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The Role of Robert McNamara in Transforming U.S. Defense Strategy

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ABSTRACT

Robert McNamara played a crucial role in transforming the United States' defense strategy during the 1960s by moving military decision-making away from traditional expertise toward quantitative analysis and rational modeling. As Secretary of Defense (1961–1968), he established what became known as the "systems analysis" approach, which focused on assessing costs, effectiveness, and expected outcomes before choosing any military option. In the nuclear area, McNamara helped shift from a strategy of massive retaliation to the principle of Flexible Response, enabling the use of multiple force levels instead of relying solely on nuclear weapons. He also introduced the concept of Mutual Assured Destruction (MAD) as the basis for strategic stability during the Cold War, arguing that deterrence depends on each side's ability to cause unacceptable damage rather than on achieving absolute nuclear superiority. McNamara implemented significant organizational reforms within the Department of Defense, notably unifying planning, budgeting, and armaments under centralized civilian authority and reducing the traditional military leadership's independence in shaping major policies. This enhanced civilian control over the military while also marginalizing qualitative, field-based judgment in favor of numerical indicators. Although this approach improved efficiency and strategic discipline, its application in the Vietnam War exposed its limits, as quantitative metrics failed to account for the political, social, and psychological aspects of the conflict. McNamara later recognized that overreliance on numerical analysis led to misjudging the true nature of the war.

Keywords: McNamara, defense strategy, military operations, Department of Defense.

INTRODUCTION

The Role of Robert McNamara in Transforming U.S. Defense Strategy:

The Eisenhower administration[1] adopted the strategy of massive retaliation to safeguard the national security of the United States against any aggression, particularly from the Soviet Union. However, following the Soviet

[1] **Dwight D. Eisenhower:** An American military officer and statesman (14 October 1890 – 28 March 1969), the thirty-fourth President of the United States of America. In 1909, he graduated from high school and enrolled in the United States Military Academy, from which he graduated in 1913. In 1925, he entered the Command and General Staff School, and in 1927 he attended the Army War College. In 1942, he assumed the position of Commander of U.S. forces in Europe. In 1948, he retired from active military service and served as President of Columbia University. Following the outbreak of the Korean War in 1950, he was appointed by President Truman as Supreme Commander of the Allied Forces of the North Atlantic Treaty Organization (NATO). Subsequently, he was nominated by the Republican Party for the presidency of the United States, won the presidential elections, and governed the country from 1953 to 1961. See: Mithaq Bayat Al-Dhaifi, *U.S. Policy toward Israel during the Administration of President Dwight Eisenhower 1953–1961*, Dar Ghaida for Publishing and Distribution, Amman, 2010, pp. 73–88; Firas Mahdi Hassoun Al-Zubaidi, *U.S. Arms Policy in the Kingdom of Saudi Arabia (1971–1989)*, unpublished Master's thesis, College of Education, University of Maysan, 2024, p. 26.

Union's success in launching the artificial satellite (Sputnik 1)[2] in 1957[3], and again on 3 November of the same year with the launch of (Sputnik 2)[4], in addition to its success in producing the largest nuclear bomb on 30 October 1961—known as the (Tsar Bomba)[5]—the prevailing perception within all circles of the United States that the Soviets were incapable of technologically [6]Their military arsenal developed almost overnight.

As a result, the equation was fundamentally altered, and the Soviet Union came to be regarded as a major nuclear threat, a development that necessitated a significant shift in the United States' defense strategy[7]. Consequently, the two poles of the Cold War [the United States of America and the Soviet Union] entered an arms race[8]. Most American policymakers and analysts, and even ordinary citizens, came to expect that the outbreak of a nuclear war between the two countries had become an imminent possibility.[9]

McNamara wrote[10] about those events: "...the Soviet Union became the first state capable of launching an artificial satellite. For a long time, Americans had believed that the Soviet Union was technologically backward and incapable of achieving any significant accomplishments in science or politics… If they were… capable of launching a satellite, this meant—in Washington—that they could with the same ease launch intercontinental ballistic missiles… directed at the United States…."[11]

Amid these developments, President Kennedy assumed office on 20 February 1961 and announced his rejection of reliance on the strategy of massive retaliation, believing that nuclear weapons were neither effective nor usable instruments in emergencies that required a military response by conventional forces, except in the event of a nuclear attack on the United States or its allies. Kennedy criticized the policy of massive retaliation, stating that "…it places the country between two stark alternatives with no third option: sudden destruction or slow defeat….[12]" He maintained that the United States should give parallel attention to the development of conventional forces alongside nuclear forces within the framework of the Flexible Response policy, which had been one of the central pillars of his electoral campaign and to which he adhered after assuming the presidency. In his view, this

[2] **Sputnik 1:** A Russian-made artificial satellite; the term means "traveling companion" in Russian. It weighed 83.5 kilograms, took ninety-eight minutes to orbit the Earth, and transmitted radio signals. It was launched into Earth orbit on (4 October 1957) and successfully reached its designated orbit. The successful launch of this satellite constituted clear evidence of Soviet technological superiority, demonstrating their ability to manufacture a satellite capable of "escaping Earth's gravity" at such extraordinary speed. Eisenhower acknowledged that by launching a satellite weighing 184 pounds, the Soviets had proven their possession of missiles powerful enough to deliver warheads across thousands of miles. See: Ahmed Nazem Abbas Al-Abadi, *The Warsaw Pact: A Historical Study of Diplomatic and Military Relations 1955–1964*, unpublished PhD dissertation, College of Arts, University of Baghdad, 2019, p. 296;
R. A. Buchanan, *Power and Authority: Technology and Humanity from the Seventeenth Century to the Present*, trans. Shawqi Jalal, Hindawi Foundation, United Kingdom, 2023, p. 249;
Jordan Johnson, *The Cold War Chronicles: Sputnik and the Space Race*, ed. 1, Cavendish Square Publishing, New York, 2018, p. 8; Martin McCauley, *Khrushchev and Khrushchevism*, University of London, Macmillan Press, 1987, p. 196;

[3] William W. Kaufmann, *The McNamara Strategy: A Thorough Analysis of Robert S. McNamara's Role in One of the Hottest Spots in Government Service*, ed. 1, Harper and Row Publishers, New York, 1964, p. 37.

[4] **Sputnik 2:** A Russian satellite launched into space on 3 November 1957. It was six times heavier than Sputnik 1, weighing more than 500 kg and measuring approximately four meters in length. It contained several compartments housing radio transmitters, a telemetry system, a programming unit, a temperature-control system, and scientific instruments that transmitted engineering and biological data to Earth. Sputnik 2 carried the first living creature into outer space—the dog Laika—for the purpose of conducting medical and biological studies. The launch of Sputnik 2 provoked strong reactions within the United States, fueled by extensive media coverage. Countless interpretations were advanced regarding what *Life* magazine described as "…a defeat for the United States…". A wave of domestic criticism emerged, focusing on competition among different branches of the military, insufficient funding for research and development programs, rigid attitudes toward scientists and intellectuals, an educational system that failed to produce sufficient numbers of scientists and engineers, and a president perceived as being more interested in golf than in guiding the nation. See: Nasser Mohammed Al-Zuml, *Encyclopedia of Twentieth-Century Events 1981–1990*, vol. 6, 1st ed., Al-Obeikan Library, Riyadh, 2005, p. 247; Johan A. M. Bleeker et al., *The Century of Space Science*, vol. 1, Kluwer Academic Publishers, The Netherlands, 2012, p. 42.

[5] **The Tsar Bomba:** A nuclear weapon distinguished by its immense destructive power resulting from the fusion of one pound of hydrogen in a nuclear fusion process, generating energy equivalent to seven times that produced by the fission of one pound of uranium. The United States conducted the first hydrogen bomb test on an island in the Pacific Ocean in 1952, which obliterated the island and left a crater exceeding one mile in diameter. Its destructive effects extended over seven miles, and the resulting radiation contaminated vast areas. The Soviet Union followed with its own test in 1953, which caused severe damage over an area of approximately fifty thousand square miles. In 1961, the Soviet Union conducted an even more powerful test, regarded as one of the most dangerous nuclear experiments in human history, with a yield of approximately fifty megatons (and fifty-seven megatons according to U.S. claims)—at least four thousand times more powerful than the Hiroshima bomb. See: Baghita Al-Marini, *The Nuclear Non-Proliferation Treaty: Mechanisms and Challenges*, unpublished Master's thesis, College of Law and Political Science, Ziane Achour University, 2019–2020, p. 9;
Ihab Qatamesh, *World War III Beginning from the China Sea*, vol. 1, Fasila Publishing House, Dubai, 2020, p. 13;
Kevin J. Moran, *McNamara, Year One: Forging a New American Nuclear Strategy at the Dawn of the Missile Age*, unpublished Master's thesis, Columbian College of Arts and Sciences, The George Washington University, 2016, p. 35;

[6] Robert McNamara, *After the Cold War*, trans. Mohammed Hussein Younis, 1st ed., Dar Al-Shorouk for Publishing and Distribution, Amman, 1991, p. 53;

[7] Herbert F. York, *Arms and the Physicist: An Eye-Witness Report on a Half-Century of Nuclear-Age Drama*, American Institute of Physics, USA, 1995, p. 7.

