

Butler University Digital Commons @ Butler University

Undergraduate Honors Thesis Collection

Undergraduate Scholarship

2017

Our Nuclear Quandary: Deliberating U.S. Nuclear Armament & its Alternatives for Execution 1946-1961

Andrew Ross Butler University

Follow this and additional works at: https://digitalcommons.butler.edu/ugtheses



Part of the Policy History, Theory, and Methods Commons, and the United States History Commons

Recommended Citation

Ross, Andrew, "Our Nuclear Quandary: Deliberating U.S. Nuclear Armament & its Alternatives for Execution 1946-1961" (2017). Undergraduate Honors Thesis Collection. 373. https://digitalcommons.butler.edu/ugtheses/373

This Thesis is brought to you for free and open access by the Undergraduate Scholarship at Digital Commons @ Butler University. It has been accepted for inclusion in Undergraduate Honors Thesis Collection by an authorized administrator of Digital Commons @ Butler University. For more information, please contact digitalscholarship@butler.edu.

BUTLER UNIVERSITY DEPARTMENT OF HISTORY AND ANTHROPOLOGY

Departmental Thesis Certification

Name (as will appear on diploma) Andrew hoss	
Thesis Title " O . C. A. L	
Amarent and its Alternatives for Execution	
Expected Graduation Date Spring 2017	
Thesis has been read, approved, and signed by:	
Thesis adviser(s):	
Zachary Scarlett	Date5/3/2017
Zachary Scarlett	Date
Reader(s): Fat Muda Roll	
	Date 1/1/17
	Date
Certified by the Director, Honors Program	
	Date
Sc. 1	
For Department Use:	
Level of Honors Confered	
University	
Departmental	

Our Nuclear Quandary:

Deliberating U.S. Nuclear Armament & its Alternatives for Execution 1946-1961

Andrew J. Ross

Advisor: Dr. Zachary Scarlett
Undergraduate Historical Thesis
Butler University
May 3rd, 2017

"Nobody talked much as the expedition crossed the moon. There was nothing appropriate to say. One thing was clear: Absolutely everybody in the city was supposed to be dead, regardless of what they were, and that anybody that moved in it represented a flaw in the design. There were to be no moon men at all." – *Slaughterhouse 5*

In an apparent state of shock, President John F. Kennedy listened on to his Chairman of the Joint Chiefs of Staff as he was briefed for the first time on the most complex, most consequential, most destructive war plan that a military bureaucracy had ever devised. This plan, the Single Integrated Operational Plan for fiscal year 1962 (or SIOP-62), was the result of 15 years of intense deliberation on nuclear theory and its operational application given a wartime scenario. Despite the stubbornness of fierce military inter-service infighting and the incalculable costs of resources necessary to prepare the military for a global nuclear war, SIOP-62 stood before the new President as a triumph of state bureaucracy manifesting national interests into reality. Indeed, its contents were unprecedented, and if executed the thermonuclear devastation of SIOP-62 would drastically alter the trajectory of human life on planet Earth. ²

Given a scenario of a "Fully Generated Alert Level," SIOP-62 planned for the United States military to detonate 3267 atomic and thermonuclear weapons spanning from the industrial centers of Eastern Europe to coastal Chinese cities in the Pacific. At its maximum, this coordinated air-atomic behemoth would release 7.420 gigatons of nuclear energy across the Eurasian landmass in virtually simultaneous form, making massive swaths of land uninhabitable for the immeasurable future. SIOP-62 called for over 200,000 times more nuclear force than the

¹ A much more thorough report on the Kennedy's reaction to SIOP-62 can be found here: Sagan, Scott D. "SIOP-62: The Nuclear War Plan Briefing to President Kennedy." *International Security* 12.1 (1987): 22. Web.

² To dig deeper on the potential atmospheric hazards of nuclear exchange, see: Robock, Alan. "Nuclear Winter." *Wiley Interdisciplinary Reviews: Climate Change* 1.3 (2010): 418-27. Web.

³ Sagan, Scott D. "SIOP-62: The Nuclear War Plan Briefing to President Kennedy." *International Security* 12.1 (1987): 22. Web. Also to see the Strategic Air Command's official history on the evolution of nuclear operations through SIOP-62 see "History of the Joint Strategic Target Planning Staff: Bacground and Preparation of SIOP-62" which can be found in digital form on the National Security Archives "Nuclear History" page.

combined bombings on Hiroshima and Nagasaki in World War II. Tabulating a precise casualty rate is difficult, but with what declassified estimates are publicly available, the total casualties of Sino-Soviet bloc conservatively amounted to 285 million immediate deaths. ⁴ These estimates did not consider though casualties caused by firestorms, radioactive fallout, international food scarcity, or long-term atmospheric alterations, which would inevitably result in the death of millions more globally. The design of SIOP-62 demanded that each category of targeting was inseparable from the overall strategy. In essence it was either to be implemented in full or not at all.

The targeting selection process for SIOP-62 was far from arbitrary. Led by lieutenant General Hickey, the Net Evaluation Subcommittee of the National Security Council conducted a study which would become known as Study No. 2009 charged with the purpose of evaluating what type of targeting strategy would be most likely to meet policy objectives. The subcommittee came to the conclusion that targeting should be an "Optimum mix" of military and urban-industrial targets. Therefore, the Joint Strategic Target Planning Staff (charged with target selection for SIOP-62) could use discretion as to what it perceived to be the most advantageous of both military as well as urban-industrial targets to bring Soviet military capacities to a halt and ensure the survival of the United States. The approved guidance stated that each target must meet a minimum of 75 percent chance of destruction regardless of target priority. Through strategic air bombers and ballistic missiles (launched from both land outposts as well as

4

⁴ Sagan, Scott D. "SIOP-62: The Nuclear War Plan Briefing to President Kennedy." *International Security* 12.1 (1987): 22.

⁵ Andreopoulos, George J., Michael Eliot Howard, and Mark R. Shulman. "Chapter 10 -- Nuclear War Planning." *The Laws of War: Constraints on Warfare in the Western World.* New Haven; London: Yale UP, 1997. 160-77. Print.

⁶ Sagan, Scott D. "SIOP-62: The Nuclear War Plan Briefing to President Kennedy." *International Security* 12.1 (1987): 22. Print.

submarines) simultaneous launching of the US nuclear arsenal was designed to overwhelm Soviet defenses, assure the greatest extent of delivery success, and provide a relatively larger degree of safety to the bombing teams above Soviet skies. All of these factors ensured hyperredundancy measures be in place by operational planners. Whether they were necessities or excesses depended on who was being asked, but critical members within the Kennedy administration found them to be excessive.

Secretary of Defense Robert McNamara had been briefed on SIOP-62 in early February and had since sought to prepare an alternative for the moment when President Kennedy would be made aware of this plan. McNamara abhorred its inflexible nature, the redundancy of its bombardment tactics, and the whimsical attitude of its creators. "That was the crux of SIOP," wrote nuclear historian Fred Kaplan, "a first-strike plan that held back nothing, that killed hundreds of millions of people just because they lived under Communist rule, without any Communist government's having so much as scratched a square inch of the United States. As much as anyone else who had witnessed this spectacle, if not more so, Robert McNamara was horrified." As one who was skeptical of the assessments military officials offered for their own objective requirements, McNamara set off to tame the aggression within the strategies these nuclear planners had set forth under Eisenhower.

It did not take long for McNamara to convince the president that any nuclear plan should be flexible enough to accommodate for the unique circumstances of a potential nuclear scenario. The Kennedy family trusted McNamara. In fact, President Kennedy's brother, Robert Kennedy once remarked, "Bob McNamara is the most dangerous man in the Cabinet because he is so

⁷ Kaplan, Fred M. *The Wizards of Armageddon*. Stanford, CA: Stanford UP, 1991. Print.

⁸ Ibid.

persuasive and articulate." President Kennedy shared McNamara's distaste for the present direction of nuclear operational planning and trusted that he could correct the issue. So, with the approval of Kennedy, McNamara quickly began an effort to restructure the rigidity of the SIOP-62, and in 1963, McNamara presented President Kennedy with the SIOP-63 which contained more options of nuclear attack if an escalation of general conflict were to ever arise.

McNamara's plan unwound nuclear targets from non-nuclear military targets and urban-industrial targets, allowing the president the flexibility to withhold attack on higher population centers, and the plan provided the president five primary attack options—determined by the imminence of the threat—from which, hopefully, he would never have to choose. ¹⁰

This deviation from the established Eisenhower nuclear policy of massive retaliation became known as "flexible response." Massive retaliation was a strategy whereby the nation's nuclear arsenal would only be used all at once and in its totality if provoked by unacceptable Soviet aggression. Flexible response attempted to offer less apocalyptic uses of the weapon. It was to be the trademark of the Kennedy administration's imprint on nuclear policy and it was perceived by some as a sensible backing away from the brink of the thermonuclear edge.

Intuitively, this change in national policy felt safer. If the Soviet Union was to annex West Berlin, an immediate and unflinching emptying of the entire U.S. nuclear arsenal seems excessive at best, maniacal at worst. But the temporary victory of flexible response as U.S. policy over massive retaliation does not suggest some judicious civilian victory over the thoughtless excesses of military officialdom nor does it necessarily even make the brandishing of nuclear arsenals between the United States and Soviet Union any less dangerous.

-

⁹ Kaplan, Fred M. *The Wizards of Armageddon*. Stanford, CA: Stanford UP, 1991. Print.

¹⁰ Sagan, Scott D. "SIOP-62: The Nuclear War Plan Briefing to President Kennedy." *International Security* 12.1 (1987): 22. Print.

McNamara and Kennedy's logic ignores one looming reality: nuclear attack is, by nature, indiscriminate. A targeting plan which distinguishes civilian from combatant, innocent from hostile, bystander from threat requires nuclear weaponry not be used. The close proximity of military outposts and weapon systems with high population areas raises significant doubt as to whether Soviet leaders would even be able to discern a "military only" attack from one which fully integrates urban-industrial centers alongside military targets. ¹¹ In his defense of SIOP-62, JCS Chairman General Lemnitzer stated: "limiting attack to military targets has little practical meaning as a humanitarian measure." ¹² The size and scope of nuclear capability by the early 1960's negated any perceived ethical benefit from an easing of target destruction. Furthermore, if left unused, it would be likely that most, if not all, of the remaining U.S. arsenal would be destroyed by Soviet retaliation, leaving the U.S. military with no meaningful response with which to engage in further offensive action. Even if some were left intact, communication systems would surely be down, leaving regional command posts isolated to guess whether or not their superiors desired further nuclear deployment. ¹³

Furthermore, flexible response also ushered in the worry that the limited or tactical use of nuclear weapons would significantly lower the threshold from which these weapons were used. In a sense, this policy might have normalized nuclear warfare and increased the likelihood that small nuclear weapons be used on peripheral locations or placed strategically in battlefield scenarios. How the USSR would respond to any nuclear bombardment was conjecture. A low barrier to initial use could potentially lead to a rapid escalation of hostilities ending in a complete

-

¹¹ Briefing for the President, SIOP-62.

¹² Sagan, Scott D. "SIOP-62: The Nuclear War Plan Briefing to President Kennedy." *International Security* 12.1 (1987): 22. Print.

¹³ Ibid.

nuclear exchange that otherwise would not have taken place. This argument suggests that greater flexibility might inadvertently have increased the chance of a massive nuclear exchange.

It is as if McNamara and Kennedy believed the Eisenhower administration had neglected to consider all alternatives by which they might pursue nuclear policy. In fact, nuclear thinkers in the Eisenhower years had been the most entrepreneurial under any administration prior or since. As Supreme Commander of the North Atlantic Treaty Organization (NATO), Eisenhower had far more experience with nuclear operations than any preceding president to date. Yet the attitude of his subsequent administration seemed to disregard the years of strategic thinking that had allowed for an operational plan like SIOP-62 to become possible.

Despite its ambitions, flexible response would not remain national policy for long. The entire concept rested upon two major assumption. First that nuclear war could be limited—in other words the detonation of one or several nuclear weapons would not necessarily prompt the launching of all Soviet nuclear arms. As previously discussed, this was a reasonably doubtful assessment. And secondly, that funding civil and military defense apparatuses could keep US population and industrial levels intact. But as arsenals continued to grow rapidly in the early 1960's, the numbers just did not seem to suggest that could be possible.

"The calculations revealed that damage-limiting was a fairly hopeless strategy. [...] Under certain conditions, damage-limiting could make a difference of up to 55 or 60 percent in the amount of US industry surviving a Soviet attack. However, if the Soviets reacted by expanding their own offensive forces, they could completely nullify the damage-limiting measures—and moreover, do so far more cheaply than it would take for the United States to limit damage yet again. In the race between offense and defense, offense would win, and at lower cost." ¹⁴

7

¹⁴ Kaplan, Fred M. *The Wizards of Armageddon*. Stanford, CA: Stanford UP, 1991. Print.

