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The Effects of Nuclear Weapons on Post WWII US/USSR Confrontations Intensity Peak Levels

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Final report 6 June 1975

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A thesis presented to the faculty of the U.S. Army Command and General Staff College, Fort Leavenworth, Kansas 66027



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This study examines the escalation rates and intensity levels of US/ USSR post-WW II confrontations in relation to the number of strategic nuclear weapons available to these nations to determine if a relationship exists. That is, have strategic nuclear weapons effected the rate of escalation or peak level of intensity of the post-WW II US/USSR confrontations.

This study provides the reader with a better understanding of the role of nuclear weapons. Hopefully, it will influence others to accelerate efforts to bring nuclear weapons under effective control.

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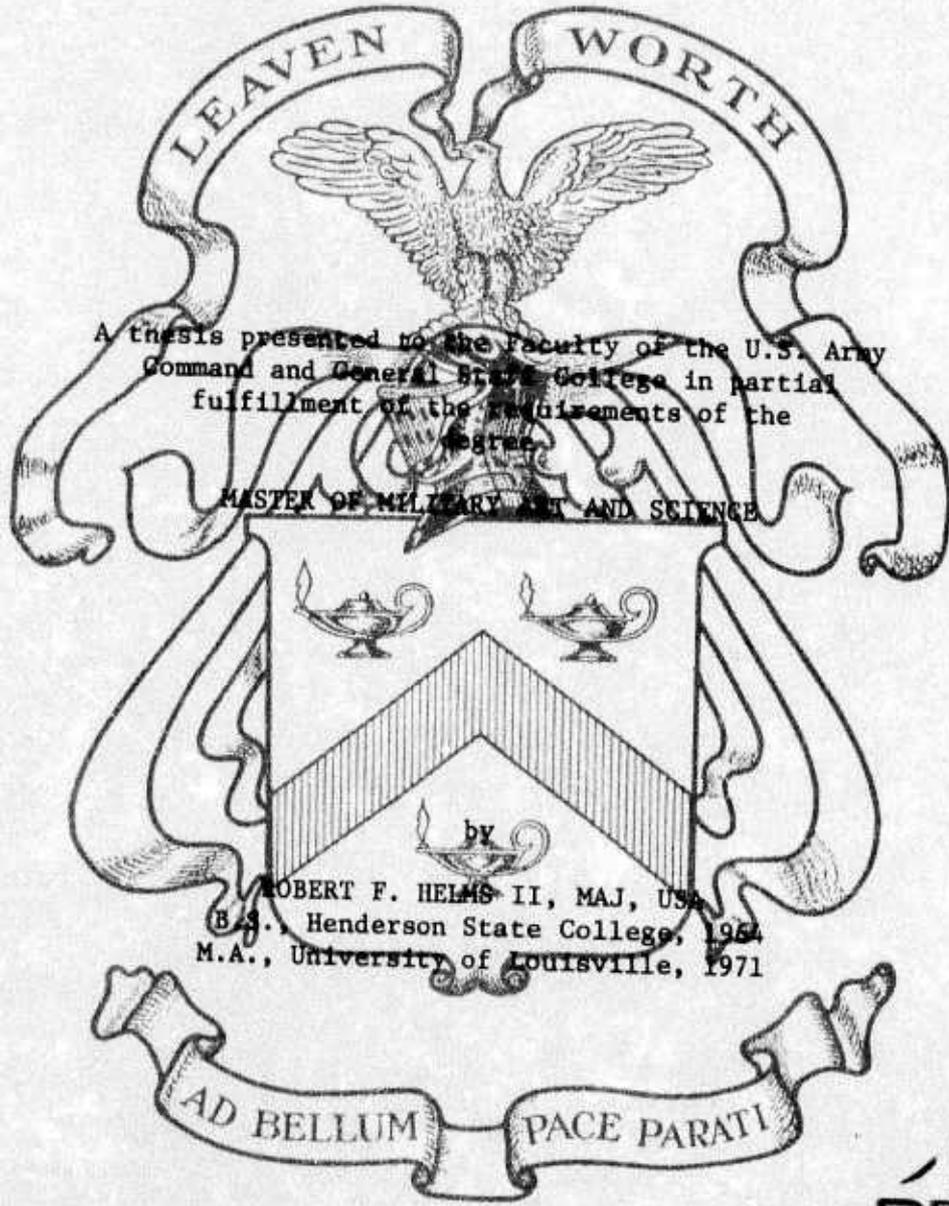
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2

THE EFFECTS OF NUCLEAR WEAPONS

ON POST WW II

US/USSR CONFRONTATIONS INTENSITY PEAK LEVELS



A thesis presented to the faculty of the U.S. Army  
 Command and General Staff College in partial  
 fulfillment of the requirements of the  
 degree

MASTER OF MILITARY ART AND SCIENCE

by  
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Fort Leavenworth, Kansas  
 1975

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## ABSTRACT

This study examines the escalation rates and intensity levels of US/USSR post-WW II confrontations in relation to the number of strategic nuclear weapons available to these nations to determine if a relationship exists. That is, have strategic nuclear weapons effected the rate of escalation or peak level of intensity of the post-WW II US/USSR confrontations. The study concludes that, while the role of strategic nuclear weapons has been insignificant in effecting either the intensity level or escalation rate of US/USSR confrontations, strategic nuclear weapons are an important factor in the pursuit of confrontation avoidance politics by the US and USSR since 1962. However, once a US/USSR confrontation becomes unavoidable and is enjoined, strategic nuclear weapons become a tool of force employed within the conceptual framework of a confrontation strategy. As this strategy involves ever increasing measures of escalation with the goal of persuading the opponent to concede and begin the de-escalation process, there is the ever present danger of miscalculation or misperception by the actors and a resorting to the use of nuclear weapons with catastrophic results. Herein, lies the danger of nuclear weapons and the necessity for understanding their role and bringing them under control. This study provides the reader with a better understanding of the role of nuclear weapons. Hopefully, it will influence others to accelerate efforts to bring nuclear weapons under effective control.

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## INTRODUCTION

This research study represents an examination of the effect of nuclear weapons on the escalation rate and intensity level of United States (US) and Union of Soviet Socialist Republics (USSR) post World War II (WW II) confrontations. The conceptual idea for this research developed out of the author's interest and concern with the value of nuclear weapons as a component of the nuclear deterrence equation. The destructiveness of nuclear weapons is well known, but their usefulness has been a matter of acceptance with little critical analysis of their worth being conducted.

The study will endeavor to trace the historical evolution of the nuclear deterrence theory, illustrate the effect of nuclear weapons as a component of the nuclear deterrence equation and measure the effectiveness of these weapons in deterring the US and USSR from increasing the intensity levels of confrontations involving these nations. Chapter one is being devoted to an understanding of the historical development of nuclear deterrence as a strategic defensive policy. The research problem is stated in chapter two and the reasons for the problem being considered worthy of research are included.

Chapter three presents the hypotheses to be tested and chapter four contains the research methodology and definitions. A summation of the research results is discussed in chapter five and the study conclusions are presented in chapter six. In an effort to maintain ease of reading for the main study, the detailed research is included as annexes.

Annex A illustrates the effect of nuclear weapons as an active variable in the nuclear deterrence equation and is considered by the author to be an

important part of the research effort. An understanding of the material contained in this annex is a prerequisite for grasping the problem being studied. The escalation rates and intensity levels of US/USSR post-WW II confrontations are researched in annexes B - J with the number of strategic nuclear weapons and delivery systems available to the US and USSR during each confrontation being developed and summarized in annex K. Lastly, annex L contains the computer operations used to compute the study results.

The ensuing study has been conducted from a careful study of numerous sources. As far as can be ascertained, it is an original idea and, in this sense, represents an effort to break new ground. It is, therefore, susceptible to the dangers normally associated with a "first" try. These dangers, though admittedly great, are not such that the study should be aborted. The need to understand the effects of nuclear weapons is critical at this juncture of history and justifies encountering the dangers of breaking new ground.

The reader may find the material contained in the study detailed and very technical at times. This fact is acknowledged, but defended on the grounds that the subject matter itself is very complex and exceptionally difficult to simplify. An earnest effort has been made to present the material in as simple form as possible. It is the expressed hope that, after reading the study, the reader will have a greater appreciation for the subject material and be motivated to conduct further study/research on the subject matter. If this occurs, the sacrifices and efforts required to research, develop and compile the study have been justified.

## CHAPTER I

### Nuclear Deterrence Theory Development

A. Introduction. A necessary prelude to meaningful research in the functioning of nuclear deterrence is an understanding of the historical development of the theory. Knowledge of the underlying causes and events which affected the nature and timing of nuclear deterrence theory development is necessary to place the research effort in perspective and connect it to United States (US) and Union of Soviet Socialist Republic (USSR) post-war confrontations. This chapter is devoted to establishing the necessary historical background upon which the research effort will be based.

Throughout history, weapon research and development has conducted a search for the ultimate weapon which would provide unquestionable military supremacy over an opponent. During their times, men thought that gunpowder, the crossbow, machinegun and airplane represented the ultimate weapon. So, it is not surprising when the US developed the atomic bomb and demonstrated its effectiveness, as well as its destructiveness, at Hiroshima and Nagasaki, that it was thought to be the ultimate weapon.<sup>1</sup> Furthermore, its technical complexity and the materials required to manufacture it were so scarce that it was widely believed that only the US possessed the ability to produce it. It was, therefore, not likely that the USSR could develop and use the atomic bomb in the foreseeable post-World War II (WW II) time frame.

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<sup>1</sup> Bernard Brodie, The Absolute Weapon, New York: Harcourt, Brace, 1946, pp. 88-90.

B. US and USSR Actions in the Immediate Post-WW II Period. The political, economic and military strength of the pre-WW II European powers was greatly reduced during the course of WW II. As a result, a political vacuum was created and the US and USSR emerged as competitors to fill it. As a practical matter, post-WW II Europe was divided into US, French, British and Soviet spheres of influence.<sup>2</sup>

The USSR used its large land army to fill the political vacuum and consolidate/integrate its share of Europe into satellite nations. The US used its smaller land army to maintain law and order in its share and its economic strength to facilitate economic recovery and to establish governments favorable toward the US. The US air capability, with the atomic bomb and means of delivery, was thought to be an effective deterrent to further USSR expansion.<sup>3</sup>

However, the immediate post-WW II actions of the USSR to consolidate control over its share of European nations and expand its influence beyond (i.e., Iran--1946, Greece--1947, Czechoslovakia--1948 and Berlin--1948) made it apparent that the WW II policy of US/USSR collaboration no longer existed and a more aggressive US policy vis-a-vis the USSR was required.

C. The Truman Administration and Containment. The Truman Administration adopted a policy of "Containment" in 1947 to counter the perceived expansionist threat of communism (used during the immediate post-WW II period as being

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<sup>2</sup>Dean Acheson, Power and Diplomacy, Cambridge: Harvard University Press, 1958, pp. 2-28.

<sup>3</sup>Thomas K. Finletter, Foreign Policy: The Next Phase, New York: Harper and Brothers, 1958, pp. 21-22 and Thomas K. Finletter, Power and Policy, New York: Harcourt, Brace and Company, 1954, pp. 19-35.

related to the USSR). The Containment Policy envisioned the firm use of US military and economic strength anywhere in the world to check Soviet probing attempts to expand its influence. The policy received the most persuasive justification from George K. Kennan, who supported the theory as an appropriate response to USSR expansion and hostility toward non-communist nations. Kennan argued that the successful implementation of containment would not only check Soviet expansion, but in doing so, would also bring about a mellowing in USSR attitudes and policies toward the outside world. Therefore, Kennan continued, since communism is necessarily expansionist in theory, its containment will eventually result in a less dogmatic ideology and the rise of less despotic political leaders in the Soviet Union.<sup>4</sup>

Under the Containment Policy, the Truman Administration conducted the Greek-Turkish Aid Program, the Marshall Plan, the NATO Pact, the Mutual Defense Assistance Program and the Mutual Security Program. Simultaneously, the US also encouraged increased political, military and economic integration among the western European nations. The primary goal of these efforts was to make Europe impregnable against threats to its security from USSR expansion efforts, whether these efforts were the direct application of USSR military power or communist intrigue from within the nations.<sup>5</sup>

The US military strength was linked to the defense of Europe by stationing of US military forces in Europe under the NATO agreement. Maintaining these forces in Europe represented an effort to counter a theory which suggested that WW II had begun because Hitler did not think the US would enter

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<sup>4</sup>George F. Kennan, American Diplomacy, 1900-1950, Chicago: The University of Chicago Press, 1953, pp. 107-128.

<sup>5</sup>Dexter Perkins, The Diplomacy of a New Age, Bloomington and London: Indiana University Press, 1968, pp. 35, 40-93.

the war. The US forces were, therefore, a trip-wire mechanism which would ensure immediate US military involvement in Europe should the USSR invade with conventional forces.<sup>6</sup>

The USSR detonated its first known atomic device in August, 1949.

This event came as a surprise to US officials and resulted in:

- A realization that the cold war would not be terminated in the near future and greater military strength was required to enforce containment.
- Increased numbers of nuclear weapons and development of larger yield weapons by the US.
- The initial development of a theoretical argument for conducting war with less than total victory as an aim.
- A realization that the possibility of US forces engaged in a war with nuclear armed USSR forces was a reality and that it was necessary to increase US military strength to meet this possibility.
- Increased civilian interest in nuclear war and initial stages of developing a civil defense theory.<sup>7</sup>

D. Korea and Aftermath. The Soviet sponsored invasion of South Korea by North Korean forces represented the second real test of the US containment policy (the 1948 Berlin Blockade is considered to be the first test) and application of limited war concepts. Nuclear weapons were not used, nor was the threat to use them made by the US Government despite arguments for their use by General Douglas MacArthur. There was considerable argument within the US that the attack in Korea represented a strategic feint by the USSR to draw

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<sup>6</sup>Perkins, Op. Cit., pp. 79-80.

<sup>7</sup>John Foster Dulles, War or Peace, New York: The MacMillan Company, 1950, p. 151.

US military forces/strength into Asia, thus weakening the defense of Europe, while preparing for an attack in Central Europe. US counter-actions to this possibility took the form of a substantial increase in US forces in NATO, creation of a Supreme Allied Commander for Europe and naming General Dwight D. Eisenhower to that position, obtaining a commitment of other NATO nations to increase their forces and the adoption of a "crisis year" concept for defense planning.<sup>8</sup>

The concept of defense planning via "crisis year" justified an increase in the annual defense budget on the assumption that the years 1954/1955 would be years of peak US/USSR crises and, that in order to prepare for these "crises years," increased defense expenditures were required.

E. The Eisenhower "New Look". The Eisenhower Administration entered office in January 1953 committed to ending the Korean War and taking a "new look" at US military strategy. The "new look" replaced the "crisis year" approach to defense planning with a "long-haul" approach which justified reduced annual defense expenditures on the assumption that these expenditures would continue indefinitely.<sup>9</sup>

Reduced defense expenditures represented a priority issue for the Eisenhower Administration to permit channeling capital flow into US economy rejuvenation efforts. Reduced defense expenditures necessarily required a reduction in US land forces which were reduced from 1,534,000 in 1953 to 900,000 in 1958.<sup>10</sup> In an effort to offset the land force reduction, the

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<sup>8</sup> Acheson, Op. Cit., 35-46.

<sup>9</sup> Morton Halperin, Contemporary Military Strategy, Boston and Toronto: Little, Brown and Company, 1967, pp. 46-47.

<sup>10</sup> Acheson, Op. Cit., 54-62.

administration sought to continue to contain communism (primarily the USSR, but also included the People's Republic of China in Asia) via nuclear deterrence.

The British Government had accepted the concept of nuclear deterrence as the basis for its military policy in 1952. The concept was based on the assumption that the manned bomber, capable of delivering nuclear weapons on Soviet cities, would deter the USSR from aggression in Europe.<sup>11</sup> Thus, a precedent had been established which the Eisenhower Administration could and did follow. Accordingly, the US Air Force's capability to deliver nuclear weapons and to defend the continental US against Soviet bomber attack was increased as rationale to offset the army's manpower reduction.

F. Massive Retaliation. The Eisenhower Administration's policy vis-a-vis the communist world was formally described by Secretary of State John Foster Dulles on 12 January 1954 as being one of "Massive Retaliation" with nuclear weapons at a time and place of US choice. Emphasizing the need for a "maximum deterrent at a bearable cost," Mr. Dulles stated:

The Soviet Communists are planning for what they call "an entire historical era," and we should do the same. They seek, through many types of maneuvers, gradually to divide and weaken the free nations by overextending them in efforts which, as Lenin put it, are "beyond their strength, so that they come to practical bankruptcy." Then said Lenin, "our victory is assured." Then, said Stalin, will be "the moment for the decisive blow."

We want, for ourselves and the other free nations, a maximum deterrent at a bearable cost.

The way to deter aggression is for the free community

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<sup>11</sup> Richard Rosecrance, The Defense of the Realm, New York and London: Columbia University Press, 1967, p. 159.

to be willing and able to respond, vigorously at places and with means of its own choosing.<sup>12</sup>

The massive retaliation doctrine was based on the assumptions that the US was invulnerable to USSR nuclear delivery means and that it would deter USSR expansion/aggression at all levels of intensity. During the course of discussions concerning the doctrine, serious questions were raised as to US intentions and credibility; e.g.,

- At what level of Soviet aggression would the US initiate a nuclear attack on the USSR?
- Would the US endanger its own population in response to an attack on India, Germany, Korea or any other nation?

The deployment of the first intercontinental strategic bombers in the Soviet military inventory in 1956 raised questions about the vulnerability of the US population centers.<sup>13</sup> The destructive power and technological advancement of US nuclear capability vis-a-vis the USSR was further challenged when the USSR detonated a thermonuclear bomb in August 1953.<sup>14</sup>

G. Criticism of Massive Retaliation. The feasibility and practicality of massive retaliation came under challenge from the democratic party, the army and navy, because of the Air Force's dominant role, and an emerging group from the academic world. The emergence of a group in the academic world to challenge

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<sup>12</sup>Extracted from a speech given by then Secretary of State John Foster Dulles on January 12, 1954 before the Council of Foreign Relations. Speech is published in Department of State Bulletin, 30, No. 791, dated January 25, 1954.

<sup>13</sup>The TU-95 (Bear) bomber, with a range of 7,800 miles, and the M-4 (Bison), with a range of 6,050 miles were first deployed as operational in 1956. The Military Balance, 1973-1974, London: The International Institute for Strategic Studies, 1973, p. 70.

<sup>14</sup>Arnold Horelick and Myron Rush, Strategic Power and Soviet Foreign Policy, Chicago and London: The University of Chicago Press, 1966, p. 17.

the strategy is significant in that it marked the first time the intellectual world had concerned itself on a large scale in the use of nuclear weapons. The emergence was accompanied with a flourish of debates, articles, essays and books to explore the implications of the doctrine and to develop alternatives.

Bernard Brodie published one of the first critical essays in November 1953 in which he argued that it was not rational to think of conducting only an unlimited nuclear war and that limited war, conducted with less than all-available nuclear forces or with non-nuclear forces, has a place which must be considered in developing foreign policy.<sup>15</sup>

A collection of essays prepared by the Princeton Center of International Studies was published in 1956 under the title of Military Policy and National Security. Included in these essays was one by William W. Kaufmann which supported Brodie's earlier line of thought that the US needed a capability to deter aggression at all levels and should develop deterrence forces accordingly.<sup>16</sup> Among these essays, Roger Hilsmann examined the actual conduct of nuclear war and began one of the first academic attempts to distinguish between counter-value and counter-force targets (counter-force targets being the enemy's nuclear capability, to include the delivery means, and counter-value targets being the population in the enemy's homeland) and to look at the tactics applicable for conducting ground war fought with nuclear weapons.<sup>17</sup>

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<sup>15</sup> Bernard Brodie, "Unlimited Weapons and Limited War," originally published in The Reporter on November 18, 1954. Reprinted in Morton H. Halperin, ed., Limited War in the Nuclear Age, New York and London: John Wiley Press, 1963, pp. 56-62.

<sup>16</sup> William W. Kaufmann, ed., Military Policy and National Security, Princeton: Princeton University Press, 1956, pp. 28-38, 257.

<sup>17</sup> Ibid., pp. 53-57, 60-72.

The applicability of strategic nuclear weapons to deter local aggression in peripheral areas was challenged by Robert Osgood and Henry Kissinger.<sup>18</sup> These authors stressed the requirement for the US to possess military forces appropriate for a response to aggression at all levels and supported the argument that tactical nuclear weapons have an applicable role in less than general nuclear war. Kissinger went even further in considering the applicability of tactical nuclear weapons in his effort to examine how they might be used and controlled to prevent a tactical nuclear war from expanding into a general nuclear war. He concluded that it might be possible to gradually escalate conflict intensity with acceptable risks and conduct simultaneous negotiations toward concluding the conflict.

Bernard Brodie challenged the view that tactical nuclear weapons were appropriate for all levels of war, arguing that too many people had concluded that nuclear weapons should be used in local wars.<sup>19</sup> While Brodie did conclude that nuclear weapons may be appropriate in some local wars after careful and thorough consideration, Thomas Schelling argued that the tacit agreement of belligerents to refrain from introducing tactical nuclear weapons into local conflicts represents a natural threshold which facilitates keeping the conflicts local and bringing about a successful negotiated conclusion acceptable to both sides.<sup>20</sup>

The wealth of criticism launched against the theory of massive retaliation and the debates created by it had an effect on the Eisenhower Administration.

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<sup>18</sup> Robert Osgood, Limited War: The Challenge to American Strategy, Chicago: University of Chicago Press, 1957, p. 258 and Henry Kissinger, Nuclear Weapons and Foreign Policy, New York: Houghton Mifflin, 1957, pp. 174-202.

<sup>19</sup> Bernard Brodie, Strategy in the Missile Age, Princeton: Princeton University Press, 1959, p. 330.

<sup>20</sup> Thomas Schelling, The Strategy of Conflict, Cambridge: Harvard University Press, 1960, pp. 53-80.

The requirements for tactical nuclear warheads, a strategy for conducting local wars and a larger conventional military force were acknowledged by Eisenhower. The 1957 Soviet launching of the first earth satellite (Sputnik) was viewed by many in the US as a technological advancement which challenged the US bomber delivered deterrent and could conceivably place the continental US within range of nuclear warheads delivered by missiles. As a consequence, the vulnerability of the US population once again occupied a center arena of concern, and a debate concerning civil defense requirements began to take place with renewed intensity.

As questions were being asked about population vulnerability and the US launched an accelerated program to overcome the alleged missile gap, it was becoming apparent that the nuclear strength relationship of the two superpowers was not constant and that the world was becoming increasingly vulnerable as nuclear power and delivery means increased and became more efficient. Several conclusions became apparent:

- It would not be possible to halt the spiral without USSR cooperation/participation.
- The US population was becoming increasingly vulnerable.
- Both sides possessed the capability of conducting a pre-emptive strike in an attempt to disarm the other; therefore, an assured second strike capability was needed.
- The danger of a miscalculation or accidental launch/detonation raised to an acute stage the possibility of unintentional nuclear war.
- The vulnerability of the US nuclear force to a USSR pre-emptive strike was directly related to the stability of the "balance of terror."<sup>21</sup>

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<sup>21</sup> Morton Halperin, Contemporary Military Strategy, Boston and Toronto: Little, Brown and Company, 1967, pp. 48-55.

At this time, the focus of strategic thought oriented on stabilizing the balance of terror as a mechanism of achieving a peaceful world. Albert Wohlstetter described the requirements of an invulnerable retaliatory force as:

. . . a stable steady-state peacetime operation within feasible budgets; the capacity to survive enemy attacks; to make and communicate the decision to retaliate; to reach enemy territory, penetrate all defenses, and destroy the target; with each phase demanding technical preparations of very considerable complexity and expense.<sup>22</sup>

Wohlstetter's theory was followed by Oskar Morgenstern, who argued that it was in the interest of the US for both the US and USSR to have invulnerable strategic nuclear forces. He further suggested that the development and deployment of seaborne missiles represented the most logical weapon system for this purpose.<sup>23</sup>

Bernard Brodie presented the requirements for an invulnerable retaliatory force as:

A real and substantial capability for coping with local and limited aggression by local application of forces; and provision for saving life on a vast scale if the worst came to worst.<sup>24</sup>

Herman Kahn's book, On Thermonuclear War, took the discussion one step further and looked at what should be done in the event of nuclear war. Kahn concluded that:

- There would be a significant number of survivors in a nuclear exchange and that the number is directly related to the type of attack and available protection.

<sup>22</sup> Albert Wohlstetter, "The Delicate Balance of Terror," printed in Foreign Affairs, January 1958.

<sup>23</sup> Oskar Morgenstern, The Question of National Defense, New York: Random House, 1958, p. 75.

<sup>24</sup> Brodie, Strategy in the Missile Age, Op. Cit., pp. 294-297.

- That the US should develop the capability to choose among its range of options in response to a nuclear attack and not be confined to a pre-determined reaction.

Kahn's theory emphasized that it is possible to control nuclear strategy and to suit a nuclear force to desired ends. This could well be to influence the enemy rather than destroy him.<sup>25</sup> In approaching the use of nuclear power as he did, Kahn attempted to bring the "unthinkable" down to and examined it in "thinkable" terms.

H. The Kennedy Administration and Flexible Response. President Kennedy's Administration assumed office in 1961 with the benefit of the theories discussed above being available for consideration and use. President Kennedy selected Robert S. McNamara as Secretary of Defense and solicited and received the active support of the academic community in developing his foreign policy. Kennedy had campaigned for the Presidency on a platform of correcting the shortcomings in US conventional military capability and the alleged "missile gap" with the USSR.<sup>26</sup> Accordingly, the administration immediately initiated efforts to build a credible conventional force with particular emphasis being placed on unconventional warfare. Concurrently with this, an invulnerable second strike nuclear force was established to ensure that a condition of minimum nuclear deterrence existed. The goal was to develop nuclear forces capable of selectively retaliating against enemy nuclear forces rather than against his cities after withstanding a nuclear first strike. In theory, it was hoped to

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<sup>25</sup> Herman Kahn, On Thermonuclear War, Princeton: Princeton University Press, 1960, pp. 301-302.

<sup>26</sup> John F. Kennedy, The Strategy of Peace, New York and London: Harper and Row Publishers, 1960, pp. 33-45.

give the enemy a strong incentive for not attacking US cities.<sup>27</sup>

McNamara realized that submarine launched nuclear missiles represented the most practical means of achieving an invulnerable minimum nuclear deterrence capability and accelerated deployment of the "Polaris" submarine for this purpose.<sup>28</sup> The administration wrapped its military policy into a strategy of "Flexible Response," which is essentially what Herman Kahn had discussed in his book, On Thermonuclear War. In regard to nuclear weapons, the flexible response strategy argued that strategic nuclear functions were not limited only to that of deterring war, but must include the ability to fight and establish military superiority in any war in which they are being used. The forces necessary to support flexible response must be designed to permit their controlled use in retaliating against selective targets during a nuclear war. The object being to select the target (i.e., missile bases, population, industrial capability, etc.) to force the opponent to end the conflict on terms favorable to the US.<sup>29</sup>

This represents one of the more advanced strategies for prevention and conduct of nuclear war developed to date and is based on the premises that:

- Deterrence may fail.
- The number of lives lost in a nuclear war will vary depending on the targets attacked, type of weapons used and the availability of adequate protection and sufficient warning to permit the use of the available protection.

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<sup>27</sup>William Kaufmann, The McNamara Strategy, New York: Harper and Row, 1964, pp. 51-56.

<sup>28</sup>Ibid., p. 53.

<sup>29</sup>Maxwell Taylor, The Uncertain Trumpet, New York: Harper and Row, 1960, pp. 145-147.

- The need to limit damage would constitute a major wartime objective. This can best be achieved by attacking the enemy's nuclear delivery means and providing active/civil defense.
- By avoiding nuclear strikes on the enemy population and holding a nuclear reserve for this purpose, should the enemy strike the US population, an incentive is provided for him not to attack US cities.
- The US will have an interest in a post-thermonuclear world and, therefore, it is desirable to terminate such a war on terms favorable to the US.<sup>30</sup>

McNamara described the strategy to the House Armed Services Committee as:

. . . the United States has no alternative but to ensure that at all times and under all circumstances it has the capability to deter. In this age of nuclear armed intercontinental missiles, the ability to deter rests heavily on the existence of a force which can weather a massive nuclear attack with little or no warning, in sufficient strength to strike a decisive counter-blow. This force must be of a character which will permit its use, in event of attack, in a cool and deliberate fashion and always under the complete control of the constituted authority.<sup>31</sup>

McNamara remained as Secretary of Defense in the Johnson Administration until 1968. The two additional factors he added to deterrence strategy were the employment of Multiple Independently-Targeted Re-entry Vehicles (MIRV) and recommendation that a limited anti-ballistic missile (ABM) system be deployed as a deterrent against a possible nuclear threat from China.<sup>32</sup>

<sup>30</sup> Kaufmann, Op. Cit., p. 51-52.

<sup>31</sup> Extracted from a statement made by McNamara before the House Committee on Armed Services on February 23, 1961 printed by the House of Representatives, Authorizing Appropriations for Aircraft, Missiles, and Naval Vessels, Washington: USGPO, 1962.

<sup>32</sup> Kaufmann, Op. Cit., pp. 156-158, 162.

I. The Nixon Administration and Realistic Deterrence. The Nixon Administration entered office in January 1969 committed to the pursuit of an enduring peace based on a strategy for peace which was structured on three interrelated principles; (1) strength, (2) partnership and (3) a willingness to negotiate.<sup>33</sup> The military policy was explained by Secretary of Defense Melvin R. Laird as one of "Realistic Deterrence." The goal of realistic deterrence is to discourage and ultimately to eliminate the use of military force as a means for one nation to impose its will on another.

Whereas President Kennedy's flexible response strategy included the capability for effecting assured destruction on an enemy even after an all-out surprise nuclear attack, realistic deterrence developed this thought one step further in the concept of strategic sufficiency. President Nixon explained this concept in his 1972 report to congress as:

Our forces must be maintained at a level sufficient to make it clear that even an all-out surprise attack on the United States by the USSR would not cripple our capability to retaliate. Our forces must also be capable of flexible application. A simple "assured destruction" doctrine does not meet our present requirements for a flexible range of strategic options. No President should be left with only one strategic course of action, particularly that of ordering the mass destruction of enemy civilians and facilities.<sup>34</sup>

In his discussion of strategic sufficiency before the Senate Armed Services Committee in 1973, Mr. Laird described the objectives of the concept as including:

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<sup>33</sup>Richard Nixon, US Foreign Policy for the 1970's, Shaping a Durable Peace, Washington: USGPO, 1973, pp. 5-13.

<sup>34</sup>Extracted from Richard Nixon, US Foreign Policy for the 1970's: The Emerging Structure of Peace, Washington: USGPO, 1972, p. 158.

Maintenance of an adequate second-strike capability to deter an all-out surprise attack on the US strategic forces.

Providing no incentive for the USSR to strike the US in a crisis.

Preventing the USSR from gaining the ability to cause considerably greater urban/industrial destruction than the US could inflict on the USSR in a nuclear war.

Defense against damage from small attacks or accidental launches.

Force design to permit strategic alternatives available for use depending on the nature or level of provocation. This means having the capability to carry out an appropriate response without having to necessarily resort to mass urban and industrial destruction.<sup>35</sup>

When the Ford Administration entered office in August 1974, President Ford committed his administration to continue the foreign and defense policies of the Nixon Administration.<sup>36</sup> As far as can be determined, the Ford Administration has not altered any of the Nixon defense policies. There has not been any announcements to the contrary, nor has the administration's actions indicated otherwise. This, then, concludes the development of US nuclear deterrence theory developments as of August 1974. A follow-on refinement of realistic deterrence appears to be occurring in the form of the present Secretary of Defense James R. Schlesinger's retargeting program. However, this concept is in the formulation phase and it has not been "operationalized" as strategic

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<sup>35</sup> Statement of Secretary of Defense Melvin Laird before the Senate Armed Services Committee on the 1973 Defense Budget and FY 1973-1977 Program, National Security Strategy of Realistic Deterrence, Washington: USGPO, 1972, p. 22.

<sup>36</sup> Bernard Gwertzman, "Ford Promises That He and Kissinger Will Continue Nixon's Foreign Policy," New York Times, August 9, 1974, p. 4.

policy.<sup>37</sup> For these reasons, it is not being included in this study.

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<sup>37</sup> For a discussion of this development see the September 11, 1974 report presented by Mr. Schlesinger to the Committee on Foreign Relations. This report is printed in, Committee on Foreign Relations, Briefing on Counterforce Attacks, Washington: USGPO, 1975, pp. 21 and 22. Also see Facts on File, Vol. 34, No. 1733, January 26, 1974, p. 50 for further discussions.

## CHAPTER II

### Statement of the Problem

A. Introduction. Whereas Chapter I discussed the historical development of US nuclear deterrence strategy, this chapter is devoted to:

- A discussion of the functioning, components and phenomenon of nuclear deterrence
- A brief review of the development of confrontation strategies
- Stating the research problem
- Summarizing the need for this research effort

In this manner, this chapter serves as a transition from historical development to the present and orients the reader on the specific problem to be researched.

B. Functioning of Deterrence. As inferred in Chapter I, the concept of deterrence represents the present US strategic defense strategy in relation to the USSR. Deterrence essentially means to discourage a potential opponent from pursuing a course of action by presenting him with a very high probability of counter-actions, which will effect him in a negative manner to a greater degree than will the gains he can expect to achieve by continuing to pursue the action. US Secretary of Defense Clark Clifford explained the use of deterrence by the US in 1969 as:

. . . the only realistic policy we can pursue at this particular juncture is one of deterrence. In other words, we must be prepared to maintain at all times strategic forces of such size and character, and exhibit so unquestionable a will

to use them in retaliation if needed, that no nation could ever conceivably deem it to its advantage to launch a deliberate attack on the United States or its allies.<sup>1</sup>

This means possessing the capability of absorbing a coordinated, surprise nuclear first strike and having a sufficient number of nuclear weapons survive to inflict unacceptable damage on the attacker. In theory, this will preclude a rational, deliberate, pre-planned attack. Thus, it is important to note that deterrent forces prevent undesired actions and are offensive in this respect. Conversely, defensive forces function to reduce the enemy's capability to inflict damage. The differences between nuclear deterrent and defensive forces are further discussed by Glenn Snyder in his book, Deterrence and Defense.<sup>2</sup> For purposes of this research work, it is sufficient to note that deterrent forces are offensive means used in a defensive modus operandi to deter a potential attacker by threatening him with a credible capability of inflicting unacceptable damage.

It follows that nation A can expect to possess a deterrent capability in relation to nation B, if nation A has:

- any form of control over nation B's present or prospective value inventory
- the capability to communicate a credible threat or promise to decrease/increase the value inventory
- the ability to convince nation B of the intent to fulfill the threat or promise if nation B undertakes an undesired action

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<sup>1</sup> Statement of Secretary of Defense Clark M. Clifford, The Fiscal Year 1970/71 Defense Program and 1970 Defense Budget, Washington: U.S. Government Printing Office, 1967, p. 47.

<sup>2</sup> Glenn H. Snyder, Deterrence and Defense, Princeton: Princeton University Press, 1961, pp. 3-8.

As stated earlier, deterrence is a function of cost versus expected gains. Then, the object of deterrence is to reduce the probability of an enemy attack, by convincing the potential enemy that his losses will be greater than expected gains.<sup>3</sup>

C. Components of Nuclear Deterrence. Strategic nuclear weapons constitute but one part of the full deterrence equation. Deterrence includes the ability to communicate a credible intent, will and capability to the opponent, the perceptions of both nations toward each other, national values, the level of unacceptable damage, risk versus the expected gain, ideologies, and restraint. A conceptual model of nuclear deterrence is illustrated in Figure 1.

This model depicts the major components of nuclear deterrence as consisting of conventional military forces, a command and control system, nuclear hardware and nuclear software items. These components are discussed below.

(1) Nuclear Software. Nuclear software consists of the unacceptable damage threshold level and available passive defensive measures.<sup>4</sup> Both of these variables are affected by the vulnerability of the population and the national will and intent of a nation. In discussing national will and intent, Lieutenant Colonel Robert B. Strain, USAF, stated:

The image of a nation and the degree of firmness it might evidence are derived from national character and psychology, the personalities of the leaders, the past conduct of the government, its position on the use of weapons, past decisiveness and public support of governmental policy. Seriousness of intent or determination can be measured by the content

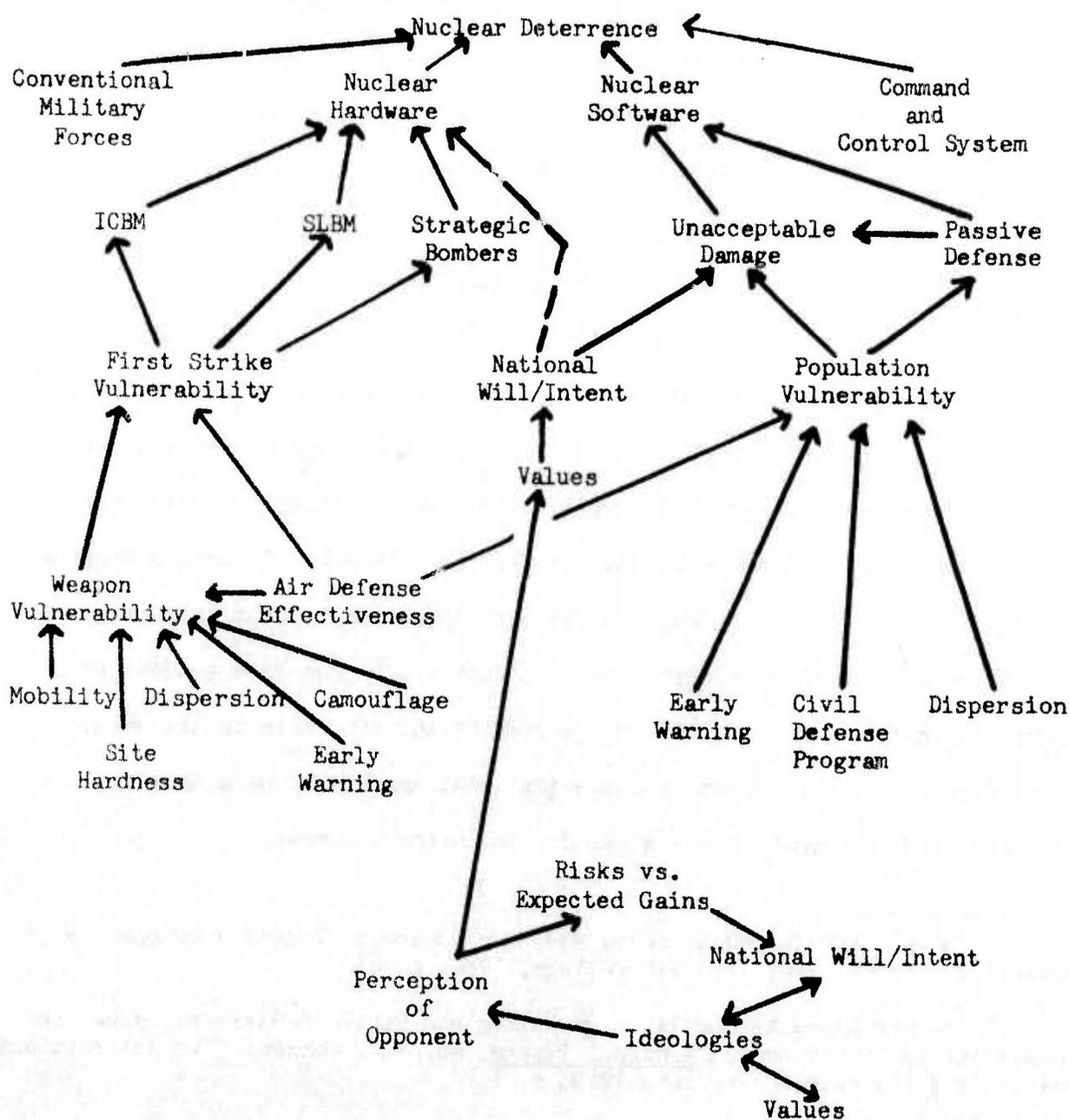
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<sup>3</sup>Snyder, Op. Cit., pp. 12-16.

<sup>4</sup>See Annex A for an in-depth discussion of unacceptable damage.

Figure 1

A Conceptual Model of Nuclear Deterrence<sup>5</sup>



<sup>5</sup>In addition to the discussion contained in this chapter, the discussion in Annex A provides the reader with additional information on the dynamic effects of these variables.

of the threat and the extent to which the issue behind the threat is vital to the threatener.<sup>6</sup>

National ideologies and perceptions will affect the manner in which nations view and interpret the actions of each other. In his essay, "Soviet Risk-Taking and Crisis Behaviour: From Confrontation to Coexistence," Hannes Adomeit concludes that the competing "Communist" versus "Democracy" ideologies has had a major influence in US/USSR interpretations, actions and counter-actions. Adomeit states "that policies have been based on perceptions of the opponent as much, if not more, than on actualities."<sup>7</sup>

Ralph White reviewed USSR actions in the post-WW II period from a Soviet point of view and concluded that most would have to be considered as being defensive in the Kremlin. He further concludes that these same actions are considered very offensive from a Western point of view.<sup>8</sup> In his study of "Soviet Reactions to Changes in American Military Strategy," Kenneth Whiting concludes that the "Soviet reactions to US changes and innovations has been to develop weapons to neutralize the US advantage."<sup>9</sup> The USSR actions are, therefore, considered defensive in the Kremlin and offensive in the West. In concluding, it is sufficient to state that what appears to be a plus for one opponent normally represents a minus for the other opponent.

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<sup>6</sup>Robert Strain, "Deterrence and Arms Control: Toward a Common Goal," Maxwell Air Force Base: Air War College, 1974, p. 43.

<sup>7</sup>Hannes Adomeit, "Soviet Risk-Taking and Crisis Behaviour: From Confrontation to Coexistence," Aldelphi Papers, No. 101, London: The International Institute for Strategic Studies, 1973, p. 8.

<sup>8</sup>Ralph White, "The Genuineness of Soviet Elite Fear of US Aggression," printed in Bobrow Davis, ed., Weapons System Decisions, New York: Praeger Publishers, 1966, Chapter 8.

<sup>9</sup>Kenneth Whiting, "Soviet Reactions to Changes in American Military Strategy," Maxwell Air Force Base: Air University, 1965, p. 32.

National values are affected by ideologies. Communist "Marxist" ideology stresses the importance of the state over the individual and the eventual, inevitable conflict with capitalist imperialism.<sup>10</sup> Soviet leaders have frequently voiced an intent to overcome the West. These actions have emphasized the eventual domination of communism over democracy and resulted in considerable mutual suspicion and mistrust.<sup>11</sup>

The risks of an opponent's reaction, as compared to expected gains, is an important variable which must be considered in the nuclear deterrence equation. In discussing this variable, Glenn Snyder stated:

The problem for the deterrer is to make sure that his military posture and threats pose greater costs than gains for the aggressor, and make sure that this threat is believed.<sup>12</sup>

In discussing threat, risk and credibility, Robert Strain stated that, "for the threat to be effective, it must be credible in the eyes of the deterred, and he, in turn, must calculate that the risk of loss in a particular venture exceeds the gain he might accrue."<sup>13</sup>

Population vulnerability directly affects the national will and intent of a nation. In considering this variable, it is useful to visualize population vulnerability as existing on a continuum with invulnerability at one extreme and complete vulnerability at the other end. A nation that is invulnerable

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<sup>10</sup>For a discussion of the role of ideologies see, the collection of readings contained in, "Impact of Ideology on National Strategy," printed by the Command and General Staff College, Leavenworth, 1974.

<sup>11</sup>For a discussion of USSR discussion of communism versus democracy, see Kenneth Whiting, Op. Cit., pp. 1-26.

<sup>12</sup>Glenn Snyder, Op. Cit., p. 29.

<sup>13</sup>Robert Strain, Op. Cit., p. 11.

in relation to another nation can normally be expected to demonstrate a strong will and intent during any conflict with the opponent. This has been quoted in the Kremlin as one of the reasons accounting for US firmness during the 1961 Berlin confrontation.<sup>14</sup>

At the other end of the population vulnerability continuum where a nation is completely vulnerable, there appears to be two courses of action that may be taken during conflict with an invulnerable nation. A nation could either resist and hope to achieve favorable results despite the relative vulnerability or it could capitulate to the stronger nation. The degree of vulnerability existing between these extremes can be expected to result in a similar variation in the demonstration of national will and intent.

From this discussion, it becomes painfully apparent that one cannot quantify or predict the direction that national will may take with a high assurance of accuracy.<sup>15</sup> However, it is possible to argue that this variable is dependent on the efficiency of early warning, dispersion and available civil defense programs. As a population becomes more dispersed and the effectiveness of its civil defense programs and early warning increases, its vulnerability to an enemy nuclear attack decreases. Vulnerability is further decreased if the number of incoming nuclear warheads can be reduced. This factor is directly related to the effectiveness of the available air defense system.<sup>16</sup>

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<sup>14</sup>For an excellent analysis of this, see Urs Schwarz, Confrontation and Intervention in the Modern World, Dobbs Ferry: Oceana Publications, Inc., 1970, pp. 60-61.

<sup>15</sup>For a discussion of national will and its role as an element of national power, see the collection of readings prepared by the Strategic Studies Committee at the Command and General Staff College entitled, "National Will: Key Element to Power," 1974.

<sup>16</sup>Herman Kahn, On Thermonuclear War, Princeton: Princeton University Press, 1965, pp. 428-504.

(2) Command and Control System. The ability of a nation to receive a surprise nuclear attack and respond with unacceptable damage on the attacker represents a basic US assumption of nuclear deterrence. Unless the response is pre-planned and automatic, this requires that a functioning command and control system, capable of assessing the situation and developing/executing a measured response, survive any surprise attack. Herman Kahn discussed the importance of the command and control role in nuclear deterrence in his book, On Thermonuclear War, and concluded that the presence of an effective system is not only essential, but, that its absence detracts from nuclear stability.<sup>17</sup>

(3) Conventional Military Forces. One of the basic criticisms of the "Massive Retaliation" theory was that it failed to provide for a less than nuclear response to Soviet aggression. This would permit the USSR to "nibble" at US interests with the US being forced to do nothing or respond with nuclear weapons. The presence of a credible US conventional military response functions to deter the USSR from sponsoring/pursuing aggression at the lower levels. The presence of a credible USSR conventional military force has a similar effect on US policies. Both nations recognize that a local conventional conflict involving US and USSR military forces could very easily escalate into a nuclear war. In discussing the role of conventional military forces for deterrence, Secretary of Defense Melvin Laird stated:

. . . our general purpose forces must be such as to convince potential enemies that they have nothing to gain by launching conventional attacks.

. . . To deter conventional aggression, we and our allies together must be capable of

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<sup>17</sup> Kahn, Op. Cit., pp. 187-188, 163, 171, 174, 182.

posing unacceptable risks to potential opponents. We must not be in a position of being able to employ only strategic weapons to meet challenges to our interests. On the other hand, having a full range of options does not mean that we will necessarily limit our response to the level or intensity chosen by an enemy. Potential enemies must know that we will respond to whatever degree is required to protect our interests.<sup>18</sup>

Glenn Snyder states it as:

. . . the modern balance of power takes a "mixed" form. Any conventional military attack by one nuclear power against the interests of another nuclear power creates a risk of nuclear reprisal of some kind . . .<sup>19</sup>

(4) Nuclear Hardware. This variable consists of the available strategic nuclear warheads and delivery means; i.e., ICBMs, SLBMs and strategic bombers. These are affected by vulnerability to the enemy's weapons and effectiveness of the command and control system. Weapon vulnerability is affected by early warning, mobility, site hardness (protection), dispersion, camouflage and effectiveness of the air defense system. This variable will be fully developed and its effect on nuclear deterrence discussed later in Annex A.