[8] Nasser Mohammed Al-Zuml, *Encyclopedia of Twentieth-Century Events 1981–1990*, vol. 6, 1st ed., Al-Obeikan Library, Riyadh, 2005, p. 247; Ihab Qatamesh, *World War III Beginning from the China Sea*, vol. 1, Fasila Publishing House, Dubai, 2020, p. 13.

[9] Kevin J. Moran, *McNamara, Year One: Forging a New American Nuclear Strategy at the Dawn of the Missile Age*, unpublished Master's thesis, Columbian College of Arts and Sciences, The George Washington University, 2016, p. 7.

[10] **Robert McNamara:** An American politician (9 June 1916 – 6 July 2009) who served as Secretary of Defense under U.S. Presidents John F. Kennedy and Lyndon B. Johnson. He was born in San Francisco and studied political economy and philosophy, and later pursued an academic career in university teaching. At the end of the Second World War, he was awarded the rank of lieutenant colonel. In 1961, John F. Kennedy appointed him Secretary of Defense, whereupon—despite strong opposition from some generals—he undertook a reorganization of the U.S. military, completed in 1968. He was subsequently appointed President of the World Bank. See: Abu Al-Qasim Sinkehi and Abdelkader Al-Hajj Ahmed, *The Cuban Missile Crisis (October 1962) and Its Impact on International Relations between the Eastern and Western Blocs*, unpublished Master's thesis, College of Human and Social Sciences and Islamic Studies, University of Adrar, 2014–2015, p. 55.

[11] Robert McNamara, *Advocacy for Avoiding Nuclear War*, Center for Military Studies, Damascus, 1989, p. 53.

[12] Kevin J. Moran, *op. cit.*, pp. 8–9.

policy provided a broad range of military options if the United States or its allied states were subjected to any form of aggression.[13]

In the wake of these Soviet successes, the weakness of the Strategic Air Command—the backbone of the U.S. nuclear arsenal—became evident during experimental combat operations, which revealed the inability of its aircraft to deliver nuclear bombs even seven hours after an order to execute a launch had been issued. The problem did not end there; the headquarters of the military commanders overseeing these forces were inadequately fortified, and most had been constructed in residential areas, rendering them easy targets for the enemy and, at the same time, sources of grave danger to the cities in which they were located.[14]

The Kennedy administration moved swiftly to develop and expand its military arsenal[15], a course of action supported by members of the U.S. Congress and senior military leaders, who endorsed the adoption of a defense strategy aimed at achieving victory in any nuclear war.[16]

President Kennedy entrusted McNamara with the task of planning and providing all the requirements of the Flexible Response policy in place of the strategy of massive retaliation. McNamara thus began his work by outlining the principal parameters of his mission, which centered on the necessity of introducing fundamental changes to both the technological and strategic foundations of the U.S. military arsenal. The objective was to ensure the capability to deter aggression in the form of a first strike directed against the United States or one of its allies, to preserve the military capacity to deliver a second strike in response to the enemy's initial attack, and simultaneously to minimize human losses among the American population.[17]

McNamara began his work by establishing the (Systems Analysis) division, which consisted of a small staff of more than 100 professionals drawn from the Department of Defense's Office of the Comptroller. Their task was to manage research and development efforts within the Department of Defense, address budgetary issues, and formulate plans for the development of the nation's nuclear and conventional forces. The office was granted an independent status.

The members of the Systems Analysis division succeeded in asserting their presence and establishing a close and direct relationship with McNamara; however, their primary source of influence lay in their impressive analytical capabilities. They were exceptionally intelligent and possessed substantial reserves of technical expertise as well as bureaucratic experience. They were distinguished by their academic specializations in economics and administrative decision-making, which provided them with a fertile foundation for dealing with issues related to strategic forces. Their lack of military experience did not constitute a major burden, as they excelled particularly in cost control and in evaluating weapons systems on the basis of effectiveness and total cost, as well as in optimizing resource allocation and preventing the acquisition of weapons systems that failed to deliver benefits commensurate with their costs.

Despite all these advantages and skills, the principal role in evaluation and the final decision-making authority ultimately remained the exclusive prerogative of McNamara.[18]

McNamara granted the members of the Systems Analysis division broad authority to establish extensive lines of communication with personnel across the military departments, enabling them to exert pressure on the three military services to implement modifications wherever change was deemed necessary.[19]

McNamara also convened additional meetings with members of the Systems Analysis division, the Joint Chiefs of Staff, and several representatives from American research centers (think tanks) [20] with which the U.S. Department of Defense contracted to provide advice based on rigorous academic studies. Among the most prominent and influential of these institutions was the RAND Corporation[21], in addition to several members of

[13] Richard L. Kugler, *The Politics of Restraint: Robert McNamara and the Strategic Nuclear Forces, 1963–1968*, a thesis, Massachusetts Institute of Technology, University of Minnesota, 1967, p. 33; Lawrence S. Kaplan et al., *History of the Office of the Secretary of Defense: The McNamara Ascendancy, 1961–1965*, Office of the Secretary of Defense, Washington, D.C., 2006, p. 293.

[14] Kevin J. Moran, *McNamara, Year One: Forging a New American Nuclear Strategy at the Dawn of the Missile Age*, unpublished Master's thesis, Columbian College of Arts and Sciences, The George Washington University, 2016, p. 7.

[15] Kevin J. Moran, *op. cit.*, p. 7.

[16] Samuel A. Tucker, *National Security Management: A Modern Design for Defense Decision—A McNamara–Hitch–Enthoven Anthology*, Industrial College of the Armed Forces, Washington, D.C., 1966, p. 6; Kevin J. Moran, *op. cit.*, p. 25.

[17] Samuel A. Tucker, *op. cit.*, p. 6; Kevin J. Moran, *op. cit.*, p. 25.

[18] Richard L. Kugler, *op. cit.*, p. 66.

[19] Richard L. Kugler, *op. cit.*, pp. 66–68.

[20] American research centers (think tanks) and scientific research institutions play an important role in American political life in general, and in the political decision-making process in particular. U.S. administrations frequently turn to these institutions to seek advice and recommendations on numerous international issues directly related to American national interests and security strategy. These research centers and institutions compete to attract cultural and intellectual elites, whose recommendations, research, and studies constitute an important intellectual backdrop for U.S. political decision-making circles. The forms and methods through which these research institutions seek to influence political life are diverse. The leadership elites within these institutions work to present their ideas and overall intellectual perspectives on political and strategic issues through the media, as well as through hearings organized by committees of the U.S. Congress, in which these elites maintained an active presence. Consequently, think tanks have become the principal instruments linking political practice with intellectual inquiry in American public life. See: Nassar Al-Rubaie, *previously cited source*, p. 158.

[21] **RAND Corporation:** The RAND Corporation is a non-profit research and analytical organization founded in 1948 by the American Douglas Aircraft Company to link military planning with research and development, in response to the growing importance of technological research and development on the battlefield. Since the 1950s, RAND has played an active and significant role in U.S. national policy, continuing to harness civilian scientific expertise to advance military capabilities. The corporation contributed to understanding Soviet military and intelligence strategy, the Soviet economy, as well as foreign

NATO and experienced observers in the military field. Each party would present its own theoretical approach to the problem under consideration or to any project requiring renewal or change; however, the final decision in determining the most appropriate course ultimately rested with McNamara.

In February 1961, McNamara[22] traveled to the city of Omaha in the U.S. state of (Nebraska), where the headquarters of the U.S. Strategic Air Command was located[23]. Lemnitzer, then Chairman of the Joint Chiefs of Staff, referred to the details of that visit in a message he sent to President Kennedy, stating: "…Following his visit to Omaha and the Strategic Air Command at the end of this weekend, Secretary McNamara inquired whether it would be possible to move to a continuous maximum state of readiness and requested an estimate of the additional costs in terms of manpower and financial resources. Accordingly, one-third of the Strategic[24] Air Command's bomber force was placed on a fifteen-minute ground alert …."[25]

McNamara and his team arrived at the fundamental principles upon which the success of the policy of flexible response should be based. McNamara stated: "…our preliminary study revealed three essential missions: (1) improving our strategic retaliatory forces; (2) placing increasing emphasis on our non-nuclear forces; and (3) enhancing the strength and effectiveness of the Department of Defense….[26]".

