The dilemma of contemporary international relations is the question of what to do with nuclear weapons and what to do about them. The processes through which nations formulate their foreign policies are supposedly based on, or ought to be based on, precepts of rational decision making. But nuclear weapons have challenged the validity of traditional approaches and rationality of their own strategy because this strategy revolves around the problem of finding some possible political use of these weapons.

Nuclear weapons have unalterably changed the way people think and nations behave. Given these weapons of mass destruction, victory is no longer possible in superpower confrontations, and large scale violence is no longer a useful tool of statecraft. It is the prospect of fighting the war rather than the possibility of losing it that induces restraint. This basic psychological condition, rather than highly diversified nuclear options, constitutes the essence of nuclear strategy. But a fundamental question in this regard is whether 'nuclear strategy' is not a contradiction in terms. A rational strategy for the employment of nuclear weapons does seem to be a contradiction in terms because rationality demands that these weapons may never be used because they will serve no purpose. Since strategy relates military power to
political purpose, and since no military purpose is furnished by nuclear weapons, there appears to be no political purpose for the exercise of nuclear power. There are strategists and scholars who believe that nuclear weapons can be used both for war fighting and war winning options through their first strike-preemptive use and, on the other hand, are others who assume that the only political purpose for which nuclear weapons can be used is the deterrence of an enemy's attack. Whereas some believe in the use of nuclear weapons under circumstances prevailing at a particular decision-point, others sanction the use of nuclear weapons only for defense. The reason that the nuclear debate is perplexing is that strategists and scholars proceed from so many different premises. Either the impact of these weapons on military strategy is underestimated or attempts are made to comprehend the contemporary international situation with intellectual tools that might have been valid in the pre-1945 period. The failure of policymakers to comprehend the nature of nuclear weapons as instruments of war is sure to have catastrophic consequences for human civilization.

Averting War?

Nuclear strategy, thus, involves the use of nuclear weapons for purposes of persuasion and compellence at one end and for dissuasion and deterrence at the other end of a continuum. It is based on assumptions that: “nuclear weapons offer nations effectively unlimited force; that winning a nuclear war is impossible; that it is imperative, therefore, to stop such a war from ever beginning; that the weapons themselves play a crucial role in that effort; that an invulnerable retaliatory force is of particular importance; that there is a special danger inherent in any capacity, on either side, for destroying the nuclear forces of the other side in a first strike; and that ‘perceptions’ and ‘psychology’ play an essential role in convincing the adversary that any aggression by him will lead only to his annihilation, and so in maintaining the ‘stability’ of the whole arrangement” (1).

The strategic essence of the entire problem concerning nuclear weapons was comprehended by Bernard Brodie at the very outset of the nuclear age when, in his The Absolute Weapon (1946), he had pointed out that, till then, the chief purpose of military establishment was to win wars but, in the era of nuclear weapons, its chief function was to avert them. The main argument in this assumption was that the
mutual destruction capability of nuclear weapons would serve no useful purpose except to make a nuclear war irrational and suicidal. Brodie had believed that margins of superiority in nuclear weapons or the means of delivering them might count for little or nothing in a crisis as long as each side had reason to fear the huge devastation of its peoples and territories by the other. Though the more effective a weapon is the more it is used, nuclear weapons are so effective that they cannot be used. Armed forces have always adapted themselves to new weapons through the process of trial and error; but no one can even think of adapting national strategy through this process of trial and error with nuclear weapons. Vast sums of money, national resources, human knowledge and time are spent over something that cannot be used and should not be used and is only intended to make sure that others also do not use it. This paradox is at the bottom of nuclear strategy.

War today is no longer a struggle but a technical process of destruction. Because of the horrendous consequences of any nuclear confrontation, nuclear weapons have not only made war less likely, they have also made major crises between great powers an infrequent occurrence. Aside from the nerve-racking period between 1958-1962, when the superpowers engaged in high stakes confrontations over Berlin and Cuba, the American and the Soviet leaders have acted with considerable restraint. Since nuclear weapons promote caution, they have served to reinforce the status quo, especially in terms of alliance relations, and super power nuclear arsenals seem to have provided more glue than solvent to alliance relationships. Historically, major shifts in territory and spheres of influence usually occur through conflicts or threats of war, and nuclear weapons have reduced both. These weapons also place a heavy onus on the super power that wishes to change the status quo. When full-blown crises have erupted or when the superpowers have jockeyed for advantage over lesser stakes, political outcomes have been unrelated to the nuclear balance or perceptions of it.

In international relations, escalation acts as a technique to put pressure on a party to settle a dispute without resorting to war and is used to make negotiations possible. The fact that two states have agreed to negotiate indicates that they do not want war. At the same time, they do not want to indicate any sign of weakness by being too eager to negotiate and they want to achieve their objectives without war. Both hope that the other side will compromise before the risk becomes big. They do not want to gain some advantage at the cost of creating a
political situation that might lead to a general war; and they avoid a situation that might provoke an imprudent response from the other. Strategic gains may be obtained by increasing war efforts but such gains will be affected by the corresponding increase of efforts by the opponent. The apprehension that the opponent may either react, or over react, deters escalation. Such escalation may be a part of the conscious strategy of some state. A state may want to threaten the other with an all-out war or may want to provoke it into some recklessness, and so may decide to escalate the level of conflict in international crisis situations. This may be done by widening the area of conflict or violating a local sanctuary, by compounding escalation when attacks are made on other allies or clients, and by increasing intensity in the form of use of nuclear weapons or attacks on cities. Thus, in any escalation two sets of basic elements are in constant interplay: the political, diplomatic and military issues surrounding the particular conflict, and the level of violence and provocation at which it is fought. Morton Halperin has suggested that two terms should be used to describe different kinds of escalation: “explosion—the sudden transformation of a local war into a central war by the unleashing of strategic nuclear forces, and expansion—a gradual increase in the level of military force employed. These two processes are frequently described as escalation. However, it is important to keep the two processes separate. The considerations that go into the decision to begin a central war would be very different from the considerations that have gone and will go into decisions to expand a local war. These latter decisions will be influenced by a number of factors, including the foreign policy objectives of the two sides, their estimate of the risk of central war, their images of the role of force and their domestic political objectives”.

War can, in fact, be deterred by a balance of power based on nuclear weapons, though not necessarily. Possession of nuclear weapons does not mean an obsolescence of conventional forces, because such forces are still required for those wars which would have them as the main instrument or for many peace time functions as the main instruments, and they would be needed to complement the nuclear weapons in a nuclear war, or maintaining the balance of power to prevent a major war. Nuclear weapons have created a force in being which makes any potential attack a suicide risk to the aggressor. This situation has in fact created a state of structural terrorism in which international relations are based on the legitimization of violence and the continuation of a dreaded threat of universal extinction.
Deterrence:

The primary function of this power has become to prevent the use of military force by one's opponent. There is the calculation that the adversary might be refrained from doing something or induced into doing something by threatening a punishment for non-compliance. This policy of deterrence operates in a manner in which the conflict is contained within the boundary of threats that are not executed and not even tested. A strategy of deterrence means (i) a strategy which may be a political strategy, in peacetime, by deterring an adversary from starting a war, (ii) a strategy of war if deterrence fails, and (iii) an elaboration of guidelines for force posture to meet the above requirements. This is not a strategy for the military but one for the politician because the threat of the use of nuclear force is a political act that reduces the relevance of military considerations. If the deterrence has failed, neither of the side will be interested in destroying the other's population centers. The main motivating force to exercise restraint will be the desire to induce the same restraint in the adversary. And the desire for restraint in the adversary will lead to self-restraint. Snyder has explained this through the phenomenon of limited retaliation in which "initial strikes, in fact, would be threats of further strikes to come, designed to deter the enemy from further fighting. In warfare limited to conventional weapons or tactical nuclear weapons, the strategic nuclear forces held in reserve by either side may constitute a deterrent act against the other side's expanding the intensity of its war effort. Also, limited wars may be fought in part with an eye to deterring future enemy attacks by convincing the enemy of one's general willingness to fight" (4). This was proved by the testimony of General Alexander Haig, former Supreme Allied Commander of the NATO, who, as the US Secretary of State, testified in 1981 before the US Congressional hearings that the NATO had plans to fire a nuclear warning shot in the early stages of the war in Europe (5).

The consequences, in international politics, of nuclear deterrence revolve around four basic questions:

i-what are the changing physical requirements for the continuing success of deterrence?

ii-What kinds of wars does nuclear deterrence really deter?

iii-What is the role, if any, for tactical nuclear weapons?
If deterrence fails, how to fight a nuclear war and for what objectives?

