that time. Rosenberg, "The Origins of Overkill," p. 47.

28. Secretary McNamara testified in 1963 that "to mount such an attack, the Soviets would either first have to deploy their bomber force to their Arctic bases or stage them through these bases in successive waves. Such action would greatly jeopardize their chance of surprising us and, equally important, their bombers would become vulnerable to our missile attack during their staging operation." Statement of Secretary of Defense Robert S. McNamara Before the House Subcommittee on Department of Defense Appropriations, The Fiscal Year 1964–1968 Defense Program and the 1964 Defense Budget, Feb. 6, 1963, p. 50, National Security Archives, Washington, D.C. In congressional testimony in January 1959, Chairman of the Joint Chiefs Nathan Twining noted that "large scale movement" of long and medium-range Soviet bombers to Arctic staging bases "might provide us with very valuable strategic warning." Executive Sessions of the Senate Foreign Relations Committee (Historical Series), Vol. 11, 86th Congress, 1st session, 1959 (Washington, D.C.: U.S. Government Printing Office, 1982), p. 23.

29. In addition, as Richard K. Betts has argued, if the Soviet Union launched a conventional attack against NATO, it would in all likelihood alert its strategic nuclear forces in order to protect against a U.S. nuclear response. Richard K. Betts, "A Nuclear Golden Age? The Balance Before Parity," *International Security*, Vol. 11, No. 3 (Winter 1986–87), p. 22. Stephen Meyer has argued that the Soviets probably had military base watchers (KGB and GRU agents) scattered around Europe and the United States to provide strategic warning of a bomber attack. Meyer, "Soviet Nuclear Operations," p. 488.

30. Draft Memorandum for the President, November 21, 1962. Subject: Recommended FY 1964–1968 Strategic Retaliatory Forces, OSD-FOI (hereinafter *DPM-62*), p. 8. On Soviet crisis reactions, see, however, Marc Trachtenberg, "The Influence of Nuclear Weapons in the Cuban Missile Crisis," *International Security*, Vol. 10, No. 1 (Summer 1985), pp. 156–161.

General Lemnitzer's statement may well reflect similar considerations, since it clearly suggests that the Joint Chiefs believed that even if warning of such Soviet activities was unequivocal and prompt, and even if the President authorized nuclear attack under such conditions (and there must have been considerable uncertainty on both counts),[31] the United States could not be confident that a preemptive attack could destroy all Soviet bombers and missiles on the ground before they were launched.

A second factor contributing to cautionary military assessments concerning preemption can be seen in the measurements of military effectiveness used in SIOP-62. As the Chairman's briefing makes clear, President Eisenhower approved guidance prescribing a minimum 75 percent assurance (probability) of the U.S. delivering an atomic weapon at each "designated ground zero" (DGZ) against the "optimum-mix" of military and urban-industrial targets in the Sino–Soviet bloc.[32] U.S. war planners faced grave operational uncertainties: for example, early U.S. ICBMs did not have high reliability rates, and the bomber forces' ability to penetrate enemy airspace depended, in part, upon initial priority attacks against Warsaw Pact air defenses and complex low-altitude flight tactics.[33] Through the use of enormous redundancy and cross targeting (placing multiple weapons from different sources on a single target), however, SIOP-62 requirements for destruction could be placed at much higher levels. Seven priority targets were to be destroyed with 97 percent assurance, 213 targets with 95 percent assurance, and 592 with at least 90 percent assurance.[34] Although the damage estimates against the critical nuclear delivery counterforce targets (approximately ten to twenty-five Soviet ICBMS, one hundred and forty bomber bases, and up to thirty submarine bases[35]) are not available, even if these high SIOP-62 requirements

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31. In 1959, the Joint Chiefs could not agree among themselves whether the Joint Strategic Capabilities Plan should provide guidance for the "possibility of obtaining strategic warning of sufficient precision to impel the President to direct the initiation of operations by United States forces." Briefing Sheet for the Chairman, JCS, 7 December 1959, Subject: Joint Strategic Objectives Plan for 1 July 1963, p. 2 enclosure, CCS 3130, JSOP (25 November 1959), JCS 1959.
32. Briefing to the President, SIOP-62, pp. 4–5; *IS*, p. 43.
33. Atlas D and E missiles had a reliability rate of approximately .70–.80. Draft, Appendix I to the Memorandum for the President, Recommended Long Range Nuclear Delivery Forces, 1963–1967, September 23, 1961, OSD-FOI (hereinafter *DPM-61*), pp. 7, 19–20; the bomber penetration tactics are described in Briefing to the President, SIOP-62, pp. 12–13; *IS*, p. 48.
34. Memorandum, CINCLANT Ft to CNO, April 27, 1961, Arleigh Burke papers, NSTL/SIOP messages, Exclusive and Personals, Center for Naval History, as cited in Kaplan, *Wizards of Armageddon*, p. 268. Kaplan states that the JSTPS calculated that the average target would receive 2.2 weapons, although the alert option used in this calculation is not clear.
35. The precise number of nuclear delivery counterforce targets in SIOP-62 is not available. For

were met, a small percentage of such forces would, probabilistically speaking, survive. Thus, U.S. war planners would have to expect that even a successful preemptive strike, one that caught all Soviet forces before they could be launched, would still leave some nuclear delivery capabilities undamaged.[36]

The third factor that probably limited military confidence in 1961 was continued uncertainty concerning the precise location and readiness level of portions of the Soviet nuclear force. Despite improved intelligence, the United States was not certain it had located every Soviet ICBM site and, although Soviet bombers and ICBMs were not kept on day-to-day alert, any force exercise or even nuclear testing activity would require a higher degree of readiness for the specific bombers or missiles involved.[37] Such uncertainty was especially important with respect to the Soviet submarine force. It is very unlikely that U.S. military authorities were confident that *all* Soviet submarines could be located and destroyed before they reached within 150–350 miles of the U.S. coast and launched their short-range ballistic and cruise missiles. The United States had plans in 1961, which were implemented during the Cuban missile crisis in 1962, to set up an ASW (anti-submarine warfare) barrier of attack submarines to intercept any Soviet missile-launching submarines approaching the U.S. coast.[38] Yet the U.S. military's confi-

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the source of the ICBM estimate, see footnote 12. (It should be noted, however, that first generation Soviet ICBMs were soft and placed with two missiles per site.) The bomber base estimates come from McNamara's September 1961 memorandum which states that there were fifty bases known or estimated to be supporting long-range air operations and about thirty staging bases for medium bombers. In addition, there were sixty light bomber bases which were expected to be used as recovery bases for the long-range bombers. *DPM-61*, p. 6. The submarine base number is McNamara's November 1962 estimate for such targets in 1968 and may therefore be slightly larger than 1961 estimates. *DPM-62*, p. 14.

