

**McNamara, Year One:
Forging a New American Nuclear Strategy at the Dawn of the Missile Age**

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Part 1: Introduction

For analysts of American strategic nuclear policy, the first years of Robert McNamara's tenure at the Department of Defense should hold a place of special importance. This period saw changes of immense scope and rapidity to the bedrock concepts of American national security policy, the most visible of which was the pursuit of an effective, secure and credible nuclear deterrent. Heightening the importance of these changes to U.S. nuclear policy was the environment in which they took place: a period of immense international tension, when fears of a global nuclear conflict between the United States and the Soviet Union preoccupied both ordinary citizens and the elite of the defense policy community. It was also a time in which the initiative in nuclear policy moved firmly into the hands of a group of ambitious, creative and highly driven civilian analysts—many of them formerly of the RAND Corporation—who would find themselves working with McNamara in the newly-elected Kennedy Administration.

To most seasoned students of nuclear issues during this period, the decision to focus on McNamara—and more specifically the very early period of his seven-year tenure—should seem fairly obvious, however, it is worth restating the importance of the man and the time-frame in order to highlight the issues to be discussed. In his seminal work on the subject, *Politics and Force Levels*, Desmond Ball clearly states that the core

concepts of American nuclear deterrence for the next ten years were laid out during the Kennedy Administration, and that, “The chief architect...was his secretary of defense, Robert S. McNamara.”¹ Ball is hardly alone in his assessment of McNamara's primacy, being echoed by Lawrence Freedman in *The Evolution of Nuclear Strategy*: “No single public figure has influenced the way we think about nuclear weapons quite as much as Robert S. McNamara.”² Priorities of basic national security policy, the strategic doctrine to be followed in the pursuit of those priorities, and the weapons and tactics employed by said strategy were forged early on in this period, under conditions of rapid conceptual innovation.

In order to achieve an adequate depth of exploration and analysis of the momentous decisions affecting nuclear strategy made under McNamara, this paper has consciously restricted its temporal scope to roughly the first year of his term. In doing so, it will drill down upon the formation of certain key concepts of American nuclear doctrine that endure to this day—Counterforce versus Countervalue posture, Assured Destruction/Invulnerable Second Strike versus Full First Strike capability. These concepts are important not merely for their impact on U.S. nuclear strategy at the time, but also because of their enduring presence in nuclear discourse, concepts that, “remain central to this day to strategic debate.”³ By beginning with the Administration's study of the inadequacy of existing strategic nuclear planning in early 1962 and ending with the acceptance of the new Single Integrated Operational Plan (SIOP) in mid-1962, I intend to

1 Desmond Ball, *Politics and Force Levels: The Strategic Missile Program of the Kennedy Administration* (Berkeley: University of California Press, 1980), XX-XXI

2 Lawrence Freedman, *The Evolution of Nuclear Strategy* (New York: St. Martin's Press, 1983), 228

3 *Ibid.*, 228

show how a combination of emerging technology, strategic innovation and the changing balance of forces with the Soviet Union came together to create a sea-change in American strategic thought.

Speaking of the balance of forces, at the heart of this inquiry is an examination of how McNamara and his colleagues attempted to grapple with the rapidly evolving strategic landscape of the late 1950s and early 1960s. It was in this environment that, according to Freedman, “The ability to prevail in a nuclear exchange depended on the exploitation of new technologies that were improving both the offense and defense.”⁴ The result, as I will show, was a see-sawing battle for technological advantage in order to escape the rapidly developing thermonuclear stalemate. I will also demonstrate the Administration's attempts to grapple with and stabilize a nuclear standoff that tended towards preemption, in which, “If it was becoming possible to mount a serious attack on the enemy's nuclear stockpile and delivery vehicles, it appeared good sense to get in this attack before the enemy forces had a chance to do any damage.”⁵

This attempt to assimilate and plan around rapidly evolving nuclear weapons technology forms an important theme in the overall story of strategic planning under McNamara. “It came to be assumed,” notes Freedman, “that the series of startling technological innovations of the past two decades set a pattern for the future; if sufficient funds and ingenuity were applied to any given problem it could be solved.”⁶ Indeed, the

4 Ibid, 124

5 Ibid, 124

6 Ibid, 156-157

idea of technological innovation and strategic prowess came to be seen a way out of the dilemma that had arisen in earnest in 1955, in which the international situation came to be characterized by the fact that, “the world's two greatest powers could literally wipe out each other and much else besides, and that there was no obvious way out of this.”⁷

The Kennedy Administration's attempts to resolve this dilemma—to find a “way out of this”—is at the heart of this examination of strategic thought. I intend to show that the combination of awesome technological progress mentioned above, combined with fear and uncertainty between the superpowers to create a climate in 1961 where, “It was by no means fanciful to consider nuclear war a very real danger.”⁸ Moreover, we will see that while strategy and technology pointed towards a more stable strategic situation, nagging doubts about what might happen should deterrence fail presented strategic thinkers with an irresistible compulsion to try to avert the absolute destruction of U.S. society should the worst come to pass. It was in this context that, “The investigation of all possible means of reducing damage seemed to be only prudent insurance.”

Finally, a word about the scope and methodology of this paper. Although it relies on works like Ball's *Politics and Force Levels* as well as Alain Enthoven's *How Much is Enough? Shaping the Defense Program 1961-1969* for general background, it is not an attempt to replicate their analysis of the budget and bureaucratic wrangling of McNamara's tenure. Rather, it is a narrowly-focused analysis of strategic planning at the level of policy and strategy, and how they were interpreted and implemented in military

7 Ibid, 162

8 Ibid, 238

planning. Although the issue of force levels and budgeting does appear, it will only be dealt with to the extent that a direct and documented relationship with strategic theory can be established in the primary evidence.

Speaking of evidence, this paper draws heavily on the declassified record of correspondence and policy documents of McNamara, his colleagues in the DoD, staffers of the National Security Council and the individual armed services—especially the Air Force. It is in this choice of evidence that this paper endeavors to provide new material and insight: while the works of authors like Ball and Freedman are expertly written and painstakingly researched, the fact they were written in the early-to-mid 1980s means they are based almost entirely on open-source records and personal interviews. Although these sources have been combined to produce several seminal works in the field of nuclear strategy, they are never the less subject to the limitations of partial or incomplete public records, and the vagaries of faded memories or self-interest in the case of interviewees. My decisions to focus narrowly on the first year of McNamara's term, and draw extensively on formerly-classified documents is an attempt to provide a more raw, unfiltered look into the evolution of nuclear strategy during this period.

Part 2: Background

While the military, political and social debate regarding the proper role—if any—of nuclear weapons in American national security policy predates the Trinity test at Alamogordo, the challenges faced by the McNamara Pentagon had their roots in wake of the Korean War. Confronted with regional Communist aggression on many fronts, the Eisenhower administration had sought to rationalize America's defense posture for the “long haul,” in an effort to keep the cost of the defense burden manageable while still providing adequate deterrence against Soviet expansion. This “New Look” posture, as it came to be termed, was based on the, “Provision of an adequate defense at the lowest cost...by maximizing the potential of mass destruction and, it was hoped, thereby deterring the Soviet Union from any attempt to expand its power or influence by force.”⁹ Such a strategy was predicated upon overwhelming U.S. superiority in strategic thermonuclear weapons and delivery systems—consisting at the time of long-range heavy bombers—in which conventional forces were eclipsed by “a decision to give clear primacy to nuclear retaliatory power.”¹⁰

The New Look's reliance on the threat of Massive Retaliation to deter Soviet conventional aggression against the Free World proved controversial from the start, especially with the U.S.S.R.'s development of air-deliverable thermonuclear weapons beginning in 1956. A combination of tight secrecy and skillful propaganda on the part of

9 Robert J. Watson, *History of the Office of the Secretary of Defense: Into the Missile Age, 1956-1960* (Washington, D.C.: U.S. Department of Defense, 1997), III

10 Ibid, 31

the Soviets succeeded in fostering an increasingly urgent debate over the wisdom and credibility of relying so heavily on strategic nuclear weapons to deter Soviet conventional moves. As the Soviet ability to retaliate against nuclear punishment grew, analysts pointed out that Massive Retaliation was looking progressively less realistic. “How credible,” asks Freedman, “was a threat of punishment that would literally, as the schoolmaster says as he prepares to spank a naughty schoolboy, 'hurt me as much as it hurts you?’”¹¹ Increasingly, Massive Retaliation came to be seen as forcing the United States to adopt a posture that left it only two choices: “sudden destruction or slow defeat.”¹²

In addition to these criticisms centering on nuclear use in the face of Soviet retaliation were concerns—especially those voiced in studies by the civilian RAND Corporation under contract from the USAF—that cast doubt upon the ability of America's strategic forces to survive a massive surprise attack by the Soviet Union. Kaplan describes an atmosphere in which, “In the last half of the 1950s the specter of a Russian surprise attack against a vulnerable America became the central threat in the eyes of the strategic community.”¹³ Worries about the Strategic Air Command's vulnerable and highly concentrated bomber force—which constituted almost the entirety of America's retaliatory forces—were highlighted in studies like Albert Wohlstetter's R-290 at RAND and helped drive the formation of the Gaither Committee in 1957.¹⁴ Formed six months before the launch of Sputnik in 1957, the Committee went beyond its initial

11 Freedman, 88

12 Ibid, 101

13 Fred Kaplan, *Wizards of Armageddon* (New York: Simon and Schuster, 1983), 125

14 Ibid, 125

remit to study civilian protection from thermonuclear attack and painted a dire picture of the military's vulnerability to surprise attack. A series of simulated alert drills in which SAC performed abysmally, failing to get any bombers off the ground even after six hours had elapsed, seemed to confirm the findings in R-290 and further alarmed the Gaither committee.¹⁵ Meanwhile, other civilian analyst like former Truman Administration national security staffer Paul Nitze viewed the “pure deterrence” of Massive Retaliation as inadequate while actual nuclear warfighting capability seemed unattainable within the confines of existing military doctrine and weapons systems. ¹⁶Ideally, thought Nitze, the United States would have to adopt “something in between.”