D. Nuclear Deterrence Phenomenon. The use of nuclear deterrence as a national defense policy has required the US to avoid pursuing goals or objectives which conflict with those the USSR considers vital. Conversely, the USSR had been required to adopt a similar policy toward the US. The adoption of the theory has also required constant US vigilance and aggressive response to USSR actions

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<sup>18</sup> Extracted from a statement by Secretary of Defense Melvin Laird before the House Armed Services Committee on the FY 1973 Defense Budget and FY 1973-1977 Defense Program, Washington: USGPO, 1972, p. 81.

<sup>19</sup> Snyder, Op. Cit., p. 47.

that might be considered as encroachments on US areas of interest. The efforts of both nations to communicate its concern, intent, will and capabilities has resulted in barrages of charges, counter-charges and periods of extreme tensions.<sup>20</sup> Such antics have also been used in the US to justify defense developments and expenses and involvements in the Korean and Vietnam Wars.<sup>21</sup>

The actions and counter-actions used by the US and USSR during their post-WW II relationships have not resulted in a nuclear exchange, to date. However, there have been periods of extreme tests of wills and credibility; such as the Berlin blockades, the Cuban Missile Crisis and the Arab-Israeli Wars. The actions of both nations have been influenced by their perceptions of each other. A great deal of mistrust and suspicion has been generated, but neither of these have gone beyond acceptable limits with a resulting "hot" war. Yet, the very cornerstone of nuclear deterrence rests on the uncertainty or certainty that an aggressive act will result in a counter act involving the use of nuclear weapons.

This phenomenon has resulted in an apparent necessity for the US and USSR to continually probe each other in an effort to determine/test each other's will and intent. These actions and counter-actions have resulted in an inevitable spiral in weapon technology, destructiveness, and numbers. Thus, the policy of nuclear deterrence has not created a stable situation for it is dynamic in nature and, therefore, invariably results in actions and counter-actions as potential opponents maneuver for advantageous positions. This

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<sup>20</sup>For a discussion concerning this aspect of US/USSR post-WW II relations, see Richard Nixon, U.S. Foreign Policy for the 1970's: A New Strategy for Peace, Washington: USGPO, 1972, pp. 1-13.

<sup>21</sup>Samuel P. Huntington, The Common Defense: Strategic Programs in National Politics, New York: Columbia University Press, 1961.

process is commonly referred to as the psychology of deterrence.<sup>22</sup>

Americans normally prefer to think of these actions as being defensive on the part of the US and offensive in regard to the USSR; however, this may or may not be true, depending on the perception of the observer. At any rate, the actions have resulted in numerous acute levels of confrontations in which a misjudgement or irrational act could have resulted in a nuclear exchange and the development and use of a confrontation strategy.

E. The Development of a Confrontation Strategy and Its Use. A confrontation strategy involves engaging an opponent with carefully designed and calculated actions to escalate a conflict (in order to achieve desired national objectives) to a level just below the threshold where it is thought that the opponent considers it necessary to use military force in counter-actions.<sup>23</sup> Herman Kahn describes the world situation as:

The existing permanent alert of US and Soviet strategic forces in an almost continual global confrontation. Tensions can build up further, and there may be limited but dramatic military confrontations, either local or global. Such confrontations are the direct tests of nerve, commital, resolve and recklessness.

However, the main purposes of such confrontations is to indicate clearly that reasonably large acts of violence are possible.<sup>24</sup>

The strategy of confrontation has been used as a mechanism for bargaining. Thomas Schelling described this process as:

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<sup>22</sup> Thomas Schelling, Arms and Influence, New Haven: Yale University Press, 1966, Chapter 2.

<sup>23</sup> Urs Schwarz, Op. Cit., Chapter 1.

<sup>24</sup> Herman Kahn, On Escalation, Metaphors and Scenarios, New York: Frederick A. Praeger, 1965, p. 74.

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<sup>23</sup> Urs Schwarz, Op. Cit., Chapter 1.

<sup>24</sup> Herman Kahn, On Escalation, Metaphors and Scenarios, New York: Frederick A. Praeger, 1965, p. 74.

The final outcome must be a point from which neither expects the other to retreat; yet the main ingredient of this expectation is what one thinks the other expects the first to expect. . .<sup>25</sup>

An example of this strategy in action can be found in President Kennedy's description of US counter-actions to Soviet actions in West Berlin in 1961. He stated:

West Berlin has now become as never before, the great testing place of Western will and courage, a focal point where our solemn commitments and Soviet ambitions now meet in basic confrontation.<sup>26</sup>

The theory of confrontation also involves carefully measuring the limits of acceptable actions from the opponent's point of view and not escalating the conflict or adopting a position which goes beyond these limits, thus, tying the opponent's hands and restricting his room of maneuver to de-escalate the conflict without suffering unacceptable loss of prestige or power. President Kennedy considered this in his selection of a more moderate response (naval blockade) to extreme direct actions such as an invasion or a surgical air strike during the Cuban Missile Crisis. He did not consider it advantageous for the US to present extreme positions to the Soviet Union.<sup>27</sup>

In concluding this discussion, it can be accurately stated that the US and USSR have used a strategy of confrontation as a component of nuclear deterrence to test each others resolve, will, intent and capabilities during

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<sup>25</sup> Schelling, The Strategy of Conflict, Op. Cit., p. 70.

<sup>26</sup> Statement by President Kennedy, quoted in Schwarz, Op. Cit., p. 14.

<sup>27</sup> For an in-depth discussion of President Kennedy's concern for adopting a moderate US position on this issue, see Robert F. Kennedy, Thirteen Days, New York: Norton and Company, 1969, pp. 47-56.

their post-WW II relations. The military forces of the US, particularly the strategic nuclear forces, have been developed to deter first and if deterrence fails, to force a favorable conflict settlement.<sup>28</sup>

F. Problem Statement. In considering the use of nuclear deterrence as a strategic defensive concept, several questions surface as to the wisdom and validity of developing and employing such a potentially dangerous policy. The concept has resulted in weapons of tremendous destructive power being produced and development of a strategy for confronting an opponent with calculated escalation as a means of obtaining/pursuing national objectives.

This paper has established the purpose of deterrent forces as being to prevent an opponent from pursuing a course of action. Taken in this respect and assuming that the purpose has been to prevent a US/USSR war, then it appears that the use of nuclear deterrence, as a strategic defensive concept, has been successful since there has not been a US/USSR war. However, would there have been a US/USSR war if nuclear deterrence weapons and forces had not been in existence?

This is a haunting question that almost defies answering. However, it seems logical that if nuclear deterrence has functioned, as its supporters suggest, then a direct relationship between the intensity peak levels of US/USSR confrontations and the existing state of nuclear deterrence should be observed.<sup>29</sup> That is, as a state of mutual deterrence is achieved, it would

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<sup>28</sup> Snyder, Op. Cit., Chapter 2.

<sup>29</sup> Intensity peak level refers to that point at which confrontation events complete intensity escalation and begin to decline on the intensity scale. See Chapter IV for a discussion of the intensity scale (escalation ladder) being used to support this research effort.

appear to be in the interests of both nations to maintain their confrontations at lower levels of intensity.

Earlier, the components of nuclear deterrence were identified as:

(1) conventional military forces, (2) nuclear hardware (available strategic nuclear weapons), (3) nuclear software and (4) the existence of a command and control system. It is obviously beyond the scope of this research effort to incorporate and study the total effect of all these components on confrontation intensity peak levels. Therefore, it is proposed to isolate the strategic nuclear weapon variable and determine if a relationship exists between US/USSR post-WW II confrontations intensity peak levels and the number of strategic nuclear weapons possessed by these nations at the time of the confrontation.

It is recognized that the other nuclear deterrence variables are important and are worthy of research. However, it is strategic nuclear weapons that have the capability of such mass destruction and need to be brought under control. Therefore, it is vitally important to understand the effect that they have had on US/USSR confrontations, i.e., have strategic nuclear weapons reduced, increased or failed to have any effect on the intensity peak levels of US/USSR post-WW II confrontations?

This research study will examine the intensity peak levels of US/USSR post-WW II confrontations in relation to the number of available strategic nuclear weapons in an effort to determine if a relationship can be established. If it is concluded that the number of available strategic nuclear weapons has not had an effect in reducing the intensity peak level of US/USSR confrontations, then the validity and wisdom of using this variable of deterrence as a strategic defensive concept must be questioned and additional study will be needed.

Conversely, if a relationship is found which indicates that nuclear weapons have reduced the intensity peak level of US/USSR confrontations, then it must be concluded that they are valuable. Efforts, then, should be directed toward controlling, rather than eliminating, nuclear weapons.

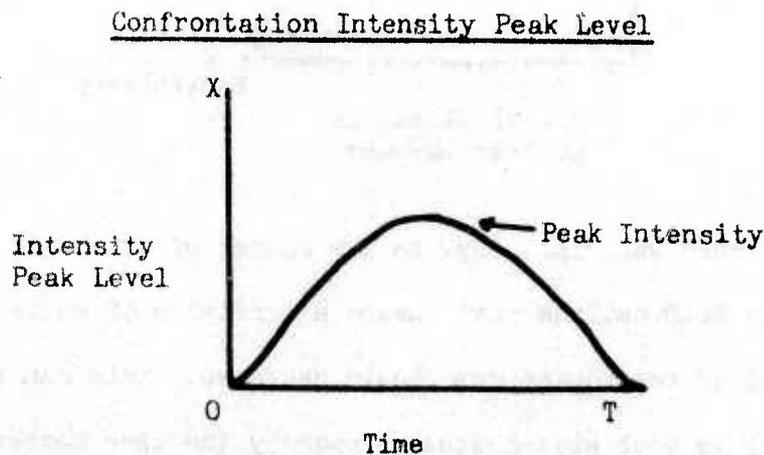
G. Need for this Research Effort. The relationship is vitally important. The US post-WW II military force developments and relations with the USSR have been based on the validity of nuclear deterrence as a strategic defensive concept. Enormous resources and efforts have been dedicated to developing and deploying present strategic nuclear weapons. Justification for these weapons and their continued development is based on the assumption that, since there has not been a US/USSR armed conflict, nuclear deterrence must be working. The cost, destructiveness and inability to stop the inevitable upward spiral of further nuclear weapon development and deployment has been established. Further, this paper has addressed the dangers of misjudgements, irrational acts and misperceptions. The necessity for nuclear weapons to deter Soviet aggressiveness is widely accepted among the American people today without questioning their worth. An examination of their effectiveness in deterring is deemed both timely and necessary.

## CHAPTER III

### Conceptual Framework, Hypotheses and Definitions

A. Dependent and Independent Variables. The stated purpose of the research study is to examine the relationship between US/USSR post-WW II confrontations and the number of strategic nuclear weapons available to these nations. The study will determine if the number of available nuclear weapons has affected the actions of either the US or USSR in escalating the intensity level of post-WW II confrontations. Therefore, the dependent variable being examined is the intensity peak level of US/USSR post-WW II confrontations. That is, at what level of intensity, ranging from cold war diplomacy at the lower end of the scale to a condition of nuclear war at the upper end, did the confrontation peak and begin to de-escalate. This is graphically illustrated in Figure 1 (letting 0 = cold war diplomacy and zero time, X = nuclear war and T = time).

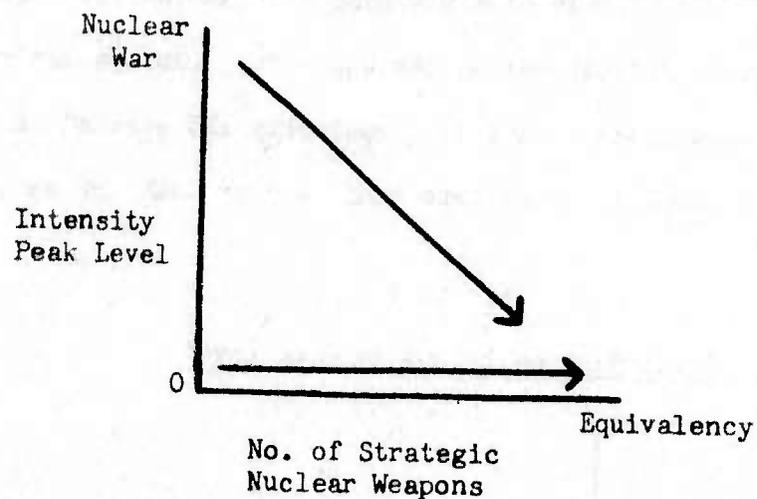
Figure 1



The independent variable affecting the intensity peak level of US/USSR post-WW II confrontations is the number of strategic nuclear weapons possessed by these nations. The components of nuclear deterrence were identified and discussed in Chapter II. Strategic nuclear hardware items (weapons) were identified as ICBMs, SLBMs and strategic bombers. Air defense, mobility, site hardness, dispersion, early warning and camouflage were identified as items affecting the vulnerability of these weapons to an enemy first strike. Figure 2 illustrates the relationship of strategic nuclear weapons and confrontation intensity peak levels, as held by advocates of nuclear deterrence as a strategic defensive concept.

Figure 2

Strategic Nuclear Weapons and Confrontation Intensity Peak Level



Letting 0 = cold war diplomacy, as the number of strategic nuclear weapons available to both nations move toward a condition of equivalency, the intensity peak level of confrontations should decrease. This can be expected to hold true as long as each side possesses roughly the same number of strategic nuclear weapons. If one nation achieves a clear numerical advantage, then that

nation may assume a less flexible, more demanding attitude toward the other. The need to maintain an equivalent number of strategic nuclear weapons has led the US Government to accept a policy of maintaining parity (equality in numbers of strategic nuclear forces and their destructive capability) with the USSR. In discussing parity, the Brookings Institute commented:

Selective protests notwithstanding, there seems to be a broad consensus within the executive and legislative branches that strategic planning should be based on the assumptions (1) that the USSR has reached a position of strategic parity with the United States and (2) that regaining strategic superiority would not be practical for the United States and would not contribute to U.S. security. Hence, the administration's goal of strategic sufficiency commands widespread support. The same is true, although to a lesser extent, for the principal tenet of the administration's strategic doctrine - that deterrence depends on the maintenance of secure retaliatory capabilities.<sup>1</sup>

In his 1973 report to Congress, President Nixon indicated that it is in the best interests of both the US and USSR to maintain nuclear equivalency and that imbalances result in dangerous policies/actions. He stated:

In the nuclear era, both the United States and Soviet Union have found that an increment of military power does not necessarily represent an increment of usable political strength, because of the excessive destructiveness of nuclear weapons in relation to the objective.

The accumulation of strategic power offered no guarantee of achieving a decisive military advantage, since neither the United States or the Soviet Union would passively accept a change in the overall balance. Moreover, with modern

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<sup>1</sup>Quoted in Robert Strain, "Deterrence and Arms Control: Toward a Common Goal," Maxwell Air Force Base: Air War College, 1974, p. 52.

weapons, a potentially decisive advantage requires a change of such magnitude that the mere effort to obtain it could produce a disaster.<sup>2</sup>

B. Hypotheses. From the discussion thus far, one is able to draw some preliminary conclusions and suggest several hypotheses for testing. First, the notion of parity suggests that as the number of strategic nuclear weapons approaches equivalency, it is in the interest of both the US and USSR to reduce the chances of a dramatic confrontation which may force a nuclear exchange. Parity further suggests that both nations should assist in maintaining a rough equivalent balance in the strategic nuclear weapon equation. This discussion suggests the following hypothesis for testing:

- Hypothesis #1. As the available number of US and USSR strategic nuclear weapons approach a condition of equivalency, confrontations between these nations will peak at a lower level of intensity.

Second, the stated purpose of nuclear deterrence is to prevent/deter a potential opponent from taking a particular course of action by convincing him of the high probability of having to accept costs that exceed his expected gains. This suggests that as the strategic nuclear weapon arsenal of opponent nations approaches equality, these nations will be careful to avoid pursuing a course of action/policy which is considered vital to the other. It also suggests that whenever the decision to confront the opponent is made, restraint will be used in escalating the intensity level. The aggressor will use a series of carefully calculated measures in confronting the opponent. One naturally approaches an opponent of equal or near equal strength with more caution than

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<sup>2</sup>Richard Nixon, U.S. Foreign Policy for the 1970's: Shaping a Durable Peace, Washington: USGPO, 1973, p. 194.

one of obviously inferior resources. Following this line of thought, the following hypotheses are developed for testing:

- Hypothesis #2. The intensity level of US/USSR confrontations will rise at a slower rate, measured in time, as the number of available strategic nuclear weapons approaches a state of equivalency.
- Hypothesis #3. As the number of available strategic weapons approaches equivalency, the US and USSR will avoid challenging policies/actions considered vital to the other nation.

Thus far, the discussion has proceeded along the lines of equivalency. What happens if a condition of equivalency does not exist? Until the late 1960's and early 1970's the USSR did not possess nuclear parity with the US, therefore, an unbalanced nuclear relationship has been in effect much longer than equivalency and must be considered for this study to have meaning. Whenever a nation finds itself with obviously inferior strategic nuclear weapon forces vis-a-vis its opponent, there appear to be five courses of action that may be taken.

- It may accept the relationship and carefully avoid conflicts with the superior opponent.
- It may try to neutralize the advantage by developing alliances with other nuclear armed nations.
- It may increase the number of available strategic nuclear forces to achieve equivalency or parity with the opponent.
- It may assume a rigid stance vis-a-vis the superior opponent and use bluffs to neutralize his advantage.
- A combination of courses of action 2, 3 and 4.

This discussion permits the following hypotheses to be developed for testing:

- Hypothesis #4. If either the US or USSR perceives its strategic nuclear forces to be numerically inferior to the other, it will increase its strategic nuclear forces to neutralize the perceived advantage.
- Hypothesis #5. If either the US or USSR perceives its strategic nuclear forces to be numerically inferior, it will assume a less flexible attitude/policy toward the other.
- Hypothesis #6. If either the US or USSR perceives its strategic nuclear forces to be numerically inferior, it will adopt an aggressive attitude/policy toward the other and use bluffs to neutralize the perceived numerical advantage.

A hypothesis is not being developed from course of action 2 because, to date, this availability of other nuclear armed nations with which to form alliances has not been a factor. This may not be true in the near future as more nations obtain nuclear arms.

C. Definitions.

Available strategic nuclear weapons/forces is being defined as the sum total of strategic nuclear warheads that can be delivered on the opponent's homeland by available strategic delivery means; i.e., bombers, ICBMs and SLBMs. Henceforth, the number of deliverable strategic nuclear warheads will be referred to as NW,d. This definition recognizes that it is the deliverable nuclear warhead that constitutes the strategic nuclear equation and the role of the delivery system. The definition is consistent with that published in the US Department of State News Release of August 1, 1972.<sup>3</sup>

A confrontation is being defined as a situation which involves both the

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<sup>3</sup>For a discussion of this, see the US Department of State, News Release, "Peace, National Security, and the Salt Agreements," dated August 1, 1972.

US and USSR with some form of overt force (or threat of overt force) being used by one of these nations to pursue a policy or achieve an objective which is being resisted by the other with similar actions. Lieutenant Commander Charles W. Koburger defined confrontation as the:

. . . opposing of one or more elements of power with other elements of power, usually including some increment of military power, the object being to prevent the first party from succeeding in whatever it set out to do without actually applying violence. Confrontations aim is to prevent an undesired action, by threat.<sup>4</sup>

The various levels of confrontation intensity indicators will be described in detail in the following chapter when an escalation ladder will be developed. Therefore, a detailed discussion of intensity indicators is deferred at this time.

Perception almost defies definition, but it is necessary to define it for this study to have validity. In discussing this subject, William Dember, stated the requirements for perception to have occurred as being:

- An output stimulus must occur
- The stimulus must be detected, received and considered by the receiver
- The receiver must interpret and respond to the received stimulus.<sup>5</sup>

Following this line of thought, then perception can be defined as occurring if the US transmits a stimulus (either intentionally or unintentionally), and the stimulus is detected, received and considered by the USSR

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<sup>4</sup>Lieutenant Commander Charles Koburger, Jr., "Komer's War. The Indirect Strategy in Action," Military Review, Volume 49, Number 8, Fort Leavenworth, 1969, p. 19.

<sup>5</sup>William Dember, The Psychology of Perception, New York: Holt, Rinehart and Winston, 1960, pp. 1-26.

and the USSR responds to its interpretation of the received stimulus. The reverse may occur with the USSR transmitting the stimulus and the US in the detecting, receiving, interpreting and responding role. It is not necessary for the transmitted stimulus to be accurate and reflect factual information. In fact, it may be completely inaccurate and represent a false situation.

Stimuli occur in any interaction of minds and may take numerous forms such as; deeds, actions, speeches, letters, inferences, pictures, etc. As mentioned earlier, the sender of a stimulus may be unaware that he is transmitting and he certainly may be unaware of how it is being received and interpreted. Assuming that the sender does desire to transmit a stimulus to a particular receiver, he cannot be certain if the intended receiver will detect, receive, consider and respond (in a manner desired by the sender) to the transmitted stimulus. The sender may anticipate, but he cannot be sure. This represents the danger of misperception and subsequent undesirable actions/reactions of two opponents involved in competing roles.

Strategic nuclear weapons equivalency is defined as existing whenever the number of US NW,d equals the USSR NW,d plus or minus five percent. The plus or minus five percent is an arbitrary figure developed to facilitate the conduct of controlled research study. If this factor was not included and it was determined that the US NW,d equaled 95 and the USSR NW,d equaled 100, then the hypotheses would be tested on the basis of the USSR possessing superiority vis-a-vis the US. It is highly unlikely that ~~five~~ NW,d would have a significant impact on the intensity peak levels of US/USSR confrontations. Robert Strain defined parity as meaning "a rough equality in numbers of strategic nuclear forces and destructive capability." Plus or minus five percent seems

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<sup>6</sup>Robert Strain, Op. Cit., p. 67.

to represent a reasonable degree of "rough equality" and is, therefore, being used in this study.

## CHAPTER IV

### Research Methodology

A. Introduction. This chapter is devoted to developing a research methodology that will support a scientific study of the relationship of post-WW II US/USSR confrontations intensity peak levels and the number of deliverable strategic nuclear weapons (NW,d) possessed by these nations.<sup>1</sup> The methodology will be developed in three distinct, but interrelated steps. These are:

- Construction and explaining a confrontation escalation ladder.
- Selection of US/USSR post-WW II confrontations for study.
- Description of the computer programs being used to compute the research results.

B. Escalation Model (ladder). An escalation ladder is being used as a tool for measuring the intensity level at which US and USSR post-WW II confrontations peaked. This device is, therefore, crucial to the validity of the research and must be carefully constructed. Ideally, an escalation ladder would contain a series of evenly spaced, sequential rungs along a continuum ranging from normal diplomatic actions at the lower end to general thermonuclear war on the upper end. This would facilitate determining which actions are taking place between belligerents, placing these in the appropriate place on the ladder, predicting the next probable level and making plans accordingly.

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<sup>1</sup>For an in-depth discussion of the effect of strategic nuclear weapons as an active variable of nuclear deterrence, the reader is referred to Annex A.

Unfortunately, nations do not normally follow an orderly, sequential process in escalating conflicts. Herman Kahn described a typical escalation situation in his book, On Escalation, Metaphors and Scenarios, as "competition in risk taking." He argues that normally a nation can expect to achieve its objective via a carefully calculated series of risk steps moving upward the intensity scale until the other side decides to use counter-actions to negate further increase.<sup>2</sup>

It has been established that the US and USSR have used a strategy of confrontation to achieve desired ends during their post-WW II relations and that each nation apparently has been quite concerned about the reaction of the other to any increased risks. This implies that confrontations are orderly affairs in the control of the constituted authority. This may or may not be true, but it does infer that one can expect confrontations to increase via a series of sequential levels of ever increasing intensity.

Normally a nation will not declare war on another without first conducting a series of sub-war level actions. These actions will normally vary in each case, but a tool to measure or indicate an expected progression is useful in conducting a comparative study of confrontation intensity peak levels and an escalation ladder will be constructed and used for this purpose.

In developing an escalation ladder consisting of forty-four rungs (levels), Herman Kahn described it as:

. . . a linear arrangement of roughly increasing levels of crisis. Such a ladder exhibits a progression of steps in what amounts to, roughly speaking, an ascending order of intensity through which a given crisis may progress. Any particular

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<sup>2</sup>Herman Kahn, On Escalation, Metaphors and Scenarios, New York: Frederick A. Praeger, 1965, p. 3.

ladder is intended as an archetype that can serve as a pattern and context for the study of a certain class of international crisis . . . the escalation ladder provides a useful framework for the systematic study of these possibilities, both realized and unrealized.<sup>3</sup>

The ladder developed by Kahn is, unfortunately, not adaptable for the purpose of this research. His ladder moves from cold war disagreement to a condition of large conventional war in twelve rungs with nuclear war occurring at number fifteen. Since the US and USSR have not engaged each other in a direct military war, an escalation ladder to measure US/USSR confrontation intensity peak levels must necessarily be expanded and in more detail in the lower rungs to be useful. Accordingly, a ladder with twenty-three rungs below a conventional war involving US and USSR military forces against each other has been developed and is illustrated in Figure 1. This ladder is an original creation and is not expected to represent a final, best-form until it is tested. As US/USSR post-WW II confrontations are examined, it may become obvious that certain rungs are out of sequence, should be eliminated or perhaps others included. If this occurs, necessary changes will be effected and suggestions made in the final chapter for developing a more appropriate ladder for future research purposes.

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<sup>3</sup>Kahn, Op. Cit., p. 38.

Figure 1

Escalation Ladder

<u>Rung #</u>	<u>Actions</u>
0	Normal inter-nation diplomacy.
1	Cold war diplomacy.
2	National leader advisor group focuses on potential conflict to assess impact and develop possible courses of action.
3	Conflict issue becomes an item of increased interest/concern and discussion among national government circles.
4	News media focuses on issues surrounding the conflict.
5	Hardening of positions, solemn declarations and re-statements of national interests.
6	Providing of military aid in the form of material, but not combat troops to a threatened ally.
7	National government officials explain the conflict issues to the national populace.
8	Meeting of nations, reaffirming of positions regarding the conflict and efforts to develop a multi-national position.
9	Threats to take the issue in dispute to the United Nations or to take unilateral action against the other superpower.
10	Direct diplomatic confrontations or legal harassment directed against the other superpower or provocative actions directed against an ally of the other superpower.
11	Rejection of a United Nations resolution.
12	Providing military support in the form of material, but not men, to an ally engaged in a military war.
13	Providing limited military support in the form of armed forces to an ally. May include advisors and/or airpower, but not ground combat troops.
14	Alert and/or deployment of conventional ground military forces.
15	Overt support to an ally involved in a military war against the other superpower.
16	Mobilization of national reserve and/or guard forces.
17	Conventional ground forces militarily engage an ally of the other superpower in combat.
18	Conventional military forces invade and/or attack targets located in the homeland of an ally of the other superpower.
19	Deployment of conventional forces to directly oppose/confront each other.

- 20 Unusual, provocative acts or demonstrations directed against the other superpower.
- 21 Return of civilian population from the opposing superpower's homeland as part of official policy.
- 22 Strategic nuclear forces brought to a high state of readiness and are deployed.
- 23 Conventional military forces actively engage each other in non-nuclear limited war.
- 24 Diplomatic relations are broken.
- 25 General war declared; conventional non-nuclear military forces only.
- 26 Civilian populations are evacuated from cities that are probable nuclear targets.
- 27 War with nuclear weapons being used.

Rung 1. Cold War Diplomacy. US and USSR post-WW II diplomacy has been characterized by an attitude of caution and suspicion. Military forces and strategy has developed from an analysis of the other's intentions/capabilities. The US and USSR openly acknowledge each other as opposing nations and normally consider a gain by one to represent a loss for the other. Rung 1 represents the normal intensity level of US and USSR post-WW II diplomacy.

Rung 2: On this level of the ladder, a potential crisis is identified and designated government officials or advisors begin to focus on the issues involved to assess the impact and develop possible counter-actions. The possibility of a conflict need not be public knowledge at this time, but the executive and a group of close advisors are concerned and are developing alternatives for use in a possible confrontation.

Rung 3. At rung 3, the conflict issues begin to become more apparent and knowledge/concern expands from a group of select inner-government official/advisors to the national government at large. At this level, the issues would become items of debate/discussion in Congress and the Politburo.

Rung 4. At this level of intensity, the probability of a confrontation and the issues involved are published by the news media; i.e., television, news papers and radio. The issues and the possibility of a confrontation become public knowledge, but the issues are not explained to the population by government officials.

Rung 5. The governments involved assume positions that are less flexible concerning the confrontation issues. The governments make official declarations of intent not to make concessions and link the issues to national interests. At this level, the communication is via established government channels and standard news media announcers/writers.

Rung 6. At this level, the US and USSR would provide military aid in the form of material to threatened allies. The material provided may be war supporting materials and military equipment, but would not include any military personnel.

Rung 7. Officials of the national government explain the issues involved and make a direct appeal to the national population in an effort to mobilize support for the government's position. Usually the appeal will be made via television, radio or newspaper.

Rung 8. The involved nations meet with traditional allies and other nations that may be sympathetic with their position in an effort to gain international support. At this time, the involved nations would seek to have the alliances reaffirm their positions, resolve and intent to stand firm. Actions would be taken to review and update alliance war plans and review the status of military forces.

Rung 9. At this level, one or the other superpower would threaten the other with taking the issue in dispute to the United Nations or to take other unilateral actions unless satisfaction is received.

Rung 10. The US and USSR engage in direct diplomatic confrontations in the United Nations, legal harassment of the other or provocative actions directed against an ally of the other superpower. The direct confrontations in the UN may take the form of debate, vetoes, filibusters, etc. Legal harassment could take the form of closing airports to aircraft of the other nation, refusing overflight rights, influencing allies to take similar actions, etc.

Rung 11. At this level, a confronted superpower would publicly reject a UN resolution directed against its actions in a confrontation.

Rung 12. Providing of war supporting materials and equipment, but not personnel, to an ally involved in a military war with an ally of the other superpower.

Rung 13. The US and/or the USSR provide limited military support in the form of armed forces to an ally. This support may include advisors, naval and/or air support, but would not include any ground combat troops.

Rung 14. Active duty forces are alerted and preparations for deployment are made. Selective forces may be deployed to forward staging areas.

Rung 15. At this level, either the US or USSR would provide overt military support in the form of war supporting materials and equipment, but not personnel, to an ally engaged in a conventional war with the other superpower.

Rung 16. National reserve and/or guard forces are mobilized.

Rung 17. Either US or USSR ground forces militarily engage an ally of the other superpower. The attack may be in the form of naval bombardment or air strikes.

Rung 18. At this level, either US or USSR military forces invade the homeland or attack targets located in the homeland of an acknowledged ally of the other superpower. Targets attacked may be by any means; e.g., air, naval bombardments, etc.

- Rung 19. Conventional military forces are deployed to locations that placed them in direct opposition of the opponent. Forces deployed will be combat ready and may carry tactical nuclear weapons.
- Rung 20. US or the USSR conduct unusual provocative acts or demonstrations against the other superpower as a matter of official policy. Actions may include blockades, overflights, crossing of recognized boundaries by small military forces, firing of weapons into area occupied by opponent's military forces, etc.
- Rung 21. US and/or USSR announce that they can no longer ensure the safety of civilians located in the homeland of the other superpower and direct that civilians, so located, depart as a matter of official policy.
- Rung 22. Strategic nuclear forces are brought to the highest state of readiness and are deployed to fire on designated targets.
- Rung 23. US and USSR military forces engage in a limited conventional war. Both sides acknowledge a desire to maintain the limits of the conflict.
- Rung 24. Diplomatic relations are terminated and embassy personnel are recalled.
- Rung 25. A condition of general conventional war is declared, however, there is a tacit agreement between the US and USSR not to use nuclear weapons.
- Rung 26. Civilian populations are evacuated from cities that are probably nuclear targets.
- Rung 27. Nuclear weapons used; nuclear threshold is crossed. A distinction is not made whether the weapons being used are tactical or strategic and it is not considered necessary to do so for purposes of this paper.

C. Selection of US/USSR Post-WW II Confrontations for Study. The problem of selecting which US/USSR confrontations to examine is crucial to the validity of this paper. Urs Schwarz identifies twenty-three post-WW II situations which resulted in confrontations between nations. Of these, the US and USSR became directly involved in only six; 1948-1949 Berlin Blockade, 1960 U-2 incident, 1959 Berlin ultimatum, 1961 Berlin Wall, 1962 Cuban missile crisis and the 1967 and 1973 Arab-Israeli Wars.<sup>4</sup> The remaining confrontations were interactions between other nations with no direct US/USSR participation.

Hannes Adomeit discusses risk and crisis in US and USSR relations and develops the following list.<sup>5</sup>

Figure 2

Risk and Crisis in Super-Power Relations

<u>Initiatives by local actors or west</u>	<u>Initiatives by the Soviet Union</u>
1947 Greek Civil War	1946 Iran crisis
1954 Indo-China conflict	1948 Czechoslovakia coup
1956 Suez crisis	1948 Berlin blockade
1957 Syrian crisis	1950-52 Korean War
1958 Middle East crisis	1956 Hungary intervention
1958 Taiwan Strait crisis	1961 Berlin Wall
1960 Congo crisis	1962 Cuban missile crisis
1960-1961 Laos crisis	1970 Egypt (expansion of USSR military presence/functions)
1965-1972 Vietnam War	
1967 Arab-Israeli War	
1969 Nigerian civil war	
1970 Jordanian civil war	

<sup>4</sup>Urs Schwarz, Confrontation and Intervention in the Modern World, New York: Oceana Publications, Inc., 1970, p. 23.

<sup>5</sup>Hannes Adomeit, "Soviet Risk-Taking and Crisis Behavior: From Confrontation to Coexistence?," Adelphi Papers, 101, London: The Institute for Strategic Studies, 1973, p. 5.

The accuracy of this research effort is predicated on careful examination of US and USSR post-WW II confrontations to correctly measure the intensity peak levels and the time required to attain the peak level in these confrontations. The bi-polar structure of the world resulting from the US/USSR cold war has resulted in only a few conflicts in which the US and USSR failed to support one side or the other. The problem is one of selecting confrontations which lend themselves to researching/determining the intensity peak level and time required to escalate to the peak level of intensity.

To facilitate these measurements, the confrontations must meet the following criteria to be selected:

- First, the US and USSR must assume opposite positions; that is, either actively oppose each other or support opposing nations.
- Second, the confrontations must contain escalation actions by both the US and USSR.
- Third, the US and USSR must be overt in their actions.
- Fourth, the US and USSR must link the confrontation to national interests.

From this discussion, it is possible to develop and use the matrix illustrated in Figure 3 as a tool for selecting US/USSR confrontations for study.

An examination of the matrix reveals that the following confrontations meet the criteria established in Figure 3 and are, therefore, selected for study.

1946 Iran crisis	1962 Cuban missile crisis
1948 Berlin blockade	1965-72 Vietnam War
1950-52 Korean War	1967 Arab-Israeli War
1959 Berlin ultimatum	1973 Arab-Israeli War
1961 Berlin Wall crisis	

Figure 3

Post-WW II Confrontations  
that have involved the US and/or the USSR

<u>Confrontations</u>	<u>US/USSR assumed opposite positions</u>	<u>Escalation involved</u>	<u>US/USSR used overt action</u>	<u>US/USSR interests involved</u>
1946 Iran Crisis	yes	yes	yes	yes
1947 Greek Civil War	yes	yes (by US only)	yes	yes
1948 Czechoslovakia Goup	yes	yes (by USSR only)	yes	yes
1948 Berlin Blockade	yes	yes	yes	yes
1950-52 Korean War	yes	yes	yes	yes
1954 Indo-China Con- flict	Ideological diff only	no	no	limited
1956 Suez Crisis	no	yes (but not by US or USSR)	yes (but not in opposition)	yes
1956 Hungary Inter- vention	yes	yes (by USSR only)	yes (but limited for US)	yes (but very limited for US)
1958 Middle East Crisis	yes	yes (by US only)	yes (by US only)	yes (limited for US)
1958 Taiwan Crisis	yes	yes (by US only)	yes (by US only)	yes (limited for USSR)
1959 Berlin Ultimatum	yes	yes	yes	yes
1960 Congo Crisis	yes	yes (by US only)	yes (by US only)	no
1960 U-2 Incident	yes	no	yes (USSR only)	yes
1960-61 Laos Crisis	yes (limited for USSR)	yes (by US only)	yes (by US only)	limited only
1961 Berlin Wall	yes	yes	yes	yes
1962 Cuban Missile Crisis	yes	yes	yes	yes
1965-72 Vietnam War	yes	yes (limited for USSR)	yes	yes (limited for USSR)
1967 Arab-Israeli War	yes	yes	yes	yes

Figure 3 (continued)

1969 Nigerian Civil War	yes	no	no	no
1970 Jordanian Civil War	no	no	yes	yes
1970 Egypt	yes	yes (USSR only)	yes (USSR only)	yes
1973 Arab-Israeli War	yes	yes	yes	yes

The selection of these confrontations for study ensures that the research effort considers the actions of the US and USSR under conditions of US NW,d monopoly (prior to 1956), during a period of uncertainty (1956 - mid 1960's) and a period of approximate NW,d equivalency (late 1960's and early 1970's). This provides a good cross section for study and permits the testing of each hypothesis advanced.

The inclusion of the Vietnam War requires further discussion. This confrontation represents a conflict extended over a considerable time period and contains periods of relatively calm interfaced with acts that resulted in increased tension/intensity. It is proposed to determine those actions which created increased tensions and to examine the intensity peak levels of US and USSR actions as a result of these acts. To examine this extended conflict as one confrontation would not serve a useful purpose and would detract from the ability of the research effort to test the relationship of NW,d and time required to attain the intensity peak level of US/USSR confrontations. These things considered, then it is more useful to isolate and examine selected actions, as discussed above, than the conflict as a whole.

D. Conduct of the Research. The dependent variable being studied is the intensity peak levels of US/USSR post-WW II confrontations. The primary independent variable being examined is the number of nuclear weapons and delivery means (NW,d) available to these nations. A secondary variable being considered

is the time required for the confrontation to peak and begin a decline in intensity. The research effort to accomplish these purposes will be conducted in three separate, but interrelated steps.

Step 1 consists of collecting the data required to test the hypotheses. This includes determining the NW,d possessed by the US and USSR and measuring the intensity peak level of selected US/USSR post-WW II confrontations. It must be emphasized, at this point, that the intensity peak level of both US and USSR actions are being measured and recorded. Also, that the NW,d relationship will be expressed as a 1:100 mathematical ratio, as opposed to using actual numbers. This has a significant advantage in that it permits using data which would otherwise be classified and, therefore, avoids the decision of either classifying or aborting the study.

Step 2 involves compiling, correlating and analyzing the collected data. Compiling and correlating the data is being accomplished thru the use of a simple data matrix. Computation, however, is more complex and requires elaboration. The nuclear deterrence model developed in Chapter II clearly illustrates that there are several variables which influence the functioning of the nuclear deterrence theory. Further, it is acknowledged that there is not an experimental technique available to absolutely control the effect of these variables. In this case it is preferable to speak of variable relationship or association than of cause.

The problems being addressed here are: (1) what proportion of the variation in the intensity peak level of US/USSR post-WW II confrontations can be attributed to the number of NW,d possessed by these nations and (2) does the number of NW,d possessed by the nations affect the escalating rate (time required to attain a peak) and if so, how much can be attributed to NW,d?

The study is concerned about the relationship of these variables occurring in a number of confrontations, but during a common period of time.

A technique which permits examining this relationship is the use of regression analysis and computation of a coefficient of determination. This technique provides a method of differentiating between black and white and measuring and expressing the gray area in mathematical form. "Description becomes a task of indicating numerically differences of degree rather than of categorization."<sup>6</sup> In discussing the use of this technique, V. O. Key, Jr. stated that:

. . . it may be said that a change of degree in B follows or is associated with a change of degree in A. The nature of such an association between changes of degree in A and B may be shown graphically in a scatter-diagram. Characteristics of the association may be measured by the line of regression, the standard error of estimate, and the coefficient of correlation.<sup>7</sup>

Substituting confrontation intensity peak levels for B and the number of NW,d for A, one can easily see the applicability of this technique for the purposes of this study. It will be necessary to conduct two separate computations to test the hypotheses stated in Chapter III. The first computation will determine the relationship of confrontation intensity peak levels and NW,d with the second computation examining the relationship of time required for the confrontation to peak and the number of NW,d possessed by the USSR and US.

It is possible to manually compute coefficients of determination using

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<sup>6</sup>V. O. Key, Jr., A Primer of Statistics for Political Science, New York: Thomas Y. Crowell Company, 1966, p. 108.

<sup>7</sup>Ibid., pp. 108-109.

the scatter-diagram technique to develop regression and median lines and to measure x and y variances.<sup>8</sup> This technique is laborious and susceptible to mathematical mistakes. For these reasons, it is preferable to use computer programs whenever possible to determine coefficients of determination.

The computer system available to the Command and General Staff College has a program, designated "LINPLOT," which fulfills these requirements. Using x and y values, the program will determine the regression line formula, regression correlation, coefficient of determination and print a graphical plot of the regression line. Whenever possible, this program is being used to determine the coefficients of determination necessary to evaluate the hypotheses being tested. Annex L contains the computer computations used to analyze the compiled research data.

The third and final step involves drawing conclusions from the study, summarizing and making recommendations for future research. Conclusions drawn will be based on the computed coefficient of determination and a subjective evaluation of collected data. This is useful, in that it will permit a comparison of the mathematically computed and subjective conclusions which increases the research validity.

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<sup>8</sup> For an illustration of the procedures and steps involved in manually computing coefficients of determination, see Key, Op. Cit., pp. 78-95 and 105-125. Another source which may be consulted for a discussion of this subject is Ted Robert Gurr, Politimetrics, An Introduction to Quantitative Macropolitics, Englewood Cliffs: Prentice-Hall, Inc., 1972, pp. 132-140.

## Chapter V

### Conduct of the Research

A. Introduction. Annexes B through J contain the detailed research associated with determining the intensity peak levels and escalation rates of post-WW II US/USSR confrontations. Annex K consists of the research conducted in measuring the US and USSR strategic nuclear relationships during these confrontations. This chapter summarizes and analyzes the data developed during the research to determine if the study supports or fails to support the hypotheses advanced earlier in chapter three.

B. The Intensity Peak Levels and Escalation Rates of US/USSR post-WW II Confrontations are summarized below in tables 1 and 2.

Table 1

#### US and USSR Intensity Peak Levels

<u>Confrontation</u>	<u>US to USSR Nuclear Relationship</u>	<u>Intensity Peak Level of US Actions</u>	<u>Intensity Peak Level of USSR Actions</u>
1946 Iranian	US Monopoly	9	10
1948 Berlin	US Monopoly	22	20
1952 Korean War	US Monopoly	18	15
1959 Berlin	9.62:1	8	10
1961 Berlin	10.19:1	19	19
1962 Cuban Crisis	10.26:1	22	22
1965 Viet Nam War	7.23:1	18	15
1967 Arab-Israeli War	5.89:1	10	10
1972 Viet Nam War	4.64:1	18	15
1973 Arab-Israeli War	4.78:1	14	14

Table 2

US and USSR Escalation Rates  
(Expressed in Days)

<u>Confrontation</u>	<u>US to USSR Nuclear Relationship</u>	<u>Escalation Rate of US Actions</u>	<u>Escalation Rate of USSR Actions</u>
1946 Iranian	US Monopoly	185	49
1948 Berlin	US Monopoly	501	571
1952 Korean War	US Monopoly	5	11
1959 Berlin	9.62:1	35	0
1961 Berlin	10.19:1	146	146
1962 Cuban Crisis	10.26:1	71	72
1965 Viet Nam War	7.23:1	1187	1515
1967 Arab-Israeli War	5.89:1	11	16
1972 Viet Nam War	4.64:1	5	0
1973 Arab-Israeli War	4.78:1	22	22

As illustrated in these tables and discussed in Annex K, the US possessed a nuclear monopoly in relation to the USSR during the 1946 Iranian, 1948 Berlin and 1952 Korean confrontations. However, during the remaining confrontations, the USSR did possess the capability of striking the US with nuclear weapons launched from the Soviet Union and a nuclear relationship did exist. Therefore, these latter confrontations are being empirically analyzed using linear regression techniques and the first three are being subjectively studied to determine if a significant variance exists between the two methods.

(1) The effect that the number of deliverable strategic nuclear weapons (x) has had on the intensity peak levels of US/USSR post-WW II confrontations (y) is computed using the computer system at the Command and General Staff College. A copy of the complete computer program (LINPLOT) is included at Annex L.

As computed, the coefficient of determination for US intensity peak levels (y) is 4.68357E-2. This means that 4.68357% of each unit of change in y can be attributed to a unit variation of x (number of deliverable strategic

nuclear weapons). The coefficient of determination computed for USSR intensity peak levels is .137009. This may be further expressed as meaning that 13.7009% of each unit change in the y value is the result of a unit variation in x.

These are very low values, but the validity of these results becomes rather obvious during a careful examination of Table 1. Even though the US possessed a monopoly of deliverable strategic nuclear weapons during the 1946 Iranian, 1948 Berlin and 1952 Korean confrontations, the Soviet Union's actions reached intensity peak levels of 10, 20 and 15 respectively. Conversely, US actions attained intensity peak levels of 9, 22 and 18 during these confrontations. During the remainder of the confrontations, the US possessed a clear numerical advantage in the number of available, deliverable nuclear weapons, yet, the USSR's actions either matched the intensity levels of US actions or were within three rungs. As a matter of fact, Soviet actions during the 1959 Berlin confrontation exceeded US actions by two rungs despite a 9.62 to 1 US advantage in deliverable strategic nuclear weapons. This emphasizes the low effect that deliverable strategic nuclear weapons has had on the intensity levels of US and USSR actions.

(2) The effect that the number of deliverable strategic nuclear weapons (x) has had on the escalation rates of post-WW II US/USSR confrontations (y) is computed using the same system and techniques discussed above in paragraph B (1). The coefficient of determination for the escalation rate (time required for US actions to reach a peak level of intensity) is computed to be 1.22170E-3 or each .12217% unit change of y is caused by a unit variation of x. Conversely, the coefficient of determination computed for the USSR escalation rate is 1.80053E-2. This can be further expressed as meaning that each 1.80053% of a unit change in y is caused by a similar change in x.

As were the values computed for the effect that the number of deliverable nuclear weapons has had on intensity peak levels, these, also, are very low. A review of Table 2 confirms the very low relationship in that, although the US possessed a nuclear monopoly during the first three confrontations, Soviet actions attained peak levels of intensity in two of these at a faster rate than US actions. During the remainder of the confrontations examined, Soviet actions peaked in 1959 and 1972 before US actions, in the same number of days in 1961 and 1973 and were very close to matching the time required for US actions to peak in 1962 and 1972.

C. Research Results Compared to the Study Hypotheses.

(1) The study fails to support hypotheses numbers 1 and 2. These hypotheses are restated below for the purpose of convenience.

- Hypothesis #1. As the available number of US and USSR strategic nuclear weapons approach a condition of equivalency, confrontations between these nations will peak at a lower level of intensity.

Although a state of equivalency, as defined, does not and has not existed in the US/USSR strategic nuclear relationship, the equation has moved from a condition of US monopoly to a 4.64 to 1 advantage for the US in 1972. Confrontations intensity peak levels have not decreased in a similar manner. The coefficients of determination computed for the US 4.68357% and the USSR 13.7009% and an examination of Table 1 serve as the basis for this finding.

- Hypothesis #2. The intensity level of US/USSR confrontations will rise at a slower rate, measured in time, as the number of available strategic nuclear weapons approaches a state of equivalency.

As discussed above, a state of nuclear equivalency has not and does not exist in the US/USSR strategic nuclear relationship. Yet, there has been

definite movement in that direction without a similar increase in the time required for US and USSR actions to reach a peak level of intensity. The basis of the finding is the coefficients of determination computed for the US (4.28%) and the USSR (3.07%) and an examination of Table 1.

(2) The study supports hypotheses numbers 3, 4 and 6. Once again, for convenience, these hypotheses are restated below.

