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By Manpreet Sethi

The Fatal Attraction of 'Tactical' Nuclear Weapons

Distinguished Fellow, Centre for Air Power Studies

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Two developments related to 'tactical' nuclear weapons (TNWs) have recently been in the news. The first is Russia's deployment of TNWs in Belarus as another act of nuclear brinkmanship in the ongoing Russia-Ukraine conflict. The second is a reference by Lieutenant General Khaled Kidwai, former head of Pakistan's Strategic Plans Division, to his country's pursuit of full-spectrum deterrence to cover ranges from "zero meters to 2,750 km" and have nuclear weapons of "destructive yields suited for strategic, operational and tactical levels".[1]

TNWs, evidently, continue to occupy mind space in nuclear-armed countries. This would likely not have been the case if US-Russia relations had not soured in 2014. The elimination of TNWs was supposed to be the next item on their arms control agenda. Unfortunately, that moment has passed, and the fatal attraction of TNWs continues.

What are TNWs?

As yields of nuclear warheads moved into megaton ranges during Cold War competition, TNWs were built as more usable, and hence more credible, deterrent options. Supported by nuclear use theorists (colloquially called NUTs), TNWs or battlefield nuclear weapons, were showcased as a way of reining in 'mutual assured destruction' (MAD) scenarios by bringing the war back into the battlefield with low-yield warheads against military targets. The inventories included nuclear artillery, atomic demolition munitions, nuclear mines, torpedoes, and short-range missiles.

There is no one accepted definition of TNWs. In the context of the European theatre, these refer to low-yield nuclear warheads (from 1 to 100 kilotons) on short-range missiles (less than 500 km) to hit targets on the battlefield. But, in South Asia, where Pakistan has declared possession of TNWs, it projects them to be of sub-kiloton or low kiloton yields deliverable from zero to 60 km.

In order to put the yields in perspective, it merits recalling that the atomic bombs dropped on Hiroshima and Nagasaki were around 12 and 20 kilotons, respectively. While they would be 'tactical' by contemporary standards, they had profound strategic effects. By way of another comparison, the biggest non-nuclear bomb, the Massive Ordnance Air Blast (MOAB), or the 'mother of all bombs', that the US dropped on Afghanistan in 2017 was a mere 0.011 kiloton. So, even the smallest TNW would be orders of magnitude higher than the largest conventional bomb. Additionally, it would leave lingering ionising radiation and radioactive fallout. It is for this reason that nuclear weapons are considered weapons of mass destruction.

India, which did test sub-kiloton weapons in 1998, maintains that there can be nothing tactical about their use. China, too, upholds the same philosophy, though its nuclear capability and positions are changing fast in contemporary times, and it chooses to remain silent on TNWs.

Why do Nations Covet TNWs?

Militaries perceive a utility in TNWs for providing more 'usable' and hence more credible options. This is particularly true for countries professing first-use nuclear doctrines. TNWs deter by projecting a resolve to use nuclear weapons to take the conflict into the nuclear realm, but in a manner that contains damage and allows the adversary to off-ramp.

NATO believed that deploying such weapons "near the front makes their use virtually automatic and therefore denies the opponent the option of conventional war. He is left with the choice between not attacking or setting off a nuclear war that would be likely to get out of hand."[2] For NATO, TNWs magnified the risk of an uncontrollable nuclear war and thus deterred Soviet conventional superiority.

Pakistan has adopted the same logic. Inspired by NATO's strategy, it seeks to raise the spectre of nuclear escalation to deter India from using force at the conventional level, even as it indulges in cross-border terrorism. Lt. Gen. Khalid Kidwai described the purpose of Pakistan's

TNW as "pour cold water on Cold Start."[3] The threat of the use of TNWs through the forward deployment of *Nasr* batteries is held out to deter any Indian ingress into Pakistani territory.

