Chapter II:

QUEST FOR MILITARY BALANCE I:
NUCLEAR WEAPONS AND FORCES
Measuring the balance of nuclear weapons and forces becomes a complicated task in the absence of a single, unambiguous and handy criterion or tool of assessment. One can measure balance by counting the number of nuclear warheads and delivery vehicles or by evaluating the total impact and lethality of these weapons based upon their projected performance, giving due attention to various aspects like megatonnage, pay-load capability, circular error probability (CEP) and the like. Interestingly, going by these criteria it would appear that though several thousand nuclear weapons were far in excess of the requirements to completely annihilate both the alliance-systems there was actually an imbalance in terms of destructive capability between the blocs. Such a balance-chart may defeat the purpose of the study by being a futile exercise in abstract figures and numbers. Ambiguities can be further compounded by saying that perceptions of enemy’s nuclear might, intent and threat have greater political significance than the actual numerical strength of the adversary available for use in war.

One way to look into the problem is through the objectives of strategy. The assumption here is that the perception of balance and the consequent attempt to achieve it depend upon the goals the prevalent nuclear strategic thinking aspires to fulfil, i.e. nuclear balance changes with modifications made in the nuclear strategy itself. For instance, when the task is not to win, but to avert a nuclear war, the concept of mutually assured destruction (MAD) holds good as it strengthens deterrence and reflects a stable
nuclear balance. But propagandists of limited nuclear war and their nuclear war-winning strategies go beyond this. They believe judicial targeting and intelligent use of first strike can deprive the enemy of the chances of political survival and with highly-advanced anti-missile defence-systems the damage to be done by the enemy's retaliatory second strike can be manageable i.e. risks are high, nevertheless a victory is possible. When any party seeks to follow one such war-winning strategy, it employs new technologies to invent new weapons systems suitable to its needs and by this very action disturbs the existing nuclear balance. In all limited war doctrines propounded in the last decades, some profound 'concerns remained, however, about whether nuclear war could in fact be limited, whether the channels of communication could be maintained, whether decision-makers would act rationally and whether a limited nuclear attack would trigger general revulsion with a consequent termination of the war, or escalation that could not be stopped short of a massive nuclear change'. Many such questions remain unanswered and in an environment marked with uncertainty and mutual distrust weapons were deployed to facilitate strategic goals that were at least theoretically possible. One interesting point to note here is that sometimes weapons appear first and change in the strategies is made to justify the existence/deployment or use of such weapons. However, as intellectual thinking and scientific progress closely follow

each other, it is difficult to categorically point out particular cases where change in strategy makes way for emergence of new weapons or vice versa. At any rate, changing strategies can provide us clues to ascertain trends in the quest for military balance.

For obvious reasons the actual quest for a balance in nuclear weapons and forces, though utterly significant in the NATO-Warsaw Pact context, was pursued by the United States and the Soviet Union with little contribution from other alliance-members. Among the Pact members, only the Soviet Union was a nuclear power; other non-Soviet Warsaw Pact (NSWP) states only provided locations and other facilities for stationing and deploying the weapon-systems. Command and control of such weapons remained with the Soviet Union. Likewise, in NATO, only the United States was the preponderant nuclear power. France was no longer a part of NATO's integrated force structure since 1966 and Britain with its 'special relationship' with the United States was much inclined to follow the American line regarding nuclear strategies and tactical operations. At any rate, both these nations were incapable of entering into a competition with the Soviet Union to enforce a nuclear power parity and/or they did not feel it necessary because of America's preponderance of nuclear power. In other words, possession of independent nuclear weapons and forces by Britain and France did not alter the basic nuclear scenario in Europe. Thus, the NATO-Warsaw Pact nuclear balance was in effect a Soviet-American nuclear balance in which Europe had been used as a forward-defence territory or a potential nuclear battlefield.
European states did not find it easy to live under the nuclear umbrella provided by the two superpowers but could not work out a viable alternative. States of Eastern Europe were less assertive in recording displeasure than the nations of Western Europe but muffled voices of disagreement could always be heard. The very existence of East Germany was dependant upon a perpetual confrontationist posture with the West but all other NSWP members were apprehensive of the nuclear weapons deployment on their territories. They felt that in any confrontation they would have to bear the first onslaught of the West and deployment of nuclear weapons would bring them into targeting focus of Western preemptive strikes. Nevertheless, will of the Soviet Union prevailed.

Western Europe nations were more sovereign and enjoyed greater freedom in their relations with the United States. Many of the alliance members did not allow the U.S. to use their territories as forward-bases and this issue was responsible for serious intra-alliance differences. Like many East European nations some of the states of West Europe thought that they were being unnecessarily dragged into Soviet-American game plan and would become targets (or sitting ducks) of Soviet preemptive nuclear strikes. Still in all those countries where the governments were pursued to adopt American perceptions the US was able to deploy its nuclear forces. In essence, most of Europe despite resistance to Soviet/American designs fell into the hands of the two superpowers and in all practical senses became supporting actors in the quest for nuclear balance between two
nations. In a way, NATO and the Warsaw Pact were the means established to facilitate the quest which began in 1949 when the Soviet Union shattered the US monopoly over nuclear weapons by exploding its first nuclear devise.