The starting concern of a state is to preserve sufficient retaliatory force against surprise attack, to deter the enemy in anticipation. In this, the precautionary measures would depend on the degree of the desire of the enemy to destroy the adversary. There may be a possibility that if the enemy believed in his capacity to destroy the other side without getting too much damaged himself, he might be tempted to do so. To be prepared for all the eventualities is to minimize that portion of one’s forces that the enemy might be confident of destroying by a surprise attack, coupled with a posture that would open for the enemy the penalties for miscalculation. No opponent would try to eliminate just a missile force unless he was confident of eliminating major portions of the other retaliatory forces (i.e., submarines and bombers). This is so because each of the legs of the triad helps the other two.

In the early nuclear age, the question was not important as to what nuclear weapons deter. It was with the thermonuclear weapons and the doctrine of massive retaliation that the necessity grew to separate general war from limited or theater war. Now it was believed that strategic nuclear power could be used to deter only the strategic nuclear power, and not other form of war. A quarter of the century back, there were attempts to delink nuclear weapons from diplomacy since they were not going to be used any way, and the idea developed that the best way to avoid their use was to build up the conventional forces (6). Actually, tactical nuclear weapons have escalatory effects and even one use may directly lead to a holocaust. It is precisely the fear that escalation is probable or possible which creates the sanction for deterrence. Then, the enemy is not likely to start a war and leave the critical choice of weapons to the other side. He would refrain from using tactical nuclear weapons only if he was confident of quickly overwhelming us without them. On the other hand, the other side also could not afford to wait and see whether the enemy would use them first. There is no logic in the argument that a conventional force would make a better deterrent than the nuclear force designed for tactical use. It is believed that nuclear weapons need not be used very rapidly in replying to an attack; and that the main war-goal should be to terminate the nuclear exchange quickly and with the least amount of damage possible. In practice, however, a different view is taken. Since the mid-Seventies, the US army (and, surely, the Soviet army must have been thinking on the same lines) is targeting a war recovery
capability (7), whose object is to make sure that in a strategic nuclear exchange, the Soviet Union will suffer such damage that its recovery would be much more prolonged. Furthermore, there is the related issue of excessive or excessively speedy retaliation to an attack and the possibility of striking first in the hope of winning advantages. If the posture of being prepared to initiate the exchange is to be maintained, as a deterrent, then the weapons are needed only for warning purposes and their number should be minimized; otherwise the enemy might misapprehend the intentions and do precisely that which one was trying to deter—that is, make a first strike.

The strategy of deterrence is based on the idea that the favourable results of a nuclear war can never be sufficient to justify its costs.

If a state does not want to initiate a total war, and does not favour a 'preventive war', then there is no option for it but to adopt a strategy that would deny to the enemy the advantages of attacking first; and it would mean a commitment to the policy and strategy of deterrence. A statement that a particular kind of conduct would be deemed 'an unfriendly act' is regarded as ultimatum and is taken seriously by states if a state issuing such an ultimatum possesses the power and has the capability of using it.

The peculiar situation about nuclear deterrence is that it needs to be perfected without being actually used. It is effective and has some meaning only when it is not used. The strategy of deterrence must always envisage the possibility of deterrence failing. Deterrence justifies something that is relative, because its effectiveness is measured not by the quantum of power that it checks but also by the incentives to attack that lie behind that power. There has to be comparison of the degree of damage that each side is likely to suffer. Our forcing the adversary to consider the probable cost to him of attacking us is to be measured in the relative terms of damage to us also. Accepting enormous damage for the sake of inflicting greater damage on the adversary is beyond reason. The efficacy of deterrence lies in its promise to impose costs upon the aggressor out of proportion to his expected gains. To be effective, threats must retain a measure of credibility, even if only in the form of the threat that leaves something to chance. There is no sure way of telling whether massive retaliation, as a deterrence, would require bluff. Deterrence is a particular type of threat that is retaliatory, in response to a particular purpose—of preventing an attack. Threats are an intrinsic part of international politics, encompassing peaceful and hostile, cooperative and competitive relationships.
Deterrence is really based on the capability of carrying out the threat, and this requires the possession of a nuclear weapon arsenal that will match, or surpass, the enemy's. The capability to carry out the threat implies, also, the will to carry out the threat in the event of war, and the other side should perceive that such a will and such capabilities do indeed exist. The deterrent strategy has to correspond to the strategy of war to be waged in case of the failure of deterrence, and the other side should believe that it will be like this. If the use of tactical nuclear weapons is threatened but the preparations are going on for the use of conventional weapons, then the deterrence will not be effective. A rational calculation of the risk in military planning is to be made and due consideration is to be given to the irrational motive not to surrender under any circumstances. An allowance has to be made for the irrational actions on both the sides. Since there is uncertainty about the rationality of the behaviour of the parties concerned, nuclear strategy is difficult to calculate. While several options about level of deterrence may be there, there is no need to make the enemy aware of what the probable response would be and the risks and damages he might expect from one's own actions. The risk must remain incalculable, because it is the enemy's fear of escalation that is the best deterrence and best defense. If a definite scenario is not elaborated then the enemy is not given the possibility to choose the kind of war most convenient to him. Therefore, the best deterrence involves the principle of incalculable/uncertain risk, meaning that the enemy should not know the extent of risk in the event of aggression. This strategy would involve the threat of an automatic war of escalation, without any pre-determination concerning the extent to which nuclear weapons would be used.

There are divergent views among the scholars on the real nature and the sanction of deterrence in the nuclear age. Some believe that fear is the key ingredient of deterrence (8). For some, it is the rational assessment of costs and gains (9). Some believe that risk and uncertainty are the key elements (10). Some see an element of rationality in it: "One requirement for deterrence is that decision-makers act rationally—the leaders of state B must calculate the costs and benefits of the action that state A is seeking to deter and rationally calculate not to act" (11). Some believe that deterrence appeals to the self-interest of the deterred: "Deterrence is the inducement of another party to refrain from a certain action by means of the threat that this action will lead the deterrer to inflict retaliation or punishment. In other words, deterrence is persuading the deterred that his own interest
compels him to desist from committing a certain act. Such persuasion is achieved by calculations of gain against loss. To make deterrence effective, the deterrer makes certain that the level of retaliation overrides the gain the deterred anticipates. To the extent that such an action is motivated by psychological impulse rather than calculations of gain, the strength of the deterrent threat must of course also offset the pressure of such impulses (12). Herman Kahn also talks about psychological impulse when he says that enough forces should be there to deter even the irrational and irresponsible (13). But for many scholars, several of these elements operate simultaneously (14). Sometimes, deterrence and denial overlap (15) while denial and defense have identical meanings. Denial is not the same as retaliation because the latter means inflicting punishment in response to an attack. Its example is the threat of nuclear attack that superpowers hold over each other. Denial would mean resistance to the attempts to attack. This is the NATO strategy, in Europe, against the Warsaw pact. Deterrence is stopping something which is unwanted before it occurs, and in involves both denial and retaliation. In this, it is different from compellence which means use of force to make adversary do something or force him to stop doing something. Retaliation, defense and denial are actually methods of that end which we describe as deterrence. The nuclear strategic thinking has been based on the assumption that strong defensive forces would prevent attacks. If deterrence by denial was expressed by the Maginot Line, deterrence by destruction is provided by the nuclear threat. However, a distinction may be attempted here between defensive deterrence, involving denial and defense, and offensive deterrence, involving retaliation and punishment. Whereas the theory of deterrence got started from the initial strategy of retaliation, soon it incorporated strategies of denial also. This was logical since the theory of deterrence itself had developed as a result of status quo policies of the West against the alleged Communist designs to alter the international system. Since the West was, immediately after the Second World War and at the time of the introduction of nuclear weapons, globally dominant, its security perceptions evolved through the policy of preserving the status quo. Nuclear strategies, geared towards denying alterations in status quo, harmonized well with these policies as defensive deterrence. The entire concept of security came to be identified with maintaining and ensuring stability, and no better and stronger means for achieving this were there than nuclear deterrence. Actually, there was nothing new in the logic of the argument. As E.H.Carr had observed, before the nuclear
age, the status quo powers always equated their own interests, in universal terms, with universal stability (16).