The earliest focus of his efforts was the development of conventional forces. McNamara clarified their condition upon assuming his duties as U.S. Secretary of Defense, stating: "…we found a Department of Defense in which each military service formulated its own separate plans. We found the Army relying on airlift that the Air Force was unable to provide. We found commanders preparing plans for a long-duration war while stockpiling supplies sufficient for only a few days. We found that weapons inventories were entirely lacking in several key elements required for combat readiness. … We found that military strategy had become, in effect, the illegitimate child of a pre-determined budget. … We found conventional forces to be weak in the number of combat-ready divisions, weak in airlift capability, and weak in tactical air support…."[27]

In February 1961, McNamara requested that the three services—the Army, the Navy, and the Air Force—prepare "coordinated and clearly defined operational requirements" to produce a single fighter aircraft to serve all three services, modeled on the so-called "miracle of the TFX[28]." He directed Herbert York[29], then Director of Defense Research and Engineering at the U.S. Department of Defense, to develop specifications for a single fighter aircraft for the three services—the Army, the Air Force, and the Navy, including the Marine Corps.

York examined the project and subsequently submitted his recommendation to McNamara, in which he emphasized the necessity of producing two aircraft rather than a single one. One aircraft would be designed to provide close air support for ground forces[30], while the second would be a multi-mission aircraft jointly operated by the Air Force and the Navy. Technical specialists within both the Air Force and the Navy objected to the

policy, science, and technology. See: Ahmed Abdel-Majid Abdel-Aziz Mansour, *Artificial Intelligence and National Security*, Ministry of Information, Arab Republic of Egypt, 2024, pp. 20–21; Ayman Talal and Wael Abu Hasan, *Think Tanks and Research Centers in India: An Evaluative Study*, Nama for Research and Studies, Lebanon, 2021, p. 41; Jean-Loup Samaan, *The RAND Corporation (1989–2009): The Reconfiguration of Strategic Studies in the United States*, trans. Renuka, ed. 1, Palgrave Macmillan, New York, 2012, p. 1;

[22] Lawrence S. Kaplan et al., *op. cit.*, p. 82.

[23] **Strategic Air Command (SAC):** The first strategic command of the U.S. armed forces, established on 26 March 1947, with the primary mission: "…to prepare for long-range offensive operations anywhere in the world… conduct maximum-range reconnaissance… and provide combat units capable of intensive and sustained operations using the most advanced and sophisticated weapons…." General Curtis LeMay was the driving force behind the development of SAC. During his tenure from 19 October 1948 to 30 July 1957, he transformed it into the cornerstone of U.S. nuclear defense. By the time he left SAC in 1957, he had introduced the B-52 and U-2 programs, along with early missile programs, into the operational forces of the Strategic Air Command. See: W. E. Morel, *The United States Strategic Command: A Cold War Icon*, United States Marine Corps, VA, 1997, p. 3; Gregory S. Gilmour, *From SAC to Stratcom: The Origins of Unified Command Over Nuclear Forces*, submitted in partial fulfillment of the requirements for the degree, VAL Postgraduate School, California, 1993, p. 6; *Memorandum for the Record*, *Foreign Relations of the United States, 1961–1963*, Volume VIII, National Security Policy.

[24] **A document published on the following website:** https://history.state.gov/historicaldocuments

[25] *Memorandum for the Record*, **Foreign Relations of the United States, 1961–1963**, Volume VIII, *National Security Policy*. Document published on the following official website: https://history.state.gov/historicaldocuments

[26] Robert McNamara, *The Essence of Security*, translated by Younis Shahin, Egyptian General Authority for Authorship and Publishing, Egypt, 1970, pp. 77–78.

[27] Deborah Shapley, *Promise and Power: The Life and Times of Robert McNamara*, Vol. I, Little, Brown and Company, USA, p. 287.

[28] In 1958, John Stack—an eminent aerodynamicist and a pioneer in the field of supersonic flight—developed a design for an aircraft with variable-sweep wings capable of operating efficiently at both subsonic and supersonic speeds. When the wings were extended, the aircraft would fly at subsonic speeds; when the wings were swept back along the sides of the fuselage, the aircraft would fly at supersonic speed. Stack emphasized that a supersonic aircraft should be long and slender, arrow-like in form, in order to achieve maximum thrust with minimal drag.
General Frank Everest, Commander of the U.S. Air Force Tactical Air Command, viewed Stack's swing-wing design as a means of revitalizing Tactical Air Command after years of relative decline in favor of the large strategic bombers of Strategic Air Command. McNamara was impressed by an early briefing he received on the capabilities and flexibility of this new variable-sweep-wing aircraft. He also considered the Navy's plans for a new fighter aircraft known as the *Missileer*, a lightweight aircraft with a maximum weight not exceeding 50,000 pounds. Consequently, he sought to integrate Stack's aircraft concept with the operational requirements of both the Navy and the Air Force into a single aircraft. See: Deborah Shapley, *op. cit.*, p. 205.

[29] Herbert York was an American physicist (born November 24, 1921) in Rochester, New York. In 1942, he earned a master's degree from the University of Rochester, and in 1949 he received a PhD in physics from the University of California, Berkeley. York supervised a wide range of projects for the Atomic Energy Commission, including work related to the development of the hydrogen bomb. He later became Director of Defense Research and Engineering at the Pentagon during the Kennedy administration. York was appointed the first Chief Scientist of the Pentagon's Advanced Research Projects Agency (ARPA), where he oversaw space and anti-missile research, and was ultimately granted the title of Director of Defense Research and Engineering.
For further information, see the following website: https://www.atomicheritage.org

[30] Deborah Shapley, *op. cit.*, p. 205.

production of a single aircraft for both services. The Secretaries of the Air Force and the Navy explained[31] to McNamara the reasons for their opposition, stating that "a joint aircraft capable of meeting the requirements of both services is not technically feasible … and would create severe operational difficulties for both the Air Force and the Navy."[32]

McNamara rejected the objections raised by both the Air Force and the Navy, stating: "…this long-standing practice of proceeding along separate paths was well known; however, I did not regard it as a realistic approach in light of the diversity and capabilities that could be integrated into a single modern aircraft as a result of advances in technology…."[33]

McNamara did not adhere to York's recommendations and instead insisted on the production of a single fighter aircraft for all three services[34], which became known as the **TFX (Tactical Fighter Experimental)**.[35]

The production phases of the TFX aircraft were marked by numerous technical problems[36]. McNamara devoted considerable attention to devising appropriate solutions to these challenges. He would spread the aircraft schematics across the carpet of his office, kneel on his hands and knees, crawl over the drawings, and annotate them with his instructions in pencil. He often invited several of his civilian aides to stand around him, many of whom felt unable to contribute any additional insight in the presence of McNamara's technical mastery.[37]

Moreover, McNamara worked long hours to provide all the information requested by members of the U.S. Senate during the hearings and interrogations that continued throughout the years of the aircraft's production program, which extended until 1967, when the aircraft entered service[38]. Following the commencement of TFX production, the naval variant was designated **F-111B**[39], while the Air Force variant was designated **F-111A**.[40]

Regarding nuclear weapons, McNamara and his team intensified their efforts through sustained and continuous work, which resulted in McNamara submitting three recommendations to President Kennedy. In these recommendations, he stated:

"First: **Deterrence of deliberate attack**. We must deter any deliberate nuclear attack against the United States and its principal allies by making clear to potential adversaries that, under all circumstances, such an attack would result in their suffering severe losses. This deterrence depends decisively on our ability to retaliate following a direct Soviet attack.

Second: **Safety and stability**, that is, protection against the outbreak of nuclear war through irrational or inadvertent means—whether through the malfunction of warning forces, miscalculation of an adversary's intentions, or irrational or pathological actions by individuals. … It is decisions, not accidents, that cause wars.

Third: **Improvement of war outcomes**. The conduct and consequences of a large-scale nuclear war merit serious consideration. … Our forces must be well protected not only against surprise attack but also against follow-on attacks. In short, our nuclear forces must be controllable not only in peacetime but also in wartime, so that we can preserve responsiveness and communication with presidential authority. Furthermore, we require a balanced combination of active air defense and civil defense in the event of war…"[41] President Kennedy responded to McNamara's recommendations by approving them.[42]

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[31] Technical specialists within the U.S. Navy emphasized that the aircraft design had to take into account the most critical requirement of naval aviation—**wind over the deck**—which is essential for carrier-based operations. This requirement necessitated either a reduction in aircraft weight, an increase in wing area, or a combination of both. However, these requirements conflicted with the new design, as they created serious problems for the thrust performance of a supersonic aircraft. See: Albert J. Beveridge, *Private Business to Public Service: Robert McNamara's Management Techniques and Their Limits in Peace and War*, PhD dissertation, Johns Hopkins University, Baltimore, Maryland, 2014, pp. 202–203.

[32] Deborah Shapley, *op. cit.*, p. 205.

[33] Ibid., p. 205

[34] Albert J. Beveridge, *op. cit.*, p. 216; Lawrence S. Kaplan et al., *op. cit.*, p. 266; Deborah Shapley, *op. cit.*, p. 206.

