CHAPTER : II
EXISTING NUCLEAR STRATEGIES AND THEIR RELEVANCE FOR INDIA
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All nuclear strategies since 1945 have hinged on the concept of nuclear deterrence though there has been little agreement on the basic question of how and why nuclear deterrence works. All nuclear strategies have sought to answer the question: "what deters"? Most of the debates about nuclear strategies have ultimately revolved around different answers to this key question. Therefore a study of existing strategies shed light on how deterrence works and their feasibility in the Indian context is essential for our analysis.

Before delving into the analysis of existing nuclear strategies and their relevance to India we have to examine the ground realities that influenced the development of nuclear arsenals and strategy of the super powers and compare them in the Indian context.

Factors influencing nuclear strategy in the west and in India

1. Geographical Consideration

The fact that the distance between US and the erstwhile Soviet Union varied between 2500 kms (nearest between Alaska and Vladivostok) to 7,500 to 10,000 kms from the heartlands of both the super powers had definite implications for the nuclear strategies of the two super powers of the Cold war era:

(a) A viable nuclear policy required a realistic nuclear weapons capability which could be delivered accurately over thousand of kilometers.
(b) There was greater reaction time available to them as it took longer time lapse between launch and strike of nuclear weapons.

(c) This provided response time to launch a retaliatory strike before unacceptable damage could be inflicted by the enemy and thus created scope for strategies to deter the adversary from making a pre-emptive strike.

(d) Relative immunity to preemptive decapitation of the decision making body was yet another product of the time of flight parameter. It was not until the 1970s that this parameter was altered due to the introduction of fairly accurate submarine launched missiles (SLBMS).\(^1\)

In the Indian context, the threat perceived emanated largely from China and Pakistan our immediate neighbors. The geographical proximity of hostile nuclear weapons on our borders entailed a different situation for India:

(a) The response time was reduced thus giving little time for our decision makers to launch a retaliatory strike which could deter the adversary from using its weapons. In other words a major input for strategy formulation is India's susceptibility to a preemptive strike.

(b) The capability to preempt Indian nuclear weapon system especially by a hostile China (which has a large stockpile of nuclear weapons) would require that India should possess a large stockpile itself to form a viable force to counteract such potential attack by the adversary.

(c) It would also dictate the deployment of nuclear warheads mounted on submarines to ensure survival of a viable force to counter enemy strikes thus creating the only feasible second strike capability to deter a pre-emptive.  

(d) In view of the preemptive quotient of a nuclear environment on the subcontinent, Indian strategy would have to place greater emphasis on 'second-strike' capability. This would entail the creation of external bases away from the Indian landmass, which may be destroyed by the first strike.

**Economic Constraints**

Despite the exorbitant costs of developing and deploying complex nuclear systems the super power economies were able to absorb the fiscal costs without retarding their national growth. This was because (a) they were not affected by runaway monetary inflation as at present and were thus economically viable.

(b) The superpowers had already acquired a suitable technological base as an outcome of the war. This greatly reduced the development costs as a great deal of R and D infrastructure was already there.

(c) They found a huge market for their domestic products in the developing countries, which gave a bolster to their economies despite immense investments in their nuclear programmes.

In comparison to the other nuclear powers India's economic status does not stand favourably. Its per capita income is lower than many developing countries. The Indian

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2. V. K. Nair: *Nuclear India*, p-18
economy is just about emerging from below the poverty line with over three hundred millions still below it. No government can afford to spend its limited resources on international power building at the cost of poverty alleviation. Therefore, the resources invested in a nuclear build up to ensure a reasonable security environment would need to be carefully balanced against a meaningful and continuous economic growth.4

India's decreasing share in world market has greatly reduced its foreign exchange reserves. The State of the art technology required for the development of nuclear weapons has to be achieved indigenously without depending on foreign technology is also going to put additional burden on our economy. But in recent years due to opening up of our economy and with greater integration with the global economy we have been able to overcome economic constraints and embark on a viable nuclear strategy. Thus the economic implications have to be objectively assessed while formulating our nuclear policy.

**Global Opposition to Nuclear Programmes.**

The economic, political and military status of global communities had been so undermined by the war that while these superpowers were developing their nuclear arsenals. There was no viable opposition to this obnoxious growth.