What alternations of SIOP-62 McNamara proposed, from a larger picture, did not change the nature of state nuclear behavior. An intolerable number of nuclear weapons would be launched that would kill millions in the event of nuclear conflict with the USSR. By 1964, Secretary McNamara came around to supporting Assured Destruction—which was more or less the policy that had been in place under Eisenhower. The hope that nuclear weapons could be utilized in a circumstance that would not wreak intolerable destruction upon the state was dead.

This juxtaposition of SIOP-62 and its horrific consequences against the legitimate critiques of flexible response illustrates the paradox of nuclear capability. With the advent of nuclear armed states, what could be defined in a wartime scenario as a *military victory* for the first time became incongruous with a *political victory*. What nuclear tacticians developed within their war plans could no longer satisfy the objectives of the civilian leadership for whom they took orders. The ultimate aim of SIOP-62 was not that it be used to successfully win a war, but that through preparation for nuclear conflict, such a war might be deterred. Therefore, by examining what these plans detailed, this gap in military-civilian objectives can be best understood.

As McNamara sought to reform SIOP, a sharply worded Kennedy administration memo articulated his frustrations succinctly: "SIOP-62 is a rigid, all-purpose plan, designed for execution in existing form, regardless of circumstances. Rigidity stems from ... [the] ... Belief that winning general war means coming out relatively better than USSR, regardless of magnitude of losses." The criticism of relative victory regardless of magnitude is legitimate, but not one that would keep a state from engaging in future warfare. McNamara realized that what

-

¹⁵ Foreign Relations of the United States, 1961-1963, Volume VIII, National Security Policy. 43. Memorandum From the President's Military Representative (Taylor) to President Kennedy. Washington, September 19, 1961.

nation would be left to rebuild. Even the declared "victor" of a thermonuclear war would have no real nation left to govern. It would be paralyzed to affect any real measure of power over what population remained. His actions reflected a larger urge by any state of nuclear capability to mold nuclear capacities into something that can be managed—an urge that was futile.

While those at the nuclear mantle throughout the 1950s gradually came to the realization of what a nuclear war would and must entail, Kennedy and McNamara's reactions to the SIOP-62 briefing are so telling because the gravity of this capability was bestowed upon them all at once. Those preceding the Kennedy administration did not inherent an atomic arsenal capable of tossing missiles of international decimation through the air. They were the gradual inventors of it. McNamara and Kennedy's shocked reaction to massive retaliation was not experienced by earlier officials because for them the consequences of nuclear exchange were a much more gradual realization. In this historical moment, we confront the quandary of nuclear weapons. They deter aggression through the threat of genocide. Yet no rational government could imagine benefit from their use. Nuclear weapons placed states in a quandary of geopolitical interests and perceptions of insecurity that persists under the pretense of irrationality.

This thesis lays out the atomic framework, beginning in the late 1940's under President Truman through the opening days of the Kennedy administration, from which nuclear thinking developed. It explores the nebulous relationship between official policy and operational planning, which so often only reluctantly coincided. In section one, this paper discusses the multiplicity of ideas suggested by policy officials and operational orchestrators alike in order to contextualize how massive retaliation became the most advantageous nuclear alternative. Its describes the dialogue surrounding the objective of deterrence and how it might be satisfied

through a variety of nuclear means. Section 2 discusses how massive retaliation and, in turn, assured destruction continued to be the principal nuclear strategy. The quest to prevail became mired by the means which prevailing demanded. Estimated casualty numbers rose quietly from the millions of casualties taking months in a wartime scenario to the hundreds of millions taking days, if not hours. In only a decade, nuclear arms went from the key centerpiece of U.S. military force against Soviet expansionism to an institutionalized system capable of jeopardizing human habitation on this planet. U.S. policymakers eventually came to this realization and attempted to grapple with genocidal and self-compromising implications.

This thesis broadens the U.S. Cold War nuclear dialogue beyond the interactions of high-level men or rivalling agencies. By centering my argument in the quandaries of interest bedeviling government leaders, I stress how nuclear armament restructured the fundamental behavior of states: their interests and the actions taken to achieve those ends. McNamara's urge to seek a nuclear strategy other than massive retaliation was not the first attempt to do so by policymakers. This thesis will explore those options, weigh their strengths and weaknesses, and explain how massive retaliation proved more resilient than other nuclear alternatives. I argue that nuclear capability was more than a tool in achieving state interests, but itself transformed what United States officials perceived their interests to be. By doing so, I decenter the Cold War as the functional form by which we discuss nuclear armament—even as my study exists within the Cold War geopolitical moment.

Through the deliberation of several nuclear alternatives and the rationalization of why the United States always returned to massive retaliation, I emphasize how the logical problems of nuclear deterrence transcend that of merely the Cold War, but as an ongoing and ever-expanding force in shaping state behavior both in terms of domestic and international. The conundrum in

which McNamara found himself in 1961 is a powerful anecdote in explaining the complex web of state interests and nuclear capability which I define as "Our Nuclear Quandary." Acting rationally, he still could not come to a satisfactory alternative to massive retaliation and reluctantly returned US nuclear strategy back to the framework provided under Truman and Eisenhower. This thesis will depict the alternatives other US officials considered and how the policy of massive retaliation emerged, gained broad acceptance, and matured into the concept we now know as assured destruction. Ultimately, I use these deliberations of nuclear capability to dig into a deeper question: Can a world governed by states reach in the atomic age reach any nuclear alternative that would not result in the destruction of global human habitation? And if not, how do we proceed forward?

Chapter 1 – The Alternatives

"War does not consist of a single instantaneous blow." – Carl von Clausewitz

Carl von Clausewitz's seminal work *On War* has long been a foundational text within the educational institutions of the US military. The nuclear strategists emerging from the post-World War II era were well versed in his ideas on the function of war and why states chose to engage in this most violent act. His first chapter laid out before them 28 fundamental "truths" of war—one of them being: "war does not consist of a single instantaneous blow." ¹⁶ But as these 20th century strategists ruminated in the chilling atmosphere of a global Cold War, they gradually found many of von Clausewitz's proverbs to be less and less applicable. In a matter of approximately a decade, war had unraveled from the neat order of Clausewitzean traditionalism to something far more sinister and unprecedented. By the turn of the decade, the potential for global war had in fact became an instantaneous act—decided within hours instead of years. I include this epigraph as a reminder to myself and any readers that alternatives considered and the opinions held throughout this tumultuous area must be contextualized in their moment, not ours. Truly no preconceived manual, nor strategy, nor philosophical text convenienced the "Wizards of Armageddon" 17 as they set forth a new structure of thought from which we now frame our considerations of war.

United States nuclear dialogue in the founding years of the Cold War centered upon two fundamental questions. First, how might the US deter the Soviet Union from expanding

_

¹⁶ Carl von. Clausewitz, On War. Penguin, 1968. Print.

¹⁷ For a comprehensive narrative on the intellectual background of those who cultivated early Cold War foreign policy thought read Fred Kaplan's "Wizards of Armageddon." Kaplan, Fred M. <u>The Wizards of Armageddon.</u> Stanford, CA: Stanford UP, 1991. Print.

substantial influence into key regions of US interest? And two, if Soviet expansion cannot be deterred, how might the United States prevail in the event of a general conflict? Despite a variety of ideas crafted by the nuclear thinkers of the day, no serious discussion deviated from satisfying these objectives. Within these two questions though, nuclear weapons took on two distinct functions: to prevent war on the one hand and to ensure a wartime victory on the other.

Intuitively, it is fairly simple to see how the eventual disconnect between political and military objectives came to be so wide. This section explores the various alternatives policymakers considered to best balance the two. While not every "nuclear innovation" is considered in this chapter nor every significant document for the ones presented, this section provides a basic understanding of the dynamism of early Cold War strategies in their diversity of potential policy solutions. Government officialdom was not stagnant. It deliberated a plethora of alternatives regarding nuclear behavior. This reality makes their eventual nuclear conclusion that much more telling as to how state interests are shaped and how far states are willing to maintain these interests.

** ** Symmetrical & Superior Mobilization ** **

In the late 1940's and early '50's, the United States was still coming to terms with its new adversarial relationship with the Soviet Union. Changing global political circumstances necessitated changes in policy options to follow suit. What I have dubbed "symmetrical & superior mobilization" was one of those policies, which for a brief moment was adopted by President Truman as official policy. Symmetrical and superior mobilization is a geopolitical

strategy where at ever avenue a nation's adversary may gain a strategic advantage, the nation in question meets it with equal or greater military capability. In no branch of military or civilian service would the nation allow its adversary to have numerical or technological advantage, and also insist that in several, it maintain a clear advantage. Given an environment of insecurity, the US officials fell susceptible to this policy, if only briefly, as they adjusted to the US's new international tension with the communist sphere.

NSC 68

Between 1949 and 1950, a slew of unexpected military actions in Eurasia caused U.S. officials to reevaluate the rather cautious US foreign policy that had existed since the end of World War II. The victory of the Chinese Communist Party over the Guomindang in China, the detonation of a thermonuclear device by the Soviets, and, most importantly, the outbreak of the Korean War produced a sense of insecurity in the U.S. that would result in a significant repositioning of U.S. global strategy. The Truman administration viewed the Communist world to be increasingly aggressive and an imminent threat to American hegemony in the postwar world. It is in this context that in 1950 President Truman adopted NSC-68 as official U.S. policy—believing every advance of communist influence must be met with an equal or greater force from the Western sphere.

_

¹⁸ Interpretation elaborated in: Holloway, David. "18 -- Nuclear Weapons and the Escalation of the Cold War, 1945-1962." *The Cambridge History of the Cold War.* Vol. 1. Cambridge UP, 2010. 376-97. Print.

NSC-68 merged Communist policy and atomic policy into the same document—which had previously necessitated separate, if overlapping, consideration. This document recognized the intersectionality of the Communist threat and nuclear armament, and it advised an immediate and wholesale expansion of the non-nuclear branches of the military. NSC-68 envisioned an expanded nuclear stockpile but it also intended to walk back U.S. geopolitical dependence upon a nuclear deterrent—seeing such a strategy as ultimately inadequate. "In time the atomic capability of the U.S.S.R. can be expected to grow to a point where, given surprise and no more effective opposition than we now have programmed, the possibility of a decisive initial attack cannot be excluded." Essentially, this document assessed the objectives of prior US foreign policy—which feared fiscal ruin of military buildup swelled to unsustainable proportions—to be inadequate for achieving a sound Soviet deterrent. NSC-68 evaluated Soviet progress in nuclearization and deemed that by 1954 a surprise nuclear attack by the Soviets would wreak unacceptable damage upon the United States. Despite the fact that U.S. capability could inflict similar, if not more, damage upon the Soviet sphere, it assessed that while a "moral" nation like the United States might be hesitant to initiate an unprovoked and whole-scale attack, the Soviet Union could not be trusted to do the same. Therefore, the project of deterrence must expand beyond air power and atomic dominance. Only a total military buildup, it argued, could prevent such an attack from occurring.²⁰

The ultimate objective of NSC-68 though was the same as previous nuclear strategy—the relative reduction of the Soviet's power and influence, which was deemed a threat to peace and global stability. What differentiated NSC-68 from prior official policies is its assessment of

¹⁹ US National Security Council, "NSC 68: United States Objectives and Programs for National Security," April 14, 1950.

²⁰ Ibid.

resources needed and the immediacy of their utilization to ensure that these objectives were successfully met. NSC-68 rationalized a hurried implementation of military-industrial strength, proposing an expansion of every avenue of military force— "air, ground, and sea strength, atomic capabilities, and air and civilian defenses." The approval of this policy by the Truman administration admitted the inability, or unwillingness, to pursue armament reduction strategies. It depicted the Soviet regime as calculating, opportunistic, and only responsive to force. Therefore, it concluded that the United States must provide force—in every sense of the word—to contain and negate Communist encroachment. No caution must be taken, no expense withheld to combat the United States' most formidable adversary. This document's power rested in its grave assessment: the conflict which the U.S. found itself in was one in which "the survival of the free world is at stake." Therefore, it could demand any sacrifice, consider all alternatives in order to ensure the survivability of the the state.

More so than any other alternative nuclear policies discussed in this chapter, NSC-68 and its call for superior mobilization was the most seriously considered policy until the achievement of nuclear parity. The importance of NSC-68 was not its long-lasting administrative approval. In fact, President Eisenhower would insist policy reassessment at the beginning of his administration only 3 years later. NSC-68 was a watershed moment in U.S. Cold War policy because of how it reshaped presidential and congressional perceptions of American interests beyond its borders. It emphasized the necessity for the U.S. to be an undoubted "global guarantor" to the free world. While previous NSC directives allowed for geopolitical margin,

²¹ US National Security Council, "NSC 68: United States Objectives and Programs for National Security," April 14, 1950.

²² Ibid.

²³ Worley, D. Robert. *Orchestrating the Instruments of Power: A Critical Examination of the U.S. National Security System.* Lincoln: Potomac, an Imprint of the U of Nebraska, 2015. Print.

