Salt II: A Study

Daniel G. Rathbun

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SALT II: A STUDY

by

Daniel G. Rathbun

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SALT II: A STUDY

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The issue addressed in this thesis is whether the SALT II treaty, signed in 1979, should have been ratified by the United States Senate following its submission in the spring of that year. The author began by exploring the background of the arms control agreements of the late 1960s and early/mid 1970s, then explored that SALT II treaty itself in some detail. Research data were drawn from a number of sources during the compilation of this paper. The conclusion drawn in this thesis is that the SALT II treaty, in its submitted form, should not have been ratified. While the agreement contained some favorable points, these were outweighed by its overall flaws, rendering the treaty ultimately unacceptable from a strategic point of view.
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CHAPTER I

INTRODUCTION

Between 1969 and 1979 the United States and the Soviet Union engaged in a series of negotiations aimed at slowing and eventually halting the arms race. This process is generally referred to as the Strategic Arms Limitation Talks, or SALT. The goal of this effort, which spanned a decade and three presidential administrations was to find some way of freezing the arms race at the levels then current. Further additions to the superpowers' nuclear arsenals, American spokesmen argued, would only be made at an ever increasing cost and would do nothing to increase the national security of either nation.

The chief results of these negotiations were the SALT I and SALT II pacts of 1972 and 1979. The first treaty severely restricted the development and deployment of antiballistic missile systems, and put a five year limitation on the number of offensive missile systems both nations could have. It was ratified by the U.S. Senate in 1972 after fierce debate. The SALT II pact, negotiated from 1973 to 1979 was debated by the Senate in the summer and fall of the latter year. It too ran into
serious opposition from a number of senators who felt the accord restricted American strategic development too much, while not restricting the Soviet Union enough. The treaty was also opposed by a small number of liberal senators, who felt the pact was a parody of real arms control, and should therefore not be ratified.

It is the purpose of this thesis to briefly explore the background of arms control agreements in the early and mid 1970s, and then explore the SALT II treaty in some detail, analyzing the major provisions of the pact in light of the strategic positions of both the United States and the Soviet Union at that time. The paper will then turn to criticisms offered by both legislators and arms control experts during the ratification debate during the summer and fall of 1979. The general question this writer will attempt to answer is: was the SALT II accord a "good deal" for the United States? In other words, did it offer real limitations on the development and deployment of strategic weapons systems, while preserving the security of the United States?

In examining the technical points of the treaty, and by analyzing the reaction to it in the Senate, this writer hopes to develop a better understanding of the pact and why it faced the problems it did. The point of this thesis is not merely to discuss the major strategic provisions of SALT II: rather, it is an attempt to
explore the military impact of the pact, as well as the political challenges the agreement faced. The underlying question facing this student is why the treaty encountered the problems it did, and what this might imply for future strategic arms control agreements.
CHAPTER II

ARMS CONTROL IN THE 1960s

The question of placing some form of control over strategic nuclear weapons was raised in 1964, at the United Nations-sponsored disarmament conference held in Geneva, Switzerland. There, the head of the American delegation proposed that such negotiations be carried out separately from any sort of comprehensive arms control discussions.\(^1\) As to why the United States put forward such a proposal at that time leads to one possible answer: the American government realized that comprehensive negotiations were not succeeding, and hoped that by separating the issues of strategic weapons from tactical nuclear weapons, more progress could be made.

Whatever the reason, nothing came of the American effort, although a similar offer was made by Secretary of Defense Robert McNamara in 1966. During the period 1964-68, the United States finished deploying the land-based portion of its strategic nuclear triad, i.e., the Minuteman II and Minuteman III missiles; planned the deployment of a new generation of submarine-launched

ballistic missiles (SLBMs); ordered extensive research and development of Multiple Independently Targetable Reentry Vehicles (MIRV) technology; and prepared for the deployment of an anti-ballistic missile (ABM) system.

MIRV and ABM

The last two steps were probably the most significant parts of America's nuclear building at the time. By continuing research into MIRV technology (although not ordering its deployment), the United States hoped to achieve a new level of strategic stability. As the Soviet Union continued its rapid buildup of Intercontinental Ballistic Missiles (ICBMs), as well as carrying out research on its own ABM system, the fear developed that the Soviets would be able to launch a crippling first strike (see Appendix B) with their ICBMs and SLBMs. They then use their ABMs to destroy American missiles launched in a retaliatory second strike (see Appendix B). By MIRVing both ICBMs and SLBMs American strategist believed they could saturate the proposed Soviet ABM system with warheads, thus maintaining the assured destruction of Soviet industrial, military and civilian targets.²

²Ibid., pp. 161-63.
Possessing a nationwide ABM system would also serve the United States in another way. Besides the two superpowers, three other nations possessed nuclear weapons: Great Britain, France, and the People's Republic of China. Should the accidental launch of one or more missiles occur, or should the PRC decide to launch a deliberate attack with their tiny arsenal of missiles, the United States assumed it would be able to destroy the incoming missiles before they reached their targets. Thus, both the building of the ABM system as well as the Continuing research into MIRV technology were examples of what McNamara termed the "action-reaction syndrome"; the actions of one nation (the Soviet Union) causing another nation (the United States) to take steps to counter that action.

Early Treaties

The cost, complexity, and danger associated with the arms race led both superpowers, and other nations as well, to sign two treaties in the late 1960s that dealt with nuclear weapons. The first, the Outer Space Treaty of 1967, banned the deployment of nuclear weapons in space or on any celestial body, and prohibited military maneuvers or the establishment of military bases in space or on any celestial body. The following year the NonProliferation Treaty (NPT) was signed, which provided
that "Nuclear Nations" would not provide nuclear weapons or assistance in developing them, to non-nuclear states, and that the non-nuclear countries would not develop nuclear weapons on their own or accept them from other nations. In addition, the nuclear states which signed the treaty pledged to work in good faith toward ending the arms race and securing a mutual disarmament agreement. This last clause was inserted at the insistence of a number of prominent non-nuclear nations, who feared that without such an agreement one or more of the nuclear countries might be tempted to use its nuclear arsenal to blackmail other nations.3

With that additional pledge in mind, the agreement of the Soviet Union and the United States to begin talks on slowing the arms race takes on new meaning. As indicated earlier, the United States had been calling for such talks since 1964. At the Glassboro Summit of June 1967, McNamara gave a presentation to Soviet Premier Alexsei Kosygin on the possibility of bilateral negotiations on the issue. Over the next eleven months further messages were exchanged on the subject, and in May of 1968 the Soviet government agreed to hold such talks. Before a starting date could be set, however, the

Soviet invasion of Czechoslovakia in August of that year made negotiations impossible.\textsuperscript{4}

\textsuperscript{4}Ibid., pp. 132-33.
CHAPTER III

SALT I

In January of 1969, following the inauguration of newly elected president Richard Nixon, the Soviets again made the offer to begin talks aimed at curbing the arms race. At the advice of Henry Kissinger, the president's assistant for national security affairs, Nixon agreed that such talks should commence. In November of 1969 the first session of the talks began in Helsinki, Finland. Each party used the four week session to gain a better understanding of the other side's point of view.5

Between the spring of 1970 and the spring of 1972, the two negotiating teams shuttled back and forth between Helsinki, Finland and Vienna, Austria, discussing both offensive and defensive weapons systems. It was quickly realized that it would be easier to limit the latter than the former, due to two factors:

1. Neither side had developed defensive systems to the degree they had advanced their offensive systems capability.

2. Both sides seemed intent on keeping their offensive systems as unlimited as possible in order to

5Ibid., pp. 132-133.
maintain assured deterrence against the other.\textsuperscript{6}

Once that was established, the next step was to further define the categories of defensive systems both sides possessed. These systems were broken down into two subtypes:

1. Anti-aircraft,
2. Anti-missile.

The former were too highly developed and deployed to seriously limit, but the latter were still open for negotiation. Neither superpower had deployed an effective ABM system, and limiting them was viewed as aiding in deterrence. As Richard Smoke (1987), the noted security policy expert, points out:

The essence of deterrence was that each side would be confident of its ability to destroy the other's cities. If each side knew the other were prohibited by SALT from trying to defend itself against missile attacks, then each could remain confident that its current offensive forces would be sufficient for assured destruction capabilities. Further expansion and development of offensive forces would seem less desirable, and agreement to freeze them might therefore become easier.\textsuperscript{7}

The issue of limiting offensive nuclear forces proved to be a more thorny topic. Both nations had well developed systems of ICBMs and SLBMs, and the United States had a large fleet of long-range bombers. The

\textsuperscript{6}Smoke, op. cit., pp. 157-58.

\textsuperscript{7}Smoke, op. cit., p. 158.
United States also had a large number of tactical nuclear or forward based nuclear weapons systems in Western Europe and the Far East, capable of striking Soviet territory. The Soviet Union was anxious to put the FBS weapons and the intercontinental bombers on the negotiating table; the United States was reluctant to do so. American negotiators pointed to the large number of Soviet FBS weapons to justify U.S. deployment of such systems, while also arguing that American lead in bombers was offset by the Soviet lead in ICBMs and SLBMs.  

In the end, a compromise was reached on all the major issues. Two separate pacts were prepared, a permanent treaty on ABM systems, and a five year agreement on offensive weapons, designed so that a follow-up treaty could be negotiated to establish more permanent limits. Both agreements were accompanied by a number of "agreed statements" that laid out common understandings between the two countries and helped clarify specific provisions of the pact.

---


The ABM Pact

The ABM treaty consisted of sixteen articles, several of which are worth closer examination. Article Two defines an ABM system as "a system to counter strategic ballistic missiles or their components in flight trajectory" which consists of interceptor missiles, missile launchers, and ABM radars. Article Three allows for two ABM sites to be established in each country, one in the area of the capital, the other around one or more ICBM silo launchers. Each system could be no more than one hundred and fifty kilometers from the area it was designed to defend, and the two systems had to be at least thirteen hundred kilometers apart, so as not to create a regional defense system, or the beginning of a nationwide system. Furthermore, no more than one hundred missiles and missile launchers could be deployed at each site.