The idea that U.S. strategic forces were increasingly vulnerable as the 1950s wore on began to contribute to a debate over the choice of weapons delivery and support systems, specifically that a particular doctrine and force composition could influence the likelihood of deterrence failing. For most of the 1950s, it had been widely believed that the only form nuclear war would take would be a “cataclysmic final catastrophe, which was unlikely because of its very enormity.”¹⁷ But RAND studies began to suggest that there were a variety of ways to fight a nuclear conflict, and the type and number of strategic forces could either be a deterrent or, “an invitation to aggression.”¹⁸ Again, this “invitation to aggression” was directed at SACs large but vulnerable bomber force. Studies by Wohlstetter demonstrated that the theoretical capability to eliminate an enemy offensive force while not taking unacceptable damage in return—what would become

15 Ibid, 133

16 Ball, 23

17 Ibid, 38

18 Ibid, 38

known as a Full First Strike—meant that the mere existence of a large strategic nuclear force was not enough to ensure deterrence.¹⁹ The RAND studies were, in turn, suggesting that a large emphasis must be put not only on the offensive striking power of strategic forces, but also their survivability.²⁰ “Clearly, a large force of protected nuclear firepower that could not be knocked out in a surprise Soviet missile attack was an absolute prerequisite for a deterrent posture,” notes Enthoven.²¹ As the prospect of a future thermonuclear stalemate became a real possibility, alarm over the “danger of assuming the inevitability of total war” began to come to the forefront of the strategic thought.

In addition to the vulnerability of the bombers themselves, concerns were growing about the vulnerability of the command and control systems supporting SAC. Particularly alarming was the fact that all the high-level command nodes for SAC were located at a small handful of unhardened facilities, all of which were located near major metropolitan areas. The fear was that a Soviet attack with ICBMs would knock out the entire command and control (C2) structure, leaving the missiles and bombers without lawful orders.²²

In the course of addressing the above criticisms of America's strategic posture, alternative doctrines of nuclear deterrence—and what to do if deterrence should ever

19 Ibid, 39

20 Ibid, 38

21 Alain Enthoven and K. Wayne Smith, *How Much is Enough? Shaping the Defense Program 1961-1969* (Santa Monica: RAND Corporation, 1971), 166

22 Enthoven, 166

fail—began to develop. Foremost among them was the concept of “Counterforce”—that is, focusing nuclear strikes on military targets, especially the enemy's strategic offensive forces. The concept of counterforce—and even the possibility of a preemptive strike—started to appear as the, “last chance for a plausible alternative to nuclear stalemate.”²³

The debate was also taken up within the military services. Inter-service rivalry—especially resentment within the Army and Navy over their loss of funds and prestige to the Air Force when it assumed the central role in national defense strategy—played and would continue to play an important role in the strategic debate into the Kennedy administration. Specifically, the Army and Navy preferred working towards a “finite” or “minimum deterrence” posture in which deterrence was achieved by a relatively modest and invulnerable force targeted at Soviet urban-industrial (“Countervalue”) targets. Opposing this was the Air Force's desire for a “Counterforce” posture, with the capability to destroy not only the Soviet military-industrial base, but strategic military targets as well. However, besides viewing Counterforce as a threat to their budgets and prestige, the Army and Navy genuinely perceived it as a potentially destabilizing factor in superpower relations. The Army, in-particular, believed that the coming nuclear stalemate made localized, conventional wars more likely to occur.²⁴ Advocates for a focus on “Limited War” like General Maxwell Taylor focused on the need for a posture that focused on conventional forces and proportional response, however, Eisenhower largely persisted in his focus on strategic air power.²⁵

23 Freedman, 127

24 Kaplan, 195

25 Ibid, 195

These concepts—the inadequacy of offensive strategic forces in the absence of survivability and the temptation towards preemption this created—would eventually be transmitted to McNamara in a number of ways: via discussion and advocacy by sympathetic officers in the USAF, in the political debates over nuclear strategy in the late 1950s and in the presidential campaign of Senator John F. Kennedy.²⁶ Furthermore, many of the participants and advocates of the studies coming out of RAND would find positions within the national security apparatus of the coming Kennedy administration. Thus, by the time Sen. Kennedy was elected in November of 1960, the stage was set for an influx of new thinking on nuclear policy at the Department of Defense.

²⁶ Freedman, 39

Part 3: How Do You Solve a Problem Like the SIOP?

During the transition period following the 1960 election and prior to JFK's inauguration in January of 1961, American views of the Soviet threat and the adequacy of U.S. strategic posture were deeply unsettled. The problem of growing Soviet retaliatory capability remained the most pressing national security issue, as described in the final National Intelligence Estimate for 1960. It concluded that the most important military issue facing the United States was, "The USSR's emergence from strategic inequality, primarily through the buildup of an ICBM force, and through its development of its defense systems against nuclear attack."²⁷ Khrushchev's provocations over Berlin seemed to confirm fears that once the Soviet strategic forces were large enough, they would "press their advantage ruthlessly."²⁸ On the other hand, it was believed that the Soviet buildup was not necessarily a prelude to a surprise attack as had been the overriding fear in the late 1950s. "It seems quite clear," noted the NIE, "that in their present view both sides are deterred from the deliberate initiation of general war as a

27 "National Intelligence Estimate," Dec 1, 1960, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v05/d1>, Apr 15, 2016, 3

28 Ibid, 3

rational course of action.”²⁹

Despite this prediction of mutual deterrence from general war, the question of what to do about the stalemate—and what to do if deterrence should fail—continued to dog the Eisenhower Administration right up to the inauguration. In the final NIE of the Eisenhower presidency, the CIA reiterated that “Despite the general feeling that all-out nuclear war is unlikely, the problem posed by the accumulation of offensive weapons of mass destruction by the great powers will remain the major problem of the 1960s.”³⁰ Further complicating matters was the fact that there remained deep disagreement over just what the Soviet strategic force levels were at that time. While the U-2 and spy satellite programs had done much to (privately) dispel Administration concerns over a possible “Missile Gap,” there nevertheless existed a deep disagreement on the size of the Soviet ICBM force, especially between the Air Force estimates and those of the other services. Estimates on the last NIE ranged from a low of 200 to a high of 700 launchers by 1963.³¹ Importantly, however, the CIA noted that even the lower number of 200 would “pose a grave threat to the U.S.”³² With 200 ICBMs, the Soviets could theoretically detonate some 1,000 to 1,250 Megatons over the United States.³³

And despite the recommendations laid out in the Gaither Committee's report, U.S. defenses against surprise attack remained alarmingly absent. In the event of a Soviet First

29 Ibid, 3

30 “National Intelligence Estimate,” Jan 17, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d2>, Apr 15, 2016, 1

31 Ibid, 1

32 Ibid, 1

33 Ibid, 1

Strike, “the US could do little to prevent enormous damage.³⁴ Even if the U.S. attacked the Soviet strategic forces preemptively upon receipt of strategic warning, it was doubtful America would escape enormous damage unless all Soviet ICBM launchers could be precisely targeted, a prospect dismissed as doubtful by the CIA.³⁵ Prospects for an active defense against Soviet missile attack looked equally doubtful. Despite ongoing research into the Nike Zeus ABM system, intelligence predicted that such a system—which would not be available until the mid 1960s—would be largely useless against a large attack.³⁶

It is at this point in the January NIE that the report lays out a series of interesting questions seemingly directed towards the incoming Kennedy Administration. It predicates these questions on the belief that in the coming five years U.S. retaliatory forces will, through hardened missile silos, dispersed bomber bases and the introduction of the Polaris SLBMs, become “survivable enough.”³⁷ The ensuing stalemate would be more stable than the current situation, however it also noted that it “does not make general nuclear war impossible.”³⁸ Assuming the stalemate was able to endure, the question became “If the situation of mutual deterrence does persist, can nuclear war be prevented from occurring by accident? Can nuclear blackmail be countered? Even among the politically and militarily sophisticated, there is considerable puzzlement and disagreement about the deterrent effects of present and future capabilities, about the

34 Ibid, 1

35 Ibid, 1

36 Ibid, 1

37 Ibid, 2

38 Ibid, 2

probable behavior of states in critical situations, and about the most suitable and effective strategic doctrines and weapons systems to develop.”³⁹

Thus, the last Eisenhower NIE laid out a conundrum in which a rapid surge in technological progress on nuclear systems had thrust both the United States and the Soviet Union into uncharted territory, the implications of which had yet to be determined. The durability of the emerging stalemate was unknown, and the prospects for mitigating the level of catastrophe should deterrence fail was uncertain. While the incoming administration seemed to think that a combination of technological progress and strategic innovation would carry the day, the NIE took a gloomy view on the prospect of breaking the deadlock. It noted (quite presciently) that an effective ABM system, assuming it could even be developed, would be potentially destabilizing by shielding an attacker from retaliation.⁴⁰ It warned that the type of small conventional wars touted by “Limited War” advocates could easily enter an escalatory spiral ending in nuclear disaster.⁴¹ And even if the situation of mutual deterrence did endure, it did not rule out the possibility of *accidental* nuclear war. The tendency to increase alert levels for nuclear forces during international crises, whether to guard against surprise attack or in an attempt at intimidation, could easily be misinterpreted as indicating an imminent attack.⁴² The large numbers of bombers and ICBMs on constant alert combined with untested early warning systems and the omnipresent fear surprise attack raised the specter of war coming though

39 Ibid, 2

40 Ibid, 3

41 Ibid, 3

42 Ibid, 3

a technical error, an unauthorized launch or simple human fallibility.⁴³ The Cold War in the coming decade would, it predicted, “Necessarily be conducted in the shadow of this strategic situation and it will affect the decisions of statesmen everywhere.”⁴⁴