- Hypothesis # 3. As the number of available strategic nuclear weapons approaches equivalency, the US and USSR will avoid challenging policies/actions considered vital to the other nation.

The basis for this finding is a study of Tables 1 and 2. Although a state of nuclear equivalency has not and does not exist, there is a definite trend after the 1962 Cuban missile crisis to avoid confrontation in sensitive areas. Although Berlin is acknowledged as a sensitive area of interest by both the US and the USSR, before 1962 there was almost continual friction between the two nations over Berlin. This issue gave rise to three direct, high intensity confrontations.

It appears that the 1962 Cuban confrontation, from a US point of view, represents the most acute US/USSR confrontation. It is necessarily speculative to suggest that this crisis is viewed by the Soviet decision makers as the most dangerous also, but post confrontation actions suggest this. At any rate, the areas of post 1962 confrontations have moved from previous, acknowledged sensitive areas to peripheral areas of lesser sensitivity: the Middle East being an exception.

Both the US and the USSR have acknowledged interests in the Middle East which are in conflict, in view of the Arab-Israeli dispute. However, although there are conflicting interests, the US and USSR also have common interests in that each wants to maintain its position in the Middle East and for this,

stability rather than conflict, is more desirable. Although the Middle East wars have involved acknowledged allies of both superpowers, it appears that the US and the USSR have acted together to preclude a superpower showdown during these wars. This is interpreted as further evidence of superpower efforts to avoid the dangers of an escalating confrontation over issues considered vital to the other.

- Hypothesis #4. If either the US or USSR perceives its strategic nuclear forces to be numerically inferior to the other, it will increase its strategic nuclear forces to neutralize the perceived advantage.

A common feature of post-WW II US and USSR behavior has been a concern about the number of nuclear weapons possessed by the other and vigorous efforts to overcome any perceived advantage. In the US, this concern gave rise to a strategic bomber gap in 1956 and a missile gap in 1958. Although neither of these gaps represented reality, the US perceived them to be as such and initiated extensive programs to overcome the non-existing gap. On the Soviet side, the USSR has never achieved nuclear equivalency with the US. Therefore, its efforts have involved extensive nuclear development programs designed to increase its strategic nuclear forces to neutralize the US advantage.

- Hypothesis #6. If either the US or USSR perceives its strategic nuclear forces to be numerically inferior, it will adopt an aggressive attitude/policy toward the other and use bluffs to neutralize the perceived numerical advantage.

It is not possible to determine if US actions in these circumstances would support or fail to support this hypothesis since this condition has never existed. However, this condition has existed for the USSR and Soviet actions support this hypothesis. The USSR was very hostile and aggressive toward the US up to and including the 1962 Cuban confrontation. Soviet actions have

included the use of bluffs in boasting about the missile gap, establishing unacceptable ultimatums and threatening war in Europe over Berlin and other provocative acts like the buzzing of aircraft in the Berlin air corridor, blockading Berlin, building the Berlin Wall, etc. Although it is not possible to state unequivocally that such Soviet actions were driven by the inferior strategic nuclear relationship with the US and there certainly must be other contributing factors, available evidence does support the theory that bluff has been used by the USSR in an attempt to offset the US nuclear advantage.

(3) The study failed to develop evidence sufficient to either support or not support hypothesis #5. This hypothesis is restated below for convenience purposes.

- Hypothesis #5. If either the US or USSR perceives its strategic nuclear forces to be numerically inferior, it will assume a less flexible attitude/policy toward the other.

It is not possible to evaluate what actions the US might take if it perceived US strategic nuclear forces to be numerically inferior to the USSR since this condition has never existed. Although it does appear that Soviet attitudes and policies toward the US were less flexible before the nuclear equation began to move in the direction of equivalency during the 1963-1965 time frame, it is not possible to determine the effect that nuclear weapons had on this apparent moderation in Soviet behavior because of the presence of other possible influencing factors. For example; the Cuban Missile Crisis, with its sobering after-effect, preceded the movement toward equivalency, a Washington--Moscow hotline was established in 1963, the Soviet leadership changed in October 1964, Strategic Arms Limitation Talks began in 1969, Mutual Balanced Forces Reductions negotiations began in 1973 and a policy of detente is receiving support in both capitals. For these reasons, it is beyond the scope of this

research effort to measure the effect of the nuclear weapon relationship in fostering these moderating factors. This relationship would serve as an interesting area for detailed research and is so recommended.

D. Measurement Error. Before moving to a presentation of the study conclusions, a few comments concerning measurement error appears to be appropriate. It is acknowledged that it is virtually impossible to eliminate all measurement error. Therefore, a more logical approach is to concentrate on measurement error reduction and this has been attempted to the maximum extent possible. In this regard, the more critical areas for this study are; the selection of confrontations for study, construction of an escalation ladder, computation of the strategic nuclear relationship, selection of confrontation starting dates, measuring the intensity levels of confrontation events, source selection and author bias.

It can truthfully be stated that this study has been conducted with an attempt to control author bias. The research effort grew out of a genuine desire to understand the dynamics of nuclear deterrence, hence the reason for Annex A, and the effect that nuclear weapons has had on US/USSR post-WW II relations. There was not, and is not, an evangelistic need to prove this or that point.

The selection of confrontation starting dates, which is necessary to permit measuring the time required for confrontation events to attain a peak level of intensity, has proven most troublesome and is somewhat arbitrary in this regard. It is simply not possible to determine a definitive, absolute starting date upon which there is universal agreement. Confrontations do not just start one day and suddenly terminate at a later date. They can be better viewed as a continuum along which an event occurs which raises the intensity

level of the issue to a higher plane, hence a confrontation is born. Events continue above a higher than normal plane until a terminating event occurs at which time subsequent events return to a less than confrontation level, but the continuum is still in existence. In acknowledgement of this discussion, efforts have been directed toward determining a significant event which raised itself and subsequent events to a higher than the normal continuum plane. This has been possible.

A third area of concern for measurement error is the computation of US/USSR strategic nuclear relationships. The relationships computed are based on the assumption that each nation has had 100% of its delivery vehicles available for launch against the other superpower with 100% of its nuclear payload. Although 100% operational availability is not the normal state, by applying the same criteria against both US and Soviet delivery systems this error is incorporated into each, and thus, nullifies itself. The assumption is being made that both the US and USSR possess as many nuclear weapons as can be transported by the available delivery vehicles. In view of the plentifulness of nuclear fission materials, this assumption is not considered unrealistic. Also, by applying it against both nations any error that is present is incorporated and should nullify itself.

Source selection and measuring the intensity level of confrontation events has proven challenging, but manageable. The primary sources used for determining confrontation events has been Facts on File, New York Times and official US Government publications. Although other authoritative sources have been used sparingly, none of the confrontation events included in the study have been utilized unless it was verifiable by more than one primary source. In this manner, the authenticity of the study has been maintained.

In regard to the assigning of intensity levels to confrontation events, the original intent was to use a twenty rung escalation ladder with normal cold war diplomacy occurring at rung 2, conventional war at rung 16 and nuclear war at rung 20. However, it became quickly apparent during the research of confrontation events, that some of the events did not neatly fit on the original ladder and a choice of either assigning an arbitrary, not so realistic intensity level to events or reconstructing the ladder had to be made. In the interest of scientific procedure, the latter choice was made and after three revisions the escalation ladder being used has proven adequate.

## Chapter VI

### Study Summary

- A. Introduction. This chapter contains the conclusions developed from the research effort, discusses the study contributions to scholarly knowledge in the subject area and recommends areas for additional study.
- B. Conclusions. This study can only conclude that the number of deliverable strategic nuclear weapons has had very little effect on the intensity peak levels of US and Soviet actions during post-WW II confrontations: US - 4.68357% USSR - 13.7009%. Further, these weapons have had an even less impact on the rate with which these nations have escalated their actions to a peak level of intensity: US - .12217%, USSR - 1.80053%.

Although these conclusions point out the insignificant effect of nuclear weapons once a confrontation is in progress, it does not mean that their confrontation avoidance role is equally insignificant. On the contrary, as the strategic nuclear equation moves in the direction of equivalency, there is a definite trend in the efforts of the superpowers to avoid a confrontation in acknowledged "sensitive areas." This seems to indicate an increased awareness of, and desire to avoid, the dangers associated with engaging in a superpower confrontation in which the number of available strategic nuclear weapons will have little influence in the escalation rate or the peak level of intensity.

Until the strategic nuclear balance began a definite movement in the direction of equivalency, which followed the "sobering effects" of the Cuban Missile Crisis, the Soviet Union's policy and basic attitude toward the US can, without exaggeration, be described as hostile and aggressive. Soviet leaders,

Khrushchev in particular, were prone to make boisterous comments about Soviet capabilities and intentions in an apparent attempt to neutralize the US numerical advantage until the USSR could "catch-up." These actions, complemented by western suspicion and fears, further intensified the arms race as the Soviet Union attempted to catch up and the US sought to maintain its nuclear advantage during the 1950's and early 1960's.

What, then, can be concluded concerning the role of nuclear weapons? There appear to be two significant conclusions that can be made. First, since 1962, strategic nuclear weapons have been a primary factor in the US and USSR pursuing confrontation avoidance policies. Although it is not possible to unequivocally conclude that the sobering after-effects of the Cuban confrontation and the movement of the strategic nuclear balance in the direction of equivalency are the sole reasons for more moderate policies, reduced tensions and an apparent willingness of both superpowers to cooperate with each other to avoid confrontations, these factors have had a measurable effect. Post-1962 statements of Soviet officials indicate that they may have indeed "blinked" during the Cuban confrontation and are intent on avoiding the dangers of war with the US.<sup>1</sup>

Second, when the superpowers become engaged in a confrontation that involves national interests, strategic nuclear weapons have not prevented rapid intensity escalation below the conventional war level (rung 23). On the contrary, it appears that once a confrontation becomes unavoidable, the practice has been for both the US and USSR to escalate their actions in an attempt to

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<sup>1</sup>For example, see the discussion contained in An Open Letter from the CPSU Central Committee to Party Organizations and All Communists of the Soviet Union, dated July 14, 1963, printed in The Current Digest of the Soviet Press, Vol. XV, No. 28, July 10-16, 1963, pp. 18-22.

force the other to concede and begin the de-escalating process. Herein, lies the underlying dangers of nuclear weapons and the pressing need to "cap the volcano."<sup>2</sup> If the superpowers become involved in a confrontation in a sensitive area, nuclear weapons become a tool of force and are employed as such within the tactical maneuvers of a confrontation strategy. Nuclear weapons do not exert a significant influence over the escalation rate or the intensity peak level attained below rung 23. Thus, there is the ever present danger of an out-of-control confrontation escalating into, or even above, the conventional war intensity level with catastrophic consequences.

The second conclusion was necessarily developed from an examination of the confrontations studied. It can reasonably be argued that while, yes, nuclear weapons have had little effect below the rung 23 conventional war level, there has not been a US/USSR military war and, perhaps, nuclear weapons have been significant in the reluctance of the superpowers to pursue confrontation actions into or above the level of a US-Soviet "hot" war. This certainly seems logical, but since this has never occurred, we simply do not know if any of the post-WW II confrontations would have escalated into the higher rungs (rung 23 or above) if nuclear weapons had not been present. One would hope that the conflict avoidance role would continue to function in the higher intensity levels of war, but to conclude such would necessarily be speculative in nature and unscientific.

C. Contributions of the Study to the Field. The conclusions developed within this study scientifically demonstrate the role of strategic nuclear weapons within

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<sup>2</sup>Phrase "To Cap the Volcano" is taken from McGeorge Bundy's article "To Cap the Volcano" printed in the October 1969 issue of Foreign Affairs.

the conceptual framework of a nuclear deterrence strategy. Heretofore, this role has been the subject of controversy and speculation, rather than the result of a careful examination. The results of this study clarifies this role and will undoubtedly be challenged by some of those who are unsure of the conclusions. This is understandable and is, in fact, encouraged if this will, as stated in the introduction, stimulate further research and a better understanding of the subject area.

Beyond the conclusions, this study makes an exceptionally valuable contribution in its compilation, in one document, of the following:

- the historical development of nuclear deterrence strategy
- an illustrated discussion of strategic nuclear weapons as an active variable of nuclear deterrence
- an in-depth examination of the escalating events for post-WW II US/USSR confrontations
- a detailed discussion of the US/USSR strategic nuclear weapon and delivery system relationships

Heretofore, it was necessary to read a large number of varied publications, as indicated by the footnotes and bibliography, to obtain the information contained in this study. The convenience, alone, of this study should motivate others to read it and, in this manner, will serve to expand the general awareness in the subject area. This, in itself, is a worthwhile contribution.

D. Recommendations for Further Research. This study concerned itself only with strategic weapons available to the US and USSR and the escalation events associated with post-WW II confrontations. For those who may wish to conduct additional research in the subject area, the following appear to be logical and useful extensions of this research effort and are so recommended:

- the effect of the total nuclear equation, both tactical and strategic
- the effect of the total military force; i.e., tactical and nuclear weapons plus the availability and projectability of conventional forces
- a study of confrontation escalation stabilization and/or de-escalating events/processes.

## Annex A

### Effect of Strategic Nuclear Weapons as an Active Variable of Nuclear Deterrence

A. Introduction. The components of nuclear deterrence were identified and discussed earlier in Chapter II. This annex is being devoted to an in-depth examination and illustration of the manner in which deliverable nuclear weapons effects the nuclear deterrence equation. Since an understanding of the dynamics of nuclear weapons is necessary to develop an appreciation of nuclear deterrence, this annex is particularly meaningful to a student of relations and strategies involving the US and USSR.

B. Nuclear Deterrence Illustrated. Nuclear deterrence is a function of the number of strategic nuclear warheads (NW,d) available, or perceived to be available by a potential opponent, for delivery on the opponent's homeland or valued things. Assuming that the US and USSR threshold for unacceptable damage is equal, Figure 1 illustrates a state of nuclear equality and, therefore, mutual deterrence.

Figure 1

Nuclear Deterrence of US and USSR

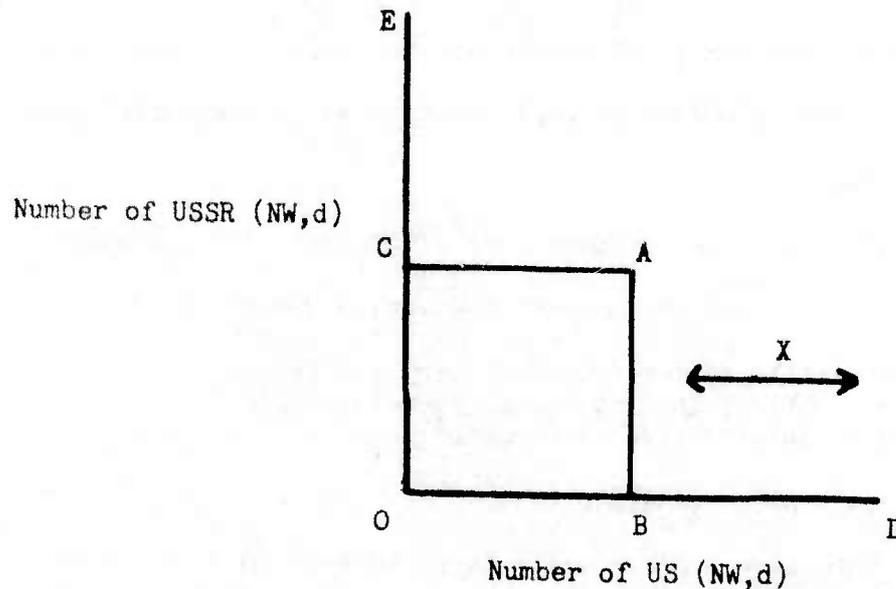


Figure 1 has two axes; a horizontal axis representing US (NW,d) and a vertical axis representing USSR (NW,d). If the US (NW,d) = OB and USSR (NW,d) = OC, then OB = OC and a condition of equality and mutual deterrence exists at point A. However, should the US (NW,d) = OD and the USSR (NW,d) = OC, then OD is greater than OC and the US deters the USSR. This may be expressed as  $OD - OC = X$  (the amount of unilateral deterrence). A similar condition of USSR unilateral deterrence of the US would exist if USSR (NW,d) = OE and the US (NW,d) = OB.<sup>1</sup>

C. Unacceptable Damage Illustrated. As discussed above, X represents unilateral deterrence. However, this is true only if X is greater than the damage considered unacceptable by the opponent (UD). Unacceptable damage is defined

<sup>1</sup> See Thomas Saz'y, Mathematical Models of Arms Control and Disarmament, New York: John Wiley and Sons, 1968, pp. 19-35 for a discussion of nuclear deterrence mathematically expressed.

as the level of damage which, when inflicted on a nation is considered unacceptable and will result in that nation not pursuing a course of action in order to prevent it being inflicted.<sup>2</sup> The threshold that represents unacceptable damage is vague and undefinable. A search of available literature indicates that there is no common agreement on what constitutes unacceptable damage for either the US or USSR.

Mr. McNamara testified (as Secretary of Defense) in 1968 that:

In the case of the Soviet Union, I would judge that a capability on our part to destroy, say one-fifth to one-fourth of her, population and one-half of her industrial capacity would serve as an effective deterrent.<sup>3</sup>

Mr. McNamara went on to state that,

400 thermonuclear warheads would kill 30 percent of the population and destroy 76 percent of the industry, while 800 thermonuclear warheads would increase these figures to 37 and 79 percent.<sup>4</sup>

Secretary of Defense Laird testified in 1970 that the figure presented by Mr. McNamara may have been insufficient and that exact figures are classified.<sup>5</sup> In discussing the adequacy of the Polaris submarine launched missile as a sufficient second strike, he stated:

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<sup>2</sup> See Herman Kahn, On Thermonuclear War, Op. Cit., pp. 40-95 for a discussion of unacceptable damage as it relates to a nation's vulnerability and recuperability.

<sup>3</sup> Statement of Secretary of Defense Robert S. McNamara before the Senate Armed Services Committee on the Fiscal Year 1969-1973 Defense Program and 1969 Defense Budget on January 22, 1968, Washington, USGPO, 1968, p. 48.

<sup>4</sup> Ibid., p. 49. During his statement, Mr. McNamara did not specify or indicate a yield for these warheads.

<sup>5</sup> Statement of Secretary of Defense Melvin Laird before the Committee on Foreign Relations on May 18, 1970, ABM, MIRV, SALT and the Nuclear Race, Washington, USGPO, 1970, p. 312.

. . . we have some 4200 strategic nuclear weapons in our strategic force today. Only about 15% of those weapons are carried by the POLARIS SLBM force . . . we are fully confident that the SLBM force at sea is invulnerable to surprise attack today . . . but is that fraction of the force enough to insure that the Soviet Union would be deterred? I do not believe that we can afford to take this kind of a risk with our national security.<sup>6</sup>

Thus, Mr. Laird is saying that 630 missiles (15% of 4,200) does not constitute an adequate deterrent force.

In a statement before the Subcommittee on Arms Control, International Law and Organization of the Committee on Foreign Relations, Dr. Jerome B. Wiesner, Provost, Massachusetts Institute of Technology, stated that:

I am firmly convinced that the probability that a nation was likely to have six out of ten of its largest cities destroyed and a substantial fraction of their residents killed will function as an effective deterrent . . . The lower limit to a deterrent then, might be the force which clearly could deliver six modern nuclear weapons on city targets.<sup>7</sup>

Dr. Herbert Scoville, Jr., Carnegie Endowment for International Peace stated before the same committee that:

Only a small fraction of the Polaris submarine force, each of the 41 submarines having 16 missiles would be required to devastate the Soviet Union.<sup>8</sup>

In an article printed in Foreign Affairs, McGeorge Bundy stated that:

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<sup>6</sup> Statement of Secretary of Defense Laird, Op. Cit., pp. 288-289.

<sup>7</sup> Statement of Dr. Jerome B. Wiesner before the Committee on Foreign Relations on May 18, 1970, ABM, MIRV, SALT and the Nuclear Race, Washington: USGPO, 1970, p. 402.

<sup>8</sup> Statement of Dr. Herbert Scoville, Jr., Ibid., p. 226.

Think-tank analysts can set levels of acceptable damage well up in the tens of millions of lives. They can assume that the loss of dozens of great cities is somehow a real choice of sane men. They are in an unreal world. In a real world of real political leaders - whether here or in the Soviet Union - a decision that would bring even one hydrogen bomb on one city of one's own country would be recognized as a catastrophic blunder; ten bombs on ten cities are unthinkable.<sup>9</sup>

General André Beaufre of France describes a study conducted at the Institut Français d' Etudes Stratégiques in which it was estimated that a loss of 2 to 10 or 15 percent of a nation's resources would encompass the damage that would be considered unacceptable.<sup>10</sup> In another study, H. Afheldt and P. Sonntag estimated that 100 nuclear warheads represented an unacceptable damage level for both the US and USSR.<sup>11</sup>

The beforementioned authorities represents a collection of western perceptions of unacceptable damage for the USSR. A meticulous search of material for a Soviet point of view has been unfruitful. Soviet leaders do not discuss unacceptable damage openly. Khrushchev discussed the destruction of nuclear war as follows:

Of course, in the event of a new world war all countries would ultimately suffer in one way or another. We, too, would endure great misfortunes; we would have many losses, but we would survive. Our territory is immense and the population is less concentrated in major industrial

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<sup>9</sup>McGeorge Bundy, "To Cap the Volcano," Foreign Affairs, Volume 48, Number 1, October 1969, p. 10.

<sup>10</sup>André Beaufre, Deterrence and Strategy, London: Faber and Faber, 1965, p. 35.

<sup>11</sup>H. Afheldt and P. Sonntag, "Stability and Strategic Nuclear Arms," New York: World Law Fund, 1971, pp. 11-12.

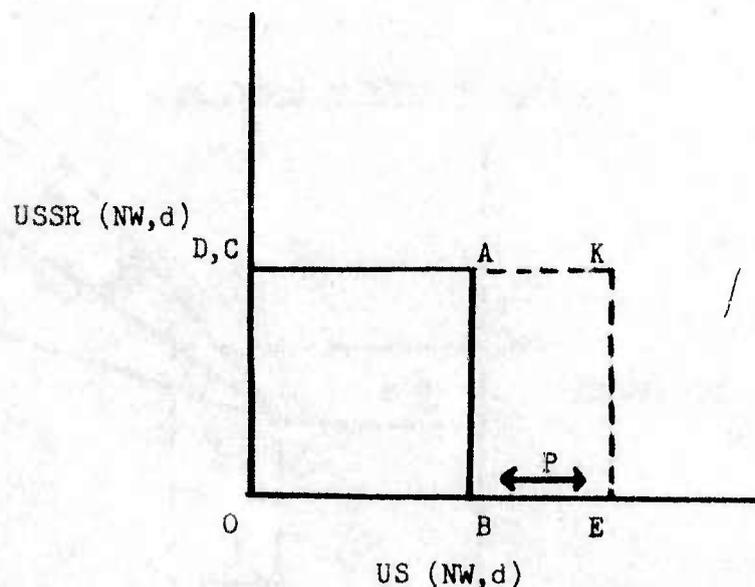
centers than in many other countries. The West would suffer incomparably more.<sup>12</sup>

Other Soviet writers echo this theme. The belief that; yes, the USSR would suffer great losses, but the West would suffer more and that the size of the USSR with its population dispersion provides the USSR a distinct advantage over the US prevails.<sup>13</sup>

No indication has been found to indicate what constitutes unacceptable damage for the US. This appears to have been carefully avoided. Suffice to state at this point that it is not possible to quantify unacceptable damage, but it is possible to illustrate its effect on nuclear deterrence.

Figure 2

Unacceptable Damage Effect on Nuclear Deterrence



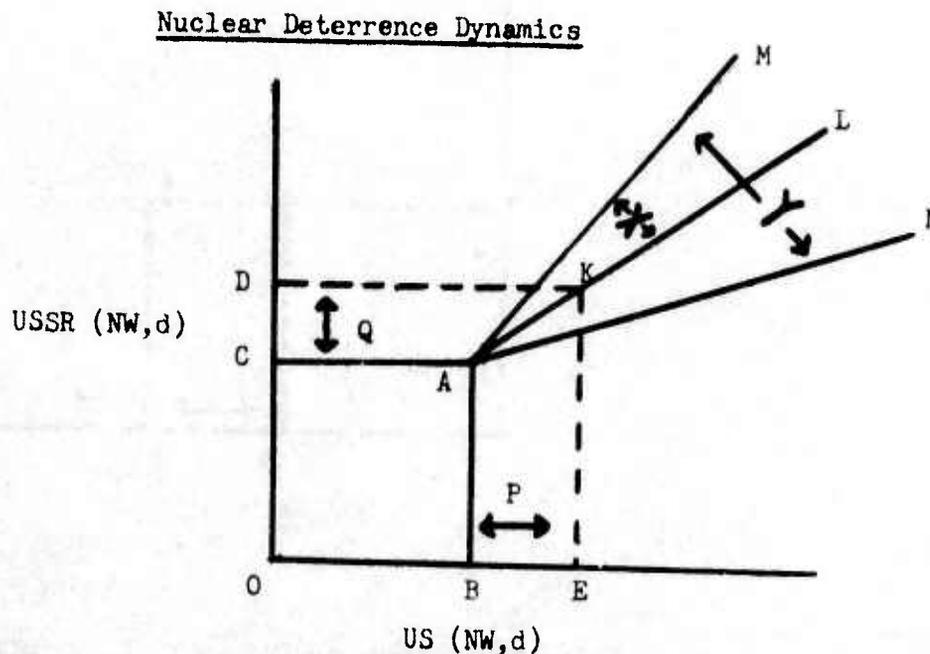
<sup>12</sup>Statement by Premier Khrushchev, quoted in A. L. Horelick, "Deterrence" and Surprise Attack in Soviet Strategic Thought, Santa Monica: The Rand Corporation, 1960, p. 18.

<sup>13</sup>Ibid., and Thomas Wolfe, Soviet Strategic Thought in Transition, Santa Monica: The Rand Corporation, 1964, pp. 4-21.

As illustrated in Figure 1, if  $OB = OC$  a state of equality/mutual deterrence exists. However, if US (UD) = 0 represented at point D, and the USSR (UD) = 50 as represented at point E, then the USSR deters the US. That is,  $OC = OD$  whereas  $OB$  is less than  $OE$ , the number of US (NW,d) necessary to deter the USSR. This can be numerically stated as  $OB - OE = P$ , with  $P$  representing the increased number of NW,d the US must have to restore mutual deterrence at point K.<sup>14</sup>

D. The Dynamics of Nuclear Deterrence. Thus far, it has been established that a condition of mutual nuclear deterrence exists when US (NW,d) equals USSR (NW,d + UD). Chapter II discussed the fact that the strategic nuclear balance equation was not constant, but rather is dynamic as the US and USSR attempt to obtain an advantage over each other. The dynamics of nuclear deterrence is illustrated at Figure 3 below.

Figure 3



<sup>14</sup>Glenn Snyder, Deterrence and Defense, Princeton: Princeton University Press, 1961, pp. 16-23.

This figure illustrates the US and USSR (NW,d) as figures 1 and 2. If the USSR (UD) is represented at point E and the US (UD) at point D, the US must increase its (NW,d) by P and the USSR must increase its (NW,d) by Q to maintain mutual deterrence. If each nation increases its NW,d along line AL to point K, a condition of mutual deterrence is maintained ( $OD = OE$ ).

However, if the US should accelerate NW,d development along line AM to point M and the USSR continues NW,d development along line AL to point L, the US would achieve a numerical advantage since AM (US NW,d) is greater than AL (USSR NW,d + UD). This can be numerically expressed as  $AM - (AL + UD) = X$ . The US now unilaterally deters the USSR.<sup>15</sup> The USSR is faced with the choices of accepting the unilateral deterrence of the US or undertaking actions to either restore a condition of mutual deterrence or surpass the US in the number of deliverable strategic nuclear weapons.

Actions that may be taken to offset the US advantage are: (1) increase the UD by X, (2) strengthen defensive measures to neutralize X, (3) increase NW,d along line AN to offset X or (4) a combination of these three options. Should the USSR opt to increase its NW,d along line AN to point N, a condition of mutual deterrence, represented by Y, would be restored ( $AN = AM + US, UD$ ). This phenomenon represents the danger of the inevitable upward spiral of nuclear weapons which appears to be virtually impossible to stop.<sup>16</sup>

E. The Effect of Invulnerable NW,d and Defensive Measures. Defensive measures against a nuclear threat can be divided into active and passive actions. Passive

<sup>15</sup> Snyder, Op. Cit., pp. 269-274.

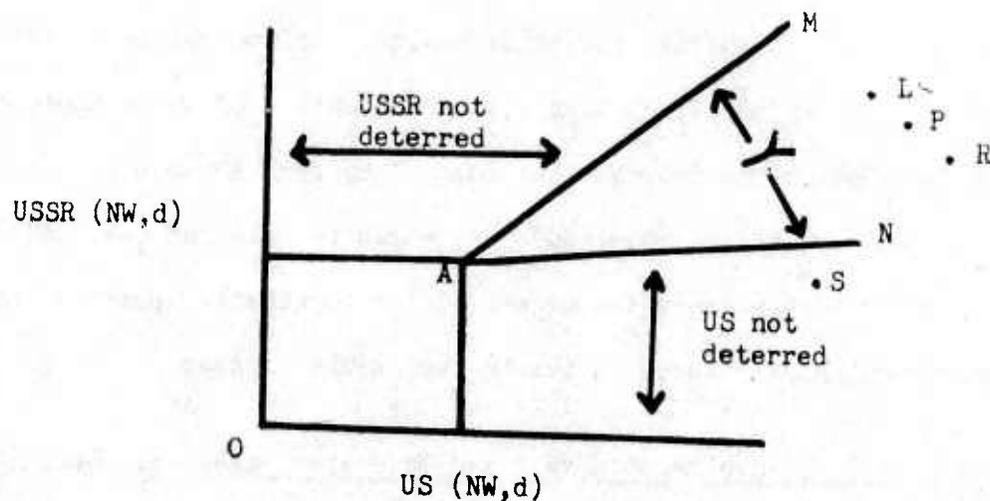
<sup>16</sup> Albert Legault and George Lindsey, The Dynamics of the Nuclear Balance, Ithaca and London: Cornell University Press, 1974, pp. 170-172.

actions involve reducing the vulnerability of a nation's valued things (such as population, industry, cities, etc.) and its NW,d. The US has done very little to reduce the nation's valued things via passive defense to date. Actions that could be taken toward this end might include dispersion, early-warning and civil defense protection shelters, drills, food stockage, emergency plans, etc.<sup>17</sup>

Much more has been done to reduce the vulnerability of NW,d. These actions have included dispersion, site-hardening, deployment of the Polaris Submarine Launched Missile (SLBM) and camouflage. Active actions have included deployment of early warning radar and limited deployment of an Anti-Ballistic Missile (ABM) System.<sup>18</sup> The effect of these measures are illustrated by Figure 4.

Figure 4

Effect of Defensive Measures on Nuclear Deterrence



<sup>17</sup> Snyder, Op. Cit., pp. 36-37.

<sup>18</sup> Ibid., pp. 54-63.

Figure 4 depicts a condition of mutual deterrence as existing between the US and USSR within the area M,A,N,(Y). The line AM represents the limit for the deterrence of the USSR by the US and the line AN represents the limit for the deterrence of the US by the USSR. A very stable condition of mutual deterrence exists at point L. Now assume that the US begins a program to reduce the vulnerability of its valued things and NW,d. In theory, as the effectiveness of the program increases, it is neutralizing the ability of USSR (NW,d) to penetrate and inflict damage.<sup>19</sup>

If the US program increases from point L through point P to point R, the USSR is in danger of losing mutual deterrence vis-a-vis the US. If the neutralizing effect of the US defensive measures (DM) reaches point S, the USSR is unilaterally deterred by the US. This can be numerically stated as  $US (NW,d + UD + DM)$  is greater than  $USSR (NW,d + UI + DM)$ .<sup>20</sup> The USSR is now faced with the choices described earlier to restore the mutual balance equation. It must be emphatically recognized that the situation described above is not unique for the US, but could very well involve the USSR assuming the initiative with the US responding.

F. The Effect of NW,d Accuracy and Reliability. Thus far, the discussion of nuclear deterrence has proceeded along the lines that a NW launched will indeed strike its designated target. This is not necessarily the case and it is time to incorporate this factor.

Wherever a bomb is dropped or a missile is launched, the probability that it will hit its target is measured in Circular Error Probable (CEP). CEP

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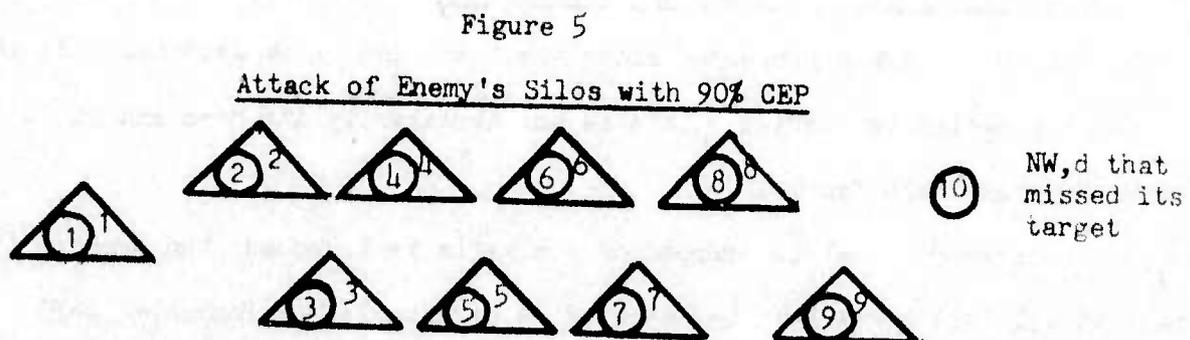
<sup>19</sup>Snyder, Op. Cit., pp. 30-33.

<sup>20</sup>Legault and Lindsey, Op. Cit., pp. 173-178.

may be expressed in any unit of measurement; e.g., miles, meters, feet, inches, etc. As weapon technology increases, CEP normally decreases and weapon effectiveness increases.<sup>21</sup> The CEP for nuclear weapons is classified, but for the purposes of the illustration below, it is assumed to be such that 90% of NW,d launched will strike close enough to destroy the intended target. An additional factor which must be considered is the accuracy of target location. If the target is not accurately located, it cannot be hit. This is particularly critical for first-strike effectiveness.

The purpose of a first strike (FS) capability is to strike the opponent and destroy enough of his NW,d to prevent him from retaliating with UD. This can be numerically expressed as:  $US (NW,d - UD) > USSR (NW,d + DM + UD - US FS)$ .<sup>22</sup> Assuming that the USSR NW,d = 2,000; then the US NW,d must equal or be greater than  $2,000 \times 90\% (CEP) - US (UD) + USSR (UD + DM)$ . That is, the US must be capable of destroying enough of the 2,000 USSR (NW,d) in a first strike to preclude the USSR from inflicting UD on the US and have enough NW,d remaining to penetrate the USSR's DM and inflict UD on the USSR.

This discussion highlights the advantage of MIRV over single warhead armed delivery means. Figure 5 illustrates this:



<sup>21</sup> For a discussion of NW,d CEP, see Edward Luttwak, The Strategic Balance 1972, New York: Washington Papers, 1972, pp. 23-39.

<sup>22</sup> Snyder, Op. Cit., pp. 63-68, 104-110.

Figure 5 depicts the opponent as having nine missile silos (numbers enclosed within the triangles). To attack these in an effective first strike and achieve 100% destruction, it is necessary to use ten nuclear warheads ( $10 \times 90\% = 9$ ; depicted by numbered circles). It would take ten missiles armed with single warheads to accomplish 100% destruction. However, three missiles, each armed with three MIRV's, would destroy eight plus ( $9 \times 90\% = 8.1$ ) of the enemy's missile silos. Three missiles each armed with three MIRV's and one armed with a single warhead would achieve almost 100% destruction;  $9 \times 90\% = 8.1 + 1 \times 90\% = 9.9$ .

G. The Effect of ABM's on Nuclear Deterrence Stability. ABM's are active defensive measures designed to intercept incoming enemy NW,d. The effect of defensive measures on nuclear deterrence was discussed above in paragraph E. This paragraph addresses the effect of employing ABM's in defense of NW,d or valued things.

Figure 6

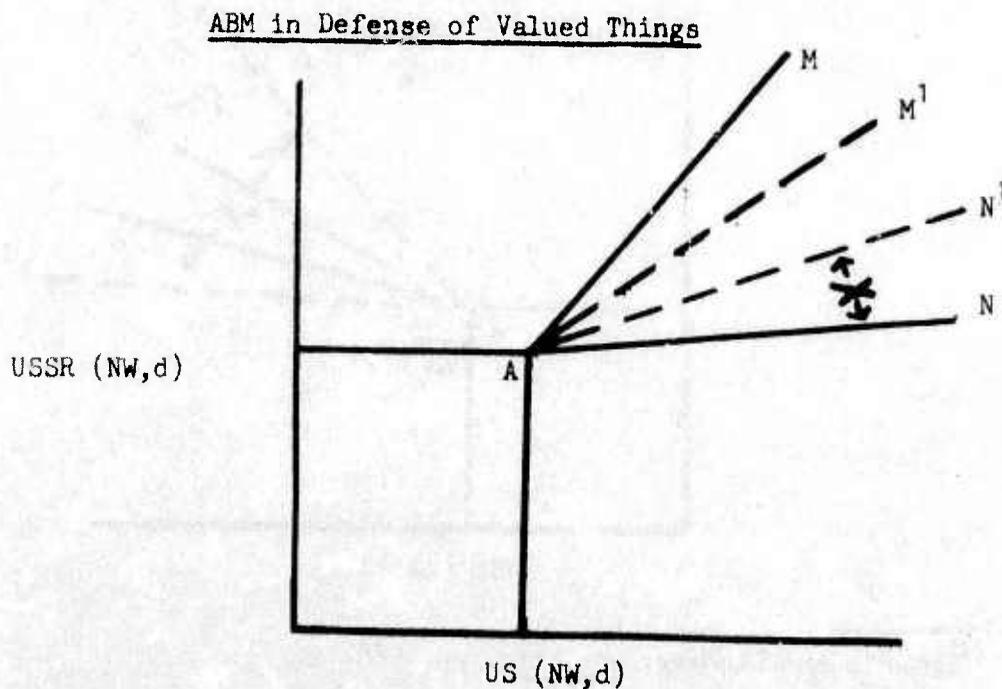
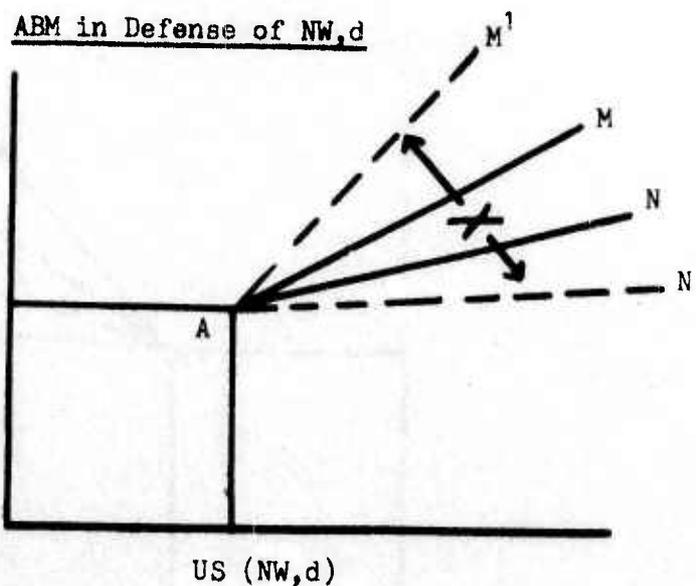


Figure 3 illustrated the dynamics of nuclear deterrence void of ABM defense. Figure 6 illustrates the effect of ABM's deployed in defense of valued things.

Mutual deterrence has been defined as existing when both the US and USSR have the capability of inflicting unacceptable damage on each other's valued things after absorbing a surprise first strike. Assuming that UD for the USSR and US equals 200, then as long as each nation  $NW,d$  is 200 greater than the opponent's first strike capability plus his defensive measures, a state of mutual deterrence exists. This is represented by the area  $M,A,N$ . However, as ABM's are deployed around valued things, the number of  $NW,d$  required to inflict UD increases and the area of mutual deterrence decreases to the area depicted as  $M^1, A, N^1$ . The area of mutual deterrence, under these conditions, is compressed by  $X$  which reduces the area of stability.<sup>23</sup> By comparison, ABM's deployed to defend  $NW,d$  increases the area of mutual deterrence. Figure 7 represents this deployment.

Figure 7



<sup>23</sup> Legault and Lindsey, Op. Cit., pp. 188-191.

Assuming once again that UD for the US and USSR equals 200 and that this number is not increased by defensive measures to protect valued things, then the NW,d required to inflict UD may be expressed as: NW,d is equal to or greater than the opponent's first strike (FS) capability + DM + UD. ABM deployment to defend NW,d decreases the FS capability to penetrate and destroy NW,d which, therefore, increases the area of mutual deterrence to that depicted as M<sup>1</sup>, A, N<sup>1</sup> or X.<sup>24</sup> This functions to stabilize the area of mutual deterrence.

H. Nuclear Deterrence Numerical Summary. This discussion has illustrated the effect of NW,d as an active variable in the total nuclear deterrence equation. In a way of summary, this variable will now be incorporated in a series of mathematically expressed equations for nuclear deterrence. Letting NW,d = the number of deliverable strategic nuclear warheads, FS = the opponent's first strike capability, UD = level of unacceptable damage and DM = available defensive measures, then:

(A) Mutual deterrence is defined as:

$$US (NW,d) + UD + DM - USSR (FS) = USSR (NW,d) + UD + DM - US (FS).$$

(B) Unilateral deterrence is defined as:

- The US unilaterally deters the USSR when the  $US (NW,d) + UD + DM - USSR (FS)$  is greater than the  $USSR (NW,d) + UD + DM - US (FS)$ .

- The USSR unilaterally deters the US when the  $USSR (NW,d) + UD + DM - US (FS)$  is greater than the  $US (NW,d) + UD + DM - USSR (FS)$ .

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<sup>24</sup>Legault and Lindsey, Op. Cit., p. 192.

## Annex B

### The 1946 Iranian Confrontation

A. Background. The northern sector of Iran physically adjoins the southern boundary of the USSR. The geographical proximity of these nations would normally serve as sufficient basis for mutual concern and a high degree of action and reaction interdependence. This has been true, but the USSR-Iranian relationship has been further complicated by the USSR's desires for access to warm water ports and oil resources, both of which Iran offers, and the inability of the Iranian Government to exert positive control over and consolidate the northern provinces under its influence. These provinces are geographically separated from the southern half of Iran by distance and desert-like mountains and are inhabited by tribal oriented populations who have an inclination to look north to the USSR for identity and trade. Under these conditions, Iranian relations with the USSR historically have involved political maneuvers from a position of weakness in an effort to maintain territorial sovereignty.<sup>1</sup>

When WW II began in 1939, Iran proclaimed a position of neutrality in the conflict even though many of those in the government were pro-German. As the war progressed, the British Government became concerned about possible German intentions to invade India through Iran. This concern was increased as the number of German technicians in Iran steadily grew during 1940 and 1941.<sup>2</sup>

When Germany invaded the USSR in 1941, the allies found that Iran

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<sup>1</sup>George Lenczowski, The Middle East in World Affairs, 3d ed., Ithaca: Cornell University Press, 1962, pp. 174-178, 185, 186.

<sup>2</sup>Ibid., p. 188.

provided the only practical transit route to Russia for resupply operations. In view of the urgent requirement to resupply the USSR with war materials and the potential sabotage of these operations by the Germans present in Iran, the British and Soviet Governments requested that Iran expel the Germans. When Iran refused, Soviet and British forces invaded Iran in August 1941 and occupied the country with little resistance. Great Britain and the USSR divided the country into two zones of occupation with the USSR gaining control of the five northern provinces and the British receiving control over the rest of the nation; except Teheran, which became a neutral enclave.<sup>3</sup>

On January 29, 1942, Iran concluded a Tripartite Treaty of Alliance with the USSR and Great Britain. This treaty confirmed that the foreign troops present in Iran did not constitute a military occupation, gave the allies transit and communication facilities, reaffirmed Iran's independence and provided for the withdrawal of allied troops within six months after WW II was concluded. The British and Soviet troops in Iran were augmented in late 1942 by some 30,000 American troops to operate the US-USSR lend lease program.<sup>4</sup>

The USSR used its wartime position in northern Iran in order to increase its influence in the area. Actions were taken to support the Communist Tudeh Party, agitate labor problems, bring officials into office who were favorably disposed toward the USSR and to develop and operate a propaganda machine. In October 1944, the USSR demanded that the Iranian government grant it oil concessions in the northern provinces. Iran refused and a series of communist rallies, protected by the Soviet Army, took place in the northern

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<sup>3</sup>Edwin M. Wright, "Iran As a Gateway to Russia," Foreign Affairs, Vol. 20, No. 2, January 1942.

<sup>4</sup>Lenczowski, Op. Cit., p. 189.

provinces and the capital province of Teheran. The Soviet supported pressure culminated with the resignation of the Iranian foreign minister, Mohammed Saed, in November 1944.<sup>5</sup>

Soviet activities in the internal affairs of Iran continued through WW II and were tolerated with minimum resistance from the US or Great Britain because of concern with the war effort and the need to maintain the USSR as an active ally. Allied victory over the axis powers was completed on September 2, 1945 with the surrender of Japan and, thus, marks the first day of the six month time limit for withdrawal of foreign troops from Iran as stipulated in the 1942 Iranian-British-Soviet Tripartite Agreement.

US forces were reported withdrawn by December 31, 1945 and British forces were withdrawn by the March 2, 1946 deadline established in the Tripartite Agreement. The USSR, however, openly supported an insurgent independence movement in the northern provinces by blocking the Iranian army's attempt to restore order in the Azerbaijan and Kurdistan provinces and made no effort to evacuate its troops from Iran by the March 2 deadline.<sup>6</sup> These actions were opposed by the US and Great Britain and resulted in the first post WW II US/USSR confrontation.

#### B. Crisis Development and Conduct

(1) The starting date for this crisis is established as September 2, 1945; the date of allied victory over the axis powers. While it is true that there was considerable concern about Soviet actions in Iran during the war years,

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<sup>5</sup>Lenczowski, Op. Cit., pp. 190-191.

<sup>6</sup>United Nations, The New International Year Book: Events of 1946, New York: Funk & Wagnalls Company, 1947, pp. 308-309.

US Government officials were more intent on maintaining the USSR as an active war ally than on its activities in Iran. Under these circumstances, it was considered more prudent to play down the seriousness of USSR actions than to confront the Soviets and press for changes. Once the war was concluded, these constraints were removed and the US began to openly question Soviet intentions and policies.

A second possible starting date is the March 2nd, 1946 deadline for withdrawal of foreign troops from Iran. It can be reasonably argued that the Soviets had until this date to withdraw and, therefore, a crisis could only develop afterwards if the deadline was not met. This date is faulty for several reasons. First, it became obvious that the USSR was not preparing to withdraw its troops, but rather was attempting to establish a sphere of influence in northern Iran via military force during the fall of 1945. Second, the Iranian government appealed to the US, Great Britain and the United Nations for assistance before this date. Third, US efforts to develop diplomatic support to challenge the USSR's actions began in September 1945 and were successful in obtaining a Soviet announcement on March 24 to complete withdrawal of all troops within five to six weeks. Therefore, the confrontation was in existence well before March 2 and September 2 is more appropriate as a starting date if the events of confrontation escalation are to be examined.

(2) Chronological listing of confrontation events:

(a) September 1945

13th. The Iranian Foreign Minister requested the immediate removal of foreign troops from Iran. (Gene Currihan, "Soviet is Prepared to Push Demands," NYT, September 14, 1945, p. 1).

18th. The USSR provided open support to rebels in northern Iran. USSR effort to gain power seen by US government. (A. C. Sedgwick, "Soviet Autonomy Bedevils Iranians," NYT, September 19, 1945, p. 3).