Rapid reloading of the ABM launchers, and air, sea, and space-based ABM systems were banned under Article Five, while Article Nine prohibited the selling, transferring, or giving of ABMs or ABM technology to other nations. Article Twelve dealt with a topic vital to arms control agreements: verification. Under the terms of the ABM treaty, and similar to terms found in other arms control agreements, "national technical means of
verification" were to be used to verify provisions of the accord. By national technical means, the signatories had in mind electronic means of verification, such as space-based satellites, monitoring stations located either in the home countries themselves or in third nations, or other intelligence gathering equipment such as the American SR-71 "spy plane." Both parties also pledged not to deliberately conceal information or interfere with the means of verifying the pact. The treaty was to be of unlimited duration. Article Fifteen, however, allowed for either or both parties to withdraw from the pact after a six month notice period, if they felt their national interests were threatened due to an "extraordinary event" connected with the treaty's provisions.10

The Interim Agreement

The interim agreement on offensive weapons was only half as long as the ABM treaty, but it aroused a great deal more controversy in the United States. To aid in understanding why the agreement met with such opposition, see Table 1. The United States and the Soviet Union were limited for five years to the number of offensive strategic nuclear missiles each had deployed or under construction as of the date of the signing of the agreement.

10U.S. ACDA, op. cit., p. 135.
Table 1

SALT I Limitations

<table>
<thead>
<tr>
<th></th>
<th>ICBMS</th>
<th>SLBMS</th>
<th>SUBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Deployed</td>
<td>1054</td>
<td>656</td>
<td>41</td>
</tr>
<tr>
<td>U.S. Limits</td>
<td>1054</td>
<td>710</td>
<td>44</td>
</tr>
<tr>
<td>S.U. Deployed</td>
<td>1618</td>
<td>740</td>
<td>56</td>
</tr>
<tr>
<td>S.U. Limits</td>
<td>1618</td>
<td>950</td>
<td>62</td>
</tr>
</tbody>
</table>

As can be seen, the Soviet Union was allowed to deploy a larger number of ICBMs and SLBMs, as well as a greater number of missile launching submarines than the United States. Both nations were allowed to increase the number of deployed SLBMs to the SALT I limit, by dismantling an equal number of old ICBMs. Both parties were pledged under Articles One and Three of the agreement not to start the construction of new ICBMs or SLBMs after signing the pact, subject to the ICBM-SLBM trade-off agreement mentioned above.\footnote{U.S. ACDA, op. cit., p. 150.}

Senate Consideration

When the interim agreement was introduced into the U.S. Senate, it immediately ran into stiff opposition from a number of senators. Many of them complained that
the pact was unfair since it gave the Soviet Union an advantage in the number of ICBMs and SLBMs, as well as in the number of missile launching submarines they could deploy. Supporters countered with argument that the American advantage in intercontinental bombers, approximately 520 to the Soviet Union's 140, outweighed this discrepancy; this reasoning still failed to win enough support to ensure the agreement's passage.

It was then that Senator Henry Jackson (D., Wash.), an expert on national security affairs, offered a compromise proposal: he sponsored an amendment that any future SALT agreement would have to contain the principle of "essential equivalence." This idea, only partially defined by Jackson, mandated an overall numerical equality in the number of strategic delivery systems both nations possessed. While vague, this proposal was enough to persuade wavering senators to support passage of the SALT I accord. This compromise did not bode well for the future of arms control, however; "essential equivalence" was a doctrine that could be interpreted in more than one way, and could be difficult to achieve. For instance, American missiles were more accurate; Soviet missiles carried larger warheads; how was equivalence to be determined between these two variables?\(^\text{12}\)

\(^{12}\)Smoke, op. cit., pp. 160-161.
CHAPTER IV

MIRVs AND THE VLADIVOSTOK ACCORDS

Before continuing with an examination of the SALT II pact, mention should be made of two events that preceded this second major arms control agreement. The first was the technological breakthrough that led to the deployment of Multiple Independently Targetable Reentry Vehicles (MIRVs) on American, then Soviet, Missiles. The second was the so-called Vladivostok Accord, signed between Soviet General Party Secretary Leonid Brezhnev and President Gerald Ford in the late fall of 1974. Each of these events affected the future of the proposed SALT II accord. MIRV technology added a new complication to ensuring the Jackson doctrine of essential equivalence would be written into the proposed treaty, while the Vladivostok Accord helped clarify negotiating parameters for each side.

MIRV Technology

MIRV technology had been researched since the late 1960s, first in the United States and later in the Soviet Union. In the early 1970s the Americans began to deploy MIRVed warheads on both their SLBMs and ICBMs. In part
this helped offset the growing Soviet advantage in the number of missiles each side was deploying, and was meant to counter the possibility that the Soviets would develop nationwide ABM network that could threaten the American assured destruction capability, the basis of deterrence. By developing a large number of MIRVed missiles the United States could offset the advantage of a Soviet ABM system by being able to launch a far greater number of warheads than the Soviets could hope to shoot down. This also helped keep American defense expenditures at a more reasonable level, since it was far cheaper to build and deploy a large number of warheads than an equal number of single warhead missiles.

The development of MIRVed missiles, however, complicated the planning for arms control negotiations. The United States, knowing that it had a three to five year lead over the Soviet Union in MIRV technology, and interested in rectifying a perceived imbalance in strategic weapons, was committed to deploying MIRVed missiles. Once the United States had completed its testing program and began to deploy MIRVed warheads, the Soviet Union refused to consider any ban on the testing or deploying of MIRVs. It quickly became impossible to limit the number of MIRVs, leaving open for negotiation only a limit on the number of missiles carrying MIRVs. After the acceptance of the Jackson amendment, MIRVs also
appeared as a possible answer to the problem of ensuring essential equivalence for the United States - but even this possibility was threatened by the Soviet deployment of MIRVed missiles that began during the Ford administration.¹³

Following the resignation of President Nixon in 1974, the Ford administration decided to press ahead with the second stage of SALT talks. Subsequent to the compromise worked out in 1973-74 between the two negotiating teams, the Ford administration continued to compromise on the subject of negotiations. SALT I had excluded both intercontinental bombers and forward based systems but the Soviet Union continued to press for their inclusion. The United States eventually agreed to the Soviet demand in the matter of FBS but it steadfastly refused to yield on the subject of SAC bombers. In going halfway, the U.S. achieved that part of the Jackson doctrine that called for numerical equality in the number of launch vehicles.

Since the Soviet Union was not inclined to destroy already-deployed ICBMs and SLBMs, the 500 or so American long-range bombers made the two sides' forces roughly equal in number. Excluding FBS weapons also allowed both parties to sidestep the thorny issue of placing limits

¹³Mayers, op. cit., pp. 80-81.
not only on American theater forces capable of reaching
the Soviet Union (the Soviet wish) but also of placing
limits on Soviet theater weapons capable of hitting
targets in Western Europe, South Korea, and Japan (the
American wish). By setting up entirely separate
negotiations on these weapons, the whole question of
limiting tactical nuclear weapons could be sidestepped,
at least for a while.\textsuperscript{14}

The Vladivostok Accords

When Ford and Brezhnev met in Vladivostok in
November of 1974 they were thus able to sign a joint
accord that laid out the principles of a SALT II
agreement both confidently expected would be finished
within six months to a year's time. The preliminary
levels set by the Accord were high; so high in fact, that
even after minor reductions called for were implemented
by both sides, each would still possess a larger nuclear
force than before the SALT process had begun. The
details of the Accord appear in Table 2.

\textsuperscript{14}Smoke, op. cit., pp. 169-171.
Table 2
Launch Vehicle Limitations

<table>
<thead>
<tr>
<th>Vehicle Type</th>
<th>Strategic Launch</th>
<th>MIRVed</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Limit</td>
<td>2400</td>
<td>1320</td>
</tr>
<tr>
<td>S.U. Limit</td>
<td>2400</td>
<td>1320</td>
</tr>
</tbody>
</table>

New ICBM launchers were banned, and it was decided that the new agreement would run through 1985. Negotiations for the SALT II treaty seemed well within reach, but two problems arose that complicated matters. The issue of cruise missiles was first; these were relatively small missiles that flew at an extremely low altitude and were thus able to avoid radar detection. Capable of carrying a warhead over thousands of miles and delivering it with great accuracy, the cruise was a formidable weapon, difficult to shoot down and far less expensive than a standard ballistic missile or a long range bomber. The Soviets, knowing that the United States had a sizable lead on them in the development and deployment of these weapons, demanded that any cruise missile with a ranger greater than 600 kilometers be counted as a strategic launch vehicle and come under the 2400 limit for such vehicles, as agreed to in the Vladivostok Accord. This the United States refused to
concede to. The second major obstacle to an early agreement was the development of a new Soviet bomber, called the "Backfire" in the United States. This new addition to the Soviet arsenal began to enter active service in late 1974 and a debate immediately began over just what kind of plane it was.

The Soviets contended that it was a medium range bomber since it could not fly round-trip missions to the United States without being refueled in mid-flight. American negotiators countered with the argument that the new bombers' range could be extended by such refueling techniques exactly like the American B-52 which was counted as a long-range bomber by both sides. Alternatively, the Soviet bomber could fly a one-way mission and land in Cuba or some other nearby country to refuel before flying back to the Soviet Union. The United States had similar bases in the Far East and in Turkey, for use by the B-52 in wartime. Therefore, American negotiators demanded that the Backfire be counted as a strategic launch vehicle and that it come under the Accord's limits. The Soviets refused to concede this and the deadlock continued throughout 1975.


16Ibid., pp. 6-7.
With the arrival of 1976 a bitter primary fight developed between Ford and his Republican challenger, former California governor Ronald Reagan. The president, hard pressed by his opponent, found it impossible to offer any possible concessions on the bomber issue for fear of losing ground - and possibly his party's nomination - to Reagan.
CHAPTER V

THE CARTER ADMINISTRATION

Ultimately, Ford's reelection bid was unsuccessful, and January 1977 saw the inauguration of a new president, the former governor of Georgia, Democrat Jimmy Carter. The new chief executive was strongly committed to the arms control process, and he appointed a number of advisors (equally committed to SALT) to high positions with the new administration. These included Secretary of State Cyrus Vance, and Paul Warnke, chief SALT negotiator and head of the Arms Control and Disarmament Agency. Both men were dedicated to the concept of arms control and had a less fearful view of the Soviet Union and its intentions than some of the officials in the Nixon and Ford administrations. Basic differences in the negotiating positions of the Ford and Carter administrations are examined in a later chapter.

Early Carter Proposals

In March 1977, in an effort to break the deadlocked talks, Carter sent Vance to Moscow with two proposals to

present to the Soviet government. The first proposal was
drawn largely from the two and a half year old
Vladivostok Accord, and retained the numerical limits on
strategic weapons while deferring talks on cruise
missiles and the Backfire bomber until a later date. The
Soviets rejected this proposal on the grounds that the
American lead in cruise missile technology gave the
United States a military advantage over the Soviet Union.