36. For discussions of current methodology for measuring targeting effectiveness, see Theodore A. Postal, "Targeting," in Carter et al., *Managing Nuclear Operations*; George J. Seiler, *Strategic Nuclear Forces Requirements and Issues* (Maxwell AFB, Ala.: Air University Press, 1983); Richard Lee Walker, *Strategic Target Planning: Bridging the Gap Between Theory and Practice* (Washington, D.C.: National Defense University Press, 1983), National Security Affairs Monograph Series 83–9; and William T. Lee and Richard F. Staar, *Soviet Military Policy Since World War II* (Stanford, Calif.: Hoover Institution Press, 1986), pp. 135–170.

37. In his 1962 Draft Presidential Memorandum, McNamara noted that "there is a problem of uncertainty of location of some of their missile sites." *DPM-62*, p. 8. The Penkovskiy papers state that both bombers and missiles were delivery vehicles in the Soviet nuclear weapons testing program and that at least some long-range bombers' training flights carried bombs. *The Penkovskiy Papers* (New York: Doubleday, 1965), pp. 333–335, 343.

38. Admiral George W. Anderson, Harvard Business School Speech, The Pentagon, November 27, 1962, *Public Speeches and Published Articles of George W. Anderson, Jr.*, Mimeograph, Office of the Chief of Naval Operations. For a discussion of U.S. ASW activities in 1962, see Scott D. Sagan, "Nuclear Alerts and Crisis Management," *International Security*, Vol. 9, No. 4 (Spring 1985), pp. 112–118.

dence in such ASW activities in the late 1950s and early 1960s was high, but not absolute. The Chairman of the Joint Chiefs, for example, testified in 1959 that "it would be very difficult for the Russians to get submarines (close to the U.S. coast) in any kind of numbers that would warrant their attacking this country," but cautioned that "one or two isolated submarines" might get through.[39] Moreover, the U.S. Navy could not rule out the possibility that a very small number of Soviet submarines might be close to the U.S. coastline prior to the setting up of ASW barriers in a crisis. There is some evidence that the Navy suspected that Soviet Zulu-class submarines practiced occasional, though not routine, covert patrols off the Atlantic coast,[40] and cruise missile-carrying submarines apparently patrolled the Caribbean.[41] In either case, a few Soviet submarines might have reached the U.S. coastline undetected.

In summary, there were more than sufficient reasons—grave operational difficulties, uncertainty concerning warning, authorization, and timing of attacks, and unpredictability in Soviet nuclear force operations—to make the Joint Chiefs extremely cautious in their assessment of the effects of a preemptive strike. Every Soviet ICBM that was not destroyed on the ground might place a multi-megaton warhead on the United States; every bomber that escaped destruction and penetrated NORAD defenses could drop one or two weapons; each submarine that approached the U.S. coast could launch two to six nuclear armed missiles.[42] The uncertainties and risks confronting U.S.

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39. Executive Sessions of the Senate Foreign Relations Committee, pp. 51–52.

40. On October 22, 1962, during the Cuban missile crisis, a Zulu-class submarine was spotted refueling off the Azores. According to Admiral Robert Lee Dennison (CINCLANT), this submarine's "topside condition, and the submarine's requirement for fuel, of course, indicated that she'd been at sea for quite a long period. Considering this together with two possibly valid contact reports, she'd been on a covert patrol in the Western Atlantic near the East Coast of the United States." *The Reminiscences of Admiral Robert Lee Dennison* (U.S. Naval Institute, August 1975), p. 436, Operational Archives, Naval Historical Center, Washington, D.C. Also note that CINCSAC requested in 1960 that all CINCPAC submarine contact reports be furnished to SAC immediately. AF IN message 3852, 4 February 1960, SAC to JCS. CCS 2010, Collection of Intelligence (3 February 1960), Box 7, JCS 1960.

41. Moore et al., "Developments in Submarine Systems," p. 161. It is worth noting that NORAD/SAC exercises in 1962 included simulated Soviet submarine-launched cruise missile attacks against the United States from the Caribbean. HQ NORAD, December 6, 1962, Sky Shield III Conclusions and/or Recommendations, p. 25, CCS 3150 Joint and Combined Exercises, 20 December 1961, Sec. 2, Box 66, JCS 1961.

42. The precise force loading of Soviet bombers in 1961 is not available. John Collins has estimated that early Bears and Bisons *average* one large gravity bomb or AS-3 Kangaroo missile. John M. Collins, *American and Soviet Military Trends Since the Cuban Missile Crisis* (Washington, D.C.: Center for Strategic and International Studies, Georgetown University, 1978), p. 108. Also see John Taylor, ed., *Jane's All The World's Aircraft 1980–81* (London: Jane's Publishing Co., 1980),

military planners were real and profound, despite the massive U.S. nuclear superiority of 1961, and General Lemnitzer was correct to provide a warning to that effect to the President.[43]

Scenarios and Objectives

In retrospect, some might argue that Lemnitzer's cautionary note merely reflects the worst-case analysis that is typical of military planners. Certainly the U.S. military was not adverse to exaggerating the Soviet threat in the early 1960s, and the planning assumptions about Soviet forces used in building SIOP-62 were undoubtedly conservative. But such an argument misses an essential point: the strongest criticism of SIOP-62 is not that it used worst-case analysis, but rather that its whole approach to the problem was narrow and mechanical.

In preparing the nuclear war plan, the Joint Strategic Target Planning Staff was told to achieve two objectives "under the several conditions under which hostilities may be initiated": first, "to destroy or neutralize the Sino–Soviet bloc strategic nuclear delivery capability and primary military and government controls," and second, "to attack the major urban-industrial centers of the Sino–Soviet bloc."[44] The SIOP-62 briefing reveals the degree to which the JSTPS approached this task mechanically, designing an inflexible overwhelming nuclear offensive to destroy the "optimum-mix," the full range of Sino–Soviet bloc targets, in one great spasm. All other strategic considerations appear to have been slighted in the quest to achieve this overriding objective.

