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Theories of Deterrence and Nuclear Deterrence in the Subcontinent

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Theories of deterrence, which put forward propositions about the nature and mechanisms of deterrence, were mostly developed during the first Cold War era (1945–1963) and dealt with the US–Soviet confrontation. The theory of nuclear deterrence is largely an American product, though there were significant British and French theorists. The troubled relations between India and Pakistan have been a rapidly evolving laboratory for nuclear deterrence theory. A review of the deterrence literature suggests several facets of deterrence theory that are relevant in the India–Pakistan context.

This essay analyzes three instances in the India–Pakistan crises: the 1990 crisis, the Kargil crisis of 1999, and the most recent crisis, that of 2002, in which India mobilized its army on the border for more than ten months after the attack on Indian parliament on 13 December 2001. Did nuclear deterrence work, and are the various theoretical formulations explanatorily useful? We then move on to discuss future scenarios between India and Pakistan and how to make deterrence effective in the subcontinent.

Theories of Deterrence

Deterrence is an old phenomenon which received new significance with the development of the atomic bomb. Discussions of deterrence often start with a Roman proverb, *Si vis pacem, para bellum*: If one wants peace, prepare for war (Luttwak 2001: 1).

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Robert Oppenheimer claimed, immediately after Hiroshima, that because nuclear weapons could cause so much destruction, they would give the advantage to the aggressor and thus encourage surprise attacks. The bomb would make war both more likely and more destructive. The other argument came in response to Oppenheimer's claim. Jacob Viner and Bernard Brodie (1946) argued that if the aggressor feared retaliation in kind he would not attack. It was generally believed that nuclear weapons, rather than encouraging war, could help to deter it and thus make peace more secure. Kenneth Waltz's monograph (1981) presented the first detailed and forceful set of arguments of the proliferation optimists. Since that time, however, others have jumped onto the proliferation optimism bandwagon.[1] Conversely, a number of scholars have argued that nuclear deterrence may not be stable in specific regional settings.[2]

Against this backdrop, I outline the current theories of deterrence.[3] These theories are also presented in tabular form in Annexure I.

Existential Deterrence Theory

Existential deterrence is a concept invented by McGeorge Bundy. Bundy argued during the Cold War that any nuclear conflict between the superpowers would be fraught with 'terrible and unavoidable uncertainties' which have 'great meaning for the theory of deterrence'. Under conditions of opacity, the role of existential deterrence is dominant. Since each side in an opaque nuclear arms competition has only limited information about the other side's nuclear forces, any deterrence derived from nuclear capabilities will logically be existential. In other words, mutual deterrence calculations rest not on relative capabilities and strategic doctrines, but on the shared realization that each side is nuclear-capable, and

[1] See Scott D. Sagan (1994) for details of the arguments of proliferation optimists.

[2] These views are echoed in the writings of Lewis A Dunn, (1991); George H. Quester (1983); Zalmay Khalilzad (1983).

[3] For various theories in this section, I have drawn heavily on the account of Frank C. Zagare and D. Marc Kilgour (2000).

thus any outbreak of conflict might lead to nuclear war. Deterrence of any kind depends on the adversary's perception of one's capabilities and one's resolve to use them. One can make the argument that this kind of deterrence is viable at relatively primitive levels of capability on both sides with neither having disarming first-strike capability. A leading Indian strategist, Jasjit Singh, has coined the term 'recessed deterrence' (1998: 318), a concept that basically prohibits the mating of weapons with delivery systems. It is only required to put in place the plans, procedures and organizations that are essential for effective nuclear operations in any eventuality. However, deterrence operates even at low levels of readiness. George Perkovich has called essentially the same concept 'non-weaponized deterrence' (2000: 3, 317).

Classical Deterrence Theory

Classical or rational deterrence theory evolved in the context of the bipolar international system after World War II, maturing in the 1950s and early 1960s.[4] Classical deterrence theory is confined to relationships between nuclear states and centres on strategic parity and strategic stability. It is generally agreed that the roots of classical deterrence lie in the intellectual tradition that has variously been labelled 'political realism', 'realpolitik', or 'power politics' (Zagare and Kilgour 2000: 4). The state in an anarchic international system is expected to have to rely ultimately on its own strength for its security. Hence, maintaining the balance of power becomes essential for stability. Classical deterrence theory envisages peace when power is equally distributed among actors in the system. This will help not only in maintaining the strategic balance but also the status quo. The status quo will be maintained because there will be neither the capability nor the incentive to change it in a system in which power is distributed equally. The probability of war will be reduced under such conditions. Classical deterrence theory posits a greater probability of war under asymmetry.

[4] Scholars like Herman Kahn, Thomas Schelling, Albert Wohlstetter, Oskar Morgenstern, William Kaufmann and Glenn Snyder made major contributions to its development and refinement.

As long as a system or a deterrence relationship is stable, the status quo is likely to survive; and when a system or a deterrence relationship is unstable, it implies that either a crisis or war is possible. The proliferation optimists' view that the spread of nuclear weapons will produce stable deterrence is based on a rationalist assumption that the behaviour of new proliferators will reflect their interest in avoiding nuclear war (Waltz 1981: 102). However, the first danger posed by the spread of nuclear weapons would seem to be that each new nuclear state may tempt an older one to strike and destroy an embryonic nuclear capability before it can become militarily effective. The Israeli attack on Iraq's Osirak reactor in 1981 is such a case. Second, while strong nuclear powers can perhaps deter one another, the question arises as to whether weak nuclear powers can deter the strong and whether they can deter one another.