The second proposal was more bold and innovative.
In it, the United States proposed the following:

1. Each nation's strategic launcher totals would be
reduced to either 2200 or 1800 from the current accepted
ceiling of 2400.

2. MIRV limits would be cut from 1320 to 1200 or
1100.

3. The sublimit (see Appendix B) on MIRVed, ICBM
launchers would be lowered from 820-550.

4. All Soviet SS-17s, 18s, and 19s would be
included in the 550 sublimit mentioned above.

5. The Soviet Union could deploy only 150 Modern
Large Ballistic Missiles (MLBMs), instead of their then
deployed total of 308.

6. Both sides would freeze deployment of existing
ICBMs, ban modification programs of existing ICBMs, and
ban the deployment of all new ICBMs.
7. No mobile ICBMs could be tested, developed, or deployed.

8. Each side could hold no more than six flight tests annually for both ICMBs and SLBMs.

9. All cruise missiles with a range greater than 2500 kilometers would be banned from deployment on non-heavy bombers.

10. Cruise missiles with a range greater than 600 kilometers would be banned from deployment on non-heavy bombers.

11. The Soviet Union would be required to provide assurances that the Backfire bomber could not be deployed against the United States.

12. Building new ICBM launchers at new locations would be prohibited.  

The Soviet Union rejected this proposal. Moscow argued that it was unfair because it restricted the deployment of their ICBM system without imposing restrictions on U.S. SLBMs. The greater part of the existing Soviet nuclear arsenal was tied up in land-based ICBMs; United States forces were more evenly distributed among the three legs of the nuclear triad. Though Vance's trip was clearly a failure, neither side was willing to forego negotiations, which resumed in Geneva.

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18Ibid., pp. 26-27.
some time later. The bold, innovative second proposal of March was quickly abandoned by the Carter administration in favor of more "realistic offers."\textsuperscript{19}

As the fall of 1977 approached, the expiration date of the five year interim agreement on SALT I began to loom. First the United States, then the Soviet Union, announced they would continue to abide by the terms of the agreement, provided that the other party agreed to do so. Over the next year and a half of negotiations, terms were set on the structure of the proposed SALT II agreement. A three-tiered system was established that allowed for different issues to be treated in different ways. Most of the issues would be settled using the Vladivostok Accord which called for sub-ceilings on certain delivery systems. Several more contentious issues were made the subject of a shorter-term agreements, while a third document covered the status of the Backfire bomber. At this time it seems appropriate to summarize the relevant articles of the SALT II treaty as it was signed in June 1979.

\textsuperscript{19}Smoke, op. cit., p. 174; Lehman and Weiss, op. cit., p. 16.
CHAPTER VI

THE SALT II TREATY

Selected Articles

Article Two dealt with the basic terminology that would be used throughout the treaty. It provided definitions for a number of weapon delivery systems, such as ICBM, SLBM, cruise missile, and heavy bombers. This was important, as both parties needed to agree on identical meanings for key concepts discussed in the pact. Article Three specified the total number of ICBMs, SLBMs, heavy bombers, and Air to Surface Ballistic Missiles (ASBMs) both sides could deploy when the treaty went into effect. Paragraph two of that article discussed the minimal cuts each side would make after a set period of time. This article showed how the Carter administration's high hopes for large scale reductions in armaments had to be reduced in the face of Soviet opposition. Instead of the 15 to 20 percent cut in strategic launchers envisioned in the March 1977 proposal, the United States had to be satisfied with a cut of just over five percent. Even this reduction was delayed in order to give the Soviet Union time to phase
out its older missiles and bombers, as it apparently had already planned to do.20

Article Four was one of the most important in the treaty. It began with a pledge by both sides not to build any new, or relocate any old, fixed ICBM launchers. The article did not ban the construction of new missiles, only of new missile launchers. Both parties pledged not to develop or deploy any new heavy ICBMs, defined as those missiles that "have a launch weight greater than, or a throw weight greater than . . . the heavy ICBMs deployed by either Party." (SALT II treaty, Article IV, section 7). Since the Soviet Union was the only party that possessed a large number of such missiles, this paragraph could be construed as being one-sided, in that it prevented the United States from building up its dwindling, aging fleet of heavy ICBMs to match the 308 new ones the Soviet Union had deployed. Each side was, however, allowed to develop and deploy one new type of light ICBM, although it was the opinion of Warnke that particular clause could have been dropped from the treaty had the United States insisted upon it. Instead, the deployment option was maintained, in order to provide

some flexibility in future deployment decisions. Neither side was allowed to deploy more than ten warheads on any ICBM, fourteen warheads on any SLBM, or 28 cruise missiles on any long-range bomber. This article had the effect of placing at least some limits on the number of warheads deployed by each side.

Article Five deals with another crucial topic: the sublimits placed on the various types of strategic delivery vehicles that each side could deploy. The following chart, based on information provided in Articles Three and Five, may prove useful in understanding the various limits:

1. 1982 total of combined strategic nuclear delivery vehicles - ICBMs, SLBMs, heavy bombers, and ASBMs, 2250.

2. **Sublimit I:** of the 2250 total, neither side may have more than a combined total of 1320 of the following types:

   (a) Launchers of MIRVed ICBMs.

   (b) Launchers of MIRVed SLBMs.

   (c) Heavy bombers equipped with long-range cruise missiles.

---


d. MIRVed ASBMs.

3. **Sublimit II:** of the subtotal of 1320, neither side may deploy more than a combined total of 1200 of the following types:

   - (a) Launchers of MIRVed ICBMs.
   - (b) Launchers of MIRVed SLBMs.
   - (c) MIRVed ASBMs.

4. **Sublimit III:** of the subtotal of 1200, neither side may deploy more than 820 launchers of MIRVed ICBMs.

The highest limits were placed on weapons that were considered to be the least destabilizing, namely unMIRVed ICBMs and bombers not equipped with cruise missiles. The lowest limit was put on the weapon category the United States viewed as the most threatening: MIRVed ICBMs. Interestingly, each side was allowed to "trade down" between sublimits. For example, fewer ICBMs might be deployed in favor of more SLBM launchers, as long as the two categories together did not exceed 1200. Alternatively, more bombers equipped with cruise missiles could be deployed as long as fewer ICBMs and SLBMs were deployed, and as long as the combined total did not exceed 1320.23

Article Six attempted to lay out guidelines to ensure that delivery systems not covered by the initial

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terms of the treaty could not be converted into systems that would be qualitatively better and still remain outside the agreement. It also defined what different stages of development arms systems could be in to be counted under the treaty at the time it was scheduled to go into effect. As shown in paragraphs two through five, attention was even given to defining what constituted a converted or completed submarine, ICBM, or an ASBM-equipped bomber.  

A study of the first several articles of the SALT II treaty reveals several references to Article Nine. This article deals with a variety of missile basing modes both parties wished to ban or restrict. Seabed or space-based weapons were strictly prohibited, as was the testing and deployment of long-range MIRVed cruise missiles. Future deployment of SLBMs and ASBMs were limited to missiles no larger than the light ICBMs both sides had deployed as of the spring of 1979. By banning the deployment of heavy mobile ICBMs as well as space and water-bed based ballistic and cruise missiles, both sides apparently sought to avoid extending the arms race in new directions, as well as restricting the deployment of ICBMs in modes that would make them harder to detect, thus jeopardizing the strategic balance. The

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restrictions on long-range air-based MIRVed cruise missiles helped reassure the Soviet Union, which still lagged behind the United States in both cruise missile and MIRV technologies, that the Americans would be prevented from deploying a weapon the Soviets regarded as destabilizing.25

Finally, Article Fifteen refers to one of the most delicate parts of any arms control treaty—verification. The SALT II accord, like its predecessor, was to be verified through "national technical means of verification"; this refers to space-based satellites, and air and shipborne electronic equipment, as well as a limited number of ground-based monitoring stations. The treaty specifically prohibits deliberate interference with the collection of data necessary to help verify the treaty, or to use "deliberate concealment measure" which could also interfere with data collection.

A problem arises however with the second "common understanding" to the third paragraph of this article. In it, both parties agree they are free to use different methods of transmitting data, including the encryption of such information. This encryption involves transmitting the data in code, in order to foil attempts by another

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country to translate the information. This proviso would seem to contradict the ban on deliberate concealment measures contained in the text of the treaty. This concern, among others, relating to verification, was raised by opponents of the treaty during its consideration by the Senate, and will be examined in a subsequent chapter.

The SALT II Protocol

Attention will now be given to the shorter term protocol that was also signed in June 1979. This document also placed certain limits on the deployment of certain types and classes of weapons, although these limitations were for a shorter period of time than those set by the formal treaty. This apparently reflected the desires of both parties to keep their deployment options open during the early 1980s. The two most important clauses in the protocol were the bans on the deployment of sea-launched and land-launched cruise missiles equipped with either single warheads or MIRVs, and the bans on the deployment of mobile ICBMs and ASBMs. At the time the protocol was signed, neither side had either mobile ICBMs or long-range and sea- and ground-launched cruise missiles, nor could either have deployed them

26 U.S. ACDA, op. cit., pp. 266-267; Minnice, op. cit., p. 16.
before the expiration of the protocol. No restrictions were placed on the range, development, flight-testing, or deploying of air-launched cruise missiles, which the United States viewed as crucial in extending the usefulness of American long-range bombers.  

The Backfire Statement

Finally, there was the matter of the Soviet Backfire bomber. Mention has already been made of the dispute over whether to count this plane as an intermediate or long-range bomber, and how the decision was made to count it under the former category. At the conclusion of the SALT II negotiations, the Soviet delegation issued a statement that declared the Soviet government would not increase the then current rate of production of the plane (believed by the United States to be about thirty per year), and not deploy it in those parts of the Soviet Union where its range would make it most effective in striking American targets. This commitment has the same force as both the treaty and the short term protocol in the eyes of the United States; thus, if the Soviet Union were to violate the terms of the statement, the United

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27Minnice, op. cit., p. 17.
States would have grounds for charging the Soviets with a violation of the SALT II treaty.\textsuperscript{28}

Potential Impact of SALT II

What was the impact of the agreement in light of the strategic positions of both the United States and the Soviet Union in the late 1970s?

1. To begin with, both countries were limited as to the number of warheads they could deploy on their ICBMs and SLBMs, these numbers begin ten and fourteen per missile, respectively. This was designed to prevent either side from "loading up" their missiles with twenty or thirty lower yield MIRVed warheads, and especially affected the Soviet Union, which had begun testing its ICBMs with these larger payloads. The problem with this limitation was that it was impossible to verify through normal means that the warhead limits were actually being observed. Assuming that both sides did abide by the terms of the treaty, however, it would place a definite limit on the total number of strategic warheads deployed by the two superpowers.