With the exception of changes in the small number of targets assigned to the nascent ballistic missile force, SIOP-62 would not be affected by whether the United States was retaliating or preempting a nuclear attack.[45] There is little consideration shown in the briefing for prioritization: for specialized bomber routing and evasion techniques or options designed to strike Soviet nuclear forces as promptly as possible in order to limit damage to the United States. "Peripheral defenses are scheduled to receive the first weapons," Lemnitzer reported, and penetrating bombers then follow the "bomb as you

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p. 209. The submarine figure comes from Garthoff, *Intelligence Assessment and Policymaking*, p. 55.

43. For an excellent review of the uncertainties facing U.S. decision-makers in the age of U.S. nuclear superiority, see Betts, "A Nuclear Golden Age?," pp. 3–32.

44. Briefing for the President, SIOP-62, p. 5; *IS*, pp. 43–44.

45. Ibid., p. 16; *IS*, p. 50.

go" principle.[46] In addition, there were no apparent plans for holding significant nuclear forces in reserve and no planned effort to tailor the attack to only those nations in the Sino–Soviet bloc that were involved in the immediate conflict or crisis.

It is revealing that the SIOP briefing did not even attempt to make predictions of casualties in the United States. All that Lemnitzer told the President was that "clearly the most important factor affecting the damage to the U.S. is that of whether the U.S. acts in retaliation or preemption."[47] Estimates of casualties beyond that general statement were, in the strategists' jargon, "scenario-specific."

In contrast, General Lemnitzer's assessment that the United States would "prevail in the event of general nuclear war" does not appear to depend upon whether the United States preempted or retaliated after a Soviet first strike.[48] Here, General Lemnitzer is clearly emphasizing the Joint Chiefs' view that the United States would prevail in the very narrow military sense of achieving the specific war aims that had been prescribed by national policy guidance to the SIOP planners. Although the briefing does not stress relative capabilities, a second factor may also have played a role here: although the United States could expect to suffer some unspecified nuclear damage under any condition of war initiation, the Soviet Union would confront absolutely massive destruction regardless of whether it struck first or retaliated. The degree to which political authorities agreed with such a judgment is, of course, a separate question.[49]

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46. Ibid., p. 12; *IS*, p. 48. The Alaskan Command's report on Exercise Dice Cup in April 1959 notes that staging bases in "Northeast Siberia" were not included in "our first offensive effort" and objects to SAC's attack plan because it results in "less than the earliest possible delivery" of weapons against such targets. Headquarters Alaskan Command, 30 April 1959, Subject: Final Report on Exercise Dice Cup, CCS 3510, Joint and Combined Exercises, 1959, Box 37, JCS 1959.
47. Ibid., p. 18; *IS*, p. 51. In contrast, Daniel Ellsberg has claimed that the Air Force privately told President Kennedy during the Berlin crisis that U.S. casualties would probably be under ten million if the United States struck first. See Herken, *Counsels of War*, p. 145.
48. Briefing for the President, SIOP-62, p. 19; *IS*, p. 51.
49. At least some political authorities believed that the relative balance mattered. For example, Dean Rusk argued in the Executive Committee during the Cuban missile crisis that "we have a substantial nuclear superiority . . . we don't really live under fear of his [Khrushchev's] nuclear weapons to the extent that, uh, he has to live under fear of ours." Off-the-record Meeting on Cuba, October 16, 1962. "Documentation: White House Tapes and Minutes of the Cuban Missile Crisis," *International Security*, Vol. 10, No. 1 (Summer 1985), p. 177. For an important discussion of the impact of the nuclear balance on U.S. and Soviet decision-makers during the Cuban missile crisis, see Trachtenberg, "The Influence of Nuclear Weapons in the Cuban Missile Crisis," pp. 137–163. For evidence on other crises, see Richard K. Betts, *Nuclear Blackmail and Nuclear Balance* (Washington, D.C.: Brookings Institution, forthcoming).

Flexibility and Change

What attack options would the President have in a nuclear war? SIOP-62 contained fourteen so-called "options" based on the U.S. alert level, but each simply launched all available strategic forces against the "optimum-mix" of military and urban-industrial targets throughout the Sino–Soviet bloc. Nevertheless, General Lemnitzer told President Kennedy that the total plan could be executed either in retaliation to a Soviet nuclear strike or as a preemptive measure and that he had the option of ordering that attacks against individual satellite countries be withheld, except for air defense targets. Any additional effort to limit the planned attack, however (for example, completely withholding attacks against individual countries or cities), could only be undertaken if there were sufficient time to rework the plan, which would be doubtful in the pressured environment of a superpower crisis or conventional war.[50]

General Lemnitzer's argument against adding further flexibility to the SIOP was fivefold. First, he argued that the majority of U.S. weapons systems might not survive, if they were withheld from an initial scheduled attack, and that therefore their "subsequent use could not be assured." Second, Lemnitzer noted that because of the huge number of military targets in the SIOP (approximately 800 of the 1,000 DGZs), the "relatively non-discriminating" nature of atomic weapons "particularly with respect to fallout," and the proximity of many military targets to urban-industrial centers, it was doubtful whether the Soviet Union would be able to distinguish between a total attack and a purely counter-military attack. Third, while he acknowledged that enemy casualties could be "somewhat reduced" if only military targets were attacked, he maintained that such limits had "little practical meaning as a humanitarian measure" since enemy casualties would still be "many millions in number." Fourth, he questioned whether the damage inflicted against the United States could be significantly reduced by further concentration on military targets. Finally General Lemnitzer stressed that a Soviet first strike would cause a "gross disruption" of U.S. nuclear forces and command and control, which "imposes an overriding requirement for simplicity of military response."[51]

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50. Briefing for the President, SIOP-62, pp. 15–17; *IS*, pp. 48–50.
51. Ibid., pp. 17–18; *IS*, pp. 50–51.