The main theoretical problem in the field of national security policy is to distinguish between the two central concepts of deterrence and defense. Snyder has made an interesting distinction between the two: “Essentially, deterrence means discouraging the enemy from taking military action by posing to him a prospect of cost and risk outweighing his prospective gain. Defense means reducing our own prospective costs and risks in the event that deterrence fails. Deterrence works on the enemy’s intentions; the deterrent value of military forces is their effect in reducing the likelihood of enemy military moves. Defense reduces the enemy’s capability to damage or deprive us; the defense value of military forces is their effect in mitigating the adverse consequences for us of possible enemy moves, whether such consequences are counted as losses of territory or war damage. The concept of defense value, therefore, is broader than the mere capacity to hold territory, which might be called denial capability. Defense value is denial capability plus capacity to alleviate war damage “ (17).

Deterrence is not synonymous with the capacity to win a war. In the pre-nuclear age, a state having an inferior force did not necessarily possess a deterrence value against the superior rival. But in the nuclear age, the potential deterrence value of an inferior force is not small. If a menaced small nation could be in a position, while possessing only a couple of bombs, to successfully deliver this thermonuclear device on Moscow or New York, then this capacity would be sufficient to deter these superpowers. They would not accept the destruction of their big cities for some trivial gains. In this example, the deterrent capacity of such a small nation is of decisive value. In the face of large conventional and nuclear arsenals, a threatened state has the option to either comply with the deterrer’s desires or resort to an all-out nuclear war. Such large arsenals, which are required for flexible response strategies, raise the costs and probability of risks. These arsenals would also bring under the effective threat range wider enemy targets, persuading him to comply. The heart of deterrence is that a threat promises costs in retaliation for an attack. The state finds that when such costs are added to the other drawbacks of an attack they are excessive in comparison to the anticipated gains. The result of such a calculation may be a decision not to attack.

Deterrence is not the power to compel or coerce, but to dissuade and, hence, is a negative aspect of political power. A state may deter another by implicit or explicit threat of some sanction, and this may
follow from any form of control which a state might have over the other. The state to be such deterred makes an estimate of the total cost-gain expectations and these depend on its perception of the other's capability and intention to apply punishments or confer rewards. The state so being deterred will not just count its existing cost-gain position but the extent to which this position is likely to change if it conforms to the wishes of the adversary. A state is unlikely to undertake overt military action if its chances are good enough for making the same gains by peaceful means. On the other hand, a state is more likely to go to war, in spite of greater potential costs, if in not going to war is the possibility that the other side might attack first and inflict even more costs on it. This uncertainty is a key factor in determining the key steps about retaliation or deterrence because it is a process of influencing the enemy's intentions. In making this determination, a state has to make valuation of possible costs resulting from the adversary's response, as also the probability of achieving the objectives with each of the response of the adversary.

There are two problems with deterrent strategies. The first is the credibility of the state that is threatening action because, to be effective, a threat has to be believed. A state has to believe that the other can deliver the threatened punishment and, under some circumstances, it may well do so; otherwise, the state against whom the threat was made may not be deterred. The state to which the threat is addressed must at least believe that the punishment may be administered. The second problem emanates from the actions that the threatened state may take. If the defense is strong, the aggressor may attempt to overcome it, or may seek to reduce the effects of deterrence by striking to destroy a large part of the adversary's deterrent force. To say that two states deter each other means that they create a condition of strategic stability. Strategic stability, however, makes it possible to use force on a fairly large scale without using nuclear power and, then, strategic strikes are deterred but not conventional actions. It is a function of deterrence to make any preventive, pre-emptive or any aggressive attack on oneself look unattractive and useless to the other side. A certain way for creating this perception is to make it absolutely clear that an attack by the other side will be met in kind, and not necessarily confined to the same degree. The threat of a massive retaliation against the targets that the other state values most, and not just its military assets, must be maintained and made credible if deterrence is to work. A state intending to deter the other has to accept the necessity of going to the brink, and even beyond that, to counter the attacks on itself and has to
accept the option of using nuclear weapons for self-defense. If the decision makers of a state are willing to launch a counter-strike against the population and industrial centers of the adversary then and only then the deterrence has some viability.

The nuclear superpowers have based their strategies on a flexible doctrine for strategic nuclear use and on the determination that hard-target counterforce capabilities must be countered in kind. The former US Secretary of Defense, James Schlesinger had outlined four requirements for maintaining a credible nuclear deterrence: “An equivalence with the Soviet Union in the basic factors that determine force effectiveness... a highly survivable force that can be withheld at all times and targeted against the economic base of an opponent so as to deter coercive or desperation attacks on the economic and population targets of the United States and its allies... a force that, in response to Soviet actions, could implement a variety of limited pre-planned options and react rapidly to retargetting orders so as to deter any range of further attacks that a potential enemy might contemplate. This force should have some ability to destroy hard targets, even though we would prefer to see both sides avoid major counterforce capabilities. We do not propose, however, to concede to the Soviets a unilateral advantage in this realm... a range and magnitude of capabilities such that everyone—friend, foe, and domestic audience alike—will perceive that we are the equal of our strongest competitors” (18).

It is not easy to assess the effectiveness of deterrence and it is not possible to say with certainty that the desired result in the adversary’s policies has been due to deterrence. It would be naive to assume that India was deterred from helping in the establishment of an independent Eelam, out of Sri Lanka, due to the super powers’ presence in the Indian Ocean, because it presupposes that India was interested in such establishment, which might not had been the case. In the case when deterrence is employed, it is always easy to assume that the desired action or inaction is the result of deterrence policy. The motivation of the adversary towards the action from which he is to be deterred is a major deciding factor coupled with the degree of probability that the action is likely to be undertaken if specific deterrence measures are not there. The adversary will also balance the costs/gains of the action for him against the costs/gains of deterrence and defense measures facing him. It is assumed that the adversary will attack unless the costs to him of doing so are increased more and more and gains of not attacking are made more appetizing, thus lowering his motivation to attack. If such motivation is fairly high, very substantial
deterrence measures will be needed to achieve the desired results. Perceptions of these levels of motivations may not be correct. The motivation of North Vietnam to unify with the South was of such high level that even the most formidable U.S. military actions failed to deter this from happening. Similarly, China under Mao had tried to establish such an image that, whatever the costs, she will not be deterred from undertaking the policy objectives.

The strategy of deterrence reflects the global foreign policy interests of superpowers aimed at ensuring their own security. The underlying assumption here is that deterrence constitutes the means of foreign policy and that it is the basic function of armed forces in the nuclear age. Nuclear deterrence theory is primarily centered around the assumption that nuclear strategy involves the super power relations only. Though China and France had posed a challenge to this super power domination, the superpowers were able to maintain their superior and dominant position. Their arsenals had so grown that it was extremely difficult for any one else to match that position. Since nuclear deterrence was based on the missile-based defense, any effective defense against it was not possible and use of nuclear system that were themselves vulnerable became the first strike. The major infra-structure of society would still be vulnerable even if some, or more, warheads could be destroyed before they reached their targets. Further, an active super power hostility was central to the development of deterrent strategy; and the hostility was real and intense during the cold war period. This, coupled with the vulnerability of nuclear forces, made it imperative that each of the two nuclear powers must possess a secure second-strike force—that is, a capability of inflicting devastating damage on the opponent after suffering a massive nuclear attack. Bipolarity now centered around protective technologies. Command, control, communications and early warning systems became of paramount importance in the conduct of effective strategic relations (19).

Deterrence is more effective under conditions of bipolarity because the fear of assured destruction restraints both the sides from going to war. In this situation, force relationship between the two sides is clearer and conflict management is based on the norm of parity. Though deterrence is effective in this condition, it is more difficult because technological imperatives for maintaining the capability of assured destruction are much more demanding, the relationship is based on zero-sum pattern and this focuses and concentrates on possibilities between the gains of one and losses of the other. Multi-
polarity also makes Mutual Assured Destruction (MAD) difficult to assess because each of the state will have to account for more than one deterrer and deterree. In this situation, two or more states may join together in an attack against the third; or a third state may trigger a war between two states during a period of crisis. Since the parity equation is undermined, more fingers on more nuclear triggers enhance the probability of war, whether intended or unintended (20). But this multi-polity reduces the zero-sum nature of deterrence and thus reduces the intensity of hostile relations. In this situation, there is a reduced need for extended deterrence. Also, since states abstaining from the war are more likely to benefit from this war, the incentives for going to war are reduced in such a multi-polar system.