20th. Great Britain warned the USSR against intervening into Iran's internal affairs. ("British to Cement Middle East Links," NYT, September 21, 1945, p. 11).

20th. British and US intentions to abide by the 1942 Tripartite Agreement were reaffirmed. (A. C. Sedgwick, "Iran Said to Seek Offset to Russia," NYT, September 22, 1945, p. 5).

(b) October 1945

21st. USSR armed forces blocked entrance of Iranian armed forces into Kurdistan Province to suppress the Soviet supported disorders. ("Kurd Disorders Continue," NYT, October 21, 1945, p. 1).

23rd. USSR reinforced its forces in the Kurdistan Province. ("Iranian Premier Out," NYT, October 24, 1945, p. 2).

25th. US interests in Iran were linked to maintenance of Iranian independence by US State Department. (Herbert Matthews, "U.S., Britain Draft a Palestine Policy," NYT, October 26, 1945, p. 4).

(c) November 1945

8th. Iranian government reported more Soviet troops moving into the Caspian and Azerbaijan provinces. (C.L. Sulzberger, "Iran Says Soviet Sends New Troops," NYT, November 9, 1945, p. 1).

18th. USSR armed forces blocked the Iranian armed forces from entering Azerbaijan province to restore order. ("Red Army Blocks Iran Relief Force," NYT, November 19, 1945, p. 1).

24th. US State Department sent the USSR a note requesting clarification of Soviet actions and intentions and reaffirming the US position to honor Iran's sovereignty. (Note from the Government of the US to the Government of the USSR, November 24, printed in Department of State Bulletin, XIII, p. 884).

26th. US urged withdrawal of all foreign troops from Iran by January 1, 1946. Notes were sent to Great Britain and the USSR. (W. H. Lawrence, "US Notes to Soviet on Iran Urges Withdrawal by Jan. 1," NYT, November 27, 1945, p. 1).

27th. US State Department linked USSR motives to an attempt to gain Dardanelles concessions. (Dana Schmidt, "Soviet Bid in Iran Keyed to Straits," NYT, November 28, 1945, p. 12).

29th. The USSR rejected the US request to remove Soviet troops from Iran before January 1, 1946. (Note from the Government of the USSR to the Government of the US, November 29, 1945, printed in Department of State Bulletin, XIII, p. 934).

(d) December 1945

1st. US State Department sent a mission to Iran to investigate USSR activities in Iran's internal affairs. (Bertram Hulen, "3 US Men on Watch," NYT, December 2, 1945, p. 1).

7th. US State Department pledged US guarantee of Iranian sovereignty. ("Byrnes Reiterates Pledge to Iran Assuring Her of Full Sovereignty," NYT, December 9, 1945, p. 38).

8th. USSR rejection of US request to remove Soviet troops from Iran was made public by the US Government. ("Soviet Note to U.S. on Iran Situation," NYT, December 9, 1945, p. 38).

(e) January 1946

1st. Last US troops reported to have evacuated Iran. ("U.S. Troops out of Iran," NYT, January 1, 1946, p. 17).

18th. US State Department publicly discussed the requirement for the USSR to withdraw its forces from Iran by March 2nd, 1946. (Bertram Hulen, "U.S. Sees No Delay in Iran Evacuation," NYT, January 19, 1946, p. 6).

19th. Iran requested the UN Security Council provide assistance in removing Soviet troops from Iran. (Year Book of the United Nations 1946-47, 1947, pp. 327-329).

(f) March 1946

2nd. Senator Tom Connally, D., Texas urged US actions to force the USSR out of Iran. The US State Department stated that the US would bring the matter before the UN if the USSR did not comply with the Tripartite Agreement. (Facts on File, Vol. VI, No. 280, February 24-March 2, 1946, p. 65).

6th. US State Department informed the USSR of the US intentions to bring the Iranian matter before the UN and restated its intention to preserve Iran's sovereignty. Grave concern was expressed. (Note from the Government of the US to the Government of the USSR Regarding the Retention of Soviet Troops in Iran dated March 6, 1946, printed in Department of State Bulletin, XIII, p. 435).

12th. US State Department announced that it had requested information from the USSR concerning the reported movement of Soviet forces and heavy equipment into Iran. (Ibid., p. 483).

12th. US Senate began debate on Iranian confrontation. ("Senator Connally's Speech to the Senate Foreign Relation's Committee", NYT, March 13, 1946, p. 3).

14th. President Truman discussed the confrontation with the US ambassador to Russia, W. Averell Harriman, and expressed concern about Soviet

actions. Restated US intention to remain firm. (Bertram Hulon, "Byrnes Discusses Iran with Truman," NYT, March 14, 1946, p. 3).

15th. US Government publicly announced its intentions to bring the matter up before the UN unless the USSR withdrew its forces. (James Reston, "Washington Decides to Ask Security Body to Act if Iran Does Not," NYT, March 15, 1946, p. 1).

16th. Great Britain and India announced support for US intentions to bring the matter before the UN. ("Nehru Deplores Iran Threat," NYT, March 16, 1946, p. 6).

16th. The USSR stated that any appeal to the UN against the presence of Soviet troops in India would be considered as an unfriendly act. (Facts on File, Vol. VI, No. 282, March 10-16, 1946, p. 82).

18th. USSR requested delay of UN debate on the Soviet-Iranian conflict. (Facts on File, Vol. VI, No. 283, March 17-23, 1946, p. 89 and "Soviet, U.S. Notes to UNO," NYT, March 21, 1946, p. 2).

21st. President Truman restated the US intentions to bring the matter before the UN and announced that Secretary Byrnes would represent the US in the discussion. (Facts on File, Vol. VI, No. 283, March 17-23, 1946, p. 89).

22nd. UN Security Council vetoed the Soviet request to postpone the debate. (James Reston, "UNO Delegates Bar a Postponement," NYT, March 22, 1946, p. 1).

24th. The USSR announced that its troops were being withdrawn and that withdrawal would be completed in five to six weeks. (Yearbook of the United Nations: 1946-47, Op. Cit., pp. 329-330).

(g) May 5, 1946. The last Soviet soldier was reported to have been withdrawn. ("Text of Iran's Statement to the UNO," NYT, May 7, 1946, p. 4).

(3) The ending date for the confrontation is 24 March. Once the USSR announced its intentions to withdraw its troops from Iran, disorder in the northern provinces subsided and the Iranian government was able to assert authority in the area.

C. Confrontation Intensity Peak Level and Rate of Escalation. The intensity levels of the confrontation's events are illustrated at figure 1. The intensity levels of confrontation events are plotted in scatter diagram fashion with

the x plots representing US actions and y plots depicting USSR actions. The date that the event, or action, occurred is printed and underlined adjacent to the plot.

As illustrated, the actions of the USSR reached a peak intensity at rung ten on October 21, 1945 with the provocative act of using Soviet armed forces to prevent the constituted government of Iran from entering into the Kurdistan Province to restore order. The time required for USSR actions to peak is 49 days (September 2 - October 21, 1946). Conversely, the US actions peaked at rung nine on March 6 with the Government's announcement of its intentions to bring the dispute before the United Nations. The time required for US actions to peak is 185 days (September 2, 1945 - March 6, 1946).

Figure 1  
US/USSR 1946 Iranian Confrontation Actions Plotted

X - US Actions  
 Y - USSR Actions

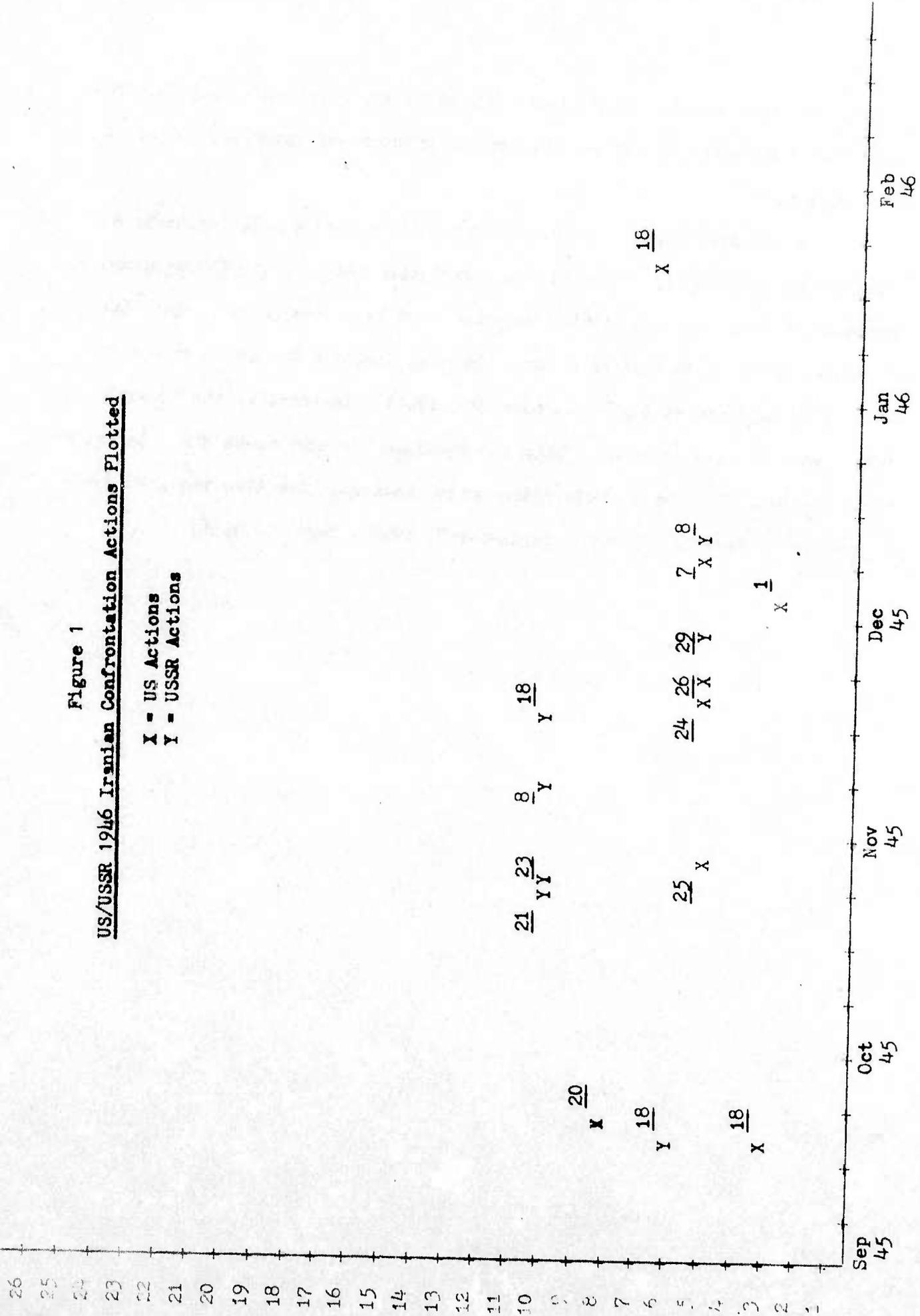
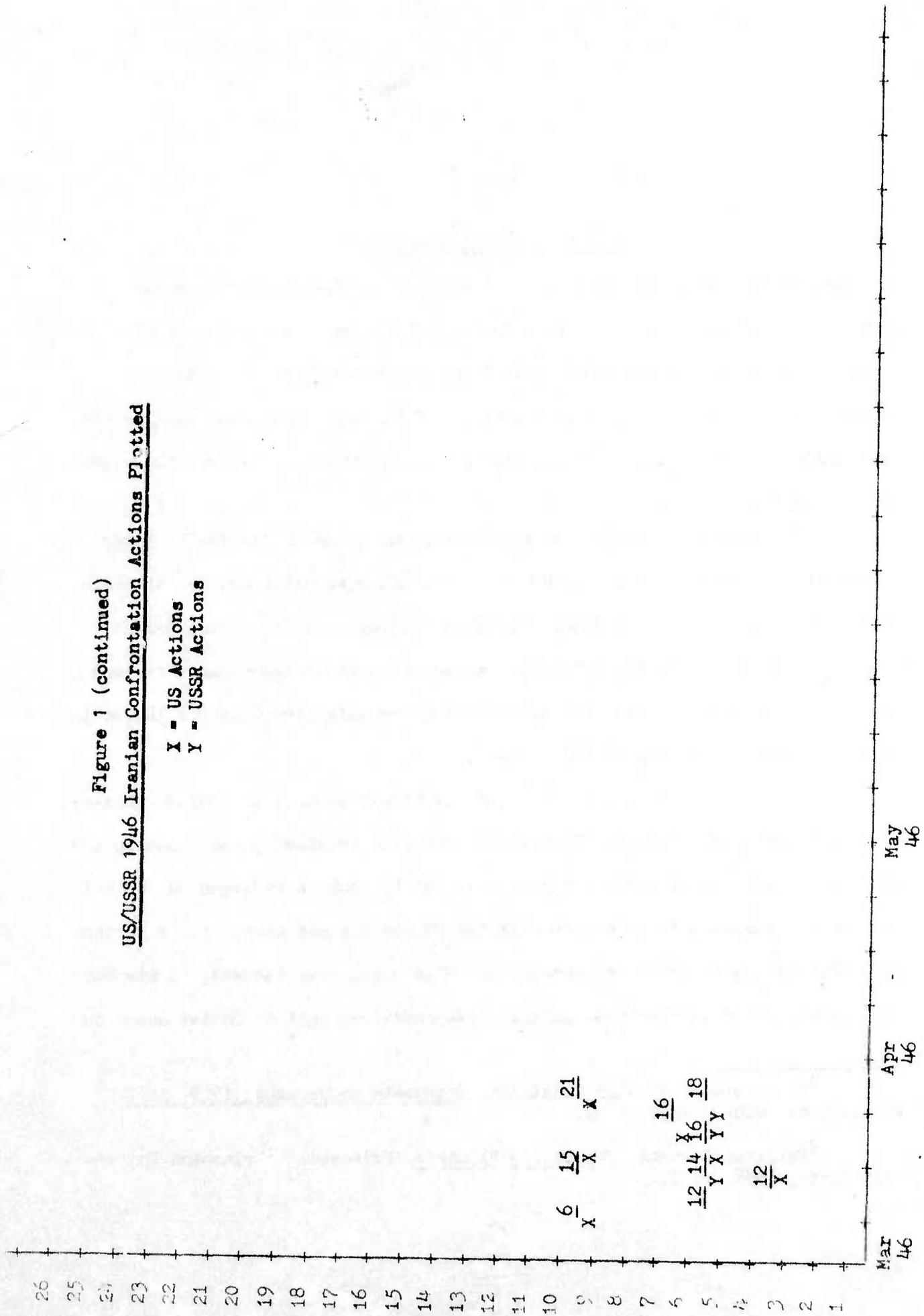


Figure 1 (continued)  
US/USSR 1946 Iranian Confrontation Actions Plotted

X - US Actions  
 Y - USSR Actions



## Annex C

### The 1948 Berlin Blockade

A. Background. With the conclusion of WW II, the allies divided Berlin into four occupation zones; US, British, French and Soviet, and established an Inter-Allied Governing Authority with representatives from each nation to govern the city through a Control Council. The German nation was partitioned into Soviet and Western occupation zones; i.e., what was to become the present nations of East and West Germany.<sup>1</sup>

USSR post-WW II policy toward Germany was to unite the nation under Communist rule as a satellite country and if this were not possible, to maintain Germany as a divided nation. Under the latter condition, East Germany would be made into a strong satellite nation and West Germany should be kept as weak as possible.<sup>2</sup> This line of thought is usually attributed to the Soviet inherent fear of a strong united Germany.

Conversely, the US post-WW II policy toward Europe, to include Germany, was expressed in the Marshall Plan which advocated rebuilding the economic and political stability of Western Europe. In the US view, a rejuvenated, united Europe was necessary to interface with the US economy and check, block further expansion of Soviet sponsored communism. Should the plan succeed, it was hoped that Europe would develop into an effective counter-weight to Soviet power on

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<sup>1</sup>US Senate on Foreign Relations, Documents on Germany, 1949-1959, Washington: USGPO, 1959, p. 5.

<sup>2</sup>Phillips Davison, The Berlin Blockade, Princeton: Princeton University Press, 1958, p. XI.

the continent.<sup>3</sup>

The Marshall Plan was not directed against the USSR in the sense that any aggressive intentions were involved. However, if viewed from a Soviet perspective, it would naturally be considered aggressive in that, if successful, it would prevent further expansion of influence and possibly could break through the newly established boundaries of Eastern and Western Europe; i.e., USSR and western spheres of influence. This fear was further increased by western statesmen who frequently referred to Europe in the pre-WW II sense with little regard for the Soviet position in Eastern Europe.<sup>4</sup>

In late 1946, the western allied post-WW II policy toward Germany changed from strictly military occupation and perpetuating a weak state to a policy of rebuilding the nation as an active participating member of a strong united Europe. Accordingly, the British and American zones of occupation in Berlin were joined to form one economic unit, commonly referred to as the Bi-zone, on December 2, 1946.<sup>5</sup> The French zone of occupation was joined with the Bi-zone on June 3, 1948.<sup>6</sup>

The Soviet attitude toward Berlin was consistent with its broader policy of maintaining and consolidating its influence in Eastern Europe. Accordingly, the USSR began to resist western efforts to develop the economic unity and strength of the western sectors and to establish a western strong

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<sup>3</sup>John Campbell, The United States in World Affairs, 1947-1948, New York: Harper & Brothers, 1948, p. 442.

<sup>4</sup>Ibid., p. 443.

<sup>5</sup>Urs Schwarz, Confrontation and Intervention in the Modern World, New York: Oceana Publications, Inc., 1970, p. 24.

<sup>6</sup>Ibid., p. 25.

point in the city. Soviet resistance took the form of vocalism in late 1946 and early 1947, active non-cooperation in late 1947 and early 1948 and finally in active opposition in the form of restrictions on land transportation into the city in March 1948 followed by a complete blockade of traffic into and out of the city in June 1948. The western allies, led by the US, countered these actions with a massive airlift of supplies along three air corridors from West Germany to Berlin. These actions and counteractions are commonly referred to as the 1948 Berlin confrontation.

B. Crisis Development and Conduct.

(1) The starting date for the crisis is established as December 2, 1946: the date of the US and British agreement to join their two zones of occupation into a single economic unity. This action marks the turning point of Soviet behavior from one of vocalism to that of active opposition. It is apparent that the USSR viewed this development as an extension of the then proposed Marshall Plan, which represented a perceived danger/threat to the Soviet position in Europe and, in particular, Eastern Europe. Following this event, US and USSR positions became increasingly divergent and culminated in the 1948 Berlin confrontation. It can be said that this marks the entrance of the two nations on the road toward confrontation.

(2) Chronological listing of confrontation events.

(a) December 1946

2nd. US and British zones of occupation joined to form one economic unit; referred to as the Bi-zone. (US Senate on Foreign Relations, Documents on Germany, 1944-1959, Washington: USGPO, 1959, p. 444).

5th. USSR refused to recognize the official status of new members of the new Magistrat appointed by the October 20th elected Berlin City Assembly. USSR prefers the 1945 Soviet appointed Magistrat. (Ibid., p. 443).

(b) February 1947

10th. The Soviet Military Administration (SMA) issued orders for the centralization of the administration of industry, trade, fuel and agriculture in the east zone. (William Conlan, Berlin: Beset and Bedevilled, New York: Fountainhead Publishers, 1963, p. 239).

25th. USSR protested against the merger of the US and British zones. (Facts on File, Vol. VII, No. 331, February 23 - March 1, 1947, p. 65).

(c) April 1947

11th. The Berlin City Assembly, elected on October 20, 1946, repudiated Mayor Ostrowski's February agreement to cooperate with the communist dominated Socialist Unity Party in city administration affairs (US Senate on Foreign Relations, Op. Cit., p. 443).

17th. USSR refused to accept resignation of Mayor Ostrowski which he submitted following the April 11 repudiation of his actions by the city assembly. (Ibid., p. 444).

24th. Four power conference of foreign ministers meeting in Moscow adjourned without agreement on Germany. USSR demanded control of the Ruhr, reparations from current West German production and recognition of the Oder-Neisse border. (Facts on File, Vol. VII, No. 339, April 10-26, 1947, p. 126).

(d) November 1947

25th. Representatives of the US/British Bi-zone signed an economic agreement providing for the exchange of RM 157 million worth of goods between the zones in calendar year 1948. (US Senate on Foreign Relations, Op. Cit., p. 444).

(e) December 1947

15th. Four power conference of foreign ministers meeting in London adjourned without agreement. USSR repeated demands of April 1947 conference and opposition of the Marshall Plan. (Facts on File, Vol. VII, No. 373, December 14-20, 1947, p. 397).

15th. Marshall blamed USSR for impasse. Molotov declared that the "three western powers have united into a single front against the Soviet Government's reparation demands." (Ibid., p. 397).

15th. SMA instituted requirements of automobile permits for travel between Berlin and the East zone of Germany. (Conlan, Op. Cit., p. 239).

(f) January 1948

12th. Marshall discussed the Marshall Plan with Congress

and urged its acceptance, less Western Europe fall into Soviet control. (Facts on File, Vol. VIII, No. 376, January 11-17, 1948, p. 16).

18th. SMA issued orders forbidding the transfer of property between the Soviet and Western Allies zones. (Facts on File, Vol. VIII, No. 377, January 18-24, 1948, p. 26).

(g) February 1948

21th. A Soviet sponsored "People's Congress of Greater Berlin" met in the USSR zone and passed resolutions calling for an all-German referendum on German unity and the establishing of a "German People's Council." (US Senate on Foreign Relations, Op. Cit., p. 444).

23rd. SMA reduced the number of truck permits issued for cargo trucks between Berlin and the Western zone of Germany by twenty per cent. (Conlan, Op. Cit., p. 240).

(h) March 1948

10th. SMA imposed traffic restrictions on Germans traveling from Berlin to the Soviet zone. (US Senate on Foreign Relations, Op. Cit., p. 444).

18th. The Soviet sponsored National Assembly of the East Zone elected a National Council which proclaimed itself the representative of the whole German people. (Conlan, Op. Cit., p. 240).

20th. Soviet Military Governor for Germany walked out of the allied Control Council. Alleged plotting by the three powers was given as the reason. (US Senate on Foreign Relations, Op. Cit., p. 444).

25th. In commenting on the USSR withdrawal, George Marshall reaffirmed the US intentions to remain as a joint occupant of Berlin. (Ibid., p. 444).

30th. SMA informed the three Western Military Governors of a series of restrictions on rail and highway traffic between the Western Zone, through the Soviet Zone, to Berlin. These restrictions included: (1) documentary identification of all Western personnel, (2) clearance at Soviet check points of all military freight and (3) inspection of all baggage, except for personal belongings of Western military and occupation personnel. (Ibid., pp. 444 and 445).

31st. US Military Governor in Berlin requested clarification of 30 March restrictions. The Soviet Governor refused to comply with the request. (Ibid., p. 445).

(i) April 1948

2nd. USSR withdrew representatives from eight of the Allied Council committees. (Ibid., p. 445).

3rd. USSR closed rail freight from Bavaria and Hamburg to Berlin. All rail freight was required to pass over the Helmstedt-Berlin route. (US Senate on Foreign Relations, Op. Cit., p. 445).

3rd. US and Britain began the airlift of supplies to Berlin. US military barred Soviet officials from entering the control office for all rail traffic in Berlin. US restated intentions to remain in Berlin. (Facts on File, Vol. VIII, No. 387, March 28 - April 3, 1948, pp. 101 and 102).

9th. SMA announced requirement for clearance of all freight trains from Berlin to the Western Zone of Germany through the office of the Soviet Military Governor in Berlin. (US Senate on Foreign Relations, Op. Cit., p. 445).

13th. SMA incorporated the East Berlin police force into that of the Soviet Zone of Germany. (Ibid., p. 445).

14th. 100 Soviet tanks, with troops, are reported to have arrived near the Soviet sector of Berlin. (Facts on File, Vol. VIII, No. 389, April 11-17, 1948, p. 119).

15th. 28 USAF B-29s landed at Munich after a mass flight from the US. (Ibid., p. 119).

16th. All Western newspapers were confiscated in the Soviet sector of Berlin and Germany. (Conlan, Op. Cit., p. 240).

20th. USSR imposed a program of individual clearance of all barge traffic to and from Berlin through the Soviet Zone. (US Senate on Foreign Relations, Op. Cit., p. 445).

(j) May 1948

8th. "Operation Assembly," a US military maneuver involving 30,000 men began in Kentucky with an airborne drop of 3,000 men. The maneuver grew out of the US Government's intentions to "build up the US military strength to ensure ERP's success." (Facts on File, Vol. VIII, No. 392, May 2-8, 1948, p. 145).

13th. USSR member of the Allied Council Public Safety Committee walked out of the meeting. (US Senate on Foreign Relations, Op. Cit., p. 445).

19th. US barred all USSR authorized publications in the US sector. (Facts on File, Vol. VIII, No. 394, May 16-22, 1948, p. 159).

(k) June 1948

9th. USSR stiffened regulations for travel by Germans through the Soviet Zone to and from Berlin. Special authorization required. (US Senate on Foreign Relations, Op. Cit., pp. 445 and 446).

9th. US and Great Britain accepted the London Conference recommendations providing a federal government for West Germany. The USSR and France rejected the plan. (Facts on File, Vol. VIII, No. 397, June 7-13, 1948, p. 181).

12th. SMA closed autobahn bridge over the Elbe River. Ferry service was substituted. (US Senate on Foreign Relations, Op. Cit., p. 446).

18th. France, US and Great Britain announced currency reform for their sectors of Berlin. (Ibid., p. 446).

19th. USSR suspended all railway and highway passenger traffic to and from West Berlin through the Soviet Zone. (Ibid., p. 446).

23rd. SMA ordered new currency effective in the Soviet Zone of Germany and all sectors of Berlin, refused to recognize the Western sponsored currency as legal. (Ibid., p. 446).

23rd. SMA stopped all freight traffic through Soviet Zone to Berlin. (Ibid., p. 446).

24th. USSR imposed total blockade on Berlin. Western allies stopped all supply shipments from West to East Berlin. (Ibid., p. 446).

26th. Western allies began large scale Berlin airlift. (Ibid., p. 447).

26th. SMA stopped shipment of coal and foodstuffs from the Soviet sector of Germany to the Western sector of Berlin. (Conlan, Op. Cit., p. 241).

26th. Marshal Sokolovsky arrested and detained in the US Zone for two hours by US military police. (Facts on File, Vol. VIII, No. 399, June 20-26, 1948, p. 197).

29th. US announced the movement of sixteen F-80 jets, ten additional B-29's (to augment the 20 at Munich) and seventy-five jet fighters to Germany. (Facts on File, Vol. VIII, No. 400, June 27 - July 3, 1948, p. 208).

30th. Marshall reaffirmed the US intent to remain firm in Berlin. (US Senate on Foreign Affairs, Op. Cit., p. 447).

(1) July 1948

1st. USSR announced that it no longer considers the Allied Council as existing. (Ibid., p. 448).

3rd. Marshal Sokolovsky declared that the blockade would continue until the allies gave up the idea for creating a West German Government. (Facts on File, Vol. VIII, No. 400, June 27 - July 3, 1948, p. 208).

6th. Western allies sent protest notes to USSR regarding the Berlin Blockade, restated their intentions to remain and announced a readiness to negotiate when the blockade was lifted. (US Senate on Foreign Relations, Op. Cit., p. 448).

8th. USSR issued an order forbidding the use of East German Marks for reparations to the Western allies. The Western allies retaliated by suspending delivery of reparations to the USSR from West Germany. (Ibid., p. 448).

14th. In replying to the notes of July 6, the Soviet Government stated that Berlin, because of its location, was a part of the Soviet Zone of Germany and that the blockade had been invoked to protect the Soviet economy. (Ibid., p. 448).

14th. US and British signed an agreement establishing the eligibility of the Bi-zone to receive Marshall Plan aid. (Ibid., p. 449).

16th. Sixty US B-29's arrived in England for "4-6 weeks long range flight training" in Europe. (Facts on File, Vol. VIII, No. 402, July 11-17, 1948, p. 226).

21st. US B-29's made a practice bombing run on Helgeland, Germany and sixteen F-80 jet fighters arrived in Scotland. (Facts on File, Vol. VIII, No. 403, July 18-24, 1948, p. 233).

23rd. Soviet publication, "Izvestia," stated that the US was trying to blackmail Russia with war threats into yielding on Berlin. (Ibid., p. 233).

26th. US and Britain halted all traffic between Western and Soviet Zones in Berlin in retaliation to the Soviet blockade. (Facts on File, Vol. VIII, No. 404, July 25-31, 1948, p. 241).

29th. Berlin City Assembly passed a resolution condemning and demanding the lifting of the blockade. (US Senate on Foreign Affairs, Op. Cit., p. 449).

(m) August 1948

2nd. Stalin proposed to lift the blockade if the Western Allies agree that they had forfeited their right to be in Berlin, except by Soviet permission, and to introduce the Soviet Zone Mark as the only legal currency in all Berlin. (Ibid., p. 449).

13th. The Soviet flag and guard were removed from the Allied Council. (Conlan, Op. Cit., p. 242).

21st. A US Army battalion was positioned at the Potsdamer Platz to block Soviet police incursions into the Western sector of the city to kidnap German. (Facts on File, Vol. VIII, No. 407, August 15-21, 1948, p. 266).

21st. Retiring USAF Chief of Staff, General Carl Spaatz reported that the US was developing a 5,000 mile supersonic atomic missile for which there was no known defense. (Facts on File, Vol. VIII, No. 407, August 15-21, 1948, p. 270).

26th. 5,000 Communist rioters stormed the Berlin City Assembly in the City Hall located in the Soviet sector. A counter-demonstration of 10,000 persons took place in the British sector. (US Senate on Foreign Affairs, Op. Cit., p. 450).

30th. Second post-WWII draft registration for the army began in the US. (Facts on File, Vol. VIII, No. 409, August 29 - September 4, 1948, p. 286).

(n) September 1948

6th. Berlin City Assembly moved from the Soviet to the British sector due to communist riots. (US Senate on Foreign Affairs, Op. Cit., p. 451).

9th. 300,000 West Berliners conducted anti-communist demonstrations in the Western sectors. (Ibid., p. 451).

13th. All supplies to the western sectors of Berlin are flown in as US and British order stoppage of all supplies from their zones into Berlin. (Ibid., p. 451).

22nd. The western powers (US, France and Britain) stated their final positions and requested, in a note to the USSR, to know if the Soviets were prepared to enter into serious, realistic discussions. (Ibid., p. 452).

25th. The USSR responded by restating its previous position. (Ibid., p. 452).

26th. The three western powers sent identical notes to the USSR stating that they were discontinuing the fruitless negotiations and were referring the issue to the UN. (US Senate on Foreign Affairs, Op. Cit., p. 452).

29th. The western powers took the Berlin issue to the UN. (Yearbook of the United Nations: 1948-49, New York: Columbia University Press, 1950, pp. 284-285).

(o) October 1948

4th. UN began consideration of the Berlin issue. (Ibid., p. 286).

20th. US and British air force units formed a Combined Airlift Task Force and West Germans met in Bonn to draft a constitution for West Germany. (Facts on File, Vol. VIII, No. 416, October 17-23, 1948, pp. 337-338).

25th. USSR vetoed UN resolution on the Berlin issue. (Year-book of the UN: 1948-49, Op. Cit., p. 286).

(p) November 1948

13th. UN appealed to the US, USSR, France and Britain to make new efforts to solve the Berlin issue. (US Senate on Foreign Affairs, Op. Cit., p. 453).

18th. SMA decreed that all Germans in the Soviet zone of Germany and Berlin sector must have a new type of ID card. (Conlan, Op. Cit., p. 242).

30th. USSR established a separate Magistrat for the Soviet sector in Berlin. (Ibid., p. 455).

(q) December 1948

3rd. USSR informed the western powers that it recognized the East Berlin Magistrat formed on November 30 as the only legal organ of the city's government. (Ibid., p. 456).

21st. Western powers announced that they would function on a Tripartite basis. (Ibid., p. 456).

(r) January 1949

5th. SMA cut the electrical power transmitted from East to West Berlin from 88 to 36 thousand kilowatt daily. (Ibid., p. 456).

30th. Stalin stated USSR readiness to end the blockade if the western powers would postpone creation of a West German state and agree to lift all restrictions simultaneously. (Ibid., p. 457).

(s) February 1949

2nd. Secretary of State Acheson stated in a reply to Stalin's January 30th comment that if the Soviets lifted their imposed restrictions the West was ready to lift their restrictions at the same time and that "agreements with West Germany did not preclude agreements on Germany as a whole." (Ibid., p. 457).

(t) March 1949

4th. USSR repatriation mission left Frankfurt after a two day US Army blockade. (Facts on File, Vol. IX, No. 435, February 27 - March 5, 1949, p. 71).

17th. East Berlin Magistrat adopted a socialization law for the Soviet sector of Berlin. (US Senate on Foreign Affairs, Op. Cit., p. 458).

(u) April 1949

8th. France, Britain and the US agreed to merge their three occupation zones of Germany and sectors in Berlin. (Ibid., p. 458)

22nd. The western powers informed the German Parliamentary Council that "Berlin should not be included as a Land in the initial organization of the (German) Federal Republic." (Ibid., p. 459).

(v) May 1949

4th. US, USSR, British and French representatives on the UN Security Council issued a UN communique stating their governments had agreed to remove restrictions imposed during the Berlin blockade on or before May 12, 1946. (Ibid., p. 459).

12th. The blockade of Berlin was lifted at 1201 hours. (Ibid., p. 460).

C. Confrontation Intensity Peak Level and Rate of Escalation. The intensity levels of confrontation events are illustrated in figure 1. These levels are plotted as described earlier in Annex B. As illustrated, the USSR actions reached an intensity peak level at rung twenty with the unusual, provocative act of imposing a total blockade against Berlin on June 24, 1948. The time required for USSR actions to peak was 571 days (December 2, 1946 - June 24, 1948). US actions peaked at rung twenty-two on April 15, 1948 with the deployment of strategic, nuclear capable bombers to Germany. The time required for US actions to peak was 501 days (December 2, 1946 - April 15, 1948).

Figure 1  
US/USSR 1948 Berlin Confrontation Actions Plotted

X - US Actions  
 Y - USSR Actions

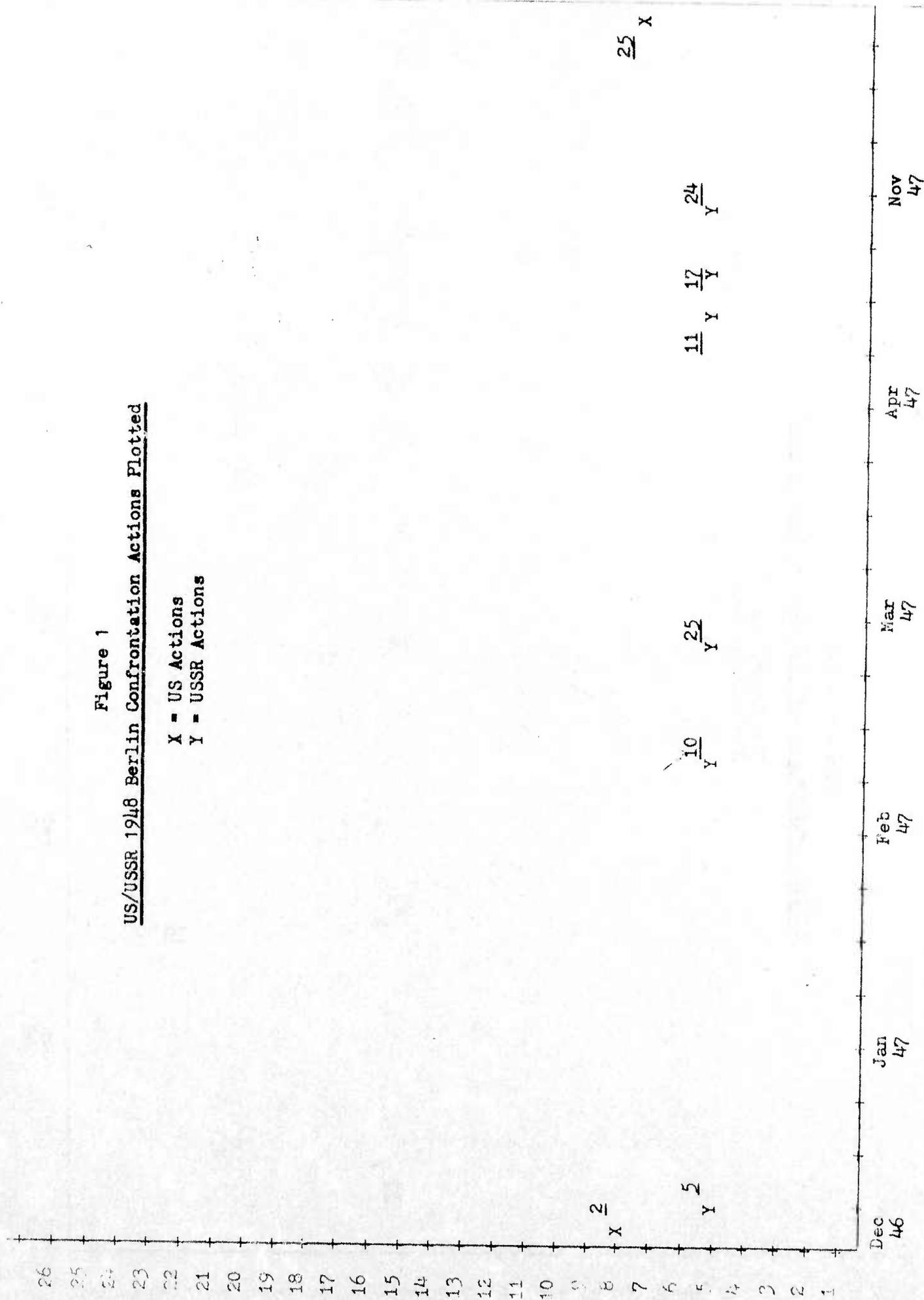
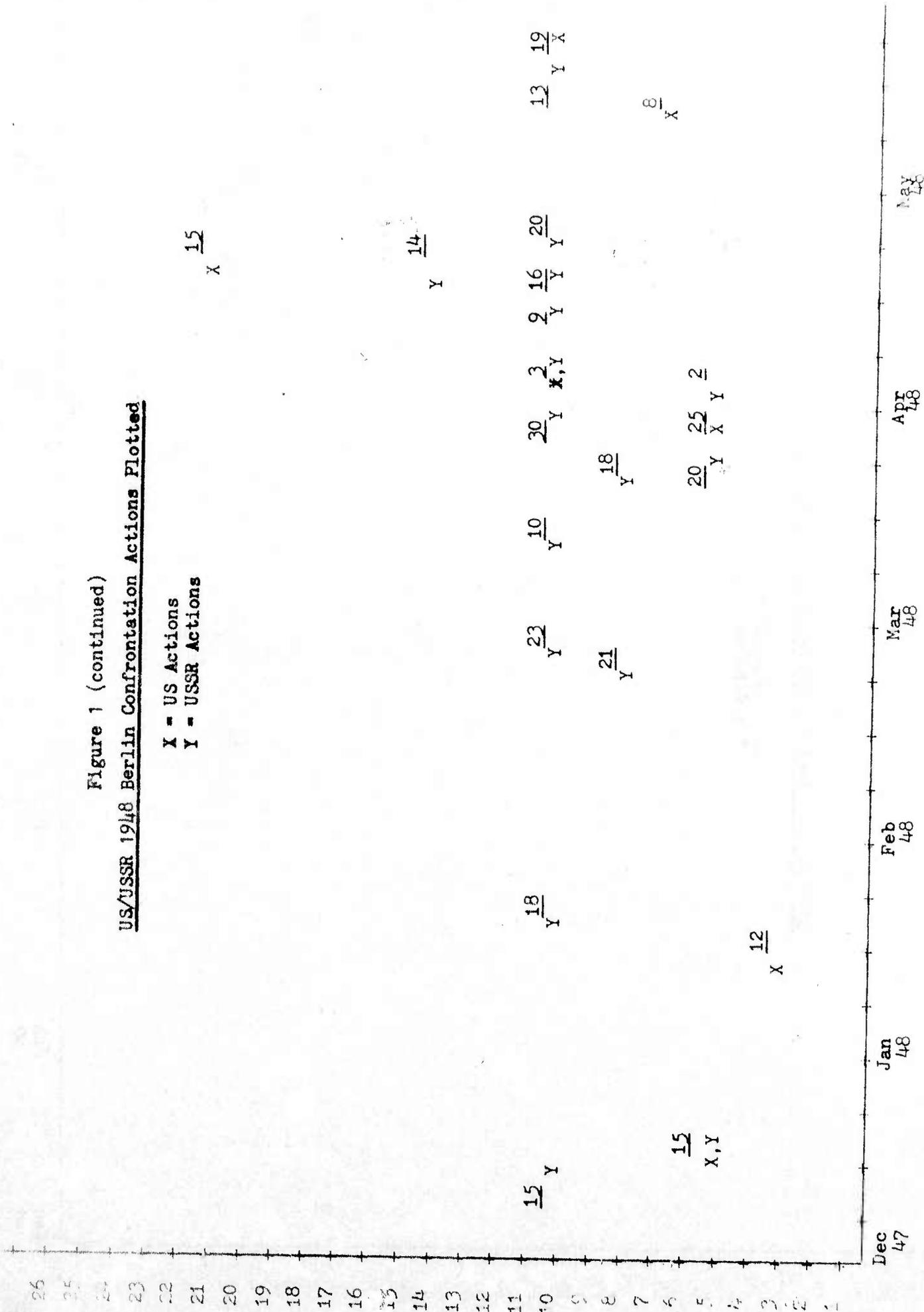


Figure 1 (continued)  
US/USSR 1948 Berlin Confrontation Actions Plotted

X - US Actions  
 Y - USSR Actions



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Figure 1 (continued)

US/USSR 1948 Berlin Confrontation Actions Plotted

X = US Actions,  
Y = USSR Actions

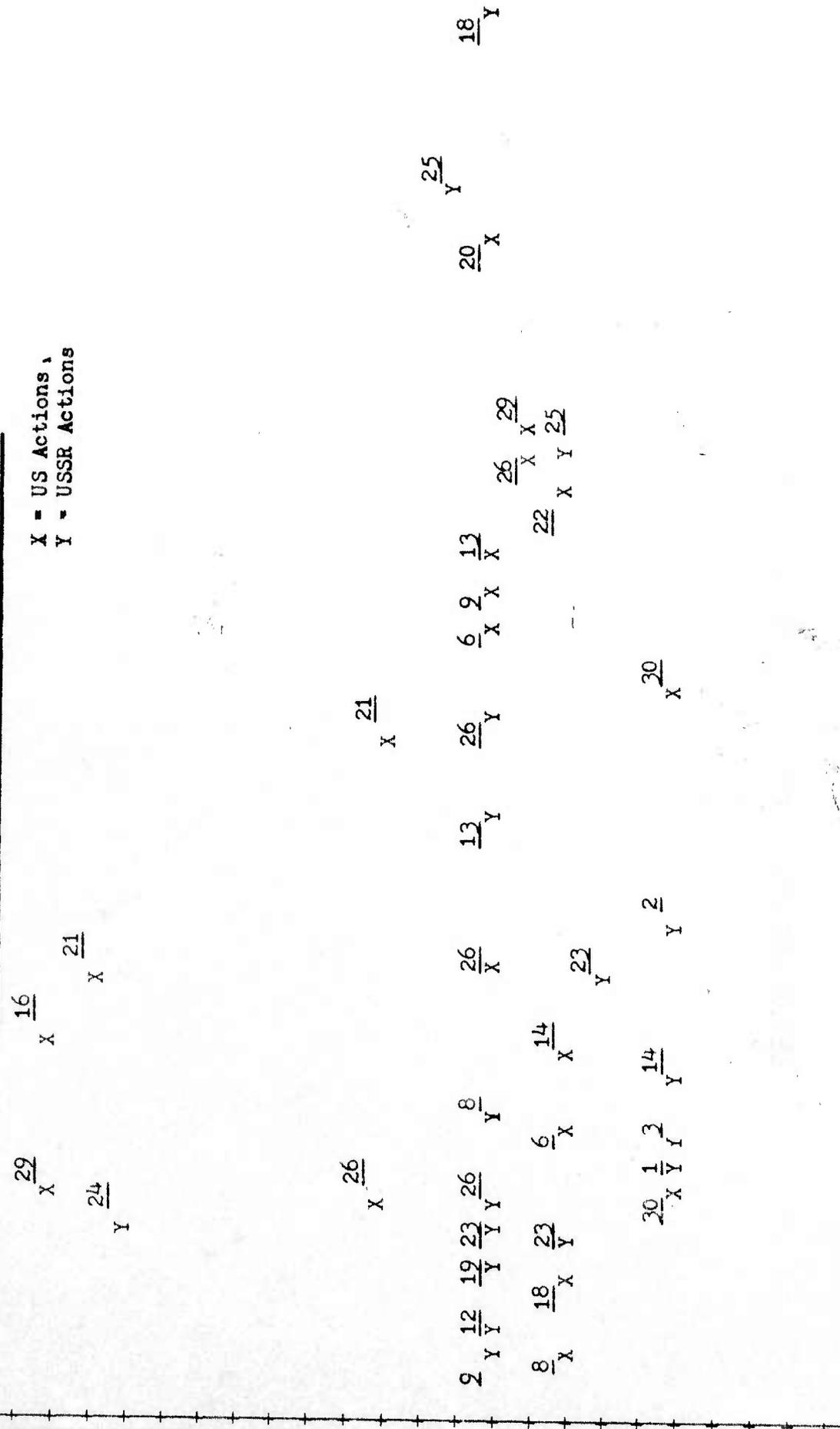
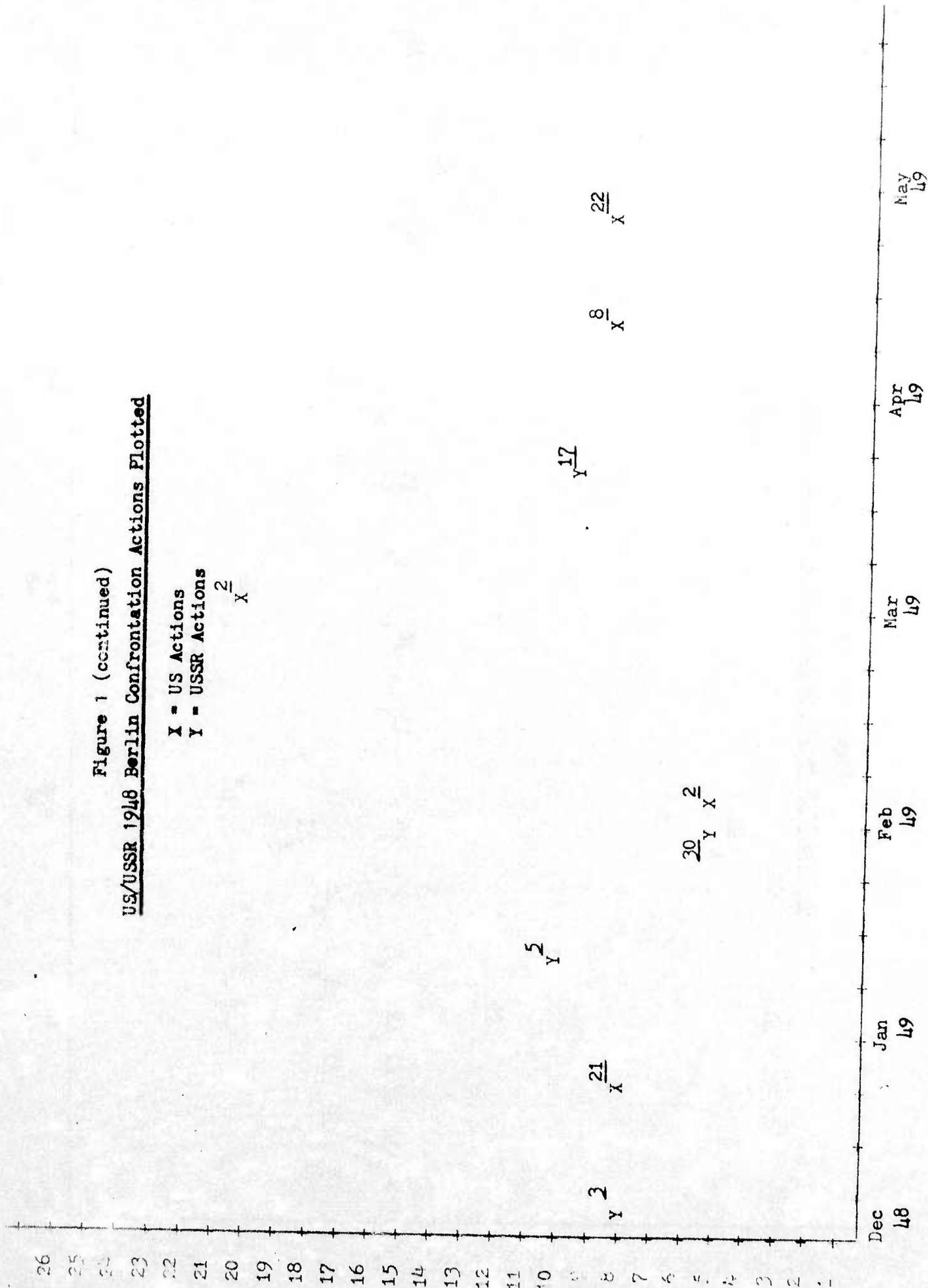


Figure 1 (continued)  
US/USSR 1948 Berlin Confrontation Actions Plotted

X - US Actions  
 Y - USSR Actions



## Annex D

### The Korean War

A. Background. Korea, as a nation, has a recent history of being subjected to foreign occupation and rule. In annexing the Kingdom of Korea in 1910, Japan continued the role of foreign domination and rule of Korea. Early during WW II, the question of Korea's post-war status surfaced with the allies' position being first officially expressed during the 1943 Cairo Conference. At this conference, the US, England and the Republic of China stated their intentions; "that in due course Korea shall become free and independent." This position was reaffirmed during the 1945 Potsdam Declaration with the USSR concurring with the earlier agreement reached during the Cairo Conference.<sup>1</sup>

Immediately following the August 10, 1945 surrender offer of the Japanese Government, the US and the USSR agreed that the US would accept Japanese surrender in Korea south of the 38th parallel and the USSR would accept Japanese surrender north of this line. Accordingly, US and USSR armed forces positioned themselves south and north of the 38th parallel to accept and administer the Japanese surrender. The directive governing the surrender did not contemplate a political division of Korea into Soviet and American areas of influence, but it soon became apparent that this was the Soviet intentions.<sup>2</sup>

Efforts to prevent the division of Korea began in December 1945 with

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<sup>1</sup>U.S. Department of State, The Record on Korean Unification: 1943-1960, Washington: USGPO, 1960, p. 4.