These arguments against adding "an excessive number of options" into the war plan were clearly an appeal to President Kennedy to temper the ongoing efforts of Secretary McNamara to add more flexibility to the SIOP.[52] Lemnitzer's appeal failed. The reason is not difficult to imagine. Lemnitzer presented strong arguments against "an excessive number of options," especially retaliatory options if the United States had received a Soviet first strike. His arguments were not at all persuasive, however, against McNamara's request for adding limited flexibility to tailor the SIOP to the strategic conditions in which war broke out.

Although the full details of resulting changes are not currently available, enough is known to outline McNamara's policy. Guidance drafted in 1961 was used by the JSTPS to construct a new war plan, SIOP-63, that separated the "optimum-mix" into three parts or "tasks": nuclear targets, other military targets, and urban-industrial targets.[53] The President was provided with significant new flexibility: five primary attack options, which could be executed under various conditions of retaliation or preemption, were provided. In addition, the capability to withhold U.S. nuclear attacks against each of the targeting "tasks," any individual or set of Communist countries, and individual "tasks" within a specific country was built into the new war plan.[54] The twin objectives guiding the SIOP revisions can be seen in McNamara's September 1961 draft memorandum for the President on strategic forces:

> [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 in protected reserve forces capable of destroying the Soviet urban society, if necessary, in a controlled and deliberate way.[55]

Each of the new SIOP options entailed, however, the use of "thousands" of nuclear weapons, and McNamara explicitly maintained the option of

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52. On this effort, see David Alan Rosenberg, "Reality and Responsibility: Power and Process in the Making of United States Nuclear Strategy, 1945–1968," *The Journal of Strategic Studies*, Vol. 9, No. 1 (March 1986), pp. 35–52; and Henry S. Rowen, "Formulating Strategic Doctrine," in *Report of Commission on the Organization of the Government for the Conduct of Foreign Policy* (Washington, D.C.: U.S. Government Printing Office, June 1975), Vol. 4, Appendix K, pp. 219–234.
53. Rowen, "Formulating Strategic Doctrine," p. 230.
54. Proposed Outline for Presentation of SIOP-63 to the President, undated, and JSTPS memorandum, General Format for SIOP-63. CCS 3105, Joint Planning, 8 March 1961 (3), Secs. 4 and 2, Box 30, JCS 1961; and Draft Memorandum for the President, Recommended FY 1965–FY 1969 Strategic Retaliatory Forces, December 6, 1963, OSD-FOI, p. I–3.
55. *DPM-61*, p. 4.

launching the entire SIOP "to strike back decisively at the entire Soviet target system simultaneously."[56]

Thus, just as SIOP-62 reflected many of the assumptions behind Eisenhower's "massive retaliation" policy, the new war plan reflected Kennedy's policy of "flexible response." SIOP-63 came into effect on August 1, 1962. It was briefed to the President on September 14, 1962, one month before the start of the Cuban missile crisis.[57]

Conclusion

The nuclear superiority of the United States in 1961 was indisputable. SIOP-62 sought to maximize the effect of such superiority through a massive, simultaneous nuclear offensive—in preemption if possible, but in retaliation if necessary—against the full set of military and urban-industrial targets in the Sino–Soviet bloc. Although they were not confident that even a preemptive strike would destroy *all* Soviet strategic forces, the Joint Chiefs did believe that they could achieve the war objectives that guided their plans and that the United States would prevail in that narrow sense in a general nuclear war.

It is clear that the Kennedy Administration responded negatively to this extremely inflexible nuclear doctrine and enacted major changes in U.S. nuclear strategy, operational plans, and strategic force acquisition policy. Precisely how such changes were made is not, however, entirely clear. An improved understanding of these issues is vitally important since contemporary and future Presidents and Secretaries of Defense face similar dilemmas in efforts to make war planning meet national security objectives. How well has military planning reflected political guidance? What political, organizational, and technical barriers have civilian authorities confronted in their efforts to control the war planning process? Finally, how have nuclear war plans, military advice, and perceptions of war outcomes influenced policymakers in crises?

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56. Rowen, "Formulating Strategic Doctrine," p. 227 (given the size of the arsenal in the early 1960s, this statement must refer to generated options rather than alert options); and Testimony Before the House Armed Services Committee, January 30, 1963, as quoted in William W. Kaufmann, *The McNamara Strategy* (New York: Harper & Row, 1964), p. 92.

57. JSCM 467–62, 20 June 1962, Memorandum to the Secretary of Defense, CCS 3105, Joint Planning, 8 March 1961 (3), Sec. 4, Box 30, JCS 1961; Presidential Appointment Book, September 14, 1962, JFKL; and Interviews.

Political scientists and historians have, of course, long had a great interest in such questions. A rich literature on deterrence theory exists, but the scholarly efforts to understand such "operational" dimensions of nuclear strategy have been greatly inhibited by the paucity of solid evidence about U.S. war planning and military operations. Major strides have been made in recent years, but far more documentary evidence such as the briefing presented here should be made available to add historical flesh to the strong bones of deterrence theory and enable scholars to contribute more effectively, along with soldiers and statesmen, to the critical objective of designing nuclear forces and strategic doctrines that maximize the prospects for successful deterrence.

SIOP-62 Briefing

13 September 1961

JCS 2056/281
Enclosure

THE JCS SINGLE INTEGRATED OPERATIONAL PLAN—1962 (SIOP-62)

The Single Integrated Operational Plan (SIOP) is the JCS plan which provides for the optimum employment of the US atomic delivery forces in the initial attack of strategic targets in the Sino–Soviet Bloc.

I shall describe to you the salient characteristics of this plan in terms of forces involved, targets attacked, and mechanics of execution of the plan. First, however, I believe it will be useful to review briefly the circumstances and actions which led to the drawing up of this plan.

As a result of the technological advances in atomic weaponry—for example, it became possible for fighter-bombers to carry megaton weapons—and, as a result of the growth in size of the atomic stockpile, in recent years the capability to deliver atomic weapons was extended to include, in large numbers, the forces assigned not only to the Strategic Air Command but also those forces assigned to commanders in Europe, Atlantic and Pacific. For example, a March 1960 analysis of the general war atomic plans of these commanders indicated that, of all the targets firmly scheduled to be struck, about half were planned for strike by SAC forces and about half by the forces of the other commanders. Further, targets were often of interest to more than one commander. Consequently, it was clear that very close pre-planning coordination was required to maximize the effectiveness of each delivery vehicle and to eliminate unnecessary duplication.