Such is not the case in the present day world. Governments and peoples are extremely sensitive to the extant threat to their future in an increasingly nuclear oriented

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4. V.K. Nair, 'Nuclear India', p-20
world. Canada and the United States withheld nuclear fuel exports to India after the PNE in 1974.5

The US has been mounting pressure on India to abandon not only its nuclear programme but also its space and missile development programmes by applying sanctions against it. The 1998 nuclear explosions drew a lot of flak from the international community in general and several developed countries also imposed military and economic sanctions against it. Though it goes to the credit of the political leadership, the diplomatic fraternity and to the nation as a whole who stood united against the external pressure. Though the sanctions are being gradually eased but the Indian government has to take into account the global antipathy to nuclear weapons and formulate its nuclear strategy accordingly without antagonizing the world community too much which may damage its image as a peace loving country.

Internal Organisation

The Second World War had thrust upon the two superpowers certain organizational influences, which precluded internal political factionalism thereby greatly bolstering the states political stability.

In the United States there existed a two party system which reduced the problems of the electorate in assessing and electing its representatives as also creating an environment for governmental continuity. In the Soviet Union the same effects were achieved by the communist ideology and the single party political system.

The interplay between the military structure and the agencies dealing with external affairs had been suitably integrated so that the extension into the nuclear era was a systematic and graduated advancement.

In India the governing machinery lacks experience in the projection of policy to handle major crisis which would as a side effect, generate reactions from other global powers. Currently there is an inadequacy of requisite command and control structures in terms of equipment, support organizations and qualified manpower to provide the kind of support that the decision makers require for such crises management.

Societal Cohesion is another critical factor, which must be taken into account while evolving a nuclear policy for the nation. The fractionalized political and social system prevailing in the country does not even guarantee continuity in national policies and strategies between succeeding governments.

Both strategy and policy are influenced by the nature of armaments. In a conventional war there can be adverse situation but they are to a certain extent limitable. The same would not be the case once nuclear weapons are deployed. Unlike the developed countries, the Indian diplomatic process is totally divorced from the military in terms of planning, future policy and preparing for its implementation. The very non usability philosophy of nuclear military force dictates exceptional norms of integration of the diplomatic and military services in the development of foreign policy. Finally the critical issue of credibility flows from the will of the leadership, the capability of the diplomatic corps to transmit this will and the potential of the leadership to orchestrate a

viable military response.

This then will be one more fact of internal organization that must be carefully redressed while formulating a nuclear strategy for India.7

**Multi-directional Reaction**

The bipolar system of the Cold war era generated a unidirectional threat perception. This greatly reduced the problems of the super powers as they could develop their nuclear arsenal in a reciprocal fashion with clear-cut perceptions of the enemy.

The linear threat perception of the super powers does not hold good for India. India will need a multi direction perspective to deal with threat perceived from Pakistan, from China and other major powers.

- A strategy to deter Pakistan from nuclear adventurism will require the creation of a nuclear force structure designed to neutralize short-range land based or air borne nuclear forces in a no warning environment. The response time would be too little and hence survivability of the force structure is essential which can be achieved by dispersing the nuclear forces and providing for of alternative command and control system.

- China while having nuclear weapons bases in the Tibetan plateau in close proximity to the Indian mainland has her capital and industrial base far away in eastern Asia. The quality of threat between the two countries is therefore asymmetric. To reduce this

asymmetry India has to deploy land based ICBMS capable of reaching Chinese heartland along with submarine based nuclear weapons systems thus creating a viable counter to the shorter range missiles that might be deployed in Tibet.

- Such a capability would in turn aggravate the security perceptions of the major powers that would naturally take commensurate defensive measures. The snowballing effect of India’s nuclear strategy would therefore require it to take long term multi directional threat perception into account.

**Technological Redundancy**

Redundancy now plays a critical part affecting the growth of a viable nuclear policy and force structures, primarily because of the greatly increased redundancy of newly developed or even developing technologies. While the frequency of redundancy was lower when the superpowers were incipient nuclear weapon states now it has increased to such a state that they are often redundant even before full development can be achieved. Keeping in mind the paucity of resources and the need to ensure that nuclear forces keep abreast with the technological advances of inimical states, the policy makers are posed with the dilemma of formulating an economically viable nuclear strategy, which has to be credible also.