<sup>2</sup>Ibid., p. 5.

agreement between the US, USSR, England and China to establish a joint US - USSR Conference to:

. . . consider long range political and economic problems, including the making of recommendations on the formulation of a provisional Korean Government for all of Korea . . .<sup>3</sup>

The US - USSR Conference conducted fifteen formal sessions during the period January 16 - February 5, 1946, but was unable to reach an agreement because of differing approaches to Korea; i.e., the US desired to integrate the northern and southern sections of the country whereas the USSR wanted to maintain the division.

A joint US/USSR Commission met on March 20, 1946 in yet another attempt to overcome the impasse reached during the joint conference meetings, but without results. A second meeting was conducted on May 21, 1947, but also failed to obtain an agreement. The failure to reach a satisfactory agreement with the USSR convinced the US that further negotiations were futile and that the whole question of Korean independence should be referred to the United Nations. Accordingly, the US placed the issue before the General Assembly on September 17, 1947.<sup>4</sup>

The UN passed a US sponsored resolution on November 14, 1947 which established a nine nation Temporary Commission on Korea to supervise elections for electing representatives to constitute a National Assembly and establish a National Government of Korea. Elections were to be conducted before March 31, 1948 and the UN commission was to be permitted the right to "travel, observe

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<sup>3</sup>U.S. Department of State, Op. Cit., p. 5.

<sup>4</sup>Ibid., p. 60.

and consult throughout Korea."<sup>5</sup> However, the UN commission was rejected by the USSR and the Soviet commander in North Korea refused to receive or permit it to move north of the 38th parallel. Despite appeals by UN Secretary General Trygve Lie, the USSR stood firm on its refusal to permit the commission access north of the 38th parallel. Blocked from carrying out its role north of the 38th parallel, the UN decided to continue with supervised elections in South Korea during March 1948.<sup>6</sup>

Elections were conducted in South Korea during the period April 5 - May 11, 1948 to elect representatives for "all the people of Korea." The UN adopted a resolution on June 25, 1948 which declared that the elections conducted:

. . . are a valid expression of the free will of the electorate in those parts of Korea which were accessible to the commission and in which the inhabitants constituted approximately two-thirds of the people of all Korea.<sup>7</sup>

The newly elected National Assembly convened on May 31st with one-third of the seats being left vacant for the people of the north, and after considerable debate adopted a constitution July 12, 1947. Syngman Rhee was elected as President of the Republic of Korea on July 10th and the Government of the Republic of Korea was established on August 15th. The UN recognized the government on December 12, 1948 with the US extending recognition on January 1, 1949. The government applied for UN membership on January 19, 1949, but was vetoed by the Soviet Union.<sup>8</sup>

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<sup>5</sup>U.S. Department of State, Op. Cit., pp. 69-71.

<sup>6</sup>Ibid., p. 10.

<sup>7</sup>Ibid., pp. 71-72.

<sup>8</sup>Ibid., pp. 77-78.

The USSR countered developments in South Korea by establishing the "Democratic People's Republic of Korea" on September 9, 1949. This government applied for admission to the UN on February 9, 1949, but was not considered in view of the December 12, 1948 UN resolution recognizing the government in the south as the only lawful government in Korea.<sup>9</sup>

These actions and counter-actions functioned to solidify the unnatural division of Korea at the 38th parallel. The problems normally associated with an artificial, imposed division of this type were exacerbated by the economic makeup of North and South Korea and Korean nationalism, in both the north and south, which has repeatedly expressed itself through various expressions of intent to re-unite the nation. These factors have resulted in continued hostilities and efforts at various levels of intensity by both governments to bring about the fall of the other. The intensity of these efforts peaked with the Soviet sponsored June 25, 1950 North Korean invasion of South Korea and provided the setting for, yet, another US/USSR post-WW II confrontation.

B. Crisis Development and Conduct.

(1) The starting date for the crisis is established as June 25, 1950: the date of the North Korean armed forces invasion of South Korea. Whereas the 1946 Iranian and the 1948 Berlin blockade confrontations developed gradually to a peak level of intensity, the North Korean invasion was unexpected and resulted in a very rapid rate of escalation on both sides.

(2) Chronological listing of confrontation events.

(a) June 1950

25th. North Korean armed forces begin the invasion of South Korea. (Facts on File, Vol. X, No. 504, June 23-29, 1950, p. 201).

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<sup>9</sup>U.S. Department of State, Op. Cit., p. 13.

25th. UN Security Council issued a cease fire order and requested UN countries to enforce it. (A. M. Rosenthal, "U.N. Calls for Cease Fire in Korea," NYT, June 26, 1950, p. 1).

25th. President Truman informed newsmen at Kansas City not to be alarmist, it could be dangerous, but he hoped that it wasn't. (Facts on File, Vol. X, No. 504, June 23-29, 1950, p. 203).

25th. Congress began debate on Korea. (Ibid., p. 203).

26th. US press urged intervention of US armed forces. (Ibid., p. 203).

26th. General MacArthur announced that US military aid was being provided to South Korea. The aid included ammunition, supplies and ten fighter aircraft. (Ibid., p. 203).

26th. President Truman received the South Korean ambassador to the US, President Truman issued a statement stating that "nations supporting the UN Charter would not tolerate North Korea's willful disregard of the obligation to keep the peace." (Ibid., p. 203).

27th. USSR and North Korea rejected the UN cease fire resolution as having no force. (Facts on File, Vol. X, No. 504, June 23-29, 1950, p. 203).

27th. President Truman ordered the US air force and navy to provide cover and support to South Korean troops. (Ibid., p. 204).

28th. Britain, Australia and New Zealand provided naval assistance to augment US efforts. (Ibid., p. 204).

28th. Congress authorized a one year extension of the draft. (Ibid., p. 204).

28th. The US Government sent a note to the USSR requesting Soviet assistance in halting the invasion. (Ibid., p. 204).

29th. USSR formally rejected the June 25th UN cease fire resolution. (Ibid., p. 204).

30th. President Truman authorized use of US ground forces in Korea and use of the US air force and navy throughout all of the Korean Peninsula. (Facts on File, Vol. X, No. 505, June 30 - July 6, 1950, p. 209).

30th. US Senate unanimously passed a \$1,222,500,000 arms aid bill to help Korea. (Ibid., p. 211).

(b) July 1950

1st. First US ground troops landed in Korea. (Ibid., p. 209).

- 2nd. US ground troops deployed to battle positions in Korea. (Facts on File, Vol. X, No. 505, June 30 - July 6, 1950, p. 209).
- 4th. 44 members of UN went on record as supporting US actions. (Ibid., p. 211).
- 5th. US ground troops engaged North Korean forces in battle. (Ibid., p. 209).
- 7th. UN authorized the US to establish a UN unified command for Korea. (Facts on File, Vol. X, No. 506, July 7-13, 1950, p. 217).
- 7th. President Truman authorized draft. (Ibid., p. 217).
- 7th. Truman asked Congress for \$260 million for hydrogen and atomic weapon development. (Ibid., p. 220).
- 8th. General MacArthur named as UN Commander for Korea. US 2d Infantry Division alerted for deployment to Korea. (Ibid., p. 217).
- 10th. US tanks entered the battle and were defeated. North Korean atrocities against US soldiers disclosed. (Ibid., p. 218).
- 11th. Truman authorized a seventy group US air force. (Ibid., p. 220).
- 12th. 47 members of the UN went on record as supporting UN military actions in Korea. (Ibid., p. 219).
- 12th. Charles de Gaulle stated that an attack in Europe was imminent. The Alsops stated that Russia had plans to invade Iran. (Ibid., p. 220).
- 17th. Stalin offered to help negotiate peace for Korea if communist China was placed in the UN and nationalist China was removed. (Ibid., p. 228).
- 18th. US First Cavalry Division landed at Pokang. 25th Infantry Division landed at Pusan. (Facts on File, Vol. X, No. 507, July 14-20, 1950, p. 225).
- 21st. Five UN nations, in addition to the US, pledged to provide combat troops to the UN force in Korea. (Ibid., p. 234).
- 21st. North Korean broadcast named USSR as benefactor to the North Korean cause. (Ibid., p. 235).
- 27th. Truman told press that he was not considering the use of atomic weapons in Korea. (Ibid., p. 235).

31st. Four national guard divisions activated and Marine Corps divisions were expanded to full wartime strength. US First Marine Division and Army 2d Infantry Division landed in Korea. (Facts on File, Vol. X, No. 509, July 28 - August 3, 1950, p. 241).

(c) August 1950

7th. US Army and Marine units stopped and counter-attacked North Korean forces. (Facts on File, Vol. X, No. 510, August 4-10, 1950, p. 249).

10th. US accused the USSR in the UN of assisting and providing weapons to North Korea. Malik, USSR representative to the UN, admitted that the North Koreans were using Soviet equipment, but stated that it had been provided before the war began. (Ibid., p. 250).

(d) September 1950

5th. US fighter planes shot down a Russian bomber. A Soviet lieutenant was found dead in the wreckage. (Facts on File, Vol. X, No. 514, September 1-7, 1950, p. 282).

15th. UN forces made an amphibious assault landing at Inchon, Korea. (Facts on File, Vol. X, No. 515, September 8-14, 1950, p. 289).

21st. Truman announced that it was up to the UN, not the US, to decide if UN troops would pursue North Korean forces north of the 38th parallel. The US would abide by the UN decision. (Facts on File, Vol. X, No. 516, September 15-21, 1950, p. 297).

(e) October 1950

1st. MacArthur broadcasted a surrender message to North Korea. His broadcast was ignored. (Facts on File, Vol. X, No. 518, September 29 - October 5, 1950, p. 314).

1st. South Korean forces crossed the 38th parallel in pursuit of retreating North Korean forces. (Ibid., p. 314).

1st. Chou En-lai stated that Red China would not stand aside if the imperialists invaded North Korea. (Ibid., p. 314).

4th. UN forces crossed the 38th parallel moving into North Korea. (Ibid., p. 314).

26th. UN forces reached the Manchurian border along the Yalu River. (Facts on File, Vol. X, No. 521, October 20-26, 1950, p. 337).

(f) November 1950

1st. Red Chinese armed forces attacked UN forces along the Manchurian border. Attack was supported by Soviet made jet fighter aircraft. (Facts on File, Vol. X, No. 522, October 27 - November 2, 1950, p. 345).

26th. UN forces began general retreat from Yalu River area. (Facts on File, Vol. X, No. 526, November 24-30, 1950, p. 382).

30th. In response to increased congressional and newspaper demands for using the atomic bomb, President Truman stated that "the US would take whatever steps are necessary to meet the military situation in Korea and that this includes using every weapon the US has." He further stated that "there has always been active consideration for using the atomic weapon," but that he did not want to see it used. (Ibid., p. 383).

(g) December 1950

8th. In a joint communique, Britain and the US reaffirmed their intentions to remain in Korea and the intent to limit the war to the Korean Peninsula. (Facts on File, Vol. X, No. 528, December 8-14, 1950, p. 398).

14th. UN appealed to both sides to accept a cease fire. (Ibid., p. 397).

14th. Winston Churchill argued that it was silly to maintain that the west should not be the first to use atomic weapons. (Ibid., p. 398).

19th. USSR and Red China rejected the December 14th UN cease fire appeal. (Facts on File, Vol. X, No. 529, December 15-21, 1950, p. 405).

(h) April 1951

11th. Truman relieved Mac Arthur of UN command and replaced him with Matthew Ridgeway. (Facts on File, Vol. XI, No. 545, April 6-12, 1951, p. 113).

(i) June 1951

1st. UN proposed a cease fire along the 38th parallel. (Facts on File, Vol. XI, No. 553, June 1-7, 1951, p. 177).

23rd. USSR proposed a cease fire be effected along the 38th parallel; (Facts on File, Vol. XI, No. 553, June 22-29, 1951, p. 201).

(j) July 1951

10th. Military truce negotiations began in Kaesong. (Facts on File, July 6-12, 1951, p. 217).

(k) July 1953

27th. Military truce signed with fighting ceasing twelve hours later. (Lindsay Parrott, "Fighting Ends, Troops Fall Back," NYT, July 28, 1953, p. 1).

C. Confrontation Intensity Peak Level and Rate of Escalation. The intensity levels of confrontation events are illustrated in figure 1. These levels are plotted as described earlier in Annex B. As illustrated, the USSR actions reached a peak level of intensity at rung fifteen on July 5, 1950 with the providing of support for North Korean forces engaged in a conventional war against US forces. The time required for USSR actions to peak was eleven days (June 25 - July 5, 1950). US actions peaked at rung eighteen on June 30, 1950 with the unusual, provocative act of conducting air strikes against targets located in North Korea, an acknowledged ally of and being supported by the USSR. The time required for US actions to peak was 5 days (June 25 - June 30, 1950).

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Figure 1  
US/USSR 1950 Korean Confrontation Actions Plotted

X - US Actions  
Y - USSR Actions

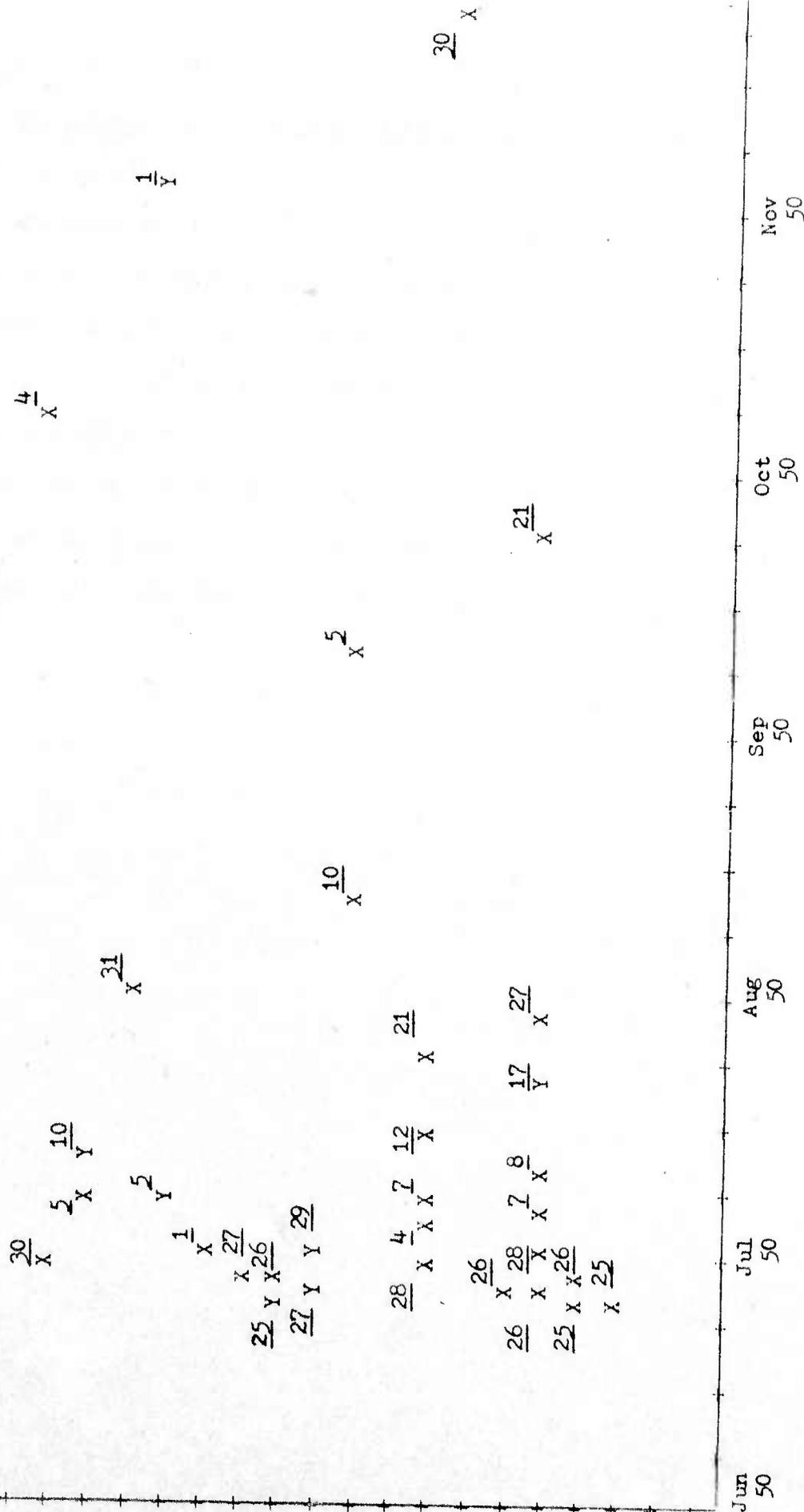
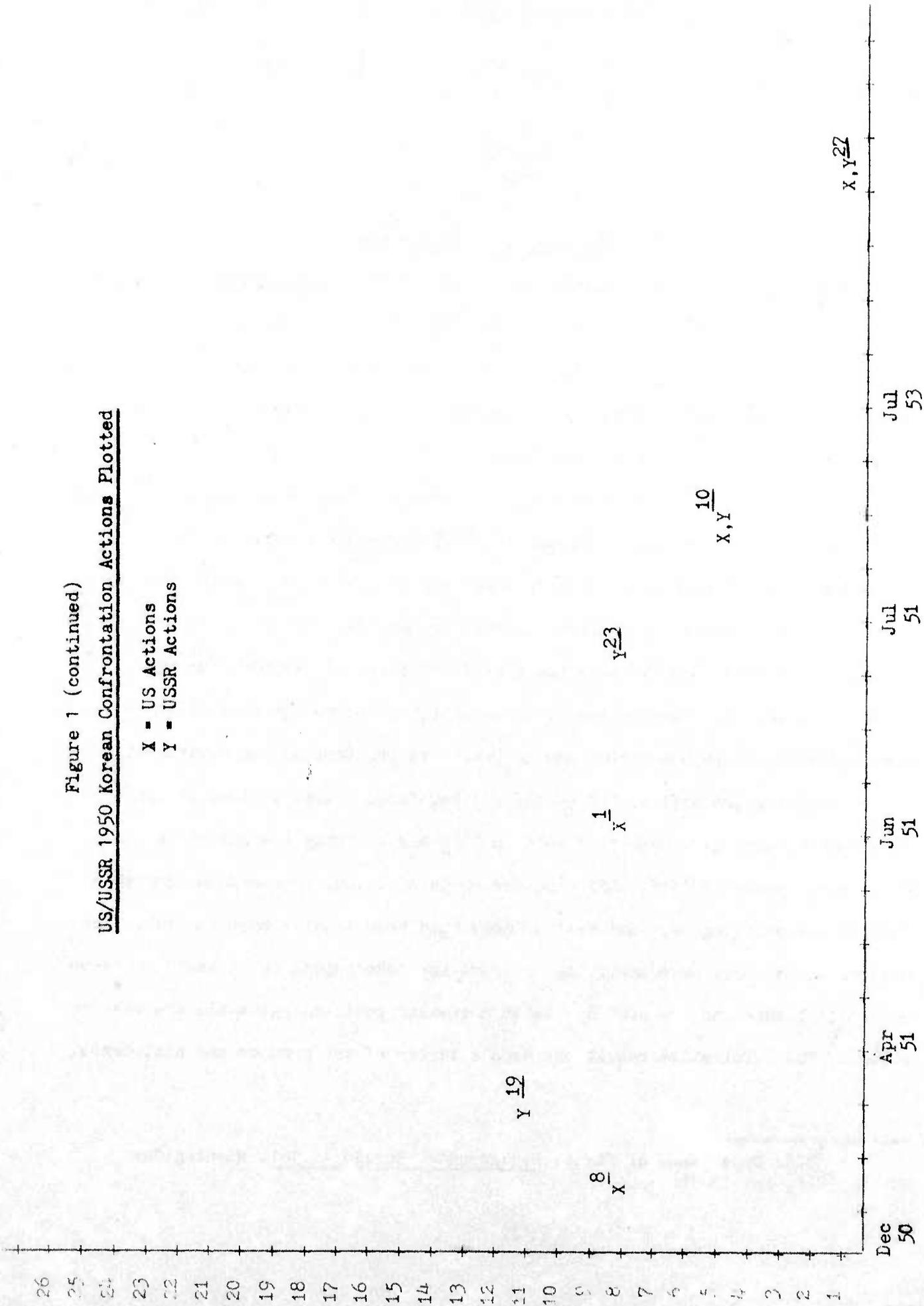


Figure 1 (continued)

US/USSR 1950 Korean Confrontation Actions Plotted

X - US Actions  
Y - USSR Actions



## Annex E

### The 1959 Berlin Confrontation

A. Background. This confrontation can be viewed as a continuation of the Berlin issue which resulted in the earlier 1948 blockade. The lifting of the blockade in May 1949 did not signal an end to the issue, but rather a return to the pre-confrontation status quo. In other words, the issue moved from a crisis intensity level to a problem level.

After the unsuccessful attempt to coerce the western allies out of Berlin during the 1948 confrontation, the USSR undertook further actions to strengthen East Germany as a military power and to consolidate Soviet influence. These actions included the rearming of East German armed forces in 1950 so that by the end of 1953, East Germany had a military force of 140,000. Another action included the transferring of responsibility for border control along the East and West German boundaries and in Berlin to the East German Government.<sup>1</sup>

The western allies, led by the US, countered Soviet actions by admitting West Germany as a member of NATO in 1954 and rearming the nation on a significant scale in 1955. Efforts, during this period, to reach an agreeable formula for unifying East and West Germany have been totally unsuccessful. The western allies have been unwilling to grant any concessions which would increase Soviet influence and the USSR has taken a similar position vis-a-vis the western allies. The culminative result has been a series of conferences and statements,

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<sup>1</sup>U.S. Department of State, Background: Berlin - 1961, Washington: USGPO, 1961, pp. 13-14.

but no progress as both sides have solidified their positions.<sup>2</sup>

Berlin is located some 100 miles inside East Germany. The USSR argued that its geographical location makes it an integral part of East Germany and that the western sectors are an unnatural enclave which should be dissolved.<sup>3</sup> Berlin has presented real problems to Soviet leaders in that, as they have progressively increased communist control in East Germany, West Berlin has become a haven for refugees from the east. This development has not only been politically embarrassing, but has resulted in a significant drain of human resources. These actions and counter-actions led to the second Berlin confrontation in November 1958 when Khrushchev stated that the USSR considered null and void all agreements with the west on Berlin and demanded withdrawal of all western forces from the city.<sup>4</sup>

#### B. Crisis Development and Conduct.

(1) The starting date for the confrontation is established as November 10, 1958: the date that Khrushchev presented his ultimatum to the western allies.<sup>5</sup> The announcement followed a series of routine position statements and proposals from both allied nations and the Soviet Union and set into motion a series of events which quickly escalated to a crisis intensity level, whereas earlier announcements had resulted only in similar counter-statements from the

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<sup>2</sup>For a discussion of the issues, actions and counter-actions surrounding Berlin, see, William Conlan, Berlin: Beset and Bedevilled, New York: Fountainhead Publishers, 1963.

<sup>3</sup>U.S. Department of State, Background: Berlin - 1961, Op. Cit., pp. 1-2.

<sup>4</sup>See the chronology contained in Conlan, Op. Cit., pp. 237-257 for a descriptive chronological review of the significant events surrounding the Berlin issue during the 1945-1963 time frame.

<sup>5</sup>U.S. Department of State, Background: Berlin - 1961, Op. Cit., p. 18.

other side. It was the escalating after-effects of the ultimatum that makes November 10th the appropriate starting date for the second Berlin confrontation.

(2) Chronological listing of confrontation events.

(a) November 1958

10th. Khrushchev presented the Soviet demand for the western allies to withdraw their military forces from Berlin and terminate their stay in Berlin. (Facts on File, Vol. XVIII, No. 941, November 6-12, 1958, p. 361).

10th. US State Department restated the intentions of the US to remain in Berlin. (Ibid., p. 361).

14th. Khrushchev stated that the USSR was preparing "definite proposals" for terminating the allied administration in Berlin and denounced US threats and intimidations." (Facts on File, Vol. XVIII, No. 942, November 13-19, 1958, p. 373).

14th. 3 US Army trucks and crews were detained by Soviet guards at the Babelsburg checkpoint outside of Berlin for 8 hours. The drivers had refused to permit their vehicles to be searched. (Ibid., p. 373).

18th. Khrushchev renounced four power occupation of Berlin and stated that the USSR would solve the problem "radically" undeterred by threats or blackmail attempts. (Ibid., p. 373).

21st. USSR and East Germany began discussion for the transfer of Soviet functions in the four power administration of Berlin to East Germany. (Facts on File, Vol. XVIII, No. 943, November 20-26, 1958, p. 381).

22nd. Eisenhower reaffirmed US intentions to maintain its position and the integrity of West Berlin. (Ibid., p. 381).

25th. Vice-President Nixon reaffirmed US intentions to remain in Berlin. (Ibid., p. 383).

26th. Secretary of State Dulles announced that the US would be willing to permit East Germany to act as a Soviet agent in administering western communications to Berlin if the USSR would reaffirm its intentions of fulfilling its obligations in the four power administration of Berlin. (Ibid., p. 381).

27th. USSR proposed to make Berlin a "free city," united and under the control of neither the east or west. The proposal contained a warning that unless the west accepted, the USSR would turn over all occupation duties to the East German Government in six months. (Facts on File, Vol. XVIII, No. 944, November 27 - December 3, 1958, p. 389).

27th. US State Department restated US intentions to remain firm in Berlin. (Ibid., p. 389).

30th. Eisenhower refuted Dulles' November 26th statement concerning US willingness to accept East Germany as a Soviet agent and reaffirmed US intentions to remain firm in Berlin. (Facts on File, Vol. XVIII, No. 944, November 27 - December 3, 1958, p. 389).

(b) December 1958

2nd. Senator Humphrey stated that, after a personal interview with Khrushchev, he was convinced that the Soviets' move in Berlin was designed to get the western powers out and there was no room for compromise. (Facts on File, Vol. XVIII, No. 945, December 4-10, 1958, p. 397).

7th. West Berlin elections resulted in a crushing defeat (98% to 2% of the votes) for the Socialist Unity (communist) Party and was seen as an expression of West Berliners against Soviet proposals for a "free city." (Ibid., p. 398).

10th. Eisenhower publicly reaffirmed US intentions to remain firm in Berlin. (Ibid., p. 397).

11th. USSR warned the US that any western attempt to force entry into an isolated Berlin with military forces would be considered an attack on East Germany and the Warsaw Pact and would mean war. (Facts on File, Vol. XVIII, No. 946, December 11-17, 1958, p. 405).

14th. US, Britain and France formally rejected USSR proposals for Berlin and reaffirmed their intentions to remain firm. (Ibid., p. 405).

25th. USSR stated that the west's determination to maintain troops in Berlin by force could lead to a general war fought with nuclear missiles and that the American continent would be hit. (Facts on File, Vol. XVIII, No. 948, December 25-31, 1958, p. 421).

31st. US, Britain and France, in a counter proposal, proposed that the Berlin issue be settled as part of broad negotiations for a reunified Germany, a German peace treaty and a European security settlement. (Ibid., p. 421).

(c) January 1959

10th. USSR rejected the December 31, 1958 western proposal and proposed that immediate negotiations be held to create a unified, demilitarized German state. (Facts on File, Vol. XIX, No. 950, January 8-14, 1959, pp. 9-10).

12th. US rejected the January 10th Soviet proposal. (Ibid., p. 10).

24th. USSR demanded high-level East-West talks on Berlin. (Facts on File, Vol. XIX, No. 952, January 22-28, 1959, p. 25).

27th. Khrushchev stated that the USSR had an intercontinental missile force which ensured Soviet military dominance over the west. (Facts on File, Vol. XIX, No. 952, January 22-28, 1959, p. 25).

27th. Dulles announced US willingness to participate in a foreign minister conference on Berlin. (Ibid., p. 25).

(d) February 1959

2nd-4th. USSR detained a US military truck convoy at the Marienborn autobahn checkpoint. (Facts on File, Vol. XIX, No. 953, January 29 - February 4, 1959, p. 33).

3rd. Dulles met with British, French and West German leaders to develop a common western policy on Berlin. (Ibid., p. 33).

4th. Eisenhower publicly denounced the USSR detention of the US military truck convoy. (Ibid., p. 33).

5th. US State Department made public a tape recording of a radio conversation between Soviet fighter pilots on September 2, 1958 as they attacked and shot down an unarmed USAF C-130 over Soviet Armenia. (Facts on File, Vol. XIX, No. 954, February 5-11, 1959, p. 41).

5th. Khrushchev invited Eisenhower to visit the USSR. (Ibid., p. 41).

7th. USSR denied authenticity of the tape and charged that the goodwill created by the Mikoyan visit to the US had been destroyed. (Ibid., p. 41).

10th. Eisenhower rejected Khrushchev's invitation to visit the USSR. (Ibid., p. 10).

16th. US, British, French and West German conference adjourned and suggested a four power foreign minister conference, with East and West German observers, to "deal with the problem of Germany in all its aspects and implications." (Facts on File, Vol. XIX, No. 955, February 12-18, 1959, p. 49).

24th. Khrushchev rejected the allied request for a foreign ministers conference on Berlin and suggested that a meeting of heads of government should be convened to discuss and solve the Berlin issue. He warned that the USSR was prepared to sign a separate agreement with East Germany and terminate the USSR occupation functions in Berlin. (Facts on File, Vol. XIX, No. 956, February 19-25, 1959, p. 57).

25th. Eisenhower publicly rejected Khrushchev's proposal for a heads of government meeting and reaffirmed the US intentions to remain firm in Berlin. (Ibid., p. 58).

(e) March 1959

2nd. USSR agreed to the west proposal for a foreign ministers conference on Berlin. (Facts on File, Vol. XIX, No. 957, February 26 - March 4, 1959, p. 65).

6th. Khrushchev stated USSR willingness to postpone the May 27th deadline for terminating USSR Berlin occupation responsibilities if real progress could be made in the foreign ministers conference. He further stated that there would not be a war over Berlin. (Facts on File, Vol. XIX, No. 958, March 5-11, 1959, p. 73).

9th. Khrushchev stated a willingness to permit the western powers to maintain minimum military forces in West Berlin. (Ibid., p. 73).

11th. Eisenhower ruled out ground war to face USSR threats in Germany, but stated that nuclear war was not an "impossibility." (Facts on File, Vol. XIX, No. 959, March 12-18, 1959, p. 81).

16th. Eisenhower stated a willingness to engage in a summit meeting concerning Berlin if there was a real prospect for success and noted that the Soviet acceptance of a foreign ministers conference was an improvement. He restated US intentions to remain firm. (Ibid., p. 81).

20th-22nd. British Prime Minister Macmillan and Eisenhower conferred at Camp David on the Berlin issue. Eisenhower agreed to participate in a summit conference on Berlin provided progress was made during the foreign ministers conference. (Facts on File, Vol. XIX, No. 960, March 19-25, 1959, p. 90).

31st. USSR and the US, Britain and France agreed on the agenda and set May 11th as the convening date for the foreign ministers conference. (Facts on File, Vol. XIX, No. 961, March 26 - April 1, 1959, p. 97).

(f) April 1959

3rd. Soviet jet fighter aircraft buzzed US military transport aircraft flying in the Berlin air corridor in an effort to force compliance with a Soviet imposed ceiling of 10,000 feet. (Facts on File, Vol. XIX, No. 963, April 9-15, 1959, p. 113).

4th. US protested the buzzing of its aircraft in a note to the USSR and refused to recognize an imposed ceiling restriction. (Ibid., p. 113).

4th. USSR charged the US with sabotaging the foreign ministers conference. (Ibid., p. 113).

6th. US protest note to the USSR concerning the air corridor buzzing was made public. (Ibid., p. 113).

30th. US, Britain, France and West German foreign ministers concluded a strategy meeting and announced complete agreement on Berlin. Reaffirmed the west intentions to remain firm in Berlin. (Facts on File, Vol. XIX, No. 966, April 30 - May 6, 1959, p. 141).

(g) May 1959

5th. Eisenhower reaffirmed US intentions to remain firm in Berlin and stated that a summit conference was not possible. (Ibid., p. 141).

11th. Foreign ministers met in Geneva. (Facts on File, Vol. XIX, No. 967, May 7-13, 1959, p. 149). This marks the end of the 1959 Berlin confrontation in that US/USSR relations returned to the normal cold war intensity level with the convening of the conference.

(h) July 1959

23rd. Vice-President Nixon began a tour in the USSR to open the American National Exhibition and to talk with Khrushchev. (Facts on File, Vol. XIX, No. 976, July 9-15, 1959, p. 226).

(i) August 1959

3rd. Eisenhower announced that he and Khrushchev would exchange visits. (Facts on File, Vol. XIX, No. 979, July 30 - August 5, 1959, p. 245).

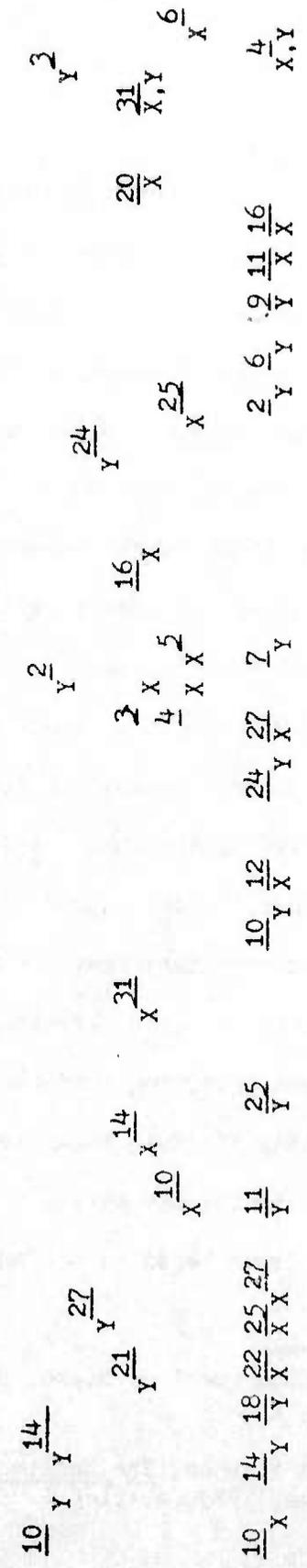
5th. The foreign ministers meeting on Berlin adjourned. (Ibid., p. 246).

C. Confrontation Intensity Peak Level and Rate of Escalation. The intensity levels of confrontation events are illustrated in figure 1. These levels are plotted as described earlier in Annex B. As illustrated, the USSR actions reached a peak intensity level at rung ten with the direct diplomatic confrontation resulting from Khrushchev's ultimatum to the US, on November 10, 1958. Since this is the date selected as the starting date for the confrontation, the time required for the USSR's action to reach a peak level of intensity is zero days. The US actions reached a peak level of intensity at rung eight on December 14, 1958 with the US, Britain and France formal rejection of the USSR Berlin proposal and declaration of their intentions to remain firm in Berlin. The time required for US actions to reach a peak level of intensity is thirty-five days (November 10 - December 14, 1958).

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Figure 1  
Us/USSR 1959 Berlin Confrontation Actions Plotted

X - US Actions  
Y - USSR Actions



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## Annex F

### The 1961 Berlin Confrontation

A. Background. This confrontation can be viewed as a further continuation of the post-WW II Berlin issue which gave rise to the 1948 and 1959 confrontations. The June 1959 Foreign Ministers Conference meeting in Geneva to negotiate a settlement to the issue was adjourned on August 5, 1959 without reaching an agreement. Premier Khrushchev did tour the US during the period September 15-27, 1959 and, after lengthy discussions with President Eisenhower, agreed to suspend his threat to sign a separate peace treaty with the East Germans. A Big Four summit meeting was to be held at Geneva on May 15, 1960, but Khrushchev used the U-2 incident to break it up before any progress could be made.<sup>1</sup>

There appeared a pause in discussions with the USSR during the period following the U-2 incident and the 1960 presidential elections. Shortly after the 1960 elections, US and USSR discussions on the Berlin issue were resumed, but it soon became evident that Khrushchev did not intend to permit the Berlin status-quo to continue unchallenged. The USSR did not accept the post-WW II Potsdam Agreement providing four power occupation of Berlin following the war and, in the spring of 1961, began to raise the intensity level of statements and actions concerning the issue.<sup>2</sup>

As the issue began to surface once again, President Kennedy suggested

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<sup>1</sup>U.S. Department of State, Berlin: Background - 1961, Washington: USGPO, 1961, p. 23.

<sup>2</sup>Robert Slusser, The Berlin Crisis of 1961, Baltimore: The John Hopkins University Press, 1973, chapter 1.

that he and Khrushchev meet for a direct exchange of views without attempting negotiations. Khrushchev concurred and the two met in Vienna during the period June 3-4, 1961. The meeting did not resolve the issue and was used by Khrushchev to restate the unacceptable 1958 Soviet demands. During a post conference interview, Kennedy described the talks as "somber" and stated that, "we are in for a long winter."<sup>3</sup>

B. Crisis Development and Conduct.

(1) The starting date for the crisis is established as June 4, 1961: the date that Premier Khrushchev and President Kennedy adjourned the June 3-4 conference in Vienna. At the conclusion of the meeting, Khrushchev handed Kennedy a note which reiterated the 1959 Soviet position that Berlin be declared a "demilitarized free city" and the occupation regime be terminated. This note was to set into motion a series of actions and counter-actions which would culminate in a direct confrontation of Soviet and American military forces in Berlin and is, thus, selected as the starting date for the crisis.

(2) Chronological listing of confrontation events.

(a) June 1961

3rd-4th. Kennedy and Khrushchev conducted bilateral talks in Vienna. During the meeting, the US and USSR positions on Berlin were reaffirmed. (U.S. Department of State, Berlin: Background - 1961, Washington: USGPO, 1961, p. 23).

4th. USSR note stating the 1959 Soviet position on Berlin handed to Kennedy by Khrushchev. (Ibid., pp. 23 and 26. See pp. 30 and 31 for the official US translation of the Khrushchev note).

10th. "Tass" printed the June 4th Khrushchev note for public consumption. (Facts on File, Vol. XXI, No. 1076, June 8-14, 1961, p. 213).

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<sup>3</sup>U.S. Department of State, Op. Cit., p. 23.

12th. US newspapers printed the note. (Facts on File, Vol. XXI, No. 1076, June 8-14, 1961, p. 213).

13th. The first of a series of National Security Council meetings convened to develop a US strategy for the Berlin problem. (Facts on File, Vol. XXI, No. 1079, June 29 - July 5, 1961, p. 237).

15th. In a television and radio report to the Russian people, Khrushchev discussed the Vienna conference and stated that "a peaceful settlement in Europe must be obtained this year or the USSR will solve the problem unilaterally." (Text published in Facts on File, Vol. XXI, No. 1077, June 15-21, 1961, p. 221).

19th. Kennedy rejected the June 4th Soviet proposals on Berlin and restated the US intentions to remain firm in Berlin. (Text published in U.S. Department of State, Berlin: Background - 1961, Op. Cit., pp. 36 and 37).

21st. Khrushchev restated the Soviet demands for a demilitarized free city in Berlin and reiterated the December 31, 1961 deadline for a solution to the Berlin question. (Facts on File, Vol. XXI, No. 1078, June 22-28, 1961, p. 229).

25th. Kennedy made a television and radio report to the nation. During the report, he discussed the USSR's position in Berlin, the US position and linked Berlin to US national interests. (Text published in U.S. Department of State, Berlin: Background - 1961, Op. Cit., p. 38).

28th. Kennedy rejected the Soviet's Berlin proposal and linked Berlin to peace in Europe. (Ibid., p. 230).

(b) July 1961

3rd. Newsweek magazine reported the result of a Joint Chiefs of Staff proposal to Kennedy. The proposal recommended: evacuation of US military dependents from Europe, movement of at least one additional US division to Europe, declaration of the intent to use nuclear weapons, combat deployment of NATO forces in Western Europe and mobilization of resources. (Lloyd Norman, "Pentagon Plan," Newsweek, July 10, 1961).

8th. Khrushchev announced the cancellation of a planned reduction in Soviet armed forces because of tensions in Berlin. (Facts on File, Vol. XXI, No. 1080, July 6-12, 1961, p. 245).

8th. Kennedy ordered that a general review of US military strength be conducted. (Ibid., p. 245).

11th. US administration announced that a study of a possible mobilization of some national guard and reserve units had begun. (Ibid., p. 245).

17th. US, Britain and France informed the USSR that Khrushchev's terms for settling the Berlin issue were unacceptable and that the three allies were prepared to defend their rights in Berlin with force, if necessary. (Text published in Facts on File, Vol. XXI, No. 1081, July 13-19, 1961, p. 253).

25th. Kennedy described US plans and intentions to remain in Berlin during a nationally televised address. He stated that the US would protect its post-WW II rights in Berlin by force, if necessary; and disclosed preparations being taken for strengthening US armed forces. Linked Berlin to US national interests. (Facts on File, Vol. XXI, No. 1082, July 20-26, 1961, p. 261).

26th. Kennedy requested congressional approval for extending current armed forces enlistments and authority to activate the Ready Reserve. (Ibid., pp. 261 and 262).

(c) August 1961

4th. Khrushchev responded to Kennedy's July 25th speech with a televised address to the Russian people. During the address, he repeated the Soviet demands made during the June 4th note and warned that any western military move in Berlin would result in an appropriate counter-Soviet move. (Facts on File, Vol. XXI, No. 1084, August 3-9, 1961, p. 278).

5th. Soviet notes reiterating the Soviet position were delivered to the US, Britain and France. The note warned that the West German people would not survive "even a few hours of the 3d world war if it is unleashed" over the Berlin crisis. (Text published in Ibid., pp. 278-279).

5th-7th. NATO foreign ministers met and announced agreement on a common strategy for the Berlin question. The strategy included the use of force, if necessary, to maintain western post-WW II rights in Berlin. (Ibid., p. 279).

8th. US administration announced plans to transform three training divisions into combat divisions, call-up 185,000 reserves, cancel plans to close four air force bases and reactivate forty ships from the mothball fleet. (Ibid., p. 279).

13th. East German police and soldiers closed the border between Soviet and western sectors of Berlin. (Facts on File, Vol. XXI, No. 1085, August 10-16, 1961, p. 285).

15th. US, Britain and France formally protested the border closing and charged the USSR for responsibility of violating the international agreement on Berlin. (Ibid., p. 286).

17th. France moved an undisclosed number of troops from Algeria to France. (Facts on File, Vol. XXI, No. 1086, August 17-23, 1961, p. 295).

18th. Vice-President Johnson flew to Berlin to reassure West Berliners of the US intent to remain in Berlin. Johnson was accompanied by General Lucius C. Clay, former US commander in Berlin during the 1948/49 blockade. Upon arriving, Johnson reaffirmed US intentions to remain in Berlin by force, if necessary. (Facts on File, Vol. XXI, No. 1086, August 17-23, 1961, p. 293).

18th. Kennedy ordered the movement of a US battlegroup, via autobahn, from West Germany to Berlin. (Ibid., p. 293).

20th. US battlegroup arrived in Berlin without incident. (Ibid., p. 293).

23rd. USSR charged that the western allies were abusing the air corridor access to Berlin and demanded that the allies conform to a series of restrictions. (Facts on File, Vol. XXI, No. 1087, August 24-30, 1961, p. 301).

23rd. In response to an East German directive that West Berliners remain a minimum of 100 meters from the border, US tanks and British and French armored cars were moved to and positioned on the border dividing the western and Soviet sectors of Berlin. (Ibid., p. 302).

25th. US Department of Defense announced activation of additional reserve units. (Facts on File, Vol. XXI, No. 1088, August 31 - September 6, 1961, p. 330).

26th. Western allies rejected USSR demands for restricting flights in the Berlin corridors and, in defiance, a US military plane flew from West Germany to Berlin unannounced, a clear violation of the established agreement. (Facts on File, Vol. XXI, No. 1087, August 24-30, 1961, p. 301).

31st. USSR announced that it would resume nuclear weapon testing of super-powerful nuclear bombs in the 100 KT yield. (Facts on File, Vol. XXI, No. 1088, August 31 - September 6, 1961, p. 325).

(d) September 1961

5th. Kennedy announced US resumption of nuclear testing. (Ibid., p. 325).

5th. US soldiers threw tear gas grenades at East German police after the East German police had sprayed the soldiers with water hoses. (Ibid., p. 334).

7th. Khrushchev stated his readiness to meet with Kennedy in an attempt to solve the Berlin question and that he was confident that the USSR would win the "war of iron wills" without resorting to war. (Facts on File, Vol. XXI, No. 1089, September 7-13, 1961, p. 333).

8th. US, Britain and France notified the USSR that any interference with western air traffic to Berlin would be considered an "aggressive action." (Ibid., p. 334).

9th. US Department of Defense announced that an additional 40,000 army troops were being sent to Europe to bring the units there to full combat strength, movement of four F-100 jet squadrons from the US to Europe and that additional US military dependents were not being sent to Europe. (Facts on File, Vol. XXI, No. 1089, September 7-13, 1961, p. 338).

21st. Secretary of State Rusk and Foreign Minister Gromyko met in New York in the first formal attempt, since the August 13th sealing of the border, to solve the Berlin issue. (Facts on File, Vol. XXI, No. 1092, September 28 - October 4, 1961, p. 358).