Today, Russia is playing the same game. The threat of the use of TNWs is allowing it to shape the contours of the war. In each case, the obvious purpose of the weapons is to threaten to create a psychological impact through the novelty of the act and the apparent brazenness to escalate to the nuclear level. The military effectiveness of the weapon on the battlefield may not be the driver. As admitted by a Pakistani strategist, "The ability of low yield nuclear weapons to destroy Indian tanks is limited to the extent of being inconsequential because to cause substantial damage to a well-dispersed attacking armoured formation a large number of 15-20 kiloton yield weapons would be required."[4]

Indeed, the loss of a few troops or tanks would matter little in an overall battle scenario. But three important purposes are perceived to be met by merely posing the threat of TNWs. One, it appears more credible than using larger-yield weapons; second, it is likely to get the international community rushing in to mount pressure to halt conventional operations and search for de-escalation; and third, even if the TNWs were used, they would cause little damage of military significance, which an adversary might prefer to absorb rather than escalate the situation towards more nuclear exchanges.

Hence, TNWs are seen as adding an additional layer of deterrence to the overall nuclear strategy. But is that so? Can there be a guarantee around these assumptions? A former National Security Advisor to the government of India does not think so.

> "*If Pakistan were to use tactical nuclear weapons against India, even against Indian forces in Pakistan, it would effectively be opening the door to a massive Indian first strike, having crossed India's declared red lines. There would be little incentive, once Pakistan had taken hostilities to the nuclear level, for India to limit its response since that would only invite further escalation by Pakistan…. Pakistani tactical nuclear weapon use would effectively free India to undertake a comprehensive first strike against Pakistan*."[5]

While this may have been said in the context of India-Pakistan, it could be applicable to other nuclear dyads too.

What are the TNW Use Dilemmas?

The apparently simple logic of greater usability of TNWs and hence better deterrence is challenged by the uncertainty about the adversary's willingness to play the game only with TNWs. Noted nuclear strategist Lawrence Freedman wrote, "It takes two to keep a war limited." It could never be taken for granted by the user of TNWs that the adversary would choose to respond in the same manner. In fact, most lessons from simulation exercises in nuclear-armed states do not show that wars that began with the use of TNWs ended at that level.

Besides, an effective TNW strategy needs a sufficiently large number of such weapons with delegated command-and-control and battlefield management. This requires financial and fissile material resources, besides top-grade security and safety processes. And yet, irrespective of the detailed planning involved in stockpiling and using TNWs, a strategic reserve arsenal is nevertheless necessary for any eventuality. So, TNWs impose additional burdens in terms of cost of build-up, maintenance effort, human resource requirement, and command-and-control processes.

While countries that possess TNWs like to signal the inevitability of their early use, this has not happened in over seven decades. All through the Cold War, even as hundreds of TNWs were deployed by both sides in Europe, neither found it easy to use them. Even in the ongoing Russia–Ukraine conflict, despite suffering several military and political setbacks, Moscow has still not found it worthwhile to use its TNWs. Pakistan, too, which has now had TNWs for almost a decade, has absorbed a surgical strike and an air strike but has not resorted to the use of TNWs. In fact, once the Indian action took at Balakot in 2019, Pakistan chose not to overplay its nuclear capabilities, including the TNWs. Obviously, there are dilemmas around TNW use, just like any nuclear use, especially owing to the unknowns that the action may create.

TNWs are meant to achieve limited destruction. This is the attribute that appeals most to military planners, buoying their perception of being able to execute nuclear operations in a controlled climb up the escalation ladder. They can make educated guesses on the physical effects of nuclear explosions based on yield, the height of the burst, the time of the attack, etc. But

they cannot completely factor in incalculable imponderables such as the overall impact on the nation, the leadership, and the people. Therefore, despite a planned TNW use, the situation could quickly become unstable. As cautioned by Freedman, "Tactical nuclear war, by the very nature of the weapons, has a built-in escalation mechanism. It is hardly consistent to argue that..., once nuclear combat begins, both sides will be content to employ only the least efficient nuclear weapons."[6]

The fear of the unknown has not allowed these weapons to be used until now. India has no reason to enter this game. It has steadfastly maintained that its nuclear weapons are for deterrence through the promise of unacceptable punishment or massive retaliation (MR).