**Small Nuclear Forces:**

Smaller nuclear powers of the future (i.e., Brazil, Argentina, Pakistan and India) may not be central poles of power, nevertheless their possession of nuclear weapons would pose vital questions as far as deterrence is concerned. Kenneth Waltz, in *The Spread of Nuclear Weapons: The More the Better*, (21) has argued for the essential universality of nuclear deterrence logic, and it would work for countries like India and Pakistan. The assumption that nuclear deterrence has sustained peace in the developed world is going to make it difficult for nuclear-capable countries not to adopt this strategy. Though Stephen P. Cohen has said that, between India and Pakistan, there would be the possibility of accident, misunderstanding or misperception since both of them have not done much work on nuclear doctrine and that both would face formidable command and control problems he is optimistic that nuclear proliferation in South Asia will stabilize the regional situation to the degree that it has done into the US-USSR relations (22). Because of various uncertainties, both have already achieved some deterrent stability and their so-far continuing resolve to exclude external powers from bilateral relationships may have been the result of the knowledge that even a conventional escalation could lead to a nuclear war. There is no logic in the argument given by some that the developing countries cannot be trusted with nuclear weapons and that they may not behave responsibly. As pointed out by K. Subrahmaniam, "It is irrational to argue that the same effect (stabilizing the situation) cannot be secured on the India-China or India-Pakistan borders unless one accepts the racist
nonsense...that nuclear weapons are safe in the hands of a senile Mao Tse Tung, a comatose Brezhnev, an inebriated Nixon, a drugged Pompidou and an unstable Eden, but not in the hands of a sober, cautious and cunning Ziaul Haq" (23).

Nuclear proliferation thus may stabilize the nuclear order by spreading the war prevention imperative to regions that now suffer from sporadic periodic conflicts.

Even a small state can have a deterrent capability against a big state. A couple of hundred nuclear warheads would be able to inflict unacceptable damage on a large state. Thus, if such a nuclear force can be retained safe against a first strike, then the state has achieved a capability of assured destruction and, therefore, an effective deterrence against the adversary, whatever the size and power of the adversary might be. The cost of the threatened act determines the effectiveness of deterrence and, if credibility of threats is ensured, the deterrence in the form of assured destruction has been achieved. Uncertainties deter if the costs are high, because then the unpredictabilities of war are amplified. Bernard Brodie, Jervis and Laurence Martin believe (24) that the basis of deterrence lies in the fear of war created by the existence of a surplus capacity of destructive power. This capacity is not that hard to achieve, even for a smaller nuclear power and, therefore, the requisite conditions for deterrence are also not hard to obtain for a smaller state. As Glaser argues (25), even a perfect strategic defense would not be able to ensure perfect security, because its perfection could never be tested adequately to convince, and constant doubts would exist as to whether one’s opponent had developed new means for penetrating what was previously impenetrable. Another factor in this regard to be considered is the uncertainty of state behaviour under crisis as escalation dominance does not make it safe to stand firm. Protection for oneself cannot be achieved just by destroying many warheads of the other side and this would be possible only if the surviving warheads were able to persuade the enemy from sparing one’s population centers.

A condition of strategic stability denotes a condition in which the superpowers decide not to build or use nuclear weapons and it encompasses the complementary ideas of arms race stability and crisis stability. Whereas the former occurs when neither super power feels compelled to develop major new weapons programmes, the latter denotes a condition in which neither super power chooses to use a nuclear weapon in a conflict.
Superpowers’ Nuclear Doctrines:

Once the nuclear monopoly of only one state was no longer there, there was no logic in the possession of superior destructive power as a method of dissuading the other side. Nuclear threats of one side would be of no use if the other side could also make counter threats. This mutuality of destructive potential ensured that any policy objective would not be a sufficient justification for resorting to war. By the middle of the ‘Sixties, even though the USA still had advantage over the USSR in nuclear strength, the latter had achieved position where it was possible to inflict unacceptable damage on the USA in retaliation. In this way, a bipolarity of effective nuclear vulnerability was established. There was a marked deviation in the Soviet strategic thinking which was a marked shift from the standard Leninism. Whereas Lenin believed in the inevitability of war between imperialist and socialist states, Khurushchev, after achieving this parity for the Soviet Union, believed that since the imperialists would not be able to win, they would not attack.

With the Soviet Union acquiring nuclear weapons, the American strategic planners believed that the former might attack and this had to be deterred by threatening a massive retaliatory blow. This was the threat of striking after an attack had been made and, therefore, it was passive deterrence. On the other hand, there was a policy of active deterrence involving the threat of carrying out a nuclear strike before nuclear weapons were used by the other side, even against the allies. There was limited deterrence also to deal with revolutionary and guerilla strategies and the use of thermonuclear weapons was not necessarily envisaged in this. The first two types (active and passive), whether involving countervalue or counterforce strikes, were actually determined by their timing. The passive was a retaliatory strike after the enemy had struck, and the active was a preemptive or preventive strike designed to forestal the enemy in his intention to attack. The strategy of limited deterrence was limited voluntarily and deliberately as far as the quantum of damage threatened and the targets involved were concerned.

The early phase of the U.S. nuclear strategy was dominated by John Foster Dulles and Kennen who believed that the U.S. problems originated from the aggressive intentions of the Soviet Union. Dulles had, in fact, not only mis-judged the Soviet intentions, but had not taken into account the pace with which technological developments
were making not only the balance of power concept but also the strategy of thermonuclear bluff, obsolete. The U.S. strategy of massive retaliation and the policy of an elaborate alliance system were part of the over-all policy of containment. The Korean war was a stimulant to change in the US policy, and the Eisenhower administration shifted the US doctrine abruptly from a war-fighting to a war-deterring strategy. There was a desire to find a strategy that the USA could afford and could stick to without gearing its responses to the wayward actions of other states. There was a resolve not to fight even a war in which the country denied herself the use of her best (i.e., nuclear) weapons; and the threat to drop Atomic bombs was intended to deter other states from starting war or carrying them through. This doctrine of absolute deterrence, based on the idea of the threat of a massive nuclear attack was termed "massive retaliation" and was intended to bring a halt to all aggression.

John Foster Dulles had announced massive retaliation as US policy in January 1954 and this policy was presented as a means of countering what was perceived as a dangerously increasing communist threat in Europe and Asia. This policy relied on a credible commitment to launch a devastating nuclear attack in response to what may be comparatively even a trivial provocation. It reflected the US aspirations to utilize nuclear superiority against the Soviet conventional advantages in Europe and Asia and was motivated by the experience of the Korean war which was expensive and militarily indecisive. This was the period of assured US nuclear supremacy. The New Look in strategic doctrine emphasized nuclear power as a cut-price of achieving US security. Not only that but tactical nuclear weapons gave more bang for the buck, that is maximum safety at minimum cost. But this strength was based on a nuclear advantage that the US possessed at the time but could not sustain for long. Once the Soviet Union also possessed the same capability the US retaliation against any Soviet action was not to be credible as that would have meant triggering a nuclear war. The doctrine was actually based on perceptions that were fast becoming outdated. The other side, with its own nuclear capability, would know that the party threatening massive retaliation does not mean it. This strategy evolved under the assumption that the utility of deterrence is based on the way one is prepared to fight. For instance, until McNamara's tenure as the US Secretary of State, strategic superiority was considered vital to deterrence of Soviet 'recklessness'. He evolved the notion of sufficiency of strategic forces. But again, since Nixon administration, up to now,
the notion has been revived that strategic inferiority is bad for deterrence. Henry Kissinger had said right in the beginning of the Age of Massive Retaliation that it seems to offer a technological solution to complex political, economic and strategic problems(26).

Flexible Response replaced massive retaliation as the US nuclear strategy in the early ‘Sixties. It meant countering enemy aggression with a variety of possible responses depending on the nature and seriousness of enemy aggression, and the response could range from limited defense with conventional military forces to all-out nuclear war. This strategy was adopted in 1967 as the official NATO strategy in Europe. The Kennedy administration had believed in the policy of a controlled and flexible response where the military force of the US was to be versatile enough to meet with appropriate force the full spectrum of possible threats to national security. This implied that the US would appropriately respond to any attack, at conventional or tactical nuclear level. On the strategic level, “the new doctrine meant a switch in targeting policy away from the ‘optimum mix’ assault, designed to destroy Soviet society and military power in one mighty spasm, to a ‘no cities’ counter force option aimed at destroying remaining Soviet armaments in place” (27). Inspite of many modifications in terminology, this idea has guided the US nuclear policy for the last three decades. The idea is based on the possession of several options, both conventional and nuclear, intending to deter aggression at all level and moving the defence forward if deterrence failed, without having to make either/or choices between conventional—nuclear means.