NSC-68 concluded that any advancement by the Soviet hegemonic sphere would be in direct defiance to American global interest. It states: "any substantial further extension of the area under the domination of the Kremlin would raise the possibility that no coalition adequate to confront the Kremlin with greater strength could be assembled."²⁴ NSC-68 also determined that any failure in achieving an eventual international control of atomic energy was a failure of Soviet accommodation. This document provided no discussion as to how the United States would equally engage in compromise to achieve such ends. It concluded that "it is impossible to hope than an effective plan for international control can be negotiated unless and until the Kremlin design has been frustrated to a point at which a genuine and drastic change in Soviet policies has taken place."25 Essentially, this document did not take seriously the option of a jointly recognized international authority to oversee atomic energy. NSC-68 organized the world into two mutually incompatible camps—pro-democratic and pro-communist—denying any semblance of nuance or of legitimate diplomatic dialogue. Despite its brevity of official approval, it removed the lid on congressional military funds for decades to come and it left an expectation upon several presidential administrations that no inch of influence—no matter how peripheral the country or how unthreatening its capacities may be—nothing could be forfeited to any communist regime.

The effects of the Korean War necessitate a brief digression to discuss its relationship with NSC-68. Beginning in 1950, real military purchases increased from \$59.8 billion USD to \$189.2 billion USD in 1953, the years of the war's end. ²⁶ Certainly, to argue that the influence

_

²⁴ US National Security Council, "NSC 68: United States Objectives and Programs for National Security," April 14, 1950

²⁵ Ibid.

²⁶ Figures for 1948-86 computed from nominal-dollar purchases and GNP deflator in Council of Economic Advisers, Annual Report (Washington: Government Printing Office, 1987), pp. 245-48.

of NSC-68 objectives was the decisive factor in this mobilization would be absurd. Yet after the Korean armistice had been signed, military budgets only slightly decreased from their mobilized peak in 1953. Throughout the 1950's real military purchases remained steady at around \$150 billion USD—only around 20% lower than the wartime peak and over 250% the budget of 1950.²⁷ For this reason, I argue that the national objectives as stated in NSC-68 held a long-lasting influence on the nature of governmental Cold War paradigms. The Korean War "proved" (to the perception of many) NSC-68's tone of urgency and imminence, even if its conclusions were unsustainable. This coupling of the Korean War and NSC-68 inculcated the military apparatuses of the Truman and Eisenhower administrations with a unending sense of tacit anxiety. With only minor fluctuations in the post-Korean military budgets, nuclear stockpiles rose from 369 weapons in 1950 to 27,000 by 1962²⁸—far above their Soviet counterparts and based in the assumption that relative military superiority provided the most viable option for long-term security.

Still, administrative officials continually feared a loss of atomic supremacy. John Lewis Gaddis, an historian of Cold War history, summed up NSC-68 thusly: "Beginning with a perception of implacable threat and expandable means, [NSC-68] derived a set of interests so vast as to be beyond the nation's political will, if not theoretical capacity, to sustain." The reoccurring insecurity evident in American foreign and nuclear policy throughout the Cold War can trace their origins back to this NSC directive. By questioning the long-term survivability of the United States, NSC-68 drove U.S. officials to conclude that an examination of the deeper,

_

²⁷ Higgs, Robert. "U.S. Military Spending In The Cold War Era: Opportunity Costs, Foreign Crises, and Domestic Constraints." *Cato Institute* (1987): Oxford University Press, 30 Nov. 1988. Web.

²⁸ Holloway, David. "18 -- Nuclear Weapons and the Escalation of the Cold War, 1945-1962." *The Cambridge History of the Cold War.* Vol. 1. Cambridge UP, 2010. 376-97. Print.

²⁹ Gaddis, John Lewis. *Strategies of Containment: A Critical Appraisal of Postwar American National Security Policy*. New York: Oxford UP, 1982. Print.

moral consequences of military expansionism would be a futile endeavor. Fear was the foundational tenet of superior mobilization. It demanded the prioritization of military strength above all other considerations because it placed national demise as mobilization's singular alternative. While this policy did not garner large enough support to be sustained throughout the era of nuclear stockpiling, the anxieties it induced persisted long after nuclear parity was reached.

** ** The Prevent Strike Temptation ** **

As weapon systems and mutual distrust gradually built between the United States and the Soviet Union throughout the 1950's, so too did the allure of a first strike option. The fear of an obsolete nuclear arsenal caused by an unexpected Soviet nuclear strike situated the first strike concept for some US officials as a tempting possibility. Needless to say, neither the US nor the USSR enacted this alternative as official policy, but nevertheless the deliberation of its merits is worth consideration. Why it was considered, in what circumstances, and how it never came to be implemented are necessary questions to discuss in order to better understand how a nuclear state behaved during the Cold War and how it perceived its interests and threats to those interests. This section will discuss the study "Project Control" as a catch all in understanding the broader arguments for prevents strikes—as many others did exist. The anxieties surrounding this moment in nuclear posturing are telling as to what motivates a state to consider a first nuclear strike.

Test-confirmed atomic capability had existed in the United States since 1945. The Soviets followed suit shortly thereafter in 1949. While atomic power was certainly menacing in its own right, but before the invention of thermonuclear capability, atomic arsenals and the inputs required for them were viewed as a highly scarce resource. Without the invention of the thermonuclear (or hydrogen) bomb, atomic arsenals could, at their greatest, only maintain a fraction of the arsenals seen at the height of nuclear stockpiling in the 1960's. This was due to the limited occurrence of radioactive minerals in the natural world—specific isotopes of uranium and plutonium—capable of facilitating the nuclear chain-reaction for fission to occur. But the theoretical concept of a fusion-based (thermonuclear) weapon would both yield far greater explosive capabilities as well as remove the scarcity limits for weapons production. On the basis of this technological achievement alone, the U.S.-Soviet nuclear arms race drove arsenals into the tens of thousands of weapons within a matter of years.

In 1952, perceiving a formidable and continually strengthened foe in the USSR and its Communist allies, the United States detonated its first thermonuclear device. Not to be outdone and to the astonishment of many, the Soviet Union detonated its first semi-thermonuclear weapon only 10 months later. Thus began an exponential scramble to acquire the most menacing arsenals and the most allusive means of transporting them. These developments transformed the landscape of deterrence. While relative military superiority had played a role in military deterrence since as early as 1945, never had it become so acute as it was upon the emergence of a circumstance of two, dueling thermonuclear states. US officials recognized the necessity of

relative strength and some came to the conclusion that preventive action was necessary to ensure US advantage was never to be lost.

These anxieties are evident in a major study conducted by the Air Force College in 1953-54, titled "Project Control." This study stated that in its current technological state, the US Air Force could seize Soviet airspace and attempt to coerce state behavior towards US interests. If non-violent measures could not achieve these ends, Project Control called for escalated "air pressure" involving strategic military targeting and potentially general warfare. The study concluded that the United States through air dominance could neutralize an attempted Soviet offensive through counteroffensive measures—wiping out key military targets primarily focused on Soviet long-range capabilities—but that this was not its first objective. The study was both audacious in its assessment of what the Air Force was capable of accomplishing as well as insistent in its determination of how quickly such a policy must be put into place. The study was insistent in its determination of how quickly such a policy must be put into place.

This thesis considers several wartime plans throughout the Truman, Eisenhower, and Kennedy administrations given a hypothetical breakout of war, but Project Control is not one of those. For one, this plan came from an unconventional source of legitimately debated policy and operational planning. This document originated in the Air Force College before making its way into the upper echelons of Air Force command and beyond into broader circles of policy decision-making. Secondly, this was not merely a responsive plan to unpredictable conflict escalation, but a call for such escalation on the part of the United States—and to do so

2

³⁰ This analysis was made possible by Lieutenant Colonel David J. Dean's digital summary of the study found here: http://www.au.af.mil/au/afri/aspj/airchronicles/aureview/1984/jul-aug/dean.html

³¹ What I have found to be the most comprehensive scholarly work on Project Control: Biddle, Tami Davis. "Handling the Soviet Threat: 'Project Control' and the Debate of American Strategy in the Early Cold War Years." Journal of Strategic Studies 12.3 (1989): 273-302. Web.

³² Biddle, Tami Davis. "Handling the Soviet Threat: 'Project Control' and the Debate of American Strategy in the Early Cold War Years." *Journal of Strategic Studies* 12.3 (1989): 273-302. Web.

immediately. While controversial, this call for preventive action had vocal support even within the JCS. The Chairman of the Joint Chiefs of Staff, Admiral Arthur W. Radford, was a staunch proponent of Project Control. Upon being briefed of its proposals he stated: "If the US did not adopt and successfully follow through on a course of action similar to Project Control that in the period mid 1957-1960 there would be either an all-out atomic war or the US would be forced into an agreement which would mean victory for the USSR."33 Clearly, an attitude of nuclear urgency took root in the minds of some military, if not also civilian, officials. Without the resolve to act decisively, some feared that the eventual nuclear stalemate, correctly predicted by state officials, could galvanize Soviet political disposition into an increasingly aggressive demeanor. NSC & JSC memorandums are littered with predictions of dark future days where the United States would be given its most feared dilemma: global retraction from the world's most contentious events or acceptance of nuclear war. Avoiding this ultimatum was the main motivation behind calls for proactive measures. While not explicitly using the term "preventive," the language Admiral Radford and the JCS put forth before the National Security Council implied such actions. Often the words "dynamic" or "positive" were used instead in order to not directly confront the president's established policy that preventive war not be used, but this strategically placed language was code for military action. One JSC memorandum in November of 1954 exemplifies this circuitous language well:

The non-Communist world, if it takes positive and timely *dynamic* countermeasures, presently has ample resource to meet this situation, and with high change of maintaining world peace without sacrifice of either vital security interests or fundamental moral principles, or in the event of war being forced upon it, of winning that war beyond any reasonable doubt. On the other hand, failure on the part of the free world and particularly of the United States to take such timely and *dynamic* action could, within a relatively short span of years, result in the United States finding itself isolated from the rest of the

-

³³ Project Control Report 4.2, Book 2, the Control of Russia by Air and Other Means, AFSHRC, p. 354.

free world and thus placed in such jeopardy as to reduce its freedom of action to two alternatives—that of accommodation to Soviet designs or contesting such designs under conditions not favorable to our success.³⁴

Such indirect language was employed by officials in favor of preventive strikes, rather than explicitly demanding such actions be taken—a demand in contradiction with the Commander-in-Chief's official policy. Locating recorded documentation advocating for preventive action is difficult, but this should not be interpreted as though its existence was tenuous. As David Alan Rosenberg put it: "Although seldom explicitly discussed in writing, preventive war was implicit in some of the major policy deliberations of the time." Language and tone became often the means of supporting preventive action rather than explicit verbiage. Overt support for preventive action was too controversial of a stance to be debated outside the shadows of ambiguity.

This is not to say though that Eisenhower was resolutely against preventive attack from the outset of his administration until the end. Several sources have him quoted throughout his administration as giving preventive action serious consideration.³⁶ But never did the National Security Council feel as if this ultimate nuclear posturing was necessary—that is the more innate mechanisms of the state did not ever reach a plurality of consensus that preventive action was the most advantageous route. Indeed, the BNSP update of 1956 unambiguously rejected preventive action: "The initiation by the United States of preventive war to reduce Soviet or Chinese Communist military power is not an acceptable course either to the United States or its major

2

³⁴ Trachtenberg, Marc. "A "Wasting Asset": American Strategy and the Shifting Nuclear Balance, 1949-1954." *International Security* 13.3 (1988): 5.

³⁵ Rosenberg, David Alan. "The Origins of Overkill Nuclear Weapons and American Strategy, 1945-1960." *International Security* 7 (1983): Print.

³⁶ A good overview on the various nuclear considerations of Truman, Eisenhower, and Kennedy: Holloway, David. "Nuclear Weapons and the Escalation of the Cold War, 1945â□"1962." *The Cambridge History of the Cold War* (n.d.): 376-97. Print.

allies."³⁷ Upon the achievement of nuclear parity this debate subsided, yet the discussion of whether preventive action in more regional geopolitical circumstances still remains.

** ** The Argument for Finite Deterrence ** **

The emergence of finite deterrence in the late 1950's as a viable policy alternative can be explained in terms of technological advancement in ballistic missile systems, genuine interest in slowing the seemingly exponential growth of the US nuclear arsenal, and the organizational interests of the Navy in absorbing nuclear control away from the Air Force's monopoly. Navy officials hypothesized a diminishing utility of deterrence in regards to nuclear weaponry as stockpiles grew, and therefore, a theoretical maximum to the number of useful weapons needed to deter the Soviet Union from a first strike possibility. This theory was expressed in their concept of "finite deterrence." Finite deterrence attempted to frustrate the established Air Force planning procedure of targeting Soviet military outposts, called "counterforce" targets, which Air Force officials argued was necessary in order to maintain the possibility of a first strike victory. But this strategy also meant that the greater number of military outposts, the greater number of weapons needed to neutralize the potential enemy threat which continued down a vicious and fiscally irresponsible cycle—hence the Navy's criticism of what they deemed to be "infinite" deterrence. Their theory of finite deterrence supposed that given a sizable, but finite, number of weapons prepared to strike via mass bomber raids, intercontinental ballistic missiles (ICBMs),

³⁷ US National Security Council, "NSC 5602/1: Basic National Security Policy," March 15, 1956.

and submarine-launched ballistic missiles (SLBMs) spanning so great an expanse of geography in such inconspicuous delivery systems, no Soviet attack could destroy the bulk of the US nuclear arsenal. This would mean that US would always maintain the capability of launching a retaliatory attack of such strength that the Soviets would deem its impact to be intolerable, hence reaching a state of deterrence.