It was under this shadow that Robert S. McNamara assumed the helm at the Department of Defense on January 21, 1961. The Administration's first order of business was to begin working out elements of a “basic military policy,” a conceptual bedrock on which the nation's strategic doctrine would be constructed.⁴⁵ There were pressing concerns about the previous administration's emphasis on general war, the Air Force's desire for a First Strike capability, as well as the need to centralize command and control of nuclear weapons in the hands of the National Command Authority (NCA)—that is, the President and the Secretary of Defense.⁴⁶ “These three forces in combination,” noted National Security Advisor McGeorge Bundy, “have created a situation today in which a subordinate commander faced with substantial Russian military action could start the thermonuclear holocaust on his own initiative if he could not reach you [President Kennedy] by failure of communication at either end of the line.”⁴⁷

In light of this situation—described as “literally of life and death importance”—McNamara took it upon himself to review both the command for and doctrine for use of

43 Ibid, 4

44 Ibid, 5

45 “Memorandum from the President's Special Adviser for National Security Affairs (Bundy) to President Kennedy,” Jan 30, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d7>, Apr 15, 2016, 1

46 Ibid, 1

47 Ibid 1

the strategic nuclear forces.⁴⁸ Although familiar with the work of the analysts at RAND such as Kaufman, McNamara himself had little background with nuclear strategy, despite having served as planner in the USAAF's bombing campaign in World War II.⁴⁹ One of the key discoveries that would later shape his view of U.S. nuclear posture was that the infamous Missile Gap did not exist, or rather, it did exist but was lopsidedly in favor of the U.S. "After reviewing all the evidence," recalled McNamara, "we were convinced that the CIA's [lower] estimate was more correct than that of the Air Force."⁵⁰ Another key moment early upon assuming office was the determination that "the massive retaliation strategy, whether it had ever been applicable or not, was bankrupt by January 1961, because by that time the Soviets had a sufficient number of nuclear weapons deliverable upon the United States, following a strike by the U.S. on Soviet nuclear forces to inflict unacceptable damage on us."⁵⁰ Thus, even with the dramatically lowered estimates for Soviet ICBM forces, the USSR was still capable of a sufficiently devastating response to a U.S. attack to make such a prospect seem unreasonable in all but the most extreme of situations. However, despite this realization McNamara continued to hold out some hope that strategy in the nuclear age had not, in the words of Bernard Brodie, "hit a brick wall."⁵¹

The above conclusions were communicated to President Kennedy following McNamara's trip to SAC Headquarters with Gen. Lemnitzer, Chairman of the JCS. After

48 Ibid, 1

49 Robert McNamara, interviewed by Alfred Goldberg and Maurice Matloff, DoD, April 13, 1986, http://history.defense.gov/Portals/70/Documents/oral_history/OH_Trans_McNamaraRobert5-22-1986.pdf, Apr 15, 5

50 Ibid, 2

51 Ibid, 6-7

asking if there was any way to prevent Soviet retaliation in the event of a American First Strike, the President was informed that this was impossible, especially with the advent of a Soviet ICBM force which were harder to locate than bomber bases, and that SAC “couldn't possibly get all of them.”⁵² A devastating counterattack was unavoidable.

It was faced with these facts—that even a small Soviet ICBM force could devastate the U.S. urban population, and that it was highly unlikely the United States could prevent at least some sort of retaliation in the event of general war—that the administration began to grapple with the change from Massive Retaliation. McNamara acted quickly to address the survivability of the vulnerable bomber force, putting 1/3 of SAC bombers on 15-minute ground alert and evaluating the feasibility of putting up to a quarter airborne at any one time.⁵³

This was followed up by a list of recommendations sent directly to the President by McNamara on February 20. In it, McNamara listed three baseline objectives for the new administration's national security policy: First, deterring a deliberate attack on the United States with thermonuclear weapons, “by making it clear to potential enemies that, in all circumstances, such an attack would result in unacceptable losses to the attacker.”⁵⁴ He makes clear that this first objective depends not on matching some predetermined ratio of U.S. to Soviet forces, but rather the achievement and maintenance of a survivable

52 “Memorandum of Conference with President Kennedy,” Feb 6, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d11>, Apr 15, 2016, 1

53 “Memorandum for the Record,” Feb 6, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d12>, Apr 15, 2016, 1

54 “Letter from Secretary of Defense McNamara to President Kennedy,” Feb 20, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d17>, Apr 15, 2016, 2-3

Second Strike capability—that is, the capability for the strategic forces to survive a surprise attack and still inflict unacceptable losses on the Soviet Union.⁵⁵

The second basic goal was to ensure “Safety and Stability,” that is, guarding against the outbreak of nuclear war in “an irrational or unpremeditated fashion—possibly by the mistaken triggering of alert forces, by miscalculation by on side of the opponent's intentions, by irrational or pathological actions by individuals, by spread and escalation of local wars or by nuclear attack by a minor power.”⁵⁶ Achieving this objective would depend not only on avoiding the above dangerous scenarios, but by structuring command and decision-making such that one of the above incidents, taken in isolation, could not provoke a nuclear exchange.⁵⁷ “Decisions, not incidents cause war,” said McNamara and stability depended on avoiding a strategy that could only succeed by quick decisions made under immense pressure.⁵⁸

The third key policy was “Improved War Outcome”: “The conduct and outcome of a big nuclear war is worth caring about, more than any war in history,” he said, because there was a non-zero chance that deterrence could fail.⁵⁹ If that should happen, the aforementioned inability of the United States to prevent at least some Soviet retaliation—even with their relatively small ICBM force—meant that any nuclear exchange would be an unprecedented disaster. However, what becomes increasingly clear from McNamara's early approaches to strategic nuclear policy is that he believed

55 Ibid, 2

56 Ibid, 3

57 Ibid, 3

58 Ibid, 3

59 Ibid, 3

some disasters were far worse than others and that with a combination of technological and strategic innovation, perhaps some sort of damage prevention could be achieved. This fusion of technological and strategic sophistication resulted in a curious product: the concept of “Controlled Response.” “If nuclear war comes and is unlimited and uncontrolled, it would be suicidal,” wrote McNamara, “We must do what we can to prevent this disaster, to improve the war's outcome, to terminate it under favorable military conditions and to limit damage to our allies and ourselves.”⁶⁰ Thus, in early 1961, McNamara began to pursue a strategy in which retaliation, conducted in a “careful and discriminating way” against Soviet *military* targets might persuade the USSR to spare U.S. cities in a future exchange—although even this early he was forced to concede that the Soviets might not reciprocate.⁶¹

In order to achieve the three objectives listed above, the McNamara felt the United States would have to overcome a number of obstacles left in place by the previous administration's Massive Retaliation policy. Highly vulnerable command, control and communications (C3) links between the NCA and the strategic forces were especially worrying. “The destruction of about a dozen sites, most of which are soft, none of which is sufficiently hardened, would deprive U.S. forces of all high-level command and control.”⁶² Vulnerable C3 systems also undermined positive control over nuclear forces by the C3, increasing the likelihood of accidents and reducing the responsiveness of the

60 Ibid, 3

61 Ibid, 3

62 Ibid, 4

forces.⁶³

However, the biggest problem facing McNamara's goal of controlled nuclear response was the sheer inflexibility of the previous administrations actual plans for nuclear war. The first Single Integrated Operational Plan (SIOP) developed by the Eisenhower administration envisioned a single, massive attack against the entire Sino-Soviet bloc, regardless of whether China or the European Satellites were actually a party to the conflict between the United States and the Soviet Union. Approved by the JCS in early December of 1960, the first SIOP (SIOP-62) was extremely rigid in its approach, its only real flexibility in attack options involved how much warning time the United States had before executing the plan—this would determine how large of a strike force could be dispatched.⁶⁴ The options ranged from a strike using only the immediate SAC alert force—1,004 delivery systems with 1,685 weapons—all the way to a strategic warning option with several days preparation, which would result in a force of 2,224 delivery vehicles with 3,267 weapons.⁶⁵

In addition to this focus on a “capabilities based” plan as opposed to one focused on discrete objectives, SIOP-62 had another flaw that seriously hindered its flexibility: it depended on a large and vulnerable bomber force with inadequate C3 systems and a target list that depended on destroying an “Optimum Mix” of military and urban-

63 Ibid, 4

64 “The Joint Chiefs of Staff Single Integrated Operational Plan 1962 (SIOP-62),” Sept 13, 1961, National Security Archive, http://search.proquest.com/dnsa_nh/docview/1679163868/fulltextPDF/E12C84E4E7774F51PQ/24?accountid=11243, Apr 15, 2016, 18-11

65 Ibid, 16

industrial targets to “prevail”⁶⁶ This concept of “Optimum Mix” had resulted from a previous study by Gen. Thomas Hickey which concluded that a targeting policy focused either on purely countervalue or counterforce was inadequate, and that a combination of military and industrial targets would need to be hit in order to “prevail” against the Soviet Union.⁶⁷ The problem with this targeting doctrine was that it was based on viewing military and civilian targets as interdependent components of a unitary target system that could not be easily untangled. “Thus,” noted the JCS, “basically, the SIOP is designed for execution as a whole.”⁶⁸(Underscore in original)

Further complicating matters was the fact that SIOP-62 depended on the same slow, vulnerable and concentrated SAC bomber force that had drawn so much criticism. This meant that if the NCA wanted to withhold part of the target list from attack, it did so at the risk that those forces would be destroyed in the inevitable Soviet counter-attack. “It must be understood,” the JCS warned the President, “that any decision to execute only a portion of the entire plan would involve acceptance of certain grave risks.”⁶⁹ The key risk was the aforementioned vulnerability, such that “Withholding 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.”⁷⁰ It was evident then that even though the existing SIOP could *technically* be altered via the withholding certain targets, the JCS left little doubt that this could fatally weaken its chances for “success,”

66 Ibid, 17

67 “General Hickey's 'Optimum Mix' Study,” Jan 22, 1960, National Security Archive, http://search.proquest.com/dnsa_nh/docview/1679158926/fulltextPDF/E12C84E4E7774F51PQ/3?accountid=11243, Apr 15, 2016, 3

68 “SIOP-62,” 17

69 Ibid, 18

70 Ibid, 19

(the definition of which was more or less confined to hitting all designated targets). SIOP-62 was thus the very definition of an all-or-nothing plan for nuclear conflict in which could only work if all available forces were used all at once against every single designated ground zero (DGZ).