This doctrine, in fact, destabilized the presumptions on which deterrence depended because it considered nuclear war rational and winnable. It was believed that flexible strategic response implied a lower nuclear threshold and more political control. Actually, there is always the possibility of a war expanding rapidly beyond the control of political authority and there is no guarantee that the enemy will also observe the same rules of strategy. Since there is hardly any possibility of a clean and surgical nuclear strike, the collateral damage will be equally high. Further, the military defect about flexible response was that it made it difficult for military planners and strategists to prepare for any particular type of war. A proper response encompassing all the eventualities is not possible in strategic terms.

At a speech at the University of Michigan, Ann Arbor, in 1962, Robert McNamara had declared that: “The U.S. has come to the conclusion that, to the extent feasible, basic military strategy in a
possible general nuclear war should be approached in much the same way that more conventional military operations have been conducted in the past. That is to say, principal military objectives should be the destruction of the enemy's military forces, not of his civilian population" (28). Its clear implication was that the U.S. was prepared to take the nuclear initiative to secure a major gain and to limit damage. Such counterforce strikes were aimed at reducing the ability of each state to damage the other; and the city-avoidance were to mean that both would share an interest in limiting the scope of strategic actions. Whereas countervalue implied nuclear attacks against civilian populations and cities and industries in highly populated areas, counterforce refers to nuclear attacks against military targets, such as enemy's own nuclear weapons and facilities. The psychological impact of a countervalue nuclear strike could, in theory, coerce the enemy into giving up. Such a strike is also considered an effective way of preventing an enemy from recovering from a nuclear war and rebuilding so as to take revenge. In this way, a deterrence based on countervalue would imply that no state can pursue aggressive policies without considering the possibility of a devastating nuclear attack on its own industrial and population centers. This countervailing strategy was the U.S. doctrine under the Carter administration but actually it was a strategic refinement of the Limited Nuclear War strategy that was formulated as the Schlesinger Doctrine of 1973.

The international strategic context, in which assured destruction was operating for determining the character of strategic forces, had radically changed. Even as late as the mid-'Sixties, the U.S. believed that it had achieved a superiority over the Soviet Union in the quantitative dimension of the strategic arms race. McNamara had said at that time "The Soviets have decided that they have lost the quantitative race, and they are not seeking to engage us in that context. It means that there is no indication that the Soviets are seeking to develop a strategic force as large as ours" (29). Elaborating this later on, in a different report, he said: "In the case of the Soviet Union, I would judge that a capacity on our part to destroy, say, one-fifth to one-fourth of her population and one-half of the industrial capacity would serve as an effective deterrent. Such a level of destruction would certainly represent intolerable punishment to any 20th century industrial nation" (30). The doctrine of Mutual Assured Destruction (MAD) sized the U.S. forces according to their ability to destroy the Soviet Union in a retaliatory strike, and it was believed that 25% of its population and 50% of its economic infrastructure would represent intolerable
punishment and that a bigger strike than this would produce only marginally improved results.

The MAD was based on the assumption that both the nuclear powers could hold the other's society under threat of an assured destruction if both possessed a secure second strike capability. In this case, there would be a less danger of first strikes against each other's nuclear forces and each would try to avoid war, though the hostility might continue. If MAD was there, possibility of counterforce strikes would not be there as that would be only counter-productive and suicidal. Stability depended on the maintenance of a secure second strike capability. An unstable hostility and rivalry could thus be transferred into something stable, wherein both the superpowers would share a common interest, out of mutual concern to avoid war. Since the advantages of a first strike were obliterated and the damages from the second strike were certain, there were very strong reasons to prevent war. A logical corollary of this common interest in war-avoidance was the emergence of arms control as an additional sphere of common interest. The argument was extremely logical: "MAD rested on deterrence by the retaliation of punishment. That threat, in turn, rested on the vast increase in destructive power made available by nuclear weapons. Given that there was no effective defense against a nuclear attack on society, the threat to punish required only a finite military capability" (31). With limited means for defending against a nuclear strike, the superpowers rely on their ability to inflict enormous damage on each other in their second and subsequent strikes, thereby attempting to deter each other from launching a nuclear attack in the first place. This arrangement would work as long as both are in a position to absorb a nuclear attack and then counter with an unacceptable destructive retaliation through their strike-back capability. Since both the sides base their security on deterrence, and deterrence is based on the capability of punishment, it would be in their mutual interest to have some ceilings and limitations on such force levels as would constitute the capability of punishment. Maintaining the MAD stability at the lowest cost became the objective of arms control. In this way, arms control became distinct from the earlier concepts of disarmament. Attempts at arms control were based on the premise that arms were not just the problem but were part of the solution and what was required was not just a reduction of arms but such deployments that would stabilize MAD in a simple and cost-effective way.

'Balance of Terror' describes the balance of power between the superpowers. It is characterized by MAD, a condition in which the
superpowers are restricted from going for aggression by their ability to inflict unacceptable damage upon each other. It is based on each superpower's capacity to absorb a nuclear strike and then counter with an unacceptable retaliation. The threat of destruction, in this way, avoids war. One side's Assured Destruction problem is the other side's Damage Limitation problem, and the other's Damage Limitation problem is the first's Assured Destruction problem.

The incentive to go for a pre-emptive strike is strong only if the adversary's strategy is perceived to be counter-city; and then the idea would be to save the damage to population and economic-industrial complex by inflicting a pre-emptive strike on the adversary. But if the adversarial strategy is perceived to be counterforce the incentive is not much for a pre-emptive strike. On the other hand, a side adopting the counter-force strategy is more likely to go for the first strike. A first strike against the cities might leave the major portion of the adversary's forces intact and this would mean the failure of the strategy of the attacker. If a side is going for the first strike there is no option for it but to attempt to destroy, as much as possible, the strategic forces of the other side. Even in a scenario of established deterrence, no superpower is likely to limit its strategy from attacking vulnerable strategic forces of the other, at the start of the war. With the availability of invulnerable strategic forces with both the sides, the prospects of pre-emptive strike are very low, notwithstanding any strategies involved.

The Nixon administration in the US found the MAD strategy insufficient. An analysis was made at this time to determine the relative casualties if either of the two superpowers resorted to a first strike; and the finding was that there would be more US casualties in the case of a US first strike than in the case of a Soviet first strike, because it was figured that the side striking first would resort to counterforce strategy whereas the retaliating side would resort to countervalue strategy. Therefore, new limited strategic nuclear options were formulated under which immediate massive retaliation against the Soviet citizens was no longer to be the only or principal option. This Schlesinger Doctrine of limited strategic options was a strategy of counterforce. This doctrine emphasized 'selectivity and flexibility' in choosing where and how nuclear weapons would be used in a conflict. This doctrine assumed that use of nuclear weapons would be coordinated with diplomatic and conventional military efforts in a conflict, providing a legitimate policy role for nuclear weapons. Tactical and theater nuclear warfighting is envisaged by the doctrine of limited nuclear war. It was based on the assumption that deterrence would be
enhanced with the ability to fight a limited war at a level of destruction that would leave enough to allow peace bargaining. Since multiple-warhead technologies of both the superpowers were soon to mature, it was appropriate for them to have a dialogue on reducing strategic armaments. The US, in the face of the Vietnam war, and the USSR, in the face of a militarily volatile Sino-Soviet rift, agreed to SALT-I, which included a Treaty on the Limitation of Anti-Ballistic Missile System, an interim agreement with a Protocol on Certain Measures with respect to the Limitation of Strategic Offensive Arms, and a Statement on Basic Principles of Mutual Relations. But SALT had not covered European theater nuclear weapons. And a limited nuclear war was to be primarily limited to Europe and this fact made it more attractive to the US than, naturally, to Europeans.

A limited nuclear war would have to be controlled to be limited and limited to be controlled. A limited war is a war fought to achieve a limited objective. In the achievement of this objective, a nation may be expected to plan to expend a limited amount of its national resources; and in carrying out the war it may be expected to plan to hold the war to a limited geographical area. But a limited war is not confined to limited objectives. The restraint that is applied in it is only on means and not on ends. Objectives become limited because the state involved in a war wants to keep it limited, and not the other way round. And the war is kept limited because the states realize that a total (nuclear) war is not just irrational but unthinkable. Limitation involves targets attacked, and this limit might be quantitative—in which each side may attack some but not all of a type of target, such as not trying to destroy all of the strategic forces while attacking some—and it might be qualitative when the destruction of a particular type of targets is avoided. While strategic targets are avoided, the two sides might go for counter-population attacks. Population damage might not be possible to avoid unless a deliberate effort is made to do so. Both the two world wars were fought for limited objectives—which is amazing in view of the efforts and costs involved—but they were certainly not limited wars. The India-Pakistan war of 1971 had limited objectives but, in a conventional sense, was fought with all the resources and means available. The Middle East war of 1973 had limited objectives (mainly, a restoration of Egyptian/Arab prestige) and it almost crossed the boundary of limited conventional war when Israel started thinking in terms of the use of nuclear power. But if two states decide to have a limited war only, then there is no option but to limit the objectives. In the face of nuclear capability of one or both the sides, the object can no
longer remain, in Clausewitzian sense, the imposition of one's will on the enemy. The process of imposition of will, involving another nuclear power as the adversary, may push it into a position of desperation thereby rejecting the limitations on war. There is always the possibility that the losing side may become constrained to reject limitations on war to avoid defeat. But to avoid pushing the losing side to this brink, the winning side has to show more restraint in imposing its will on the losing side. Because the objective in a nuclear war cannot be just the defeat or destruction of the enemy, but the survival, as much as possible, of our own population, cities, politico-economic structure etc. It would definitely be very difficult because the armed forces everywhere work upon the notion that 'there is no substitute for victory'.