Is Massive Retaliation Less Credible vis-à-vis TNWs?

It is often argued that MR is an impractical strategy. After all, even the US, which had adopted massive retaliation in the 1950s, dropped it in favour of a flexible response less than a decade later. Why did the US not find MR a credible deterrent strategy? And why does it make sense for India?

Two basic differences in the US and Indian nuclear articulations stand out. The first relates to their dissimilar nuclear doctrines. The US had a first-use nuclear doctrine, which implied that its MR had to be in response to any provocation, anywhere, including a conventional attack far away from the US mainland. This posed several difficulties and did not appeal to the American domestic constituency or its allies. In contrast, India has a no-first-use (NFU) doctrine. So, its massive retaliation would be in response to a situation in which its own territory or troops had suffered a nuclear attack. Retaliation to cause punishment after a nuclear attack would be credible and, arguably, even legitimate.

The second difference lies in their practice of nuclear deterrence. The USA deters by demonstrating its ability to fight with nuclear weapons. Therefore, a flexible response to execute and prevail in a nuclear war has greater appeal. Contrarily, India upholds deterrence through the threat of punishment or disproportionate response. The purpose of India's nuclear strategy is not to let nuclear weapons be used, and it does so by evoking the threat of an unimaginable catastrophe. It deters by maximising the fear of extreme nuclear escalation. India's MR signals a one-rung nuclear escalation ladder.

Robert Jervis wrote in 1984 that states "increase the chance of peace only by increasing the chance that war if it comes, will be total. To decrease the probability of enormous destruction may increase the probability of aggression and limited wars."[7] So, attempts at decreasing the horrors of nuclear war may tempt states to attack under the mistaken assumption that the costs of the resulting war would be tolerable. This cannot be guaranteed and is a risk not worth taking.

Another criticism of MR is that by suggesting such retaliation, India could end up inviting a massive first strike and suffering more in the process. This argument, however, does not factor in the difficulty in taking the decision to use nuclear weapons. National leaders are likely to be weighed down by not just the consequences of their choice but also by a taboo against the use of nuclear weapons that has been in force since 1945. The unacceptability of nuclear use has only strengthened over time, as is also evident in the progressive constraints on nuclear testing. Nations have collectively walked a fair distance from the time when nuclear tests were routine. So, a decision that flouts these norms cannot be taken easily. Even to approve the use of a TNW is unimaginable, and to believe that a large-scale, pre-meditated nuclear strike could be ordered by a rational leader, is even more so. So, India's MR is actually pushing away the possibility of nuclear use and thereby strengthening the case for deterrence, which is the stated objective of its nuclear weapons.

Finally, two more issues plague MR. The first relates to the perceived credibility of a proportionate response vis-à-vis massive retaliation. Would it not be more ethical, legal, and politically justifiable to inflict proportionate punishment? While this sounds logical, the difficulty lies in the determination of what is proportionate in the case of nuclear weapons – the use of the same number of weapons? Use of the same yield of weapons? Use on the same number and type of targets? Or, an equal number of people were killed in the immediate fireball and then later due to surviving radioactivity? Establishing and inflicting proportionality with nuclear use is not easy. In fact, the more nations delude themselves into believing that they can fight small, neatly contained, proportionate nuclear wars, the further they advance towards a slippery slope that could quickly slide from proportionate to obliterative.

The second set of questions can be built around 'what if' scenarios. What if a TNW was used on a naval carrier battle group? Or on a few tanks in enemy territory? Or on a military airfield? Would the Indian leadership respond with counter value attacks against the cities of the

adversary? Some strategic analysts see this as a "serious decision dilemma" since "it could make it hard for Indian leaders to find justification for infliction of disproportionate damage to avenge against what limited damage the TNWs could inflict."[8] So, it is argued that the asymmetry between TNW use and massive retaliation adversely impacts the credibility of India's deterrence.