One last factor that made the plan undesirable from a controlled-response standpoint was its planning regarding damage and casualties to the DGZs. The Joint Strategic Target Planning Staff (JSTPS) at SAC HQ had used a very “conservative” estimate of weapons effects, focusing almost exclusively on overpressure-blast damage from the detonations while ignoring the effects of thermal pulse, prompt radiation and fallout.⁷¹ This resulted in estimated weapons effects wildly out of line with what had been seen at Hiroshima, leading to many more weapons being programmed for individual targets than might have otherwise been the case.⁷² This potential for “overkill” had been realized before the plan was even adopted, after review from Eisenhower's Science Advisor George Kistiakowsky.⁷³ This overkill, combined with the proximity of many military targets to urban-industrial areas and the need to use high-fallout groundbursts to attack hardened targets led the JCS to conclude that, “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

71 “Strategic Planning [Includes Extract from George Kistiakowsky Report and Related Memoranda],” Jan 27, 1961, National Security Archive, http://search.proquest.com/dnsa_nh/docview/1679163650/A4548D1F4A2F4345PQ/25?accountid=11243, Apr 15, 2016, 6

72 Ibid, 6

73 Ibid, 6

military targets.”⁷⁴(Underline in original)

Thus, upon assuming control at the Pentagon, McNamara was confronted with a plan for general nuclear war that was rigid, relied on using the entire strategic force in a single uncontrolled blow, and was so overwhelmingly destructive to the USSR's urban population that there was little doubt the Soviets would respond against U.S. cities if the plan were ever used. It was the antithesis of everything McNamara believed a nuclear strategy should be—neither controlled, deliberate or proportional and useless in all but the most extreme situations. Clearly, if a survivable, responsive force that could be used in a controlled and discriminate manner were to have any chance at becoming a reality, fundamental changes to both the technological and strategic underpinnings of U.S. nuclear doctrine would have to occur.

This would be not easy task. The defense establishment at the time was still paralyzed by the inter-service conflicts that pitted the Army and Navy against the Air Force over what constituted an adequate deterrent, especially whether the U.S. should acquire a First Strike capability (assuming this were even possible).⁷⁵ This disagreement constituted, “An issue so basic that it essentially controls almost every other military decision as well as many foreign policy questions.”⁷⁶ Part of the problem was that while it had never been national policy to get a First Strike capability, Massive Retaliation had

74 “SIOP-62,” 19

75 “Military Power, Arms Limitation and Foreign Policy,” Jan 26, 1961, National Security Archive, http://search.proquest.com/dnsa_nh/docview/1679158083/A4548D1F4A2F4345PQ/27?accountid=11243, Apr 15, 2016, 1

76 Ibid, 1

required SAC to build up a bomber force large enough to win a potential preemptive war.⁷⁷ The whole concept of Massive Retaliation, if it were to be credible, had hinged on the ability to attack the USSR so effectively that the U.S. and its allies would escape serious damage.⁷⁸ Now that the Soviet Union had gained a credible retaliatory force, the above scenario seemed highly unlikely, yet the Air Force remained steadfast in a strategic doctrine that was predicated upon massive Soviet inferiority.

This intransigence on the part of the Air Force was clearly demonstrated immediately before the new administration took office, when the USAF Commanders Conference met to assess the changes likely to occur under Kennedy and McNamara. They still clung to the concept of “winning” a general nuclear war in the traditional military sense.⁷⁹ “Through all of the studies, the war games, the analyses and reports, this theme rings out unequivocally: we must have a war winning strategy.”⁸⁰ (Underline in original) Importantly, the assembled officers made it clear that a force based solely on retaliation—e.g. one based around a secure Second Strike capability as opposed to First Strike—would be inadequate.⁸¹ This is the kind of thinking that McNamara and the new administration were up against in their fight to reform nuclear doctrine.

Faced with the wholly unacceptable SIOP-62 and a skeptical Air Force command, McNamara began by asking the Joint Chiefs in March of 1961 to study a doctrine of

77 Ibid, 2

78 Ibid, 3

79 “Presentation to the USAF Commanders Conference,” Jan 13, 1961, National Security Archive, http://search.proquest.com/dnsa_nh/pagepdf/1679163709/Record/A4548D1F4A2F4345PQ/36?account_id=11243, Apr 15, 2016, 4-5

80 Ibid, 10

81 Ibid, 13

controlled response and negotiating pauses in the event of nuclear war at the conceptual level.⁸² This resulted in what Gen. Lemnitzer euphemistically described as “a divergence of views on the matter,”—in other words the same deadlock that had pervaded the end of the Eisenhower administration.⁸³ One thing the JCS could agree on was that the U.S. didn't have the capability at that time to adopt a controlled response doctrine. “We also agree,” they said, “that attempts at the present time to implement such a doctrine, or to declare such an intent, would be premature and could gravely weaken our deterrent posture.”⁸⁴ Lack of effective defenses and sufficiently survivable retaliatory forces would make controlled retaliation impossible once a nuclear exchange began, and such a goal would furthermore be dependent on Soviet reciprocity, explained Lemnitzer.⁸⁵

However, Lemnitzer and others on the JCS did believe that moving towards such a posture in the future might be desirable, but the DoD needed to explore what technology would be required to achieve it.⁸⁶ The JCS thus ordered the Joint Strategy Survey Council to begin an investigation into controlled response and whether it would be feasible to implement such a posture later in the 1960s.⁸⁷ Until then, however, given the relative retaliatory capabilities of the U.S. and its allies, there could be no advantage for the U.S. to “respond under a degree of control beyond that provided in current policy,

82 “Memorandum From the Joint Chairman of the Joint Chiefs of Staff to Secretary of Defense McNamara,” April 18, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d25>, Apr 15, 2016, 1

83 Ibid, 1

84 Ibid, 1

85 Ibid, 1

86 Ibid, 1

87 Ibid, 1-2

doctrines and plans.”⁸⁸ It seems clear, then, that the problem being presented to McNamara was one of finding the technological means to make a more rationalized nuclear doctrine a reality.

The technology to enable a force capable of both Second Strike and controlled response was laid out by McNamara starting in early March of that 1961. Spending on the existing F/Y '61 program was modified to provide additional funding for improved nuclear C3 systems, the MIDAS missile early warning satellite program was accelerated and the phase out of vulnerable forward-deployed B-47 was moved forward.⁸⁹ The most significant change for the FY '61 program, however, was a massive increase in funding to accelerate production and deployment of the Minuteman ICBM and Polaris SLBM, totaling over \$727 million in additional funds.⁹⁰ Minuteman, deployed in hardened, dispersed silos and Polaris, deployed in nearly invulnerable submarines, were both key to building a credible Second Strike capability. Also of note was a recommendation to consider axing the B-70 Valkyrie strategic bomber, a favorite project of SAC, on the grounds that it was too vulnerable and costly. McNamara suggested that President Kennedy, “Consider cancellation of the entire program at this time in view of [the] doubtful need for an aircraft with [the] B-70's characteristics,” in light of expanding Soviet ICBM capabilities and the “high cost of the B-70 in relation to the limited Second

88 Ibid, 2

89 “Memorandum From Secretary of Defense McNamara and the Director of the Bureau of the Budget to President Kennedy,” March 10, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d20>, Apr 15, 2016, 2

90 Ibid, 2

Strike capabilities that would be provided by such a vulnerable ground-based system.”⁹¹

Clearly, a change away from a large force of vulnerable bombers to relatively invulnerable missile systems was in the offing.

These changes to the budget were in turn justified by the need, “for flexibility of all sorts,” especially in the area of better C3 systems to responding to a changing strategic environment.⁹² The administration also based its changes on the need to break out of the conceptual framework for nuclear war that continued to be advocated by the Air Force in general and SAC in particular. “There is a whole theological framework here of words like 'prevail' and 'general war' and so on which has led to a lot of war planning and even budgetary planing of a seriously distorted,” warned McGeorge Bundy. The President, in turn, laid out his basic vision of national security policy that eschewed the Air Force's vision of “prevailing” in a nuclear war in favor of first-and-foremost preventing “any general atomic aggression” towards the United States and its allies. Failing that, the U.S. should be prepared such that, “in the terrible event of a general atomic war, we retain the capability to act rationally to advance national interest by exerting pressure and offering choices to the enemy,”—in other words, the choice to avoid the widespread targeting of American cities.⁹³

Additionally, the administration also repudiated the kind of massive drive to

91 Ibid, 2

92 “Memorandum from the President's Special Assistant for National Security Affairs to the President's Special Counsel,” March 13, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d21>, Apr 15, 2016, 1

93 Ibid, 2

preemption embodied in SIOP-62, stating that the goal of American strategic “was not aiming to create forces whose objective is a preventative or preemptive war, or any of the kind of massive first strike against another nation. This is not the policy of the U.S. government.”⁹⁴ This constituted an unprecedented shift in the basic thinking regarding nuclear policy and was explained as such to President Kennedy, who was informed that in accepting McNamara's new concept “you will in-fact be rewriting basic military policy which came on...from the Eisenhower administration.”⁹⁵

With President Kennedy's endorsement of a new basic strategy, the Defense Department began the process of putting this desire for change into action. They informed the other involved departments within the executive branch that a major change was on the way, and that the administration would be moving away from the basic policies outlined in Eisenhower-era planning documents like NSC 5906/1, which put primary emphasis on preparation for general thermonuclear war.⁹⁶ In its place, the DoD began drafting a planning document entitled “Military and Related Aspects of Basic National Security Doctrine,” which would lay out the new policy goals and doctrine for the strategic nuclear forces.⁹⁷ The central thrust of the document would be moving away from “The present concept [which] is based on 'spasm war'” which the administration had come to view as a “ridiculous and unworkable notion.”⁹⁸ In its place would be a move

94 Ibid, 2

95 Ibid, 3

96 “Letter from the Deputy Secretary of Defense (Gilpatrick) to Secretary of State Dean Rusk,” April 15, 1961, <https://history.state.gov/historicaldocuments/frus1961-63v08/d24>, Apr 15, 2016, 1-2

97 “Memorandum of Conversation with Mr. Henry Rowen, Deputy Assistant Secretary of Defense for International Security Affairs,” May 25, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d28>, Apr 15, 2016, 1

98 Ibid, 1

towards controlled response with an emphasis on ensuring the President was never boxed-into choosing a single uncontrolled plan like SIOP-61: “Our general plan,” noted Deputy Assistant of Defense for International Security Affairs Henry Rowen, “should be flexible and include a large variety of controlled responses.”⁹⁹

This need for new thinking was further bolstered by the emerging intelligence picture of Soviet strategic forces in the Summer of 1961. Far from the worst-case-predictions of the Missile Gap era, the CIA was now reporting that the Soviets had not embarked on a crash production program for ICBMs and was currently sitting at only 2-4 launchers.¹⁰⁰ Furthermore, deployment of a second-generation ICBM to replace the slow, vulnerable and inaccurate SS-6 had not progressed as quickly as anticipated (partly due to the Nedelin disaster, unbeknown to the U.S.) and the Soviets were left without a secure Second Strike capability.¹⁰¹ More problematic, however, were Soviet statements regarding targeting. Khrushchev and other leaders had made statements to the effect that in the event of general war, American urban-industrial sites would be targeted in addition to strategic forces—similar to the U.S. “optimum mix” strategy that McNamara was trying to get away from.¹⁰² Also, it was anticipated that even a modest increase in the Soviet ICBM force could have serious repercussions.