2.1 Air-Atomic Age and massive retaliation: Era of US superiority

As we have already stated, NATO came into being largely because of the West European states' inability to match the conventional threat of the Soviet Union and consequently their desire to use US nuclear forces for the defence of Europe. Though it was quite a simplistic view and there was not much explicit desire to install the weapons on their own soil, most of the West European states thought that 'Soviet levels of conventional forces could never be matched and US nuclear power made such an attempt unnecessary. This initial concept of the alliance - a clear statement of US intentions backed up by actual nuclear forces and potential conventional forces, the whole constituting a credible deterrent - survived, with minor revisions, until 1967 as the official policy of NATO'. Moreover,

The European members of NATO considered economic reconstruction to be of greater importance than an increase in the level of conventional military forces. US nuclear superiority and the absence of an imminent Soviet threat further detracted from the impetus for a build-up. The NATO treaty had, in any case, been conceived not as a vehicle for redressing its prospective members' inferiority in conventional forces but as a way

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The reader may notice in the foregoing passage the admission of the fact that there was no imminent Soviet threat to the West European states. Practically, right after the World War II, because of catastrophic conditions at home, Soviet Union was not quite in a position to follow an 'aggressive' national strategy. It did not have long-range naval or air capability to inflict damage upon the US. On the contrary, 'the prevalent strategic view in the Truman phase of the air-'atomic age' (1945-53) was that (the U.S.) long-range bombers carrying nuclear weapons against enemy cities or military forces could defeat any nation or force hostile to the United States and its interests'. This was a phase of the US overwhelming superiority which continued up to late 1950s.

Whether the Soviet Union intended to overrun Europe with its large and well-armed ground forces or not is debateable but it certainly was anxious to take corrective measures to save itself and its area of influence from possible Western nuclear blackmail. The Soviets did not have overseas bomber bases like the United States, there were technological limitations as well. So it sought to bridge this gap by developing intercontinental ballistic missiles - the ultimate strategic weapons, along with the development of long-range bombers like Bison jet bombers and Bear.

\[\text{3 Ibid.}\]
turboprops which became operational by 1956. To be effective these bombers had to undergo continuous long flight and survive US warning and air-defence systems. One can always be paranoid and complain about uncertainties but in actuality these bombers were not much of a threat to US security.

However, till Stalin’s death, Soviet Union had no concrete strategic nuclear policy. While in the Western concept conventional war and employment of such forces were subordinated by nuclear warfare, in the Soviet Union modern conventional warfare was given primacy. Stalin denigrated the importance of nuclear weapons though he did not ignore it altogether. As observed by Laird and Herspring

The successful Soviet strategy adopted during the conduct of operations in World War II was dogmatized by Stalin as the five ‘permanently operating factors’ of war. Stalin declared that the following five factors would decide the ‘fate’ of any modern conflict:

* the stability of the rear;
* the morale of the troops;
* the quality and quantity of divisions;
* the armaments of the army; and
* the organizational ability of the command personnel of the army.

Once canonized by Stalin, the permanently operating factors could not be openly challenged. These factors became the centrepiece of Soviet military science and in fact, dominated the field until after Stalin’s death in March 1953.¹ Stalin’s views were challenged in September 1953 in an article by Major General Nikolai A. Talenski, followed by another important one by Marshal P. Rotmistrov in March 1955, which acknowledged the role of surprise

and the 'preemptive' or 'forestalling' strike.  

There were also a series of tactical missiles which were developed for the Ground Forces (SS-1 and SS-2) in early 1950s. In addition, SS-3 Shyter, an operational tactical missile, was integrated into the Soviet forces. "In wartime such missiles probably would have been used to provide long-range barrages of nuclear or chemical explosives to pave way for the Ground Forces' assaults. The importance of operational-tactical missiles grew through the 1950s as NATO's deployments of nuclear-capable artillery and tactical nuclear missiles expanded".  

A scientific panel in the US headed by mathematician John von Neumann in early 1954 worked out the feasibility aspects of intercontinental ballistic missiles (ICBMs) with nuclear warheads. While the ICBM programme was gathering momentum in 1955, another panel of scientific experts headed by James R. Killian of the Massachusetts Institute of Technology took a look into 'the broad technological balance between the United States and the Soviet Union, projected trends in that balance and drew out implications of these trends for national security requirements'. In its report to President Eisenhower the panel recommended not only the acceleration of the ICBM programme but also 'to launch a programme to develop intermediate range ballistic missiles (IRBMs) for early deployment either on the European continent or at sea. It was estimated that

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6 Ibid. p.11.
an operational ICBM with advanced components could be deployed only in 1962 while IRBMs could be developed much earlier. It was apparent 'that Soviet efforts in ballistic missile technology might require an earlier response'. Accordingly, the US embarked upon the production of Thor and Jupiter IRBMs. Oppenheimer played a crucial role in persuading the NATO supreme commander to accept the tactical nuclear weapons as effective means to enhance security.

With 1500-mile-range, IRBMs were to be deployed at the forward bases. The US began negotiations in this respect with its allies but a certain urgency soon developed when in 1957 the Soviet Union tested its own ICBM and the sputnik was put into orbit around the earth. As some would argue

This jolted the United States into realization that the Soviet Union might have missiles which could deliver nuclear warheads onto targets in the United States. If this was so, then the Soviet Union had already surpassed the United States in the development of long-range missiles. According to Henry Kissinger it was in order to close the supposed 'missile gap' that the United States pressed its allies to permit the installation on their territories of intermediate range ballistic missiles.

As stated earlier, smaller West European states were apprehensive of such deployment. 'They recognized they were in a more exposed strategic position than the United States vis-a-vis the retaliatory force of the Soviet Union. They felt that such deployments would entail an unequal sharing of risk'. In the end, only Italy,

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10 Schwartz. No.8. p.81.
Turkey and the United Kingdom agreed to deploy IRBMs on their territories. In 1959 France formally rejected the American offer after long-drawn negotiations and went ahead with its own nuclear programmes.