25th. Kennedy, in a speech before the UN General Assembly, reaffirmed the US intent to maintain its position and uphold its responsibilities in Berlin. (Facts on File, Vol. XXI, No. 1091, September 21-27, 1961, pp. 349-350).

(e) October 1961

10th. 50,000 new Soviet and 10,000 Polish troops were reported to have moved into East Germany for maneuvers. (Facts on File, Vol. XXI, No. 1095, October 19-25, 1961, p. 338).

17th. Khrushchev announced that the USSR was willing to extend the year end deadline for signing a separate peace treaty with East Germany. (Facts on File, Vol. XXI, No. 1094, October 12-18, 1961, p. 377).

18th-20th. 2 US battlegroups conducted maneuvers in the Grunewald Forest area in Berlin. (Facts on File, Vol. XXI, No. 1095, October 19-25, 1961, p. 386).

20th. Khrushchev appealed to "common sense" to avert a nuclear war over the Berlin issue. (Facts on File, Vol. XXI, No. 1094, October 12-18, 1961, p. 378).

20th. Czechoslovakia began mobilization of its armed forces. (Facts on File, Vol. XXI, No. 1095, October 19-25, 1961, p. 386).

20th. US Department of Defense announced reactivation of four air bases in France and movement of additional army and air force units to Europe. (Ibid., p. 388).

22nd. Armed US military police entered East Germany to retrieve a US Government official who was being detained by East German police. (Ibid., p. 385).

26th. Thirty-three Soviet tanks were moved into East Berlin to counter the US show of force. Crews were Russian speaking and the tanks were reported to belong to the USSR's 20th Guard Division. (Facts on File, Vol. XXI, No. 1097, November 2-8, 1961, p. 408).

27th. US and Soviet tanks confronted each other at the Friedrichstrasse crossing point in Berlin for sixteen hours. (Ibid., p. 409).

(f) November 1961

7th. Khrushchev announced that the USSR was prepared to wait on a solution to the Berlin problem; stating that, "It is not good for the time being to press one another." (Facts on File, Vol. XXI, No. 1097, November 2-8, 1961, p. 407).

14th. Macmillan informed the British Parliament that there had been an easing of positions in Berlin and that he was hopeful for renewed negotiations. (Facts on File, Vol. XXI, No. 1098, November 9-15, 1961, p. 414).

19th. East German authorities began fortifying the wall separating East and West Berlin. (Facts on File, Vol. XXI, No. 1099, November 19-22, 1961, p. 426).

29th. Kennedy stated his support for negotiations on the Berlin issue. (Facts on File, Vol. XXI, No. 1102, December 7-13, 1961, p. 454).

(g) December 1961

15th. Foreign ministers of the fifteen NATO countries approved a US approach to determine the Soviets attitude toward negotiations on Berlin. (Facts on File, Vol. XXI, No. 1103, December 14-20, 1961, p. 467).

31st. Kennedy stated that although cold war tensions had not declined that a third world war was unlikely. (Facts on File, Vol. XXI, No. 1105, December 28, 1961 - January 3, 1962, p. 487).

(h) January 1962

2nd. US requested USSR terms for opening negotiations on Berlin. (Facts on File, Vol. XXII, No. 1106, January 4-10, 1962, p. 1).

3rd. General Clay, Kennedy's personal representative in Berlin, and Kennedy conferred in Washington concerning tactics for dealing with on-the-spot Soviet pressure. It was decided to avoid direct clash when possible. (Ibid., p. 2).

15th. Fifteen US tanks positioned in the east-west Berlin border area on October 26, 1961 were withdrawn to Tempelhof Airport, located two miles from the border. (Facts on File, Vol. XXII, No. 1107, January 11-17, 1962, p. 10).

17th. Twelve Soviet tanks positioned near the east-west Berlin border since October 26th were withdrawn to their base in East Germany. (Facts on File, Vol. XXII, No. 1108, January 18-24, 1962, p. 17).

(i) April 1962

11th. Kennedy announced his intentions to release all Reservists who had been called to active duty during the Berlin crisis. The release

would be effected in August unless the international situation became worse. (Facts on File, Vol. XXII, No. 1120, April 12-18, 1962, p. 125).

16th. Secretary of State Rusk and the Soviet Ambassador to the US, Dobrynin, began talks to settle the Berlin problem. (Ibid., p. 121).

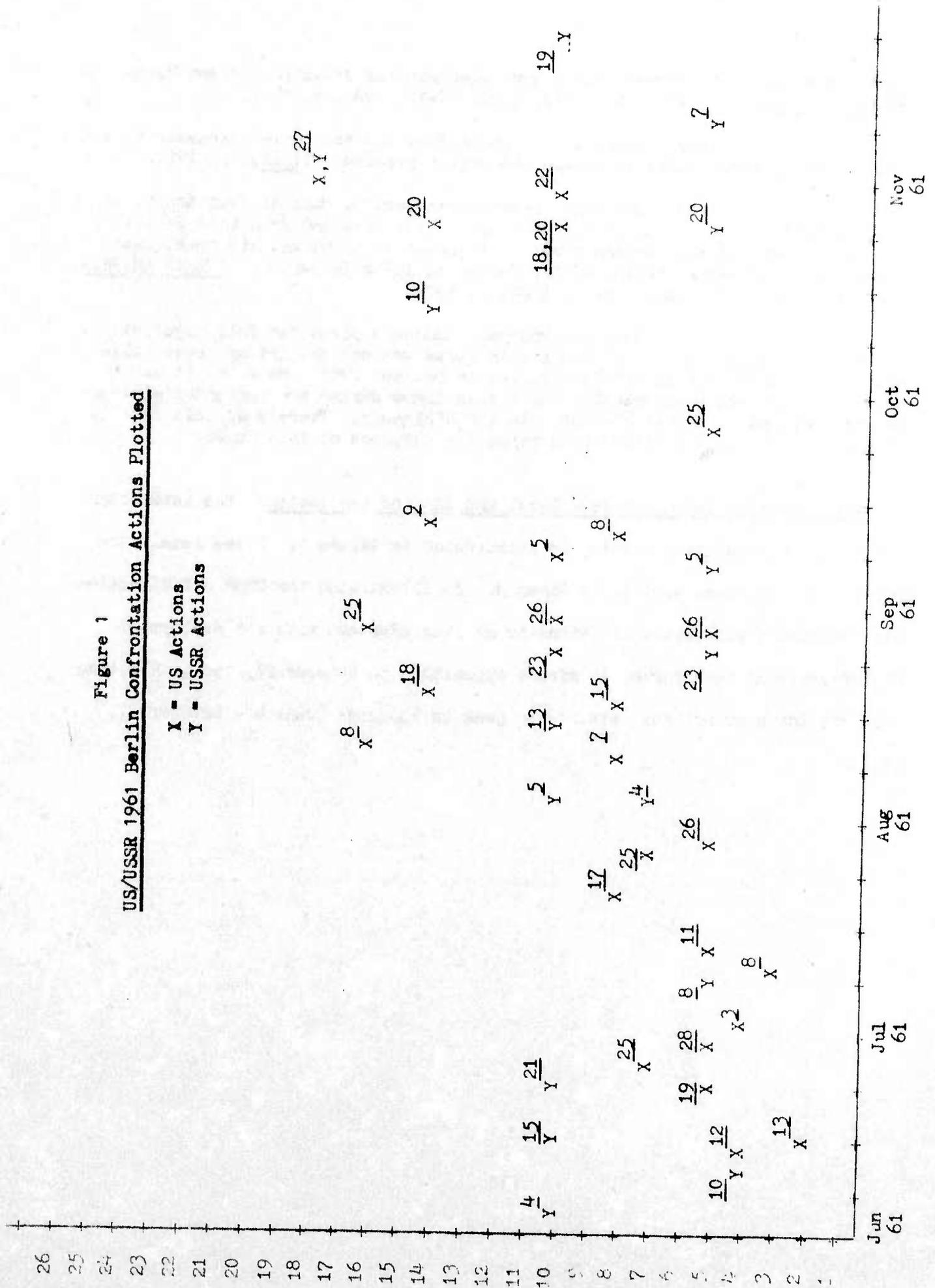
19th. Red Army Commander in Berlin, Marshal Ivan Konev, a leading Soviet tank commander and strategist, was recalled from East Berlin. He had assumed the East German command on August 10, 1961 and his recall was viewed as a further softening of the Soviet position in Berlin. (Facts on File, Vol. XXII, No. 1121, April 19-25, 1962, p. 131).

23rd. Rusk and Dobrynin announce plans for full negotiations on Berlin. (Ibid., p. 131). The Berlin issue was not settled by these talks before the Cuban Missile Crisis occurred in October 1962. However, it can be said that the events surrounding the Berlin issue during the remainder of 1962 can be included in normal US/USSR cold war diplomacy. Therefore, this date is selected as the crisis termination point for purposes of this paper.

C. Confrontation Intensity Peak Level and Rate of Escalation. The intensity levels of confrontation events are illustrated in figure 1. These levels are plotted as described earlier in Annex B. As illustrated the USSR and US actions both reached a peak level of intensity at rung nineteen with the deployment of conventional tank forces in direct opposition on October 27, 1961. The time required for both nations' actions to peak is 146 days (June 4 - October 27, 1961).

Figure 1  
US/USSR 1961 Berlin Confrontation Actions Plotted

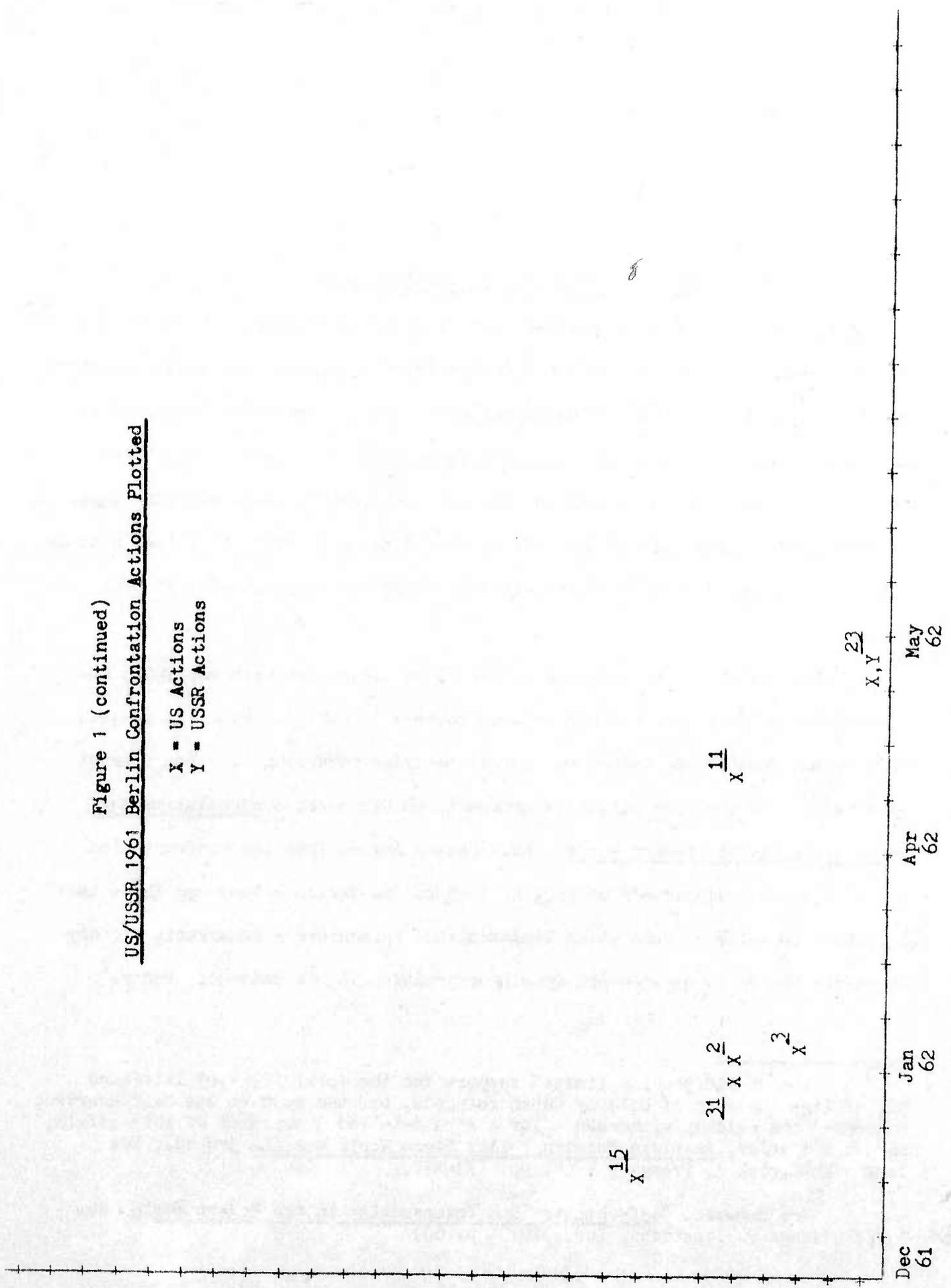
X - US Actions  
 Y - USSR Actions



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Figure 1 (continued)  
US/USSR 1961 Berlin Confrontation Actions Plotted

X - US Actions  
Y - USSR Actions



## Annex G

### The 1962 Cuban Missile Confrontation

A. Background. Almost from the day that Fidel Castro assumed control of the Cuban Government on January 6, 1959, US and Cuban relations have steadily deteriorated. Conversely, USSR and Cuban relations have progressively improved as Castro has turned to the Soviet Union for assistance and trade. Despite the troublesome situation developing in Cuba and the unquestionable military power to invade the island and replace Castro, the US has been content to take a hands off approach toward Cuba until the events of 1962 forced a reversal of this policy.<sup>1</sup>

The Soviet decision to chance the risks associated with emplacing nuclear armed missiles and nuclear capable bombers in Cuba has been the subject of numerous debates and there are several theories regarding it. Urs Schwarz advances one of the more palatable arguments in his book, Confrontation and Intervention in the Modern World. Mr. Schwarz argues that the confrontation can be viewed as a spin-off or continuation of the Berlin crises and Khrushchev's political troubles at home which demanded that he achieve a remarkable victory vis-a-vis the US to quieten his growing opposition in the Communist Party.<sup>2</sup>

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<sup>1</sup> The US did provide limited support for the April 17, 1961 ill-fated Bay of Pigs invasion of Cuba by Cuban refugees, but the support was half-hearted, condemned and quickly withdrawn. For a more detailed discussion of this affair, see John Spanier, American Foreign Policy Since World War II, 3rd ed., New York: Frederick A. Praeger, 1969, pp. 173-177.

<sup>2</sup> Urs Schwarz, Confrontation and Intervention in the Modern World, New York: Oceana Publications, Inc., 1970, p. 60.

The massive threats against the people of Europe had failed to be effective when opposed by the western allies, led by the US, because the Soviet Union did not have the capability to threaten, on a decisive scale, the US homeland. Therefore, "Wall Street" felt protected by the superior US nuclear strength and was willing to project US military strength abroad to contain the Soviet Union. The alternatives to giving-in were to either increase the size and capability of available nuclear missile forces or to emplace the more numerous medium range missiles within striking range of the US. Since it would require considerable time and resources to increase the missile fleet to the level required for threatening the US with missiles launched from the USSR and Castro made Cuba available, and Cuba met the prerequisites for the second course of action, Khrushchev elected to pursue the second alternative.<sup>3</sup> The pursuit of this alternative gave rise to the US/USSR Cuban Missile Confrontation as the US challenged and demanded the withdrawal of Soviet missiles and strategic aircraft from Cuba.<sup>4</sup>

B. Crisis Development and Conduct.

(1) The starting date for the crisis is established as August 22, 1962: the date President Kennedy informed the nation that Cuba was receiving large quantities of equipment and an increased number of technicians from the Soviet bloc, but there was no evidence of military aid being provided.<sup>5</sup> This

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<sup>3</sup>Schwarz, Op. Cit., pp. 60-61.

<sup>4</sup>For a discussion of the US position on the missiles in Cuba, see the statement of Adlai Stevenson, US representative to the UN published in the Yearbook of the United Nations, New York: Columbia University Press, 1964, p. 105.

<sup>5</sup>Facts on File, Vol. XXII, No. 1139, August 23-29, 1962, p. 287.

event seems to have set into motion a number of critical statements from US congressional circles demanding strong US action vis-a-vis Soviet activities in Cuba. These statements placed the administration on the defensive and were viewed by the USSR and Cuba as being hostile. As a consequence, Kennedy was forced to publicly admit the presence of Soviet military in Cuba and this, in turn, spurred counter-actions from the USSR and started a rapid escalation of events upward on the intensity scale. For these reasons, this date is selected as the appropriate starting point for this confrontation.

(2) Chronological listing of confrontation events.

(a) August 1962

22nd. During a news conference in Washington, Kennedy stated that Cuba was "definitely receiving large quantities of equipment and an increased number of technicians from the Soviet bloc." He further stated that there were no reports to support Cuban exile reports that Soviet troops and military aid was entering Cuba. (Facts on File, Vol. XXII, No. 1139, August 23-29, 1962, p. 287).

24th. US State Department announced that the tempo of Soviet aid to Cuba was increasing. (Joseph Loftus, "Russians Step Up Flow of Arms Aid to Castro Regime," NYT, August 25, 1962, p. 1).

27th. Senator Capehart (R., Ind.) called for a US invasion of Cuba stating that the Soviet technicians being sent to Cuba were really military men. (Facts on File, Vol. XXII, No. 1140, August 30 - September 5, 1962, p. 292).

29th. Senator Wiley (R., Wis.) proposed that Cuba be blockaded to prevent the movement of Soviet military supplies and men into Cuba. (Ibid., p. 292).

29th. Kennedy rejected a US invasion of Cuba because ". . . an action like that . . . can lead to very serious consequences." (Ibid., p. 292).

(b) September 1962

2nd. A joint USSR-Cuban communique was issued in Moscow in which the USSR pledged increased military and industrial assistance to Cuba. The communique stated that ". . . in view of the threats of aggressive imperialist quarters in regard to Cuba the USSR has agreed to Cuba's request for help by delivering armaments and sending technical specialists for training Cuban servicemen." (Ibid., p. 292).

4th. Kennedy announced that evidence supported, without a doubt, that the USSR had provided Cuba with defensive missiles and motor torpedo boats armed with ship-to-ship missiles. He reaffirmed US intentions to prevent Cuba from exporting aggression in the western hemisphere. (Facts on File, Vol. XXII, No. 1140, August 30 - September 5, 1962, p. 291).

7th. Kennedy requested congressional approval for stand-by authority to order 150,000 Ready Reserve members to active duty for one year in view of the increased tensions in regard to Cuba. (Ibid., p. 303).

7th. New York Times reported that there were 4,000 Soviet soldiers in Cuba. (Tad Szulc, "Soviet Troops Take Dual Role in Cuba," NYT, September 7, 1962, p. 1).

11th. USSR warned the US that any US attack on Cuba or on Soviet ships carrying supplies to Cuba would result in a nuclear war. (Statement quoted in Facts on File, Vol. XXII, No. 1141, September 6-12, 1962, p. 306).

11th. US Secretary of State Dean Rusk replied to the USSR's warning that the US would proceed as it found necessary. (Ibid., p. 306).

11th. Senators Mansfield (D., Mont.), Tower (R., Tex.) and Humphrey (D., Minn.) urged a US get tough policy toward the Soviet military build-up in Cuba. (Ibid., p. 306).

13th. Kennedy announced that the US would do whatever necessary to protect US interests regardless of the presence of Soviet personnel and equipment in Cuba. (Facts on File, Vol. XXII, No. 1142, September 13-19, 1962, p. 317).

17th. Rusk testified before congress that the US would use its military forces to intercept Soviet arms shipments to Cuba. (Ibid., p. 324).

19th. Congress passed a joint resolution (No. 230) reaffirming US intentions to prevent Cuba from creating or using an externally supported military capability endangering the security of the US. ("Text of Cuba Resolution," NYT, September 20, 1962, p. 14).

20th. Administration sources announced that during the May-August 1962 time frame 65-75 shiploads of Soviet military items and personnel had arrived in Cuba. Military aid included anti-aircraft missiles, 8 torpedo patrol boats and sixty-one MIGs. (Facts on File, Vol. XXII, No. 1143, September 20-26, 1962, p. 324).

24th. Congress approved a joint resolution (No. 224) authorizing Kennedy to activate 150,000 Ready-Reservists. (Jack Raymond, "President Gets Power to Call Up 150,000 Reserves," NYT, September 25, 1962, p. 1).

25th. Cuba announced that the USSR had agreed to assist in building a port in Havana Bay as headquarters for a Cuban-Soviet fishing fleet. (Facts on File, Vol. XXII, No. 1143, September 20-26, 1962, p. 327).

(c) October 1962

2nd-3rd. Latin American foreign ministers and the US Secretary of State, Rusk, met in Washington to develop a common strategy to combat the Soviet build-up in Cuba. (Facts on File, Vol. XXII, No. 1145, October 4-10, 1962, p. 343).

3rd. At the conclusion of the October 2-3 meeting (see above), a joint communique reaffirming OAS intentions to oppose Cuba and the Soviet arms build-up was issued. (Ibid., p. 343).

4th. Kennedy imposed a four-point embargo on Cuba. (Ibid., p. 343).

18th. Gromyko and Kennedy met in Washington to discuss Cuba. Gromyko assured Kennedy that the USSR was only working to assist in Cuba defensive armaments. (Facts on File, Vol. XXII, No. 1147, October 18-24, 1962, p. 361).

20th. Kennedy, on a campaign trip, cancelled plans and returned to Washington. (Marjorie Hunter, "President Cuts His Tour Short, Flies to Capital," NYT, October 21, 1962, p. 1).

21st. US military forces began maneuvers in the Caribbean and south-eastern US. (Jack Raymond, "Navy and Marine Force Heads for Exercise Off Puerto Rico," NYT, October 22, 1962, p. 16).

22nd. Kennedy briefed congress and announced, in a nationally televised address, that the USSR had installed medium range nuclear missiles and positioned strategic bombers in Cuba. He also announced the imposing of an armed blockade of Cuba. US military forces around the world were brought to the highest state of alert. Kennedy stated that it was US policy that if any nuclear missile launched from Cuba against any nation in the western hemisphere would be regarded as an attack by the Soviet Union on the US requiring a full retaliatory response upon the Soviet Union. (Facts on File, Vol. XXII, No. 1147, October 18-24, 1962, p. 361).

23rd. USSR rejected the blockade, alerted its armed forces, to include strategic nuclear forces, and announced that any aggressive US action toward Cuba or its sea lanes with the Soviet bloc would result in thermonuclear war. (Ibid., p. 362).

23rd. The Council for the Organization of American States unanimously approved and announced support for the US actions. (Ibid., p. 362).

23rd. US confronted the USSR in the UN, accused the USSR of installing offensive weapons in Cuba and requested the Security Council "to deal with the dangerous threat to the peace and security of the world." (Yearbook of the United Nations, New York: Columbia University Press, 1964, p. 104).

24th. Kennedy ordered the US armed blockade of Cuba imposed, effective at 10 a.m. EDT. (Facts on File, Vol. XXII, No. 1147, October 18-24, 1962, p. 363).

24th. US Strategic Air Command canceled all leaves and ordered the return of all personnel on leave. (Ibid., p. 364).

25th. US naval units halted the Soviet tanker "Bucharest" enroute to Havana, but permitted to pass through the US blockade after ascertaining that it carried no prohibited material. (Facts on File, Vol. XXII, No. 1148, October 25-31, 1962, p. 373).

26th. Personnel from the US destroyer "Joseph F. Kennedy" halted and boarded the Lebanese-registered freighter "Marucla's" enroute to Havana from the Soviet Union. (Ibid., p. 373).

26th. US Administration announced that construction of the missile sites in Cuba were continuing and warned of further US actions if the construction was not halted. (Ibid., p. 374).

27th. Khrushchev offered to withdraw all missiles from Cuba if the US would withdraw its missiles from Turkey. (Ibid., p. 374).

27th. Kennedy rejected Khrushchev's offer to withdraw the Soviet missiles from Cuba in exchange for US withdrawal of missiles from Turkey and reaffirmed US intentions to stand by its earlier statements. (Ibid., p. 374).

27th. US Ambassador to the UN, Adlai Stevenson, stated that the US was prepared to take military action against the Cuban missiles in a brief space of time unless the bases were rendered inoperable quickly. (Ibid., p. 375).

27th. Department of Defense activated twenty-four Air Force Reserve troop carrier squadrons, eight troop carrier wing headquarters and six aerial port squadrons. (Ibid., p. 375).

28th. Khrushchev informed Kennedy that the USSR would dismantle the bases and return the weapons to the Soviet Union. (Ibid., p. 375).

28th. Kennedy announced the US acceptance of Khrushchev's statement regarding the removal of missiles from Cuba. (Ibid., p. 375).

30th. US lifted the naval blockade and suspended overflights of Cuba for forty-eight hours to facilitate UN Secretary General U-Thant's negotiations with Castro regarding UN on-the-site inspection of the Soviet missile withdrawal. (Ibid., p. 377).

(d) November 1962

1st. US resumes the naval blockade and overflights of Cuba after Castro rejected U-Thait's request for UN on-the-spot inspection. (Facts on File, Vol. XXII, No. 1149, November 1-7, 1962, p. 385).

2nd. Kennedy announced that the USSR had begun dismantling its Cuban missile bases. (Ibid., p. 385).

2nd. US and USSR agreed to permit the Red Cross inspect and verify the contents of Soviet ships bound for Cuba. (Ibid., p. 385).

7th. US and USSR agreed for procedures permitting the US to verify, by count, the number of missiles removed from Cuba. (Ibid., p. 386).

7th. Khrushchev announced that all Soviet missiles had been withdrawn from Cuba. (Ibid., p. 387).

8th. Department of Defense announced that all known missile bases in Cuba had been dismantled. (Facts on File, Vol. XXII, No. 1150, November 8-14, 1962, p. 397).

8th-11th. US ships intercepted Soviet ships carrying missiles from Cuba and counted forty-two medium range ballistic missiles being evacuated. (Ibid., p. 397).

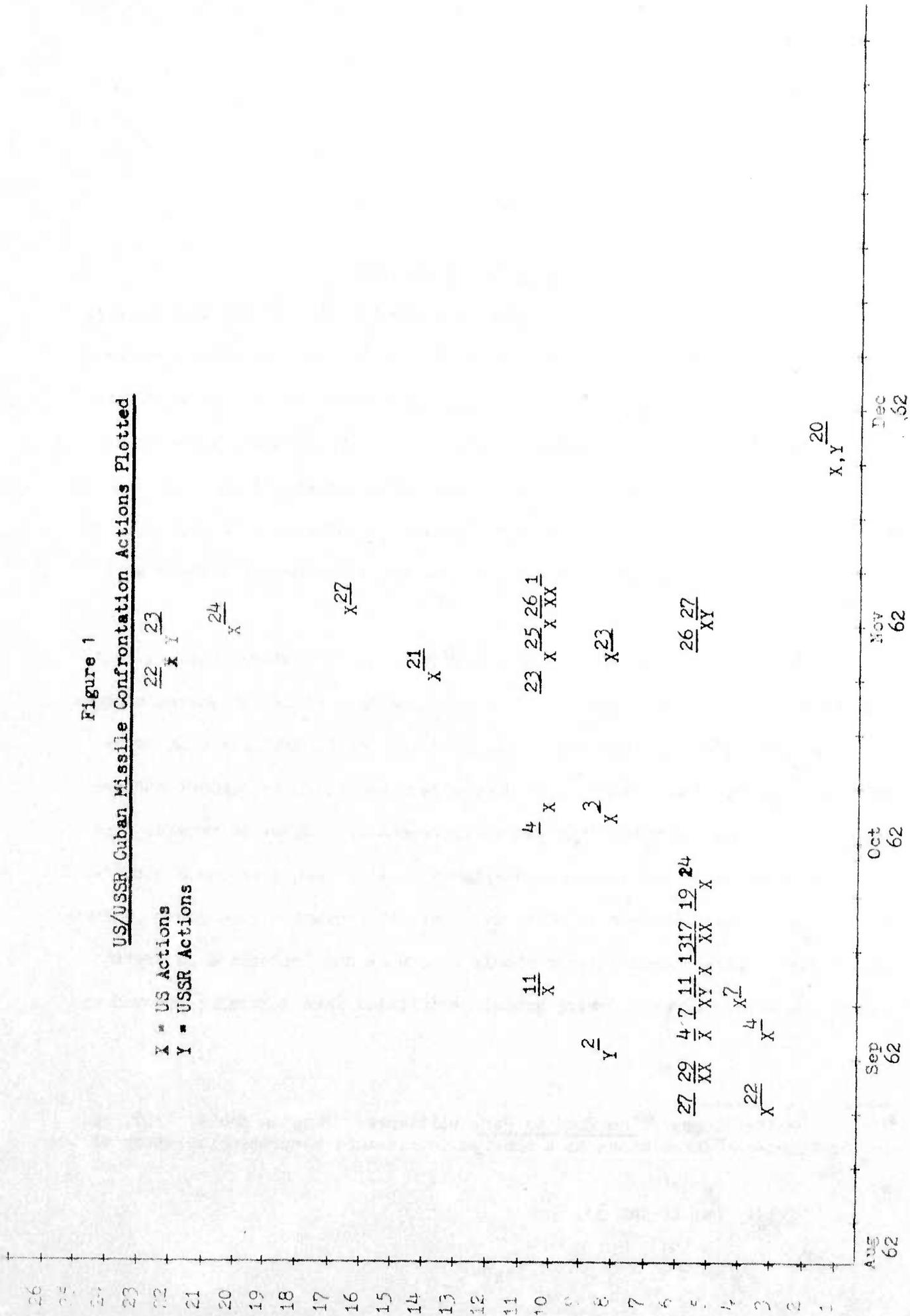
20th. Khrushchev agreed to remove the Soviet strategic bombers positioned in Cuba. (Facts on File, Vol. XXII, No. 1151, November 15-21, 1962, p. 409).

20th. Kennedy announced the lifting of the armed naval blockade of Cuba. (Ibid., p. 409). This event marks the end of the 1962 US/USSR Cuban missile confrontation, as subsequent events took the form of normal cold war diplomacy.

C. Confrontation Intensity Peak Level and Rate of Escalation. The intensity level of confrontation events are illustrated in figure 1. These levels are plotted as described earlier in Annex B. As illustrated, the USSR actions reached a peak intensity level at rung twenty-two on October 23, 1962 with the alert and deployment of strategic nuclear forces. The time required for USSR actions to peak is 72 days (August 2 - October 23, 1962). US actions peaked at rung twenty-two October 22, 1962 with the alert and deployment of strategic nuclear forces. The time required for US actions to peak is 71 days (August 2 - October 22, 1962).

Figure 1  
US/USSR Cuban Missile Confrontation Actions Plotted

X - US Actions  
 Y - USSR Actions



Annex H

The 1967 Arab-Israeli War

A. Background. This war can be viewed as a continuation of the Arab-Israeli conflict and its eruption was caused by many, complex factors which have never fully been explained. One school of thought attributes the war to an effort by Syria and Egypt to divert attention from their deteriorating domestic situations. Another contends that it was a natural outgrowth of Arab nationalism personified in the Palestinian freedom fighter. A third asserts that Zionist expansionism, supported by US imperialism, is the cause of the Arab-Israeli dilemma.<sup>1</sup>

The root cause of the war is not germane to this study, but the fact that as a result of the conflict the US and USSR have found themselves committed to support enemy nations is. US support for the Israeli position dates back to creation of the State in 1948, whereas, Soviet overt support for the Arab nations began with the 1955 Soviet agreement with Egypt to provide that nation with military and economic assistance.<sup>2</sup> As a result of these commitments, the US and USSR have found it difficult to prevent a superpower confrontation during the interim between middle east wars and impossible to prevent during the wars. Efforts during actual hostilities have generally focused on

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<sup>1</sup>Walter Laquer, The Road to War, Baltimore: Penguin Books, 1969, pp. 10-18, discusses these views as a prelude to his more comprehensive study of the 1967 war.

<sup>2</sup>Ibid., pp. 21 and 33.

keeping the intensity level as low as possible.<sup>3</sup>

B. Crisis Development and Conduct

(1) The starting date for the crisis is established as May 16, 1967: the date that the US ambassador to the UN reported US concern about the increased tensions and military build-up in the middle-east.<sup>4</sup> There has been continued superpower concern over the Arab-Israeli conflict, but this announcement seems to have set the stage for a series of events which were to quickly accelerate in intensity as the middle east nations prepared for war and other nations increased their efforts to prevent it. Prior to this announcement, concern was directed toward the conflict issues that were smoldering beneath the surface. Subsequent events, however, indicated that the issues were surfacing and war was inevitable unless immediate actions were taken to reverse the process. For these reasons, May 16, 1967 is selected as the appropriate starting date for the confrontation.

(2) Chronological listing of confrontation events.

(a) May 1967

16th. Cairo newspaper "Al Ahram" reported that Egypt was on "war footing" because of Israeli-Syrian border tension with large movements of troops in and around Cairo. The US sealed off its embassy. ("U.A.R. Said to Put Forces on Alert," NYT, May 16, 1967, p. 1).

16th. US ambassador to the UN, Goldberg, reported US concern over the increased tensions and military build-up in the middle east and urged diplomatic actions to curb tensions. ("U.N. Warned on Mideast," NYT, May 16, 1967, p. 16).

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<sup>3</sup>George Lenczowski, The Middle East in World Affairs, Ithaca: Cornell University Press, 1969, pp. 661-680 discusses the superpower dilemma in the middle east and efforts to contain the conflict within self serving limits.

<sup>4</sup>"U.N. Warned on Mideast," NYT, May 19, 1967, p. 1.

16th. Both the US and the USSR were providing military aid to their middle east allies (Israel and the Arab Nations respectively) as of June 16, 1967. For a discussion of US and USSR military expenditure see, Stockholm International Peace Research Institute, SIPRI Yearbook of World Armaments and Disarmament, 1969/70, New York: Humanities Press, 1970, pp. 30-31.

18th. Israel conducted a partial mobilization of its reserve force as "pre-cautionary measures." (James Feron, "Israel Indicates Partial Call-Up," NYT, May 19, 1967, p. 1).

19th. U-Thant agreed to Nasser's request for removing the UNEF located in the Sinai desert. (Sam Brewer, "U.N. to Withdraw Its Mideast Force as Asked by Cairo," NYT, May 19, 1967, p. 1).

19th. USSR newspaper "Krasnaya Zvezda" charged the US of encouraging Israel to attack Syria. (Reuters, "East German Offer of Arms Reported," NYT, May 19, 1967, p. 1).

20th. US congress expressed concern over the removal of the UNEF and urged strong US action to have it retained in the Sinai. ("Congressmen Urge U.N. Forces be Kept," NYT, May 20, 1967, p. 6).

20th. Egypt moved 12,000 troops into the Sinai desert. (Eric Pace, "Sinai Build-Up Continues," NYT, May 21, 1967, p. 1).

21st. President Johnson requested that Premier Kosygin assist in easing the crisis. (Sam Brewer, "Johnson Plea to Soviet Reported," NYT, May 21, 1967, p. 1).

22nd. Egypt mobilized its reserve forces. ("Cairo Calling up 100,000 Reserves," NYT, May 22, 1967, p. 1).

23rd. Nasser closed the Gulf of Aqaba at the Tiran Straits to Israeli shipping. (Eric Pace, "Cairo Acts to Bar Israeli Shipping in Gulf of Aqaba," NYT, May 23, 1967, p. 1).

23rd. USSR stated that the Soviet Union had a direct interest in the area and warned that the USSR and all Arabs would resist aggression. (Peter Grose, "Moscow Blames Israelis in Crisis," NYT, May 24, 1967, p. 1).

23rd. Johnson announced that the Gulf of Aqaba blockade was illegal and asserted a firm US commitment to the territorial integrity of all middle east nations. (Max Frankel, "Johnson Calls on Cairo to Abandon Blockade Moves," NYT, May 24, 1967, p. 1).

23rd. 96 members of the House of Representatives pledged US support to defend Israel and charged the USSR as being responsible for the crisis. (E. W. Kenworthy, "Senators Demand U.N. Role in Crisis," NYT, May 24, 1967, p. 16).

23rd. USSR rejected a US proposal for a four power commission for negotiating the crisis. (Peter Grose, "Soviets Reported to Opposed Talks by Big 4 on Crisis," NYT, May 26, 1967, p. 1).

25th. US directed the dependents of American officials in Egypt and Israel to leave and announced support for Israel. ("U.S. Aides' Families Ordered to Leave Israel and U.A.R.," NYT, May 26, 1967, p. 17).

25th. US 6th Fleet task force departed Naples for the western Mediterranean. ("Task Force Leaves Italy on Exercise," NYT, May 26, 1967, p. 17).

25th. US and Britain announced common opposition to the closing of the Gulf of Aqaba and support for Israel. ("Avon, Recalling '56 Crisis, Backs Present Allied Stand," NYT, May 26, 1967, p. 34).

26th. USSR blamed Israel for the crisis and announced support for Egypt. ("Moscow Studying Call for Parley," NYT, May 27, 1967, p. 1).

28th. USSR reported to have cautioned Egypt against starting a war and informed Nasser that the USSR did not fully support the Gulf of Aqaba blockade. (Hedrick Smith, "Washington Sees Respite in Crisis," NYT, May 29, 1967, p. 2).

29th. Senator Fullbright urged that the UN Security Council should solve the crisis and stated that the USSR was backing Egypt. (Roy Reed, "Fullbright Favors Putting Issues in Mideast Before World Court," NYT, May 29, 1967, p. 6).

30th. USSR moved ten warships through the Turkish straits into the Mediterranean. US State Department viewed this as posing diplomatic problems, but not representing a serious challenge to the US 6th fleet. ("Soviets are Sending Ten Warships to Middle East," NYT, May 31, 1967, p. 1).

31st. USSR warships are reported to be shadowing ships of the US 6th fleet. (Neil Sheehan, "Admiral Says Soviet Shadowing Often Imperils Ships in 6th Fleet," NYT, June 1, 1967, p. 18).

(b) June 1967

1st. US aircraft carrier "Intrepid" is moved through the Suez Canal to a position in the vicinity of the Aqaba Gulf. (John Finney, "Backing Reported for Plan to Test Aqaba Blockade," NYT, June 1, 1967, p. 1).

1st. Secretary of State Rusk discussed the draft text of US declaration in congress asserting the right of free passage through the Tiran Strait for all nations. (John Finney, "U.S. Drafts Plan to Assert Rights of Aqaba Passage," NYT, June 1, 1967, p. 1).

1st. Pravada claimed that the real issue in the middle east crisis was not the Aqaba Gulf blockade, but rather imperialist aggression. (Reuters, "Soviet Commentator Calls Blockade a Minor Issue," NYT, June 2, 1967, p. 18).

4th. Johnson declared US determination to preserve peace and the territorial integrity of Israel and Arabs. (Richard Witkin, "Johnson Vows to Maintain Peace in Mid East," NYT, June 4, 1967, p. 1).

6th. Arab-Israeli war broke out and USSR denounced Israel while announcing full support of the Arab nations. ("Fighting is Raging in Gaza and Sinai," NYT, June 6, 1967, p. 1).

7th. UN Security Council adopts a cease-fire resolution calling for an immediate halt of military activities. (Drew Middleton, "Security Council Asks a Cease Fire," NYT, June 7, 1967, p. 1).

7th. USSR threatened to break diplomatic relations with Israel unless Israel accepted the cease-fire. USSR seen as being fearful that the Arab armies will be completely destroyed. (Peter Grose, "Soviet Threaten to Cut Israel Tie," NYT, June 8, 1967, p. 20).

8th. USSR sponsored a cease-fire resolution which was unanimously accepted by the UN Security Council. (Drew Middleton, "Eban Sees Thant," NYT, June 8, 1967, p. 1).

11th. Israel accepted the UN cease-fire and the war ended. (Drew Middleton, "U.N.'s Terms Met," NYT, June 11, 1967, p. 1).

C. Confrontation Intensity Peak Level and Rate of Escalation. The intensity levels confrontation events are illustrated in figure 1. These levels are plotted as described earlier in Annex B. As illustrated, the USSR reached a peak level of intensity at rung ten on May 30, 1967 with the movement of ten Soviet warships through the Turkish straits into the general area of the conflict. The time required for Soviet actions to peak was fifteen days (May 16-30, 1967). The US actions attained a peak level of intensity at rung ten on May 25, 1967 with the movement of elements of the 6th fleet from Naples to the conflict area. US actions reached a peak intensity level in ten days (May 16-25, 1967).



## Annex I

### The 1973 Arab-Israeli War

A. Background. The 1973 Arab-Israeli War can be seen as a continuation of the same struggle that resulted in the 1948, 1955 and 1967 wars. During each of these previous wars, Israel was able to decisively defeat the Arab armies and occupy additional Arab territories. The Arab defeat in 1967 and Israeli occupation of lands were particularly significant in scale. The Arab armies were thoroughly defeated in six days and Israel occupied additional territories in Jerusalem, the Sinai Desert area and the Golan Heights.<sup>1</sup>

Following the 1967 War, Israel continued its refusal to return occupied areas, despite numerous UN resolutions and extensive diplomatic efforts, and began extensive efforts to develop and incorporate the areas into the State of Israel. Egypt and Syria, in the interim, rebuilt their armies with Soviet assistance and made preparations to engage Israel in war once again, if necessary, to regain the territories lost in 1967. Their efforts culminated with the September 12, 1973 agreement of Egyptian President Sadat and Syrian President Assad on war strategy. The agreed strategy represented a compromise. Sadat agreed to accelerate Egypt's preparations for war and, in return, Assad moderated Syria's position of total war against Israel and accepted the more limited Egyptian objective of recovering the Israeli occupied territories. The Egyptian and Syrian armies attack of Israel began on October 6, 1973 and

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<sup>1</sup>Walter Laqueur, The Road to War, Baltimore: Pelican Books, 1967, pp. 273-313.

was joined on October 13th by Jordanian armed forces.<sup>2</sup>

The renewed hostilities once again placed the US and USSR in the position of providing military support for declared allies engaged in war. The US has stated its support for Israeli independence and right to exist and the Soviet Union has pledged its support of Egypt and Syria in their struggle against Israel.<sup>3</sup> The common role of providing support to enemies engaged in combat was to lead to a series of events that were to escalate into a US/ USSR confrontation during the 1973 Arab-Israeli war.

B. Crisis Development and Conduct

(1) The starting date for the confrontation is established as October 4, 1973: the date that the US observed and informed the Israeli Government of a large build-up of Egyptian troops west of the Suez Canal. This information was followed by increased concern about the possibility of another middle east war, pleas by Kissinger to Israel not to launch a pre-emptive attack and evacuation of personnel from Egypt and Syria by the Soviet Union. For these reasons, October 4th is selected as the appropriate beginning date for the confrontation.

(2) Chronological listing of confrontation events.

4th. US informed Israel of large Egyptian troop movements on the west side of the Suez canal. (Facts on File, Vol. 33, No. 1719, October 7-13, 1973, p. 837).

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<sup>2</sup> See Riad El-Rayyes and Dunia Nahas, ed., The October War, Beirut: An-Nahar Press Services, 1973, pp. 3-6 for a more detailed discussion of this subject area.

<sup>3</sup> Ibrahim Abu-Lughad, ed., The Arab-Israeli Confrontation of 1967: An Arab Perspective, Evanston: Northwestern University Press, 1970, pp. 122-137 discusses the interim war years and efforts made to resolve the conflict.

- and Egypt. 5th. Soviet personnel were reported being evacuated from Syria (Facts on File, Op. Cit., p. 837).
- p. 837). 6th. Egyptian and Syrian military forces attacked Israel. (Ibid.,
- p. 837). 6th. Shore leaves for the US 6th Fleet were canceled. (Ibid.,
- Israel. 7th. Elements of the 6th Fleet began movement to vicinity of (Ibid., p. 837).
- 7th. USSR announced full support of the Arab nations. (The full text of the statement published in Moscow is printed in Riad El-Rayyes and Dunia Nahas, ed., The October War, Beirut: An-Nahar Press Services, 1973, pp. 153-156).
- 8th. Brezhnev stressed that he hoped the war would not interfere with Soviet - US detente. (Facts on File, Vol. 33, No. 1719, October 7-13, 1973, p. 837).
- 8th. US Senate passed a resolution calling for an immediate cease fire and a return to pre-war positions. (Ibid., p. 838).
- 8th. Brezhnev urged the other Arab nations to assist Egypt and Syria in a message to the President of Algeria. (Riad El-Rayyes, Op. Cit., p. 14).
- 10th. USSR began massive resupply of Egyptian and Syrian armaments via air and sea. (Facts on File, Vol. 33, No. 1720, October 14-20, 1973, p. 859).
- 10th. A Soviet cruiser and two guided-missile destroyers passed through the Dardanelles to reinforce the Soviet fleet in the Mediterranean. (Facts on File, Vol. 33, No. 1719, October 7-13, 1973, p. 837).
- 10th. A Boeing 707 with Israeli markings was loaded with air-to-air missiles at the Oceana Naval Air Station, Virginia Beach, Virginia. (Ibid., p. 837).
- 11th. Kissinger warned the USSR that if the conflict was escalated, the US would assume a firm stand. He reaffirmed US support of Israel's sovereignty. (Riad El-Rayyes, Op. Cit., p. 23).
- 11th. Israel halted the Syrian advance in the Golan Heights and counter-attacked against the Syrian forces. (Ibid., p. 22).
- 14th. Israel halted the Egyptian advance in the Sinai Desert. (Ibid., p. 29).

15th. Nixon announced support of Israel's right to maintain "its independence and security." (Facts on File, Vol. 33, No. 1720, October 14-20, 1973, p. 859).

15th. US began massive airlift of supplies to Israel. (Ibid., p. 859).

15th. USSR pledged to provide the Arabs with assistance "in every way" to recover their lands lost to Israel in 1967. (Ibid., p. 860).

17th. US Senate approved the continued support of Israel by the US in the form of arms aid. (Ibid., p. 859).

17th-18th. Kosygin and Sadat discussed the conflict in Cairo in an effort to agree on a strategy for ending the war. (Ibid., p. 860).

17th. US Defense Department asked Congress for \$2 billion supplemental appropriation to aid Israel. (Ibid., p. 859).

18th. Defense Secretary Schlesinger stated "that the US did not plan to send ground troops into the conflict, but if the Soviet Union intervened, the US would have to reconsider its position." (Ibid., p. 860).

22nd. UN passed a cease-fire resolution urging a stop in the fighting and start of negotiations to establish a "just and durable peace in the Middle East." (UN Resolution printed in Facts on File, Vol. 33, No. 1721, October 21-27, 1973, p. 879).

22nd. Egypt and Israel accepted the UN cease-fire resolution. (Ibid., p. 877).

23rd. Israel, in violation of the cease-fire, continued the attack against Egyptian forces. (Ibid., p. 877).

24th. Egypt requested that the US and USSR commit troops in the area to force Israeli compliance with the UN cease-fire. (Ibid., p. 877).

25th. USSR alerted and pre-positioned 40,000 airborne troops in staging areas. (Ibid., p. 877).

25th. US placed US military forces on "pre-cautionary alert" in response to the Soviet alert. (Ibid., p. 877).

25th. Kissinger stated that he did not consider the US to be engaged in a confrontation with the Soviet Union and that both superpowers were anxious to keep a US/USSR confrontation from occurring in the Middle East. (Ibid., p. 878).

