INTERFACE BETWEEN CONVENTIONAL AND NUCLEAR DETERRENCE: A CASE FOR THE INDIAN SUBCONTINENT

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INTRODUCTION

Background: The Stability-Instability Paradox

India and Pakistan became overt nuclear powers with their series of explosions in May 1998. This was an epochal event that transformed the paradigm of global security forever. Theorists of the Kenneth Waltz school felt that nuclear symmetry would usher in an era of stability on the Indian subcontinent[1]. However, just a year later, in May 1999, the two countries fought a sharp but limited conventional conflict in Kargil. The Indian armed forces carried out a partial mobilisation and Pakistan suffered a tactical defeat. The situation was defused with American mediation. Two years later, in December 2002, Pakistani terrorists attacked the Indian Parliament leading to Operation Parakram, a full scale mobilisation of the Indian armed forces for war.

Michael Kreppon and Chris Gagne[2] have highlighted the two opposing view points amongst nuclear theorists:

(a) **Nuclear Optimists.** Theorists led by Kenneth Waltz aver that offsetting nuclear weapon capabilities is stabilising because they make war too costly to contemplate. It was probably based upon this Waltzian paradigm that India made the bold Lahore peace initiative in the wake of nuclear testing and overt

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1. Michael Kreppon and Chris Gagne, eds., *Nuclear Risk Reduction in South Asia* (Henry L. Stimson Centre, 2003. Published in India by Vision Books), Gagne quoted on p. 300.
2. Gagne, Ibid., p. 53.

weaponisation of the subcontinent. [3]

(b) **Nuclear Pessimists**. Theorists led by Scott Sagan refute this formulation. They claim that the potential dangers of nuclear weapons far outweigh any stabilising effect they may usher. The initial phase after nuclearisation is most dangerous and destabilising and serious miscalculation or accidents can occur in this period. Thus, the Indian peace initiative at Lahore received a rude jolt in Kargil.[4]

The Initial Phase Syndrome. Michael Kreppon[5] also highlights that the most dangerous time to control escalation usually comes in the years immediately after nuclearisation of both adversaries. This initial phase has the following characteristics:

(a) Tolerance thresholds and red lines have not been defined.

(b) The nuclear balance is unclear.

(c) The risk-reduction arrangements have not been implemented.

Stability-Instability Paradox

This results in what nuclear theorists call the "Stability-Instability Paradox." Chris Gagne[6] defines this as under:

(a) To the extent that the military balance is stable at the level of all out nuclear war, it will become less stable at lower levels of violence.

(b) Michael Kreppon elaborates, "Nuclear weapons can generate risk taking because they presumably provide an insurance policy against escalation."[7]

The Pakistani Military Mindset. The prime element of danger in South Asia, is the highly subjective Pakistani military mindset. Very high levels of subjectivity and a failure to think through an option have characterised Pakistani military planning in the last half century[8]. Both in 1965 and 1971 and later in 1999, Pakistani strategists failed to factor in the probability of a strong Indian response. The dominance of the Pakistan Army in that nation's polity,

3. Ibid., p. 54.
4. Ibid., p. 54
5. Kreppon, Ibid., p. 300.
6. Gagne, Ibid., p. 54.
7. Kreppon, Ibid., p. 300.
8. Brian Cloughly, *A History of the Pakistan Army* (New Delhi: Reprint by Lancer Publishers, 1998).

unfortunately stifles any objective debate and analysis, and competing view points cannot emerge in any psychophantic hierarchy. Pakistan's post-nuclear belligerence and brinkmanship, however, could easily have been anticipated. Almost two decades before nuclearisation, Pakistani military officers had confided to Stephen P. Cohen that acquisition of nuclear capability would totally negate the Indian conventional superiority[9]. Islamic nuclear doctrines spoke of striking terror into the hearts of enemies. They theorised that the Indians would be so terrified of a nuclear holocaust that they would not dare to exercise a conventional military response to Pakistani provocations. *Ergo sum*, this would give Pakistan a free hand to settle the Kashmir dispute by an intensification of the proxy war at the sub-conventional or low intensity conflict (LIC) level. This Pakistani mindset was further fuelled by its experience in Afghanistan where the Soviets failed to punish Pakistan for its support to the Mujahideen. Media reports indicate that the plan for the Kargil intrusions had been drawn up almost a decade earlier (when Gen. Musharaff was the commanding general of the Frontier Command Northern Area and later when he was the director general military operations). Musharaff merely executed it, the moment he was in charge (as chief of army staff—COAS). Reeta Choudhari Tremblay and Julian Schofield have speculated that the Kargil adventure was the resultant vector of a civilian-military face-off in the Pakistani polity.[10]