2. The throw weight—the combined weight of all warheads, guidance equipment, and penetration aids—carried by each ICBM and SLBM was limited to that of the

\textsuperscript{28}Irwin, op. cit., p. 24; Minnice, op. cit., p. 16.
largest missile each side had deployed at the time of the treaty. This would prevent either party from deploying larger missiles (in theory) that could carry a larger number of more powerful warheads.

3. In addition, during the life of the treaty neither side could deploy more than one new type of ICBM, and this addition had to fall into the light ICBM category. This new type should be distinguished from a new generation of missile, the later being merely a newer version of an already existing missile type, with similar payload and propulsion characteristics. This limit to one new type would effectively prevent either side from deploying a new heavy ICBM, capable of carrying a large number of heavy yield (megaton range) warheads. At the time the treaty was signed, it was assumed that the Soviet Union would deploy a new single warhead missile to replace its older SS-9s and IIs. The United States was already committed to the deployment of the Missile Experimental, MX missile, designed to carry ten MIRVed warheads, the maximum allowable payload under the terms of the treaty. The MX was originally designed to be a mobile missile; it was hoped that by deploying such a weapon, the deterrence value of the land-based leg of the nuclear triad would be greatly enhanced.

4. Neither country, in the short term, would be allowed to deploy a mobile IBCM, which each side had the
capability of doing in the long term—the Soviet Union with its SS-16 missile, the United States with its MAP basing mode for the MX. This restriction would only apply through the end of 1981, however, when the protocol to the treaty would expire. As a mobile basing mode made the task of tracking and targeting an ICBM harder, it would be preferred basing mode for each side; thus each part gained and lost by the decision to ban such basing modes in the short term.

5. Long-range bombers carrying long-range air-launched cruise missiles (ALCMs) were included in the 1320 sublimit on offensive delivery systems, along with MIRVed ICBMs and SLBMs. Since the latter two categories have a combined permissible total deployment of 1200, the United States would be prevented from deploying more than 120 ALCM-equipped bombers without scaling back on its deployment of ICBMs and SLBMs. The Soviet Union, lagging approximately three to five years behind on cruise missile technology, would be faced with the same dilemma. Whether either side would choose to sacrifice any of their MIRVed ballistic missiles was debatable; these weapons were generally regarded as high priority for deployment, and would not be given up without good cause. On the other hand, 120 ALCM-equipped bombers would constitute a formidable second-strike weapon in their own right. With each bomber carrying 28 cruise missiles, and
assuming that only half survived a first strike, that would still leave either side with slightly over 1500 accurate, though low-yield, warheads for use in a retaliatory strike. Thus, the treaty limits the number of ACLM-equipped bombers both sides could deploy; yet each was still allowed a significant number of such strategic launch vehicles. The Soviet Union undoubtedly benefitted more than the United States, however; the comprehensive Soviet air defense network would have a far easier time of tracing and destroying incoming American bombers than the almost non-existent American air defense system.

6. The SALT II treaty did not cover so-called "grey area" weapons systems that both sides deployed around the world. The small British and French nuclear arsenals, American nuclear-equipped FB-111 bombers, 100 Soviet intermediate range SS-20 missiles, and a number of medium range Soviet bombers were all excluded from the agreement.
CHAPTER VII

CARTER NEGOTIATING POSITIONS

The negotiating positions assumed by the Ford and Carter administrations require the realization that there were differences between them in their pursuit of strategic arms reduction. Ford and his Secretary of State, Kissinger, developed a balanced group of advisors to aid them in strategic negotiations. Carter, on the other hand, staffed every subcabinet post of SALT significance with disarmament advocates. No conservatives, Democrat or Republican, were to be found among the inner circle of Carter's SALT advisors. An examination of the two administrations' negotiating positions, while certainly showing evidence of continuity, also reveals a number of differences on several key issues. The Carter administration revealed a willingness to make unilateral concessions and compromises in pursuit of disarmament.

This disarmament advocacy began to make itself apparent early on in the Carter administration. After the Soviet rejection of the second proposal of March, 1977—which had enjoyed strong bipartisan support from Congress--the Carter administration seemed more
interested in making concessions aimed at winning Soviet approval than in negotiating from a position of strength. For example, the treaty's positions on the cruise missile and the Backfire bomber were in line with Soviet demands on topics, as was the position on the issue of heavy ICBMs, as well as the decision to permit the encryption of missile test data. At the same time, the Carter administration made several strategic decisions that delayed or eliminated programs aimed at aiding in the American strategic buildup. First came the shutting down of the Minuteman III production line, followed by the slowdown of the MX program, cancellation of the Thomahawk cruise missile and the B-1 bomber, and a slowdown in the Trident submarine program. None of these unilateral concessions at the negotiating table or at the Pentagon met with Soviet reciprocation.29

The following is a comparison of the strategic programs and policies of the Ford and Carter administrations (see Table 3), based on data presented at both the negotiating table and to Congress.30

29Lehman and Weiss, op. cit., pp. 105-106.
<table>
<thead>
<tr>
<th>ISSUE</th>
<th>CARTER</th>
<th>FORD</th>
</tr>
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<tbody>
<tr>
<td># of strategic launchers</td>
<td>2400 at first;</td>
<td></td>
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<tr>
<td></td>
<td>2250 by Dec. 1982</td>
<td>2150</td>
</tr>
<tr>
<td># of MIRVed systems</td>
<td>1320, including B-52s w/ALCMs</td>
<td>Same</td>
</tr>
<tr>
<td>Limit on MIRVed ICBMs and SLBMs</td>
<td>1200</td>
<td>No sublimit; freedom to mix</td>
</tr>
<tr>
<td>Limit on MIRVed ICBMs</td>
<td>820</td>
<td>No sublimit; freedom to mix</td>
</tr>
<tr>
<td>Limit on MLBMs</td>
<td>Soviets-308, U.S.-none</td>
<td>Same</td>
</tr>
<tr>
<td>Mobile basing for ICBMs</td>
<td>Prohibited by the Protocol</td>
<td>No restrictions</td>
</tr>
<tr>
<td>New ICBM types</td>
<td>U.S.-one new type</td>
<td>No restrictions</td>
</tr>
<tr>
<td></td>
<td>plus 2 being deployed</td>
<td></td>
</tr>
<tr>
<td>New ballistic missile submarines</td>
<td>No restrictions, Trident</td>
<td>Same, no delay</td>
</tr>
<tr>
<td></td>
<td>Trident program delayed</td>
<td>in Trident program</td>
</tr>
<tr>
<td>New SLBMs</td>
<td>No restrictions, reduce</td>
<td>Same; maintain for</td>
</tr>
<tr>
<td></td>
<td>funding Trident II</td>
<td>funding for Trident II</td>
</tr>
<tr>
<td>B-1</td>
<td>Cancelled</td>
<td>Full production</td>
</tr>
<tr>
<td>Backfire</td>
<td>No limitation</td>
<td>Soviets limited to maximum deployment of 275</td>
</tr>
<tr>
<td>ACLMs</td>
<td>Banned on non-heavy bombers</td>
<td>Same</td>
</tr>
<tr>
<td></td>
<td>On heavy bombers, bomber</td>
<td></td>
</tr>
<tr>
<td></td>
<td>counts in MIRV totals</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No more than 28 ACLMs per plane</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nuclear and conventional ACLMs restricted</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Restrict sharing of technology w/NATO</td>
<td></td>
</tr>
<tr>
<td>Sea Launched Cruise Missiles (SLCMs)</td>
<td>Deployment banned except SLCMs w/a range</td>
<td>Range Limited to 2500 km</td>
</tr>
<tr>
<td></td>
<td>under 600 km</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nuclear and conventional SLCMs restricted</td>
<td>No restrictions on conventionally armed SLCMs</td>
</tr>
<tr>
<td></td>
<td>Restrict technology sharing w/NATO</td>
<td></td>
</tr>
<tr>
<td>Ground Launched Cruise Missiles (GLCMs)</td>
<td>Same as for SLCMs</td>
<td>Same as for SLCMs</td>
</tr>
<tr>
<td>Older strategic bombers</td>
<td>Modified Soviet Bear and Bison bombers do</td>
<td>Modified Bears and Bison do count against Soviet total</td>
</tr>
<tr>
<td></td>
<td>not count against Soviet total</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mothballed U.S. B-52s count against U.S.</td>
<td>Mothballed B-52s do not count against U.S. Total</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
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CHAPTER VIII

SENATE CONSIDERATION

Finally, the SALT II treaty was submitted to the U.S. Senate for ratification. Initially, it was assigned to the Foreign Relations and Armed Services Committees, where it was the subject of exhaustive scrutiny over a period of several months. John Lehman, a strategic policy analyst, was witness to what he termed "The Great SALT debate." He writes:

"Literally hundreds of hours were spent by administration and nongovernmental witnesses in arguing the case for and against the treaty. By the time the Senate went home for Thanksgiving recess in November, it had become clear that it would be impossible to obtain the necessary two-thirds majority to ratify the treaty in its existing form."^{31}

Indeed, the Armed Services Committee issued its final report on December 20, 1979, that rejected the treaty wholesale, without a single dissenting vote. It would appear that the senators agreed with the conclusions of the House Armed Services Committee panel that stated that the treaty was: "a cosmetic domestic political symbol,

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^{31}Lehman and Weiss, op. cit., p. 96.
which neither limits strategic arms, enhances security, deters war, nor maintains the strategic balance."\textsuperscript{32}

Interestingly, opposition to the pact appeared to come from two different sources within the Senate. The first, and larger, group was composed of those conservative senators who opposed the treaty on national security grounds. Senators such as Jesse Helms (R., N.C.), Richard Lugar (R., Ind.), and Henry Jackson (D., Wash.) claimed that the accord was weighted in favor of the Soviet Union, and did little, if anything, to improve the security of the United States. They advocated the treaty's rejection, and called instead for a buildup of American strategic nuclear forces. The second group, led by Senator William Proxmire (D., Wis.), was smaller, and was composed of a number of liberal senators who decried the treaty as being a parody of real arms control. This group felt SALT II, like SALT I before it, imposed only marginal constraints at best on the development of new weapons systems. Furthermore, whatever constraints were imposed were purchased at the price of allowing the military establishment on both sides to develop and build new weapons systems, which would only further destabilize the strategic balance between the two superpowers. When totaled together, representatives of both groups numbered

between forty-five and fifty--well over the one third plus one minority needed to defeat the treaty. The Soviet invasion of Afghanistan in December of 1979 spelled the end of SALT II in the United States; the Senate was not inclined to ratify an arms agreement with a nation that was in the process of invading one of its neighbors. When combined with alliance of conservatives and liberals in the Senate who had originally opposed the treaty, the Carter administration was forced to withdraw the pact in January 1980.\textsuperscript{33}

\footnotesize{\textsuperscript{33}Irwin, op. cit., pp. 27-28; Lehman and Weiss, op. cit., p. 96.}
CHAPTER IX

SALT II: STRATEGIC SURVIVAL OR SURRENDER?