It is of little surprise though that advocates and opponents regarding this idea fell sharply along organizational lines—the Navy and Army for and the Air Force against. If implemented, this policy would substantially boost Naval prominence in implementing the national nuclear agenda. The emergence of the Polaris program in the late '1950's and early '1960's—a naval program which outfitted US submarines with nuclear-capable ballistic missiles—was a key component in ensuring the success of finite deterrence. Submarines were nearly impossible to track regularly while high-altitude aircraft or satellite reconnaissance could locate many of the land-based nuclear deployment outposts. Therefore, capping the requirement of nuclear arms would end the Air Force's long-enjoyed position as the chief vehicle of nuclear transportation. The preponderance of SAC (the Strategic Air Command charged with transporting the bulk of nuclear weapons to their designated targets) would be greatly reduced and the prestige of the entire Air Force military branch would be diminished—eclipsed by the latest advances in submarine technology. In sum, the Joint Chiefs of Staff did not weigh each alternative, especially finite deterrence, disinterestedly. The prestige of their respective occupational branch was at stake.

Finite deterrence by no means was certainly not without controversy, and Air Force officials did all that they could to highlight its drawbacks. For one, it admitted that nuclear war could not be won, instead asserting that "sufficiency or stalemate" of nuclear destruction was all

that was necessary.³⁸ For the Navy, "winning" a nuclear war was neither the ultimate objective nor even a possible scenario considering the size and scope of nuclear destruction capable by the late 1950's.³⁹ In their assessment, nuclear war would wreak intolerable devastation upon all parties. In a 1957 memo circulated amongst top Navy officers, Rear Admiral Roy M. Johnson described this discrepancy of military branches as to what the their ultimate goal even was:

"It has gradually become evident, as perhaps it should have from the start, that the basic disagreement [among the Joint Chiefs of Staff] is over objectives at that echelon where national security is defined, rather than over military means once specific tasks are assigned. This is not to say that indictment of SAC's plans and demands on specific military points is not justified, but that it is somewhat aside from the main point. It seems evident that since deterrence of general war and maintenance of US security and values are the basic objectives, preparedness to fight and win a general war must subordinate itself to these objectives."

What Rear Admiral Roy M. Johnson was deliberating in this memo was what ultimately did the United States' government deem to be its higher priority: deterring war or ensuring victory? SAC and other Air Force officials believed ensuring victory to be their highest priority, and more importantly, still believed victory to be an attainable objective. The Navy thought otherwise—if only for the convenience of their own interests.

But the Navy's somber assessment of US capabilities does not signify necessarily a more humane nuclear approach. Chief Naval Officer Admiral Arleigh Burke described finite deterrence as follows: "Our objectives can be assured by the selection of a target system which

³⁸ Kaplan, Edward. *To Kill Nations: American Strategy in the Air-Atomic Age and the Rise of Mutually Assured Destruction*. Ithaca: Cornell U, 2015. Print.

³⁹ For a primary source understanding of the Navy's thought processes read: "More Advantageous Than Simple Revenge" GSB [George S. Brown] to Air Force Chief of Staff Thomas White, 30 March 1959, enclosing "CNO Personal Letter No. 5 to Retired Flag Officers, 'Summary of Major Strategic Considerations for the 1960-70 Era," 30 July 1958. Source: Library of Congress, Thomas White Papers, box 28, Navy [Also available on Digital National Security Archive, U.S. Nuclear History, 1955-1968]

⁴⁰ "A Stable Stalemate of Mutual Deterrence" Rear Admiral Roy M. Johnson memo to Distribution List, "Adaptation of the National Military Posture to the Era of Nuclear Parity; a Suggested Navy Position," 3 December 1957, Top Secret. Source: Washington Navy Yard, U.S. Navy Operational Archives, Records of Strategic Plans Division, box 354, 1957 A16-10

will include the most vulnerable and essential elements of Soviet life; that is, the control structure of their government and the Communist Party, and the industrial complex which is the foundation of their national power." Such a targeting system essentially called for the explicit targeting of cities which ironically the Air Force sought to avoid. Proponents of finite deterrence concluded that capping weapons necessitated that those being employed would crumble Soviet urban-industrial areas with little discrimination. This was so because the theory preferred deterrence over military victory. Instead of locating and targeting the growing number of Soviet military instillations, which would result in the continued growth of US weapons, finite deterrence *could be finite* because it targeted the heart of Soviet urban existence.

But despite the theoretical promise of finite deterrence, it arrived for discussion in the NSC at the poorest of times. Nuclear production in the United States began exponential growth around 1955. Whereas the US warhead count stood liberally at 2,000 in 1955 by 1960 that number stood at around 20,000—a 1,000 percent increase. ⁴² Also, the US Congress was entrenched in a (what turned out to be illusory) fear that the Soviets held a considerable margin of bombers and then missiles over the United States. The national political climate was not conducive to a national policy that would ostensibly cap nuclear weapons production when the most immediate concern was that in fact atomic numbers may be too low. ⁴³ Coupled with the reality that no real humanitarian argument could be made in support of this policy, the theory of finite deterrence largely remained that—a theory. It would remain an unattainable fantasy for

4

⁴¹ "The Finite Deterrent System" versus Launching a "World Holocaust" Arleigh Burke for All Flag Officers, "Views on Adequacy of U.S. Deterrent/Retaliatory Forces as Related to General and Limited War Capabilities," 4 March 1959, Confidential. Source: Washington Navy Yard, Operational Archive, Flag Officers "Dope," CNO Personal Newsletter and Memorandum #44-49 May-June 1959

⁴² Holloway, David. "18 -- Nuclear Weapons and the Escalation of the Cold War, 1945-1962." *The Cambridge History of the Cold War.* Vol. 1. Cambridge UP, 2010. 376-97. Print.

⁴³ Ibid.

Army and Navy officials until atomic parity was reach in the following decade, which by that point the fiscal argument behind finite deterrence was essentially benign. With the Polaris program, Navy officers had found other ways to once again assert their influence in nuclear policy and therefore no longer needed finite deterrence to prop up their strategic importance. In sum, finite deterrence was a theoretically possible alternative. Propped up by military opportunism it was given considerable attention toward the latter half of the 1950's, but ultimately the political context of the day ensured it would not be held up to oppositional scrutiny. The navy found other avenues from which it would assert its importance leaving finite deterrence to fade from serious consideration moving forward.

In summary, this chapter has explored a portion of the alternative strategies considered, but never entirely implemented, during the founding years of the Cold War. Through the evaluation of their strengths, weaknesses, and uncertainties, I have provided some understanding as to what US officials considered to be the ultimate aims of nuclear policy and also what risks were unacceptably burdensome. These alternatives—Symmetrical & Superior Mobilization, Prevent Strike, Finite Deterrence—were deliberated as another nuclear strategy maintained supremacy. Just as SIOP-62 and its theoretical premise of Assured Destruction seem puzzling when viewed in a vacuum, it is crucial to understand the evolving strategy which placed the United States in a position to make that wartime plan feasibly usable. This chapter has explored the alternatives that now belong in the nuclear waste bin. In the following chapter I will explore the strategy that morphed into something far different from its intended design, but nevertheless maintains a definable continuity from the arms race's earliest days under Trumane through its darkest hours under Kennedy.

Chapter 2 – The Path to Assured Destruction

"Any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such: killing members of the group; causing serious bodily or mental harm to members of the group; deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part; imposing measures intended to prevent births within the group; [and] forcibly transferring children of the group to another group." United Nations' definition on genocide

To label an action or the potentiality of an action as genocidal as we see it is not the role of a historian. Yet it very well may be the role of a historian to understand how a state or body of states came to collectively agree upon a common definition of the term and then reflect upon how that description measures against the behavior of these states. In this regard, one can see how the definitions of warfare and genocide merged into a murky and indistinguishable blend. Beginning around 1954 the United States government had reached a capability "to kill nations." The incongruity between their public assertions of what constituted as the most egregious of national acts—genocide—and what they privately prepared to commit were by no means harmonious. I included this definition not to assert a label upon developing operational plans and NSC doctrine through the latter half of the 1950's, but to keep a point of reference regarding what was considered outside the bounds of decent state behavior, and how nuclear weapons seemed to transcend these boundaries altogether.

_

⁴⁴ Article 2 of the Convention on the Prevention and Punishment of the Crime of Genocide (1948)

⁴⁵ See Edward Kaplan's "To Kill Nations" for a comprehensive text on the development of this term.

** ** Securing Victory ** **

The US-Soviet nuclear arms race can be described into two overlapping categories: the phase in which state officials believed a nuclear war could be won and the phase in which they believed nuclear war would result in unacceptable losses on both sides. In no one specific moment was this transition made, rather as the capability of nuclear arsenals matured so too did the thinking behind their potential use. The overarching objective in this first phase was acquiring nuclear capabilities which state officials deemed adequate in securing a US victory given an escalation of general conflict between the capitalist and communist spheres. This section will elaborate on some of this phase's key documents. Through an assortment of official policy statements, wartime plans, and presidential strategies, I will shed light on what drove the president, his National Security Council, and Joint Chiefs of Staff to a deeper dependence on nuclear arms for geopolitical benefit and how this narrowed, instead of widened, future strategic options moving forward.

NSC 30 & NSC 20/4

The first official U.S. nuclear policy report was released in September of 1948 under National Security Council directive 30 (or NSC-30). This document titled "United States Policy on Atomic Warfare" was the first attempt to define the role of nuclear armament under peacetime conditions. Attempts at the United Nations to internationalize ownership of nuclear research and resources had come to a standstill as the gaps between the US and Soviet proposals had proven to be irreconcilable. The point of contention was what would be internationalized

first: the US nuclear stockpile or all global nuclear programs. The Baruch plan submitted by the US proposed that all nuclear programs be internationalized first, and only then would the United States relinquish itself of its atomic monopoly. The Gromyko plan submitted by the Soviets demanded the opposite—that US nuclear weapons be internationalized before it would surrender its nuclear program to the global community. Essentially, so much distrust existed between these states that both sides feared a first move might lead to detrimental geopolitical leveraging of the other. More and more, the US began to realize that future nuclear uncertainties would be settled among states, not a collective international body. As I attempt to recast the Nuclear Arms race in a context of Nuclear History rather than merely a Cold War history, the abandoning of international control was a watershed moment. In no proceeding scenario was global cooperation regarding Nuclear Warfare been as feasible right after World War II nor will it likely ever be as simple of a process as it would have in in the late 1940's. It is in this moment that the Nuclear Arms Race truly began.

Given the ever-heightening tensions with the Soviet Union, U.S. policymakers were unwilling to set any limits as to the use of atomic weapons. In fact, this document affirmed that no such definition would, or even should, be given. To officially establish definitive parameters surrounding the use of atomic weaponry regardless of circumstantial context would be "a prescription preceding diagnosis"⁴⁶:

"The United States has nothing presently to gain, commensurable with the risk of raising the question, in either a well-defined or an equivocal decision that atomic weapons would be used in the event of war. An advance decision that atomic weapons will be used, if necessary, would presumably be of some use to the military planners. Such a decision does not appear essential, however, since the military can and will, in its absence, plan to exploit

⁴⁶ US National Security Council, "NSC 30: United States Policy on Atomic Warfare," September 10th, 1948

every capability in the form of men, materials, resources and science this country has to offer."⁴⁷

From the earliest days of nuclear policy formation, the long-term viability of strategic nuclear armament was largely disregarded. This document evinces that official policy served as an unambiguous removal of limitation upon war planners to pursue whatever action in wartime scenario they saw fit. Every aspect of the national resources available could potentially be utilized in order to construct a sound atomic arsenal. Government officials believed the U.S. atomic monopoly to be the only theoretical deterrent that prevented the U.S.S.R. from further military expansion. Therefore, to limit its development would be to limit U.S. interests throughout the world. A policy of unobstructed nuclear armament did not seriously consider the fiscal or societal consequences of its implementation. While armies and navies necessitated a period of mobilization before combat, it would not take long before the immediacy of air domination became viewed as essential in claiming military victory—thereby justifying the need for air power to be constantly maintained and nuclear arsenals continuously at the ready.

While atomic planning was not to be regulated by the National Security Council, its general objectives were strikingly vague in the Cold War's earliest years. NSC 20/4, an outline of official U.S. policy towards the U.S.S.R. and its communist bloc, directed a reduction of "the power and influence of the U.S.S.R. to limits which no longer constitute a threat to world peace, national independence and stability in the world family of nations." US officials feared the communist ideology of the Soviets, but more importantly, they took alarm at the expansionary policy which the Kremlin actively disseminated among regional states. Coupled with impressive industrial output and the most formidable military across Eurasia, the NSC 20/4 considered the

⁴⁷ US National Security Council, "NSC 30: United States Policy on Atomic Warfare," September 10th, 1948

⁴⁸ US National Security Council, "NSC 20/4: U.S. Objectives with Respect to the USSR to Counter Soviet Threats to U.S. Security," September 23rd, 1948.