Aggravation of High Risk Orientation

What is worrisome, therefore, is this Pakistani military mindset about the correlation between nuclear and conventional deterrence in the subcontinent. As long as the Pakistani military elite is convinced that conventional war is ruled out by nuclear symmetry, it could continue to behave in a highly irresponsible and belligerent fashion. The Pakistani military elite has a very high risk orientation premised upon inordinately high levels of subjectivity. Nuclear weapons, as Kreppon highlights, can generate risk taking because they presumably provide an insurance against escalation. Nuclear weapons initially

9. Stephen. P.Cohen, *The Pakistan Army,* 2nd ed. (Oxford University Press 1998) pp. 141-168.
10. Reeta Chowdhury Tremblay and Julian Schofield, "Hybrid Governments and Pakistan: Nuclear Weapons and Conflict over Kashmir," *Aakrosh*, vol 4., no.11, April 2001, pp. 30-31.

aggravated this high risk orientation of the Pakistani military elite. This could prove to be catastrophic. There is a need, therefore, to examine the escalation dynamics in the Indian subcontinent and clearly establish the interface between nuclear and conventional deterrence.

Hypothesis

Ever since Pakistan developed its nuclear capability, it has been acting from a base line presumption that India's conventional superiority has been totally negated by the nuclear symmetry. Nuclear weapons inject low order instability and encourage the Pakistani military elite to intensify the ongoing proxy war in Jammu and Kashmir (J&K). This could have catastrophic consequences. It is vital, therefore, to establish the interface between conventional and nuclear deterrence on the Indian subcontinent through precise escalation models that generate credible conventional responses to the proxy war.

EXAMINATION OF THEORETICAL ASPECTS: COERCION, COMPELLENCE AND DETERRENCE

Failure of Coercion Strategies

The behavioural aspects of a nation-state entity are guided by its historical experience. The traumatic defeat of 1971 had been a highly traumatic and sobering experience for one generation of Pakistani officers. Unfortunately, the intervention of the Central Intelligence Agency (CIA) against the USSR in Afghanistan, made Pakistan a key surrogate of the USA. The apparent "victory" of the Inter-Services Intelligence (ISI) in the Afghan War gave the Pakistani military elite a triumphalist mindset. In the low intensity conflict genre of *jihad*, they found a new foreign policy force multiplier that was especially effective in a symmetric nuclear setting that checkmated the conventional response capabilities of much stronger antagonists.[11] Emboldened by its Afghan experience, the Pakistani military-ISI elite went all out to destabilise India by promoting insurgency/terrorism in its key border states of Punjab and J&K. Subsequently, this *jihad*-based terrorism was

11. G.D. Bakshi, *Afghanistan: The First Fault in War* (New Delhi: Lancers Publishers, 2002) p. 80, for a fuller treatment of the impact of the Afghan War on the Pakistani military mindset and the onset of hubris and triumphalism.

sought to be spread to the Indian depth areas as far afield as Bombay, and Chennai in the south. This has amounted to an ideological-cum-sub-conventional assault upon the Indian nation-state that culminated in a highly symbolic attack on the key institution of its democratic polity, the Parliament itself.

Given the nuclear backdrop, the most prudent course for India was to coerce Pakistan into ceasing/calling off this proxy war by the threat of conventionalising the conflict. This coercive threat, however, failed to carry conviction. India experimented with a series of options short of war or what the American euphemistically call operations other than war (OOTW) to coerce Pakistan into stopping its proxy war. Pakistan's continuing intransigence in the intial phase after nuclearisation seemed to highlight the apparent lack of success or possibly only the partial success of these coercion strategies. It is, therefore, essential to examine these basic concepts in more detail.

Coercion. Daniel L. Byman and Mathew C.Waxman have defined coercion as the use of threatened force, including the limited use of actual force to back up the threat, to induce an adversary to behave differently than it otherwise would. [12]

Bayman and Waxman argue that coercion can be differentiated into two distinct categories:

(a) **Deterrence**. They define this as stopping an undesired action from occurring (e.g. the USA forcing Iraq not to invade Kuwait).

(b) **Compellence**. Compellence is reversing an undesired action that has already taken place. (e.g. forcing Iraq to withdraw from Kuwait)[13].

In practice, however, it is difficult to differentiate compellence from deterrence and this neat compartmentalisation may not always be feasible. Bayman and Waxman argue that coercion is a dynamic process. Even as the USA or India or any other coercer tries to shape the adversary's behaviour, so too the adversary tries to reduce the pressure imposed on it. Adversaries typically try to counter-coerce the coercer.[14]

Measuring Coercive Success. They point out that measuring coercive success

12. Daniel L.Byman and Mathew. C. Waxman. "Confronting Iraq: US Policy and the Use of Force Since the Gulf War," National Defence Research Institute RAND-2000, Arlington USA, pp. xi. The paper is useful for its analysis of theoretical concepts against the backdrop of a live crisis situation in Iraq.
13. Byman and Waxman, Ibid., p.xi.
14. Ibid., p. xii.