It is now time to examine the SALT II treaty from a strategic point of view, to look at the objectives and assumptions of the SALT process and decide whether the accord was a "good deal" for the United States or not. It must be noted that this is difficult to determine. Obviously both sides of the SALT debate advanced arguments that they felt were convincing, and that effectively refuted the arguments put forward by their opponents. In this portion of the thesis, the main assumptions of the SALT process will be listed, as well as the primary objectives of the SALT II treaty itself. Closer examination will then be given to each assumption and objective, to see how much validity it had, and to attempt to answer the basic question: Would ratification of SALT II, or rejection of it, be more likely to move the United States away from the twin dangers of nuclear instability on the one hand and political ascendancy by the Soviet Union on the other—and thus towards greater security?
Assumptions and Objectives of the SALT Process

There were five assumptions made about the SALT process that originated with the Nixon administration in 1969-70. These were:

1. SALT would save money on defense spending.

2. SALT would slow or stop the development of technology that would destabilize the military balance.

3. SALT would increase military stability between the superpowers.

4. SALT would slow the nuclear arms race considerably.

5. SALT would place a cap on Soviet strategic forces.  

Three basic objectives were also quickly established for the SALT II treaty by President Nixon's original negotiating team, in the aftermath of the SALT I agreement; these objectives were accepted in turn by the Ford and Carter administrations. They were:

1. Place equal limits on the nuclear capabilities of both sides.

2. Secure significant reductions in offensive nuclear forces.

3. Secure limits that were verifiable. 

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34Lehman and Weiss, op. cit., p. 5.

35Lehman and Weiss, op. cit., pp. 82-84.
With these two lists in mind, it is now time to examine the assumptions given above:

1. **The SALT process would save dollars:** The theory behind this assumption was that as treaties limiting nuclear weapons went into effect, this would result in a savings in the annual defense budget. Paul Warnke went so far as to maintain that if the SALT process failed to restrain the amount of money spent by the United States on strategic weapons systems, the negotiators should be sent "back to the drawing board." with instruction to do their jobs better the second time around. Three problems arose concerning this assumption, however.

   (a) Strategic expenditures comprised less than ten percent of the overall defense budget; thus the potential for saving large amounts of money was severely restricted.

   (b) Both SALT I and SALT II tended to exclude strategic systems already on the drawing board. Thus these systems, which comprised the bulk of the American strategic budget, would not be eliminated, and the money budgeted for them would be spent anyway.

   (c) If the nuclear arsenals on both sides were to be reduced, increased conventional spending would undoubtedly be called for, in order to compensate for the perceived conventional imbalance between the United States and the Soviet Union. Conventional weapons tend
to be more expensive than strategic systems thus seemingly wiping out whatever minor savings might have occurred.

In short, by the late 1970s officials who had confidently expected to realize defense savings were now saying that this would not come about. As Cyrus Vance noted in the spring of 1978: "the cost of an adequate defense will remain high," and furthermore: "for the foreseeable future, arms control will not dramatically reduce our defense budget."36 Liberal opponents of SALT even charged that SALT would ultimately stimulate U.S. strategic programs. George Rathjens, a leading arms control advocate, argued that new strategic systems were bound to be developed as negotiations continued, either to strengthen the negotiating position of one part or the other, or to appease influential domestic groups, such as the defense establishment or not appear as though this first assumption was valid.37

2. SALT would slow or stop technological development: This assumption has at least two problems that a study of the SALT process reveals:

(a). No real restraints were placed on weapons technology as a result of SALT I or SALT II. MIRVed

36 Vance, Cyrus, address to the American Society of Newspaper Editors, April, 1978, in Lehman and Weiss, op. cit., p. 84.

37 Rathjens, George, in Lehman and Weiss, op. cit., p. 84.
warheads, cruise missiles, improved targeting systems, improved guidance systems—all were researched, developed and deployed during the 1970s. The cutting edge of technology both sides sought to deploy tended to be protected in two agreements reached during the period. When constraint was shown, it was quite often unilateral on the part of the United States. The cancellation of the neutron warhead, the B-1 bomber, and the closing down of the Minuteman III production line, as well as the slowdown of the MX and Thomahawk cruise missile programs—all tended to restrain American strategic technological deployment, without any sign of Soviet reciprocity.

(b) The second problem with this assumption is that it is self-defeating. Restricting strategic technology might not necessarily stabilize the military balance; a case can be made that the improvements in technology have proven to be more stabilizing than restrictions. For example, the placing of ICBMs in underground silos removed for over a decade the threat of their being destroyed in a first strike. Initially deployed in a soft, above ground configuration, these missiles were extremely vulnerable to a preemptive attack. By moving them into hardened underground silos (a technological breakthrough), ICBMs became more secure, removing the necessity to "use them or lose them" in the event of nuclear crisis. Improvements in the SLBMs also increased
the security of the sea-based leg of the strategic triad, thus enhancing strategic stability. The development of Permissive Action Links (PALs), a computerized device that prevents the unauthorized launching of an ICBM, is another example of how technological development helped stabilize the strategic balance. In essence, the restraining, or cutting off entirely, of technological development should be viewed as misguided at best, and dangerous at worst.³⁸

3. SALT increases military stability: Those who support the SALT process claimed that the chance of war was lessened and strategic stability enhanced by the acceptance of SALT, and in particular, SALT II. The problem with this arises when one realizes that if SALT does not enhance strategic stability, the chance of war is not reduced. The question as to whether SALT II did enhance strategic stability is open to question and will be explored below.

4. SALT will slow the arms race appreciably: The question immediately comes to mind: "What arms race?" The phrase conjures up and image of both superpowers frantically building more and more missiles, bombers, and submarines, each keeping pace with the other. The fact is that the Soviet Union engaged in these activities

³⁸Lehman and Weiss, op. cit., pp. 84-86.
throughout the 1970s, while the United States largely did not. The construction of manned bombers and ICBMs in this country was halted in 1967; the building of ballistic missile submarines continued, but slowed during the 1970s. The Soviet Union continued the rapid buildup of all three types of delivery systems throughout the same two decade period. How could any SALT agreement end a race that by any reasonable definition was no arms race at all? If SALT was intended to stop the Soviet Union, or even force a retrenchment on their part, it failed there as well.\footnote{Lehman and Weiss, op. cit., pp. 82-84.} That leads us to the final assumption of the SALT process.

5. **SALT will place a cap on Soviet strategic forces:** If this were true, then an argument could be made that the SALT process was worthwhile. But is this indeed the case? As will be explored in this thesis, there is little evidence to show that a cap of any sort has been placed on the growth of Soviet strategic forces as a result of the SALT process. Long-range bombers, ICBMs, ballistic missile submarines—all continue to churn off Soviet production lines throughout the 1970s.
Objectives of the SALT Process

The three publicized objectives of the SALT II treaty were as follows:

1. Place equal limits on the nuclear capabilities of both sides.
2. Secure significant reductions in offensive nuclear forces.
3. Secure limits that were verifiable.

The fulfillment of these objectives served as the whole raison d'etre for the pact, and failure to achieve them would seem to undermine any reason for its acceptance. With this list in mind, it is now time to further examine these objectives:

1. SALT II will place equal limits on both sides nuclear capabilities: This was supposed to be accomplished by establishing clearly defined limits on the number of launch vehicles each side could possess—ICBMs, SLBMs, ASBMs, and intercontinental bombers. Certain categories of weapons and certain specific types of delivery systems were exempt from this process; this led to criticism by opponents of the treaty, as will be discussed later.

Advocates of the SALT pact argued that the treaty achieved this objective through the ceilings and subceilings imposed by the agreement. They also argued,
as Paul Warnke did, that without the treaty, the Soviet Union would deploy far more delivery systems than the 2250 allowed by the treaty—possibly as many as 3000 or 3500, by 1985. They also argued that the Soviets would be forced to dismantle some 250 delivery systems in order to meet the treaty's target figures, while the United States, with approximately 2050 such systems, would have the ability to increase its strategic forces under the terms of the overall ceiling.40

The restraints placed on launchers are real; of that there can be no doubt. The question arises when one considers the number of warheads each side possessed at the time. In 1979 the United States had 1054 ICBMs, carrying approximately 2100 warheads. The Soviet Union had 1400 ICBMs equipped with approximately 7000 warheads; in megatonnage, the Soviets held a lead of approximately five to one. In addition, 308 of the Soviet ICBMs were in the so-called heavy category, carrying ten one-megaton MIRVed warheads each; the United States was barred by SALT II from deploying anything comparable. These heavy ICBMs were excellent first strike weapons, powerful and accurate enough to destroy even the hardened silos that housed the American ICBM force—and yet these missiles

represented less than twenty-five percent of the Soviet ICBM force.\textsuperscript{41} And while it is true the Soviet Union was obliged to dismantle approximately 250 launchers to meet the treaty's terms, the most obvious choice for such dismantling were their oldest ICBM systems, which were rapidly becoming obsolete.

In SLBMs, the Soviet lead was 950 to 624 for the United States. While approximately 500 of the United States' SLBMs were MIRVed, compared to half as many for the Soviet Union, the latter still held a four to one advantage in the number of ballistic missile submarines it was allowed to deploy, a limit of 62, while compared to the American limit of 44.\textsuperscript{42}

The question of long-range bombers is more difficult to determine. By the terms of the treaty, the 316 American B-52s, and the 150 Soviet Bisons and Bears were counted as being intercontinental bombers. Excluded from the treaty were 75 FB-111s deployed by the United States, and approximately 140 Backfire bombers deployed by the Soviet Union. There was agreement that the FB-111 was a medium range bomber, and therefore not subject to the treaty's constraints; disagreement arose over the classification of the Backfire. The Soviet Union insisted that

\textsuperscript{41}Rostow, in Lineberry, op. cit., pp. 134-135.