The answer to this dilemma lies in understanding the difference between a nuclear deterrence doctrine and a military strategy to handle a deterrence breakdown. In signalling massive retaliation as a doctrinal response to any kind of nuclear use, India is deterring the possibility of such an occurrence. It is letting the adversary know in advance that it will respond with a heavy nuclear hand in case nuclear weapons are used against its troops or territory. However, if deterrence does break down for any reason, advertently or accidentally, the nation's response could span a spectrum from non-nuclear to nuclear, depending on many factors.

Staying straightforward with its nuclear deterrence strategy, India deters all use of nuclear weapons, irrespective of whether the adversary calls it tactical or otherwise, with the threat of unacceptable damage, complemented with a show of firm resolve and operational preparedness. There has never been anything tactical about nuclear weapons. Irrespective of the yield, range, or target, the effects of nuclear use can only be calamitous with these extraordinary weapons. They may be touted as more usable, but they are as difficult to use as nuclear weapons. The artificial distinction is a case of fatal attraction.

(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies [CAPS])

Notes:

[1] Special Message by Lt Gen Khaled Kidwai, at Institute of Strategic Studies, Islamabad, May 25, 2023. Accessible at https://www.youtube.com/watch?v=c3oOXOk3G1k.

[2] Thornton Read, "Limited Strategic War and Tactical Nuclear War", in *Limited Strategic War*, edited by Klaus Knorr and Thornton Read, (London: Pall Mall Press, 1962), p. 96.

[3] Feroz Hassan Khan, *Eating Grass: The Making of the Pakistani Bomb,* (Stanford: Stanford University Press, 2012), p. 396.

[4] A.H. Nayyar and Zia Mian, "The Limited Military Utility of Pakistan's Battlefield Use of Nuclear Weapons in Response to Large-Scale Indian Conventional Attack", *Pakistan Security Research Unit Brief*, No. 61, University of Bradford, November 11, 2010.

[5] Shivshankar Menon, *Choices: Inside the Making of India's Foreign Policy*, (Penguin Random House India, 2016) p. 174

[6] Lawrence Freedman, The Evolution of Nuclear Strategy, (Saint Martin's Griffin, 1983) p. 77

[7] Robert Jervis, *The Illogic of American Nuclear Strategy* (Ithaca: Cornell University Press, 1984)

[8] Gen. N.C. Vij, "Strengthening India's Nuclear Deterrence", in *Securing India*, VIF Perspective: Issues and Trends, Wisdom Tree, (New Delhi, 2017), p. 7. Similar views may be found in Ajai Shukla, "After a Pakistani TNW Strike, India Can Go for Pakistan's Nuclear Arsenal: Former NSA Shivshankar Menon", *Broadsword*, March 18, 2017, http://ajaishukla.blogspot.in/2017/03/after-pakistani-tnw-strike-india-will.html, accessed on May 15, 2018 and Arka Biswas, "Incredibility of India's Massive Retaliation: An Appraisal on Capability, Cost and Intention", *Comparative Strategy*, vol.36, No.5, pp 445-456.

Recommended Readings:

- Gurmeet Kanwal and Monika Chansoria eds., *Pakistan's Tactical Nuclear Weapons: Conflict Redux* (New Delhi: Knowledge World, 2014)
- Feroz Hassan Khan, *Subcontinent Adrift: Strategic Futures of South Asia* (New York: Cambria Press, 2022)
- Lawrence Freedman, *The Evolution of Nuclear Strategy* (London: Palgrave Macmillan, 1989)
- Manpreet Sethi, "Pakistan's TNWs: The Signal and How it Should be Received", in Shalini Chawla and Rajiv Nayan eds., *Pakistan's Security Dynamics and Nuclear Weapons* (New Delhi: Knowledge World, 2023)
- Manpreet Sethi, "The Idea of Limited Nuclear War*", Indian Foreign Affairs Journal*, vol.14, no.3, Jul-Sep 2019, pp. 235-247.