Thus, it may be difficult to gauge the success of Operations Parakaram in coercing Pakistan. The full scale Indian mobilisation did force Pakistan to publically condem terrorism and ban the LeT/JeM and scale down support to terrorists.

is often very difficult. The same action can have both positive or negative effects, particularly when long-term ramifications are taken into account. Thus, it may be very difficult to accurately gauge the success of Operation Parakram in coercing Pakistan. The full scale Indian mobilisation for war did force Pakistan to publicly condemn terrorism and ban the Lashkar-e-Tayyeba/Jaish-e-Mohammed (LeT/JeM) and for a period, scale down its support to the terrorists. However, coercion being a dynamic process, it is difficult to sustain such effects for extended durations. Absolute binary matrices of success or failure cannot be employed in coercion strategies. It would be essential to use the simple cost-benefit analysis model for heuristic assessments of coercive measures.[15] In the absence of precise data, it may be premature to pass any value judgements on Operation Parakram. The whole standpoint of judgement changes dramatically if this mobilisation was not for coercive purposes but had an actual offensive design of compellence. It is, therefore, a matter of "intent". No details of actual intent are available in the open literature. Any value judgements or measurements of coercive success would, therefore, be premature at this stage.

Factors Effecting the Coercive Process. Bayman and Waxman have highlighted some key factors effecting the coercive process. These are:

(a) **Recognising Adversaries' Centres of Gravity**[16]. It is essential to identify the adversary's centres of gravity which if destroyed (or seriously degraded) would cause the enemy resistance to collapse. For Iraq, they identified the centre of gravity as "Saddam's relationship with his power base." In the end, key Republican Guard commanders were simply bribed by the CIA and Iraq's military resistance collapsed. The centre of gravity had been correctly established.

15. Ibid., p. xii.
16. Ibid., p. xviii.

(b) **Recognising that Coercion is a Dynamic Process**.[17] Coercion is not a single event (e.g. Operation Parakram). It is a dynamic and ever evolving process that must take into account the adversary's reactions and counter-measures.

(c) **Understanding What Cannot be Affected**.[18] The coercer can control the level of pain it inflicts, not the adversary's willingness to accept that pain threshold. The US found that coercing populations to revolt or adversaries to carry out a coup was extremely difficult in Iraq.

(d) **Improving Long-Term Planning**.[19] There is a need for continued "low probability-high impact analysis" and employing "Red Teams" to explore the range of possible outcomes and make policy planning more objective and realistic.

(e) **Recognising Self-Imposed Limits**.[20] Lastly, it is essential to recognise the self-imposed limits and constraints generated by political or diplomatic concerns. These self-imposed limits are often far more effective in undermining coercion than any measure taken by the adversary. Thus, the decision not to cross the Line of Control (LoC) was a self-imposed limit during the Kargil War.

Risks of Coercion. The risks of coercion are identified as the "potential for backfire."[21] Threatening an adversary could well provoke an increase in unwanted behaviour.

Communication and the Deterrence Process

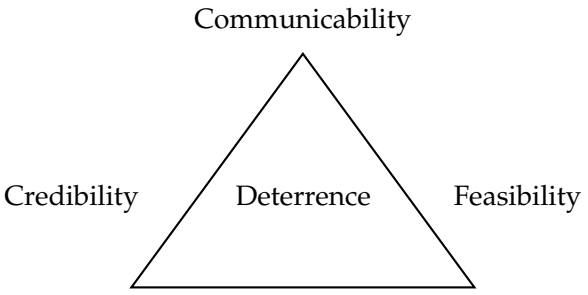
The Israeli Analyst Zeev Maoz has highlighted the triad of communicability, credibility and feasibility as central to the process of deterrence.[22] This is shown in diagrammatic form (Fig.1).

Communicability. The threat held out must be unambiguous and communicable. The adversary must be convinced about the existence of the threat namely:

(a) The conditions under which it will be carried out.

17. Ibid., p. xviii.
18. Ibid., p. xviii.
19. Ibid., p. xviii.
20. Ibid., p. xviii.
21. Ibid., p. xviii.
22. Zeev Maoz, *Paradoxes: On the Art of National Self-Entrapment* (Boston: Unwin Hyman, 1996) p. 32.

Fig. 1



(b) Political, economic and military consequences of carrying out that threat.[23]

Credibility. The threat must be credible. Credibility is a function of capability and intent. The political will to carry out the threat must be made clearly evident. It is as important and critical as having the military capability to execute the threat.[24]

Feasibility. This defines the extent to which the deterring nations can respond to a given violation of the status quo. Historically, this has generally failed with low order threats to the status quo e.g. the USA in Vietnam and the USSR in Afghanistan.[25]

Application of Theoretical Framework to the Indian Context

India's existing conventional threat/superiority has failed to deter Pakistan from challenging the status quo in Kashmir through its low cost/no cost proxy war. India, therefore, has to think of:

(a) **Compellence Strategies**. To force Pakistan to halt and roll back its proxy war.