[35] Octavio Díaz, *Weapons and Supply: Very High-Speed Fighter Aircraft*, trans. Mohammed Salehi, 1st ed., Obeikan Library, Riyadh, 2002, p. 16.

[36] Problems emerged during the development and production phases of the TFX aircraft. In 1963, a major issue arose concerning the aircraft's takeoff speed from an aircraft carrier deck, a matter with significant implications for the launch of a supersonic aircraft from a carrier. This problem was never satisfactorily resolved, as the proposed solutions relied on a new aerodynamic principle that had not yet been discovered. Consequently, the aircraft's supersonic range was reduced from the contract specification of 3,000 miles to 2,100 miles, and the carrier-based range was similarly reduced from 4,180 miles to 2,750 miles. Another significant problem related to weight emerged at the end of 1966, when General Dynamics estimated an 8,000-pound increase in the weight of the naval version. This was a serious issue that prompted the Navy to propose a redesign; however, McNamara rejected the proposal, believing it to be an attempt by the Navy to obtain an aircraft tailored exclusively to its own requirements. A further problem then appeared, as the engine, air intake, and fuselage ducting were incompatible.
See: Albert J. Beveridge, *op. cit.*, pp. 216–217.

[37] Ibid., pp. 219–220.

[38] Deborah Shapley,OP.Cit.,P.215.

[39] The naval variant of the project was canceled in 1968 following the opposition of **George Eugene Anderson**, Chief of Naval Operations, due to the aircraft's failure to meet fleet requirements. It was subsequently removed from the Navy's inventory, while the Air Force retained its aircraft. No further attempts were made to produce a dual-service aircraft thereafter. See: William Stewart, *A Biographical Dictionary, 1500 to the Present: Admirals of the World*, McFarland Company, U.S.A., 2014, p. 8; Albert J. Beveridge, *op. cit.*, p. 220

[40] Deborah Shapley, *op. cit.*, p. 206; Albert J. Beveridge, *op. cit.*, p. 85.

[41] **Letter from Secretary of Defense McNamara to President Kennedy**, Washington, February 20, 1961, *Foreign Relations of the United States, 1961–1963, Volume VIII: National Security Policy*. Published online: https://history.state.gov/historicaldocuments

[42] Lawrence S. Kaplan et al., *op. cit.*, p. 294.

McNamara encountered administrative complexities while carrying out his responsibilities, including the requirement that any project or decision pertaining to the U.S. military system be presented in a detailed proposal to President Kennedy and to Congress. McNamara stated:

"... The President of the Republic, the Secretary of Defense, and Congress had to be fully informed of the costs of a squadron of B-52 aircraft as compared with a unit of Sabre missiles or a submarine carrying Polaris missiles. The data had to include not only the costs of equipping these units, but also the costs of the crews operating them and their operating expenses over different periods ..."[43]

McNamara and his team at the Pentagon succeeded in devising a solution to these administrative complexities by establishing the "Planning, Programming, and Budgeting System (PPBS)," which was designed to collect all information related to combat issues and the military arsenal and to integrate it into a structured administrative system. McNamara explained this as follows:

"... For the Department of Defense, this system served several purposes of critical importance: it provided a means by which to balance financial budgets, weapons programs, and force requirements; it established a five-year[44] annual defense program for the Secretary of Defense; and it enabled each administration within the Department of Defense, as well as the President and Congress, to focus their attention on tasks related to our national objectives rather than on the affairs of a particular department. The system also provided the entire defense establishment with a single approved plan, sufficiently forward-looking to ensure that all programs were financially feasible. Nevertheless, it amounted to little more than an empty form unless supported by comprehensive analyses derived from operations research and other modern management methods capable of shedding light on the problems of our national security. This system continues to be applied widely[45] within the U.S. government and in several foreign governments as well ..."[46]

The House of Representatives requested McNamara's appearance to clarify the rationale for adopting a five-year planning framework. McNamara appeared before the House and explained, stating:

"... In view of the great technical complexity that characterizes modern weapons, the lengthy periods required for their development, their enormous combat power, and their high cost, we believe that the sound selection of major weapons systems in relation to military missions has become the central set of decisions around which many defense programs revolve. However, the full costs resulting from these decisions, both in the present and in the future, cannot be ascertained unless projections of programs and their costs are made over a period of years—ideally over the entire life cycle of the weapons system. Because such long-term projections are extremely difficult to achieve with any degree of precision, we adopted five years: short enough to ensure reasonably accurate estimates, yet long enough to provide a sound approximation of total costs ..."[47]

Following the successful work of the Systems Office, several of its members were appointed as assistants for systems and analysis within the Office of the Secretary of Defense, the institutions of the Joint Chiefs of Staff, and the military departments. They subsequently provided civilian and military decision-makers in the Department of Defense with analytically reinforced systems that were far more effective than those previously available[48].

In March 1961, McNamara ordered the allocation of additional funds for improved nuclear Command, Control, and Communications (C3) systems, as well as the acceleration of the production program for the Missile Defense Alarm System (MIDAS) early-warning satellite and the acceleration of the production and deployment of the Minuteman intercontinental ballistic missile (ICBM). He then, together with Gilpatric, established teams whose core members included officials from the Eisenhower administration, tasked with determining whether there was consensus within the military establishment regarding the production of the Polaris submarine-launched ballistic missile (SLBM)[49], a program that had been initiated during President Eisenhower's tenure. Members of these teams informed McNamara that there was broad agreement in favor of producing the Polaris missile[50].

Accordingly, McNamara and Gilpatric proceeded to examine the program for the production and development of Polaris[51]. After the RAND Corporation presented its recommendations advocating reliance on intercontinental ballistic production primary and strategic weapon of the U.S. nuclear arsenal—because they

[43] Robert McNamara, *The Essence of Security*, trans. Younis Shahin, *op. cit.*, p. 82.
[44] McNamara defined the Five-Year Plan as follows:
"The force structure and the financial Five-Year Plan are internal tools of the Department of Defense and do not represent a program officially approved by the U.S. government. Congress retains the right to authorize and allocate funds, year by year, for this proposed program, and even the President is not irrevocably bound by the five-year plan in detail. Essentially, it is a planning tool—a roadmap—that indicates the direction we hope to move in over the next five years…"
See: William W. Kaufmann, *op. cit.*, pp. 175–176.
[45] The year 1970 was the time at which McNamara wrote his book *The Essence of Security*, from which the above information was drawn.
[46] Robert McNamara, *The Essence of Security* (…), previously cited source, p. 82.
[47] William W. Kaufmann, *op. cit.*, p. 176.
[48] Robert McNamara, *The Essence of Security* (…), previously cited source, pp. 82–83.
[49] Desmond Ball, Politics and Force Levels: The Strategic Missile Program of the Kennedy Administration, University of California Press, Los Angeles, 1980, p. 111.
[50] Graham Spinardi, *From Polaris to Trident: The Development of U.S. Fleet Ballistic Missile Technology*, Cambridge University Press, New York, 1994, p. 35.
[51] William W. Kaufmann, *op. cit.*, pp. 54–55.

enabled U.S. forces to retain a second-strike capability that was more accurate and more destructive in response to a first strike[52]—McNamara ordered an increase in the production and further development of both the Minuteman[53] missile and the sea-based Polaris missile. He placed particular emphasis on the development of the Polaris missile[54], regarding it as one of the most important and effective nuclear weapons in the U.S. nuclear arsenal.[55]

McNamara continued to work with his team on the development of ballistic missiles and succeeded in developing a high-performance ballistic missile known as the Poseidon C-3 missile[56]. The new missile was equipped with Multiple Target Reentry Vehicle (MTRV) technology (Mk-6)[57] and was designed to be compatible with the existing launch tubes of the older Polaris system. As a result, each submarine that had previously carried Polaris missiles became capable of carrying sixteen Poseidon C-3 missiles, each fitted with up to fourteen Mk-3 reentry vehicles, with individual warheads weighing between 40 and 50 kilotons.