\textsuperscript{42}Minnice, op. cit., p. 39.
it was a medium range bomber as well, and the Carter administration ultimately accepted this declaration. Critics such as Henry Jackson charged that it was not, however, and argued instead that it could assume an intercontinental role with the aid of mid-air refueling--like the B-52. These critics further pointed to the fact that while the Carter administration had cancelled production of the B-1, scheduled as the replacement of the aging B-52, the Soviet Union was continuing steady production of the Backfire.43

In summary, was the objective of placing equal limits on both sides nuclear capabilities actually achieved? The answer is an ambiguous yes and no. While an equal limit was placed on the number of launchers each side could deploy, the Soviet Union had a clear advantage in the number of warheads it had deployed. In addition, the exclusion of the Backfire bomber from the treaty allowed the Soviets to deploy a plane that many critics argued was a strategic weapon (see Appendix B), and thus should have come under the terms of the pact. In short, the first objective of the treaty was achieved in only the most technical of senses.

If equal limits were not effectively established, then what about the second objective of the treaty?

2. **SALT** will achieve significant reduction in both superpowers' stockpiles of strategic weapons: The original proposal made by the Carter administration in March 1977 might have led to the achievement of this goal, but the proposal was withdrawn after sharp Soviet criticism of it. Instead, after another two years of negotiations, the SALT II treaty was signed. This had the effect of reducing the number of strategic launch vehicles by 250—all on the Soviet side—while allowing them to continue the MIRVing of their ICBM and SLBM forces, increasing the number of deployed warheads by several thousand. The United States, through the Carter administration's decision to cancel or slow down a number of strategic programs did delay any sharp increase in American strategic weaponry, but did not reduce the stockpile. Thus, this key objective was clearly not fulfilled.

Finally, attention must be paid to the third and last principle objective to SALT II.

3. **SALT will secure verifiable limits on both sides' nuclear arsenals:** This was one of, if not the most, hotly debated topics of the SALT II debate. For the record, it would be useful to examine the principal points on verification covered by the SALT II accord. Verification was to have been by national technical means, including the use of spy planes, photo-
reconnaissance satellites, and ground-based monitoring stations. Both sides agreed not to use deliberate concealment methods that would impede verification, or to interfere with each others' national technical means.

**Counting Rules**

Along with the verification procedures mentioned above, certain counting and distinguishing rules were written into the agreement along with certain constraints on specific systems, all designed to aid in verification of MIRV limits. Both parties agreed that once a missile had been tested with MIRVs, then all missiles of that type were to be considered to be equipped with MIRVs, whether they actually were or not. In addition, if a launcher contained or test-fired a MIRVed missile, then all launchers of that type would be counted as launchers of MIRVed missiles, and thus come under the 1320 sublimit contained in the treaty. A further constraint was sought against the Soviet SS-16, an ICBM very similar to the mobile SS-20 Intermediate Range Ballistic Missile (IRBM). Since the treaty prohibited the conversion of IRBM and Medium Range Ballistic Missile (MRBM) launchers into launchers for ICBMs, and since mobile ICBMs were also prohibited, the Soviets agreed not to produce the SS-16,
since it would be impossible to verify whether or not an
SS-20 launcher contained an SS-20 or an SS-16.44

Supporters of the SALT II agreement argued that its
verification measures were not only as good as could be
achieved through negotiation, they were also more than
adequate to ensure that the Soviets could not cheat on
the treaty. Carter, in a speech given before the
American Newspaper Publishers Association in April 1979,
stressed the importance of verifiability in the accord.
He stated bluntly:

No objective has commanded more attention in
our negotiations. We have insisted that the
SALT II agreement be made verifiable. We are
confident that no significant violation of the
treaty could take place without the United
States detecting it.45

He went on to claim that photo-recon satellites could
accurately count the number of missile silos, submarines,
and long-range bombers deployed by the Soviet Union, each
backed up by ground-based observation stations, and other
"sensitive intelligence techniques" whose nature could
not be disclosed. He concluded by claiming, as already
noted, that deliberate concealment measures by either
side were strictly prohibited under the terms of the
treaty, and that the two parties would provide one

44 Minnice, op. cit., p. 11.

45 Carter, Jimmy, Address to the ANPA, from
Department of State Publication 8981, General Foreign
another with data on the numbers of strategic weapons each had deployed, and the payload each carried—the first time the Soviets had agreed to such an exchange of data.46

SALT advocates, like Paul Warnke and Jan Lodal, seized on remarks like this, and by other top administration officials, to argue that the pact was sufficiently verifiable to warrant ratification. National technical means, combined with other "sensitive techniques" would enable American strategists to detect any major violations of the pact in time to take unspecified countermeasures. In addition, this reassurance would be reinforced by what they termed to be a strong Soviet interest in abiding by the terms of the accord and thus keeping the SALT process alive.

**Treaty Loopholes?**

In response to this, opponents of the SALT II pact like Eugene Rostow and Henry Jackson raised a host of objections, the essence of which was that the pact left too many loopholes to be adequately verified. Since it could not be verified, it should therefore not be ratified. An example of their objectives would be the article limiting missile launchers. Contrary to popular

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belief, neither SALT I nor SALT II limited the number of ballistic missiles either side could deploy; they limited the number of missile launchers instead. During the SALT I negotiations this was seen as irrelevant, since once a missile was fired the launcher became unusable. However, shortly after the SALT I accord was ratified, the Soviet Union began the deployment of two new ICBMs, the SS-17 and the SS-18. Both missiles used a "cold launch" technique, wherein compressed gas was used to pop the missile out of the silo before its engines were fired by remote control. This allowed a launch silo to be used repeatedly.47

If the Soviet Union were to stockpile additional missiles, this would give them an advantage in the number of deployed ICBMs. After all, critics argued, being able to verify holes in the ground did not mean being able to verify how many missiles the Soviets had actually build and had ready for deployment. Even though the treaty prohibited this kind of stockpiling (Article IV, section five, subsection b), this is inherently unverifiable; without stringent on-site inspection of all 458 SS-17 and SS-18 silo sites, it would be impossible to verify whether or not the Soviets were stockpiling missiles in excess of the treaty's limits. Furthermore, the pact

47Lehman and Weiss, op. cit., p. 69.
says nothing about the stockpiling of missiles at sites other than missile silos. Again, it would be impossible to verify whether this was actually occurring without on-site inspection of the suspected areas.

**Ambiguous Definitions**

Loose definition was another way the Soviets attempted to circumvent the treaty, according to its critics, such as Rostow and Jackson. As an example, they cited the agreement reached in the SALT I accord that banned either side from deploying heavy ICBMs in light ICBM launchers. Unfortunately, the Soviet Union refused to join the United States in issuing a joint definitive statement on precisely what constituted a heavy ICBM, leading the Americans to issue a unilateral statement saying that they understood a heavy ICBM to be "any ICBM having a volume significantly greater than that of the largest ICBM now operational on either side."\(^{48}\) SALT negotiator Gerald Smith even testified before Congress that Soviet deployment of missiles bigger than their SS-11s in their light missile launchers would be regarded as a violation of the SALT pact by the United States.\(^{49}\)

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\(^{49}\) U.S. Congress, Congressional Budget Office, SALT and The U.S. Strategic Forces Budget, in Lehman and Weiss, op. cit., p. 70.
Shortly after the pact was ratified by the Senate, the Soviets began deploying SS-17 and SS-19 missiles in SS-11 launch silos. The SS-19 had a volume 53 percent greater than the SS-11, and a throw-weight four to five times as large. The SS-17 had a throw-weight three to four times as large. SALT supporters were obliged to argue that this did not violate the letter of the treaty; SALT opponents claimed that there was no need to—the treaty was so loosely worded that the Soviets did not have to violate it in order to circumvent its intent. In SALT II, the same loose definition tactic was employed by the Soviets to skirt around the clause limiting both sides to the deployment of one new ICBM. SALT opponents charged the American negotiators with having accepted too loose a definition of what constituted a new ICBM, instead of insisting on a stricter definition.

**Double-Use Objects**

A final way the Soviets were alleged to have slipped around verification guarantees was to build something forbidden, or limited by the treaty, and then claim not to use it in the manner that the treaty forbade. As an example, the Soviet Union began deployment of the SS-20, and IRBM, in 1977. Fully loaded, it fell just under the minimum range limit for an ICBM as specified by SALT II. If its payload were to be reduced, its range would be
increased, making it capable of striking the United States.

SALT II critics charged that it was impossible to verify whether or not the SS-20 was equipped as an IRBM or an ICBM, by the verification methods set out in the treaty. The same charge was leveled against the Backfire bomber, which a number of reputable defense experts claimed had an operational range of 8000 kilometers, far exceeding the 5500 kilometer figure established by the treaty as the minimal range for an intercontinental bomber.50 And yet the Soviets insisted that the Backfire was only a medium bomber, and therefore did not come under the treaty's formal limits. Without on-site verification, the critics charged, there was no way to determine whether or not the Soviets were telling the truth. In addition, the Soviet Union had test-fired long-range ALCMs from the Backfire less than a week after the Secretary of Defense stated that if the plane was used as a tester or carrier of such missile, it would have to come under the terms of the treaty.51 Again, it was impossible to verify whether the Backfire was equipped with the missiles or not, under the verification procedures outlined in SALT II.

50Lehman and Weiss, op. cit., p. 75.

51Lehman and Weiss, op. cit., p. 77.
The Soviets also constructed approximately 150 missile silos in violation of Article Four of the treaty. The Soviets at first declined to say what the silos were for, then claimed that they were command and control facilities for other missile silos. Unable to verify whether or not this was indeed the case, the United States accepted the Soviet claim at face value, ignoring the possibility that the Soviets might be preparing to deploy an additional 150 ICBMs, in clear violation of SALT II.