(b) **Deterrence**. Deter Pakistan from escalating the proxy war beyond existing levels and from employing nuclear weapons should India chose to conventionalise the conflict in response.

Credibility

As far as the proxy war is concerned, therefore, Indian deterrence has failed in Kashmir because Pakistan has already launched its proxy war. India, therefore, has

23. Maoz, Ibid., p. 33.
24. Ibid., p. 33.
25. Ibid., p. 34.

to adopt a compellence strategy. The reason for the failure of Indian conventional deterrence is its possible lack of credibility. Credibility is a function of capability and intent. Pravin Sawhney writes, "Few understand the reality that the conventional forces of India and Pakistan are matched or nearly matched." In all the wars fought between the two, Pakistan has never been defeated in the eastern sector by India. This explains why military officers from both sides rarely take the impending nuclear holocaust scenario painted by the scholars very seriously.[26] The Indian conventional forces currently do not have the overmatching edge which could engender credibility. Pakistan is also sceptical about Indian political resolve to cross the LoC/IB (international boundary).

As far as the proxy war is concerned, Indian deterrence has failed in Kashmir. India has to adopt a compellence strategy. The reason for the failure of Indian conventional deterrence is its possible lack of credibility.

Pakistani Centres of Gravity. Sawhney's argument is that India cannot conventionalise the conflict because no credible and overmatching conventional capability that could yield decisive results is currently available. We must, first and foremost, acquire such a conventional edge before we threaten to press it home. The next question is: against what do we apply this conventional force? What are the Pakistani centres of gravity that if addressed could cause its collapse? These could be:

(a) The Pakistani city complexes of Islamabad and Rawalpindi (the national capital complex, with key command and control nodes).
(b) The Pakistani nuclear weapons and reactors and means of delivery.
(c) The Punjabi heartland with the core cities of Lahore and Sialkot.
(d) The port city of Karachi.
(e) The Pakistani economy.
(f) The Pakistani strategic reserves (Army Reserve North and Army Reserve South).

26. Pravin Sawhney, *The Defence Makeover: 10 Myths that Shape India's Image* (New Delhi: Sage Publications, 2002) p. 175.

(g) On the Iraqi pattern, the relationship of Pervez Musharaff with his power base, viz. the 12 corps commanders, is also a key centre of gravity in Pakistan's case.

ESCALATION DYNAMICS: HERMAN KAHN'S THEORIES AND THEIR APPLICABILITY TO THE INDIAN CONTEXT

On Escalation

Herman Kahn is to nuclear thought what Clausewitz is to conventional warfare. Kahn's magnum opus on *Thermonuclear War* is still a standard text for strategic nuclear thought. However, Kahn's other seminal work, *On Escalation: Metaphors and Scenarios* is not as well known.[27] Nonetheless, it has useful inputs that suit the subcontinental context.

Escalation. Kahn cites Thomas Schelling who coined the phrase, "Escalation is a competition in risk taking."[28]

Escalation Dominance. Escalation dominance is not mere military superiority. It is complex concept in which military calculations are only one element. It also encompasses the assurance, morale, commitment, resolve and internal discipline of both principle antagonists and their allies.[29]

Intensifying Escalation. Herman Kahn cites the example of two nuclear armed adversaries between whom a "limited conflict" or "agreed battle" is going on. There are three possible ways in which one antagonist can escalate the conflict (i.e. increase or threaten to increase his efforts)[30]:

(a) **Increase the Intensity**. Increase the intensity of the ongoing conflict (by doing more of what one is already doing—perhaps send in more troops and equipment, send better equipment or attack new targets). An example would be Pakistan intensifying the proxy war by inducting shoulder fired surface-to-air missiles (SAMs)[31] into Kashmir.

(b) **Widening the Area: Violate Local Sanctuary**. Kahn postulates that a "local

27. Herman Kahn, *On Escalation: Metaphors and Scenarios* (London: Pall Mall Press, 1965).
28. Kahn, Ibid., p. 3.
29. Ibid., p.4.
30. Ibid., p. 4.
31. Ibid., p. 3.

sanctuary" could be violated (e.g. crossing of the Yalu river in the Korean War, retaliatory raids or bombings of North Vietnam or hot pursuit operations). This entails a permanent widening of the area of conflict or ongoing battle.[32] In the subcontinental context, Pakistan Occupied Kashmir (POK) is a local sanctuary. India launching hot-pursuit operations into POK would be violating a local sanctuary.

During escalations, national leaders deliberately employ the tactics of calculated irrationalities to scare their adversaries into backing off. This raises the level of uncertainty and forces a rational actor to back down.