The policy of 'massive retaliation' was the cornerstone of the nuclear strategic thinking during the Eisenhower-Dulles era (1953-61). In simple terms it meant that any attack against the U.S. and its allies would be deterred with the threat of use of massive retaliatory strikes and if that failed to prevent aggression the US would prevail over the Soviet Union in a general war. The doctrine called for use of nuclear weapons, irrespective of the nature of aggression - conventional or nuclear. Conventional forces, however, were assigned the role of dealing with 'minor incursions'. More specifically 'to act as a screen to determine that a full-scale Soviet attack was taking place'.

Secretary of State Dulles observed in 1954,

"The essential thing is that we and our allies should have the means and the will to assure that a potential aggressor, however powerful his aggression more than he could gain. This does not mean that the aggressor has to be surprised by it. It means that the aggressor has to be surprised by our determination to defend our allies."

And a study by the US Department of Defense presented an estimate in which it claimed 'that the loss of at least 25 percent of the
population and 50 percent of the industrial capacity of the Soviet Union would destroy that nation's ability to function as a modern society. '14

From the very beginning, the Soviet Union maintained that the use of nuclear bombs in Japan was designed to put pressure on them and to demonstrate the US resolve to actually use nuclear weapons in war against them. It has been argued by a Soviet analyst that 'Merely to intimidate the Soviet people and their government, the American imperialists dropped atomic bombs on two cities in Japan which destroyed and doomed hundreds of thousands of peaceful inhabitants to severe suffering from radioactive contamination.' 15 The Soviet Union never questioned the credibility of the US threat. It, however, knew that 'only their ability to match U.S. strategic developments provide(d) them with a reliable guarantee of deterring the United States.'16 Practically, 'throughout the nuclear age, the Soviet Union (had) placed as a sine qua non of a successful Soviet strategic policy the ability to inflict massive damage on the U.S. homeland in order to undercut U.S. geographical advantages, vis-a-vis the USSR.' 17 The first threat to the US lead


17 Laird and Herspring. No.5. p.90.
in nuclear arms race was posed by 1960 when through development of long-range bombers and missile-systems the Soviet Union acquired the capability of inflicting massive damage on the U.S. territory.

We have said earlier that during mid 1950s, the Soviet Union preferred the primacy of conventional forces in war. They believed that "nuclear strikes could exert only a 'significant' influence on the 'course' of war but could not exert a 'decisive' influence." Perhaps the absence of effective delivery-systems and the success of its ground forces in the World War II was responsible in justifying such a view. Moreover, the Korean war and the crisis in Indochina, between the French and the Communist Viet Minh, corroborated the idea that use of even tactical nuclear weapons were not forthcoming in localized wars and since there was no imminent threat from the US or Western Europe to its security (though the nuclear threat from them was indeed credible) the Soviets could see in its conventional forces the ability to exert decisive influence on war. But from the early 1960s, because of the encouraging developments in the nuclear weapons programme resulting in changing equations, the Soviet strategic thinking increasingly took a different shape under Khrushchev.

In this context, Bottome argued: 'except for an atomic attack on the United States, the doctrine of massive retaliation was - in its simplest terms - a bluff'. But observed Krepon, though 'a

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18 Ibid. p.13.

good many strategists flayed the doctrine of massive retaliation as a caricature of the policy of bluff that NSC-68 said should be avoided. But in reality, Eisenhower and Dulles waged the Cold War with only eleven fully equipped Army Divisions and a tight lid on defence spending. How else were they to project a dominant strategic posture?  

Practically, it was with the prevailing state of technology and available resources at hand that the policy of massive retaliation was formulated strategically to deter Soviet aggression. But there was a problem on the tactical level where 'it was felt that should deterrence fail, the United States would have the option of using nuclear weapons first rather than being forced to choose between capitulation or all-out war in the event of Soviet aggression. This dual strategic and tactical task was to be accomplished by getting 'more bang for the buck'.  

The threat was there but the Soviets found it easy to indulge in less direct offensives outside the NATO area and even the American allies were doubtful as to whether the United States would take such a risk if a lesser ally was engaged by the Soviet Union in a low-level conflict.

It is interesting to note that during the initial stages the United States had no qualms in asserting its nuclear superiority as the best way of preserving peace in the absence of an equivalent

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21 Bottome. No.19, pp.21-22.
Soviet response. On the contrary, the Soviet Union viewed this nuclear preponderance of the USA as a destabilizing factor for world peace. Despite all the pious pronouncements, no country is more concerned with world peace than with its own security and national interests. Being the relatively weaker party, now it was the turn for the Soviet Union to go for an effective nuclear balance to offset the US edge on day-to-day international politics, which practically began with Khrushchev receiving a rebuff from Kennedy during the Cuban missile crisis of October 1962.

However, the policy of massive retaliation, as a response to local and peripheral conflicts, proved to be futile in the late 1950s and by 1960 the American homeland became vulnerable to Soviet strategic attacks, although the Soviet systems were technically and numerically much inferior to those of the US. Consequently, the early 1960s saw changes in the nuclear strategic thinking of both the nations. It is to be noted that eventually though the USSR succeeded in acquiring large, diversified arsenals but in the early 1960s the United States "possessed virtually the capacity to eliminate the Soviet Union as a functioning entity, while withholding a reserve force capable of satisfying U.S. objectives in almost any other contingency. The Soviet Union, during this period, faced a very real window of vulnerability". As Lewis observes,

American strategic bomber-forces then consisted of about 2,000 intermediate- and long-range aircraft. These were deployed at an array of bases ringing the USSR. These assets would have been supplemented by a substantial armada of tactical aircraft and carrier-based fighters, as well as by a limited number of intermediate- and
intercontinental-range ballistic and cruise missiles. At this time, Soviet forces capable of striking the United States consisted of a handful of unreliable ICBMs and some SLBMs (ship-launched ballistic missiles) and cruise missiles aboard noisy subs that had to approach the United States and surface in order to fire. Surviving Soviet long-range bombers would have to run a North American air defence gauntlet of about 2000 interceptors and thousands of SAMs (note that most Soviet interceptors surviving U.S. defense suppression were only daylight-capable). Even after eliminating Soviet strategic forces, the United States would have thousands of high-yield weapons in reserve.22