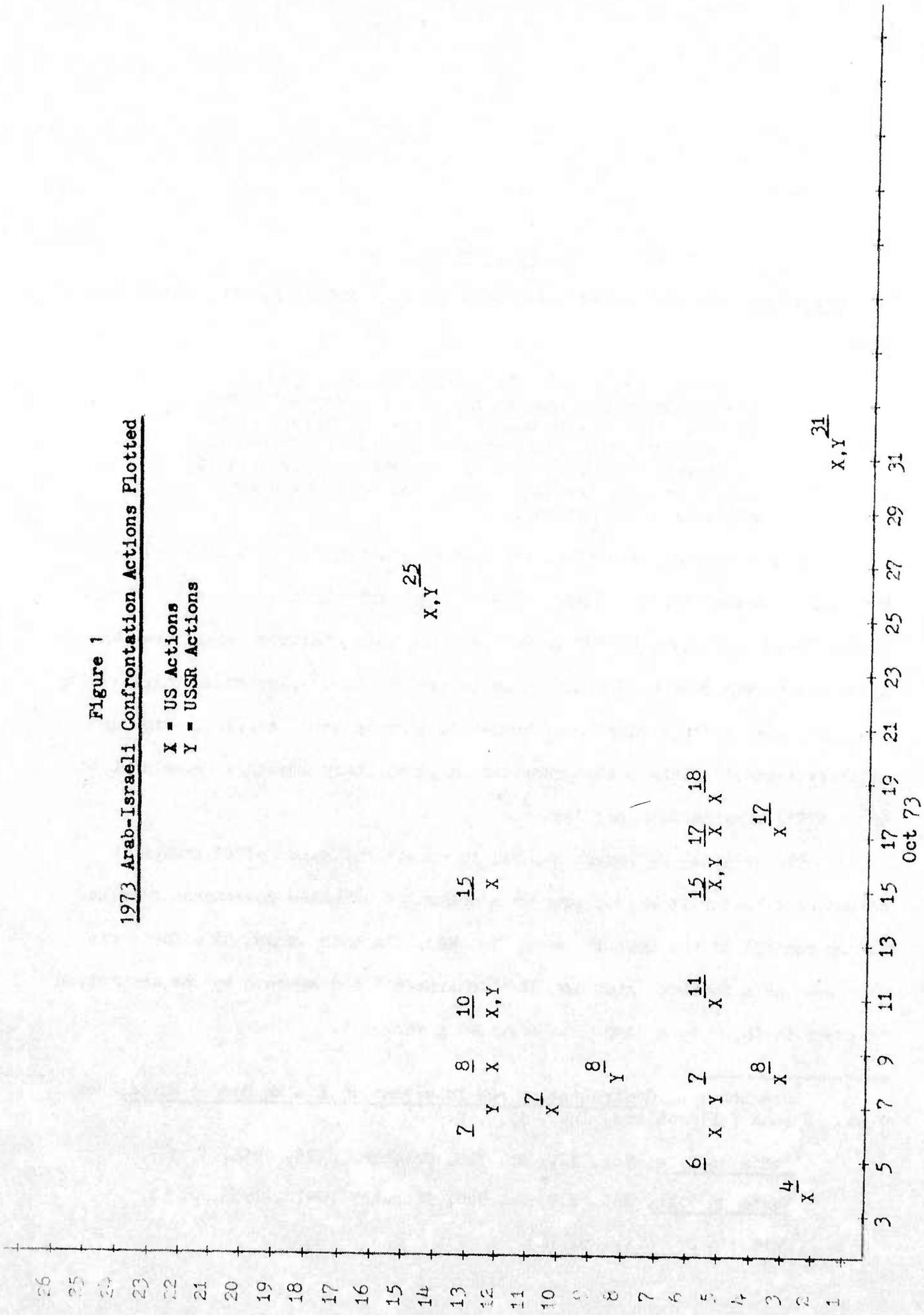
25th. UN peace keeping force authorized/established by the UN. (Ibid., p. 878).

31st. US and the USSR terminated the alert status of their military forces. (Facts on File, Vol. 33, No. 1722, October 28 - November 3, 1973, p. 899).

C. Confrontation Intensity Peak Level and Rate of Escalation. The intensity levels of the confrontation events are illustrated at figure 1. The intensity levels are plotted as described earlier in Annex B. As illustrated, both the US and USSR actions reached a peak level of intensity at rung fourteen with the alerting of military forces on October 25, 1973. The time for US and USSR actions to peak was twenty-two days (October 4-25, 1973).

Figure 1  
1973 Arab-Israeli Confrontation Actions Plotted

X - US Actions  
 Y - USSR Actions



Annex J

The Viet Nam War

A. Background. In discussing the origins of this conflict, Urs Schwarz stated that:

The Vietnam war, the origins of which go back to the compromise reached in the conference of Geneva in 1954, provides an example of how technical, economic and military aid, combined with political advice, all relatively peaceful forms of intervention directed at establishing a friendly regime, may degenerate into military intervention . . .<sup>1</sup>

This accurately describes the method by which the US became militarily involved in South Viet Nam (RVN). The US began efforts to replace the diminishing French influence in RVN in October 1954 when President Eisenhower promised aid to RVN Premier Ngo Dinh Diem to assist "in developing and maintaining a strong, viable state capable of resisting aggression or subversion through military means."<sup>2</sup> This pledge resulted in US military advisors being sent to train RVN's army in February 1955.<sup>3</sup>

The original US intent was not to commit thousands of US troops in combat, but rather it was to prevent a communist oriented government from assuming control of the area in South Viet Nam. In this sense, US efforts can be viewed as a further extension of "containment" and spurred by the assumption of power in China by a communist oriented government.<sup>4</sup>

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<sup>1</sup>Urs Schwarz, Confrontation and Intervention in the Modern World, New York: Oceana Publications, Inc., 1970, p. 140.

<sup>2</sup>Facts on File, Vol. XIV, No. 730, October 22-23, 1958, p. 355.

<sup>3</sup>Facts on File, Vol. XIV, No. 746, February 10-16, 1955, p. 50.

<sup>4</sup>Schwarz, Op. Cit., p. 143.

The US actions were to become less and less effective as the political stability of the RVN governments proved less than desired and insurgent strength and support increased during the period of 1955-1964. The US repeatedly found itself being faced with the choices of either increasing its commitment or withdrawing its support which would almost certainly result in the fall of the western oriented government in South Viet Nam and its being replaced by one oriented toward the communist bloc. Since it was feared "that an American retreat in Asia might upset the whole world balance" and the US was being confronted in other areas by the USSR, the only viable alternative, as viewed by the US administration, was to increase the US commitment in the hope that just a little more would be sufficient.<sup>5</sup>

Schwarz draws the analogy that US aid to RVN was "like building a house in quicksand."<sup>6</sup> As increased aid was provided, it was quickly absorbed, the situation deteriorated and additional aid increases were required to cope with the events occurring. These little-by-little increases in US aid were to culminate in the US commitment of more than 500,000 men in RVN, mining of harbors and large scale bombing in North Viet Nam and limited expansion of combat into the neighboring countries of Cambodia and Laos. A US/USSR confrontation developed when the Soviet Union declared its support of North Viet Nam and began to provide military assistance to that nation.

#### B. Crisis Development and Conduct

(1) The starting date. When compared to the other confrontations being examined, the Viet Nam war is an extended affair in which several intensity

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<sup>5</sup> Schwarz, Op. Cit., p. 144.

<sup>6</sup> Ibid., p. 143.

increasing events occurred. For these reasons, it would not be appropriate to examine the war as a single confrontation and determine the peak intensity level and escalation rate of US/USSR actions. A more correct procedure is to identify events that resulted in significant escalation and measure the intensity peak level and escalation rate of US and USSR actions subsequent to these events.

A careful study of the war has revealed two events that resulted in significant rates of escalation and increased intensity peak levels. The first of these was the initial bombing in 1965 of North Viet Nam with the subsequent commitment of US ground forces to combat in RVN. A second event, the April 1970 US limited invasion of bases in Cambodia was an escalation in the sense that it expanded the "official" ground war to other countries, but it was announced by the US as a limited operation, quickly terminated and did not solicit a significant escalating response from the USSR.<sup>7</sup> Also, the action was limited to an area along the Cambodia-RVN border and did not represent an armed invasion of a Soviet oriented nation in an attempt to replace its government with one oriented toward the west. For these reasons, this event is not considered to represent a US/USSR confrontation and is not included in the study. The third event was the North Vietnamese invasion of RVN on March 30, 1972 with the subsequent mining of the Haiphong Harbor and mass B-52 bombing of North Viet Nam.

The starting date for the commitment of US military combat forces in RVN is established as May 5, 1961: the date of President Kennedy's announcement that Vice-President Johnson was going to visit RVN on a fact finding trip and that he would discuss the commitment of US troops in RVN with the South Vietnamese

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<sup>7</sup> John Stoessinger, Why Nations Go to War, New York: St. Martin's Press, 1974, p. 137.

Government.<sup>8</sup> This announcement and Johnson's trip set into motion a series of events which were to lead to the commitment of US ground forces in offensive combat operations on June 28, 1965.<sup>9</sup> Therefore, this event is considered as the appropriate starting point for examining and measuring the intensity peak level and escalation rate for this confrontation.

The starting date for the mining of the Haiphong Harbor and mass B-52 bombing of North Viet Nam is established as March 30, 1972: the date that North Vietnamese forces, armed with tanks and supported by artillery and anti-aircraft units began a large scale invasion of RVN across the demilitarized zone (DMZ) into Quang Tri Province.<sup>10</sup> This event threatened the US capability to continue the orderly withdrawal of its forces from RVN while maintaining the South Vietnamese capability to defend themselves via the "Vietnamization Program." The introduction of tanks and artillery on the battlefield by the North Vietnamese dramatized the support being provided from outside sources and led to increased US efforts to interdict the supply of war materials being provided to North Viet Nam. These actions culminated with the mining of the Haiphong Harbor on May 9, 1972.<sup>11</sup>

The mining of the harbor was augmented in December, 1972 with mass B-52 bombing of North Viet Nam in an effort to convince the North Vietnamese to negotiate a settlement to the war and release US prisoners of war being held in captivity. The mass bombing and mining of the Haiphong Harbor are

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<sup>8</sup> "Transcript of the President's News Conference on World and Domestic Affairs," NYT, May 6, 1961, p. 14.

<sup>9</sup> Facts on File, Vol. XXV, No. 1287, June 24-30, 1965, p. 233.

<sup>10</sup> Facts on File, Vol. XXXII, No. 1639, March 26 - April 1, 1972, p. 221.

<sup>11</sup> Facts on File, Vol. XXXII, No. 1645, May 7-13, 1972, p. 239.

related events in that they both are efforts by the US to extract itself from the RVN "quicksand" with honor.<sup>12</sup> Therefore, these events will be examined as one confrontation.

(2) Chronological listing of confrontation events leading to the commitment of US military combat forces in RVN.

(a) May 1961

5th. President Kennedy announced, during a news conference, that Vice-President Johnson would discuss the dispatch of troops to Viet Nam with the South Viet Nam Government (RVN) during his fact finding trip. ("Transcript of the President's News Conference on World and Domestic Affairs," NYT, May 6, 1961, p. 14).

12th. Kennedy ordered the assignment of 100 specially trained advisors to (RVN) and announced plans to increase US officers and men in RVN to 1,650. (Associated Press, "Military and Other Backing Against Reds Pledged to South Vietnam," NYT, May 12, 1961, p. 1).

(b) October 1961

11th. Kennedy announced that he was sending General Maxwell Taylor to RVN to "discuss ways in which we can better assist Vietnam in meeting the threat to its independence." In responding to queries as to whether he was considering sending US troops, Kennedy stated that he would have to wait until the return of General Taylor before coming to any final conclusions. (Facts on File, Vol. XXI, No. 1094, October 12-18, 1961, p. 378).

12th. Radio Moscow charged that the Taylor mission was proof of the US' "openly aggressive plans to send troops into Vietnam." (Ibid., p. 380).

26th. Kennedy informed RVN President Diem that the US was "determined to help Vietnam preserve its independence, protect its people against Communist assassins and build a better way of life." (Facts on File, Vol. XXI, No. 1098, November 9-15, 1961, p. 415).

(c) November 1961

9th. New York Times reported that the US Air Force was "airlifting large amounts of equipment to South Vietnam." Equipment was

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<sup>12</sup>For a review of the nationally televised address delivered by President Nixon, during which he presented his rationale for his Viet Nam policy, see, "Transcript of President Nixon's Address to Nation on his Policy in Vietnam War," NYT, May 9, 1972, p. 18.

reported to have included B-26 bombers, propeller-driven fighters and helicopters. Some "200 air and ground crew instructors" were reported to be accompanying the equipment. ("U.S. is Bolstering Vietnam's Air Arm to Combat Rebels," NYT, November 10, 1961, p. 1).

(d) December 1961

8th. Secretary of State Dean Rusk announced that the US was consulting with its allies on the provisions for providing joint technical and technical defense support for Vietnam. ("Transcript of Rusk's News Conference on Congo, Vietnam and Other Foreign Issues," NYT, December 9, 1961, p. 6).

11th. The US aircraft carrier "Core" arrived in Saigon with 33 US Army helicopters and 400 air and ground crewmen assigned to operate them for the Army of the RVN (ARVN). (Facts on File, Vol. XXII, No. 1105, December 28, 1961 - January 3, 1962, p. 487).

20th. New York Times reported that "U.S. uniformed troops and specialists were operating in battle areas with South Vietnamese forces." (Jack Raymond, "G.I.'s in War Zone in South Vietnam," NYT, December 20, 1961, p. 1).

(e) February 1962

8th. US Department of Defense announced the formation of the US Military Assistance Command, Vietnam (MACV) to coordinate US military support of Vietnam. (Facts on File, Vol. XXII, No. 1113, February 22-28, 1962, p. 63).

8th. New York Times reported that US military strength in RVN was estimated to be 5,000 men. (E. W. Kenworth, "Pentagon Sets Up Vietnam Command Under a General," NYT, February 9, 1962, p. 1).

13th. General Paul Harkins arrived in RVN to command MACV. (Facts on File, Vol. XXII, No. 1113, February 22-28, 1962, p. 63).

14th. Kennedy stated during a news conference that the US involvement in RVN did not include "combat troops in (the) generally understood sense of the word." He went on to state that "the training missions that we have there have been instructed that if they are fired upon, they are, of course, to fire back." (Ibid., p. 63).

26th. Soviet Deputy Foreign Minister Valerin Zorin warned the US, during a UN press conference that continued involvement in Vietnam "could entail very unpleasant consequences." (Ibid., p. 63).

(f) March 1962

9th. The US State Department confirmed that US pilots were actively involved in combat missions in RVN. (Facts on File, Vol. XXII, No. 1115, March 8-14, 1962, p. 81).

17th. USSR Foreign Ministry, in a diplomatic note circulated to member nations of the 1954 Geneva conference on Indochina, charged the US with waging an undeclared war against the "national liberation movement" led by the Viet Cong. The note demanded immediate withdrawal of US military personnel and equipment from the country, removal of the US military command in Vietnam and discontinuation of US arms delivery to RVN. (Facts on File, Vol. XXII, No. 1148, October 25-31, 1962, p. 380).

(g) May 1962

9th. Australia, New Zealand and the US issued a joint communique which supported US assistance to RVN and in which, Australia agreed to provide technical experts to augment US efforts. (Facts on File, Vol. XXII, No. 1148, October 25-31, 1962, p. 380).

15th. In response to an increase insurgent threat to the Government of Laos, Kennedy directed that 5,000 US military personnel be stationed in Thailand and the US 7th Fleet be positioned in the Gulf of Siam. (Facts on File, Vol. XXII, No. 1124, May 10-16, 1962, p. 154).

(h) June 1962

14th. Britain, in a note to the USSR, charged North Vietnam with sending troops and supplies into South Vietnam for the purpose of aggression. (Ibid., p. 381).

(i) July 1962

3rd. In response to Britain's June 14, 1962 note (see above) the USSR rejected the charge that North Vietnam had intervened in the civil war in South Vietnam and repeated its earlier demands concerning US activities in RVN (See March 17, 1962 above). (Ibid., p. 382).

22nd. McNamara stated that "it will take years, rather than months, but the communists will eventually be defeated." (Ibid., p. 382).

(j) October 1962

15th. US helicopter crews were permitted to "fire first" on any observed enemy formations. There had been earlier reports of this occurring, but it was acknowledged as official policy on this date. (Ibid., p. 383).

(k) November 1963

22nd. President Kennedy was assassinated in Dallas, Texas and Vice-President Johnson was sworn in as President. (Facts on File, Vol. XXIII, No. 1204, November 21-27, 1963, p. 409).

24th. Johnson pledged his administration to continue the policies established by Kennedy for RVN. (Ibid., p. 418).

25th. US military force in RVN was established as 16,700 men by McNamara and plans were announced to withdraw 1,300 men by January 1, 1964. (Facts on File, Vol. XXIII, No. 1204, November 21-27, 1963, p. 418).

(1) January 1964

1st. Johnson pledged continued US material and personnel support to RVN in its war against North Viet Nam. (Facts on File, Vol. XXIV, No. 1210, January 2-8, 1964, p. 4).

27th. During testimony before the House Armed Services Committee, McNamara stated that the US hoped to withdraw most of the 15,000 US troops from RVN by the end of 1965. (Facts on File, Vol. XXIV, No. 1216, February 13-19, 1964, p. 53).

(m) February 1964

21st. During a speech on the UCLA campus, Johnson warned North Viet Nam that the type of aggression being waged by the north was "a deeply dangerous game." (Facts on File, Vol. XXIV, No. 1217, February 20-26, 1964, p. 58).

23rd. New York Times announced that the US was preparing plans to extend the war to North Viet Nam and to increase the size of its military involvement in RVN to end the successes of the Viet Cong on the battlefield. (Ibid., p. 58).

24th. The Department of Defense announced that McNamara would go to RVN to review the ARVN capabilities and hear suggestions about extending the war to the north. (Ibid., p. 58).

24th. US State Department announced the establishing of an inter-agency to coordinate the activities of the CIA, USIA, State Department and Department of Defense in RVN. (Ibid., p. 58).

25th. The USSR warned the US that it would provide "whatever support was necessary to support the national liberation movement in South Vietnam" and called for the US to halt its aggression in Southeast Asia. (Ibid., p. 58).

29th. Johnson denied that the US was planning to extend the war to North Viet Nam and indicated that the US strategy in RVN would be reviewed when McNamara returned. (Facts on File, Vol. XXIV, No. 1218, February 27 - March 4, 1964, p. 65).

(n) March 1964

5th. McNamara departed the US for a fact finding tour of RVN. (Facts on File, Vol. XXIV, No. 1219, March 5-11, 1964, p. 75).

17th. McNamara announced increased US military and economic

aid to RVN to support the new plan of RVN Premier Nguyen Khanh. The statement expressed US intentions to withdraw US personnel as the ARVN became capable of performing their functions. (Facts on File, Vol. XXIV, No. 1220, March 12-18, 1964, p. 83).

26th. McNamara reaffirmed US intentions to support RVN during a speech before the National Security Industrial Association. (Ibid., p. 98).

(o) April 1964

15th. Richard Nixon recommended extending the war to North Viet Nam. During a speech before the American Society of Newspaper Editors, he stated, "to win the war there, the initiative must be carried into North Vietnam." (Facts on File, Vol. XXIV, No. 1225, April 16-22, 1964, p. 122).

17th. Dean Rusk visited RVN to review the military situation and to review US strategy. (Ibid., p. 122).

20th. Rusk stated that RVN was planning to request several of the US allies to assist in the war. (Ibid., p. 122).

24th. McNamara stated that the Administration had "amended" its plans to withdraw most US military personnel from RVN by the end of 1965. He further stated that new US personnel were being sent to RVN "for new training missions not previously carried on." (Facts on File, Vol. XXIV, No. 1227, April 30 - May 6, 1964, p. 137).

(p) May 1964

2nd. U.S.N.S. "Card," a WW II escort carrier in use as an aircraft and helicopter ferry was sunk by Viet Cong terrorist while at dock in the Saigon harbor. (Facts on File, Vol. XXIV, No. 1227, April 30 - May 6, 1964, p. 137).

14th. McNamara, upon completion of a fifth fact finding tour in RVN recommended increased US aid for RVN. (Facts on File, Vol. XXIV, No. 1229, May 14-20, 1964, p. 154).

18th. Johnson requested congressional approval of \$70 million, in addition to the approved \$500 million during Fiscal Year 1965, to support the war in RVN. (Ibid., p. 154).

(q) June 1964

22nd. US State Department reiterated US determination to resist "communist aggression" in southeast Asia and to "avert another Korea." (Facts on File, Vol. XXIV, No. 1234, June 18-24, 1964, p. 201).

21st. US reported to be constructing a huge Air Force base at Danang, South Vietnam. When completed, the base would be capable of accommodating the largest jet aircraft. (Peter Grose, "Net of US Bases Widened in Asia," NYT, June 22, 1964, p. 1).

(r) July 1964

8th. UN Secretary General U-Thant proposed that the 1954 Geneva conference be reconvened as a way to settle the civil war. (Facts on File, Vol. XXIV, No. 1237, July 9-15, 1964, p. 225).

(s) August 1964

2nd. North Vietnamese torpedo boats attacked US destroyers "Maddox" and "C. Turner Joy" in the Gulf of Tonkin. (Facts on File, Vol. XXIV, No. 1240, July 30 - August 5, 1964, p. 248).

4th. US Navy planes bombed North Vietnamese coastal bases, patrol boats and an oil installation in retaliation for the August 2nd attack (see above). (Ibid., p. 248).

5th. McNamara announced that the US was reinforcing its position in southeast Asia in the event of more trouble. He further stated that "selected Army and Marine units had been alerted for movement." (Ibid., p. 248).

5th. US Ambassador to the UN, Adlai Stevenson, presented the US position to the UN Security Council. The Soviet Ambassador, Planton Morozov, condemned the US actions as aggressive and dangerous. (Ibid., p. 248).

5th. Soviet press agency "Tass" called the US raid "aggressive actions" and warned that further US "rash steps or provocations" could lead to a broad armed conflict." (Henry Tanner, "Moscow Assails US Rash Steps," NYT, August 6, 1964, p. 6).

7th. Congress approved the Gulf of Tonkin Resolution which affirmed congressional support of "all necessary measures to repel any armed attack against the forces of the US." (Facts on File, Vol. XXIV, No. 1241, August 6-12, 1964, p. 256).

8th. Khrushchev denounced the US attack against North Viet Nam and warned that the USSR would "stand up for other socialist countries if the imperialists impose war on them." (Ibid., p. 259).

10th. Johnson signed the Gulf of Tonkin Resolution. (Ibid., p. 259).

(t) November 1964

26th. "Tass" reported that the USSR had pledged to "provide North Viet Nam with necessary assistance to combat US air attacks." (Facts on File, Vol. XXIV, No. 1257, November 26 - December 2, 1964, p. 416).

(u) January 1965

6th. MACV reported that 136 Americans had been killed in RVN during 1964. (Facts on File, Vol. XXV, No. 1262, December 31, 1964 - January

6, 1965, p. 3).

14th. US Air Force began large scale bombing of the Ho Chi Minh Trail in Laos in an attempt to interdict the shipment of supplies from North Viet Nam to RVN. (Facts on File, Vol. XXV, No. 1264, January 14-20, 1965, p. 17).

21st. The USSR denounced the US bombing in Laos, reaffirmed its support of North Viet Nam and warned the US against conducting more bombing. (Facts on File, Vol. XXV, No. 1266, January 28 - February 3, 1965, p. 33).

(v) February 1965

6th. Soviet Premier Kosygin arrived in Hanoi to confer with Ho Chi Minh. Upon arriving, he reaffirmed the USSR intentions to provide support for North Viet Nam in its war with the US. (Facts on File, Vol. XXV, No. 1267, February 4-10, 1965, p. 51).

7th. In retaliation for an attack on the US Camp Holloway airbase at Pleiku, RVN, US carrier base planes bombed and strafed the North Vietnamese military base of Donghoi. (Ibid., p. 49).

7th. Johnson directed the evacuation of US dependents from Saigon. (Ibid., p. 49).

7th. A US Hawk surface-to-air guided missile battalion was alerted for movement to RVN. (Ibid., p. 49).

7th. Johnson stated that "it has become clear that Hanoi has undertaken a more aggressive course of action. We have no choice but to clear the deck and make absolutely clear our continued determination to back South Viet Nam. . ." (Ibid., p. 49).

9th. The USSR issued a statement stating that "in view of US military actions against North Viet Nam and the massing of armed forces and weapons in South Viet Nam, the Soviet Union, together with its friends and allies, has no choice but to take further measures to safeguard the security and strengthen the defense capability of North Viet Nam." (Ibid., p. 50).

10th. In a joint Soviet-North Vietnamese communique, the USSR pledged to strengthen the defense potential of North Viet Nam. (Ibid., p. 52).

11th. US airplanes bombed and strafed targets in North Viet Nam for a third time in February. (Facts on File, Vol. XXV, No. 1268, February 11-17, 1965, p. 57).

16th. Soviet air defense missiles were reported to have begun arriving in Hanoi via airlift. Technicians were reported to be accompanying the missiles. (Ibid., p. 58).

17th. During a speech before the National Industrial Conference Board in Washington, Johnson reaffirmed US intentions to support RVN. (Ibid., p. 58).

27th. A US white paper issued by the State Department denounced North Viet Nam as the aggressor attempting to conquer RVN. (Facts on File, Vol. XXV, No. 1270, February 25 - March 3, 1965, p. 73).

(w) March 1965

8th. Two US Marine battalions landed in RVN with the "limited mission of providing protection" for the DaNang airbase. (Facts on File, Vol. XXV, No. 1271, March 4-10, 1965, p. 81).

8th. Tass described the landing as a "new phase in the US expansion of the war in Indochina." (Ibid., p. 82).

12th. First fire fight between the Marine units at DaNang and Viet Cong was reported with no known casualties resulting. (Facts on File, Vol. XXV, No. 1272, March 11-17, 1965, p. 89).

30th. US embassy in Saigon was bombed killing two Americans. (Facts on File, Vol. XXV, No. 1274, March 25-31, 1965, p. 105).

(x) April 1965

2nd. Maxwell Taylor, US Ambassador to RVN, stated that the Johnson Administration had decided to commit several thousand US troops in RVN to augment the 27,500 presently there, to continue the air attacks against North Viet Nam and to help RVN to increase the 557,000 man armed force by 160,000 men. (Facts on File, Vol. XXV, No. 1275, April 1-7, 1965, p. 114).

10th. USSR rejected Johnson's offer of unconditional talks on RVN as "noisy propaganda" and reaffirmed the Soviet support of North Viet Nam. (Facts on File, Vol. XXV, No. 1276, April 8-15, 1965, p. 129).

29th. Australia announced that the Australian Government had agreed to send one 800-man battalion to RVN to fight the Viet Cong. (Facts on File, Vol. XXV, No. 1280, May 6-12, 1965, p. 172).

(y) May 1965

3rd. Elements of the 173d Airborne Brigade began to arrive in RVN. (Facts on File, Vol. XXV, No. 1280, May 6-12, 1965, p. 171).

5th-9th. 8,000 additional US Marines arrived in RVN. (Ibid., p. 171).

20th. Kosygin warned the US that the USSR was in the process of settling its ideological dispute with China and that China and Russia would pool their resources to hit back at the US unless Washington reversed its

aggressive policies in Viet Nam. (Facts on File, Vol. XXV, No. 1283, May 27 - June 2, 1965, p. 195).

(z) June 1965

3rd. US State Department announced that North Viet Nam had received six Soviet IL-28 bombers from the Soviet Union. (Facts on File, Vol. XXV, No. 1284, June 3-9, 1965, p. 203).

7th. An administration spokesman announced that US military personnel in RVN totaled 51,000 of which 20,000 were combat troops. (Ibid., p. 203).

9th. US State Department announced that President Johnson had authorized General Westmoreland, MACV Commander, to commit US ground troops in direct combat operations against the Viet Cong. (Ibid., p. 203).

28th. US Army troops, elements of the 173d Airborne Brigade, conducted the first US ground operation against the Viet Cong in War Zone D. (Facts on File, Vol. XXV, No. 1287, June 24-30, 1965, p. 233).

Author's note. This event is selected as terminating the escalation associated with committing US ground combat forces in RVN. As this event occurred, the US was conducting aerial bombing in North Viet Nam, interdiction bombing in Laos and Cambodia and patrolling the North Viet Nam coast with naval forces. The USSR was providing military aid and diplomatic assistance to North Viet Nam. This situation was to continue, within varying levels of intensity, until the mass bombing of Hanoi and mining of the Haiphong Harbor in 1972; the next confrontation selected for study.

(3) Chronological listing of confrontation events leading to the US mining of the Haiphong Harbor and mass bombing of North Viet Nam.

(a) March 1972

30th. North Vietnamese Army (NVA), supported by tanks, artillery and anti-aircraft units launched a major ground attack across the DMZ in Quang Tri Province. US advisors stated that they believed the city of Quang Tri to be the NVA's objective. (Facts on File, Vol. XXXII, No. 1639, March 26 - April 1, 1972, p. 221).

(b) April 1972

3rd. Nixon ordered air strikes against North Viet Nam in

retaliation for the NVA invasion of RVN. (Facts on File, Vol. XXXII, No. 1640, April 2-8, 1972, p. 241).

6th. Hanoi requested that the US resume the Paris peace talks. (Ibid., p. 243).

8th. NVA soldiers had captured the cities of Locninh, Anloc and were threatening Quang Tri. (Facts on File, Vol. XXXII, No. 1641, April 9-15, 1972, p. 261).

10th. B-52s attacked targets 145 miles north of the DMZ in the Vinh, North Viet Nam area. (Ibid., p. 262).

12th. Nixon warned North Viet Nam that unless the offensive was halted, the US might have to cancel plans to conduct further troop withdrawals. Similar views were expressed by Congressmen Gerald Ford and Hugh Scott. (Ibid., p. 262).

15th. US Air Force and Navy planes resumed large scale bombing of the Hanoi-Haiphong area. (Facts on File, Vol. XXXII, No. 1642, April 16-22, 1972, p. 281).

16th. Tass denounced the renewed bombings and charged that four Soviet ships at harbor had been damaged. (Ibid., p. 281).

17th. US ships and North Vietnamese shore boats engaged in a small battle in the Gulf of Tonkin. The US reported no losses and two North Vietnamese vessels sunk. (Ibid., p. 282).

18th. Laird criticized the USSR for showing no restraints in providing North Viet Nam with war materials and stated that the invasion of the RVN could not have occurred without Soviet assistance to the north. (Ibid., p. 283).

26th. Nixon announced the withdrawal of 20,000 more US troops from RVN and that the Paris peace talks would resume on April 27, 1972. (Facts on File, Vol. XXXII, No. 1643, April 23-29, 1972, p. 297).

(c) May 1972

1st. NVA forces captured Quang Tri City and threatened Kontum and Hue. (Facts on File, Vol. XXXII, No. 1644, April 30 - May 6, 1972, p. 317).

4th. Viet Cong established a provisional revolutionary administration in Quang Tri City. (Ibid., p. 317).

4th. Paris peace talks suspended. (Ibid., p. 317).

8th. Nixon ordered the mining of North Vietnamese ports and interdiction of land and sea routes to North Viet Nam to cut off supplies. (Facts on File, Vol. XXXII, No. 1645, May 7-13, 1972, p. 339).

9th. US Navy planes dropped mines into the Haiphong and six other ports to block exit and entrance. (Ibid., p. 341).

11th. Tass denounced the US blockade of North Viet Nam and called for the immediate withdrawal of US forces from Indochina and lifting of the blockade. (Ibid., p. 341).

12th. US claimed that the harbor mining was 100% effective and that land routes were being shut off. (Facts on File, Vol. XXXII, No. 1646, May 14-20, 1972, p. 357).

15th. US aircraft carrier "Saratoga" arrived off of the coast of Viet Nam to bring the number of US aircraft carriers in the area to six. (Ibid., p. 359).

18th. USSR and China reached an agreement permitting the USSR to resupply North Viet Nam via rail thru China. (Ibid., p. 359).

21st. China began diverting trains to carry increased war aid to North Viet Nam from the Soviet Union. (Facts on File, Vol. XXXII, No. 1647, May 21-27, 1972, p. 379).

22nd. Nixon visited Moscow for a series of conferences with the Soviet leadership. (Ibid., p. 377).

24th. US Air Force moved sixty additional B-52 bombers to Thailand to reinforce the 150 already there. (Facts on File, Vol. XXXII, No. 1648, May 28 - June 3, 1972, p. 401).

(d) June 1972

19th. Kissinger arrived in China to begin a series of talks with Chinese officials. (Facts on File, Vol. XXXII, No. 1651, June 18-24, 1972, p. 457).

19th. Soviet President Podgorny ended a four day visit to North Viet Nam and stated that the Soviet Union would "continue to render all the necessary assistance to Hanoi in the fight against imperialism." (Ibid., p. 457).

(e) July 1972

13th. Paris peace talks resumed. (Facts on File, Vol. XXXII, No. 1654, July 9-15, 1972, p. 525).

(f) October 1972

20th. US announced that all of North Viet Nam above the 20th parallel was to be considered a bomb free area in recognition of North Vietnamese peace concessions. (Facts on File, Vol. XXXII, No. 1677, December 17-23, 1972, p. 1013).

26th. Kissinger announced that "peace is at hand" and speculated that an agreement would be reached within "three or four days." (Facts on File, Vol. XXXII, No. 1669, October 22-28, 1972, p. 837)

(g) December 1972

13th. Paris peace talks were recessed without an agreement being reached due to RVN's demand that all of the North Vietnamese troops be withdrawn from its territory. (Facts on File, Vol. XXXII, No. 1676, December 10-16, 1972, p. 989).

18th. US renewed bombing north of the 20th parallel in the heaviest bombing ever in the Hanoi-Haiphong area. The Haiphong Harbor was also remined. (Facts on File, Vol. XXXII, No. 1677, December 17-23, 1972, p. 1013).

19th. Tass denounced the US actions, warned the US against further aggression and reaffirmed Soviet support of North Viet Nam. (Ibid., p. 1013).

21st. Brezhnev warned that his government "angrily and resolutely condemned" the US bombings and that Soviet-American detente "will depend on the course of events in the immediate future. . ." (Facts on File, Vol. XXXII, No. 1673, December 24-31, 1972, p. 1035).

22nd. Nixon announced his intentions to continue the mass bombing until peace talks were resumed. (Ibid., p. 1034).

30th. Nixon halted air strikes north of the 20th parallel to prepare the way for a resumption of the Paris peace talks. (Ibid., p. 1033).

(h) January 1973

8th. Kissinger and Le Duc Tho began negotiations at Paris as the US-North Vietnamese peace talks resumed. (Facts on File, Vol. XXXIII, No. 1680, January 7-13, 1973, p. 9).

15th. Citing progress in the Paris peace talks, Nixon ordered a halt to all US offensive military action against North Viet Nam. (Facts on File, Vol. XXXIII, No. 1681, January 14-20, 1973, p. 21). This event marks the termination of US bombing of North Viet Nam and a return to US/USSR cold war diplomacy.

C. Confrontation Intensity Peak Level and Rate of Escalation. The intensity peak levels are plotted at figures 1 and 2 as described earlier in Annex B.

(1) Events leading to the commitment of US military combat forces in RVN. As illustrated at figure 1, the USSR's actions peaked at rung fifteen on June 28, 1965 with the providing of open support for an ally (North Viet

Nam) involved in a war with the United States. The time required for Soviet actions to peak was 1515 days (May 5, 1961 - June 28, 1965). US actions peaked at rung eighteen on August 4, 1964 with US military aircraft attacking targets in North Viet Nam; an ally of the USSR. The time required for US actions to peak was 1187 days (May 5, 1961 - August 4, 1964).

(2) Events leading to the mining of the Haiphong Harbor and mass B-52 bombing of North Viet Nam. As illustrated at figure 2, the USSR's actions peaked at rung fifteen on March 30, 1972. The USSR had continued to provide open military support for North Viet Nam since early 1964 and had not discontinued such assistance when the North Vietnamese began their large invasion of RVN on March 30th. Therefore, Soviet actions are at rung fifteen when the invasion began and the time required for the USSR's actions to peak is zero days.

Conversely, the US had discontinued bombing in North Viet Nam when the invasion began on March 30, 1972, therefore US actions were at rung seventeen; US conventional forces were militarily engaging NVA forces in RVN. US actions peaked at rung eighteen on April 3, 1972 with the resumption of the bombing in North Viet Nam. The time required for US actions to peak is five days (March 30 - April 3, 1972).

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Figure 1  
1965 Commitment of US Ground Forces in Viet Nam Confrontation Actions Plotted

X = US Actions  
Y = USSR Actions

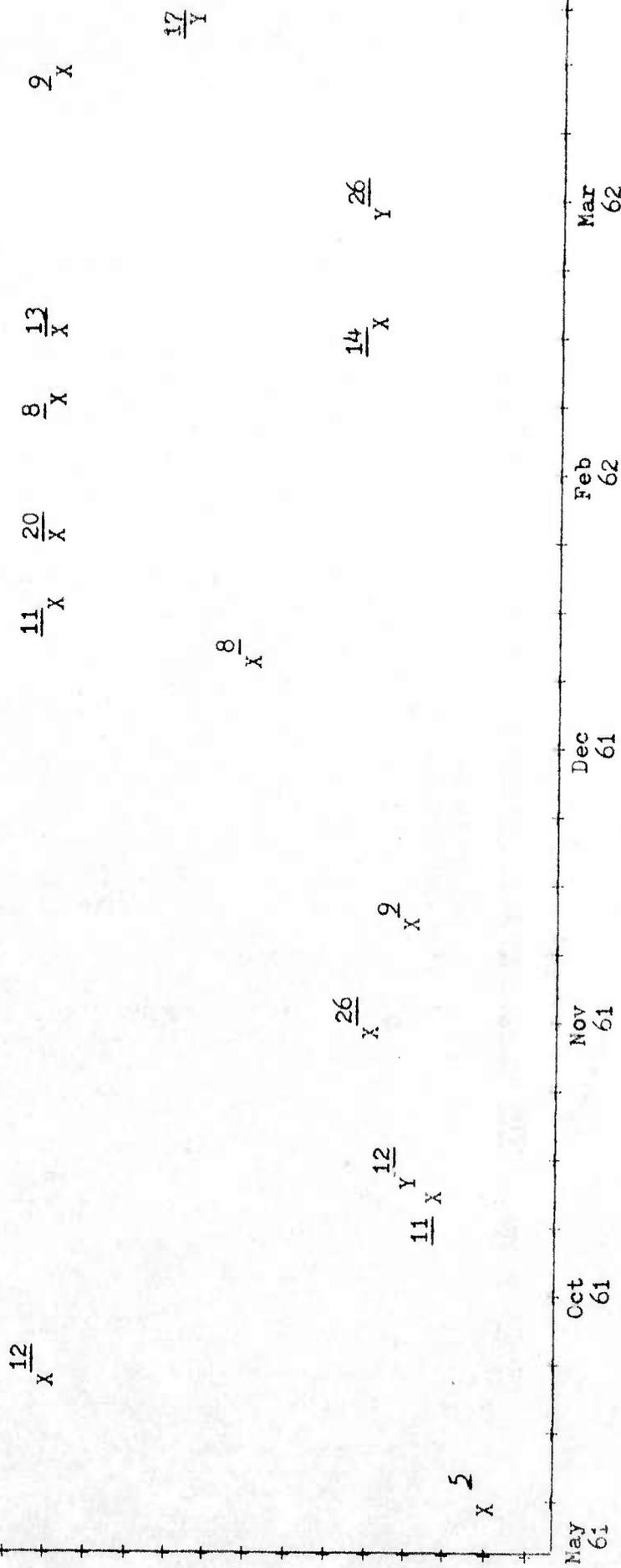


Figure 1 (continued)  
1965 Commitment of US Ground Forces in Viet Nam Confrontation Actions Plotted

X - US Actions  
 Y - USSR Actions

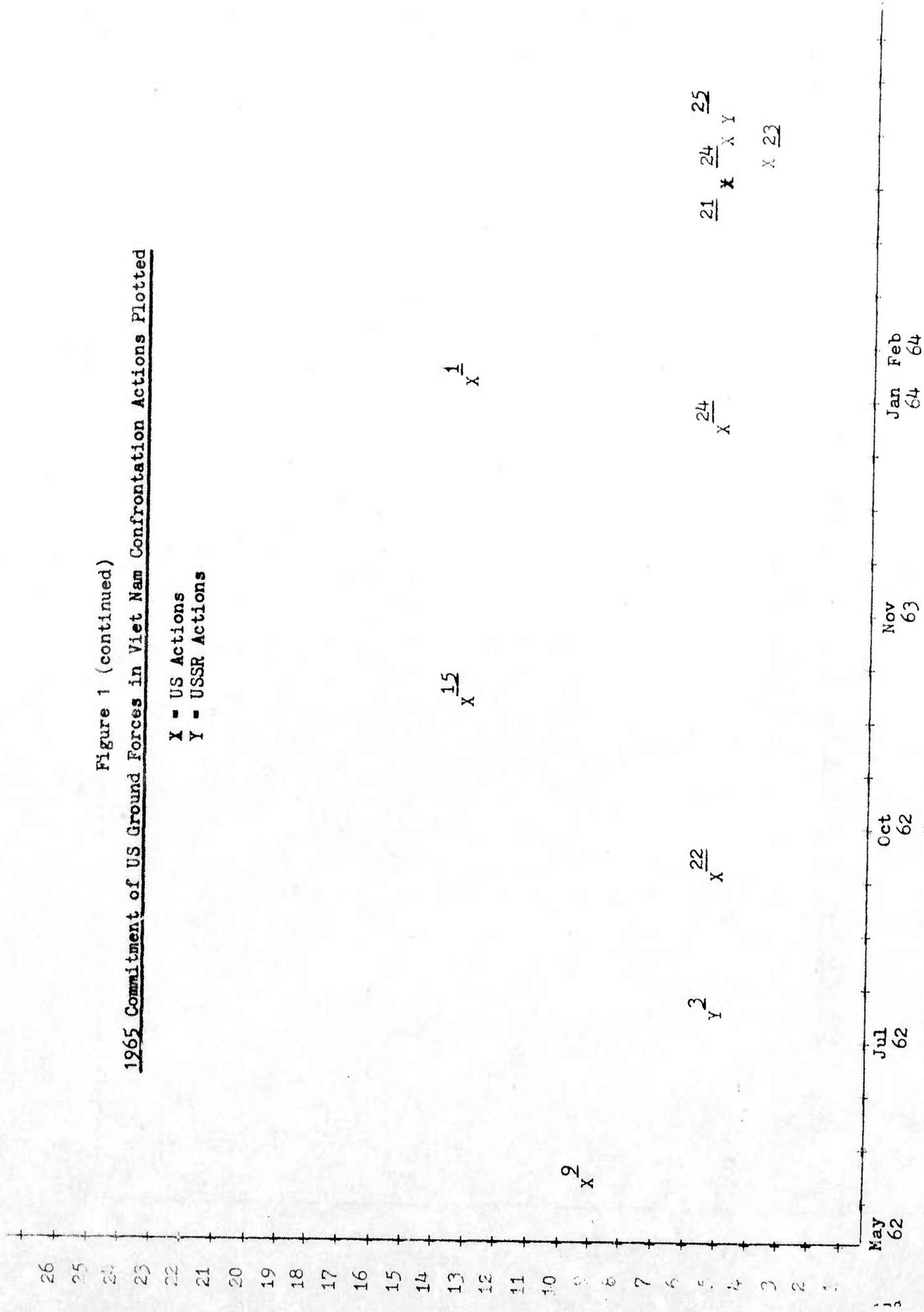
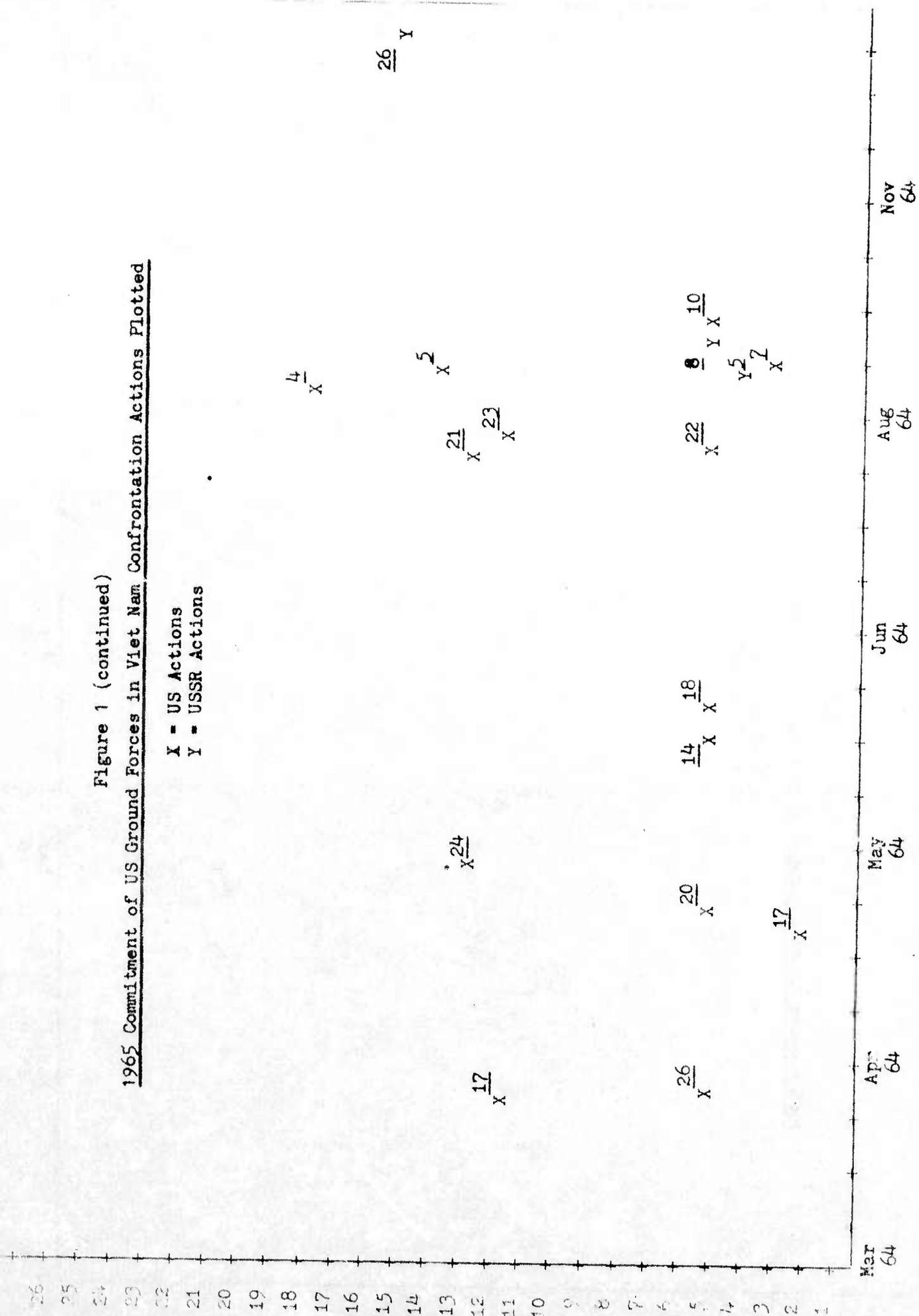


Figure 1 (continued)

1965 Commitment of US Ground Forces in Viet Nam Confrontation Actions Plotted

X - US Actions  
 Y - USSR Actions



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Figure 1 (continued)  
1965 Commitment of US Ground Forces in Viet Nam Confrontation Actions Plotted

X - US Actions  
 Y - USSR Actions

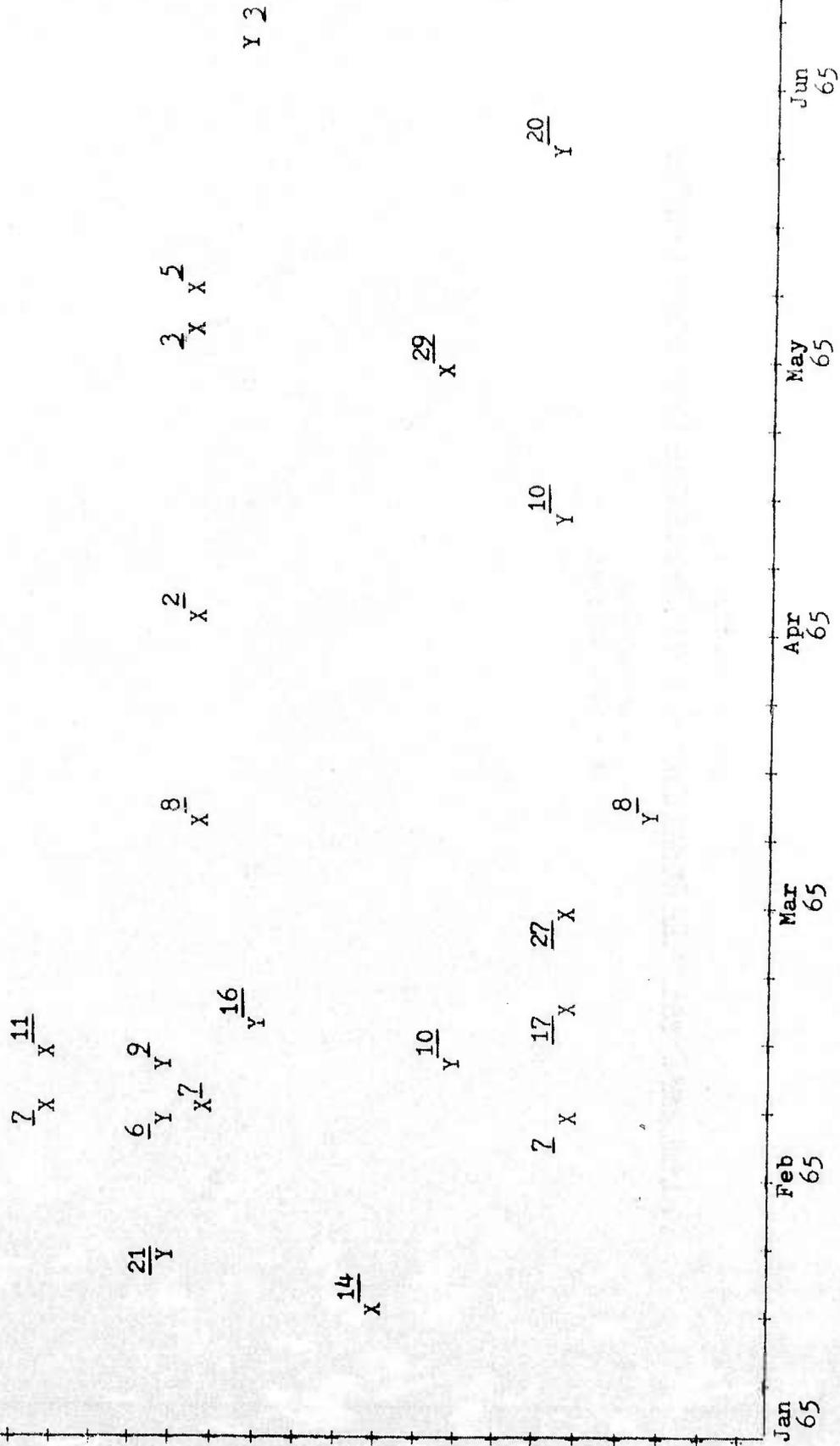
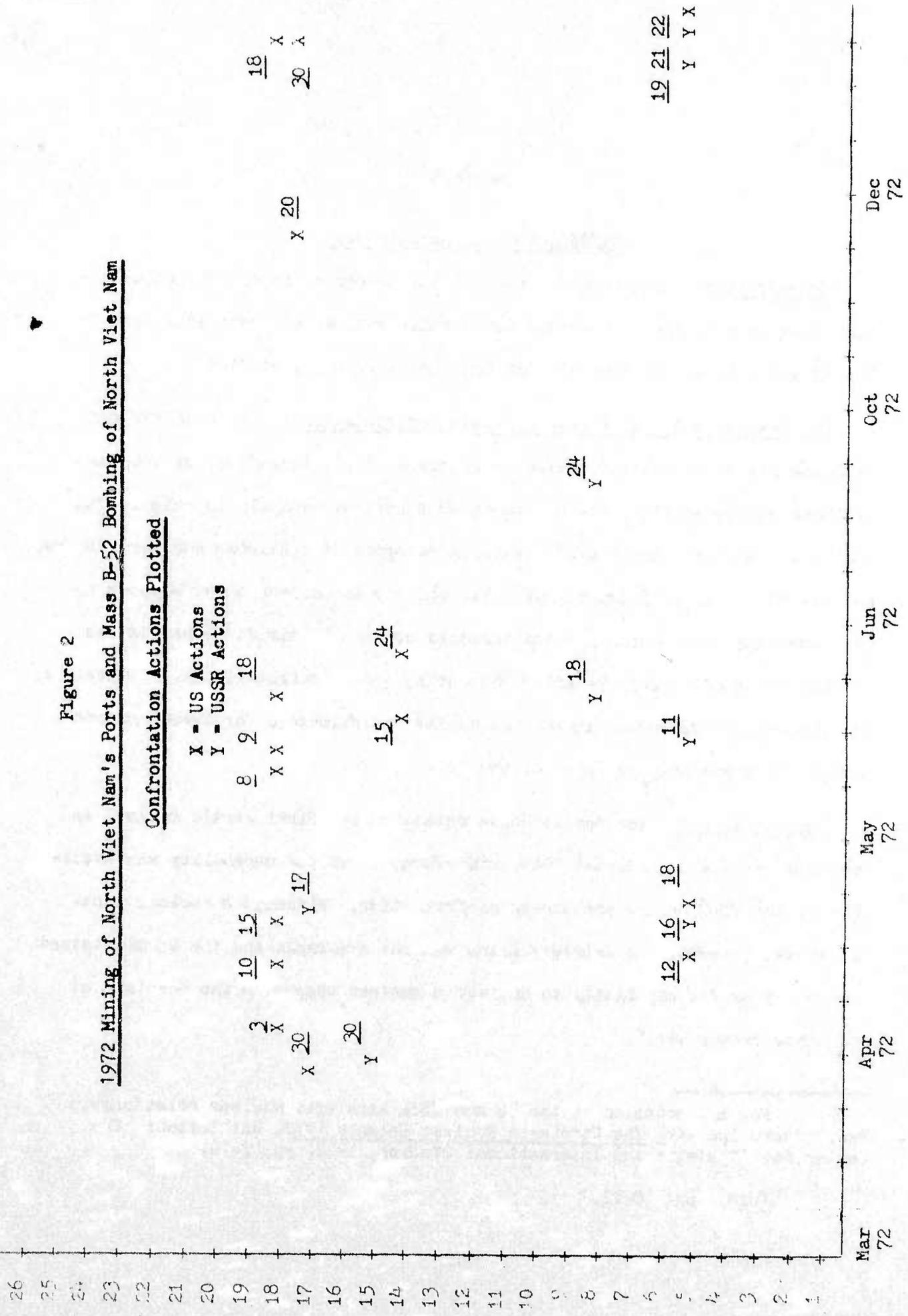


Figure 2

1972 Mining of North Viet Nam's Ports and Mass B-52 Bombing of North Viet Nam

Confrontation Actions Plotted

X - US Actions  
Y - USSR Actions



## Annex K

### US/USSR Nuclear Relationship

A. Introduction. This chapter examines the number of intercontinental nuclear weapon delivery systems and deliverable nuclear warheads available to the US and USSR at the time of each confrontation being studied.