Data Encryption

Finally, the problem of data encryption divided the supporters and opponents of SALT II. On one hand, the treaty forbade the use of any concealment measures that would interfere with the national technical means of verification used to verify the terms of the pact. On the other hand, the treaty also permitted the parties to use encryption during the transmitting of telemetric information. At first, the United States insisted that encryption not be allowed; in the face of Soviet resistance to this, the idea was dropped. Telemetry encryption denied the United States the ability, in part, to verify the treaty; how could American analysts know the content of the telemetry encrypted by the Soviets? There is no way to tell, with any high degree of
accuracy. just what specific telemetric information the Soviets were transmitting; the treaty thus sanctified a method that could only be used to help evade its terms.52

CHAPTER X

CONCLUSIONS ON SALT II

The SALT II treaty was the crowning achievement of a decade-long effort to achieve detente with the Soviet Union. Putting aside the question of how valid the entire process of detente was, a far simpler one presents itself: was the SALT II treaty, in its submitted form worth the effort that had one into it? Should it, in fact, have been ratified by the Senate? To its supporters, the treaty was a useful step on the road to controlling the arms race, a further strand in the web of mutually beneficial agreements linking the United States and the Soviet Union. To its critics, the treaty was a mockery of genuine arms control, full of loopholes that would enable the Soviets to violate the spirit of the pact, even if they remained within the technical limits of the agreement. And yet, any treaty that two or more parties negotiate should be written in such a way that neither side gains an undue advantage through it, or is left with so much maneuvering room that they can violate either the letter or the spirit of the accord. Was SALT II such a treaty? In this writer's opinion, no. The intentions of the successive American negotiators were
good, but the final result of their work was badly flawed.

On three major points the specific terms of the treaty can be called into account. The first is the area of heavy ICBMs. Allowing the Soviet Union to deploy 308 SS-18s, with a combined megatonnage greater than that of our ICBM and SLBM forces combined, and prohibiting a similar weapons system to the United States is ludicrous, and worse, potentially destabilizing. Giving up equal rights to such a powerful weapon makes their future reduction and elimination far more difficult, if not improbable. The method of dealing with the Backfire bomber is the second area of concern where the treaty runs into difficulty. The weight of the evidence is that this modern bomber has an intercontinental range, and yet the SALT II treaty exempts these planes from any realistic restraints.

Finally, the handling of verification is extremely questionable as well. SALT II forbids the deliberate interference with national technical means of verification, yet permits the encryption of missile test data, a substantial interference with American verification efforts. Thus the treaty not only codified a unilateral Soviet right to heavy ICBMs and legitimized the Backfire bomber as being free from limitations, but it also legitimized Soviet efforts to interfere with United States verification efforts.
In brief, eleven years of negotiation produced three major arms control agreements of questionable worth, the last of which was so flawed as to prove unacceptable "as wa" to the U.S. Senate. This same eleven year period also saw a buildup of Soviet strategic forces that continued unabated, while the United States lagged far behind in its own buildup (see Appendix C). Indeed, during the latter part of the 1970s the Carter administration engaged in a wholesale gutting of modernization programs in the United States strategic arsenal while vigorously pursuing completion of the SALT II accord. To answer the question posed at the beginning of this paper, was SALT II a "good deal" for the United States? No. The treaty as submitted contained too many loopholes to adequately serve the national security needs of the United States at that time.

Beyond SALT II

In the aftermath of the failure of the SALT II treaty, Carter tried to revive the concept of arms control. But the mood of the public, as well as the mood of the Senate, was against him. The presidential election of 1980 brought Ronald Reagan into the White House. Reagan, a conservative Republican, was publicly skeptical about the value of arms control, and had opposed the ratification of SALT II. Claiming that the
United States was falling behind the Soviet Union militarily, he embarked on a military buildup that saw the Defense Department's budget nearly double in four years.

Abroad, the Soviet Union went through three leaders in rapid succession--Brezhnev, Yuri Andropov, and Konstantin Chernenko--before the Communist Party selected the comparatively youthful Mikhail Gorbachev as the country's new leader.

The arms talks--renamed START, for Strategic Arms Reduction Talks--continued to pursue a two-track policy of negotiating on both strategic and tactical nuclear weapons. For a while, it appeared as if the talks would flounder on the issue of Euromissiles. These were medium range missiles that the United States sought to deploy in Western Europe to counter a perceived Soviet buildup of similar weapons in Eastern Europe and the Western part of the Soviet Union. Negotiations eventually resumed, however, and while talks on strategic weapons failed to produce an agreement, discussions on the Intermediate Range Forces, or INF, ultimately proved to be successful. After a number of false starts and two brief summit meetings between the two leaders, Reagan and Gorbachev met in Washington D.C. in December of 1987 to sign the INF accord. This treaty mandated the destruction of all
medium and intermediate range nuclear missiles in the arsenals of both the United States and the Soviet Union.

The irony in this landmark agreement is that it was signed by Ronald Reagan, the man who had been one of the leading critics of the arms control process throughout the 1970s. It might be argued that the SALT process and SALT II helped prepare the way for the INF accord. If this is true, then SALT--and SALT II--did serve a useful purpose. While it still would not justify the ratification of SALT II, it does partially serve to redeem that flawed treaty.
Appendix A

Selected Articles - SALT II
ARTICLE II:

For the purpose of this treaty:

1. Intercontinental ballistic missile launchers are land-based launchers of ballistic missiles capable of a range in excess of the shortest distance between the northeastern border of the continental part of the United States of America and the northwestern border of the continental part of the territory of the Union of Soviet Socialist Republics, that is, a range in excess of 5500 kilometers.

2. Submarine launched ballistic missile launchers are launchers of ballistic missiles installed on any nuclear-powered submarine or launchers of modern ballistic missiles installed on any submarine, regardless of its type.

3. Heavy bombers are considered to be:
   a. currently for the United States of America, bombers of the B-52 and B-1 types, and for the Union of Soviet Socialist Republics, bombers of the Tupolev 95 and Myasischev types.
   b. in the future, types of bombers which can carry out the mission of a heavy bomber in a manner similar or superior to that of bombers listed in subparagraph (a) above;
   c. types of bombers equipped for cruise missiles capable of a range in excess of 600 kilometers; and
   d. types of bombers equipped for ASBMs.

4. Air to Surface Ballistic Missiles (ASBMs) are any such missiles capable of a range in excess of 600 kilometers and installed in an aircraft or on its external mountings.

5. Launchers of ICBMs and SLBMs equipped with multiple independently targetable reentry vehicles (MIRVs) are launchers of the type developed and tested for launching ICBMs or SLBMs equipped with MIRVs.
6. ASBMs equipped with MIRVs are ASBMs of the types which have been flight tested with MIRVs.

7. Heavy ICBMs are ICBMs which have a launch weight greater or a throw weight greater than that of the heaviest, in terms of either launch weight or throw weight, respectively, of the light ICBMs deployed by either Party as of the date of signature of this treaty.

8. Cruise missiles are unmanned, self-propelled, guided, weapon delivery vehicles which sustain flight through the use of aerodynamic lift over most of their flight path and which are flight tested from or deployed on aircraft, that is air launched cruise missiles, or such vehicles which are referred to as cruise missiles in subparagraph 1(b) of Article IX.

ARTICLE III

1. Upon entry into force of this treaty, each Party undertakes to limit ICBM launchers, SLBM launchers, heavy bombers, and ASBMs to an aggregate number not to exceed 2400.

2. Each Party undertakes to limit from January 1, 1981, strategic offensive arms referred to in paragraph 1 of this Article to an aggregate number not to exceed 2250, and to initiate reductions of those arms which as of that date would be in excess of that aggregate number.

3. Within the aggregate numbers provided for in paragraph 1 and 2 of this Article and subject to the provisions of this Treaty, each Party has the right to determine the composition of these aggregates.

4. For each bomber of a type equipped for ASBMs, the aggregate numbers provided for in paragraphs 1 and 2 of this Article shall include the maximum number of such missiles for which a bomber of that type is equipped for one operation mission.

5. A heavy bomber equipped only for ASBMs shall not itself be included in the aggregate numbers provided for in paragraphs 1 and 2 of this Article.

6. Reductions of the numbers of strategic offensive arms required to comply with the provisions of paragraph 1 and 2 of this Article shall be carried out as provided
for in Article XI.

ARTICLE IV:

1. Each Party undertakes not to start construction of additional fixed ICBM launchers.

2. Each Party undertakes not to relocate fixed ICBM launchers.

3. Each Party undertakes not to convert launchers of light ICBMs or of ICBMs of older types deployed prior to 1964, into launchers of heavy ICBMs of types deployed after that time.

4. Each Party undertakes in the process of modernizing and replacing ICBM silo launchers not to increase the original internal volume of an ICBM silo launcher by more than thirty-two percent. Within this limit, each Party has the right to determine whether such an increase will be made through an increase in the original diameter or in the original depth of an ICBM silo launcher, or in both of these dimensions.

5. Each Party undertakes:
   a. not to supply ICBM launcher deployment areas with intercontinental ballistic missiles in excess of a number consistent with normal deployment, maintenance, training, and replacement requirements.
   b. not to provide storage facilities for or to store ICBMs in excess of normal deployment requirements at launch sites of ICBM launchers.
   c. not to develop, test, or deploy systems for the rapid reload of ICBM launchers.

6. Subject to the provisions of this Treaty, each Party undertakes not to have under construction at any time strategic offensive arms referred to in paragraph 1 of Article III in excess of numbers consistent with a normal construction schedule.

7. Each Party undertakes not to develop, test, or deploy ICBMs which have a launch-weight greater or a throw-weight greater than that of the heaviest, in terms of either launch-weight or throw-weight, respectively, of the heavy ICBMs deployed by either Party at the date of
signature of this Treaty.

8. Each Party undertakes not to convert land-based launchers of ballistic missiles which are not ICBMs into launchers for launchers for launching ICBMs, and not to test them for this purpose.

9. Each Party undertakes not to flight-test or deploy new types of ICBMs, that is, types of ICBMs not flight-tested as of May 1, 1979, except that each Party may flight-test and deploy one new type of light ICBM.

10. Each Party undertakes not to flight-test or deploy ICBMs of a type flight-tested as of May 1, 1979, with a number of reentry vehicles greater than the maximum number of reentry vehicles with which an ICBM of that type has been flight-tested as of that date.

11. Each Party undertakes not to flight-test or deploy ICBMs of the one new type permitted pursuant to paragraph 9 of this Article with a number of reentry vehicles greater than the maximum number of reentry vehicles with which an ICBM of either Party has been flight-tested as of May 1, 1979, that is ten.

12. Each Party undertakes not to flight-test or deploy SLBMs with a number of reentry vehicles greater than the maximum number of reentry vehicles with which an SLBM of either Party has been flight-tested as of May 1, 1979, that is, 14.

13. Each Party undertakes not to flight-test or deploy ASBMs with a number of reentry vehicles greater than the maximum number of reentry vehicles with which an ICBM of either Party has been flight tested as of May 1, 1979, that is, 10.

14. Each Party undertakes not to deploy at any one time on heavy bombers equipped for cruise missiles capable of a range in excess of 600 kilometers a number of such cruise missiles which exceeds the product of 28 and the number of such heavy bombers.