With only 50 launchers they could have a high probability of success in

99 Ibid, 1

100 “National Security Estimate,” June 7, 1961, NARA, FRUS,

<https://history.state.gov/historicaldocuments/frus1961-63v08/d29>, Apr 15, 2016, 2-3

101 Ibid, 2

102 Ibid, 4

detonating thermonuclear weapons over the 25 principal metropolitan areas of the U.S.¹⁰³ With 100, they could inflict “severe damage” on most SAC bases.¹⁰⁴ With 200 in the 1961-62 period they could have a “moderate” chance of damaging all SAC bases as well as most soft and semi-hard ICBM launchers.¹⁰⁵ Finally, with 300-500—which the CIA thought to be the desired Soviet force level in the 1962-63 period—they could strike all SAC bases, all soft and semi-hard ICBM launchers and much of SACs supporting C3 infrastructure.¹⁰⁶ As Soviet ICBMs improved, they would be able to achieve each of these goals using fewer and fewer missiles.¹⁰⁷ However, at this point the ongoing inter-service rivalry still complicated producing a solid estimate of Soviet force levels and intentions.

The Army and Navy contended that the combination of the SS-6's inherent limitations and the lack of sightings of operational ICBM complexes indicated that the Soviets lacked *any* operational ICBMs prior to Jan 1, 1960 and were only now preparing to deploy a modest ICBM force.¹⁰⁸ The Air Force—which had always pushed for very high estimates of the Soviet missile force—believed that Soviet secrecy had allowed them to hid the scope of their ICBM program.¹⁰⁹ They were convinced that the Soviet ICBM program was driven by their “determination to achieve world domination,” which by necessity involved the “elimination of the US , as the chief obstacle to the

103 Ibid, 4

104 Ibid, 4

105 Ibid, 4

106 Ibid, 4

107 Ibid, 4

108 Ibid, 10

109 Ibid, 11-12

achievement of their objective.”¹¹⁰ Faced with these two extremes, McNamara would be forced to steer a middle-path between the services to achieve his objective of a more flexible, controllable force.

Faced with the unending squabbling between the military services, the administration attempted to forge ahead with its vision for a new nuclear doctrine at the conceptual level. The “Military and Related Aspects of Basic National Security Policy” document then being drafted would attempt an end-run around the deadlocked services by re framing nuclear policy at a fundamental level. Two changes were of paramount importance. First, the objective of U.S. strategic nuclear forces would change from the Air Force notion of “prevailing,” in a general war to “a spectrum of possible goals running from superiority to stalemate,” depending on circumstances.¹¹¹ This new goal would require rapid improvements in strategic command and control systems.¹¹² The second major change would be “the explicit introduction of second-strike counterforce (counter-military) capability as an objective to be achieved by our striking force,” although it was not clear exactly what force level would achieve this.¹¹³

By the fall of 1961 McNamara began to receive assistance in implementing the above goals due to a combination of changing attitudes in the military as well as changing circumstances in the international situation—especially the ongoing crisis over

110 Ibid, 11-12

111 “Letter from President's Deputy Special Assistant for National Security Affairs (Kaysen) to Deputy Assistant Secretary of Defense for International Security Affairs (Rowen),” June 16, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d30#fnref4>, Apr 15, 2016, 2

112 Ibid, 2

113 Ibid, 2

Berlin. General Maxwell Taylor, the President's special military representative (and later Chairman of the JCS) had come to the conclusion that the existing SIOP-62 might not be appropriate in the case of a conflict over Berlin, and worried that U.S. strategic forces could be “lured out of position by a false alarm or strategic faint by the Soviets.”¹¹⁴ Were such a false alarm to result in the launch and then recall of U.S. alert forces, it would “degrade our capabilities significantly,” owing to the lack of adequate C3 systems.¹¹⁵ Furthermore, due to the rigid nature of the SIOP, escalation over Berlin could cause a catastrophic move from local conflict to general war by the U.S.¹¹⁶ As a result, Taylor strongly suggested an alternative to SIOP-62 be developed—exactly in-line with McNamara's efforts at the Pentagon.¹¹⁷ Taylor also echoed McNamara's desire for a counterforce/city-avoidance posture by suggesting the U.S. announce in peacetime that they would only attack military targets, unless the Soviets attacked U.S. urban-industrial sites first.¹¹⁸ He felt this would offer the Soviets “a powerful incentive to use whatever residual forces they command in a sensible way.”¹¹⁹

Taylor vividly illustrated the consequences of what would happen if the Soviets did not retaliate in the “sensible way” hoped for in the new doctrine. He estimated that the execution of SIOP-62 would result in some 16 million U.S. casualties *at a*

114 “Memorandum from the President's Military Representative (Taylor) to President Kennedy,” Sept 19, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d43>, Apr 15, 2016, 1

115 Ibid, 1

116 Ibid, 1

117 Ibid, 2

118 Ibid, 2

119 Ibid, 2

minimum.¹²⁰ Furthermore, the current plan turned a Soviet countervalue attack into a self-fulfilling prophecy due to its dismissal of Soviet responses to U.S. targeting doctrine and its usage of the entire available force in the initial attack.¹²¹ The current SIOP, he concluded, was “a blunt instrument and its tactics make certain fulfillment of prophecy that [the] enemy will launch some weapons.”¹²²

At the same time, the strategic intelligence picture of the Soviet nuclear forces became much clearer. By late September the CIA was describing a “sharp downward revision of our estimate of present Soviet ICBM strength,” which was now theorized to be around 10-15 launchers.¹²³ This was, they reasoned, due to a conscious decision to focus on developing a more militarily-useful second-generation ICBM rather than divert limited resources to the unwieldy SS-6.¹²⁴ “While the present ICBM force poses a grave threat to a number of US urban areas, it represents only a limited threat to US based nuclear striking forces,” they concluded¹²⁵ This downward revision of Soviet ICBM capability constituted a strong refutation of the critics of McNamara's new strategic doctrine within the USAF, especially SACCINC Gen. Power. Up until the new NIE Power had continued to insist that the Soviets had a large and growing ICBM force, and that “the time of our greatest danger of a Soviet surprise attack is now and during the coming year.”¹²⁶

120 Ibid, 3

121 Ibid, 3

122 Ibid, 3

123 “National Intelligence Estimate,” September 21, 1961, NARA, FRUS,

<https://history.state.gov/historicaldocuments/frus1961-63v08/d45>, Apr 15, 2016, 1

124 Ibid, 1-2

125 Ibid, 1-2

126 “Memorandum of Conference with President Kennedy,” September 20, 1961, NARA, FRUS,

It is important to note that the drastic downgrading of Soviet ICBM capabilities was not accompanied by a lessening of the belligerent boasting on the part of Khrushchev and the Soviet leadership about their alleged superiority over the United States in ballistic missiles. Although Khrushchev himself would later admit that his claims about the SS-6 were wildly overinflated, his bluffing had succeeded in creating a sense of intense concern in the West that helped to obfuscate the USSR's fundamental inferiority versus the U.S. in strategic forces.¹²⁷ “Regardless of its range,” recounted Khrushchev, “it represented only a symbolic counterthreat to the United States.”¹²⁸ Adding to the seeming menace of this ruse was the renewal of Soviet nuclear testing in 1961, including the infamous Tsar Bomba on October 30, 1961. With a yield of at least 50 megatons (U.S. sources claim 57 Mt), Tsar Bomba represented the most powerful nuclear device ever detonated and although impractical as a military weapon, it had a clear purpose in the arena of propaganda. However, a week before the test, on October 21, the administration decided to finally call the Soviet's bluff.