In recognition of the nature and level of effort by all commanders with respect to atomic strikes, measures were taken by the JCS to coordinate those efforts to insure direction of appropriate level of effort against each target and to avoid interference among forces enroute to and over targets.

Measures taken essentially were these:

a. Coordinating instructions were issued by the JCS in their Joint Strategic Capabilities Plan, the basic guidance to the commanders upon which they base their war plans.

b. World-Wide Coordination Conferences were held at which the commanders were to coordinate among themselves their atomic strike plans.

c. Joint Coordination Centers—one in England and one in Hawaii—were established to assist in the elimination of interference among striking forces.

This briefing, originally classified top secret, was presented to the President by the Chairman of the Joint Chiefs of Staff on September 13, 1961. This sanitized copy was declassified by the Organization of the Joint Chiefs of Staff on August 15, 1986. Passages removed by the sanitizers are identified by the word "deleted" in parentheses. Editorial notes and changes in brackets, as well as the footnotes, are provided by Dr. Scott Sagan.

Underlying all coordination efforts was the growing atomic threat posed by the USSR. All concerned with atomic planning were determined that optimum utilization should be made of all elements of the US atomic forces.

However, it became generally recognized that the coordination machinery was not producing the pre-D Day coordination results that the increasing atomic capabilities of our commands required, and certain corrective measures were initiated by the JCS.[1] As a further development, in mid-59, in the course of studying the matter of employment of POLARIS submarines, the Secretary of Defense (Mr. Gates) became aware of and took an active interest in the problems associated with the planning and execution of atomic strikes. Mr. Gates asked that the JCS study and report to him on those problems.

In August of 1959, General Twining, then Chairman of the JCS, placed before the JCS some eighteen questions, the answers to which he felt would make [a] strong contribution to [the] solution of targeting problems. Those questions essentially were as follows:

With respect to our targeting policy:

1. What should it be?
2. What categories of targets should it cover?
3. What agency should develop it? Maintain it?
4. What agency should review and approve the policy?

On the subject of an integrated operational plan for strategic nuclear operations:

5. Do we need such a plan?
6. What agency should develop it? Review and approve it?
7. Should non-all weather systems attack strategic targets? If so, under what conditions?
8. Should carrier forces have H Hour strategic targets?
9. If carrier forces are relieved of strategic targets, how do we state their nuclear mission?
10. Is there an immediate need for a Unified Strategic Command?
11. Is a Unified Strategic Command desirable in the future?
12. If we do not form a unified command now, should POLARIS and SAC Plans be integrated?
13. If so, how?

On the subject of operational control of the atomic strike forces:

14. Should unified commanders have H Hour strategic targets?

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1. The failure of the CINCs' (Commanders-in-Chiefs') coordination process in resolving critical targeting conflicts was clear by 1960. Not only were there numerous unresolved and undesired redundancies in targeting (more than one command delivery weapon against the same target), but in each of the Joint Coordination Centers' exercises from 1958 to 1960, over 200 time-over-target conflicts were identified. Thus, U.S. strategic delivery forces would likely destroy each other, and not only the targets attacked, in the event of nuclear war. History and Research Division, Headquarters Strategic Air Command, *History of the Joint Strategic Target Planning Staff: Background and Preparation of SIOP-62* (partially declassified and released by the Organization of the Joint Chiefs of Staff, April 1980), p. 4.

15. Should Joint War Room Annexes and Joint Coordination Centers be continued?
16. What additional measures would improve coordination?

Questions 17 and 18 pertained to operational analysis and war gaming.

An associated matter strongly bearing on the solution of targeting problems was a study conducted by the staff of the Net Evaluation Subcommittee, under the direction of Lt General Hickey. That study, known as Study No. 2009, was *to establish*, for the 1963 time period, the relative merits, from the standpoint of deterrence, of retaliatory efforts directed against:

a. Primarily a Military Target System.

b. Primarily an Urban-Industrial Target System.

or

c. An Optimum-Mix of combined Military and Urban-Industrial Target Systems.

Also, Study No. 2009 was *to determine*:

a. The minimum number of enemy targets, by category, which the United States retaliatory forces must clearly be capable of destroying or neutralizing in order to achieve the objective of prevailing in general war.

b. The US retaliatory forces required to neutralize or destroy this minimum number of targets.

c. The adequacy of the required retaliatory forces to contribute effectively to the national objective of deterrence.

In essence, the *conclusions* of Study No. 2009 were as follows:

a. Of the target systems studied (Military, Urban-Industrial, and Optimum-Mix) the Military alone and the Urban-Industrial systems alone had certain shortcomings. No major limitations were evident relative to the Optimum-Mix System. Successful attack of the Optimum-Mix System should result in the US prevailing in general war.

b. Forces programmed for the 1963 time period would be adequate to deliver the necessary weapons on each target, at a level of assurance between 75 and 90 percent.

c. The range of retaliatory force structures providing between 75 and 90 percent assurance, under the assumption of surprise attack, should provide effective deterrence to general war in 1963.

On 12 February 1960, the President approved the concept of the Optimum-Mix Target System, for a minimum of 75 percent assurance of delivering a weapon at each bomb release line, as described in Study No. 2009. The President also referred Study No. 2009 to the Joint Chiefs of Staff as a basis for planning.

In August 1960, following consideration by the Joint Chiefs of Staff and the Secretary of Defense of the matters covered by the Eighteen Questions and of Study No. 2009, there was issued the JCS National Strategic Targeting and Attack Policy.

The *intent* of that policy was to provide guidance for the optimum employment of appropriate US atomic delivery forces in the initial attack against the Sino–Soviet Bloc. *The basic objective* of the policy was to establish an essential national task to be accomplished under the several conditions under which hostilities may be initiated. *Specific Objectives* are:

a. To destroy or neutralize Sino–Soviet Bloc strategic nuclear delivery capability and primary military and government controls of major importance, and

b. To attack the major urban-industrial centers of the Sino–Soviet Bloc to achieve the general level of destruction as indicated in Study No. 2009.