ARTICLE V:

1. Within the aggregate numbers provided for in paragraph 1 and 2 of Article III, each Party undertakes to limit launchers of ICBMs and SLBMs equipped with MIRVs, ASBMs
equipped with MIRV, and heavy bombers equipped with
missiles capable of a range in excess of 600
kilometers to an aggregate number not to exceed 1320.

2. Within the aggregate number provided for in paragraph
1 of this Article, each Party undertakes to limit
launchers of ICBMs and SLBMs equipped with MIRVs and
ASBMs to an aggregate number not to exceed 1200.

3. Within the aggregate number provided for in paragraph
2 of this Article, each Party undertakes to limit
launchers of ICBMs equipped with MIRVs to an aggregate
number not to exceed 820.

4. For each bomber of a type equipped for ASBMs equipped
with MIRVs, the aggregate numbers provided for in
paragraph 1 and 2 of this Article shall include the
maximum number of ASBMs for which a bomber of that type
is equipped for one operational mission.

5. Within the aggregate numbers provided for in paragraphs
1, 2, and 3 of this Article and subject to the
provisions of this Treaty, each party has the right
to determine the compositions of these aggregates.

ARTICLE VI

1. The limitations in this Treaty shall apply to those
arms which are:
a. Operational

b. In the final stages of development

c. In reserve, in storage, or mothballed.

d. Undergoing overhaul, repair, modernization, or
conversion.

2. Those arms in the final stages of construction are:
a. SLBM launchers on submarines which have begun sea
trials.

b. ASBMs after a bomber of a type equipped with such
missiles has been brought out of the shop, plant,
or other facility where its final assembly or
conversion for the purpose of equipping it with
such missiles has been performed.

c. other strategic offensive arms which are finally
assembled in a shop, plant, or other facility after they have been brought out of the shop, plant, or other facility where their final assemble has been performed.

3. ICBM and SLBM launchers of a type not subject to the limitation provided for in Article V, which undergo conversion into launchers of a type subject to that limitation, shall become subject to the limitation as follows:
   a. Fixed ICBM launchers when work on their conversion reaches the stage which first definitely indicates that are being converted.
   b. SLBM launchers on a submarine when that submarine first goes to sea after that conversion has been performed.

4. ASBMs on a bomber which undergoes conversion from a bomber of a type equipped for ASBMs which are not subject to the limitation provided for in Article V into a bomber of a type equipped for ASBMs which are subject to that limitation when the bomber is brought out of the shop, plant, or other facility where such conversion has been performed.

5. A heavy bomber of a type not subject to the limitation provided for in paragraph 1 of Article V shall become subject to that limitation when it is brought out of the shop, plant, or other facility where it has been converted into a heavy bomber of a type equipped for cruise missiles capable of a range in excess of 600 kilometers. A bomber of a type not subject to the limitation provided for in paragraph 1 or 2 of Article III shall become subject to that limitation and to the limitation provided for in paragraph 1 of Article V when it is brought out of the shop, plant, or other facility where is has been converted into a bomber of a type equipped for cruise missiles capable of a range in excess of 600 kilometers.

6. The arms subject to the limitations provided for in this Treaty shall continue to be subject to those limitations until they are dismantled, are destroyed or otherwise cease to be subject to these limitation under procedures to be agreed upon.

7. In accordance with the provisions of Article XVII, the Parties will agree in the Standing Consultative
Commission upon procedures to implement the provisions of the Article.

ARTICLE IX:

1. Each Party undertakes not to develop, test, or deploy:
   a. Ballistic missiles of a range in excess of 600 kilometers for installation on waterborne vehicles other than submarines, or launchers of such vehicles.
   b. Fixed ballistic or cruise missile launchers for emplacement on the ocean floor, on the seabed, or on the beds of internal waters or inland waters, or in the subsoil thereof, or mobile launchers of such missiles, which move only in contact with the ocean floor, the seabed, or the beds of internal waters and inland waters, or missiles for such launchers;
   c. Systems for placing into Earth orbit nuclear weapons or any other kind of weapon of mass destruction, including fractional orbital missiles;
   d. Mobile launchers of heavy ICBMs;
   e. SLBMs which have a launch-weight greater, or a throw-weight greater than that of the heaviest, in terms of either launch-weight or throw-weight, respectively, of the light ICBMs deployed by either party as of the date of signature of this Treaty.
   f. ASBMs which have a launch-weight greater, or a throw-weight greater than that of the heaviest, in terms of either launch-weight or throw-weight, respectively, of the light ICBMs deployed by either party as of the date of signature of this Treaty.

2. Each Party undertakes not to flight-test from an aircraft cruise missiles capable of a range in excess of 600 kilometers which are equipped with multiple independently targetable warheads and not to deploy such missiles on aircraft.

ARTICLE XV:

1. For the purpose of providing assurance of compliance with the provisions of this Treaty, each Party shall use national technical means of verification at its
recognized principles of international law.

2. Each Party undertakes not to interfere with the national technical means of verification of the other Party operating in accordance with paragraph 1 of this Article.

3. Each Party undertakes not to use deliberate concealment measures which impede verification by national technical means of compliance with the provisions of this Treaty. This obligation shall not require changes in current construction, assembly, conversion, or overhaul practices.

SELECTED ARTICLES - SALT II PROTOCOL:

ARTICLE I:

Each Party undertakes not to deploy mobile ICBM launchers or to flight test ICBMs from such launchers.

ARTICLE II:

1. Each Party undertakes not to deploy cruise missiles capable of a range in excess of 600 kilometers on sea-based launchers or land-based launchers.

2. Each Party undertakes not to flight-test cruise missiles capable of a range in excess of 600 kilometers which are equipped with multiple independently targetable warheads from sea-based launchers or land-based launchers.

3. For the purpose of this protocol, cruise missiles are unmanned, self-propelled, guided weapon-delivery vehicles which sustain flight through the use of aerodynamic lift over most of their flight path and which are flight tested from or deployed on sea-bed or land-based launchers, that is, launched cruise missiles and ground launched cruise missiles, respectively.

ARTICLE III:

Each Party undertakes not to flight-test or deploy ASBMs.

ARTICLE IV:

This protocol shall be considered an integral part of the Treaty. It shall enter into force on the day of the entry
into force of the Treaty and shall remain in force through December 31, 1981, unless replaced earlier by an agreement on further limiting strategic offensive arms.
Appendix B

Glossary of Terms
GLOSSARY OF TERMS

1. **ABM**: Anti-Ballistic Missile - any missile capable of destroying an enemy missile in flight, before the latter reaches its target.

2. **ALCM**: Air-Launched Cruise Missile.

3. **BACKFIRE**: American code name for a Soviet bomber that first appeared in 1974. Debate exists over whether it should be counted as a strategic delivery vehicle or not.

4. **BALLISTIC MISSILE**: Any missile propelled by a rocket. The rocket's thrust determines the missile's course and point of impact. It cannot change course in mid-flight.

5. **CRUISE MISSILE**: A missile that flies like an airplane at subsonic speed within the atmosphere. It can be guided to its target, has a varying range, and can be launched from the ground, sea, or air.

6. **FIRST STRIKE**: A first offensive move in a nuclear war, designed to knock out the enemy's ability to retaliate effectively in kind.

7. **ICBM**: Intercontinental Ballistic Missile. A land-based, rocket-propelled missile capable of carrying one or more warheads over a distance of 3000 miles or more.

8. **launcher**: In SALT, a device such as a silo, a submarine tube, or a strategic bomber, from which a strategic weapon is launched.

9. **MIRV**: Multiple Independently Targetable Reentry Vehicle. One of several warheads mounted on a single missile, which can be separated from its companion warheads and directed at separate targets.

10. **MOBILE BASING MODE**: A system for making ICBMs mobile, thus harder to locate and less vulnerable to attack.

11. **SECOND STRIKE**: A nuclear attack in response to an enemy's FIRST STRIKE.

12. **SILO**: An underground launcher for an ICBM, hardened with reinforced concrete to reduce its vulnerability.

14. **STRATEGIC BOMBER**: A bomber of intercontinental range, capable of serving as a STRATEGIC WEAPON.

15. **STRATEGIC WEAPON**: Any long-range weapon - an ICBM, a SLBM, or a STRATEGIC BOMBER - designed to hit targets in the enemy's homeland.

16. **SUBLIMIT**: One part or portion of an overall limit on something.

17. **TACTICAL WEAPON**: A weapon intended for battlefield use in a local or regional theater of operations. Also called a "theater weapon." Contrast with STRATEGIC WEAPON.

18. **THROW-WEIGHT**: The combined weight of all warheads, guidance systems, and decoys carried by a single missile; the useful payload of a missile.

19. **TRIAD**: The threefold structure of U.S. and Soviet strategic forces, consisting of ICBMs, SLBMs, and STRATEGIC WEAPONS.

20. **WARHEAD**: The part of a missile's payload that explodes upon reaching its target.
Appendix C

Strategic Weapons Introduction 1972 to 1982
UNITED STATES:
1. Trident I SLBM - 1979
2. Trident Submarine - 1981

SOVIET UNION:
1. SS-18 ICBM - 1974
2. SS-17 ICBM - 1975
3. SS-19 ICBM - 1975
4. SSN-8 SLBM - 1973
5. SSN-18 SLBM - 1978
6. SSN-17 SLBM - 1978
7. Delta I Submarine - 1972
8. Delta II Submarine - 1974
9. Delta III Submarine - 1978
10. Backfire Bomber - 1974
Appendix D

List of Key Actors
LIST OF KEY ACTORS

1. Leonid Brezhnev: General Secretary, Communist Party of the Soviet Union. Signed SALT I and II treaties, as well as the Vladivostok Accord.

2. Jimmy Carter: American President. Concluded SALT II negotiations with the SALT II treaty of 1979, but was unable to secure its ratification.


5. Henry Jackson: Democratic Senator. National security expert, authored the Jackson amendment to SALT I, that established the doctrine of essential equivalence.

6. Lyndon Johnson: American President. Laid the groundwork for the SALT negotiations, signed the Non-Proliferation Treaty.

7. Robert McNamara: Secretary of Defense during the Johnson years. Supported Johnson's efforts to start the SALT talks.

8. Richard Nixon: American President. SALT negotiations began during his first term. Signed the SALT I treaty, began the SALT II talks.


10. Cyrus Vance: Secretary of State during the first three years of the Carter administration. SALT II advocate.

11. Paul Warnke: Head of the Arms Control and Disarmament Agency during the early Carter years. SALT II advocate.
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