However, one of the reasons provided by the author of the above observation as to why the U.S.A. did not attack the Soviet Union was "the Soviet did maintain, in their theatre and tactical nuclear arsenals, and in their conventional forces, the ability to inflict catastrophic damage on American friends and allies on the European periphery".23

2.2 Sufficiency and Realistic Deterrence

The Kennedy-Johnson period (1961-69) inherited the legacy of American nuclear thinking with its main focus upon strategic superiority. 'The issue for nuclear weapon strategists during these years was not whether, but how much superiority would be adequate'.24 Even Secretary of Defense Robert McNamara who had 'vetoed some strategic weapon programs, but authorized considerable


23 Ibid. f.n. p. 262.

increase in U.S. nuclear capabilities .... emphasized, whenever asked, that despite his doubts about the political and military utility of nuclear superiority, he had no intention of testing his theories by allowing U.S. superiority to lapse. 25

Nuclear weapons were to remain the ultimate insurance but inadequacies of the concept of massive retaliation called for a change in strategy. Thus it was decided that 'a direct Soviet attack against the United States, and possibly against the NATO countries, would be countered by a US nuclear strike, conventional military forces, on the other hand, would be developed to counter Soviet or other hostile actions at a lower level of conflict' 26 and thus the policy of 'flexible response' came into being. 'This was no vague threat of massive retaliation; it was a specific statement of American intent to engage in conflict on every front and at every level'. 27 As McNamara said:

Our forces can be used in several different ways. We may have to retaliate with a single massive attack. Or, we may be able to use our retaliatory forces to limit damage done to ourselves, and our allies, by knocking out the enemy's bases before he has had time to launch his second salvos. We may seek to terminate a war on favourable terms by using our forces as a bargaining weapon - by threatening further attack.

.... Our new policy gives us the flexibility to choose among several operational plans, but does not require that we make any advance commitment with respect to

25 Krepon, No. 20, p.30.

26 Polmar. No.4. p.4.

Along with this flexible approach were offered several other concepts. The 'assured destruction' idea was a guarantee that the possession of enough nuclear forces to 'ride out' a first strike would not eliminate the defender's second strike capability. Weapons would counter weapons (i.e. the strategy of counter force) in precise operations 'on a total or selective basis according to the strategic situation'. Cities would not be attacked initially but reserved to 'hostage' status for later attacks.

Soviet nuclear capability created a major problem for the credibility of US nuclear guarantee to its European allies in early 1960s. A solution was sought through the creation of multilateral force (MLF) but it was soon realised that disputes over sensitive questions of political sovereignty and military command would render MLF ineffective. The policy of flexible response too came for heavy criticism from the European powers, specifically from France which called it 'truncated flexibility'. After much debate, however, the policy was officially adopted by NATO in 1967. NATO's relative weakness in conventional area offered special status to tactical nuclear weapons in this phase which continued to the end despite modifications in strategies. As it was felt during the debate

It is inherent in the doctrine that there is a spectrum

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or hierarchy (sic) of violence through which the enemy will proceed. In terms of Soviet policy this was seen as comprising a spectrum ranging from political agitation through insurgency, guerrilla warfare, sub-theatre conventional warfare and theatre conventional warfare to strategic nuclear warfare. NATO was, of course, concerned with theatre warfare. Any imbalance in conventional, tactical nuclear or strategic nuclear capabilities would tend to invalidate the theory of a strategy of flexible response and face the deficient side with practical decisions which allowed for no alternative options. 29

From now on, efforts were being made to establish balance at every level, conventional, nuclear tactical and nuclear strategic. Allies were faced with economic pressure and soon the question of burden-sharing became significant.

In these years a change in Soviet strategic doctrine was taking place. It was felt that ‘in modern warfare, nuclear weapons can be employed for various missions: strategic, operational and tactical. It permits the execution of military missions in a considerably shorter time than was possible in past wars.’ 30 They also believed that if war was initiated by the ‘imperialist’ forces, it would soon escalate into a nuclear war in which missiles would be the basic means of delivering the nuclear warheads to the targets. 31 Once the inevitability of nuclear escalation was accepted, Soviet military policy supported massive use of nuclear weapons to 1) defeat the enemy’s armed forces and simultaneously

31 Ibid. p.299.
to 2) annihilate and destroy the objectives in the enemy's rear, for the purpose of disorganizing it. Soon the Soviet Union launched the SLBM programmes in addition to its ICBM programmes and research began in the USSR for an effective anti-ballistic missile (ABM) system.

The Cuban missile experience brought different lessons to different people. While men like Bertrand Russell, perhaps representing the majority of peace-loving people, condemned the practice of Brinkmanship, the Soviet Union realized that unless they had substantial strategic nuclear power, they might remain at perpetual disadvantage in comparison to the US and its allies. Practically, under Kurushchev, the Soviet Union shifted its focus upon the ways of intercontinental war. This trend continued under the Brezhnev-Kosygin leadership.

In the summer of 1966 an accelerated programme of ICBM development was set in motion. New missiles were introduced in dispersed and hardened sites including the SS-9 and SS-11, both of which are liquid-fuelled, and the SS-13, the Soviet Union's first solid-fuel SCBM. The Soviet Union also accorded special importance to the development of mobile land-based missiles. High priority was also given to missile-launching submarines.