Soviet Union to be the gravest threat to the security of the United States within the foreseeable future.

It is at the intersection of these two directives—NSC 30 and NSC 20/4—that the quandary of U.S. policy regarding the Soviet Union became evident. These documents, implemented in tandem as U.S. policy, intended to mutually support one another. Yet the logic propelling each document was counterintuitive to the other. In NSC 30, war planners were given the authority to enact any means to achieve the objectives of NSC 20/4. Yet the goal of diminishing the Soviet threat to a level which would "no longer constitute a threat to world peace" is inherently at odds with increased military capability. A more threatening U.S. nuclear stance would become the impetus which drove the U.S.S.R. to itself become a greater military threat. "The growth of a U.S. nuclear capability," Historian David Alan Rosenberg wrote, "was largely justified in terms of the need to counter a growing Soviet nuclear threat." This race of arms was anticipated by NSC planners, and eventually become a routinely analyzed procedure by the NSC's Net Evaluation Subcommittee (NESC). Instead of evaluating US dominance in the world as it stood, it became the job of the NESC to evaluate US superiority several years ahead of present conditions—a testament to the fluidity and instability in this era of atomic expansion.

NSC 20/4 stated that Soviet capabilities "will progressively increase and that by no later than 1955 the USSR will probably be capable of serious air attacks against the United States with atomic, biological and chemical weapons." ⁵⁰ One nation's dominance was relative to the other's vulnerability. Therefore, the objective "to counter" Soviet influence and capability was incompatible with the objective "to reduce" Soviet influence and capability—both phrases were

-

⁴⁹ David Alan Rosenberg's Origins of Overkill: Nuclear Weapons and American Strategy, 1945-1960.

⁵⁰ US National Security Council, "NSC 20/4: U.S. Objectives with Respect to the USSR to Counter Soviet Threats to U.S. Security," September 23rd, 1948.

employed in these earliest NSC directives. No serious assessment was given as to how Soviet armament could be reduced. Instead, NSC 20/4 and NSC 30 focused on how the *relative* threat of Soviet armament could be reduced. By maintaining a faster rate of growth in both quantity and quality of military capability—atomic and otherwise—the National Security Council believed that the United States security would be maintained. This policy though would inevitably fail to reduce the long-term threat of Soviet arms. It plotted a course for exponential growth of atomic armament and unprecedented increases in military expenditures. Intended to be more than a wasted asset, the growth of these military forces meant operational planning willing to affect more violence than in any prior military engagement.

The primary importance of NSC 30 and NSC 20/4 was the nuclear paradigms they made manifest across the U.S. nuclear bureaucracy. Rather than these NSC directives playing a decisive role in material production of nuclear arms, they served as an expression of the dilemmas from which policymakers could not escape in regard to nuclear thinking. Their emphasis on nuclear preponderance justified as a means to diminish "the USSR to limits which no longer constitute a threat to the peace" enabled military technocrats to be the judges of what constituted viable nuclear options. Nuclear victory became the business of agencies, commissions, and commands rather than presidents, cabinets, and councils. What exactly satisfied the requirement of deterrence and feasible wartime victory became an operational and technical feat—reducing or eliminating available alternatives for high-level officials. As historian John M. Curatola concluded: "Due to the lack of strategic guidance from the national political leadership and with little real understanding of atomic effects, the wartime operational

_

⁵¹ US National Security Council, "NSC 20/4: U.S. Objectives with Respect to the USSR to Counter Soviet Threats to U.S. Security," September 23rd, 1948.

influences would dominate nuclear postwar planning efforts up into the 1950s."⁵² Curatola argues in his book *Bigger Bombs for a Brighter Tomorrow* that the objectives outlined in these preliminary directives were not operationally feasible.⁵³ The value of NSC 30 and NSC 20/4 was the mode by which nuclear armament was to be conceptualized moving forward. They serve as a convenient starting point of atomic objectives, and a troubling example of how little nuclear strategy actually evolved.

Offtackle

Upon the release of NSC 30 & NSC 20/4, the Joint Chiefs of Staff began aligning hypothetical wartime scenarios between the US and USSR with official policy. The JCS had actually begun constructing these operational plans as early as 1946, but without direction from the Truman administration or even much information from agencies regarding actual atomic capabilities. ⁵⁴ Interestingly enough though, these plans, proposed after NSC guidance was released, were quite similar to their unregulated predecessors. If anything, the unambiguous position of non-regulation within NSC 30 and NSC 20/4 emboldened JCS planners to continue maximizing target potentials and vital atomic resources—pressuring agencies such as the Atomic Energy Commission (AEC) to ramp up their production of atomic weaponry and the Strategic Air Command (SAC) to acquire the necessary delivery system for atomic bombing.

⁵² Curatola, John M. "National Security Objectives?" *Bigger Bombs for a Brighter Tomorrow: The Strategic Air Command and American War Plans at the Dawn of the Atomic Age, 1945-1950.* Jefferson, NC: McFarland &,, 2016. 88-95. Print.

⁵³ Ibid.

⁵⁴ Ibid.

Offtackle was the United States' first politically sanctioned war plan integrating atomic weapons with conventional air forces prepared in 1949.⁵⁵ It was by far the most comprehensive air offensive list to date with 123 sites targeted. The plan called for five days of aircraft mobilization—mostly transporting bombers and their equipment to bases in the United Kingdom but some mobilization in the Pacific-Alaskan region as well. On day six, 211 bombers would leave UK and Alaskan bases targeting 32 Soviet targets scheduled to be completed within 4 hours of takeoff. Of the 201 bombers departing from UK airports, 112 would proceed through a Scandinavian route in the North and entering the USSR near Leningrad (now St. Petersburg) while the remaining 89 would sweep down over the Black Sea before penetrating Soviet territory Southwest of the Ukraine. In total these forces were responsible with destroying 26 Soviet targets, while Pacific forces were responsible for six. Given the limited intelligence available, it was deemed that 60 sites were readily available for attack while 63 targets needed further reconnaissance. So As US forces rolled across currently known targets, intelligence would be gathered on the remaining so that all 123 instillations could be eliminated.

The second wave of attack would happen no later than 3 days after the first and by day 30, all 123 targets would be struck. By the first three months of combat a total of 292 atomic weapons and 17,610 tons of conventional bombs would be dropped. The remainder of the plan covered 2 more years of conflict but became more ambiguous as unpredictable factors demanded flexibility while the war progressed.⁵⁷

⁵⁵ Presentation by the Strategic Air Command General J. B. Montogomery, Commanders Conference, Ramey Air Force Base, 25-26-27 April 1950, Top Secret; see pages 203-231 of the transcript.

⁵⁶ Ibid.

⁵⁷ Ibid.

The crucial elements of Offtackle lie not in its immediate operational feasibility, however. Indeed, General George Kenney of the US Air Force remarked, "It was quite evident to all ... that Plan 'Offtackle' was decidedly unrealistic." ⁵⁸ Rather it served as a convenient framework from which future war plans may be derived. First, it is based on the assumption that war would begin due to Soviet aggression. In so doing, it denied the possibility of a preventive US attack against the Soviets without provocation or warning and increased the possibility that Soviet aggression might destroy key wartime resources or disrupt vital communication lines prior to US mobilization. This was in line with the limitations provided by NSC 20/4 and it was also the most substantial limitation placed on operational planners. The concept of preventive attack (mentioned in the prior chapter) was not unanimously opposed by high-level officials though. General Kenney himself advocated for it, saying that in fact "It would not be preventive war, because we are already at war."⁵⁹ Nevertheless, at no point did the JCS fully support preventive war nor did a significant portion of the civilian members of the NSC. Therefore, unacceptable provocation by the Soviet Union continued to be a prerequisite for Offtackle and other war plans throughout the remainder of the Cold War.

Second, the language of the plan alluded to a more holistic offensive strategy than previously devised. Preceding war plans called for air forces to be directed "against" vital Soviet war making centers, but Offtackle instructed air forces to "destroy" these centers. ⁶⁰ Indeed, the JCS approved a memo which stated that Offtackle would be able to "make the maximum contribution toward disrupting the vital elements of the Soviet war-making capacity, force new

⁵⁸ Letter from General George C. Kenney, Air University, to Air Force Chief of Staff General Hoyt S. Vandenberg, 29 April 1950, Top Secret

⁵⁹ Ibid.

⁶⁰ United States of America. Office of Joint History & Office of the Chairman of the Joint Chiefs of Staff. *The Joint Chiefs of Staff and National Policy*. By Kenneth W. Condit. Vol. II. Washington DC: Library of Congress, 1996. Print. 1947-1949.

decisions [upon the enemy], and be immediate assistance in retarding the Soviet advances in Western Eurasia."⁶¹ The categorization of war making *capacities* as vital components of the Soviet threat broadly expanded the urban-industrial centers which nuclear planners may target. Detectable in previous war plans, but increasingly so in Offtackle, the line between military and civilian target continued to blur. To be a contributor toward the gross domestic product of the Soviet Union would in essence be a qualifier of air offensive targeting. This basic tenet of nuclear planning formulated in the Cold War's earliest years would be consistent throughout the nuclear arms race and a fundamental rationale behind the massive scope of SIOP-62 a decade later.⁶²

Third, the JCS assembled an interservice committee to conduct a study of the effects of atomic bombing at around the same time Offtackle was being formulated. Their findings, expounded in a document entitled "the Harmon Report," gave further impetus that atomic weapons must continue to be the chief reliant upon which United States security depends. The report stated: "From the standpoint of our national security, the advantages of its early use would be transcending. Every reasonable effort should be devoted to providing the means to be prepared for prompt and effective delivery of the maximum numbers of atomic bombs to appropriate target systems." The war plan preceding Offtackle, entitled TROJAN, called for the targeting of 70 sites. This amount was estimated to destroy 35 to 40 percent of Soviet

⁶¹ United States of America. Office of Joint History & Office of the Chairman of the Joint Chiefs of Staff. *The Joint Chiefs of Staff and National Policy*. By Kenneth W. Condit. Vol. II. Washington DC: Library of Congress, 1996. Print. 1947-1949. A reference in Chapter 6 and cited as: (TS-RD) ICS 2056,31 Aug. 49, and Dee On, 24 Ott 49; (TS) JCS 2056/3,23 Nov 49, and Dee On, 1 Dee 49; CCS 373.11 (12-1448) iec 1.

⁶² An example of the eventual plans for massive population fatalities see David Alan Rosenberg and W. B. Moore's "Smoking Radiating Ruin at the End of Two Hours": Documents on American Plans for Nuclear War with the Soviet Union, 1954-55

⁶³ United States of America. Office of Joint History & Office of the Chairman of the Joint Chiefs of Staff. *The Joint Chiefs of Staff and National Policy*. By Kenneth W. Condit. Vol. II. Washington DC: Library of Congress, 1996. Print. 1947-1949.

industrial capacity and cause 6.7 million casualties—2.7 million of those being fatal. Offtackle though increased these targeting sites nearly 80 percent. ⁶⁴ Therefore, Offtackle reflected a growing consensus among policymakers: that a general conflict between the US and USSR will be determined by the swiftness and scope of atomic utilization. In effect, relative superiority of atomic yield and delivery effectiveness would be crucial. To continue this embittered rivalry, more elaborate, expensive, and deadly operational plans would be necessary if the United States was to maintain its perception of security.

Eisenhower's "New Look" Policy

With the heightened sense of insecurity that accompanied the Korean War, US officials briefly adopted the policy of symmetrical mobilization as elaborated in NSC-68. The demands of this policy would not become permanent, but the military resources deemed necessary to counter Soviet aggression became substantially more available. As these documents emphasized the imminence of potential threat and the dependence upon military action at deterring such a threat, coupled with serious ambiguity regarding how atomic planning should be overseen, they reveal an administrative atmosphere conducive to military, particularly nuclear, expansionism, and new state apparatuses to organize and exploit this newfound military potential. President Eisenhower instituted what I categorize to be the "third phase" of pre-stalemate nuclear policy upon

⁶⁴ United States of America. Office of Joint History & Office of the Chairman of the Joint Chiefs of Staff. The Joint Chiefs of Staff and National Policy. By Kenneth W. Condit. Vol. II. Washington DC: Library of Congress, 1996. Print. 1947-1949.

assuming office in 1953. The remaining documents discussed will originate from his strategic outlines.

Under no other presidential administration has the United States held as clearly articulated of a grand nuclear strategy as under Dwight Eisenhower.⁶⁵ Through the introduction of his "New Look" defense strategy, the onus of Soviet deterrence would once again return to the U.S. nuclear arsenal. He viewed nuclear weapons as "an essential substitute for ruinous spending on larger conventional forces" and more ominously that "not just the possession of nuclear weapons but the credible inclination to use them" would be necessary if this defense strategy were to succeed. Therefore, it was under this strategy, elaborated in NSC-162/2, that a document such as the Single Integrated Operational Plan for fiscal year 1962 (SIOP-62) came to be possible.