(c) **Compounding the Escalation: Violate Central Sanctuary**. Finally, one of the adversaries can escalate by precipitating a new crisis or conflict in an area other than the local one. Thus, the escalator could violate a "central sanctuary" or attack an ally or client of the principle opponent. In the Indian context an attack across the IB could violate a "Central Sanctuary".[33]

Nuclear Chicken: Calculated Irrationality. Kahn used the metaphor of the game of "chicken" played by teenagers for describing escalation dynamics.[34] He pointed out the symmetrical character of many escalation situations. Game theorists like Steve J.Brams and Kilgour have built mathematical models to calculate payoffs and probabilities of various options in the game of chicken and in deterrence situations.[35] During escalations, national leaders sometimes deliberately employ the tactic of "calculated irrationality"[36] to scare the adversary into backing off (Pretend to be highly emotive and, hence, make rational calculations unreliable for the adversary.) This raises the level of uncertainity and forces a rational actor to back down. Pakistan initially tried to play the calculated irrationality card in Kargil.

In international relations, theorises Kahn, escalation is used to facilitate negotiations or to put pressure on one side to settle a dispute without recourse

32. Ibid., p. 3.
33. Ibid., p. 3.
34. Ibid., p. 9.
35. Steve J. Brams and D. Marc Kilgour, *Game Theory and National Security* (New York: Basil Blackwill, 1988).
36. Brams and Kilgour, Ibid., p. 11.

to war.[37] However, Bayman and Waxman feel that escalation could involve limited use of force. This is vital in our context.

APPLICATIONS IN THE INDIAN CONTEXT

Herman Kahn's theories on escalation provide a logical framework for analysing the escalation dynamics and option matrices in the Indo-Pakistan context. As per the Kahn thesis, India's options are:

(a) **Intensification of Counter-Terrorist (CT) Operations**. India could intensify the CT operations in J&K by inducting additional formations and employing attack helicopters, Lancer gunships and use field artillery and mortars while tackling terrorist concentrations in remote areas. So far, the design of our CT operations in J&K has been on the Afghan model, with primary emphasis on securing lines of communication and key communication centres. The intensification option implies a manifold increase in the density of the counter-terrorist grid to expand operations and tackle terrorist concentrations in remote base areas like Hilkaka.[38] The move of additional troops and resources for this stated aim would also set the stage for more proactive trans-LoC operations.

(b) **Violate Local Sanctuary**. In the Indo-Pakistan context, POK constitutes the local sanctuary which has so far remained immune from Indian retaliation. Kargil provided us a major opportunity to retaliate across the LoC. However, in view of the nuclear backdrop, it was decided to confine operations to own side of the LoC. This entailed heavy casualties and time penalties but India gained great mileage internationally as a mature and responsible nuclear power. Pakistan's military regime attempted a posture of "calculated irrationality" and courted adverse international reaction. However, in retrospect, Indian restraint only emboldened the Pakistani military elite to intensify the proxy war in Kashmir and even extend terrorist violence to other states of India. The next major stand-off occurred in December 2001 with the attack on the Indian Parliament. Once again, the Indian response of a total

37. Ibid., p. 12.
38. Pravin Swami, "The Hype and the Folly," *Frontline*, July 4, 2003, p. 4.

mobilisation for war was partially successful. It forced Gen. Pervez Musharaff to denounce terrorism and ban the LeT/JeM, but over time, the credibility of the Indian threat wore off. In case of any future Pakistani provocations, India is now left with no option but to violate the local sanctuary of POK with trans-LoC operations.

(c) **Violate Central Sanctuary**. In the Indo-Pakistan context, attacks across the IB would constitute a violation of the "central sanctuary." In 1965, India had followed this escalation ladder. In response to Operation Gibralter of Pakistan, it had launched a series of attacks across the ceasefire line. Pakistan had responded by Operation Grandslam (a division sized offensive in Akhnur). In response, India had launched major corps sized offensives across the IB. The 1965 War, however, was a military stalemate because India lacked a decisive edge in conventional force ratios. Unfortunately, much the same situation of parity exists today (albeit at a much higher force level). As such, this option will not become credible till India develops an overmatching conventional capability vis-a-vis Pakistan. Analysts like Praveen Sawhney have clearly highlighted this stalemated situation.[39] A major conventional attack across the IB should not merely generate a stalemate but a distinctly favourable end state (severe attrition/destruction of Pakistani strategic reserves/war-making capability and a total blow to the Pakistani economy that prevents rearmament). It is this conventional parity factor (even more than the nuclear dimension) that fuelled Pakistani intransigence. Only a major rearmament programme to generate a visible conventional military edge will make a threat to conventionalise the conflict credible to Pakistan.