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32 Unwin, Ibid. p.305.
34 SIPRI Yearbook 1974. p.89.
Table 2.1 Soviet Nuclear Forces, by Number of Delivery Systems and Warheads, 1955-80

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<td>724</td>
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<td>195</td>
<td>195</td>
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<td>2,466</td>
<td>3,684</td>
<td>4,332</td>
<td>9,653</td>
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* Includes the SS-3 and SS-12 operational missiles

* Initially, nuclear weapon production lagged substantially behind the number of potential delivery systems. Additionally, the early TU-4 Bull bomber probably was only assigned to deliver nonnuclear weapons.
However, mid-1960s was also the time for the Soviet Union to rethink and modify the strategy which was marked by the overriding importance of strategic nuclear weapons. As the USA faced problems in pursuing a policy of 'massive retaliation’, the Soviets too had doubts about exclusive strategic operations. And General Lomov, despite his warning that 'the probability of escalation into a nuclear world war is always great and might under certain circumstances become inevitable’, thought a war confined to conventional or tactical nuclear weapons in Europe was possible.35 As a consequence, yet again the utility of the conventional forces was considered, tactical nuclear weapons were viewed as a supportive force and strategic nuclear weapons were regarded as the ultimate step in the ladder of escalation.

In the late 1960s, because of military-technical progress, the Soviet Union could enforce a parity in Strategic nuclear power with the United States. The SALT Agreement of 1972 was a recognition of this balance achieved by the two most dominant partners of the two alliances. "The strategic balance", observed Laird and Herspring, "is at best a dynamic equilibrium; US technological developments create strategic uncertainties that require a Soviet response. Given the commitment of both sides not to fall significantly behind the strategic arms race, parity tends to be reestablished at a higher armaments level and at great cost to both sides".36


36 Laird and Herspring. No.5. p.106.
In the early 1970s, the Nixon Administration came up with the idea of 'Relative Deterrence' which was not much different from the existing policies apart from the fact that it sought to distribute the responsibility (read economic burden) of defence against Soviet attack more thoroughly among the allies. On the other side, it had been claimed that 'the Soviet military power since 1966-67 (had) been marked by the 'harmonic and even development of all types of forces, necessary for preparation of any kind of war'.

Validity of a rough strategic parity between the Soviet Union and the USA, though recognized in the early 1970s, had been repeatedly questioned by strategists with penchant for details. Comparisons were made with simple figure of numbers which had ambiguities and disparities. Technological progress improved upon the existing capabilities of the strategic weapons (in terms of pay-load of the missile, the explosive yield, the accuracy of the weapons or their degree of protection from pre-emptive attack) and also surveillance and intelligence methods. And an endless debate continued about the credibility of such weapons and of the strategic balance. To maintain the strategic balance intact, a number of rectifying measures had been incorporated. For example, the Carter administration planned for MX missiles to be deployed which were much less easily targeted than the fixed ones when it was apprehended that the Soviets might destroy the American ICBMs in a first strike with bigger throw-weight, greater yield of its

### Table 2.2  Strength of Western Nuclear Forces, by Number of Delivery Systems and Warheads, 1950-80

<table>
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<tr>
<th>Nuclear force and instrument</th>
<th>Number of Delivery systems</th>
<th>Number of Warheads</th>
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---|---|---|---|---|---|---|
| Intercontinental forces (U.S. only) | 520 | 1,309 | 1,809 | 2,157 | 2,171 | 2,159 | 2,016 |
| Bombers | 520 | 1,309 | 1,735 | 807 | 501 | 489 | 428 |
| Land-based missiles | 0 | 0 | 42 | 854 | 1,054 | 1,054 | 1,052 |
| Sea-based missiles | 0 | 0 | 32 | 496 | 616 | 616 | 536 |
| Regional forces | 116 | 441 | 772 | 782 | 668 | 802 | 853 |
| United States | 0 | 114 | 128 | 252 | 108 | 108 | 108 |
| Theater nuclear missiles | 0 | 12 | 72 | 72 | 72 | 68 | 66 |
| QRA aircraft | 45 | 135 | 0 | 0 | 0 | 0 | 0 |
| Forward-based bombers | 0 | 0 | 38 | 120 | 120 | 96 | 96 |
| Carrier-based aircraft | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sea-based missiles | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| European allies of the United States | 0 | 0 | 72 | 72 | 72 | 72 | 72 |
| Theater nuclear missiles | 0 | 0 | 56 | 96 | 110 | 92 | 48 |
| QRA aircraft | 0 | 0 | 0 | 12 | 12 | 14 | 14 |
| Forward-based bombers | 0 | 0 | 105 | 0 | 0 | 0 | 0 |
| Carrier-based aircraft | 0 | 0 | 120 | 104 | 86 | 86 | 81 |
| Medium and intermediate-range missiles | 70 | 122 | 180 | 104 | 86 | 86 | 81 |
| Bombers | 0 | 0 | 0 | 48 | 112 | 128 | 128 |
| Sea-based missiles | 0 | 0 | 0 | 48 | 112 | 128 | 128 |
| All delivery systems | 636 | 1,750 | 2,581 | 2,927 | 2,921 | 2,821 | 2,657 |
| Intercontinental range | n.a. | 2,310 | 4,362 | 4,002 | 3,689 | 7,725 | 8,018 |
| Regional range | n.a. | 698 | 772 | 862 | 748 | 1,290 | 1,343 |
| All warheads | n.a. | 3,008 | 5,134 | 4,864 | 4,437 | 9,015 | 9,361 |


n.a. Not available.
a - Does not include aircraft in storage. By the early 1960s many bombers were equipped to launch nuclear air-to-surface missiles (ASMs) such as the Hound Dog and, later, short-range attack missiles. In 1960, 54 ASMs were operational, in 1965, 542; in 1970, 345; in 1975, 1,759 and in 1980, 3,002. The flexibility of bomber operations increased as airborne tankers entered the air force. In 1950, 126 tankers were operational; in 1955, 761; in 1960, 1,094; in 1965 and 1970, 615; in 1975, 599; and in 1980, 515.
b - Includes 30 U.S. Air Force Snark intercontinental range cruise missiles.
c - Includes the early Mace and Matador cruise missiles and the Redstone and Pershing ballistic missiles.
d - Quick-reaction alert aircraft.
e - Before the development of thermonuclear weapons, the number of nuclear weapons available for delivery was substantially less than the number of delivery systems.
ICBMs leaving little scope for the US for effective retaliation.