Published in October of 1953, NSC-162/2 admitted the eventual stalemate of the nuclear arms race. It states:

"In the face of the developing Soviet threat, the broad aim of the U.S. security policies must be to create, prior to the achievement of mutual atomic plenty, conditions under which the United States and the free world coalition are prepared to meet the Soviet-Communist threat with resolution..." ⁶⁸

The National Security Council feared that in the process of nuclear armament, the Soviet Union may detect and exploit an advantageous moment to eliminate the threat posed by the United States and its allies—a preventive attack. Routine assessments of Soviet nuclear progress were implemented to ensure that "U.S. retaliatory capability cannot be neutralized by a surprise

⁶⁵ Millen, Raymond. "Eisenhower And US Grand Strategy." *Parameters: U.S. Army War College* 44.2 (2014): 35-47. *Academic Search Premier*. Print.

⁶⁶ Robert J. McMahon. "14 – US national security policy from Eisenhower to Kennedy." *The Cambridge History of the Cold War*. Vol. 1. Cambridge UP, 2010. 288-131. Print.

⁶⁸ US National Security Council, "NSC 162/2: Basic National Security Policy," October 30, 1953.

Soviet attack."⁶⁹ With the military focus once again placed upon superior nuclear arms, NSC-162/2 walked back claims from NSC-68 of an imminent Soviet danger. U.S. officials deemed the U.S.S.R. to be a rational state capable of assessing the threat to its own survivability if it were to provoke the United States into a general war. As long as the United States maintained a clearly visible nuclear potential, the peace could persist—the world could exist with both the United States and the Soviet Union for the foreseeable future. As statesman Brent Scowcroft once remarked: "The Cold War was not an acute crisis that had to be solved today; it was something we had to learn to live with."⁷⁰

This optimistic assessment of U.S.-Soviet coexistence though did pose problems which are evident throughout the document. If the Cold War conflict was to be a "slow burn" then the U.S. must form long-term fiscal solutions to an increasingly expensive question: How might the United States maintain nuclear supremacy for an indeterminate amount of time given a rapidly rising Soviet nuclear arsenal? From the outset of this directive, the NSC determined the "Basic Problems of National Security Policy" were "(a) To meet the Soviet threat to U.S. security," and "(b) In doing so, to avoid seriously weakening the U.S. economy or undermining our fundamental values and institutions." This worry is repeated throughout NSC-162/2.

Paragraph 40 (b) summarizes the dilemma well: "The United States must, however, meet the necessary costs of the policies essential for its security. The actual level of such costs cannot be estimated until further study, but should keep to the minimum consistent with the carrying out of these policies." Achieving a minimum cost while maintaining relative superiority were

.

⁶⁹ US National Security Council, "NSC 162/2: Basic National Security Policy," October 30, 1953.

⁷⁰ Showalter, Dennis E. *Forging the Shield: Eisenhower and National Security for the 21st Century*. Chicago: Imprint Publications, 2005. Print.

⁷¹ US National Security Council, "NSC 162/2: Basic National Security Policy," October 30, 1953.

⁷² Ibid.

counter-intuitive objectives. They were aware that a nuclear arms race, in which they determined the U.S. must always maintain an advantage, would require massive military expenditures. But they could not imagine any suitable alternative. NSC-162/2 assumed that the economic strength of a free-enterprise system could withstand the investment needed to ensure U.S. superiority until the "achievement of mutual atomic plenty." Given the "efficiency" of threat these nuclear weapons achieved in comparison to a buildup of conventional forces, Eisenhower and the National Security Council under his administration judged nuclear deterrence to be the most bearable and adequate means of deterrence.

This was not without producing further potential problems though. As nuclear deterrence came more and more to be seen as the only means of deterrence, the concept of "Massive Retaliation" began to appear in NSC policy planning. In its own words, NSC-162/2 called for "(1) A strong military posture, with emphasis on the capability of inflicting massive retaliatory damage by offensive striking power." U.S. allied nations in Europe and Far East Asia were still vulnerable to an unimpeded invasion if Soviet strategy deemed it advantageous.

Recognizing that the U.S. could not practically maintain the military manpower at these borderland locations as the Soviet Union or People's Republic of China could, administrative officials relied on what John Lewis Gaddis termed "asymmetrical" threat—that is the invasion of any one U.S. ally would result in an unleashing of all U.S. nuclear capability. Secretary of State John Foster Dulles described it this way in 1954:

"We keep locks on our doors, but we do not have an armed guard in every home. We rely principally on a community security system so well equipped to punish any who break in and

⁷³ US National Security Council, "NSC 162/2: Basic National Security Policy," October 30, 1953.

⁷⁴ Ibid.

⁷⁵ Gaddis, John Lewis. *Strategies of Containment: A Critical Appraisal of Postwar American National Security Policy*. New York: Oxford UP, 1982. Print.

steal that, in fact, would be aggressors are generally deterred [...] We want, for ourselves and the other free nations, a maximum deterrent at a bearable cost."⁷⁶

Therefore, the coupling of responsibility for a vast expanse of geopolitical space—from the Far East to West Germany—and with the obvious dissymmetry of manpower, Basic National Security Policies maintained a firm reliance upon the unthinkable option of massive retaliation. This maximum deterrent though only hastened the "fantastic compression of time" which states might mobilize its resources to wage war. Instead of a gradual and clearly evident mobilization of military capability, massive retaliation necessitated the immediate depletion of the U.S. nuclear stockpile in coordination with one another. "Whereas in the past, if [offensive striking capability] had failed to act, the United States still could mobilize forces, in the late air-atomic era, it must act immediately to avoid instant defeat." In this sense, a sound defensive strategy would be, not the potential for a powerful buildup of military capability, but the sustained maintenance of the ultimate offensive capability. Within the rationality of NSC-162/2 and its preceding BNSP updates, a continually revised and expanded operational plans would be necessary in order to utilize all new atomic resources made available—ideally as a deterrent but potentially as a killer of nations.

** ** Massive Retaliation ** **

_

⁷⁶ Dulles, John Foster "Speech on the Need for Long-Range Policies" (Excerpt on Massive Retaliation) January 12, 1954

⁷⁷ Kaplan, Edward. *To Kill Nations: American Strategy in the Air-Atomic Age and the Rise of Mutually Assured Destruction*. Ithaca: Cornell U, 2015. Print.

In the opening years of the Cold War, the use of nuclear weapons was considered a viable, albeit undesired, alternative. But as nuclear war came to be more and more consequential, the structure of US policy shifted. War with the Soviet Union would no longer be take years or months. Assessment of wartime scenarios determined the decisive moments of war to be nearer and nearer the point of initial aggression and at exponentially higher costs. This section considers the "fantastic compression of time" that emerged around the middle of the 1950's, how it was perceived by US officialdom, and how wartime scenarios responded to these heightening stakes.

"Fantastic Compression of Time" 1954-55

By 1954, the United States' assessment of Soviet nuclear capabilities suggested an uncertain future for the US position of dominance. Both states had now successfully displayed their thermonuclear capabilities, and now only a matter of time stood between their present moment and the day of "greatest danger" when tensions between the two states—primarily growing due to nuclear expansion—might reach levels of maximum insecurity. Projections put this "time of greatest danger of a Soviet nuclear attack on the United States [around] mid-1957," only three years forward. The NSC, though, did not believe overt attack would be the Soviets strategy to expand its global influence. Instead they assumed the USSR would take the approach of "creeping expansion" as they called it—through subversive action. The NSC doubled down on their policy that given the outbreak of general war "the United States will wage it with all available weapons" so as to show no sign of hesitancy to the communist sphere

_

⁷⁹ Memorandum of Discussion at the 209th Meeting of the National Security Council, Thursday, August 5, 1954.

⁸⁰ NSC 5422, "Study Prepared by the National Security Council Planning Board," [Washington,] June 14, 1954.

regarding US means of maintaining its security, and therefore substantial resources were put forth to maximize weapon and delivery systems availability.

SAC was the premier tool by which nuclear weapons would be delivered to their target location. In a briefing given to the representatives of all military services at the SAC headquarters, General Curtis Lemay, head of SAC, described to the other military branches the optimum plan of US wartime execution. Below is a Navy summary of his report:

"It was estimated that SAC could lay down attack [...] of 600-750 bombs by approaching Russia from many directions so as to hit their early warning screens. It would require about 2 hours from this moment until bombs had been dropped by using the bomb-asyou-go system in which both BRAVO [nuclear] and DELTA [urban-industrial] targets would be hit as they reached them. [...] The final impression was that virtually all of Russia would be nothing but a smoking, radiating ruin at the end of the two hours." 81

Clearly, SAC planners had successfully compressed the moment of decisive action from months to hours. They determined that given a "Pearl Harbor-style" Soviet attack, between 8.9% to 90% of SAC capabilities would be destroyed—meaning essentially that they could not ascertain to what degree a surprise attack would affect the survival potential of their command. 82 This in turn demanded further readiness and flexibility on the US nuclear arsenal as a moment of vulnerability in US posturing could result in the unwinding of deterrence and possibly an intolerable degree of damage against the state.

Throughout this period, regularly updated reports on the extent of potential damage the US could enact of the Soviet Union were being produced. Constructed in 1955, the Defense Department's Weapons Systems Evaluation Group (or WSEG) produced a document titled "WSEG Report number 12" evaluating this damage and the manner in which it was to be

45

⁸¹ Lemay, Curtis. Memorandum Op-36C/jm 18 March 1954.

⁸² Ibid.

delivered. Report 12 in many ways was similar to previous wartime scenarios. Targets were separated into BRAVO, ROMEO, and DELTA (or blunting, retardation, and destruction) categories, and the report assumed that SAC's "bomb as you go" system was standard procedure. It was determined that 118 out of 134 major Soviet cities would receive "calamitous damage" and that "the majority of skilled personnel living in those cities would be lost." 83

When viewed in tandem, these documents represent the beginning phases of US massive retaliation operational tactic. While nuclear targets would be prioritized both military and industrial centers would be targeted. The execution of these bombing campaigns would be swift—no more than 2 hours upon their detection by Soviet radar. The reasoning for this overwhelming approach to nuclear bombardment was largely operational convenience. This reasoning was summarized succinctly by SAC commander General Moore:

"Such an all-out attack would provide the largest degree of protection to SAC crews. By a predominant use of large nuclear weapons, moreover, one crew could be counted upon to destroy as many individual targets with single weapons, thus achieving a 'bonus effect' that was thought to be quite important in view of the many targets requiring destruction and limited size of the Strategic Air Command." 84

As these national policies and operational procedures settled in as the new normal for nuclear planning, undetectable and massively destructive weaponry became necessary to maintain deterrence. Nuclear war was no longer bound within the traditional limitations of warfare. No real constraints were placed on what was and was not to be targeted and, if called upon to act, the US military would make its decisive blows before the day had ended. The era of

⁸⁴ Futrell, Lemmer, The Air Force and Strategic Deterrence, pg. 551-552.

46

⁸³ Briefing of WSEG Report No. 12 [Part of David Alan Rosenburg's publication: "Smoking Radiating Ruin at the End of Two Hours': Documents on American Plans for Nuclear War with the Soviet Union, 1954-55." 1981-2.

conventional warfare methods was fading from view and the era of massive retaliation became the fast approaching vista of awe and terror.

NSC 5602/1

As mentioned in the prior chapter, the United States nuclear arsenal stood at 369 weapons in 1950. 85 By 1959 that number grew to 12,305 and only two years later, as Eisenhower neared his last days in office, that number nearly doubled at over 23,000. 86 The potential consequences of an immediate nuclear launch ensured that both the United States and the Soviet Union maintained ever-ready nuclear systems. Therefore, an unmitigated thermonuclear presence became the global norm. NSC-5602/1, the 1956 BNSP (or Basic National Security Policy) update, stated that "because of the increasing importance of forces-in-being in an age of nuclear weapons, economic and industrial potential for production after war begins is becoming a less dependable measure of the ability to achieve victory in general nuclear war than in past years." War potential had become so deadly that wholescale industrial capacities and urban centers of adversarial states were viable strategic targets for thermonuclear attack. Understanding that their enemy would also consider these targets viable, NSC officials came to realize the decimation that their own nation faced in the event of a general war.

⁸⁵ Holloway, David. "18 -- Nuclear Weapons and the Escalation of the Cold War, 1945-1962." *The Cambridge History of the Cold War.* Vol. 1. Cambridge UP, 2010. 376-97. Print.

⁸⁶ Howard, Michael, George J. Andreopoulos, and Mark R. Shulman. "Nuclear War Planning." *The Laws of War: Constraints on Warfare in the Western World.* New Haven: Yale UP, 1994. 160-77. Print.

⁸⁷ US National Security Council, "NSC 5602/1: Basic National Security Policy," March 15, 1956.