Escalation Ladders as Scenario Generators

Perhaps one of the most valuable contributions of Herman Kahn has been the concept of escalation ladders as scenario generators. In the 1950s, he had drawn up escalation ladders for a hypothetical conflict between the USA and USSR that highlighted the various rungs, event plateau levels and decision points where the national leadership could decide to move up or down the

39. Sawhney, n.26, p. 175.

escalation ladder based on the adversary's reactions, the international response and domestic compulsions. It is imperative that we generate a series of escalation ladder options. These will constitute the multiple war-gaming scenarios that can enable us to crystallise an effective response to the Pakistani proxy war. It is argued that escalation ladders trace the evolution of any conflict from a cold start to border skirmishes, to a limited conflict in a specific theatre that proceeds to full-fledged conventional war and the possible nuclear release as a consequence thereof. Thus, the precise interface between conventional and nuclear deterrence can best be defined by such exhaustive escalation ladders that detail each step of the graduated responses and counter moves. The escalation ladder is, therefore, a most valuable theoretical tool in our study of this uncharted territory.

RECENT DEVELOPMENTS IN MILITARY TECHNOLOGY THAT COULD GENERATE CONVENTIONAL OPTIONS IN THE SUBCONTINENT

General: Impact of the RMA

We are currently in the throes of an ongoing revolution in military affairs (RMA) that has been generated by the application of information technology to war-fighting.[40] This has resulted in:

(a) **A Transparency Revolution**. Surveillance satellites, unmanned aerial vehicles (UAVs) and synthetic aperture radars on airborne platforms [airborne early warning (AEW) and airborne early warning and control systems (AWACS) as well as joint surveillance target attack radar system (JSTARS)] have all created a transparency revolution. This enables the attacker to look deep in the enemy rear and reduce the fog of war.[41] AWACS flying deep in own territory can direct the air battle over enemy areas.

(b) **Precision Attack**. Precision guided munitions (PGMs) like laser guided bombs, TV guided munitions, global positioning system (GPS) guidance kits on traditional gravity bombs, etc have exponentially increased the

40. Michael L. Brown in "Revolution in Military Affairs". Paper in Alan.D. Campen, ed., *Cyber Wars Security Strategy and Conflict in the Information Age* (New Delhi: Indian reprint by Book Mart Publishers, 2000).
41. Brown, Ibid., p. 43.

precision and lethality of aerial attacks from altitudes well beyond the existing SAM envelope. This has led to a phenomenal increase in the lethality and effectiveness of air power which is transforming the very nature of war. It is this ability which is at the heart of the current RMA.[42] Though the RMA is much discussed in our armed forces, we still have a long way to go before we can actualise it in our context. This RMA itself could generate for us the conventional edge that we need in the subcontinent.

US Experience: Afghanistan and Iraq. Current US military campaigns have highlighted the increasing usage of PGMs in successive campaigns:

	Campaign	Percentage of PGMs Employed
(a)	Op Desert Storm (Gulf War I)	10%
(b)	Op Allied Force (Serbia)	35%
(c)	Op Enduring Freedom (Afghanistan)	60%
(d)	Op Iraqi Freedom (Gulf War-II)	70%[43]

Air Power-Special Forces Combine. The most significant lesson to emerge from the US campaigns in Afghanistan and Iraq has been the tremendous effectiveness of the new air power-special forces combine. Precision munitions require equally precise intelligence for effective engagements. US special forces teams equipped with TAMERs (technology advanced mini eye-safe laser range finders, a very lightweight but accurate GPS based laser range finder and target designator) could operate in the rear and paint targets for precise and lethal air attacks. It highlighted that backed by precise and responsive air power, very small ground forces could achieve results wholly disproportionate to their size.[44] These target designation binoculars and lightweight air-to-ground communications have, therefore, generated a new revolution in war-fighting which has very pertinent applications in the trans-LoC context.

42. Ibid.
43. Michel Sirak, "Flexibility Key to Weapon Mix ," *Jane's Defence Weekly*, January 18, 2003, p. 45.
44. G.D. Bakshi, "End Game in Afghanistan: Military Lessons from the Campaign," *Indian Defence Review*, vol.16(4), October-December 2001, p. 63, for a fuller treatment of the enabling impact of such force multipliers on combat.

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Specific Weapon System Applications

AWACs. Catering for the Chinese frontier, the conventional ground forces of India and Pakistan are at near parity levels. The Indian Air Force (IAF) however, with its SU-30, MiG-29, MiG-27, Jaguar and Mirage aircraft has a distinct edge over the Pakistani air fleet. However, even with this current edge, our air force can achieve only local air superiority for limited durations. Iraq, Yugoslavia and Afghanistan have clearly demonstrated the war-winning potential of air superiority. For any conventional threat to be credible, the IAF must be given this decisive edge over the Pakistan Air Force (PAF). The greatest force multiplier for it would be AWACs. Media reports indicate that India is about to receive the Israeli Phalcon radar. This could be mounted on IL-76 platforms and provide our air force with a most significant force multiplier that can usher in the RMA on the subcontinent.[45] Specific applications of the AWACs will be discussed in the proposed escalation ladders.