**Demographic Constraints**

The quality of population of both the super powers generated a high degree of societal cohesiveness, which helped the leadership to project their international policies without prejudice to their internal security. The low density of population along with their high rate of literacy gave impetus to their nuclear programmes not only by reducing the
strain on their national expenditure but also by providing the requisite skilled manpower adapted to such complex technologies.

In the Indian context the demographic content has acted more as an impediment rather than an impetus to the development of nuclear strategy. There were several divisive forces acting against the societal cohesiveness of the country like communalism, regionalism, casteism etc. The high density of population along with mass illiteracy and poverty only results in a weak and fragmented society. The majority of the people of India are ignorant about the defense or nuclear policies of the country. Viewed in this light, the Government of India should introduce socio economic reforms to redress the demographic problems and bring about societal homogeneity. Therefore while conceiving a nuclear policy for India, this factor should be taken into account as it can act as a double-edged sword. The large population is a potential consumer market which like the Chinese can attract a lot of foreign investment only if cohesive societal environment is presented. India's nuclear strategy should be evolved taking its own peculiarities and security imperatives into consideration.

As stated earlier, the existing nuclear politico-military strategies are a consequence of the imperatives of the extant nuclear weapon states (especially of the US and the erstwhile Soviet Union). It is therefore incumbent upon the Indian strategic analysts, the military and the political leadership to study the evolution of nuclear strategy and nuclear doctrines examine their relevance to India before formulating a nuclear strategy designed to meet its own requirements and needs. It should be drawn within the existing economic, political and military framework.
Doctrine of Implicit Massive Retaliation

Post war strategic concepts flowed from the reality of those times. The United States was the only nuclear weapons state with no reciprocal threat to itself. The concept hinged around the ability to "strike the first blow if necessary... when it becomes evident that the forces of aggression are being arrayed against us." 8 Initiated by John Foster Dulles in 1952 it called for an all out nuclear attack on Soviet population and industrial centers in the event of a Soviet attack on the US. 9

When, however the Soviet Union acquired a nuclear weapons capacity and a highly visible and ominous ICBM capability, the threat was projected directly to the United States, something that had been hitherto unthinkable. This and the perception of a missile gap caused considerable agitation in the strategic circles of the United States and led to the concept of Mutually Assured Destruction [MAD] meaning that adversary nuclear powers must have an adequate second strike capability which would ensure the destruction of each and there by prevent one from striking against the other.

The Doctrine of Mutually Assured Destruction (1962) initiated by Robert McNamara, the then US Secretary for Defence recognized the vulnerability of the US deterrent to a Soviet first strike, and called for a second strike force capable of surviving the first attack and inflicting the desired level of assured destruction on Soviet population and industrial centers.10

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10. ibid, p-87
It is at this stage, it was pinpointed that an essential ingredient of a nuclear strategy, hinging on deterrence, was the need to make a declaratory statement. While the aim was clearly to maintain the threshold of fear in the adversary at the desired level to make deterrence a feasible proposition, the declaratory statement also provided the basis for directing the thrust of technology towards creation of suitable weapons capability to meet the pressures of ground reality. This led to the next major stage in the development of nuclear strategy, the Flexible Response.

The Flexible Response doctrine (1967) sought to match the US nuclear response to the provocation. It was recognized that the threat of all-out nuclear attack on the Soviet Union, say in response to a Soviet attack on Berlin was scarcely credible. The US, under the doctrine of Flexible Response, sought to reserve for itself less than ultimate responses. For example, in response to a Soviet attack on Berlin the US might use tactical nuclear weapons in the defence of Berlin, or explode a strategic weapon over an unpopulated area as a demonstration of its will.

The doctrine of Flexible Response was essentially an attempt at limiting damage, by moving away from targeting civilians, in the event of conflict which may escalate into a nuclear exchange. Declaratory statements focused on confining a nuclear exchange to military or quasi-military targets [Counter Force, Tactical Strikes, Countervailing etc.] while providing maneuver time to the political leadership to contain crisis and localize damage.