All this involves a deliberate restraint. If one or both the sides do not possess a capability for a full war, this war is not limited. If the possibility is there for an unrestrained conflict but a deliberate restraint is applied, then a war becomes limited. Such a war is conceivable only involving nuclear powers, because only they possess the capability and resources of total destruction. It does not preclude the use of nuclear weapons, however. Strategic bombing may be carried out in a limited or selective way, involving nuclear weapons, on selected targets while being as careful as possible not to hit cities. This bombing may be carried out in a discriminatory way instead of an unrestrained and total bombing. Inherently it will be a very unstable situation, because even a limited nuclear bombing will be so much near the blow-out point that it will be very difficult to maintain any restraint. When the nuclear power is already in the stage of mobilization and is maintained constantly at a high level of effectiveness, it will require a very high degree of self-restraint for a state not to resort to an all-out use of this power in an unstable condition.

Since Henry Kissinger wrote *Nuclear Weapons and Foreign Policy*, in the late 'Fifties, many strategies have shared his belief (though he himself had changed this opinion, later on) that even if a war is limited geographically, it can still be fought with nuclear weapons, not only because such a war will be cheaper but also to avoid the risk of a total defeat. No doubt, a nuclear posture against limited aggression can have great deterrent effect. But this posture will be affected by a necessary, tacit, understanding between the two sides about the rules governing the use of nuclear weapons and the necessity of observing the geographical limitations. Whereas the use of a nuclear weapon can be very easily distinguished from the conventional
weapons, it will be very difficult to impose any restraint on the size of the nuclear weapon so used. Of course, there is no use in distinguishing between a man killed by a conventional weapon and one by a nuclear weapon. There is no military reason as to why tactical nuclear weapons have to be small yield because if a small weapon is good, a large one is better. Whatever sound reasons there may be for using such tactical, ‘small’, nuclear weapons in a limited war, they have to be politically sound—that is, if they will work for the realization of the political objectives of a war. The sound reason will involve the critical consideration that the use of nuclear weapons in a limited war may create that unstable situation in which the limited war may erupt into total war. Contrary to the popular belief that a nuclear war would have no restraint and that both the sides would fire off all of their nuclear weapons against all the targets of each other, actually some distinct limitations can be identified and analyzed. It is possible to have a quantitative and qualitative restraint about weapons to be used and targets to be attacked. This strategy of limited retaliation would involve single attacks on strategic targets rather than cities. Instead of attacking population concentrations and major weapon sites (missile silos, force/armoured concentrations etc) targets such as staging bases, off-shore oil plants, missile test ranges, or similar non-prime targets might be attacked to demonstrate determination, resolve and capability without involving a pre-emptive strike by the other side. Another strategy might be counter-city which would have qualitative restraint about attacks only on cities. This is more a pre-war threat position as it reduces the danger of a pre-emptive strike. The incentive to strike first would be reduced if the intention of both the sides to attack cities is known before hand. This is a type of limited deterrence. Another strategy would preclude attacks on cities and would involve attacks only on strategic targets. Qualitative restraint is there because attacks on cities are avoided; quantitative restraint is there because some weapons are held in reserve to threaten attacks on the cities if this strategy does not work. The nature and strength of the alliance forces in contemporary international relations make it possible for both the two superpowers to retain, even after a massive nuclear attack, sufficient striking power to destroy the large part of enemy population. This provides a strong incentive to each of the two sides to refrain from striking each other’s cities.

The strategy of controlled escalation formed the basis of the US policy of limited nuclear war in the mid-‘Seventies. It required a deliberate and careful limitation of the use of nuclear weapons in a
conflict since an all-out nuclear holocaust is not necessarily inevitable just because nuclear weapons are introduced into a conflict. It is possible to restrict the use of nuclear weapons to specific military targets, thereby limiting the scope of a nuclear war; and thus nuclear weapons would have a legitimate policy role.

Behind the idea of a limited nuclear war was the assumption that neither super power would be in doubt about the survivability of its strategic forces (32). There would be no reason for them to escalate to strategic nuclear use because, in that case, there would be certain retaliation without any advantage.

There are some problems with the limited nuclear war. The possibility of a stable MAD, at low force levels, is negated by the requirement of extra-nuclear forces that are needed for limited nuclear war. Thus the basic strategy of assured destruction is undermined. Also, once the limited nuclear war starts, it might not remain so limited and might escalate to a full-scale nuclear war. Further, the risk level for the opponent is lower in the limited nuclear war and, therefore, deterrence is weakened. With such a weakening of deterrence, and because of a misperception leading to a false sense of security that the conflict would remain limited, the limited nuclear war idea, in fact, increases the risks of nuclear war. No doubt, the risk of escalation is there but so is the uncertainty about it, and that might offer a temptation to attempt it, destroying thereby the credibility of deterrence.

Scholars like Bracken, Russett, Sagan, Nye etc (33) have doubted the feasibility of conducting limited nuclear war. Limited nature of nuclear war would be impossible to maintain in case of any breakdown of political control over nuclear forces. Further, maintenance of command-control- communications and intelligence would be difficult under the effects of nuclear weapons. The 'limited' nature of nuclear war will be affected in case the enemy makes decapitating or counter-combatants attacks against the command-control centers and then it would be difficult to maintain rational behaviour on which the limited nature of such a war rests. Limited war strategists were more interested in controlled responses whose object would be to diminish the adversary’s resolve rather than his strategic capabilities.

Arms control attempts of President Carter of the USA were widely jeopardized by various developments in the Middle East, Iran, Afghanistan, Horn of Africa, central America and the releasing of a controversial CIA report on Soviet civil defense estimating American dead in a nuclear exchange at 160 million and the Soviet casualties at
10 million (34). This was also a period of a lack of self-confidence, for the USA, following Vietnam and Watergate. The arms industry pressure groups and the rightist think-tanks built up fears of a Soviet first strike. It was believed that the Soviet Union would eliminate the Minuteman ICBM force in a first strike, while their own two-thirds missiles would remain safe in silos and submarines. With this wiping out of the counterforce option, the only US response might be a countercity strike, using her surviving systems, but this would invite, in return, a greater countercity strike and, so, surrender would be the only option. The MX mobile ICBM seemed the best possible remedy to enhance counterforce capability. Concepts of endurance and recovery were introduced in the strategic debate. In the words of Walter Slocombe:

The policy had been dubbed the countervailing strategy in Secretary Brown's initial public discussion because its fundamental feature is the proposition that deterrence over the full range of contingencies of concern requires in an age of strategic parity that the United States have forces, and plans for their use, such that the Soviet Union, applying its own standards and models, would recognize that no plausible outcome of aggression would represent victory or any plausible definition of victory. In short, the policy dictated that the United States must have countervailing strategic options such that at a variety of level of exchange, aggression would either be defeated or would result in unacceptable costs that exceed gains (35).

President Reagan introduced into the US nuclear strategy the concepts of nuclear superiority, prevailing, war-winning, prolonged nuclear war and controlled escalation (36). The strategy of 'escalation control' was intended to limit the use of nuclear weapons once they have been introduced into a conflict. This mechanism would enable a limited nuclear war to be fought as it would prevent an all-out nuclear holocaust. Escalation dominance and escalation matching were suggested as forms of escalation control. The former is a strategy of maintaining an ability to remain superior to an enemy at every possible stage of a conflict because the weaker nation would soon realize that launching an attack would invite undesirable consequences and would rather seek conciliation than conflict; and the latter is the strategy of maintaining an ability to effectively counter an enemy at every possible stage of a conflict, relying on a willingness to match another nation blow for blow in a crisis, limiting and controlling the
escalation of the crisis/conflict by convincing the adversary of one's resolve and coercing the adversary into backing down. On the basis of the logic of effectiveness, denial is a better security approach than retaliation. Denial not only deters attack but also blocks it in case deterrence fails. It was this realization that had prompted the Strategic Defense Initiative of President Reagan.