TAMER Class Laser Designating Binoculars. A key piece of technology that enabled US Special Forces to accurately acquire and designate targets for the US Air Force in Afghanistan and Iraq are the very lightweight TAMER designation binoculars. These were developed by the US Defence Advanced Research Projects Agency (DARPA). It uses laser beams to accurately measure distance and bearing of targets and uses GPS to instantly get their precise eight figure grid references. These enable the precision attack ability of the USAF to be optimally exploited.[46] In our case, small special forces teams equipped with TAMER binoculars could infiltrate across the LoC and accurately designate targets

45. Rahul Bedi, "Divided Interests" *Jane's Defence Weekly*, May 21, 2003, p. 22.
46. John Barry, "A New Breed of Soldiers", article in *Newsweek*, December 10, 2001, pp. 20-21.

(terrorist camps) for engagement by own air force and/or artillery of 155 mm and higher calibres. Equivalent Israeli systems are Lachross binoculars. The lethality of such special forces teams would be enhanced exponentially with this capability. Small tactical teams could, thus, have a huge strategic impact.

SMERCH Multiple Rocket Launcher System (MRLS). This 300 mm calibre Russian MRLS has a range of upto 70 km.[47] It could be used to engage terrorist training camps across the LoC as well as command and control centres like divisional and corps headquarters and launch pads for infiltration. This system is within the existing restraint envelope as both sides have been using artillery for trans-LoC engagements. Its far higher throw weight and range would constitute a new rung on the escalation ladder and clearly make a statement of intent.

Mini UAVs. The American DARPA is currently working on hand held micro UAVs, weighing between 200-500 gm, with a range of upto 10 km and endurance of up to one hour. These could be mass produced and issued down to the infantry battalion level on the LoC. These would greatly enhance transparency and permit accurate acquisition and engagement of targets in POK. The Israeli's firm Elbit Systems have produced lightweight UAVs (5.5 kg, with two hours endurance) called Skylark and Seagull.[48]

Fast Attack Vehicles. These are very lightweight but high mobility vehicles for the special forces that can be inserted/extracted by helicopters. They carry two/three man crews, a machine gun, automatic grenade launcher and anti-tank missiles. They have long endurance and range (500-700 km) and power to weight ratios that are higher than those of all main battle tanks (MBTs). They have low noise and heat signatures which give them virtual stealth capabilities. Their cross-country mobility is superior to that of MBTs and infantry combat vehicles (ICVs). These could be used by our special forces in the plains/desert sectors for acquiring targets (tagging strategic reserves) and for lethal raids/ambushes deep in the enemy's rear. They could be effectively employed in the plains sector of J&K. Such enhanced capabilities with our special forces can open up a whole range of options for trans-LoC/IB raids/missions that can be employed as new

47. Nicholai Makorovets, "Multiple Rocket Launchers," *Indian Defence Review*, vol.16 (4), October-December 2001, p. 43.
48. Craig Hoyle, "Israel's Elbit System," *Jane's Defence Weekly*, June 18, 2003, p.31.

steps in the escalatory ladder that utilise smaller number of troops but have a vastly disproportionate impact. The actual employment of limited but precise and lethal violence could send a strong signal of political intent that is far more coercive than mere deployments on own side of the border. There is an urgent need, therefore, to greatly strengthen our special forces capability.[49]

ESCALATION MODELS FOR CONVENTIONALISING THE CONFLICT IN THE SUBCONTINENT

Escalation Ladders: Scenario Generators

To generate various war-gaming scenarios and *define the precise relationships between conventional and nuclear war in the subcontinent, it would be essential to trace out specific escalation ladders*. These escalation ladders define the precise space between conventional and nuclear war in our context and help us to chart the steps that span the transition between these conflict modes.

Pakistani Views of Escalation

Before we design our own escalation ladders/scenarios, it would be useful to examine the Pakistani thinking on this subject. In Pakistan, the initial reaction to acquiring an overt nuclear capability was euphoric. In the wake of the Chagai explosions, Pakistani responses seemed to stem from a belief that India's conventional superiority was totally negated. During *the Kargil conflict, the Pakistani military pegged the subcontinental nuclear threshold at absurdly low levels*.[50] It was characteristic of the highly subjective modes of thought in the Pakistani military establishment. However, the strong Indian response in Kargil was highly sobering for the Pakistani generals. The traditional cautious approach of the General Headquarters (GHQ) Islamabad resurfaced soon thereafter. Would the Pakistani response to an Indian conventional attack across the LoC/IB be a spasmodic nuclear release? A study of recent Pakistani military literature now suggests that this may no longer be the case.

49. Dr Bhashyam Kasturi, "Military Special Forces in the Indian Context," *Indian Defence Review*, vol. 16(4), October-December 2001.
50. Rear Admiral K. Raja Menon, *A Nuclear Strategy for India* (New Delhi: Sage Publications, 2000), p. 197.