During the 1970s and the early 1980s, the Poseidon missile was further refined to achieve greater accuracy against heavily fortified targets and to attain a shorter flight time, enabling it to penetrate and destroy Soviet missile defense systems, as well as to strike "softer" military units, urban centers, and industrial areas.[58]

McNamara wrote: "... the Poseidon missile … was capable of carrying multiple nuclear warheads, each of which could independently proceed to its designated target upon reentry into the atmosphere …".[59]

McNamara also stated: "... we maintained in operational readiness (270) B-27 bombers … we increased our procurement objectives by (200) Polaris and Minuteman missiles … and we possess more than (1,000) supersonic fighter aircraft, the majority of which are armed with nuclear weapons …".[60]

McNamara ordered the cancellation of the B-70 aircraft[61], believing that its production costs were excessively high and that it was more vulnerable to attack[62]. He wrote: "... the development of even a modest force of these aircraft … would cost us at least $10 billion … the B-70 aircraft would not have carried bombs but would instead have attacked their targets using an extremely complex system of air-launched missiles fired from hundreds of miles away …".[63]

Alain Enthoven, one of McNamara's assistants in the Department of Defense, clarified the Department's position, stating: "... there will be no B-70 aircraft standing idle and deployed at airfields where they could be destroyed by enemy ballistic missiles. Instead, our force will consist of intercontinental ballistic missiles [Minuteman] placed in underground concrete and steel silos, and missiles deployed on submarines [Polaris] … so that the Soviets will be deterred from attacking us, knowing that we are capable of delivering a large and effective retaliatory strike."[64]

Air Force commanders opposed McNamara's decision to cancel the production of the B-70 aircraft, considering it an important component of the U.S. air power arsenal due to its ability to fly at three times the speed of sound. Nevertheless, considering McNamara's insistence, production was terminated, with only the prototype version being completed.[65]

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[52] William W. Kaufmann, *op. cit.*, p. 57.

[53] "The principal intercontinental ballistic missile (ICBM) launcher was designed to carry nuclear warheads."
Robert McNamara, *The Argument* (…), previously cited source, p. 159.

[54] Polaris: the first American ballistic missile to be launched from submarines, with a range of up to 1,200 miles. Accordingly, President Kennedy ordered the acceleration of the construction of new missile-carrying submarines, increasing their number to 29 submarines armed with 463 ballistic missiles, following a Navy report affirming that ballistic missiles deployed on submarines possessed the capability to remain submerged in the world's oceans for several weeks. McNamara subsequently ordered a further acceleration of production, raising the total to 41 submarines carrying 656 ballistic missiles. See:
Camille Bosquet, *Weapons and Supplies: Aircraft Carriers, Amphibious Assault Ships, and Submarines*, trans. Saeed Sbeih and Mohammed Salhi, 1st ed., Al-Obeikan Library, Riyadh, 2002, p. 38.

[55] William W. Kaufmann, *op. cit.*, p. 57.

[56] The Poseidon C-3 missile is a solid-fuel, medium-range ballistic missile incorporating a maneuverable equipment section designed to deliver reentry bodies (REBs) to a single target or to multiple targets. The missile was designed for launch either from the surface or from beneath the water by a fleet ballistic missile submarine. The flight of the Poseidon C-3 missile is divided into two phases: boost and deployment. Corresponding to these phases, the missile is divided into two systems—the booster and the delivery system. The booster provides controlled thrust to place the missile on the correct trajectory during the powered flight of the first and second stages, while the delivery system supplies the control forces required to achieve the precise position and velocity necessary for the deployment of multiple reentry bodies. Each missile is approximately 34 feet in length, measures 74 inches at the base, and has a diameter of 72 inches in the equipment section. The name "Poseidon" is derived from Greek mythology, where it referred to the god of the sea, storms, earthquakes, and horses, known as the "earth-shaker." See: John A. Huck, *Fire Control Technician B 3 and 2 (Poseidon)*, University of Illinois Library, Urbana, 1986, p. 14; Max Shapiro and Rhoda Hendricks, *Dictionary of Mythology*, trans. Hanna Abboud, Rslan Foundation Publishing House, Damascus, 2018, p. 19.

[57] The MTRE Mk-6 unit performs a preparatory sequence on each missile prior to launch and, under the control of the Central Decision Support System (CDSS) at the Fire Control (FC) center, directs missile preparation signals to the electrical control and flight subsystems. See: John A. Huck, *op. cit.*, p. 14.

[58] Brian J. Auten, *Carter's Conversion: The Hardening of American Defense Policy*, University of Missouri Press, USA, 2008, p. 77; Deborah Shapley, *op. cit.*, p. 105. William W. Kaufmann, *op. cit.*, p. 57.

[59] Robert McNamara, *The Essence of Security* (…), previously cited source, p. 76.

[60] William W. Kaufmann, *op. cit.*, p. 69.

[61] Due to certain amendments made to the National Security Act of 1947, specifically Section 41(b), McNamara acquired the authority to withhold funds for research and development of specific programs, even after Congress had appropriated them. Deborah Shapley, *op. cit.*, p. 117;

[62] Kevin J. Moran, *op. cit.*, p. 27;Deborah Shapley, *op. cit.*, p. 107.

[63] Robert McNamara, *The Essence of Security* (…), previously cited source, p. 80

[64] Lawrence S. Kaplan et al., *op. cit.*, p. 312.

[65] Deborah Shapley, *op. cit.*, p. 1070.

McNamara continued his efforts to develop conventional forces and explained the rationale for this policy before the United States Senate during a hearing in April 1961, stating:

"…… We seek to ensure that this nation possesses …… the types of forces necessary to deter more limited military adventures that the enemies of freedom may undertake … ranging from guerrilla warfare and subversive activities carried out by small, dispersed groups of men, to organized aggression involving large, regular military forces. Our limited war forces must be deployed appropriately, and trained and equipped in a manner suitable to address the full spectrum of such actions. They must also possess the means to move rapidly to any location where they may be required, within an extremely short time frame…"[66]

McNamara began his work by developing the combat forces, issuing orders to accelerate the implementation of previously authorized programs, and directing an increase in the size of the Army. As a result, Army personnel strength was expanded from 875,000 to one million soldiers, and the number of combat divisions increased from eleven to sixteen. Of these, five divisions were prepared for combat deployment in Europe, with two additional supporting divisions equipped to reinforce them.

As for the number of tactical combat wings, it stood at sixteen and was subsequently expanded to twenty-one fighter wings. In addition, the naval forces were allocated forty destroyers, together with one escort destroyer, and their aviation fleet—responsible for anti-submarine warfare missions—was reinforced by eighteen squadrons drawn from the reserve forces. Furthermore, eleven squadrons of fighter aircraft were dispatched to Europe, six reserve air transport squadrons were recalled to active service[67], and the necessary logistical support in terms of equipment and consumable supplies was provided to the three-armed services.

The Army was also granted full authority to suppress any insurrection with maximum force and decisiveness, and to call up reserve forces as required. Moreover, after obtaining authorization from the President[68], McNamara ordered the equipping of the Minute Men forces.[69]

McNamara devoted particular attention to what he regarded as a fundamental issue: the speed of mobility of conventional forces. He wrote:

"…. Very large conventional forces must be maintained …. positioned in proximity to potential danger points around the globe … while retaining a smaller central reserve composed of forces at a high level of readiness, reinforced by means capable of transporting them with great speed to wherever they are needed … To this end, bases were made available in Europe and the Far East …."[70] Accordingly, large vessels were constructed and employed to provide heavy supplies and equipment to distant bases and areas of tension smoothly and efficiently.[71]

McNamara also emphasized the provision of logistical support for U.S. forces stationed in remote regions. To this end, 129 modern transport aircraft capable of long-range operations were procured, and the necessary funding was allocated to secure all requirements for logistical support. He further attached great importance to expanding research on non-nuclear weapons and recommended increasing the size of the Special Forces to more than double their existing strength, so that they would be capable of confronting guerrilla warfare and suppressing any insurrection that might arise following the outbreak of a nuclear war.[72]

Moreover, McNamara recommended reorganizing the strategic reserve of conventional forces, rendering it more structured and more rapidly responsive to any contingency. He succeeded in establishing a timetable that enabled the preparation of ten combat divisions within eight weeks[73]. Reflecting on these achievements with his team in the development of conventional forces, McNamara wrote: "…. As an initial step, we increased the procurement of conventional weapons, ammunition, and equipment; expanded the Navy's ship maintenance program; ordered the construction of additional amphibious transport capabilities; introduced modifications to tactical fighter aircraft in the Air Force to enhance their non-nuclear strike capability … as well as the development of the Marine Corps and its reserve forces … and we strengthened the advancement of non-nuclear military development and research."[74]

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[66] William W. Kaufmann, *op. cit.*, p. 57.
[67] William W. Kaufmann, *op. cit.*, p. 71.
[68] **Minute Men**: They were a group of men who assembled within a very short time in response to the first call issued by President Abraham Lincoln and Governor Andrew on April 15, 1861. Most of them were merchants, mechanics, and students, who proceeded directly from their workplaces to Faneuil Hall and then onward to Washington. In 1961, the Minute Men in Massachusetts consisted of seven separate organizations: the 1st Massachusetts Light Battery, comprising 118 soldiers; the 2nd Battalion of Rifles, with 318 soldiers; the 3rd Massachusetts Infantry Regiment, consisting of 447 soldiers; the 4th Infantry Regiment, with 635 soldiers; the 5th Massachusetts Infantry Regiment, numbering 829 soldiers; the 6th Regiment, with 740 soldiers; and the 8th Massachusetts Infantry Regiment, comprising 711 soldiers. See: George W. Nason, *History and Complete Roster of the Massachusetts Regiments Minute Men of '61 Who Responded to the First Call of President Abraham Lincoln, April 15, 1861, to Defend the Flag and Constitution of the United States*, Minute Men of '61 Together, Franklin Job Print, Massachusetts, 2008, p. 327.
[69] Deborah Shapley, *op. cit.*, p. 121.
[70] Robert McNamara, *The Essence of Security*, *op. cit.*, p. 74.
[71] Ibid., p. 75.
[72] Desmond Ball, *Politics and Force Levels: The Strategic Missile Program of the Kennedy Administration*, University of California Press, Los Angeles, 1980, p. 114.
[73] William W. Kaufmann, *op. cit.*, p. 64.
[74] Robert McNamara, *The Essence of Security*, *op. cit.*, p. 70.