In a speech delivered by Deputy Secretary of Defense Roswell Gilpatric, the U.S. stated unambiguously that, Soviet claims notwithstanding, the U.S. strategic forces were vastly superior to the Soviets *even after a hypothetical Soviet First Strike*.¹²⁹ This statement, which definitively accepted the CIA's lower figures over the Air Force,

<https://history.state.gov/historicaldocuments/frus1961-63v08/d44>, Apr 15, 2016, 1
127 Nikita Khrushchev, *Khrushchev Remembers: The Last Testament*, trans. Strobe Talbott (Boston, Brown, Little and Company, 1974), 47

128 Ibid, 48

129 Lawrence S. Kaplan, Ronald D. Landa and Edward J. Drea, *The McNamara Ascendancy 1961-1965* (Washington, D.C., Department of Defense, 2006), 302

constituted “what amounted to the official interment of 'the gap.’”¹³⁰ However, it is important to note that even with the new estimates of a much smaller Soviet force, McNamara did not give up his drive to create a very large, protected Second Strike force consisting of Minuteman and Polaris. The explanation for this persistence can perhaps be best explained not as a continued drive for the kind of “superiority” envisioned by SAC First Strike advocates, but rather the belief that while the small Soviet ICBM force was a “*temporary phenomenon.*”(emphasis added)¹³¹ According to the official DoD history, “The secretary appeared to have seriously taken the message of the CIA reports, particularly in late 1960, that considered the relatively low Soviet production schedule a temporary phenomenon, to last only until a new generation of more powerful missiles came on line.”¹³² Finally, there was concern that even the very modest Soviet ICBM force had made them significantly bolder on areas like Berlin.¹³³

The revised intelligence situation provided the administration with some breathing room to develop a new alternative to SIOP-62, helping to de-legitimize some of the more alarmist predictions coming out of SAC. The next step was McNamara's submission of a comprehensive force acquisition budget for Fiscal Year '63. In this document, he made provisions to drastically expand U.S. Second Strike systems. This included 100 Minuteman deployed in hardened silos and 6 Polaris SLBM submarines, along with provisions for 92 Skybolt ALBMS (eventually canceled amidst considerable controversy) and an additional 100 KC-135 tankers, all at a cost of \$3.1 billion.¹³⁴ The

130 Ibid, 302

131 Ibid, 302

132 Ibid, 302

133 Ibid, 302

134 “Draft Memorandum From Secretary of Defense McNamara to President Kennedy,” Sept 23, 1961,

draft budget also recommended phasing out all B-47s by 1966, and drawing down the total number of bombers—which were less survivable than Minuteman and Polaris—from 1,720 in 1961 to 710 by 1966, most of which would be the more survivable CONUS-based B-52.¹³⁵

In justifying these force recommendations, McNamara explained the overall goal of U.S. strategic forces in a nuclear war was to attack Soviet long-range nuclear delivery systems in order to limit damage to the U.S. and its allies—a combination of both the Second Strike and counterforce concepts.¹³⁶ The second goal of the new force would be to survive Soviet retaliation after the initial exchange and remain capable of “destroying Soviet urban society, if necessary, in a controlled and deliberate way,”—ostensibly to compel Soviet cooperation in terminating the conflict.¹³⁷ The resulting force would theoretically be secure against an attempted disarming First Strike while providing a controlled countervalue capability which he said “should provide us a capability to achieve a substantial military superiority over the Soviets even after they have attacked us.”¹³⁸ As mentioned previously, McNamara sought to steer a middle course between a purely countervalue force and one dedicated to a disarming First Strike. The above force and doctrine appears to fit neatly with this objective, and in doing so blended elements of both counterforce and countervalue in a manner which sought to limit the catastrophic consequences of deterrence failing.

NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d46>, Apr 15, 2016, 1-2
135 Ibid, 2
136 Ibid, 4
137 Ibid, 4
138 Ibid, 4

He also justified the new posture by taking into account possible Soviet reactions to a U.S. build-up of strategic forces. In the case of First Strike—which he dismissed as impossible to achieve due to lack of U.S. defenses against Soviet missiles—he anticipated such a posture would precipitate an intensified arms race, as the USSR would be unwilling to accept a scenario in which they could be disarmed at-will by the U.S.¹³⁹ Furthermore, he felt that a purely First Strike/counterforce based posture neglected the important capability to threaten Soviet urban-industrial targets. “The capability to destroy urban-industrial targets,” he explained, “is our power to deter attacks on our own cities.”¹⁴⁰ Thus, we can see a concrete shift away from the Massive Retaliation-era concept of destroying cities and industry as a way of crippling Soviet war production in a protracted conflict, and towards using the threat of countervalue strikes as a way to induce intra-war deterrence. The resulting plan for “controlled destruction” of Soviet urban targets provided for striking the 120 largest Soviet cities down to a population of 90,000 which also constituted 80% of Soviet industrial floorspace and killing some 50 million people out of a population of 210 million.¹⁴¹ McNamara also made the point that in planning force levels, the U.S. needed to focus less on the total ratio of missiles and more on how U.S. missiles were based and used.¹⁴² However, he did concede that there were some areas where Soviet superiority could harm U.S. security. These included reducing the survivability of protected U.S. missiles, worsening the overall outcome of

139 Ibid, 4

140 Ibid, 5

141 Ibid, 6

142 Ibid, 8

general war and making the Soviets generally more aggressive in the overall Cold War.¹⁴³ For those reasons, he stated that when it came to force planning he had “no intention of letting ourselves be seriously out-numbered by in ICBMs by the Soviet Union.”¹⁴⁴

Despite the above changes to force-level planning and strategy, McNamara remained dissatisfied in a number of areas regarding U.S. vulnerability. He felt the threat of fallout in the event of a Soviet attack had not been adequately addressed, noting that even if the USSR responded positively to his counterforce/city-avoidance strategy and only attacked SAC bases, fallout would “probably result in the deaths of 50 to 100 million Americans.”¹⁴⁵ Another problem was the continued short-term reliance on bombers for the majority of U.S. retaliatory forces. Despite Air Force pressure for continued expenditures on the B-70 and a much larger B-52 force, McNamara was of the opinion that the future force must concentrate on more survivable ballistic missiles.¹⁴⁶ This transition to survivable missiles would also help ameliorate another problem area he was worried about: the “use it or lose it” effect of having depending on slow and vulnerable bombers, which in-turn drove decision makers to act as quickly as possible in a crisis.¹⁴⁷ Another advantage of a shift to missiles was that they were an order of magnitude faster than bombers and did not rely on the need to be used en-masse, making them a more discriminating weapon.¹⁴⁸ For these reasons, McNamara officially came out

143 Ibid, 8

144 Ibid, 8

145 “Draft Memorandum From Secretary of Defense McNamara to President Kennedy,” October 6, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d50>, Apr 15, 2016, 5

146 “Memorandum From Secretary of Defense McNamara to President Kennedy,” October 7, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d51>, Apr 15, 2016, 1

147 Ibid, 1

148 Ibid, 2

against moving forward with production of the B-70, much to the dismay of SAC.¹⁴⁹

By late 1961 the JCS were also coming around to the need for an alternative to SIOP-62 and began laying out guidelines for a new plan in-line with McNamara's new doctrine of survivability and controlled response. They announced the objectives of the new plan would be to destroy Soviet military capabilities “while retaining ready, effective and controlled U.S. strategic capabilities” to retain military superiority during general war.¹⁵⁰ Echoing McNamara's thinking, they talked of the need to minimize damage to the U.S. and its allies “to a level consistent with national survival and independence.”¹⁵¹ Also significant, especially compared to the “all or nothing” character of the previous SIOP was the stated goal that the new plan should allow “selective withholding of all attacks.”¹⁵² Finally, the resulting plan should clearly prioritize minimizing civilian collateral damage to “friendly, neutral and Satellite areas (ie all countries except the USSR...to the extent that military necessity permits,” and should include provisions for minimizing the number of high-fallout surface bursts.¹⁵³ This was a far-cry from the previous plans goal of attacking the entire Sino-Soviet Bloc en masse.

As 1961 drew to a close, however, there were ominous signs that despite the administration's highly visible shift towards an attempted city-avoidance doctrine, the Soviets were not reciprocating. The CIA noted that there had not been a comparable

149 Ibid, 2

150 “Paper Issued by the Joint Chiefs of Staff,” Late 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d52>, Apr 15, 2016, 1

151 Ibid, 2

152 Ibid, 2

153 Ibid, 4

“high-level discourse” by the Soviets over “alternative attack strategies and target systems which are at the center of U.S. military attention.”¹⁵⁴ While policy-makers in the U.S. debated over issues like First Strike versus Second Strike, counterforce versus countervalue, the Soviet discourse seemed to be “remarkably deficient in sophisticated analysis of such concepts.”¹⁵⁵ Most worrying from the U.S. standpoint was that while Soviet strategy appeared to target American nuclear forces, “they generally give equal importance to strikes against urban centers and their enemy's broad war-making potential.”¹⁵⁶ In other words, the Soviets were subscribing to exactly the kind of “Optimum Mix” targeting doctrine that McNamara et al were trying to get away from.

Another problem arose in the form of intra-administration disagreement over the proper force-levels to facilitate the new strategy. Although McNamara and his allies won out in the end, some on the National Security Council staff thought the rapid build-up envisioned under controlled response—especially of the ballistic missile forces—could interact dangerously with Soviet strategic planning.¹⁵⁷ Some staffers worried that although McNamara was not trying to seek a First Strike capability, the rapid rise in missile forces would convince the Soviets that the U.S. was attempting to do just that, thus provoking a strategic build-up of their own.¹⁵⁸ Some on the NSC argued that McNamara had overshot the optimum force levels by relying on the old NIEs that had yet

154 “Special National Intelligence Estimate,” Nov 21, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d56>, Apr 15, 2016, 2

155 Ibid, 2

156 Ibid, 2

157 “Memorandum From the President's Deputy Special Assistant for National Security (Kaysen) to President Kennedy,” November 22, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d57>, Apr 15, 2016, 1

158 Ibid, 2

to reflect the downgrading of Soviet ICBM forces levels.¹⁵⁹ They also claimed that casualty estimates for counterforce strikes against the Soviets failed to adequately account for the effects of fallout.¹⁶⁰

Despite these calls for restraint and evidence the Soviets were not going to play along with McNamara's strategy, the administration forged ahead with counterforce/controlled response. This was made abundantly clear to U.S. allies the next spring when McNamara gave his famous address to NATO ministers in Athens on May 5, 1962. In it, he emphasized that change was the order of the day, stating that “Nuclear technology has revolutionized warfare over the past seventeen years. The unprecedented destructiveness of these arms had radically changed ways of thinking about conflict among nations.”¹⁶¹ As a result of these changes, he told the assembled allies that America's primary objective in the event of nuclear war would be “the destruction of the enemy's military forces while attempting to preserve the fabric as well as the integrity of Allied society.”¹⁶² He justified this change from Massive Retaliation on the grounds that both countervalue and Optimum Mix targeting were inadequate from a military standpoint and that destroying the enemy's strategic forces while preserving Allied society was not impossible.¹⁶³