Under the National Strategic Targeting and Attack Policy, a National Strategic Target List (NSTL) and a Single Integrated Operational Plan (SIOP) were to be developed to provide for the integration of committed forces for the attack of a minimum list of targets, the destruction of which would accomplish the objectives just shown.

General Thomas Power, CINCSAC, as agent of the JCS, was designated Director, Strategic Target Planning (DSTP) and was directed to organize a joint staff to develop and maintain the NSTL and the SIOP. The NSTL and SIOP were to be submitted to the JCS for approval. The commanders of the unified and specified commands were directed *to commit* appropriate forces to attack of the targets on the NSTL, *to insure* execution of those attacks, *to program* no attacks against targets on the NSTL except as provided in the SIOP, *and to provide* permanent senior representation at the headquarters of the DSTP for participation in the preparation of the NSTL and the SIOP and for liaison purposes.

Damage and assurance criteria were specified in the policy. Also specified were constraints to be observed in the programming of weapons, in order to protect friendly forces and allies. Constraints also were prescribed to be observed in the Satellite areas, toward avoiding the alienation of potentially friendly populations who are assumed to be not responsible for the acts of their governments.

Pursuant to the National Strategic Targeting and Attack Policy, the Single Integrated Operational Plan for 1962 was prepared. On 2 December 1960, the plan was approved by the JCS and the Secretary of Defense, and was made effective on 15 April 1961.

I shall now describe for you some of the methodology employed in developing the National Strategic Target List and the Single Integrated Operational Plan.

The NSTL was developed from a list of more than 80,000 potential targets in the Bombing Encyclopedia. This list was analyzed, screened and finally reduced to 3729 installations which were determined to be essential for attack. Many of these are co-located in target complexes. A DGZ, or desired ground zero, can be located so that several installations may be destroyed or neutralized by a single weapon. Thus the total of 1060 DGZs cover the 3729 installations in the NSTL.

A breakdown of DGZs by country is shown on this chart.

[*Editor*: The numbers and locations of DGZs in SIOP-62 were deleted from this document. According to Henry Rowen, former Deputy Assistant Secretary of Defense, "the countries targeted in the SIOP have been the USSR, the People's Republic of China, and allies of these two powers in Eastern Europe and elsewhere."[2]] This map will give you a feel for the geographic distribution of DGZs within the Sino–Soviet Bloc. Each red circle represents one actual DGZ. No attempt has been made to differentiate as to size or importance.

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2. Henry S. Rowen, "Formulating Strategic Doctrine," Part III, Vol. 4, Appendix K, to *The Report of the Commission on the Organization of the Government for the Conduct of Foreign Policy* (Washington, D.C.: U.S. Government Printing Office, 1975), p. 220. Also see Draft September 23, 1961, Appendix 1 to the Memorandum for President, Recommended Long-Range Nuclear Delivery Forces, OSD-FOI, p. 8.

Now to the Plan itself. Forces of the unified and specified commands participating in attack of these targets are as shown on this chart.

Strategic Air Command
Pacific Command
Atlantic Command
European Command
Alaskan Command

[*Editor*: The number of nuclear weapons committed to SIOP-62 in July from U.S. commands was as follows:

	Day-to-Day Alert	Fully Generated Alert
Strategic Air Command	1,246	2,180
Pacific Command	84	421
European Command	178	489
Atlantic Command	32	177

(For details, see the tables reproduced above, p. 25.)[3]]

SIOP forces are launched from a total of 112 bases.

There are 49 bases in the US (deleted) all Strategic Air Command forces. (deleted)

Shown here are bases in the *Pacific* area (deleted).

Launch bases in the *Atlantic and European areas* are shown on this chart. (deleted)

[*Editor*: The official history of the Strategic Air Command notes that in 1961 there were 46 SAC bases in the Continental United States as well as bases in Puerto Rico, Newfoundland, and Labrador. Additional SAC bases were located in the United Kingdom, Morocco, Spain, and Guam. The rest of the 112 bases used for SIOP-62 were those of the other commands listed above: the Pacific Command, the Atlantic Command, and European Command and possibly the Alaskan Command.[4]]

Operational Concepts.

The Targeting and Attack Policy prescribed that the SIOP provide for the initial attack only. Therefore, the foremost objective in integrating these forces was to attain the highest probability of success with this initial attack. This has been accomplished by:

Cross Targeting of aircraft and missiles on a common target system, considering the capabilities of each system. Launch bases were considered from a standpoint of location, vulnerability, and distance from the target area. A specific base survivability

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3. Cyrus Vance, Memorandum for the President, "Military Strength Increases Since Fiscal Year 1961," October 3, 1964, TAB G, National Security Files, Agency Files, Box 11–12, Department of Defense, 11–63, Vol. 1, Lyndon Baines Johnson Library, Austin, Texas.
4. J.C. Hopkins, *The Development of the Strategic Air Command, 1946–1981*, Office of the Historian, Headquarters, Strategic Air Command, Offutt Air Force Base, Nebraska, 1982, p. 95. The Strategic Air Command was responsible for delivery of offensive weapons allocated to the Alaskan Command. Headquarters Alaskan Command, 30 April 1959, Subject: Final Report of Exercise Dice Cup, CCS 3510, Joint and Combined Exercises, 1959, Box 37, Records of the United States Joint Chiefs of Staff 1959, RG 218, National Archives.

factor is not in the plan. However, it is recognized that many bases will come under enemy attack. This consideration caused the selection of weapon delivery vehicles from different types of bases, as well as different geographical locations, in order to achieve the best probability of delivering a weapon.

Route Coordination was accomplished, as well as controlled timing. This helps us to avoid defenses and to take advantage of results of weapons already dropped.

Time Over Target Coordination was effected. Target times are controlled to avoid target conflicts and to insure that we do not destroy our own delivery vehicles.

Economical Weight of Effort is applied through the integration of all forces directed against a single target list. The weight of effort against each target is consistent with the worth of that target and the assurance desired on each target. As a result, unplanned duplication has been eliminated.

Optimum Strike Effort Base[d] on Preparation Time is accomplished by a series of options which provide the JCS with a means of applying the maximum number of weapon carriers which can be generated for any given time. Warning time, whether it be in minutes or days, is the key to success of the plan. Therefore, heavy emphasis has been placed on tactical warning and quick reaction of the committed forces. Full strategic warning is also provided for.