McNamara continued his efforts by ordering the reallocation of financial appropriations from several projects that had been approved under the Eisenhower administration to other projects that he regarded as essential but whose production had been delayed due to insufficient funding. These included the production of two squadrons of heavy ballistic missiles, the Snark missile (then considered obsolete), the Mobile Minuteman Program, and the nuclear-powered aircraft project. In addition, McNamara supported a number of space-related projects, such as the Advent Defender and Discoverer programs, all of which were concerned with military activities in outer space. He also allocated additional funds for the development of the Skybolt air-to-ground ballistic missile.[75]

President Kennedy endorsed McNamara's efforts in formulating the new defense strategy and conferred official status on all his initiatives. Consequently, a document entitled *"Military and Related Aspects of Basic National Security Doctrine"*[76] was issued to serve as the foundation of the new national security policy. This policy was primarily based on the strategy of Flexible Response, which President Kennedy sought to adopt[77], and McNamara, together with his team at the Department of Defense, led its implementation[78].

McNamara focused on a critical issue, namely the necessity of protecting the leadership of U.S. combat forces. He wrote on this matter:

"… We established a broad program to improve and secure the command and control of our strategic offensive forces. Among the measures adopted was the establishment of alternative national command centers, including the continuous maintenance of airborne command posts, so that the direction of all our forces would not depend on the survivability of a single center. Steps were also taken to enhance the various command and communications systems; these included—for example—the requirement for airborne control over the launch of bombers and the Minuteman and Polaris missiles. All of this was integrated into a unified national military command system."[79]

After approximately one year had passed, McNamara emphasized that the fundamental national security policy of the United States had undergone—and would continue to undergo—ongoing evolution. He noted that technological, political, economic, social, and military changes were prevailing, and that the instruments and policies of the United States must adapt to these changes and exert influence upon them.[80]

McNamara further stated before the U.S. Senate Armed Services Committee on January 19, 1962, at the opening of the annual meeting of military leaders, that the United States possessed forces capable of destroying selected Russian targets even after having been subjected to a surprise nuclear attack. [81] McNamara faced accusations that he was interfering in the operations and authority of certain departments, including the Air Force—particularly after he refused to proceed with their preferred project, the production of B-70 bombers. This issue became a point of contention between him and Air Force leaders for two years, as they viewed it as a test of his authority. As noted previously, he ultimately succeeded in canceling the program[82]. Moreover, McNamara opposed the Air Force's request to develop the RS-70 aircraft and sent a memorandum to Air Force leadership in which he stated that "the costs are likely to reach approximately three billion dollars more … than the value estimated by the Air Force; that the aircraft's purported technical performance cannot be supported under present conditions … and that the development of the RS-70 would not significantly enhance the United States' capability to deter or wage a nuclear war.[83]" He further proposed four alternative courses[84] of action instead of developing the RS-70 aircraft.[85]

Veteran Congressman Carl Vinson[86], Chairman of the House Armed Services Committee, intervened after criticizing what he saw as an attempt to reduce Congress's role in shaping national policy. In January 1962,

[75] Desmond Ball, *op. cit.*, p. 58.
[76] Kevin J. Moran, *op. cit.*, p. 32.
[77] Stephen J. Cimbala, *Coercive Military Strategy*, 1st ed., Texas A&M University Press, USA, 1998, p. 25.
[78] Kevin J. Moran, *op. cit.*, p. 29.
[79] Robert McNamara, *The Essence of Security*, *op. cit.*, p. 67.
[80] Kevin J. Moran, *op. cit.*, p. 46.
[81] Philip Dodd, "U.S. Could Fight After A-Attack, McNamara Says Can Still Destroy Prime Targets in Russia," *Chicago Daily Tribune*, January 20, 1962, p. 51.
[82] Deborah Shapley, *op. cit.*, p. 107.
[83] Lawrence S. Kaplan et al., *op. cit.*, p. 115.
[84] The proposed alternatives were:
1. Complete the production and testing of the three prototype aircraft at a total cost not exceeding $1.3 billion.
2. Continue the development of radars and related equipment that could prove useful.
3. Consider alternative applications for manned aircraft.
4. Initiate the development of a new RBX aircraft, which, due to its post-strike reconnaissance mission, would be less costly than the RS-70; it was estimated that 50 RBX aircraft would cost $1.4 billion.
See: Lawrence S. Kaplan et al., *op. cit.*, p. 115.

[85] Ibid., p. 115.
[86] **Carl Vinson**: An American politician (November 18, 1883 – June 1, 1981), born in Milledgeville, the capital of Baldwin County, United States. He completed his primary and secondary education while working as a newspaper seller and in various retail stores. He then attended the Georgia Military College, and after graduation, enrolled in the Mercer University School of Law in Macon. Upon completing his legal studies, he was appointed as an attorney in Baldwin County Court. Vinson served in the U.S. House of Representatives for fifty years, the longest tenure in its history. He was nicknamed "The Admiral" and "Father of the Two-Ocean Navy," retiring at the age of eighty-one. See: James F. Cook, *Carl Vinson: Patriarch of the Armed Forces*, Mercer University Press, Georgia, 2004, pp. 1–3.

McNamara appeared before the House of Representatives and testified regarding his position on the refusal to develop the RS-70 aircraft[87]. However, he was not called again to complete his testimony, and the House subsequently passed a resolution approving the development of the RS-70.

McNamara requested that President Kennedy challenge the wording of the House resolution. To address the potential constitutional crisis between the administration and the legislative branch, Kennedy became personally involved. His legislative affairs aide, Lawrence F. O'Brien, advised him that confronting Vinson directly could be risky. Nevertheless, President Kennedy chose to support McNamara. He approached Vinson, spoke with him, and then the two walked together in the White House Rose Garden—a meeting later known as the "Rose Garden Walk.[88]" The dispute was resolved amicably in favor of McNamara.[89]

Despite the frequent summons of McNamara before both the House of Representatives and the Senate, and the numerous points of contention that arose, there were also notable moments of admiration among some members during his testimony. In February 1962, when he appeared before the Robertson Subcommittee of the U.S. Senate to provide a comprehensive account of his department's activities, one member described him as "a veritable encyclopedia."[90] The Democratic Representative from Florida, Robert L. F. Sykes, who chaired several of the sessions, characterized McNamara as "one of the finest demonstrations of mastery of subject matter and willingness to cooperate and work with the committee that I have seen during my time here.[91]" Sykes further remarked with amazement that "the Secretary never once had to refer to his records to obtain information with which to answer the committee's questions—this is almost unbelievable."[92]

Following a substantial increase in Department of Defense expenditures—resulting from the large number of projects that had been completed or initiated—total defense spending reached $727 million. One of the principal reasons for this increase was the rising cost of manufacturing most weapons systems. In response, McNamara introduced a new initiative known as "program definition,"[93] the purpose of which was "to protect the government from committing large sums of money to any project before it has been fully defined." Under this new program, any weapons procurement valued at more than $25 million was divided into two distinct phases.

The First Stage: This is the program definition stage, during which companies submit their initial bids. Unlike the approach previously adopted, these bids are not based on producing detailed or actual designs of the required weapons; rather, the principal and most critical criterion is the companies' ability to demonstrate their competence to execute the project. Upon completion of the program definition stage, two proposals are selected to advance to the second stage. At this point, the Department of Defense assigns technical experts and active-duty military personnel to work with the remaining bidders as though they were competing prime contractors. As for the method by which the competing companies present a detailed explanation of the project, this is done in written form[94]. McNamara himself would review each item in the program, and when he sought to delegate oversight of the program, he selected either one of the civilian staff members he had personally chosen or an officer in whom he placed his trust. The clear definition of all stages of weapons production contributed to securing superior bids and reducing the costs of weapons manufacturing for both the producing company and the United States Department of Defense.[95]

McNamara continued his efforts to reduce the expenditures of the Department of Defense by altering the policy of military assistance that the United States had pursued with its allies since 1945. Whereas this policy had entailed the provision of military aid to allies free of charge, McNamara ordered that such assistance be converted into military sales. The proceeds from these sales were redirected to companies affiliated with the U.S. Department of Defense, and he established an office within the Pentagon to oversee the international sale of American

McNamara recounted that President Kennedy met with Vinson at the White House, during which Vinson reportedly told Kennedy: "…You are a young President, and I am a senior member of Congress. But I have great respect for you as President and for the office itself. I understand the constitutional struggle underlying this situation and do not wish to expose it. You do not want it to surface either…"
Kennedy expressed his willingness to reach a settlement and invited Vinson for a walk in the Rose Garden. The matter was ultimately resolved in McNamara's favor. Vinson later told a colleague: "…I feel satisfied about this matter… because I genuinely wanted to assist the President."
He also explained to Gilbert Patrick that his aim in the settlement was "…simply to ease Congressional frustration and relieve pressure on the members of my committee." Lawrence S.Kaplan and others, OP.Cit.,P.106.