The policy objectives of Reagan administration were to escalate the arms race thereby denying to the Soviet Union any parity, to consolidate the US nuclear commitment to Europe, and to build the US non-nuclear forces to a level to ensure successful US intervention in the Third World. The Hoffman and Fletcher Studies had recommended building a system against attacking ballistic missiles and had believed that an effective BMD system would reduce the likelihood of a nuclear war. The Single Integrated Operational Plan (SIOP-6) was now based on a doctrine that involved operations under conditions of prolonged war. The General who was in charge of developing SIOP-6 had commented: "The US strategy is one of counterforce. That is, it is not a mutually-assured-destruction strategy or a city strategy. It goes after the Soviet military-leadership and, of course, the land-based ICBM capabilities" (37) The basic objective was to prevent a first strike against the US and this meant that the US would rather use the nuclear weapons first than losing them. A threat of disarming nuclear first attack was perceived as necessary for coercing the Soviet Union in international relations. This strategic defense programme, at the cost of $1,80,300 million spread over six years was designed to achieve, by the turn of the 'Nineties, upgrading of strategic defense and strategic 'C3' systems, development of long-range weapon system (B-1 bomber) and of stealth advanced technology radar-penetrating bomber, development of 100 MX missiles, further development of Trident SSBNs, operationalization of Cruise missiles, and development of the Strategic Defense Initiative (SDI, or the Star Wars)--- a defense system based in space that would prevent missiles from reaching the U.S. Most of the missiles would have been destroyed, along with their warheads, shortly after launch as they carried their pay-loads into space and were detected by the satellites; and those that survived the boost phase would have been targeted by the post-boost Vehicle, the device on the top of the missile and dispensing warhead. The US believed, correctly, that it would not be possible for the Soviet Union to compete in this high technological race in space. If the Soviet Union wanted to penetrate the SDI layers with a 90% effectiveness of warheads, it would have to spend ten times
than the current $8,504,300 million on the missile force and it would take them more than 15 years to have a fast-burn missile required to penetrate the SDI layers (38). It was assumed that, instead of a mutually assured destruction, this would ensure a mutually assured survival (MAS). But, by the middle of the ‘Eighties, it was conceded that, since the Soviet Union had too many warheads, the SDI will not be able to guarantee safety of the US cities against a Soviet attack.

The current conceptual approach to nuclear war plans to utilize nuclear weapons against specific targets in a complex of nuclear war-fighting situations intended to be limited, as well as the management over an extended period of a general nuclear war between the superpowers. The Fiscal Year 1984-1988 Defense Guidance outlines the option of conducting a protracted nuclear war for which the US should have the capability to inflict very high levels of damage on the Soviet Union and in which the US must prevail or out of which it must emerge with terms most favourable. The US Secretary of Defense, Casper Weinberger, defending this strategy, commented: “You show me a Secretary of Defense who’s planning not to prevail and I’ll show you a Secretary of Defense who ought to be impeached” (39).

In early 1990, the US Joint Chiefs of Staff prepared a new military assessment that indicates that NATO has the ability to mount an effective defense of western Europe without resorting to nuclear weapons (40). Improvements in warning time of a possible attack and the unilateral withdrawal of the Soviet forces from Europe would enable NATO to achieve a strong conventional defense of western Europe, without loss of territory. The Eastern European nations used to contribute 40% of Warsaw Pact ground forces, which might not be the same in future considering the fast changing east European political scene. To ensure an agreement on reducing conventional forces in Europe, the US is currently not insisting for on-site inspections of weapons plants and ports and airfields. Though the Soviet Union is willing to accept these measures the West European allies of the US are vehemently opposed to it.

The West European countries were, from the beginning, trapped in a dilemma in that they wished to be defended by a deterrent threat possessed by the US; but they also feared that such a defense would mean a transfer of decision making power to the US. The US policy, during the last two and a half decades, has been intended to reduce the NATO’s dependency upon tactical and strategic nuclear weapons and they have advocated a stalwart conventional defense for NATO. Inherent in it was the idea that both the superpowers accept the
outcome of any non-nuclear conflict in Europe, without escalating to nuclear confrontation. The Europeans viewed this as a US attempt to reduce their risks in American security connection to the NATO (41). It was widely believed that any resort to tactical nuclear weapons would diminish the chances for controlling the escalation. On the other hand, a protracted delay or ‘pause’ before nuclear weapons were used could be made to ensure that war would not escalate to super power’s homelands. The NATO allies, naturally, were not enthusiastic about these prospects. They believed that the presence of European nuclear forces ensured that the Soviets could not be confident that nuclear weapons would not be used. They were not convinced that the heavy conventional emphasis was necessary. They believed that so long as NATO retained a substantial nuclear posture, deterrence was assured.

NATO had not been much interested in deterrence by denial, which would have required matching the Soviet conventional strength. The Europeans believed their security depended on nuclear deterrence. The problem for the US was not just her own security, which was relatively easy, but that of European allies also. The dilemma was that if this extended security was maintained, the symmetry of MAD was undermined. The US had committed her security to the extended deterrence, to cover West Europe, at a time when, because of the US nuclear superiority, the task was relatively easy. Under the conditions of nuclear bipolarity, it was not that easy. Up to the last decade, solving this dilemma has been the theme of the strategic debate in the western world. MAD had effectively ensured that the superpowers would not resort to force against each other’s homeland, but the uncertainty was with regard to the similar reluctance to use force against each other’s allies. Because it was not possible to safeguard the alliance-commitments by conventional military means, strategies had to be developed to safeguard these commitments with nuclear forces. This led to the development of doctrines of limited war and deployment of additional forces and then to the Strategic Defense Initiative. Though the possibility was always there that the security considerations of the allies would be covered by the risks of escalation acting as deterrent, the denial factors of deterrence policy led to an escalation of arms race, more deployments and more initiatives.

The European strategists, as contrasted with the Americans, were more interested in the strategy of graduated deterrence, from the very beginning (42). This was the policy of graduated action, applying the minimum force required to repel any particular attack and to deter any
extension of it. In the beginning, the action was to be directed mainly against the fighting forces and nuclear weapons use was to be restricted to the immediate battle zone. Enemy's airfields and command-control centers were to be targeted in the second stage; and, if the war was to finally escalate, then the third stage nuclear strategic weapons were to be used. This led to the idea of the proportionality of the value of a possible conflict to the extent of the risk to be incurred. What is needed to deter a political aggressor is the ability to bear on him a threat proportionate to the importance he ascribes to the desired conquest. It was believed that a medium-sized nuclear country might deter a stronger aggressor because the latter's losses even from a small retaliatory nuclear attack would be much bigger than the expected gains. Proportional deterrence idea was combined with the one of the third partner; and this assured that the possession of nuclear weapons by a third partner (i.e., an ally of a super power, such as France) would prevent any war in a region, like Europe, than the mutual deterrence between the two superpowers. The superpowers might be mutually deterred, but if the ally was to threaten the use of nuclear weapons the superpowers would have to go to war. This possibility of triggering a nuclear war by the third partner is a powerful deterrence mechanism. The hazards of such a situation were seen to generate strategic dissuasion to the advantage of the third country. But the model envisaged was based on irrational action undertaken by the third partner and on the semi-automatic escalation of the level of weapons used. The West German strategists had adopted a slightly different approach and insisted on war deterrence by the threat of using nuclear weapons from the very beginning (43). Deterrence could be achieved by a war scenario in which the use of nuclear weapons was automatic from the very beginning, or by not announcing any definite scenario. The West German strategic scholar, Adelbert Weinstein, insisted that the concept of graduated deterrence should not make a distinction between conventional and the nuclear defense systems: "Even if NATO should not have a sufficient number of units but all of them including the Bundeswehr were equipped with atomic weapons, the enemy would not be able to foresee the magnitude of the reaction of the NATO forces. He should know, however, that the answer would be atomic. Thus it would be a mistake to remove atomic weapons from the forward defense lines in a mid-European front, on the grounds that the use of them would mean an escalation.... It would not be possible for the enemy to calculate the risk"(44). The West European strategists, generally, believed that the enemy should not be given the
option to choose a war-scenario most convenient to him. Instead, the strategy should be based on the principle of 'incalculable risk', in which it might not be possible for the enemy to know in advance his risk in undertaking an aggression, the calculus of gains and losses or the form of the war. Deterrence would be successful if the enemy would not know when, where, how, how much and under what conditions to expect the use of nuclear weapons by the other side.