Targeting Sequence.

All forces have been targeted in the order of their arrival in the target area. The sequence of targeting was first, the ballistic missiles; second, forces launching from forward areas; and last, forces from the US.

The first group of forces to be targeted was that identified and maintained as the Alert Force, which was applied under conditions of tactical warning against highest priority targets.[5]

Next to be targeted were the Follow-on Forces. The Follow-on Force is that portion of the committed forces which are [*sic*] not maintained in a condition for immediate reaction. Warning time is required to ready this force. The Follow-on Force is targeted to take advantage of the Alert Force strike; to improve the probabilities on targets scheduled for strike by the Alert Force; and, as a result of a larger force made available by preparation time, it is used to expand target coverage.

The penetration and delivery capabilities of all weapon systems in the plan were analyzed and applied to insure the highest probability of delivering at least one weapon on each target. The number of weapons scheduled against each ground zero was determined by the target characteristics and the desired assurance of delivery. Weapons were then scheduled until the desired assurance was obtained at each target bomb release line.

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5. According to SIOP-62 planning documents, to be included in the alert force, "there must be a reasonable assurance that the weapon carrier will survive enemy action long enough to be launched effectively." Under conditions of tactical warning, the established time periods for fixed bases (ICBMs and bombers) were fifteen minutes, and for missile submarines and aircraft carriers, two hours. Annex to Appendix B, JCS 2056/181, JSTPS Policy Committee, 14 September 1960, "Integration and Utilization of SIOP Forces," p. 1679, CCS 5175 Director Strategic Target Planning, 16 September 1960, JCS 1960.

The final factor considered was that of maximum exploitation of the following factors within each force: reaction capability, launch locations, range capability, and weapon and system variety. I will cover some of these items in greater detail.

Reaction Capability.

Primary consideration was given to the quick reaction capability of the Alert Force, responding under conditions of tactical warning. The planning criteria for tactical warning has been established as shown here. (deleted)

That portion of the SIOP force requiring time to prepare for launch, which I have previously identified as the Follow-on Force, has been assigned launch timing based upon the generation or preparation rate of the aircraft and missile systems concerned.

Here are the weapons planned for aircraft delivery.

And by missile.

Forces.

I have previously mentioned the consideration given to programmed force changes during the life of this plan. Practically all commands have weapon systems phasing into or out of their inventory during the next 12 months. In SAC, additional ATLAS and TITAN units are becoming operational, and other systems are being phased down. In Europe there are changes in the MATADOR–MACE program. CINCLANT is scheduled for additional POLARIS capability.

In order to provide a degree of stability to the plan, yet effectively provide for the employment of all forces, systems scheduled for operational readiness at any time during the plan life have been assigned a target.

An additional consideration in regard to force commitments was the identification and coordination of forces assigned to SACEUR, both US and non-US. Those forces have been targeted in a joint effort, with consideration given to the SACEUR NATO commitments. Those forces will respond to common Alert and Execution Reference Hours and will accomplish prior coordination with the Omaha planning staff on all program changes. The weight of effort of these forces, both US and non-US, has been included in the plan.

Under normal conditions, the carrier forces of CINCLANT (the Second Fleet) would not be in launch position. That is, they would be operating off the East Coast of the US or in port. However, to provide for the eventuality that these forces may be ordered into their launch area, (deleted) targets have been assigned in order to capitalize on their capability.

Under conditions of strategic warning these carrier forces will be in position, and under this condition delivery probability has been assigned and weight of effort of these forces computed.

Non-All Weather Forces.

Twenty-two percent of the force, carrying sixteen percent of the weapons in this plan, are of a non-all weather category. In order to apply realistically the weight of effort represented by these forces, a planning factor was developed for the probability of these forces making correct target identification during conditions of bad weather and darkness. This factor was applied in determining forces necessary to provide the desired assurance.

Tactics programmed for the SIOP are in two principal categories—the *penetration phase* and the *delivery phase*. In the penetration phase, the plan considers degradation of those defenses that offer the greatest threat to our forces. Peripheral defenses are scheduled to receive the first weapons. Subsequent arriving aircraft then bomb deeper defenses and primary targets as the force penetrates. The attack becomes a progressive development, following the principle of "bomb as you go."

Roll-back of the target system in this manner, within a selected geographical area, is called a "corridor." These corridors vary in width from (deleted) with defenses degraded within and for a (deleted) distance on either side. This distance represents potential ground-controlled interceptor coverage within the corridor.

(deleted)

In those areas where, due to extensive Soviet defenses, roll-back of the target system or establishment of corridors is impractical, penetration is scheduled to be accomplished by maximum possible use of low level flight.

In the delivery phase, increased assurance has been obtained through the assignment of different delivery systems to the same target, by diversified tactics, and by cross-targeting on a common target system with consideration given to the capabilities of all systems in terms of reaction, circular error probable, yield, and launch location.

Optimum Launch Timing.

Should warning time be available, procedure has been established to designate the size of the strike force for immediate launch and to establish the timing of the entire force.

We accomplish this timing through *execution options*. These provide the capability to immediately launch variable forces as a function of preparation time and also provide proper timing for each size force.

In this Plan, 14 options have been established. Option 1 is the Alert Option. Options 2 through 13 are based on preparation times of up to 14 hours. Option 14 is the Strategic Warning Option and pre-supposes a minimum of 14 hours' preparation with no maximum time established.

Force Generation.

This chart illustrates the option assignment based upon preparation time and the increase in available delivery systems under each successive option. The left column lists the option numbers. The center column indicates hours after Alert Hour. The right column indicates the additional delivery systems brought to ready status during the respective period.

Thus, under Option 1, the Alert Option, there are 1004 delivery systems capable of immediate launch. They carry 1685 weapons. In the event of surprise attack and only 15 minutes warning, it would be essentially the Alert Force which would constitute our retaliatory force. If one hour of preparation time is available, an additional 95 systems will have been prepared. At the end of six hours of preparation time, 1658 delivery systems will be prepared for launch under Option 7. Option 14 completes the force with a total of 2244 delivery systems generated and ready for launch, carrying a total of 3267 weapons.

NATO and SIOP forces use a common reference timing system.