[87] See: Lawrence S. Kaplan et al., *op. cit.*, pp. 101–102.

[88] McNamara recounted that President Kennedy met with Carl Vinson at the White House, during which Vinson reportedly told Kennedy:
"…You are a young President, and I am a senior member of Congress. But I have great respect for you as President and for the office itself. I understand the constitutional struggle underlying this situation and do not wish to expose it. You do not want it to surface either…"
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Lawrence S. Kaplan et al., *op. cit.*, p. 106.

[89] Deborah Shapley, *op. cit.*, p. 107.

[90] Lawrence S. Kaplan et al., *op. cit.*, p. 107.

[91] Lawrence S. Kaplan et al., *op. cit.*, p. 107.

[92] Ibid., p. 107.

[93] Albert J. Beveridge, *op. cit.*, p. 187.

[94] Ibid., pp.186-187.

[95] Deborah Shapley,OP.Cit.,P.235.

weapons[96]. McNamara began implementing his new policy with NATO countries and adopted an export approach based on the principle that "allies could buy whatever they wished, so long as they purchased American weapons"—a policy reminiscent of that employed by Ford during the production of the Model T. As a result, NATO countries came to import one-third of U.S. arms exports. Moreover, he ordered a doubling of arms exports to South Vietnam[97]. With regard to Third World countries[98], the volume of arms exports to them was increased to double and, in some cases, to one and a half times its previous level. As for Iran, U.S. military assistance sent to the Shah of Iran amounted to $387 million[99], following American involvement—through certain agents—in strengthening his authority in 1953. After the Shah paid a visit to the United States, President Kennedy referred him to McNamara to organize and manage cooperation with him. McNamara subsequently succeeded in formulating a five-year renewable plan to be implemented over the same period. William Bundy, Assistant Secretary of State, who was present at the meeting between the Shah and McNamara, remarked: "The Shah did not like being told what he needed and what he did not need, but during his meeting with McNamara he appeared as if he had swallowed a peach pit.[100]"

McNamara's efforts extended beyond just rationalizing expenditures and increasing revenues for the Department of Defense; he also aimed to correct the imbalance in the balance of payments[101] and to stop the depletion of the country's gold reserves. This depletion occurred due to rising gold prices, which led to a significant outflow of gold from the United States[102] and directly affected the dollar's value under the Gold Standard[103]. As a result, the U.S. government became more worried about speculation against the dollar's future, a practice widely expected to be promoted by "Republican bankers," who might push for greater demand for dollars. Such actions would boost demand and increase the supply of dollars in circulation, forcing the Kennedy administration to devalue the dollar—a symbol of American strength—contradicting the pledge President Kennedy made when he took office.[104] With considerable confidence, McNamara assured President Kennedy that he could address the problems arising from the depletion of gold reserves and the balance-of-payments deficit. He emphasized that the substantial increase in U.S. government expenditures overseas was among the principal causes of these difficulties. Declaring his reliance on quantitative methods to resolve them, McNamara undertook a detailed calculation of the costs of maintaining approximately two million military personnel, together with their weapons and families, which amounted to about USD 6.2 billion. He then moved swiftly to impose controls aimed at reducing these family-related expenditures by setting limits on the amounts they were permitted to spend abroad[105].

McNamara subsequently concluded an "offset" agreement with the government in Bonn[106], under which it undertook to make fixed annual payments to compensate for the additional U.S. forces deployed to West Germany

[96] Deborah Shapley,OP.Cit.,P.225.

[97] Ibid., p. 226.

[98] **Third World:** A term applied to certain countries in Asia, Latin America, and Africa that share common characteristics such as poverty, low standards of living, rapid population growth, and economic dependence on developed countries. The expression was first used in French (*Tiers Monde*) in 1952 in an article by the French economist Alfred Sauvy entitled *Trois Mondes*. He drew inspiration for this designation from the "Third Estate" in French society prior to the outbreak of the French Revolution. See: Khaled Hassan Al-Ashmawi, *The Global Financial Crisis: Its Impact on Developing Countries and Policies for Confronting It, with a Study of the Repercussions of the Crisis on the Egyptian Economy*, unpublished PhD dissertation, Faculty of Law, Mansoura University, 2017, p. 50; Abu al-Qasim Sankihi and Abd al-Qader al-Haj Ahmed, op. cit., p. 76.

[99] **Shah of Iran:** Mohammad Reza Pahlavi (26 October 1919–27 July 1980), born in the capital, Tehran. He received his education at the La Rosey boarding school in Switzerland, and upon completing his studies he enrolled in the Iranian Military Academy. He was given the title *Shahanshah* (King of Kings). He opposed the nationalization decision announced by Prime Minister Mohammad Mosaddegh. He ruled Iran from 1940 until 1979, when his regime was overthrown by an internal revolution, after which he fled to the United States under the pretext of receiving medical treatment and then moved to Egypt, where he died. See: Arabian Gulf Center in Basra, *Memoirs of the Shah of Iran Mohammad Reza Pahlavi: His Life, His Wives, and His Death*, 1st ed., Arab Encyclopedias House, Beirut, 2016, p. 7; Firas al-Baytar, vol. 5, op. cit., p. 1869.

[100] Ibid., p. 226.

[101] **Balance of Payments:** It consists of the current account and the capital account. The current account records the movement of imports and exports into and out of a country and is therefore primarily concerned with the trade balance, which is defined as the difference between merchandise exports and merchandise imports. See: Saeed Sami Al-Hallaq and Mohammad Mahmoud Al-Ajlouni, *Money, Banking, and Major Financial Institutions*, Al-Yazouri House, Hashemite Kingdom of Jordan, 2016, p. 23.

[102] Gold prices witnessed a significant increase, with the price of one ounce in open markets reaching USD 40. In 1961, foreign holders of U.S. dollars—particularly Western Europeans—intensified the conversion of dollars into gold, heightening concerns about the possibility of a large-scale run on dollar holdings. Paul Nitze of the Department of Defense stated: "...President Kennedy... felt that this was one of the most important issues that had to be brought under control; if we could not control this outflow of gold, there might be a run on the dollar, which would be disastrous and would force us to impose controls on the currency and many other things...". See: Aurélie Basha i Novosejt, *Robert S. McNamara's Withdrawal Plans from Vietnam: A Bureaucratic History*, MA thesis, International History, London School of Economics, 2014, p. 162.

[103] **Gold Standard:** This refers to the relationship that links the circulating currency to the quantity of gold backing it, according to a fixed ratio between a monetary unit and a specific weight and fineness of gold. In other words, there exists a relationship between the amount of money in circulation within a state and the quantity of gold held by the authorities. A legally fixed relationship is established between the monetary unit and a defined weight and purity of gold, implying a fixed price of the currency in terms of gold. Moreover, linking the national currency to gold renders it an international currency as well, since gold is a globally traded commodity. See: Mohammad Ahmad Al-Afandi, *Monetary and Banking Economics*, Academic Book Center, Jordan, 2020, p. 70.

[104] Aurélie Basha i Novosejt, *op. cit.*, pp. 161–164.

[105] Lawrence S. Kaplan and others, OP.Cit., p. 449; Deborah Shapley, OP.Cit., p. 225.

[106] Bonn: A German city located on the banks of the Rhine River in the southern part of the state of North Rhine-Westphalia. After the division of Germany in 1949 into East and West Germany, Bonn became the capital of West Germany. After German reunification in 1991, Berlin became the official capital, but the government continued to operate from Bonn until the German parliament approved the relocation of most government offices within 10 to 12 years. See: Encyclopedia Works Foundation for Publishing and Distribution, The Arab World Encyclopedia - Baalbek - Pierre, 2nd ed., Riyadh, Saudi Arabia, 1999, p. 334; Hossam El-Din Ibrahim Othman, the aforementioned source, p. 59.

following the outbreak of the Second Berlin Crisis. He also ordered tanks and equipments requiring repair be transported by air to the United States for maintenance, to avoid spending dollars on repair operations in Europe. Furthermore, McNamara directed that an entire army division operate on a rotational basis, spending half the year in the United States and the other half in Europe.[107]

In addition, McNamara introduced a new policy known as "Buy Strong American Products," which allowed U.S. defense contracts to be awarded to American companies even when their bids exceeded those of European firms by 25 percent, and later by as much as 50 percent[108].