To emphasize the advantage of the new strategy, he stressed the concrete

159 Ibid, 2

160 Ibid, 2

161 “Address by Secretary of Defense McNamara at the Ministerial Meeting of the North Atlantic Council,” May 5, 1962, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d82>, Apr 15, 2016, 1

162 Ibid, 1

163 Ibid, 1

differences in outcome of a nuclear war depending on which targeting doctrine was used. American studies had shown that in 1966, if the Soviets launched a pure-counterforce strike against the U.S. and NATO, there would be 25 million U.S. deaths, and slightly fewer in continental Europe. However, were the Soviets to target Allied urban-industrial targets, the U.S. would suffer some 75 million dead, with 115 million dead in Europe.¹⁶⁴ “While both figures make for grim reading,” he noted, “the first set is preferable to the second.”¹⁶⁵

Far from hiding the lack of Soviet reciprocity in the area of targeting, however, McNamara was quite up-front about it, saying it remained “uncertain” if the Soviets would play along with the above strategy.¹⁶⁶ His position was that by building up U.S. and Allied strength, they would at least give the Soviets a strong incentive to do so.¹⁶⁷ In order to do this, he announced the United States would spend over \$15 billion dollars on strategic nuclear forces in FY '62, in order to maintain superiority over the Eastern Bloc.¹⁶⁸ Doing so, he reasoned, would allow NATO to resist Sino-Soviet aggression with confidence, while making the Eastern Bloc reluctant to escalate local conflicts.¹⁶⁹ However, he ended his address to the Allies on an ominous note, making plain that U.S. superiority notwithstanding, the Alliance “would suffer deeply in the event of a major nuclear war.”¹⁷⁰ New technology and a more sophisticated strategy, it seemed, could not avert a disaster, it could only lessen its impact.

164 Ibid, 1

165 Ibid, 1

166 Ibid, 1

167 Ibid, 1

168 Ibid, 2

169 Ibid, 2

170 Ibid, 2

The Athens Speech sowed consternation among the European Allies, who viewed the move away from Massive Retaliation as a lessening of American commitment to defending Europe (This is covered at length by both Ball and Enthoven, but is less germane to our analysis of evolving strategy *within* the United States). At home, however, the changes initiated by Kennedy and McNamara were pushing ahead. Planning continued to focus on building up a survivable Second Strike forces, with plans for hardened and dispersed ballistic missile deployment extending into the late 1960s.¹⁷¹ The hope was to essentially make the force immune to the type of technological upsets that had characterized the last 17 years, to ensure that the Soviets wouldn't be able to reduce U.S. retaliatory power, "despite any technological breakthroughs."¹⁷² It was anticipated that such a force would help to increase crisis stability by taking the pressure off the U.S. to strike first in order to avoid its forces being destroyed.¹⁷³ An invulnerable Second Strike force would also reduce the chances of accidental war, by removing the need to take provocative alert measures to save U.S. forces, and would reduce the need to "launch on warning" in response to "ambiguous evidence of impending attack."¹⁷⁴ Thus, a strong theme of strategic stability began to enter the conversation, in addition to flexibility and damage reduction.

This new emphasis on stability was also evident in planning for a new U.S.

171 "Draft Paper Prepared by the Policy Planning Council," June 22, 1962, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d93>, Apr 15, 2016, 3

172 Ibid, 1

173 Ibid, 4

174 Ibid, 4

declaratory policy on the use of nuclear forces directed at the Eastern Bloc. The U.S. was now prepared to assure the Soviet Union that they would not strike first if Soviet forces refrained from violating the frontiers of the Free World, and that the U.S. was “not so prone to mount an initial strike in the event of grave crises or limited conflict.”¹⁷⁵ The point of these assurances was to reduce Soviet fears of preemption in the event of a crisis and prevent a World War I-style rush to preemption that would prematurely shut down diplomatic options.¹⁷⁶ Thus, by planning for a more flexible and survivable nuclear force, the U.S. was able to increase the prospects for crisis stability and give both sides a chance to make decisions in a deliberate and rational manner—at least theoretically.

This year long shift away from Massive Retaliation culminated in the preparation of the new SIOP-63 and the approval of the “Military and Related Aspects of Basic National Security Policy,” documents in the middle of 1962. Looking back on the new SIOP, SAC described how “The guidance eventually received for SIOP-63, with its 'tasks' and 'options,' represented the administration's attempts to put its philosophy into practice.”¹⁷⁷ The guidance provided by McNamara was described as “markedly changed from instructions for SIOP-62,” reflecting “Fundamental changes in nuclear targeting policy...gestating within the Defense Department in 1961 which would eventually be reflected in the guidance for SIOP-63.”¹⁷⁸

175 Ibid, 5

176 Ibid, 5

177 “History of the Joint Strategic Target Planning Staff: Preparation of SIOP-63,” January 1964, National Security Archive, <http://search.proquest.com/dnsa/docview/1679157932/F5264AF89B345C9PQ/54?accountid=11243>, Apr 15, 2016.

178 Ibid, 10

In “Military and Related Aspects,” which was the culminating document for the year's-worth of strategic and technological change at the DoD, McNamara made stressed that “The basic national security policy of the United States has undergone and will continue to undergo constant evolution. Technological, political, economic, social and military changes are the order of the day; the instruments and policies of the United States must adapt to, and influence, the impact of these changes.”¹⁷⁹ In a 180-degree turn from Massive Retaliation, it clearly defined global nuclear war as “The greatest threat to the independence and integrity of the United States.”¹⁸⁰

However, at the same time the new national security policy being outlined made it clear that the possibility of such a war could not be ruled out, and that the U.S. had to plan for contingencies the premise that not all outcomes from central nuclear war were equal, and some were considerably worse than others.¹⁸¹ With this in mind, the administration stipulated that a large Second Strike force must survive any surprise attack in order to limit damage using counterforce strikes against the enemy.¹⁸² The same force also would try to achieve intra-war deterrence by making continued or unrestricted attacks on the U.S. unattractive to a potential enemy.¹⁸³ In light of the above realities, U.S. strategic forces should be survivable under prolonged attack, under enduring

179 “Military and Related Aspects of Basic National Security Policy,” June 1, 1962, National Security Archive,
http://search.proquest.com/dnsa_nh/docview/1679163377/91ADAC035E7A4FA3PQ/17?accountid=11243, Apr 15, 2016, 2

180 Ibid, 6

181 Ibid, 12

182 Ibid, 14

183 Ibid, 14

positive control by the NCA and remain capable of selective commitment, of being re-targetable and of launching both counterforce and countervalue strikes.¹⁸⁴ Central to this capability was the need for highly-survivable and robust C3 systems: “The protected command, communications and information systems should permit coordinated, informed and selective overall direction of U.S. forces by the highest surviving, authorized civilian and military leaders,” according to the new doctrine.¹⁸⁵ Furthermore, it stipulated that to the extent possible, command and control should continue to rest with the “highest constituted political authorities at all times.”¹⁸⁶ This was a clear repudiation of the Eisenhower-era practice of pre-delegation of nuclear authority to military leaders in wartime. Finally, it noted that the changes necessary to achieve the above characteristics were “principally qualitative characteristics of force capabilities rather than major increases in force size.”¹⁸⁷ It is interesting to note that while this statement is partially true—there was indeed a need for a qualitative improvement in areas like C3 systems and survivable basing modes—it seemed to overlook that fact that the new doctrine and its attendant force levels constituted a massive increase in U.S. missile numbers. On the other hand, this numerical increase could be seen as a technique for increasing force survivability in the face of attrition, that is, it was more difficult for an enemy to destroy the U.S. Second Strike capability because it was simply much larger. As the Soviets used to say, “Quantity has a quality of its own.”

184 Ibid, 19

185 Ibid, 24

186 Ibid, 24

187 Ibid, 27

Part 4: Final Analysis

The sweeping changes enacted during Robert McNamara's first year at the Pentagon fundamentally changed the character of American nuclear policy and strategy. What had started with SIOP-62—a rigid, poorly controlled, “all or nothing” policy of Massive Retaliation—had by the fall of 1962 morphed into a considerably more complex, flexible and survivable strategy embodied in SIOP-63 and the planning outlined the “Military and Related Aspects” document. The strategic forces that would support this plan were, by late 1962, in the process of transitioning from a large force of slow, vulnerable bombers to the modern Triad of ICBMs, SLBMs and bombers that endures to this day. The systems of command, control and communications that had in early 1961 been useful only for initiating an attack were, a year-and-a-half later, well on their way towards providing enduring lawful civilian control that was intended to endure through the entirety of a nuclear conflict. In short, American nuclear policy, strategy and forces started to look a lot like they do in their present state.

This change over the first year was not, obviously, the end of the matter. Although the subsequent events and changes to U.S. strategic nuclear policy in the 1960s lie outside the scope of this inquiry, suffice it to say that the process of rapid strategic

evolution started by McNamara and the new administration continued, changing and reacting to external events and crises. The Cuban Missile Crisis, occurring shortly after the approval of SIOP-63 did much to dampen McNamara's belief in the feasibility of city-avoidance and damage limitation—though as mentioned earlier he had admitted that these goals were only possible with the tacit cooperation of Soviet military planners and that they might not reciprocate. The lack of evolution in the area of Soviet strategic nuclear doctrine, combined with the U.S. response to the Missile Crisis—Kennedy's threats of a “Full retaliatory response” against the Soviet Union and the dispersal of SAC bombers to airfields near urban areas—would later see a shift away from counterforce to a focus on securing stability via Second Strike—aka “Assured Destruction”. The achievement of a comparable Soviet capability later in the 1960s would usher in perhaps McNamara's most famous—and controversial—strategic concept, the idea of strategic stability through Mutually Assured Destruction (MAD). Despite the best efforts of subsequent administrations to escape the paradigm of MAD—whether through the “Schlesinger Doctrine,” or “Countervailing Force” or the Strategic Defense Initiative—the restraint imposed by two secure retaliatory forces endured through the rest of the Cold War and beyond.