(deleted)

The JCS will designate A [Alert] Hour based upon:

a. Available intelligence,

b. Recommendations of unified and specified commanders,

or *c.* Declaration by unified and specified commanders of an

Air Defense Emergency

or

Defense Emergency.[6]

The JCS will designate E [Execution] Hour and the appropriate execution option.

a. After consultation with appropriate commanders and the Director, Strategic Target Planning, if feasible, and

b. After receipt of authority from the President, including withhold instructions.

Unified and specified commanders may launch aircraft under positive control, a "fail-safe" system, advising the JCS.[7]

Unified and specified commanders may, after E Hour, launch forces in advance of scheduled launch time but will avoid other scheduled SIOP strikes and will inform the JCS.

FLEXIBILITY

A fundamental characteristic of the current SIOP is that it provides for attack of an Optimum-Mix Target System. This follows the conclusions and the Presidential decision relative to Study No. 2009 that an optimum-mix of both military and urban-industrial targets must be successfully attacked in order for the US ultimately to prevail. Consequently, the SIOP is designed for the accomplishment of this total essential task. This embraces such things as timing and routing of attacks so that the maximum mutual support of the attacking forces is achieved. For example, tactics of follow-on forces relate directly to results expected to be achieved by earlier-arriving forces.

Thus, basically, the SIOP is *designed* for execution as a whole.

Notwithstanding the above, the current SIOP does have certain flexibility—some of which is built into the plan by design, and some of which, although not included in the design of the plan, is inherent in the mechanism for control of forces committed to the plan.

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6. In the 1959 North American Air Defense Command Defense Readiness Conditions (DEFCON) guidance document, it was stated that CINCNORAD or the Deputy CINCNORAD had the authority to declare Air Defense Emergency (Exercise term: "Big Noise"), the alert status above DEFCON 1, in the following situation: "Significant strategic and/or tactical indications of hostilities against the U.S. forces overseas, U.S. allies (,) on U.S. possessions and/or North American Continent. War is imminent and may occur momentarily." North American Air Defense Command, Defense Readiness. Conditions CCS 3180 Emergency Readiness Plans, 20 April 1959, Records of the United States Joint Chiefs of Staff (JCS) 1959, Record Group 218. National Archives; NORAD Regulation No. 55–1, 27 April 1960, CCS 3180 Emergency Readiness Plans (12 January 1960), JCS 1960.

7. Under "positive control" launch procedures, bombers are launched into the air and proceed toward their targets; if, however, they do *not* receive a message ordering the execution of the SIOP before they reach hostile territory, they will return to bases.

The plan is so *designed* as to contain the following flexible features:

a. It may be executed as a total plan
(1) In retaliation to a Soviet nuclear strike of the US, or
(2) As a preemptive measure.
(The ballistic missiles covered by the plan are assigned alternate targets for the two conditions of retaliation and preemption.)

b. Strikes can be withheld against targets in any or all of the Satellites except for defensive targets. (Also it would be possible to direct withholding of strike of all targets in the Satellites, providing the CINCs are so notified sufficiently in advance of E Hour to permit alteration of existing plans.)

In addition to the above designed flexibility, because of the positive control we exercise over our nuclear forces, it would be possible to direct that attack be withheld against any specific category or categories of targets in any area. For example, it would be possible to order that no direct attacks be made on cities.

However, it must clearly be understood that any decision to execute only a portion of the entire plan would involve acceptance of certain grave risks.

As earlier pointed out, the plan is designed for execution as a whole, and the exclusion of attack of any category or categories of targets would, in varying degree, decrease the effectiveness of the plan. There is no effective mechanism for rapid re-work of the plan, after order for its execution, for a different set of conditions than for which it was prepared. Further, the characteristics of the greater majority of the weapons systems now committed to the plan are such that if withheld from their scheduled attack of assigned targets their survival for subsequent use would not be assured.

Thus, withholding of a portion of the planned attack could degrade our plan and the forces committed to it to the point that the task essential to our national survival might not be fulfilled.

There are additional factors which bear on partial execution of the SIOP.

The very great majority of targets now covered by the SIOP are military in nature. For example, of about 1000 DGZs covered by the plan, some 800 are military targets. Further, atomic weapons are relatively non-discriminating, particularly with respect to fallout. Consequently, because of the relatively high number of military targets, the proximity of many of those targets to urban-industrial centers, and the characteristics of atomic weapons, there is considerable question that the Soviets would be able to distinguish between a total attack and an attack of military targets only *even* if US authorities indicated that the US attack had been limited to attack of military targets.

Another point relates to the thought that by concentrating attack on military targets only, the damage inflicted by the Soviets on the United States might significantly be reduced. The current SIOP provides for a very high level of assurance of success against Soviet targets posing a direct nuclear threat to the United States. Under any circumstances—even a preemptive attack by the US—it would be expected that some portion of the Soviet long-range nuclear force would strike the United States.

It is not clear that increased weight of US effort against military targets over that already provided by the SIOP would significantly alter the strength of Soviet strikes

on the US. Clearly the most important factor affecting damage to the US is that of whether the US acts in retaliation or preemption.

As an additional point, while personnel casualties would be somewhat reduced if urban-industrial installations were not directly attacked, nevertheless, because of fallout from attack of military targets and co-location of many military targets with urban-industrial targets, the casualties would be many millions in number. Thus, limiting attack to military targets has little practical meaning as a humanitarian measure.

The Single Integrated Operational Plan was designed to meet requirements under conditions such that our national survival is at stake. If the enemy were to launch an all-out nuclear attack against the US and its allies during the current time period, the expected gross disruption of facilities, military capabilities, communications and control elements, and other national assets imposes an overriding requirement for simplicity of military response. This overriding requirement severely limits the operational responses which may practically be planned—this notwithstanding how desirable some responses individually might be under certain circumstances. The ability to defeat the enemy must not be lost by the introduction into the SIOP of an excessive number of options which would contribute to confusion and lower our assurance of success under the most adverse circumstances.

CONCLUSION

In conclusion, we believe that the current SIOP effectively integrates in a well-planned and coordinated attack the forces committed. Further, the plan is well designed to meet the objectives prescribed in the policy governing its preparation. Attainment of those objectives should permit the US to prevail in event of general nuclear war.