1. The Relevance of western doctrine in the Indian Context

Though the nuclear doctrines of the erstwhile Superpowers have dominated the major thinking and literature on the nuclear issue but that does not imply India is to
imbibe any of them. Any Indian nuclear strategy or doctrine is to be developed to suit its endogenous requirements though taking into account the theoretical and technological knowledge and the past experiences of the nuclear weapon states (NWS). The Central concept around which all the nuclear doctrines revolved was deterrence. The Deterrent theory was inherently paradoxical in the sense that nuclear weapons were sought to be created to deter rather than fight war. In his book, Bernard Brodie argued that because the actual use of nuclear weapons could not be harnessed to any meaningful military objective, the relation between weapons and war had been fundamentally altered. A differing viewpoint was offered by William Borden, who argued that while these weapons were revolutionary in their destructive potential and would change, the way wars are fought, they were nevertheless, ultimately weapons of war and if they differed from other weapons, this was a difference of degrees rather than of kind. 11

The above contrasting ideas were later developed as two approaches of deterrence viz. deterrence by punishment and deterrence by denial. This distinction between deterrence by denial and punishment was first suggested by Glenn Snyder in his book Deterrence by denial and Punishment.12

A less prominent view of deterrence that is the Existential Deterrence came up out of the experience of the Cuban Missile Crisis, which suggested that it was the threat of

nuclear war itself, rather than either the fear of retaliation or difficulty of launching a successful nuclear first strike that Thomas Schelling called "The tradition of non-use of nuclear weapons." A brief discussion on the three approaches to deterrence is essential to understand their implication in the Indian context and to apply them to different situations at different periods of time.

2. **Deterrence by Punishment**

Deterrence by punishment seeks to prevent aggression by threatening unacceptable damage in retaliation, by threat of punishment.

Some American nuclear strategies, such as Massive Retaliation and Mutual Assured Destruction theories provide good examples of both the logic of deterrence by punishment and the practical problems and requirements in adopting such a strategy. Massive Retaliation, as the earliest "popular" exposition of American nuclear strategy, was explicit in its threat of punishment as a means of deterring the Soviet Union. Similarly the primary objective of Assured Destruction was "to deter deliberate nuclear attack upon the United States or its allies."

The threat of a punishing retaliation with nuclear weapons might appear to be a straightforward one, but comparing Massive Retaliation with Assured Destruction suggests that clarity of purpose and the correlation of means and ends are important in ensuring the credibility of the threat of punishment at least in the minds of those holding out the threat. As the Soviet nuclear force began to grow, American strategists became increasingly worried about the vulnerability of American missile and bomber

bases to a Soviet first strike hence about the credibility of the strategy of Massive Retaliation.14

This gave birth to the concept of "second strike" i.e. the capacity of a nuclear force to retaliate after being struck first.

Another concern in McNamara's strategy of Assured Destruction was the extent of damage that constituted punishment. The two fundamental concerns in the nuclear deterrence through the threat of punishment can be seen in the criticism of Massive Retaliation and the concept of Assured Destruction strategies: the need to have forces that can survive an enemy attack and a conception of the level of destruction that is required for deterrence to operate.

**Deterrence by denial**

Deterrence by denial is more complex. It is difficult to classify the denialists as deterrence theorists because at the very fundamental level, the denialists exhibit a profound distrust in the possibility of deterrence. The logic of denial begins at the point when deterrence fails.

The "victory theorists" of the 1970s American nuclear debate provide the best example of deterrence by denial. The victory theorists assumed that deterrence can fail and they insisted on the need to plan for that eventuality. They argued that deterrence could fail to deter a Soviet Union if it was in the midst of a political crisis.15

because of irrationality and misperception. Deterrence might simply fail because of the vulnerability of the nuclear arsenal. This presumed vulnerability of the American strategic force might itself invite a Soviet first strike by presenting too tempting a target. Ultimately according to one victory theorist Colin Gray "no one can guarantee that deterrence will always work." 16