Indeed, many of the fundamental changes enacted during McNamara's first year continue to endure to the present day. The necessity of a relatively invulnerable Second Strike capability, the requirement for enduring civilian command and control throughout a nuclear conflict, and the need for flexibility and options in the event deterrence failed—rather than recourse to a single all-out “spasm attack”—all continue to be a part of

American nuclear doctrine today. Many of the weapons systems programmed under McNamara also continue to serve to this day in much the same capacity as in 1962. The longevity of the strategic innovations of McNamara and the Kennedy administration thus stands as a testament to their fundamental soundness, or perhaps more modestly, a testament to the inability of subsequent administrations to come up with a superior alternative.

BIBLIOGRAPHY

SECONDARY:

1. Ball, Desmond. *Politics and Force Levels: The Strategic Missile Program of the Kennedy Administration*. Berkley: University of California Press, 1980.
2. Enthoven, Alain and K. Wayne Smith. *How Much is Enough? Shaping the Defense Program 1961-1969*. Santa Monica: RAND Corporation, 1971.
3. Freedman, Lawrence. *The Evolution of Nuclear Strategy*. New York: St. Martin's Press, 1983.
4. Kaplan, Lawrence, Ronald D. Landa and Edward J. Drea. *The McNamara Ascendancy 1961-1965*. Washington, D.C., Department of Defense, 2006
5. Kaplan, Fred. *Wizards of Armageddon* (New York: Simon and Schuster, 1983
6. Martel, William C. and Paul L. Savage. *Strategic Nuclear War: What the Superpowers Target and Why*. Westport: Greenwood Press, 1986.
7. Payne, Keith B. *Nuclear Deterrence in U.S.-Soviet Relations*. Boulder: Westview Press, 1982.
8. Power, Thomas. *Design for Survival*. New York: Coward-McCann, 1964.
9. Rohrty, James M. *Decisions of Robert S. McNamara: A Study of the Role of the Secretary of Defense*. Coral Gables: University of Miami Press, 1970.
10. Taylor, Maxwell. *The Uncertain Trumpet*. New York: Harper & Brothers, 1960.
11. Watson, Robert J. *History of the Office of the Secretary of Defense: Into the Missile Age, 1956-1960*. Washington, D.C.: U.S. Department of Defense, 1997

Primary:

1. "Address by Secretary of Defense McNamara at the Ministerial Meeting of the North Atlantic Council," May 5, 1962, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d82>, Apr 15, 2016.
2. "Counterforce Strategy [Includes Attachment 'Proposed Amplification of Air Force Statements on Counterforce Strategy,'" January 19, 1961, National Security Archive, http://search.proquest.com/dnsa_nh/docview/1679163185/A4548D1F4A2F4345PQ/29?accountid=11243, Apr 15, 2016.
3. "Draft Memorandum From Secretary of Defense McNamara to President Kennedy," Sept 23, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d46>, Apr 15, 2016.
4. "Draft Memorandum From Secretary of Defense McNamara to President Kennedy," October 6, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d50>, Apr 15, 2016.
5. "Draft Paper Prepared by the Policy Planning Council," June 22, 1962, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d93>, Apr 15, 2016.
6. "General Hickey's 'Optimum Mix' Study," Jan 22, 1960, National Security Archive, http://search.proquest.com/dnsa_nh/docview/1679158926/fulltextPDF/E12C84E4E7774F51PQ/3?accountid=11243, Apr 15, 2016.
7. "History of the Joint Strategic Target Planning Staff: Preparation of SIOP-62," c. 1963, National Security Archive, http://search.proquest.com/dnsa_nh/docview/1679163239/5A9424A520F244B4PQ/45?accountid=11243, Apr 15, 2016.
8. "History of the Joint Strategic Target Planning Staff: Preparation of SIOP-63," January 1964, National Security Archive, <http://search.proquest.com/dnsa/docview/1679157932/F5264AF89B345C9PQ/54?accountid=11243>, Apr 15.
9. "Letter from the Deputy Secretary of Defense (Gilpatric) to Secretary of State Dean Rusk," April 15, 1961, <https://history.state.gov/historicaldocuments/frus1961-63v08/d24>, Apr 15, 2016.
10. "Letter from President's Deputy Special Assistant for National Security Affairs (Kaysen) to Deputy Assistant Secretary of Defense for International Security Affairs (Rowen)," June 16, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d30#fnref4>, Apr 15,

- 2016.
11. "Letter from Secretary of Defense McNamara to President Kennedy," Feb 20, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d17>, Apr 15, 2016.
 12. "List of Possible Modifications to the Strategic Weapons Program," February 10, 1961, National Security Archive, http://search.proquest.com/dnsa_nh/docview/1679163750/A4548D1F4A2F4345PQ/12?accountid=11243, Apr 15, 2016.
 13. "Memorandum for the Record," Feb 6, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d12>, Apr 15, 2016.
 14. "Memorandum from the Joint Chairman of the Joint Chiefs of Staff to Secretary of Defense McNamara," April 18, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d25>, Apr 15, 2016.
 15. "Memorandum from the Joint Chiefs of Staff to President Kennedy," October 5, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d49>, Apr 15, 2016.
 16. "Memorandum from the President's Deputy Special Assistant for National Security (Kaysen) to President Kennedy," November 22, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d57>, Apr 15, 2016.
 17. "Memorandum from the President's Military Representative (Taylor) to President Kennedy," Sept 19, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d43>, Apr 15, 2016.
 18. "Memorandum from the President's Special Adviser for National Security Affairs (Bundy) to President Kennedy," Jan 30, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d7>, Apr 15, 2016.
 19. "Memorandum from the President's Special Assistant for National Security Affairs to the President's Special Counsel," March 13, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d21>, Apr 15, 2016
 20. "Memorandum from Secretary of Defense McNamara and the Director of the Bureau of the Budget to President Kennedy," March 10, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d20>, Apr 15, 2016.
 21. "Memorandum from Secretary of Defense McNamara to President Kennedy," October 7, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d51>, Apr 15, 2016.

22. "Memorandum of Conference with President Kennedy," Feb 6, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d11>, Apr 15, 2016.
23. "Memorandum of Conference with President Kennedy," September 20, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d44>, Apr 15, 2016
24. "Memorandum of Conversation with Mr. Henry Rowen, Deputy Assistant Secretary of Defense for International Security Affairs," May 25, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d28>, Apr 15, 2016.
25. "Memorandum of Discussions February 24 and 27," March 1, 1961, National Security Archive, <http://proxygw.wrlc.org/login?url=http://search.proquest.com/docview/1679150403?accountid=11243>, Apr 15, 2016.
26. "Military and Related Aspects of Basic National Security Policy," June 1, 1962, National Security Archive, http://search.proquest.com/dnsa_nh/docview/1679163377/91ADAC035E7A4FA3PQ/17?accountid=11243, Apr 15, 2016.
27. "Military Power, Arms Limitation and Foreign Policy," Jan 26, 1961, National Security Archive, http://search.proquest.com/dnsa_nh/docview/1679158083/A4548D1F4A2F4345PQ/27?accountid=11243, Apr 15, 2016.
28. "National Intelligence Estimate," Dec 1, 1960, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v05/d1>, Apr 15, 2016.
29. "National Intelligence Estimate," Jan 17, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d2>, Apr 15, 2016.
30. "National Security Estimate," June 7, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d29>, Apr 15, 2016.
31. "National Intelligence Estimate," September 21, 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d45>, Apr 15, 2016.
32. "Paper Issued by the Joint Chiefs of Staff," Late 1961, NARA, FRUS, <https://history.state.gov/historicaldocuments/frus1961-63v08/d52>, Apr 15, 2016.
33. "Presentation to the USAF Commanders Conference," Jan 13, 1961, National

- Security Archive,
http://search.proquest.com/dnsa_nh/pagepdf/1679163709/Record/A4548D1F4A2F4345PQ/36?accountid=11243, Apr 15, 2016.
34. “Proposal to Incorporate Reconnaissance into Single Integrated Operational Plan,” February 8, 1961, National Security Archive,
http://search.proquest.com/dnsa_nh/docview/1679157817/A4548D1F4A2F4345PQ/13?accountid=11243, Apr 15, 2016
35. Robert McNamara, interviewed by Alfred Goldberg and Maurice Matloff, DoD, April 13, 1986,
http://history.defense.gov/Portals/70/Documents/oral_history/OH_Trans_McNamara_Robert5-22-1986.pdf, Apr 15, 2016.
36. “SAC Atomic Weapons Requirements Study for 1959,” June 15, 1956, National Security Archive, <http://nsarchive.gwu.edu/nukevault/ebb538-Cold-War-Nuclear-Target-List-Declassified-First-Ever/documents/section3.pdf>, Apr 15, 2016
37. “Special National Intelligence Estimate,” Nov 21, 1961, NARA, FRUS,
<https://history.state.gov/historicaldocuments/frus1961-63v08/d56>, Apr 15, 2016.
38. “Strategic Planning [Includes Extract from George Kistiakowsky Report and Related Memoranda],” Jan 27, 1961, National Security Archive,
http://search.proquest.com/dnsa_nh/docview/1679163650/A4548D1F4A2F4345PQ/25?accountid=11243, Apr 15, 2016.
39. “Task Force Reports,” February 10, 1961, National Security Archive,
http://search.proquest.com/dnsa_nh/docview/1679164007/fulltextPDF/A4548D1F4A2F4345PQ/11?accountid=11243, Apr 15, 2016.
40. “The FY 1962 Budget—Issues Relating to the US Military Program,” January 30, 1961, National Security Archive,
http://search.proquest.com/dnsa_nh/docview/1679163300/fulltextPDF/A4548D1F4A2F4345PQ/24?accountid=11243, Apr 15, 2016.
41. “Thomas White Calls for Re-Appraisal of Military Strategy,” February 1, 1961, National Security Archive,
http://search.proquest.com/dnsa_nh/docview/1679163359/fulltextPDF/A4548D1F4A2F4345PQ/20?accountid=11243, Apr 15, 2016
42. “The Joint Chiefs of Staff Single Integrated Operational Plan 1962 (SIOP-62),” Sept 13, 1961, National Security Archive,
http://search.proquest.com/dnsa_nh/docview/1679163868/fulltextPDF/E12C84E4E7774F51PQ/24?accountid=11243, Apr 15, 2016.