Technological improvements of the heavy bombers, ICBMs and SLBMs in both the countries were not drastically dissimilar. Still, increase in numbers and capability could no longer affect the rough strategic balance already achieved. However, this balance could have been seriously undermined, had President Reagan’s pet-project the ‘Star Wars’ been successful.

In 1983, Reagan announced the novel idea of the Strategic Defence Initiative programme (SDI) or ‘Star Wars’. It was to be an elaborate arrangement of space-based multi-layered ballistic-missile defence system to deter any preemptive first strike by the adversary. The emphasis was on defence, on destroying weapons rather than killing people, and the argument was that an effective defence system would ultimately free the world of threats of a nuclear exchange by rendering nuclear arms impotent and obsolete. However, ‘successive reinterpretations of objectives of SDI by the spokesmen of Reagan’s administration made it a question of strengthening and buttressing deterrence by introducing a new ambiguity in the calculation of the adversary. Constantly changing rationale and shifting emphasis proved that there was no strategic foundation for SDI’.


Some authors, however, argued that SDI was a belated response to the "Soviet Strategic Defense Initiative" comprising offensive ballistic missile capabilities and anti-ballistic missile programmes. See Van Cleave, William R. Fortress USSR (Stanford: Hoover Institution, 1986).

72
At any rate, the Russians viewed it as an attempt of the militarists to turn outer space into a theatre of war. They argued that the US goal was 'first, to create a space-based anti-missile shield that would make the United States invulnerable and enable it to deliver the first strike with impunity and, second, to use the combined might of the strategic offensive forces and space strike weapons in order to render the first strike even more devastating; in fact, all-destructive'. There have been arguments and counter-arguments on its purpose, effectiveness and feasibility. While many in the US viewed it as an enormous waste of both intellectual efforts and material resources, the programme nevertheless, was launched. However, its futility soon became apparent and it lost its momentum with Reagan’s departure from the White House. Robert McFarlane, National Security Adviser during Reagan presidency revealed later that "'Star Wars' was never to have been built. He had told Congress that it was only a bargaining chip; the US would spend a few millions on it to fool the Russians. Mr. Gorbachev thought 'Star Wars' would be built. Even Mr. Reagan thought it would be built". With the disintegration of the Soviet Union the programme lost its relevances and for all practical purposes was discarded making way for other programmes like GPALS (Global Protection Against Limited Strikes). The

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39 Surikov, Boris, SDI: Key to Security or Disaster? (Moscow: Progress, 1988). pp.5-6.

strategic balance was virtually reestablished at a lower level much later, in early 1990s, through START Agreements.

2.3 Tactical Weapons and a Shift in the Quest for Balance

The era of detente which followed the US-Soviet SALT agreements caused concern among the NATO allies. 'The emergence of Soviet-American nuclear parity (had) deepened existing fears in Western Europe that the United States would no longer be prepared if necessary, to invoke the threat of its strategic nuclear forces in defense of its allies ...... The codification of parity in the May 1972 SALT Agreements appear(ed) to have strengthened this perception.41 Moreover, as Joshua observed in 1973

Presssed by the United States, the NATO allies in 1967 officially adopted the flexible response strategy which remains in force today. But there appears to be a wide divergence in the interpretation of NATO's flexible response strategy; the European allies have never endorsed the original US interpretation of flexible response, which called for a large conventional defense of Western Europe if deterrence were to fail.42

The role of tactical nuclear weapons was not quite convincing and President Nixon once mused: 'Beyond their value as a deterrent to war, how should our tactical nuclear weapons in Europe be used to counter specific Warsaw Pact military threats?'43 However, though

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42 Ibid. p.3.

Table 2.3  US and Soviet Strategic Nuclear Weapons, as at Mid-1980*

<table>
<thead>
<tr>
<th>Types</th>
<th>United States</th>
<th></th>
<th>Soviet Union</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Single Warhead</td>
<td>MIRVed</td>
<td>Total Warhead</td>
<td>MIRVed</td>
</tr>
<tr>
<td>ICBMs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Warhead</td>
<td>504</td>
<td>550</td>
<td>790</td>
<td>608</td>
</tr>
<tr>
<td>MIRVed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1054</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SLBMs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Warhead</td>
<td></td>
<td>656</td>
<td>843</td>
<td>160</td>
</tr>
<tr>
<td>MIRVed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>656</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>STRATEGIC BOMBERS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single Warhead</td>
<td>381</td>
<td></td>
<td>156</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>381</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>885</td>
<td>1206</td>
<td>2091</td>
<td>1789</td>
</tr>
</tbody>
</table>

there was no elaboration on tactical nuclear weapons forthcoming from the US, in NATO, the United States and allies stressed the need to convince the aggressor of NATO's readiness to use nuclear weapons (first use, that is) if necessary.