Structural Deterrence Theory

Structural deterrence theory is an offshoot of classical deterrence theory, its conceptual framework again rooted in the realist approach to international politics. The proponents of structural deterrence theory emphasize the distribution of power as the guiding principle in bringing about international and strategic stability. The distribution of power in the international system, more specifically among great powers, is the essential basis for international stability or the lack of it. Many structuralists believe that war will be undesirable and unthinkable when a symmetric relationship among the great powers is maintained and the costs of war are very high.

Given that the costs of nuclear war are so high, even a small risk of war can deter under this scenario. A nation will be deterred from attacking even if it believes that there is just a possibility that its adversary will retaliate. The probability of major war among states having nuclear weapons approaches zero (Waltz 1988: 50–51; 1993: 51–55). If one believes this, then the spread and proliferation of nuclear weapons should have positive consequences. This will be analyzed later in the India–Pakistan context. Virtually every structural deterrence theorist believes that the high cost of war in the nuclear era has rendered states more prudent. States are not

deterred because they expect to suffer a certain amount of damage, but because they cannot know or are not sure of how much damage they will suffer. It is, therefore, important to point out the importance of the costs of war between two adversaries.

The major tenets of structural deterrence theory are: that the probability of symmetric relationships being peaceful will be greater when the costs of nuclear war are high, that the probability of crises and war among states will be especially high in an asymmetric relationship; and, that the probability of war decreases under conditions in which there is an increase in the absolute costs of war.

Decision-theoretic Deterrence Theory

Decision-theoretic deterrence theory also emerges from the basic assumptions and logic of classical deterrence theory. It emphasizes the combinations of preferences, choices and outcomes in determining the course of inter-state conflict behaviour, and hence, the stability of deterrence. The choices made, rational or irrational, at every stage during the unfolding of the process of conflict are of paramount importance in determining outcomes and deterrence stability. The assessment of the costs and benefits in the decision-making process during conflict is the centerpiece of decision-theoretic deterrence theory rather than the structure and distribution of power. The decision-making process becomes crucial and it is generally believed that only an irrational leader would consider a nuclear war as a means of conflict resolution.

The simplest way to illustrate the facets of decision–theoretic deterrence theory is to consider the Chicken game in light of an expected utility model of blackmail developed by Daniel Ellsberg (1975). What is crucial is the calculation of the risks and rewards that affect the adversary's calculations. The Ellsberg model is based on Chicken, where each player's critical risk occurs when the expected utilities of its two strategies are equal. This risk is critical in that it represents the maximum risk of conflict that a defecting player is willing to tolerate. A rational player cooperates at any higher risk level. Hence, the lower a player's critical risk, the more likely it is to cooperate; the higher a player's critical risk, the more likely it is to defect.

Certain assumptions are common to many decision-theoretic deterrence theorists. First, it becomes very difficult for a leader to take any decision particularly during a crisis, because of the uncertainty involved. Decision-makers on both sides experience strategic ambiguity because neither player in the course of an inter-state conflict is certain about the other's strategies and cannot read the other's mind except by drawing inferences from the other's statements, postures and behaviour. Second, despite the ambiguity of and uncertainty about the other's behaviour, each state's decision-makers attempt to interpret and estimate the other's likely behaviour on the basis of intelligence reports. In reality, they become subjective in making probabilistic estimates of the opponent's possible actions. Third, the maximin strategy is adopted in decision-making. Each player adopts a play-safe strategy, assuming a maximum of the various estimates of minimum damage to oneself from various possible alternative decisions in a nuclear exchange. The factors influencing rational behaviour and choices become very important. The basic objective of each state in an inter-state conflict will be to maximize survival probability and minimize risks and losses.

In a nutshell, decision-theoretic deterrence theory highlights the need for instituting mechanisms by which rational choices are made during an inter-state crisis. These mechanisms should be devised taking into account the complex problems related to miscalculation, misperception and accident. Bargaining skills become a predominant factor in this process. The assumptions made in decision-theoretic deterrence theory are those regarding uncertainty, subjectivity and rationality. Neither player knows enough about the other's strategy and behaviour. Hence, each gets an opportunity to make a subjective estimate about the other's behaviour. Each player will then choose a play-safe strategy to achieve the highest expected utility. Since both players will be doing this, it will help substantially in stabilizing deterrence.

Organization Theory

An alternative view of the consequences of nuclear proliferation is rooted in organization theory (Sagan 1994). Organization theory

leads to a far more pessimistic assessment of the future prospects for peace.

There are two central arguments. First, the premise of organization theory is that the behaviour pattern of professional military organizations is important for stable deterrence. From their typical behaviour pattern, it is highly unlikely that military organizations will fulfil the operational requirements for rational nuclear deterrence. This is because of common biases, inflexible routines and parochial interests on the part of professional military organizations (ibid.: 66–107). Second, it is suggested by the champions of organization theory that only tight and sustained civilian control of the military can help in balancing the logic of the behaviour pattern of professional military organizations. It is also generally believed that future nuclear-armed states will lack mechanisms of civilian control of the military. The current trend suggests that emerging proliferators will either have military-run governments or weak civilian-led governments. This is considered dangerous. There is a high risk of deterrence failure in states where the military is directly running the government. It is not only because the military leadership might elevate the interests of the military over the state. Extensive military involvement in domestic affairs changes the focus of officers' energies and interests, and the military's professional competence as a fighting force suffers. (see Huntington 1957: 71; Perlmutter 1977: 281–88).

Perfect Deterrence Theory

Perfect deterrence theory, developed more recently by Frank C. Zagare and D. Marc Kilgour, uses non-cooperative game theory and offers a new approach to deterrence (2000). It is applicable to both unilateral and mutual direct deterrence relationships and also to extended deterrence relationships where deployment policies are based on the theoretical constructs of massive retaliation and flexible response.

The crux of perfect deterrence theory lies in the working of mutual deterrence, and mutual deterrence works best when both players are capable and pose credible threats. The capability of a player