NSC-5602/1 lays out quite accurately how the US-Soviet nuclear arms race would develop. It acknowledged the impeding shift of weapon delivery from aircraft to a hybrid of land-based ballistic missile, aircraft, and submarine-launched ballistic missile, and it accurately determined that the United States would hold an edge in these developments over the next few years. It also stated on several points, if ambiguously, how flexibility must be allowed into both location of the nuclear arsenal and the options available for use. The policy states:

"They must be highly mobile and suitably deployed, recognizing that some degree of malemployment from the viewpoint of general war must be accepted. Such forces must not become so dependent on tactical nuclear capabilities that any decision to intervene against local aggression would probably be tantamount to a decision to use nuclear weapons. However, these forces must also have a flexible and selective nuclear capability, since the United States will not preclude itself from using nuclear weapons even in a local situation."

Yet the document did not address how to in fact add further flexibility. Indeed, increasing Presidential nuclear options was an issue which stumped administrations for decades to come, but nevertheless, NSC-5602/1 clearly stated this as a potential issue not regularly recognized in prior official documentation.

The policy also hinted toward a looming anxiety throughout the US policy sphere—the day of nuclear ultimatum where potentially the state must choose between an international loss of face or general nuclear war. "The United States and its allies must avoid getting themselves in a position," it states, "where they must choose between (a) not responding to local aggression and (b) applying force in a way which our own people or our allies would consider entails undue risks of nuclear devastation." This remained a chief concern throughout these years as the United States was not only engaged with its European allies, but in several geographic areas deemed of

48

⁸⁸ US National Security Council, "NSC 5602/1: Basic National Security Policy," March 15, 1956.

high interest around the globe. Projection of US influence—in all its forms—was regarded as a necessity so that US interests could remain vivacious on a global scale. This fear was augmented by the technological advancement that made an all-out nuclear war all but intolerable. "A situation is approaching in which a total war involving use by both sides of available nuclear weapons could bring about such extensive destruction as to threaten the survival of both Western civilization and the Soviet system." While past policy documents stated that nuclear parity was a concern in upcoming years, this NSC 5602/1 statement seems to suggests it was now a reality.

Even as the nations' two arsenals remained asymmetrical, the potential destruction of both the US and Soviet found the nuclear capability of the other to exceed the acceptable level of their own nations destruction. All alternatives to inciting such an instance would be considered before accepting that general war was necessary. Although still primitive in its language, NSC-5602/1 began nuclear assessments of atomic parity that would become normative for the ensuing decades. It admitted how ill-prepared the United States was, or even could be, in defense of a Soviet nuclear attack and endeavored to find alternatives routes of coercion and influence in disrupting nefarious Soviet activity. This document is laced with the anxiety of a state stretched to distant reaches of the globe, determined not to lose that hold, and self-conscious of how a global retraction might diminish its international repute. In many ways NSC-5602/1 is a snapshot of transition between the old age of the tolerable weaponized atom and new age of its unspeakable use.

SAC Targeting Plan for 1959

_

⁸⁹ US National Security Council, "NSC 5602/1: Basic National Security Policy," March 15, 1956.

A recently declassified SAC targeting plan titled Atomic Weapons Requirements Study for 1959 reveals the extent and nature of bombing operations that the US Air Force developed given an escalation of hostilities by the year 1959. Dr. William Burr of the National Security Archive (or NSA) states that this document "provides the most comprehensive and detailed list of nuclear targets and target systems that has ever been declassified."90 While this document is only one snapshot of SAC planning among an archive of declassified and still classified SAC targeting studies, how closely it aligned with the mainstream air-atomic dominance theory of the day evinces that its contents are not an outlier of Air Force thinking. Some of its specific targeting categories are unprecedented when compared to other wartime plans available for public analysis, but this may possibly be due to the continued classification of similar documents or redaction from these plans' targeting categories and not necessarily because this is a fringe study with little support. The breadth of this work suggests that the resources necessary for its creation would not be allocated if not seriously considered. Likewise, the study claims the basis of its creation on the authority of a JCS directive SK129-56 and JCS message 399095, 152849 in March of 1956. It is likely that this targeting list, when compared to the overarching objectives of war plans prior to and preceding this study and the methodical approach this document conveys in its targeting objectives and analysis, this list was a normative assessment of necessary attack locations to ensure what the Air Force deemed to be a US victory.

The overriding structure of this SAC study does not vary the framework of previous tactic of nuclear delivery. Its most fundamental objectives were to: "(1) Win the Air

⁹⁰ This statement was provided on the Electronic Briefing Book "U.S. Cold War Nuclear Target Lists Declassified for First Time," written by Dr. Burr, on the National Security Archives Digital Website. Posted - December 22, 2015.

Power Battle by Destroying SovBloc Air Power. (2) Destroy Systematically SovBloc War-Supporting Resources."91 To accomplish this the document employed the JCS-established targeting categories of BRAVO targets (blunting of Soviet counteroffensive), ROMEO targets (retardation of soviet troop advancement westward throughout Europe), and DELTA targets (disruption/destruction of the Soviet economic base) to be the basis of target organization. As the study states, "These objectives are basic and valid," suggesting no substantial deviation from former procedures. Upon the engagement of general hostilities, SAC forces would work to prioritize the destruction of Soviet air forces and air offensive threats. Atomic forces, defense forces, and tactical forces would be targeted first followed by Soviet bloc air bases, launching sites and depots, and atomic stockpile sites. Once the Soviet air threat had been neutralized, focus would shift towards DELTA targets—military and governmental control centers as well as air industry resources to render not only present, but future air capability paralyzed as well. "It is here that the enemy's basic industries are brought [under?] attack," the study reads, "and the final blows are brought to bear against his economic base and his remaining government structure, with attendant physical, sociological, and psychological effect."92

The plan called for the destruction of 5975 targets, 938 of which are designated as DELTA targets, and builds into this plan duplications of target destruction to ensure more valuable targets have higher probabilities of successful termination. These probabilities range from 50% to 70% to 90% in likelihood of destruction. The study also does not consider the effects of thermal or radiation destruction as "both are relatively ineffective compared with

⁹¹ The SAC [Strategic Air Command] Atomic Weapons Requirements Study for 1959. Title page, table of Contents and introduction. Posted on the Electronic Briefing Book "U.S. Cold War Nuclear Target Lists Declassified for First Time," by Dr. Burr on the National Security Archives. Posted - December 22, 2015.

⁹² Ibid.

blast."⁹³ It goes on to say "radiation effects are particularly ineffective in terms of time, due to their delayed arrival and subsequent decay."

Also, included in this study is the list of every targeted city corresponded by the categories of intended industrial destruction within each city. This may be the only publicly available description of what specific targets nuclear bombardment aimed to destroy. The list did not differentiate between national borders and only differentiated between the three "zones" of communist control (USSR, Communist China, and Soviet Satellites) in order of priority. Most ominously, this categorization described "population" as one of several dozen intended categories of destruction. Virtually every city attacked included population as one of several categories intended to destroy. The complete targeting list includes well over one thousand cities from Beijing, China to East Berlin, East Germany in what it terms "systematic destruction." Within the five major communist cities alone—Beijing, Leningrad, Moscow, Warsaw, and East Berlin—this SAC study called for the decimation of 19 population centers. 94 This targeting list reveals that targets of capital (factories, equipment, etc.) were not the only industrial resources directed to be eliminated, but that dense sources of labor were also seen as essential in order for "the final blows [to be] brought to bear."

The Atomic Weapons Requirements Study for 1959 recasted the nature of nuclear planning as an amoral operation. Nuclear planners considered congregated sources of labor to be one cog of the larger industrial behemoth that the Soviet might employ against the United States.

_

⁹³ The SAC [Strategic Air Command] Atomic Weapons Requirements Study for 1959. Title page, table of Contents and introduction. Posted on the Electronic Briefing Book "U.S. Cold War Nuclear Target Lists Declassified for First Time," by Dr. Burr on the National Security Archives. Posted - December 22, 2015.

⁹⁴ An interactive map of these cities and their target categorization was accomplished by Dr. William Burr on the Electronic Briefing Book "U.S. Cold War Nuclear Target Lists Declassified for First Time," in National Security Archives digital page, which can be found at: http://nsarchive.gwu.edu/nukevault/ebb538-Cold-War-Nuclear-Target-List-Declassified-First-Ever/#_edn4

They determined explicit depopulation as a viable targeting measure in order to achieve US objectives. In this regard, mass extermination of human life planned by SAC was not a byproduct of nuclear warfare. Mass extermination was itself the ultimate aim. This study, seemingly standard protocol for SAC, disregarded international norms of the day and would potentially have been labeled as genocidal planning. ⁹⁵ In its opening mission statement, the study states:

"In the event of general war, the mission of the Strategic Air Command is to conduct global strategic air warfare in support of US national and military objectives utilizing atomic and nuclear weapons. In view of the growing Soviet threat to the US and its Allies, as well as the increasing Soviet capability to launch an atomic offensive against them, the accomplishment of the SAC mission must be realized through the execution of [air power dominance and the systematic destruction of the SovBloc war-supporting resources]."

To be employable, to be able bodied, to be of sound mind—these are the human traits that qualified Soviets as potential "war-supporting resources." Just as steel mills and ammunition factories were vital tools in the Soviet war-making effort, so too were the people who might operate them. This study revealed how international enmity coupled with thermonuclear armament demanded a readiness by the state to annihilate any inputs required for Taylorian manufacturing or the urban environments which made Taylorian manufacturing possible. This plan went beyond the destruction of militaries or their commanding outputs. SAC intended to unwind the very fabric of a society. Industrialism and urbanization—the essence of technological progress—when within the confounds of "SovBloc" control was viewed as threatening.

Countries could be killed. Cities could be sanitized. The United Stated developed these extraordinary capabilities so that its global interests may be maintained. *The Atomic Weapons*

⁹⁵ The SAC [Strategic Air Command] Atomic Weapons Requirements Study for 1959. Title page, table of Contents and introduction. Posted on the Electronic Briefing Book "U.S. Cold War Nuclear Target Lists Declassified for First Time," by Dr. Burr on the National Security Archives. Posted - December 22, 2015.

Requirements Study for 1959 is the most honest depiction of nuclear war discussed in this chapter. The totality of its execution is not explained in ambiguous terminology, but as calculated statistics. As Secretary of Defense Robert McNamara refused to accept the calamity of SIOP-62 and the rigidity by which it demanded these actions be taken, it was the intended depopulation of entire nations that moved McNamara to find some other alternative. What constituted a military victory was beyond the bounds of his own political will. In the end though, the compulsion towards state security trumped his detestation for nuclear exchange and the potential for these nuclear atrocities persisted—both in that day and into our own.

Conclusion

"...the essence of totalitarian government, and perhaps the nature of every bureaucracy, is to make functionaries and mere cogs in the administrative machinery out of men, and thus to dehumanize them." – Hannah Arendt

Once again, I return to the idea of the United States' nuclear dilemma existing in a quandary. The opposing interests of the military in assuring a wartime victory and the political desire for national survival post-nuclear war were not and cannot be compatible. Through this paper, I have laid out several of the alternatives available to the US government and how massive retaliation as an operational plan and assured destruction as a national policy remained the continued nuclear positioning throughout the nuclear arms race. By contrasting a variety of nuclear alternatives—flexible response, symmetrical mobilization, finite deterrence, and preventive attack—I have shown how massive retaliation and assured destruction were not merely presidential preferences, but the most viable option for national survival that, despite various attempts to enact new policies, spanned across historical particularities, party affiliation, or leadership style.

At an NSC meeting in 1958, President Eisenhower quipped "...that he could remember well when the military used to have no more than 70 targets in the Soviet Union and believed that destruction of these 70 targets would be sufficient. Now, however, a great many more targets had been added." Still moments later, he gave his approval of the nuclear targeting of all Soviet cities over the population of 25,000. In a matter of 10 years the capacities of another general war

_

⁹⁶ Memorandum, "Discussion at the 387th Meeting of the National Security Council, Thursday, November 20, 1958," November 20, 1958, Top Secret

grew exponentially. No longer was it a struggle to dominate one's military and capture their cities, but to eviscerate their national livelihood entirely.

While presidential oversight certainly played a role in the guidance of nuclear strategy, it should be noted how autonomous the nuclear-industrial complex came to be throughout Eisenhower's administration and onward. A 1960 NSC memorandum on a proposal to reach a potential bilateral agreement with the Soviets to cut off of fissile materials production is very telling to the nature of the larger nuclear capabilities' system. In this document, President Eisenhower expresses his deep conviction that some sort of agreement needed to be reached. "We can't go on the way we are," he said, "with the nuclear build-up and the spread of capabilities."97 The Defense Department was hesitant to agree—noting the potential vulnerabilities that could arise from cutting off fissile production for US nuclear arsenals. The President then said that "the Defense analysis appeared to him one-sided and in a vacuum. It stressed the effects of a cut-off on the U.S. without looking at the effects on the Soviet Union. He thought that any equitable arrangement leading to mutual inspection was in our interest." ⁹⁸ While it is an often-said proverb by historians to avoid analyzing an event or phenomenon "in a vacuum," the President of the United States expressed concern that Defense policy was often constructed exactly that way. Deterrence as a theoretical concept was never tied down to a quantifiable value of measurement that could be broadly accepted. It held different meanings to the strategist who spoke of its necessity. Therefore, much of the justification for these plans, and

 ⁹⁷ Memorandum of Conversation Prepared by Philip Farley, Special Assistant to the Secretary of State for Atomic Energy Affairs, "NSC Meeting on Nuclear Cutoff," 18 February 1960, Secret (Note 13)
 Location of original: RG 59, Policy Planning Staff Records 1954-1962, box 116, Atomic Energy - Armaments 1960
 ⁹⁸ Ibid.

the deterrence they ensured, cannot be tied to specific events aside from the initial success of detonating atomic, and then thermonuclear, weapons.