At the same time, from mid-1970s, many in America propounded that the Soviet Union was slowly achieving a clear strategic superiority. An organization called the Committee on the Present Danger reported in 1977, "we are convinced, and there is widespread agreement among knowledgeable experts, that if past trends continue, the USSR will within several years achieve strategic superiority over the United States." A Soviet expert, Richard Pipes, long before felt that 'Soviet doctrine .... emphatically asserts that while an all-out nuclear war would indeed prove extremely destructive to both parties, its outcome would not be mutual suicide: the country better prepared for it and in possession of a superior strategy could win and emerge a viable society. However, "the strategic doctrine the Carter administration inherited can be reduced to three basic elements" observed Snow: 1) the ultimate deterrent remained assured destruction of the Soviet Union; 2) the emphasis was on proportionate responses to limited attacks including limited counterforce targeting; and 3) essential equivalence, loosely defined as the ability to respond proportionately to any Soviet


action. Collectively they formed the 'countervailing strategy'.

The era of detente was, however, shortlived. With the invasion of Afghanistan by the Soviet Union in 1979 an era of neo-cold war began. The ascendance of the Soviet Union vis-a-vis the crumbling position of America that sought to make the US almost irrelevant in international politics created a feeling of danger and uncertainty. The average American was also no less anxious about the grim future. "In an NBC Associated Press survey of November 1981, 76 per cent of Americans polled expected Nuclear War within the decade. Armageddon it seemed, was just around the corner". It was felt in many quarters that a country which by way of its economic, technological and military superiority had so far enjoyed a profound influence on world affairs was now facing 'national extinction' because of incompetent leadership and military inadequacy. "Within the United States, an attitude of defeatism, self-doubt, self-denigration and self-delusion" Kirkpatrick observed, "... displaced what had been a distinctly American optimism about the world and our prospects as a nation". The US, it was perceived, had lost its edge over the Soviet Union in overall balance of military power. According to Leebert, the


prevailing balance was the result of two processes: "the US diversion of enormous defence resources into the Vietnam War and the simultaneous balanced incremental growth of the Soviet defence spending .... The resultant cuts in real US defence spending amounted to some 20 percent of outlays during 1971-76. The USSR, however, proceeded with a gradual but consistent expansion of strategic and conventional forces".49

Determined to halt the retreat of the Carter years, Reagan sought to achieve the reassertion of the country's global leadership. Accordingly, in addition to modernizing theatre nuclear forces in Europe, Reagan also announced the programme for production and deployment of MX with due urgency, the B-1 and Stealth Bombers, cruise missiles, the Trident-II counter-silo missile system and allocated massive funds for anti-satellite weapons and for a command, control, communications and intelligence system (C3I) designed to survive nuclear exchange.50 Consequently Reagan's assertion in 1984, that 'America is back-standing tall' had 'created the image of a nuclear build up that was starting to yield some results'. He could convince the American people of the much improved US deterrent capacity and his 'we are number one'


50 For an account of how the views of neo-conservatives came to be the official policy of the Reagan administration and its campaign for nuclear superiority see Sanders, J. Peddlers of Crisis (London: 1983).
theme carried him to a landslide re-election.\footnote{Arkin, William. "The buildup that wasn't" Bulletin of the Atomic Scientists, January-February 1989. p.8.} However, once being convinced of nuclear superiority, the American public showed a marked unwillingness to support further defence spending in his second term and the Congress, being annoyed with increasing federal deficit went for a cut in the administration's military budget.

The Alliance was much concerned regarding the rationale underlying the American nuclear policy. It feared a 'decoupling' of the US from Western Europe and soon the INF deployment in Western Europe was sought to provide American reassurance to the Europeans with the additional benefit of significantly enhancing deterrence and affecting Soviet calculations by posing a genuine threat of escalation.\footnote{Lawrence D. Freedman, "US Nuclear Weapons in Europe: Symbols, Strategy and Force Structure" in Pierre, Andrew J. (ed.) Nuclear Weapons in Europe (New York: Council on Foreign Relations, 1984). pp.45-74.} Everybody did not agree on this point. Paul Warnke, for instance, presented a different view. Andrew Pierre summarized his views in the following manner:

The INF deployments cannot markedly improve existing deterrence. All important military, industrial and urban facilities in the Warsaw Pact's geographic area are already well covered by the 10,000 warheads now carried on American intercontinental and submarine-launched ballistic missiles and strategic bombers. If the Soviet Union should strike a European city or NATO base with an SS-20 .... the United States would respond in kind with a minuteman or Trident missile, or an air-launched cruise missile. Indeed, the notion that an American president would more readily launch a Pershing II from West Germany than a Minuteman III from the continental United States implies a belief that Soviet retaliation would be against the launching point - a very 'decoupling' idea in itself. Warnke argues that there is no military need for 572 additional warheads to strike enemy targets. Their installation in West Germany in particular will reduce,
rather than increase European Security.  

The debate continued. While on the one hand the proponents of the Euromissile argued that they were 1) essential to fill a gap in NATO's continuum of deterrence, 2) a part of selective employment plans (SEPs) for proportionate (limited) use of nuclear weapons to signal escalation, 3) for countering the Soviet SS-20 deployment and 4) helpful in deterring conventional war in Europe, on the other hand, critics observed: 'to counter the Soviet strategy of preemption by acquiring preemptive capabilities of its own only aggravates crisis instability in Europe. Pershing II is the antithesis of the stable deterrent NATO requires'. The deployment and consequent withdrawal of the INF from Europe and the politics of negotiations have been specifically discussed in Chapter 4.