B. The Iranian and 1948 Berlin Blockade Confrontations. The USSR did not detonate its first nuclear device until August 1949, therefore, at the time of these confrontations, the US possessed a nuclear monopoly in relation to the USSR. Not only did the US possess a monopoly of available nuclear weapons, but the US had clearly demonstrated its ability to deliver these weapons on distance targets at Hiroshima and Nagasaki and the US Air Force had in its inventory a number of B-29s and B-36s during these confrontations.<sup>1</sup> Therefore, for the reasons discussed above, the nuclear relationship for these confrontations is a monopoly in favor of the US.

C. The Korean War. The Soviet Union detonated its first atomic device, as mentioned earlier, in August 1949, therefore, a nuclear capability was available to the USSR during the Korean confrontation. Although a nuclear capability was present, the delivery means was not available and the US maintained a monopoly on the capability to deliver a nuclear weapon on the homeland of the other superpower.<sup>2</sup>

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<sup>1</sup>For a discussion of the US and USSR strategic nuclear relationship see, Edward Luttwak, The Strategic Nuclear Balance 1972, Washington: The Center for Strategic and International Studies, 1972, pp. 7-14.

<sup>2</sup>Ibid., pp. 10-22.

The USSR introduced the nuclear capable TU-4 (Bull) bomber with a range of 1,550 miles in 1951.<sup>3</sup> Because of its limited range, this aircraft did not, however, provide a capability to deliver a nuclear weapon on the continental US from airfields available to the USSR.<sup>4</sup>

D. The 1959 Berlin Confrontation. In 1959 and during this confrontation, the US possessed a 9.62 to 1 nuclear advantage in relation to the USSR. Subparagraphs 1, 2 and 3 contain the computations used to develop this relationship.

(1) The US strategic nuclear delivery system consisted of 500 B-52 Stratofortress bombers, each capable of carrying five nuclear weapons.<sup>5</sup> Therefore, the number of nuclear bombs that the US could deliver onto Soviet soil from the US is 2,500 (500 x 5 = 2,500).

(2) The Soviet strategic nuclear delivery system consisted of:<sup>6</sup>

<u>Type system</u>	<u># of systems</u>	<u># of deliverable warheads/system</u>	<u>Total # of deliverable warheads</u>
TU 20 (Bear)	70	2	140
M 4 (Bison)	<u>120</u>	1	<u>120</u>
USSR totals	190		260

<sup>3</sup>Janes, All the World's Aircraft, 1952-1953, London: The Trade Press Association, p. 181.

<sup>4</sup>The distance from Moscow to New York is recorded in the 1972 edition of the Rand McNally Cosmopolitan World Atlas (p. 150) as being 4,662 miles. The USSR could have conceivably launched the TU4 bomber from Leningrad; however this would not have placed it within range of the continental US, nor did the USSR possess any airfields that would place the continental US within the range of the TU4 bomber.

<sup>5</sup>Department of Defense, Annual Report of the Secretary of Defense, July 1, 1959 to June 30, 1960, Washington: USGPO, 1961, p. 321.

<sup>6</sup>The Military Balance, 1961-1962, London: IISS, 1962.

(3) US/USSR strategic nuclear relationship equals  $2,500 \div 260$  or a 9.62:1 advantage for the US.

E. The 1961 Berlin Confrontation. The US enjoyed a 10.19 to 1 strategic nuclear advantage over the USSR during this confrontation. Computations used to arrive at this nuclear relationship are described below in subparagraphs 1, 2 and 3.<sup>7</sup>

(1) Available US strategic nuclear delivery systems and weapons.

<u>Delivery systems</u>		<u># of deliverable warheads/system</u>	<u>Total # of deliverable warheads</u>
<u>Type system</u>	<u># of systems</u>		
ICBM	63	1	63
SLBM	96	1	96
Strategic Bombers	<u>600</u>	5	<u>3,000</u>
US totals	759		3,159

(2) Available USSR strategic nuclear delivery systems and weapons.

<u>Delivery systems</u>		<u># of deliverable warheads/system</u>	<u>Total # of deliverable warheads</u>
<u>Type system</u>	<u># of systems</u>		
ICBM	50	1	50
SLBM	0	0	0
Strategic Bombers			
- TU 20 (Bear)	70	2	140
- M 4 (Bison)	<u>120</u>	1	<u>120</u>
USSR totals	240		310

(3) US/USSR strategic nuclear relationship equals  $3,159 \div 310$  or a 10.19:1 advantage for the US.

<sup>7</sup>The Military Balance, 1961-1962, London: IISS, 1962.

F. The 1962 Cuban Missile Crisis. The US possessed a 10.26 to 1 strategic nuclear advantage in relation to the USSR during this confrontation. This relationship was developed from the computations contained in subparagraphs 1, 2 and 3 below.<sup>8</sup>

(1) Available US strategic nuclear delivery systems and weapons.

<u>Delivery systems</u>		<u># of deliverable warheads/system</u>	<u>Total # of deliverable warheads</u>
<u>Type system</u>	<u># of systems</u>		
ICBM			
- Atlas	90	1	90
- Titan I	54	1	54
- Minuteman	150	1	150
SLBM			
- Polaris A1	96	1	96
- Polaris A2	48	1	48
Strategic Bombers	<u>600</u>	5	<u>3,000</u>
US totals	1,038		3,438

(2) Available USSR strategic nuclear delivery systems and weapons.

<u>Delivery systems</u>		<u># of deliverable warheads/system</u>	<u>Total # of deliverable warheads</u>
<u>Type system</u>	<u># of systems</u>		
ICBM			
	75	1	75
SLBM			
	0	0	0
Strategic Bombers			
- TU 20 (Bear)	70	2	140
- M 4 (Bison)	<u>120</u>	1	<u>120</u>
USSR totals	265		335

(3) US/USSR strategic nuclear relationship equals  $3,438 \div 335$  or 10.26:1 in favor of the US.

<sup>8</sup>The Military Balance, 1962-1963, London: IISS, 1963.

G. The commitment of US ground military force in offensive combat operations in South Viet Nam. The US possessed a 7.23 to 1 strategic nuclear advantage vis-a-vis the USSR when this event occurred. The computations used to develop this relationship are contained in subparagraphs 1, 2 and 3 below.<sup>9</sup>

(1) Available US strategic nuclear delivery systems and weapons.

<u>Type system</u>	<u>Delivery systems # of systems</u>	<u># of deliverable warheads/system</u>	<u>Total # of deliverable warheads</u>
ICBM			
- Minuteman	800	1	800
- Titan	54	1	54
SLBM			
- Polaris A1	80	1	80
- Polaris A2	208	1	208
- Polaris A3	208	3	624
Strategic Bombers			
- B-52	<u>630</u>	5	<u>3,150</u>
US totals	1,980		4,916

(2) Available USSR strategic nuclear delivery systems and weapons.

<u>Type system</u>	<u>Delivery systems # of systems</u>	<u># of deliverable warheads/system</u>	<u>Total # of deliverable warheads</u>
ICBM			
	270	1	270
SLBM			
	130	1	130
Strategic Bombers			
- TU 95 (Bear)	80	2	160
- M 4 (Bison)	<u>120</u>	1	<u>120</u>
USSR totals	600		680

(3) US/USSR strategic nuclear relationship equals  $4,916 \div 680$  or 7.23:1 in favor of the US.

<sup>9</sup> Figures are extracted from The Military Balance, 1965-1966, London: IISS, 1965. See page 23 for a discussion of the number of warheads to be carried with each Polaris A3 missile.

H. The 1967 Arab-Israeli War. During this confrontation, the US possessed a 5.89 to 1 strategic nuclear advantage over the USSR. Subparagraphs 1, 2 and 3 below contain the detailed computations used to develop this nuclear relationship.<sup>10</sup>

(1) Available US strategic nuclear delivery systems and weapons.

<u>Delivery systems</u>	<u># of deliverable</u>	<u>Total # of</u>
<u>Type system</u>	<u># of systems</u>	<u>deliverable warheads</u>
ICBM		
- Minuteman 1	750	1
- Minuteman 2	250	1
- Titan 2	54	1
SLBM		
- Polaris A2	208	1
- Polaris A3	448	3
Strategic Bombers	540	5
US totals	2,250	5,306

(2) Available USSR strategic nuclear delivery systems and weapons.

<u>Delivery systems</u>	<u># of deliverable</u>	<u>Total # of</u>
<u>Type system</u>	<u># of systems</u>	<u>deliverable warheads</u>
ICBM		
	460	1
SLBM		
	130	1
Strategic Bombers		
- TU 20 (Bear)	100	2
- M 4 (Bison)	110	1
USSR totals	800	900

(3) US/USSR strategic nuclear relationship equals  $5,306 \div 900$  or 5.89:1 in favor of the US.

I. The 1972 blockade of the Haiphong Harbor in North Viet Nam. At the time of this event, the US possessed a 3.47 to 1 strategic nuclear advantage over

<sup>10</sup>The Military Balance, 1967-1968, London: IISS, 1967, provides these figures except for the number of SLBMs available to the USSR. This figure is taken from The Military Balance, 1973-1974, London: IISS, 1973.

the USSR. The computations to support this figure are contained in subparagraphs 1, 2 and 3 below.<sup>11</sup>

(1) Available US strategic nuclear delivery systems and weapons.

Type system	Delivery systems		# of deliverable warheads/system	Total # of deliverable warheads
	Type system	# of systems		
ICBM				
- Minuteman 1		300	1	300
- Minuteman 2		500	1	500
- Minuteman 3		200	3	600
- Titan 2		54	1	54
SLBM				
- Poseidon		160	10	1,600
- Polaris A2		128	1	128
- Polaris A3		368	3	1,104
Strategic Bombers <sup>12</sup>				
- B-52 C/F		172	5	860
- B-52 G/H		<u>283</u>	20	<u>5,660</u>
US totals		2,165		10,806

(2) Available USSR strategic nuclear delivery systems and weapons.

Type system	Delivery systems		# of deliverable warheads/system	Total # of deliverable warheads
	Type system	# of systems		
ICBM				
		1,527	1	1,527
SLBM				
		560	1	560
Strategic Bombers				
- TU 20 (Bear)		100	2	200
- M 4 (Bison)		<u>40</u>	1	<u>40</u>
USSR totals		2,227		2,327

(3) US/USSR strategic nuclear relationship equals 10,806 ÷ 2,327 or 4.64:1 in favor of the US.

<sup>11</sup>The Military Balance, 1972-1973, London: IISS, 1972. See page 1 for a discussion of the number of warheads to be carried by the Minuteman 3 missile and page 2 for a discussion of the Poseidon missile and the Short-Range Attack Missile (SRAM) carrying capability of the B-52.

<sup>12</sup>This does not include the 76 FB-111 aircraft deployed by the US in 1969. This aircraft was not classified as strategic and thus not included in the SALT II agreement reached at Vladivostok. For a discussion of this, see Michael Getter, "Exclusion in Arms Pact Stir Controversy," The Washington Post, December 14, 1974, p. A4.

J. The 1973 Arab-Israeli War. At the time of this war, the US possessed a 4.78 to 1 strategic nuclear advantage over the USSR. Once again, the computations to support this figure are contained in subparagraphs 1, 2 and 3 below.<sup>13</sup>

(1) Available US strategic nuclear delivery systems and weapons.

<u>Delivery systems</u>			
<u>Type system</u>	<u># of systems</u>	<u># of deliverable warheads/system</u>	<u>Total # of deliverable warheads</u>
ICBM			
- Minuteman 1	140	1	140
- Minuteman 2	510	1	510
- Minuteman 3	350	3	1,050
- Titan 2	54	1	54
SLBM			
- Poseidon	320	10	3,200
- Polaris A2	160	1	160
- Polaris A3	176	3	528
Strategic Bombers <sup>14</sup>			
- B-52 C/F	202	5	1,010
- B-52 G/H	<u>240</u>	20	<u>4,800</u>
US totals	2,152		11,452

(2) Available USSR strategic nuclear delivery systems and weapons.

<u>Delivery system</u>			
<u>Type system</u>	<u># of systems</u>	<u># of deliverable warheads/system</u>	<u>Total # of deliverable warheads</u>
ICBM	1,527	1	1,527
SLBM	628	1	628
Strategic Bombers			
- TU 95 (Bear)	100	2	200
- M 4 (Bison)	<u>40</u>	1	<u>40</u>
USSR totals	2,295		2,395

(3) US/USSR strategic nuclear relationship equals  $11,452 \div 2,395$  or 4.78:1 in favor of the US.

<sup>13</sup>Data is extracted from The Military Balance, 1973-1974, London: IISS, 1973.

<sup>14</sup>See footnote #12 above.

K. Summary. In a way of graphical summary, figures 1 and 2, depicted on the following two pages, illustrate the number of deliverable strategic nuclear weapons and strategic nuclear weapon delivery systems available to the US and USSR during each confrontation. The year of each confrontation is plotted along the horizontal axes and the number of weapons and delivery systems are plotted on the vertical axes.

Figure 1

Number of Deliverable Strategic Nuclear Warheads  
Available to the US and USSR

US - Solid line  
USSR - Broken line

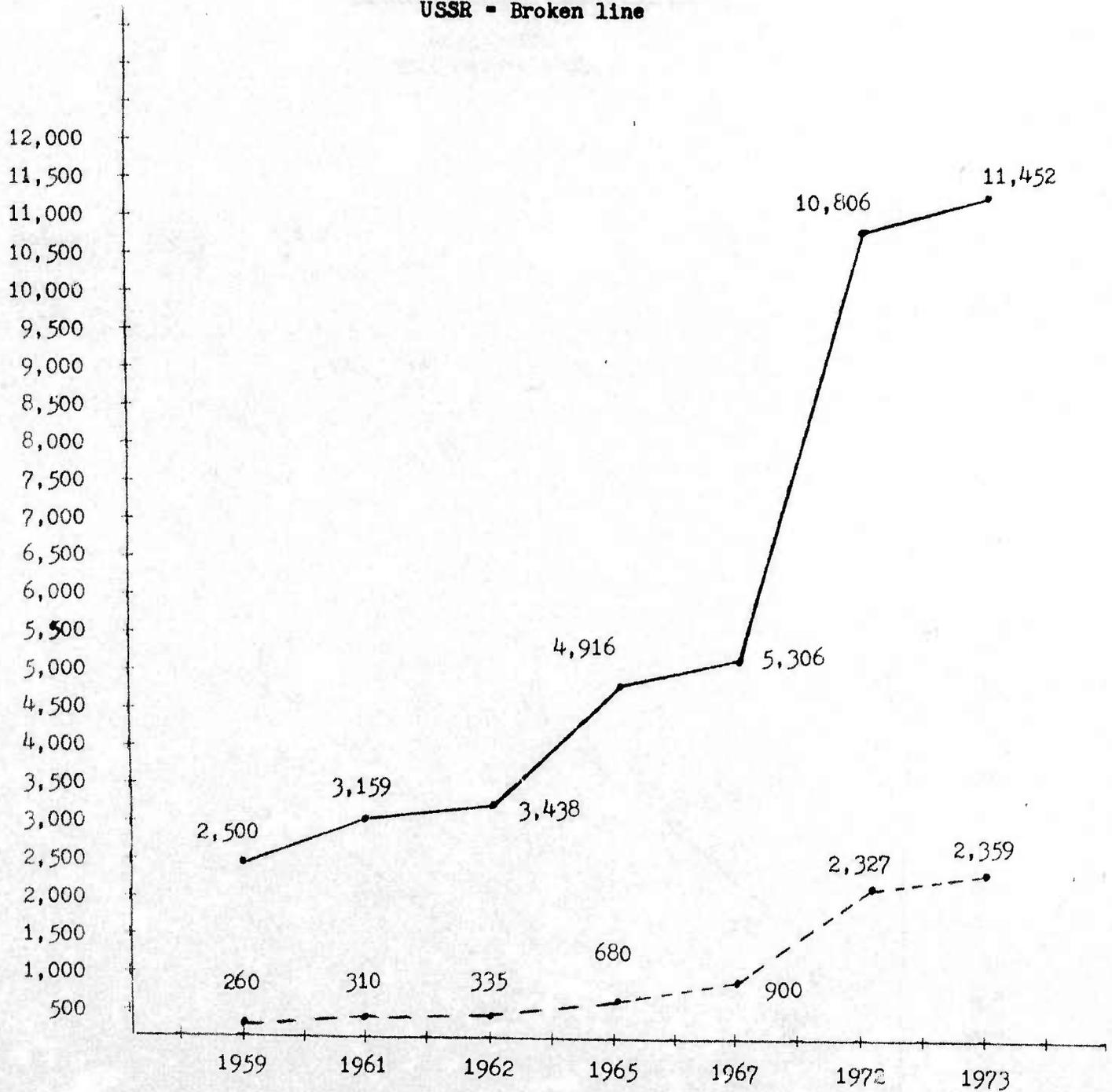
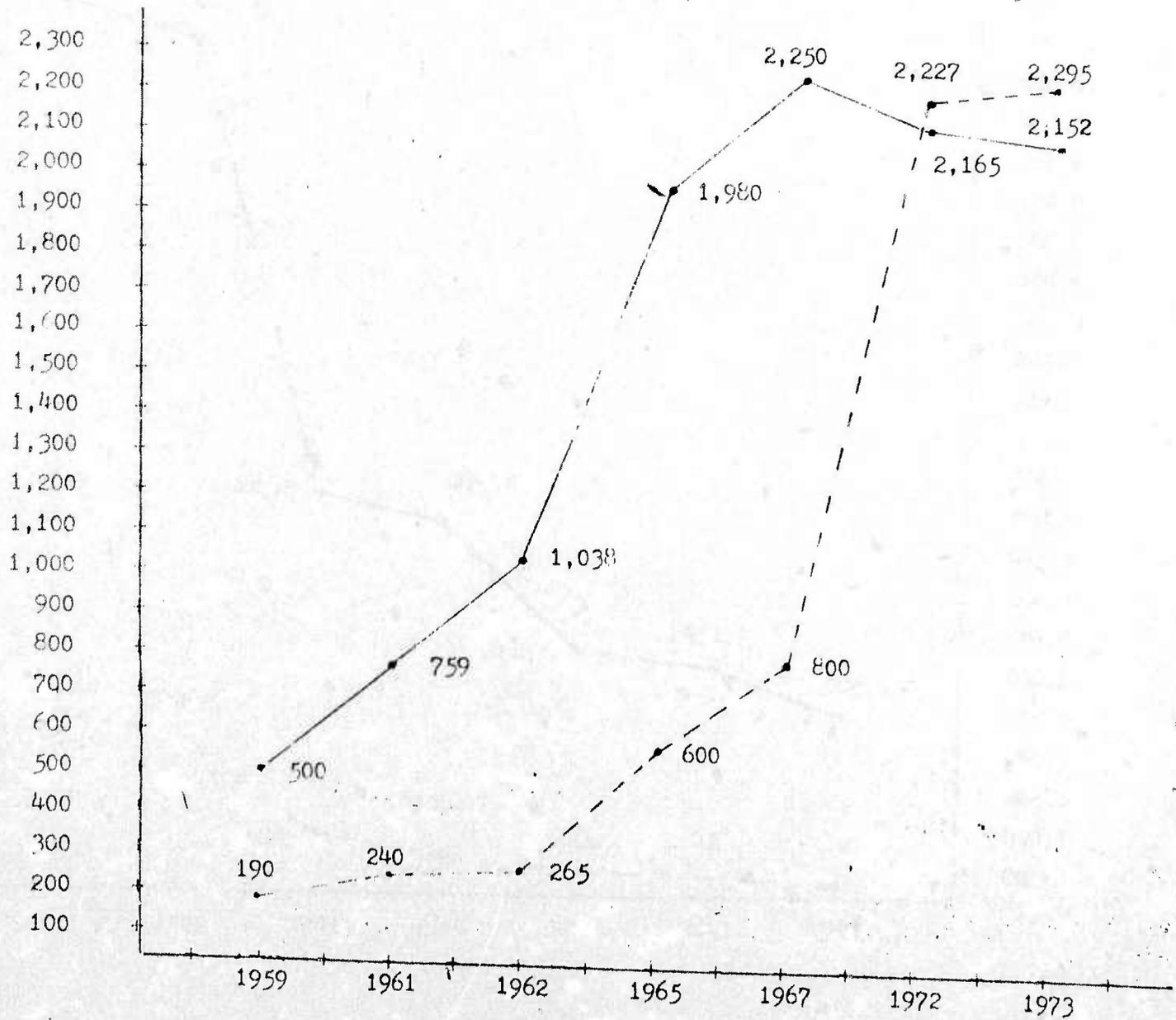


Figure 2

Number of Strategic Nuclear Delivery Systems  
Available to the US and USSR

US = Solid line  
USSR = Broken line



## Annex L

### Computer Computations

A. Introduction. This annex contains the computer computations used to determine the coefficients of determination for each of the dependent (y values) and independent (x values; the US/USSR deliverable strategic nuclear relationship) variables being tested. As discussed earlier in chapter four, the computer system available to the Command and General Staff College is being used.<sup>1</sup>

This computer system uses a computer program designated "LINPLOT" to determine and express x and y values in the form of a regression line formula, line correlation and coefficients of determination. LINPLOT will also graphically print a regression plot of the x and y values, but the program does not possess the capability to print a scatter-diagram. However, a scatter-diagram is not necessary for computer operations and the lack of one does not interfere with this study.<sup>2</sup>

The regression plots of x and y values are attached as appendices 1-4. These plots are constructed with the x values (independent variables) along the horizontal axis and the y values (dependent variables) on the vertical axis. In reviewing these plots, it should be noted that the LINPLOT program does not provide for a capability of fitting the regression line to the x and y

---

<sup>1</sup> For further discussion of the use of regression analysis to determine the relationship of x and y values, see paragraph D in chapter four of this study and also V. O. Key, A Primer of Statistics for Political Scientists, New York: Thomas Crowell Co., 1971.

<sup>2</sup> For further information on the Command and General Staff College computer system, the reader is advised to contact Committee 2 of the College's Department of Command.

values. The regression line is printed as a constant in each case and the x and y values are fitted to match the regression line. This explains the apparent inconsistency in the printing of the x and y values; i.e., the US values printed on the y axis increase from the bottom to the top and from left to right on the x axis. Conversely, USSR values increase from top to bottom on the y axis and from right to left on the x axis. This is perfectly acceptable and does not detract from the accuracy of the plot.<sup>3</sup>

B. The effect of strategic nuclear weapons on the intensity peak level of US actions during US/USSR post-WW II confrontations.

(1) Data entered into the computer:

(a) x values: 9.62, 10.19, 10.26, 7.23, 5.89, 4.64, 4.78.

(b) y values (intensity peak level): 8, 19, 22, 18, 10, 18, 14.

(2) Regression line formula computed is:  $y = 12.261 + .44074(x)$ .

(3) Computed results are:

THE CORRELATION (R)--(FIT OF LINE TO DATA)-- IS .216416  
THE COEFFICIENT OF DETERMINATION (R\*\*2) IS 4.68357E-2  
WHICH MEANS THAT 4.68357% OF THE VARIATION OF THE  
Y'S CAN BE ATTRIBUTED TO THE DIFFERENCES IN X,  
NAMELY, TO THE RELATIONSHIP WITH X.

(4) The regression plot of the x and y values, with the line of regression, is attached at appendix 1.

C. The effect of strategic nuclear weapons on the intensity rate of US actions during US/USSR post-WW II confrontations.

(1) Data entered into the computer:

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<sup>3</sup>Per conversation with Major D. G. Moore of Committee 2 on February 14, 1975. Major Moore is the author of the LINPLOT program.

(a) x values: 9.62, 10.19, 10.26, 7.23, 5.89, 4.64, 4.78.

(b) y values (intensity rate): 35, 146, 71, 1187, 11, 5, 22.

(2) Regression line formula computed is:  $y = 165.543 + 6.04825 (x)$ .

(3) Computed results are:

THE CORRELATION (R)--(FIT OF LINE TO DATA)--IS  $3.49529E-2$ .  
THE COEFFICIENT OF DETERMINATION ( $R^2$ ) IS  $1.22170E-3$   
WHICH MEANS THAT .12217 % OF THE VARIATION OF THE  
Y'S CAN BE ATTRIBUTED TO THE DIFFERENCES IN X,  
NAMELY, TO THE RELATIONSHIP WITH X.

(4) The regression plots of the x and y values, with the line of regression, is attached at appendix 2.

D. The effect of strategic nuclear weapons on the intensity peak level of USSR actions during US/USSR post-WW II confrontations.

(1) Data entered into the computer:

(a) x values. Since US x values have been expressed as a numerical relationship to a unit of 1 (9.62:1, 10.19:1, etc.), to arrive at USSR x values it is necessary to divide the US value into 1. Therefore USSR x values are:  $1 \div 9.62 = .104$ ,  $1 \div 10.19 = .098$ ,  $1 \div 10.26 = .097$ ,  $1 \div 7.23 = .138$ ,  $1 \div 5.89 = .169$ ,  $1 \div 4.64 = .216$ ,  $1 \div 4.78 = .209$ .

(b) y values (intensity peak level): 10, 19, 22, 15, 10, 15, 14.

(2) Regression line formula computed is:  $y = 19.6537 + 31.5966 (x)$ .

(3) Computed results are:

THE CORRELATION (R)--(FIT OF LINE TO DATA)--IS .370148.  
THE COEFFICIENT OF DETERMINATION ( $R^2$ ) IS .137009  
WHICH MEANS THAT 13.7009 % OF THE VARIATION OF THE  
Y'S CAN BE ATTRIBUTED TO THE DIFFERENCES IN X,  
NAMELY, TO THE RELATIONSHIP WITH X.

(4) The regression plot of the x and y values, with the regression line, is attached at appendix 3.

E. The effect of strategic nuclear weapons on the intensity rate of USSR actions during US/USSR post-WW II confrontations.

(1) Data entered into the computer:

(a) x values: .104, .098, .097, .138, .169, .216, .209.

(b) y values (intensity rate): 0, 146, 72, 1515, 16, 1, 22.

(2) Regression line formula computed is:  $y = 467.451 + (-1456.02)(x)$ .

(3) Computed results are:

THE CORRELATION (R)--(FIT OF LINE TO DATA)--IS  $-.134184$ .  
THE COEFFICIENT OF DETERMINATION ( $R^2$ ) IS  $1.80053E-2$   
WHICH MEANS THAT 1.80053 % OF THE VARIATION OF THE  
Y'S CAN BE ATTRIBUTED TO THE DIFFERENCES IN X,  
NAMELY, TO THE RELATIONSHIP TO X.

(4) The regression plot of the x and y values, with the regression line, is attached at appendix 4.

Appendix 1

NW,d Effect on the US Intensity Peak Levels

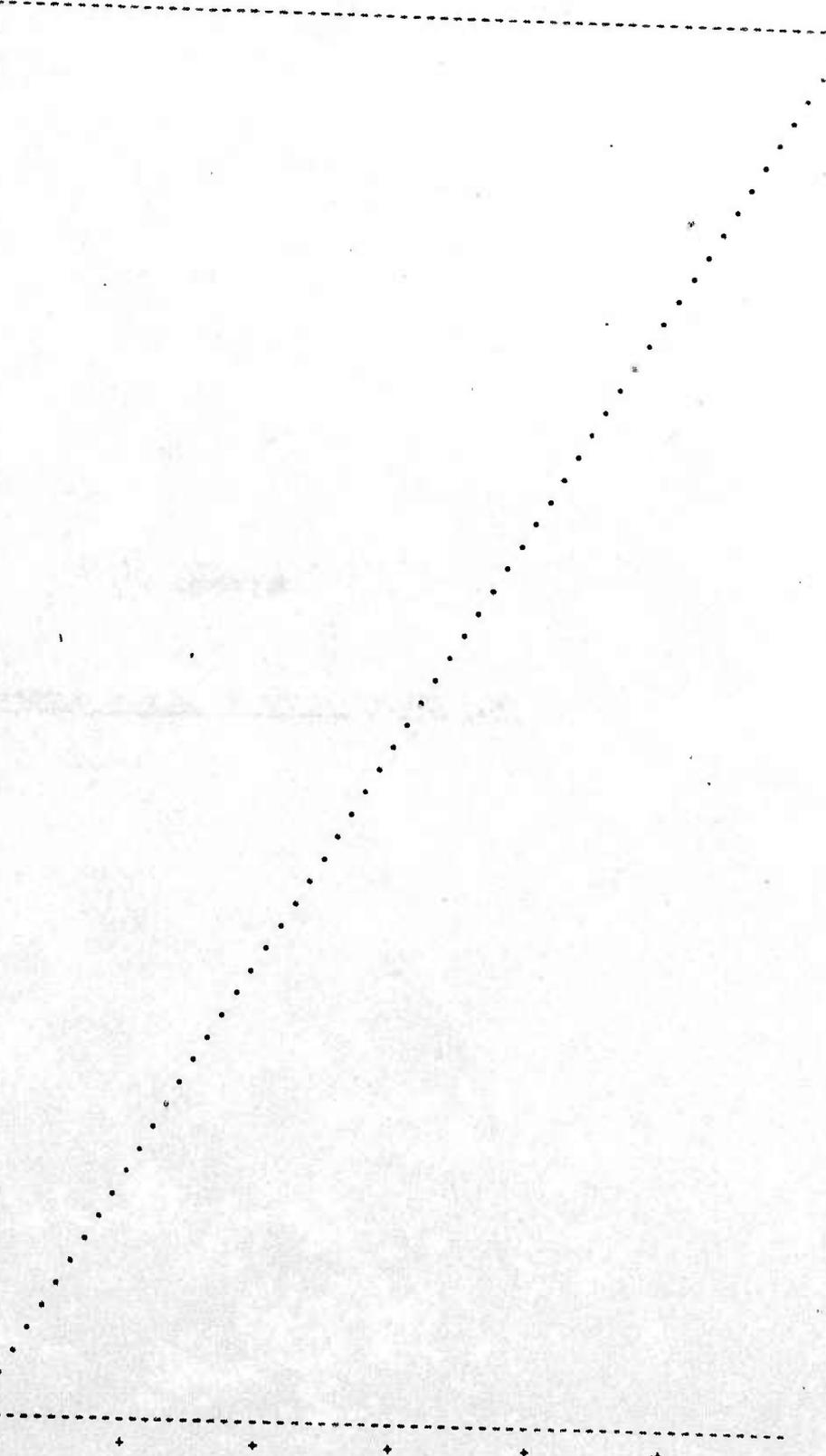
\*\*\*\*\*  
 \* LINPLOT \*  
 \*\*\*\*\*

VALUE OF Y

PL0T 0F X AND Y VALUES

16.7802  
 16.739  
 16.6977  
 16.6564  
 16.6152  
 16.5739  
 16.5327  
 16.4914  
 16.4502  
 16.4089  
 16.3676  
 16.3264  
 16.2851  
 16.2439  
 16.2026  
 16.1613  
 16.1201  
 16.0788  
 16.0376  
 15.9963  
 15.9551  
 15.9138  
 15.8725  
 15.8313  
 15.79  
 15.7488  
 15.7075  
 15.6663  
 15.625  
 15.5837  
 15.5425  
 15.5012  
 15.46  
 15.4187  
 15.3775  
 15.3362  
 15.2949  
 15.2537  
 15.2124  
 15.1712  
 15.1299  
 15.0886  
 15.0474  
 15.0061  
 14.9649  
 14.9236  
 14.8824  
 14.8411  
 14.7999  
 14.7586  
 14.7173  
 14.6761  
 14.6348  
 14.5936  
 14.5523  
 14.511  
 14.4698  
 14.4285  
 14.3873  
 14.346  
 14.3048

+ + + + + + + +  
 4.64 5.57667 6.51333 7.45 8.38667 9.32333 10  
 VALUE OF X



Appendix 2

NW,d Effect on US Escalation Rates

\*\*\*\*\*  
 \* LINPLOT \*  
 \*  
 \*\*\*\*\*

VALUE OF Y

PLOT OF X AND Y VALUES

227.598  
 227.032  
 226.465  
 225.899  
 225.332  
 224.766  
 224.199  
 223.632  
 223.066  
 222.499  
 221.933  
 221.366  
 220.8  
 220.233  
 219.667  
 219.1  
 218.534  
 217.967  
 217.401  
 216.834  
 216.268  
 215.701  
 215.135  
 214.568  
 214.002  
 213.435  
 212.869  
 212.302  
 211.736  
 211.169  
 210.603  
 210.036  
 209.47  
 208.903  
 208.336  
 207.77  
 207.203  
 206.637  
 206.07  
 205.504  
 204.937  
 204.371  
 203.804  
 203.238  
 202.671  
 202.105  
 201.538  
 200.972  
 200.405  
 199.839  
 199.272  
 198.706  
 198.139  
 197.573  
 197.006  
 196.44  
 195.873  
 195.307  
 194.74  
 194.173  
 193.607

+ + + + +  
 4.64 5.57667 6.51333 7.45 8.38667 9.32333 10  
 VALUE OF X

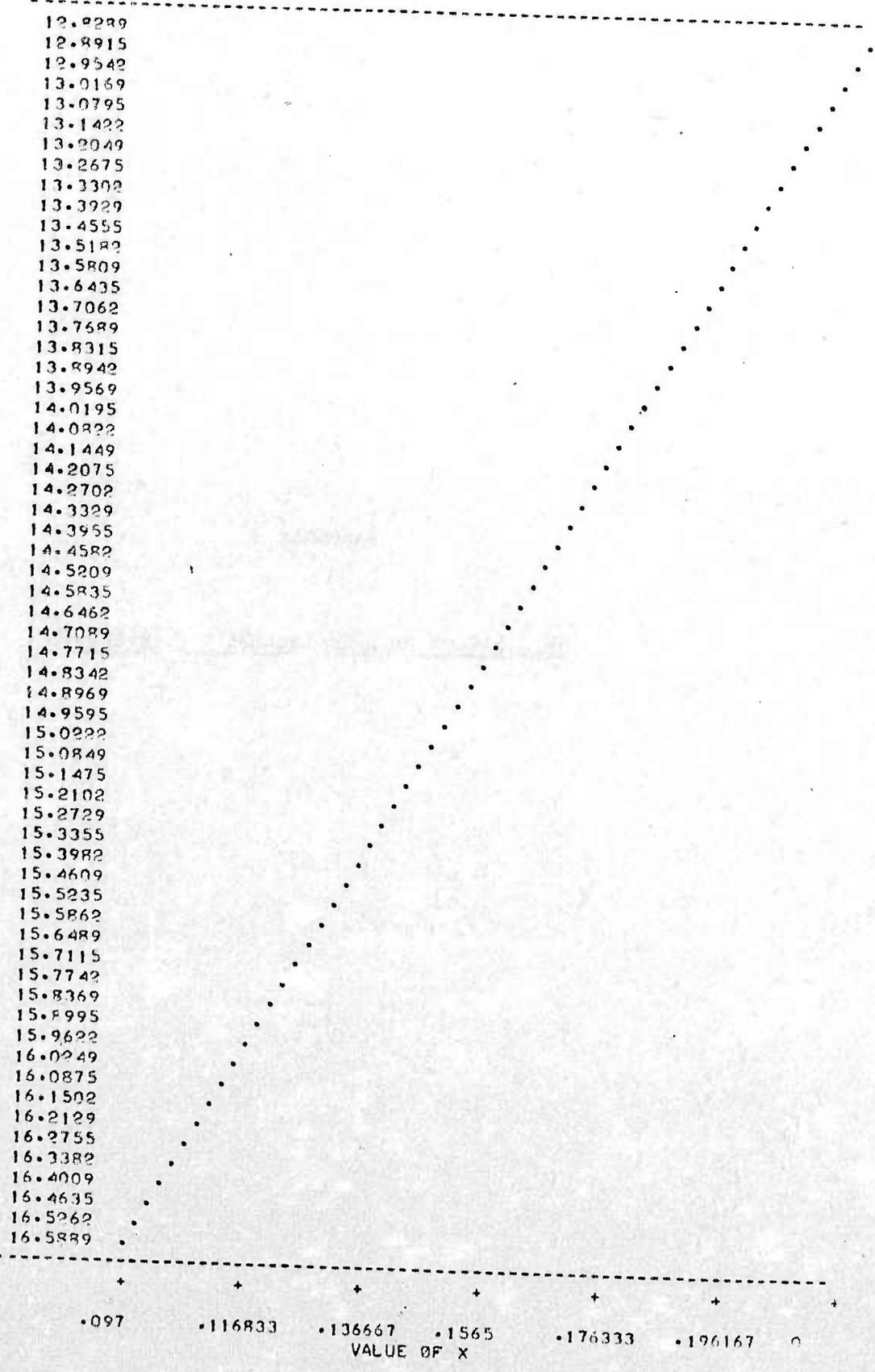
Appendix 3

NW,d Effect on USSR Intensity Peak Levels

\*\*\*\*\*  
\* LINPLOT \*  
\*\*\*\*\*

VALUE OF Y

PLOT OF X AND Y VALUES



+ + + + + + +  
 .097    .116833    .136667    .1565    .176333    .196167    0  
 VALUE OF X

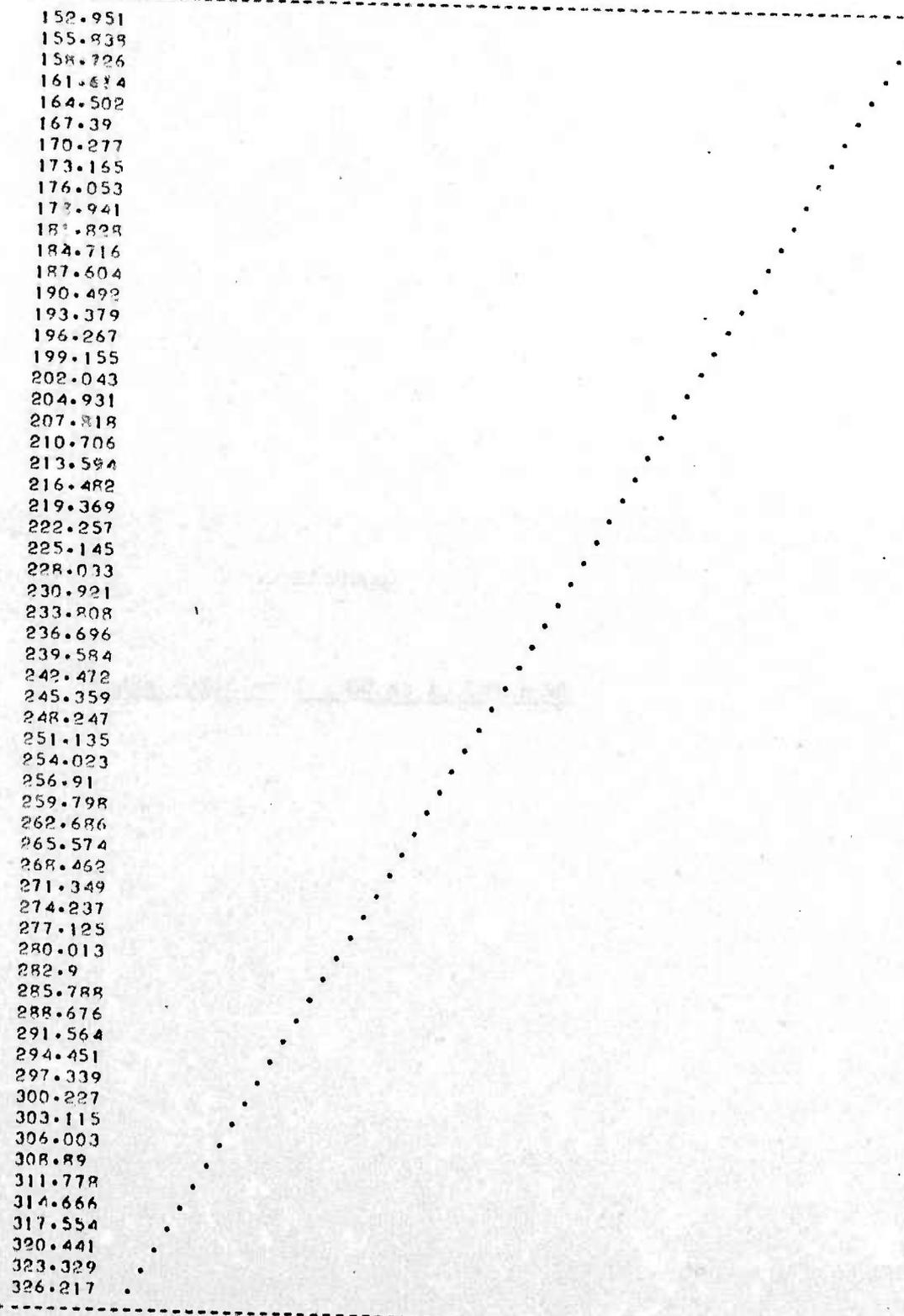
Appendix 4

NW,d Effect on USSR Escalation Rates

\*\*\*\*\*  
 \* LINPLOT \*  
 \*\*\*\*\*

PLOT OF X AND Y VALUES

VALUE OF Y



0.097 0.116833 0.136667 0.1565 0.176333 0.196167 0

VALUE OF X

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