Indeed the true distinction might not be between deterrence by punishment and deterrence by denial but, as Glenn Snyder originally suggested, between deterrence and defense, because defense rather than deterrence is the true objective of the denialists.17 Preparing for defense even in the context of nuclear war makes sense to the denialists because good defense both reinforces deterrence and it also accounts for the possibility of the failure of deterrence. The “victory theorists” of the 1970s who argued that the United States should plan to fight and prevail in a nuclear war, provide the best example of such thinking during the cold war nuclear confrontation.18 The difference from punishment should be clear: Assured Destruction suggested that the Soviet Union would be foolish to attack because nobody could possibly win a nuclear attack while victory theorists proposed that the Soviet Union would not attack if it was convinced that not only it would lose the war, but that US would win it. Experts on India’s Nuclear strategy have opined that India’s “minimum credible nuclear deterrence “ doctrine and “

no-first use" policy are based on the concept of deterrence by denial rather than deterrence by punishment.\textsuperscript{19} Hence India's no first use doctrine demands a robust, infallible and potentially insuperable nuclear deterrent capability to ensure that India has never to suffer a nuclear strike. In a suo moto statement in Parliament on May 27, 1998 Prime Minister Atal Bihari Vajpayee stated, "We do not intend to use these nuclear weapons for aggression or for mounting threats against any country; these are weapons of self defense to ensure that India is not subjected to nuclear threats or coercion." \textsuperscript{20}

**Existential Deterrence**

Existential Deterrence, a concept suggested by Mc George Bundy, and based on his experience as a member of the Kennedy Administration during the Cuban Missile Crisis argues that nuclear deterrence is the function primarily of the presence of survivable thermonuclear arsenals in the hands of both superpowers. Bundy has defined the concept thus: "As long as each side has thermonuclear weapons that could be used against the opponent, even after the strongest possible preemptive attack, existential deterrence is strong and it rests on uncertainty about what could happen.\textsuperscript{21}

For Bundy, a crucial element in the creation of existential deterrence was, as the above quotation makes clear, the presence of survivable thermonuclear forces.\textsuperscript{22} However there is a lot of confusion about the concept as Bundy and others have been

\textsuperscript{20} ibid.
unable to clarify whether such a deterrence is applicable only to robust nuclear forces like that of US and Russia or also to other small nuclear forces like that of China, France and England.

Other writers like Beaufre, argued that it was the uncertainty and risk that are inherent in any contemplation of a nuclear first-strike that create deterrence; thus a small nuclear force even one without an assured second strike capability can still deter.\textsuperscript{23}

Of the three theories of deterrence the existential deterrence theory seems to be the most optimistic theory for small nuclear force like India. But here also, Bundy's approach which comes close to a punishment strategy would be less hopeful of the deterrence capacity of the Small Nuclear Forces (SNFs). On the other hand Rajesh Rajagopalan feels that a "pure" existential deterrence perspective would consider SNFs to have a deterrence capability strong enough to deter even the American and Russian nuclear arsenals.\textsuperscript{24}

Denial strategies might be theoretically possible for an SNF in a nuclear confrontation with another SNF. In a confrontation that is limited to SNFS the symmetry in capabilities will permit, theoretically, the adoption of denial strategies. (Like in an Indo-Pak confrontation) But even in an SNF-SNF dyad their will be significant practical problems for an SNF first strike force. It may ignite nuclear arms race and increase the problems of instability.

Deterrence in the form of punishment can be less demanding on resources and thus appropriate for a small Nuclear Force like India. But here also punishment if assumed to be assured destruction of the adversary would require extensive nuclear infrastructure,


which would be exorbitantly costly, but deterrence by punishment if conceptualized in terms of retaliation does not require an extensive second strike force.25

A pure existential deterrence perspective of Beaufre, which depends on uncertainty as a factor, is less demanding than Bundy’s “assured retaliation” perspective. Thus as regards an appropriate nuclear strategy for India from among the three strategies discussed, the requirements of a denial strategy are too large. The force requirements of punishment strategies is less, but that of existential deterrence in the least of all and therefore most affordable.

As discussed above all the strategies have certain limitations as well as advantages. In the Indian context the nuclear strategy will be influenced by everything from domestic politics to bureaucratic bargaining and the possibilities of budgetary and technological capacities. Indian nuclear strategy need not be based on any single existing nuclear strategy of the nuclear weapon states but an amalgam of different strategies best suited to its requirement and capacity. Nuclear strategy is essentially paradoxical in the sense it is based on psychological intangibles flowing from creation of formidable forces not intended to be used i.e. the emphasis is directed towards the psychological rather than the military application of force. Deterrence is the cornerstone of nuclear strategies since its evolution but has to be viewed in the existing perspective of developing countries and not as conceived by the developed world.