However, in general 'the balance of terror exist(ed) because of the nuclear destructive capabilities of the Soviet Union and the United States, capacities so great that since Nagasaki neither government (had) been prepared to use them in even the smallest way for fear of unleashing the whole Armageddon'. But many were

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55 Ibid. p.53.

concerned about the efficacy of such thinking. For instance, Snow argued in 1983

If nuclear war can no longer be deterred by universal agreement that its consequences would be disastrous .... one must look at alternative ways to achieve that end. The certainty of cataclysm that, in a perverse way, made the nuclear balance stable and even comfortable may or may not have eroded, but to the degree that new capabilities alter circumstances, the Soviets must be persuaded that nuclear weapons employment continues to make no sense. One method for accomplishing this purpose has been for the US to modernize its forces so aggressively that a comparison of capabilities will give the Soviets greater pause. Others have suggested in essence that the US take the offensive and develop its own plausible warfighting strategy aimed at victory.57

Under the circumstances, much effort was made to convincingly surpass the Soviet Union in nuclear preparedness. Modification in strategies facilitated new systems of weapons development and deployment.

But what was the logic of Soviet nuclear strategy in the late 1970s and early 1980s? There have always been this feeling prevalent that the ‘Soviet objectives in a nuclear war should deterrence fail are straightforward: “to fight it, win it, survive it, and recover”.’58 Snow summarized the basis on which a nuclear war could be won: 1) preemption (first strike), 2) quantitative superiority in arms, 3) counterforce targeting, 4) combined-arms operation and 5) defence.59 Moreover, ‘Soviet doctrine strongly


59 Snow. No. 46. pp. 139-40.
suggest(ed) that any major [Warsaw] invasion of Europe would be accompanied if not preceded by a mass employment of nuclear weapons designed to destroy or paralyze NATO’s own tactical nuclear capabilities and deployed conventional forces’. And accordingly they formulated war plans which had a judicious mixture of conventional and nuclear options. They believed that a rough parity between the USSR and USA and between the Warsaw Pact and NATO had emerged in nuclear field and they used their energy now to ensure political goals through arms control strategies. (Soviet military strategies of conventional/nuclear blitzkrieg are discussed in the next chapter.) There was also a process of what Cockburn called ‘threat inflation’ by which the strength of the Soviet Union had always been exaggerated. And even the Soviet Union consistently worked to have its enemies overestimate their capabilities through disinformation and false claims. The Soviet superiority in numbers was alleged to be ever growing and if comparative warhead numbers gave the US considerable superiority, megatonnage comparison cancelled out such advantage by being in favour of the Soviet. The leaders, however, repeatedly insisted that the Soviet


At the same time, consider Weinberger’s observation: ‘one should be particularly wary of the accounting tricks used by those who for whatever reason are determined to prove that the Soviet’s four-and-a-half to one predominance in tanks over NATO, to take one example, does not give the Soviets an advantage’. Weinberger, Casper W. "Arms Reductions and Deterrence", Foreign Affairs, 66(4), Spring 1988, p.716.
Union would 'make a proper response to any attempt to disrupt the existing military-strategic balance'.\textsuperscript{62} But by mid-1980s the Soviet Union was showing trends of retreat from the race and warfare fighting nuclear strategies lost their relevance with Gorbachev's insistence on finding political solutions for military problems.

Nuclear warfare at sea, as a subject, could not draw enough attention from the strategic community, partly because the weapon-systems were less "visible" and partly because of the lack of official deployment doctrines that were presented in a form to invite informed critique.\textsuperscript{63} In the last chapter we have considered some aspects of naval balance and naval arms control but here it can be safely said that for geographical and technological reasons the Soviet Union was a much inferior power to the U.S. (and NATO) in terms of naval nuclear capability.

\textbf{Summary}

Being the preponderant powers in regard to nuclear weapons and forces the United States and the Soviet Union dominated the nuclear policies of NATO and the Warsaw Pact respectively. The quest to achieve a balance (or superiority) was in effect pursued by these two powers with lesser contribution from other allies.

Being the first in the race to explode a nuclear device and reaping consequent advantage in technological advancement the US


\textsuperscript{63} Ball, Desmond. "Nuclear War at Sea". International
enjoyed an era of superiority in the initial years while the USSR steadfastly worked to achieve strategic capability and around 1970 they were able to fulfil their ambitions. With the progress in missile technology the Soviets could overcome geographical constraints and though they had trouble with missile accuracy and precision, a rough parity emerged. Thus, in early 1970s the nuclear power of both the nations (and therefore, of both the alliances) was somewhat balanced.

What followed next was a modification of warfighting strategies and this was largely a debate considering aspects of limited, proportionate nuclear exchange, judicious targeting and damage limitation and their feasibility aspects - necessary to win a nuclear war. Despite arguments and counter-arguments no one could have the conclusive final say in this respect and, ethical critique notwithstanding, nuclear deterrence (or the balance of terror) continued to be relevant. However, this debate was fuelled by technological progress which created more sophisticated weapons and improved C'I, surveillance and intelligence and accordingly the balance was repeatedly reestablished at higher levels with quantitative and qualitative increase in nuclear weapons and forces.

Apart from causing serious economic burden on both the economies, these changes, for all practical purposes, were of little value. In terms of enhancing deterrence they were superfluous. The deployment and withdrawal of the INF from Europe proved this point. Practically, once strategic parity was achieved,
it was no longer necessary to establish an equilibrium in respects of ICBMs, SLBMs, Strategic Bombers, INFs on one hand and in regard to throw-weight, CEP, and megatonnage of the missiles on the other. As Figure 1.1 denotes: perfect equilibrium is not necessary to achieve balance.

There was always present an element of uncertainty which led to race toward perfecting deterrence mostly as a means of psychological contentment. The competition for perfecting deterring capability needed money and itself became a latent war and in this context, failure to keep up with the pace of the adversary might appear to be a reason for declining morale and an urge for compromising in the Soviet Union.

However, at the same time, one could not ignore the progress made in the conventional field. After strategic nuclear parity was established the focus had to shift to a significant extent on conventional weapons and forces.