Pakistan's First Use Doctrine: Escalation Scenarios

Pakistan has clung to its "first use doctrine." However, the sobriety engendered by the Kargil War is now clearly visible. Pakistani strategists are now talking of a "graduated response" as opposed to a "massive response" or spasmodic release. Thus, Lt. Gen. Sardar F.S. Lodhi of the Pakistan Army, writing in the *Defence Journal*[51] clearly articulated a Pakistani view of the escalation ladder as under:

Pakistan has clung to its "first use doctrine." According to their strategists, when a military situation deteriorates and a conventional attack is likely to break through their defences, causing a major setback, the government would be left with no option except to use nuclear weapons to stabilise the situation.

(a) **Conditions for Nuclear Release**. "In a deteriorating military situation, when an *Indian conventional attack is likely to break through our defences or has already breached the main defence line - causing a major setback to defences which cannot be restored by conventional means* at our disposal, the government would be left with no option except to use nuclear weapons to stabilize the situation. India's superiority in conventional arms and manpower would have to be offset by nuclear weapons. Pakistan's nuclear doctrine, therefore, would essentially revolve around the first strike option."[52]

(b) **Graduated Escalation**. Gen Lodhi states, "This would entail a stage by stage approach in which the nuclear threat is increased at each step to deter India from attack."[53]

(c) **First Step**. Public or private warning.[54]

(d) **Second Step**. Demonstration explosion of a small nuclear weapon on Pakistani soil.[55]

51. Lt. Gen (Retd) Sardar F.S. Lodhi, "Pakistan Nuclear Doctrine," *Pakistan Defence Journal*, April 1999.
52. Lodhi, Ibid.
53. Ibid.
54. Ibid.
55. Ibid.

(e) **Third Step**. Use of a few nuclear weapons on its own soil against Indian conventional forces.[56]

(f) **Fourth Step**. Nuclear weapons employed against critical but purely military targets in India across the border from Pakistan, probably in thinly populated areas in the desert or semi-desert, causing less collateral damage.[57]

(g) **Counter-Value**. Some weapons would be in reserve for the counter-value role.[58]

Lt. Gen. K.M. Arif has stated that both India and Pakistan are not crazy countries. If the strategy of deterrence works in other parts of the world, it is bound to work in this region as well. It is highly doubtful if either country would use nuclear weapons against each other.[59] Lt. Gen. Khalid Kidwai of the Strategic Plans Division of the Pakistan Army defined the nuclear threshold as under:

(a) Nuclear weapons are aimed solely at India.

(b) In case deterrence fails, they will be used under the following conditions:

(i) **Space Threshold**. India attacks Pakistan and conquers large parts of its territory.

(ii) **Military Threshold**. India destroys a large part of Pakistan's land or air forces.

(iii) **Economic Threshold**. India proceeds to the economic strangulation of Pakistan. This would include a naval blockade and stoppage of the Indus waters.

(iv) **Internal Threshold**. India pushes Pakistan into political destabilisation or creates large scale internal subversion in Pakistan.[60]

(c) **The Kidwai Thesis is Largely Academic**. Lt. Gen. Lodhi's thesis is far more specific and could well represent Pakistan's nuclear escalation options.

Analysis of Pakistani Escalation Ladder

Analysis of the Pakistani escalation ladder clearly highlights the sobering effects of Kargil.The conditionalities for nuclear release are ambiguous. They stretch

56. Ibid.
57. Ibid.
58. Ibid.
59. Lt. Gen. K.M. Arif, "*Working with Zia*" (Karachi: Oxford University Press), pp. 362-363.
60. Lt. Gen. Khalid Kidwai cited in Landau Report on Nuclear Safety, Nuclear Stability and Nuclear Strategy in Pakistan. Prepared by Prof P.C. Ramusino and M. Matellini.

from "breaching the main defence line to actual breach. It next graduates to a major setback which cannot be restored by conventional means." The Pakistani nuclear threshold, therefore, has a very elastic bandwidth. The absurdity of the massive response strategy was highlighted to the USA in the Cuban missile crisis of 1962. The Kargil War has similarly forced Pakistan into a flexible response strategy. Gen. Lodhi's escalation ladder is clearly graduated. It commences with a "nuclear shot across the bow" and then graduates to a purely military use of nuclear weapons, first on its own soil and only then on ours. The anxiety to avert a devastating counter-value Indian response is clearly evident. Use against military targets in semi-desert/desert regions of low population density is also designed to mitigate international criticism and increase plausibility of such nuclear release.

This paper is excerpted from the author's thesis written at the National Defence College in 2003. Though a little dated, the theoretical frame work continues to be relevant and merits further debate and analysis. The paper is based entirely on open sources that have been cited in detail.