Nuclear plans were not analyzed exogenously—in that any one geopolitical maneuver significantly altered the design of nuclear strategic course. Instead, it was an endogenous craft the degree which "we" perceive our survivability to be threatened by "them." The imminence of this threat rose and fell over the decades, but any change in threat never redirected how nuclear deployment would function. In essence, those who formed nuclear plans were academics economists, mathematicians, scientists—who operated under the loose restrictions of NSC directives to find the most effective and efficient means to destroy a nation. The studies of these scientists "were scientific, so it was thought; there were numbers, calculations, rigorously checked, sometimes figured on a computer. Maybe the numbers were questionable, but they were tangible unlike the theorizing, the Kreminology, the academic historical research and interpretation. [One influential scientist] snootily denigrated all such work as being in 'the essay tradition." Their conclusions were empirical: what degree of target destruction can be achieved with X number of B-52 bombers? And they sneered down upon those who attempted to grapple the Cold War as an issue of history, of political science, of unpredictable human behavior. In many respects, their plans were created in a vacuum—ignoring the unfolding geopolitical events, neglecting the complexities of how nuclear capability changed state behavior.

External events certainly did play a role in effecting nuclear saber rattling—the Korean War as mentioned before, as well as others such as the escalating conflict in Vietnam and the

_

⁹⁹ Fred Kaplan's *The Wizards of Armageddon* explains in great detail this disconnect between theoretical conceptualization of the consequences & application of nuclear capability and their real time quantifiable utility

Soviet invasion of Hungary in 1956 became so tense because nuclear warfare was becoming increasingly likely. The Berlin Crises and Cuban Missile Crisis certainly affected the potential for the use of nuclear weapons. But these events, in their respect to nuclear policy, should be viewed as escalations in a pre-determined nuclear trajectory, not substantial deviations on their own. The Cuban Missile Crisis did not change the way nuclear planners went about crafting nuclear bombardment—instead it affected the likelihood that these plans might actually be employed. Therefore, nuclear planning is a frightening example of military strength that was in fact, at least partially, constructed within a vacuum.

What I have argued is that the nature of nuclear tactic is inalterable. No personal impulse towards humanitarianism nor hawkish drive for a fully mobilized military can forgo the dependency upon nuclear weapons for perceived national survival. Yet this very capability is what has drawn the world to a real possibility of global genocide. When reviewing the final general war plans approved under the Eisenhower Administration, military commander Harry Felt commented that considering the global consequences such a thermonuclear bombardment would unleash, "our weapons can be a hazard to ourselves as well as our enemy." Using nuclear weapons had no practical utility for it posed a risk to all of the world regardless of national borders, yet their disposal paradoxically remained impossible. Similarly, Robert McNamara said in an interview once:

"...under no circumstances should [the U.S. and its NATO allies] ever initiate the use of nuclear weapons. I believed it then, I believe it today. Nuclear weapons have no military utility whatsoever, excepting only to deter one's opponent from their use. Which means you should never initiate their use against a nuclear-equipped opponent. If you do, it's suicide." ¹⁰¹

10

¹⁰⁰ Cable from CINCPAC to JCS, "Report of Preliminary Review of SIOP-62," 18 January 1961.

¹⁰¹ http://nsarchive.gwu.edu/coldwar/interviews/episode-12/mcnamara1.html

If its ultimate utility is to deter other nations from attack, and this deterrence is built upon the real possibility that they could be used, then is this not an admittance of the futility of nuclear armament? Grappling with the logic of nuclear weapons is not a finite process. To argue for and against nuclear weapons, the deterrence they command, and the destruction of their potential, one would never reach an ending point. It is a cyclical logic that is never resolved or self-satisfied. With states at the helm of nuclear potential, they will persist in a quandary of military and political interests, and with the current global ecological system hanging in the balance. As globalization continues to fracture the arbitrary boundaries that organize what is "us" and what is "them" let nuclear policy of the past be a reminder of how imagined these to concepts truly are. States which aim to disregard the security of others in order to prop up the security of their own will ultimate fail, and leave all the world as a whole worse off. Only as we realize our collective interest in nuclear weapons as a species—as a living, sentient organism perhaps—will this threat to our survival diminish, and a new logic of nuclear armament can unravel our current quandary.

Archives

National Security Archive, George Washington University, District of Columbia

Office of the Historian (digital), Department of State, United States of America

Primary Sources

- "A Stable Stalemate of Mutual Deterrence" Rear Admiral Roy M. Johnson memo to Distribution List, "Adaptation of the National Military Posture to the Era of Nuclear Parity; a Suggested Navy Position," 3 December 1957, Top Secret. Source: Washington Navy Yard, U.S. Navy Operational Archives, Records of Strategic Plans Division, box 354, 1957 A16-10
- Article 2 of the Convention on the Prevention and Punishment of the Crime of Genocide (1948)
- Briefing of WSEG Report No. 12 [Part of David Alan Rosenburg's publication: "Smoking Radiating Ruin at the End of Two Hours': Documents on American Plans for Nuclear War with the Soviet Union, 1954-55." 1981-2.
- Cable from CINCPAC to JCS, "Report of Preliminary Review of SIOP-62," 18 January 1961.
- Dulles, John Foster "Speech on the Need for Long-Range Policies" (Excerpt on Massive Retaliation) January 12, 1954
- Figures for 1948-86 computed from nominal-dollar purchases and GNP deflator in Council of Economic Advisers, Annual Report (Washington: Government Printing Office, 1987), pp. 245-48.
- Foreign Relations of the United States, 1961-1963, Volume VIII, National Security Policy. 43. Memorandum From the President's Military Representative (Taylor) to President Kennedy. Washington, September 19, 1961.
- Lemay, Curtis. Memorandum Op-36C/jm 18 March 1954.
- Letter from General George C. Kenney, Air University, to Air Force Chief of Staff General Hoyt S. Vandenberg, 29 April 1950, Top Secret
- Memorandum of Conversation Prepared by Philip Farley, Special Assistant to the Secretary of State for Atomic Energy Affairs, "NSC Meeting on Nuclear Cutoff," 18 February 1960, Secret (Note 13)
- Memorandum, "Discussion at the 387th Meeting of the National Security Council, Thursday, November 20, 1958," November 20, 1958, Top Secret
- "More Advantageous Than Simple Revenge" GSB [George S. Brown] to Air Force Chief of Staff Thomas White, 30 March 1959, enclosing "CNO Personal Letter No. 5 to Retired Flag Officers, 'Summary of Major Strategic Considerations for the 1960-70 Era," 30 July 1958. Source: Library of Congress, Thomas White Papers, box 28, Navy [Also available on Digital National Security Archive, U.S. Nuclear History, 1955-1968]
- NSC 5422, "Study Prepared by the National Security Council Planning Board," [Washington,] June 14, 1954.
- Presentation by the Strategic Air Command General J. B. Montogomery, Commanders Conference, Ramey Air Force Base, 25-26-27 April 1950, Top Secret; see pages 203-231 of the transcript.
- Project Control Report 4.2, Book 2, the Control of Russia by Air and Other Means, AFSHRC, p. 354.
- RG 59, Policy Planning Staff Records 1954-1962, box 116, Atomic Energy Armaments 1960.

- "The Finite Deterrent System" versus Launching a "World Holocaust" Arleigh Burke for All Flag Officers, "Views on Adequacy of U.S. Deterrent/Retaliatory Forces as Related to General and Limited War Capabilities," 4 March 1959, Confidential. Source: Washington Navy Yard, Operational Archive, Flag Officers "Dope," CNO Personal Newsletter and Memorandum #44-49 May-June 1959
- The SAC [Strategic Air Command] Atomic Weapons Requirements Study for 1959. Title page, table of Contents and introduction. Posted on the Electronic Briefing Book "U.S. Cold War Nuclear Target Lists Declassified for First Time," by Dr. Burr on the National Security Archives. Posted December 22, 2015.
- United States of America. Office of Joint History & Office of the Chairman of the Joint Chiefs of Staff. *The Joint Chiefs of Staff and National Policy*. By Kenneth W. Condit. Vol. II. Washington DC: Library of Congress, 1996. Print. 1947-1949. As referenced in Chapter 6 and cited as: (TS-RD) ICS 2056,31 Aug. 49, and Dee On, 24 Ott 49; (TS) JCS 2056/3,23 Nov 49, and Dee On, 1 Dee 49; CCS 373.11 (12-1448) iec 1.
- US National Security Council, "NSC 162/2: Basic National Security Policy," October 30, 1953.
- US National Security Council, "NSC 20/4: U.S. Objectives with Respect to the USSR to Counter Soviet Threats to U.S. Security," September 23rd, 1948.
- US National Security Council, "NSC 30: United States Policy on Atomic Warfare," September 10th, 1948
- US National Security Council, "NSC 5602/1: Basic National Security Policy," March 15, 1956.
- US National Security Council, "NSC 68: United States Objectives and Programs for National Security," April 14, 1950.

Secondary Sources

- Andreopoulos, George J., Michael Eliot Howard, and Mark R. Shulman. "Chapter 10 -- Nuclear War Planning." *The Laws of War: Constraints on Warfare in the Western World.* New Haven; London: Yale UP, 1997. 160-77. Print.
- Biddle, Tami Davis. "Handling the Soviet Threat: 'Project Control' and the Debate of American Strategy in the Early Cold War Years." *Journal of Strategic Studies* 12.3 (1989): 273-302. Web.
- Carl von. Clausewitz, On War. Penguin, 1968. Print.
- Curatola, John M. "National Security Objectives?" Bigger Bombs for a Brighter Tomorrow: The Strategic Air Command and American War Plans at the Dawn of the Atomic Age, 1945-1950.
- Futrell, Lemmer, The Air Force and Strategic Deterrence, pg. 551-552.
- Gaddis, John Lewis. Strategies of Containment: A Critical Appraisal of Postwar American National Security Policy. New York: Oxford UP, 1982. Print.
- Higgs, Robert. "U.S. Military Spending In The Cold War Era: Opportunity Costs, Foreign Crises, and Domestic Constraints." *Cato Institute* (1987): Oxford University Press, 30 Nov. 1988. Web.
- Holloway, David. "18 -- Nuclear Weapons and the Escalation of the Cold War, 1945-1962." *The Cambridge History of the Cold War*. Vol. 1. Cambridge UP, 2010. 376-97. Print.
- http://nsarchive.gwu.edu/coldwar/interviews/episode-12/mcnamara1.html
- Kaplan, Edward. To Kill Nations: American Strategy in the Air-Atomic Age and the Rise of Mutually Assured Destruction. Ithaca: Cornell U, 2015. Print.
- Kaplan, Fred M. The Wizards of Armageddon. Stanford, CA: Stanford UP, 1991. Print.

- Lieutenant Colonel David J. Dean's digital summary of the study: http://www.au.af.mil/au/afri/aspj/airchronicles/aureview/1984/jul-aug/dean.html
- Millen, Raymond. "Eisenhower And US Grand Strategy." *Parameters: U.S. Army War College* 44.2 (2014): 35-47. *Academic Search Premier*. Print.
- Robert J. McMahon. "14 US national security policy from Eisenhower to Kennedy." *The Cambridge History of the Cold War.* Vol. 1. Cambridge UP, 2010. 288-131. Print.
- Robock, Alan. "Nuclear Winter." Wiley Interdisciplinary Reviews: Climate Change 1.3 (2010): 418-27. Web.
- Rosenberg, David Alan. "The Origins of Overkill Nuclear Weapons and American Strategy, 1945-1960." *International Security* 7 (1983): Print.
- Sagan, Scott D. "SIOP-62: The Nuclear War Plan Briefing to President Kennedy." *International Security* 12.1 (1987): 22. Print.
- Showalter, Dennis E. Forging the Shield: Eisenhower and National Security for the 21st Century. Chicago: Imprint Publications, 2005. Print.
- Trachtenberg, Marc. "A Wasting Asset": American Strategy and the Shifting Nuclear Balance, 1949-1954." *International Security* 13.3 (1988): 5.
- "U.S. Cold War Nuclear Target Lists Declassified for First Time," in National Security Archives digital page: http://nsarchive.gwu.edu/nukevault/ebb538-Cold-War-Nuclear-Target-List-Declassified-First-Ever/#_edn4
- Worley, D. Robert. Orchestrating the Instruments of Power: A Critical Examination of the U.S. National Security System. Lincoln: Potomac, an Imprint of the U of Nebraska, 2015. Print.