The Soviet Nuclear Strategy:

The Soviet strategy is based on the belief that the principal military capability of a great power is and must be far more than merely a reflection of perceived external threats. Instead of remaining confined to the ideas of mutual deterrence or mutual destruction, the Soviet strategy is geared to the development of a posture that would ensure the best possible outcome in case of a war. Soviet strategy accepts uncertainty and unpredictability in the nature of war. In a nuclear conflict, strategic objectives are not the guaranteed conditions of security but are objectives to be achieved. War, in Clausewitzian terms, is regarded as a continuation of policies by other means and, consequently, is considered both as feasible and winnable, provided the Soviet Union maintains the initiative to pursue the offensive and to utilize the element of surprise. This would involve an initial blow against the adversary and it may prove ultimately decisive but may not ensure that the conflict would be short. It is recognized that an all-out nuclear war would prove extremely destructive to both parties, nevertheless the state better prepared for it and in possession of a superior strategy would win.

Soviet nuclear strategy always remained part of their overall policy. A military policy is meant to deprive the enemy, and destroy his capability and will to resist. The Soviet nuclear doctrine is based on the related elements of preemption, quantitative superiority in arms, counterforce targeting, combined-arms operations, and defense. The difference between the strategic doctrines of the two superpowers is that whereas the USA views nuclear weapons as a deterrent, the Soviet Union sees them as compellent. The initial nuclear inferiority of the Soviet Union had forced it to rely, in the beginning, on city-targeting. When the US was shifting the policy to mutual assured destruction, the Soviet Union was also achieving the capability of fulfilling the objectives of military policy, mentioned above. They believed that a
European war would be nuclear, and they concentrated on Europe more so because the forward strategic bases of the US were actually there. After the shaking up of Soviet prestige and confidence during the 1962 Cuba crisis, their strategic rocket forces eliminated the US advantages in ICBMs and medium range strategic missiles in Europe. This continued till the advent of MIRV.

In accordance with the logic of an interaction between strategy and technology, the Soviet Union also revised its strategic thinking and geared it towards the development of precision missiles carrying lower-yield warheads. This was inevitable considering their peculiar geostrategic needs. But a comprehension of precisely this is generally lacking which prevents a clearer appreciation of the Soviet strategy. An awareness of their historical experience is needed to comprehend the Soviet policies for which the context and style of Western strategic analysis is insufficient. The Soviet strategy for achieving superiority in weapons and victory in war based on offensive weapons is the continuation of a historical process, extending over centuries, by which invaders on Russia were repelled. If, and when, the Soviet strategic planners decide upon a major offensive against the NATO, they would have to take account of the strong probability that NATO would introduce tactical nuclear weapons. Their strategic doctrines are based on the assumptions that any future war involving the Soviet Union would be a nuclear version of the second World War. And, knowing what they had suffered during the Second World War, one can assume that they would never look forward with enthusiasm to the Second World War again, and that too with nuclear weapons.

In the early 'Sixties, the Soviet leaders had calculatingly bragged about some weapon systems that, in fact, they neither had at the time nor planned to build immediately. They were about supposed Soviet capability for defence against a missile attack and included Khrushchev's famous statement of July 1962 that the Soviet Union had an anti-missile missile that can 'hit a fly in outer space'. This was a pure boast as actually they were far behind the USA in missile force deployment. This was an attempt to generate some uncertainty about the real Soviet capability and about the ability of the US to take on the Soviet nuclear forces. But, by the mid-Sixties, they had realized that the realities of the balance of terror favoured the 4:1 in favour of the USA. They were against the thermonuclear war as self-destructive. The party theoretician, Mikhail Suslov, had admitted that "if a thermonuclear conflict arose, it would be a most terrible tragedy for mankind and would, of course, be a heavy loss to the cause of communism". (45).
This realistic trend continued later on also. A Soviet author was of the view that the development of an ABM system capable of making victory possible would be a discovery bordering on a miracle and that there is no available defense against a missile salvo (46). This realization of the 'Sixties, that it was not possible for the Soviet Union to win a nuclear war, was still uppermost in the minds of the Soviet strategists two decades later. Brezhnev had pledged in 1982 that the Soviet Union would not use nuclear weapons first. This was reaffirmed, in 1984, by the Soviet Chief of Staff: “He who fires his missiles first will perish second, but perish just the same.... One can turn the adversary into ashes, but cannot thereby emerge victorious... Nuclear might is a means not only of annihilation but also of self-annihilation” (47). This was not just the perception of the Soviets only. Writing about the nature of the Soviet leadership, George Kennan had commented: “As this leadership looks abroad, it sees more dangers than inviting opportunities. Its reactions and purposes are therefore much more defensive than aggressive. It has no desire for any major war, least of all for a nuclear war. It fears and respects American military power even as it tries to match it, and hopes to avoid a conflict with it. Plotting an attack on western Europe would be, in the circumstances, the last thing that would come into its head” (48). It was acting under such perceptions that the Soviets had reduced their defense spending and stabilized their nuclear weapon programme, and this was confirmed by a 1984 US report itself: “New information indicates that the Soviets did not field weapons as rapidly after 1976 as before. Practically all major categories of Soviet weapons were affected—missiles, aircraft, and ships. ... the rate of growth of over-all defense costs is lower because procurement of military hardware—the largest category of defense spending—was almost flat in 1971-1981.... and that trend appears to have continued also in 1982 and 1983” (49).

There were persistent doubts in the Soviet strategic thinking about the rationality of the US strategy. These doubts and apprehensions led the strategists to respond by bolstering up the Soviet strategic forces to a degree where its destruction by a US first strike would be impossible. A theater nuclear doctrine was developed that is to be implemented by vehicle-mounted, short range ballistic missiles and by the strike aircraft of Frontal Aviation. Whereas in the mid-'Sixties, their ICBMs were one-fourth of the US, by the end of the decade they had achieved a parity. But at the same point of time the US was at least two years ahead of the Soviet Union in MIRV. Then, “just as the leaders of the US had cited in 1970 Soviet achievement of ICBM
‘parity’ as proof of their wisdom in the 1960s, the Soviet MIRV program of the 1970s was cited as further evidence of their inherent wisdom” (50).

The western deterrent concept is viewed by the Soviet Union as ustrashnie (threatening intimidation), while the Soviet concept is illustrated by sderzhivanie (constraining and restraining). This is understandable in view of the fact that the Soviet Union does not accept the metaphysics of deterrence. They believed that the fact of the US capabilities being developed beyond what was required for ‘deterrence through punishment’ makes it impossible to accept the mutuality of assured destruction because the reality points to further expansion of US counterforce capability. Mutual deterrence was possible in the absence of the US attempts at coercion. This created the situation in which the US doctrines professed war avoidance and the unthinkability of a nuclear war, whereas the Soviet doctrines adopted war-prevention coupled with the acceptance of the possibility of a nuclear war. Deterrence is effective in the face of anticipated war-fighting competence, and war, at any level, can and should be won. The entire strategy is based on a balanced and combined arms approach, and, therefore, the Strategic Rocket Force is linked with the military capabilities of the other armed forces. Therefore, Soviet capabilities of strategic forces should be determined keeping in view the relative competence of the ground and air forces. The entire strategy is based on the comprehensive development of a triad of capabilities composed of strategic offense, active strategic defense, and passive strategic defense. This triad is to conduct four basic strategic operations in a nuclear war: intercontinental, continental, oceanic, and defensive. Whereas the offensive one are to destroy the enemy’s nuclear forces, military-industrial complexes, troop groupings and political-military command / control systems, the defensive elements are to protect these same on the Soviet side. The level of development of these two types is not symmetrical, at a given time and one often attains superiority over the other. In view of this, it is not possible to have the theoretical development of an absolute weapon for either the offense or the defense; and neither offense nor defense is to be totally effective in implementation.

What the Soviet Union is experiencing now at the beginning of the ‘Nineties, and how that is going to affect her strategic considerations, was definitely not foreseen in the mid-Sixties. But it is interesting to note that, in 1966, Alastair Buchan’s *War in Modern Society* had analyzed the same factors of Soviet strategy that are still
relevant in the present conditions and for the same reasons: "Two factors make the Soviet concept of deterrence a different and cruder one from that of the United States. On the one hand she is restrained by economic necessity from developing as large a force of bombers and missiles; on the other, the direct threat she wields exists primarily to deter attacks on the Soviet Union since she has nothing like the ramifications of alliances which the United States possesses" (51).

References, Chapter IV

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