McNamara continued his efforts to reduce U.S. overseas expenditures and was joined by Galbraith in the view that American commitments to Korea were excessively costly. In a letter to President Kennedy, McNamara wrote: "…I believe we should prepare plans for a gradual reduction of U.S. Army forces in the Republic of Korea from 52,400 troops to approximately 17,000 by the end of calendar year 1965, and for a reduction of Republic of Korea ground forces from 536,000 to 450,000 by the end of calendar year 1967. If these reductions are achieved, the Joint Korean Operational Plan could be reduced from the programmed level of $200 million for fiscal year 1964 to an annual level not exceeding $150 million by fiscal year 1968…".[109]

From McNamara's perspective, these changes were both logical and necessary to correct the imbalance in the balance of payments and to enhance the effectiveness of the program aimed at reducing U.S. military assistance. By contrast, the Department of State and the Joint Chiefs of Staff objected to any withdrawal of American forces, whether in Europe or Asia, because such actions would entail serious political consequences[110], including undermining the credibility of the United States with respect to its international commitments. They succeeded in blocking any decision in this regard, particularly in light of Dean Rusk's firm insistence on rejecting any reduction or withdrawal of U.S. forces.

McNamara responded by stating that "it was entirely acceptable to him (Dean Rusk) that, when withdrawals did occur, they should not … signify a withdrawal by the United States from its commitment to preserving the security and freedom of the free world, but rather should be carried out separately so as not to give countries any basis for believing that such withdrawals were imposed upon us because of our balance-of-payments position."[111]

In November 1963, McNamara issued instructions to the Joint Chiefs of Staff stating that, although the plan still called for a 15 percent reduction in overseas deployments over the next two years, the necessary measures should be taken wherever possible without any public announcement.[112]

The foregoing suggests that the Joint Chiefs of Staff were able on this occasion to undermine McNamara's efforts with considerable success, especially after gaining the support of a key ally—the U.S. Secretary of State. Moreover, the view expressed by the Secretary of the Navy, as noted in footnote three on the previous page, emphasized that the withdrawal of any forces from Korea or the Far East would leave the United States with only one option: a nuclear response. This position ran counter to the flexible response strategy adopted by President Kennedy. It is perhaps here that the explanation lies for the President's reluctance to intervene on McNamara's behalf, as he had done previously. Nevertheless, McNamara appears to have remained steadfast in his convictions; for him, timing was less important than the eventual implementation of decisions he believed to be the most effective solutions, even if achieved at a later stage.

McNamara continued his efforts to develop his country's forces, this time focusing on the field of education provided by the Department of Defense to tens of thousands of volunteers serving within the Department and the three-armed services—the Army, the Air Force, and the Navy—across a wide range of branches and functions. All information and curricula that McNamara deemed unnecessary were eliminated, and new instructional programs were introduced to align closely with specific job requirements. Among the most significant outcomes of implementing these curricula were a reduction in training periods and a substantial increase in student success rates.[113]

McNamara wrote about these programs and his contributions to developing students' skills as follows: "…We conducted experiments in program-based instruction carefully designed to meet the specific needs of the job. Students were allowed to progress at their own pace rather than moving with the group in lockstep. We introduced new educational methods within the Department of Defense to achieve this. For example, the idea of using closed-circuit television in defense training proved highly successful, to the extent that the Army established a television network for individualized training. The major advantage of closed-circuit television lies in its flexibility: students

[107] Deborah Shapley, OP.Cit., p. 225.
[108] Ibid.,P. 225.
[109] Aurélie Basha i Novosejt, OP.Cit., p. 172.
[110] Paul Nitze, the Secretary of the Navy, stated that "...a withdrawal of forces was simply impossible, especially in the Far East and Germany." His concern stemmed in part from the fear that reducing forces would "oblige us to an immediate nuclear response in the event of any serious threat in Korea and perhaps elsewhere in the Far East." In other words, any confrontation could quickly escalate into a nuclear exchange in the absence of another credible deterrent. See: Aurélie Basha i Novosejt, OP.Cit., p. 173.
[111] Ibid., p. 174.
[112] Ibid., p. 174.
[113] Robert McNamara (The Essence of Security…), previous source, p. 113.

with lower aptitude could use video recordings, with both sound and image, to assist them in formal learning, enabling them to reach a level of competence comparable to that of students with higher aptitude. …We discovered within the Department of Defense that the principal reason for the 'failure' of many men in aptitude tests at the time of enlistment was simply that these tests were designed based on the psychology of traditional, formal classroom education, in which the teacher controls and determines the pace. Such tests inevitably reflect the cultural value systems and linguistic models of affluent American society. This is why a large number of young men from impoverished backgrounds fail these tests—not because they lack sufficient intelligence, or even possess greater intelligence, but because their cultural environment differs fundamentally from that assumed by the test designers…".[114]

McNamara succeeded in developing his country's military arsenal by providing sufficient nuclear capability for a first strike, ensuring the capacity to carry out a second strike if the United States was subjected to an initial attack, and maintaining the ability to continue fighting after a second strike. He also ensured the continuity of communications with senior leadership and the protection of their safety[115]. These changes have remained highly effective to this day[116], undergoing no fundamental alteration[117] apart from certain modifications introduced by U.S. Secretary of Defense James R. Schlesinger[118] in 1974 and by Richard Bruce Cheney[119] in 1990[120]. This continuity attests to the essential nature of these reforms and to the inability of successive governments to devise viable alternatives, given their sustained effectiveness and success.[121]

McNamara earned the admiration of President Kennedy, who remarked to *Businessweek* that "McNamara is a remarkable model of a distinguished lineage in American industry—a specialist trained in business administration who also possesses broad experience, able to move easily from one technical field to another[122]." Beyond this, McNamara gained the trust of the American public in both administration and technology, earning a reputation as a "human computer" in a positive sense[123]. William Kaufman, writing in a 1963 book, noted that "McNamara possesses all the qualities of a professional manager; he can navigate across large and significant fields."[124]

McNamara proved his competence in transforming the strategy of the U.S. Department of Defense. He successfully developed the institution and demonstrated the effective application of statistical and quantitative analysis within the largest military organization in the world, achieving these results despite the immense scale and complexity of the task.

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[114] Same source, pp. 113–114.
[115] Kevin J. Moran, *op. cit.*, p. 50.
[116] Thesis published in 2016.
[117] Kevin J. Moran, *op. cit.*, p. 50.
[118] **James R. Schlesinger:** An American economist and politician (15 February 1929 – 27 March 2014), born in New York. He earned a Bachelor's degree from Harvard University in 1950, a Master's in 1952, and a Ph.D. in Economics in 1956. Between 1955 and 1963, he taught economics at the University of Virginia. In 1963, he joined the Rand Corporation, where he worked until 1969. That year, he entered the Nixon administration as Assistant Director of the Office of Management and Budget. In 1971, President Nixon appointed him a member of the Atomic Energy Commission and later designated him as its chairman, a position he held for approximately a year and a half. In February 1973, he became Director of the Central Intelligence Agency. Although his tenure at the CIA was brief, he implemented comprehensive organizational reforms and earned a reputation as a strict and candid administrator. See: Roger R. Trask, *The Secretaries of Defense: A Brief History 1947–1985*, Historical Office—Office of the Secretary of Defense, Washington, DC, 1985, p. 40.
[119] **Dick Cheney:** An American politician and businessman (born 30 January 1941), born in Nebraska. He earned a degree in political science from the University of Wyoming. Cheney served as White House Chief of Staff under Presidents Nixon. In 1978, he became a member of the House of Representatives. During the administration of President George H. W. Bush, he served as U.S. Secretary of Defense from 1989 to 1993, overseeing the invasion of Panama and the Gulf War in 1991. From 1995 to 2000, he served as CEO of Halliburton. He was also a member of the advisory board of the Jewish Institute for National Security Affairs (JINSA). Later, he served as Vice President of the United States under George W. Bush from 2001 to 2009 and has been described as the most powerful vice president in American history. See: Hassan Atta, *The Great Fraud: How the Dollar Became the Greatest Deception in History*, 3rd ed., Nile Group, Cairo, 2024, p. 86; Dick Cheney and Liz Cheney, *In My Time: A Personal and Political Memoir*, translated by Fadel Jatkar, Dar Al-Kitab Al-Arabi, Lebanon, 2012, p. 20.
[120] Deborah Shapley,OP.Cit.,P.120; Kevin J. Moran, OP.Cit.,P.50.
[121] Kevin J. Moran, OP.Cit.,P.50.
[122] Deborah Shapley,OP.Cit.,P.104.
[123] Deborah Shapley,OP.Cit.,P.104.
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