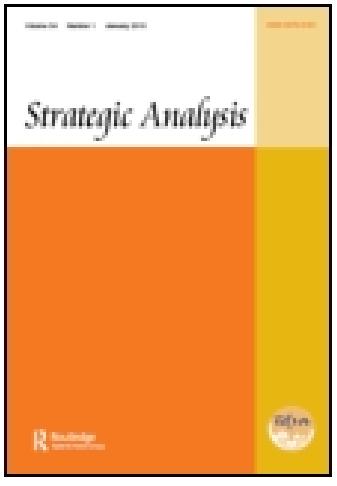

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Commentary

Pakistan's *Nasr*/Hatf-IX Missile: Challenges for Indo-Pak Deterrence

Arun Vishwanathan

On November 5, 2013 Pakistan conducted its fourth test of the Hatf-IX (*Nasr*) short range battlefield 'nuclear' missile. To date there have been four flight tests of the missile system. After the first three tests (April 19, 2011, May 29, 2012 and February 11, 2013) Pakistan's Inter Services Public Relations (ISPR) had put out identical press releases.[1] These statements claimed that the missile had a range of 60 km and carried 'nuclear warheads (sic) of appropriate yield'. The ISPR statement following the fourth flight test of *Nasr*, a salvo firing of four missiles, was worded differently and did not repeat the claim that *Nasr* carried a nuclear warhead. Curiously, it referred to the missile's nuclear capability in a roundabout sort of way. The statement claimed that the missile 'contributes to the full spectrum deterrence against threats in view of evolving scenarios'.[2]

This then begets three questions. Firstly, what is Pakistan trying to signal by way of the *Nasr* and what is the significance of the change in wording of the ISPR statement following the fourth *Nasr* test flight? Secondly, can Pakistan actually fit a nuclear warhead into the *Nasr*? Thirdly, how credible would *Nasr* be in Indian eyes and how will it impact the Indo-Pak deterrence relationship.

Nasr and Pakistan's nuclear signalling

In order to understand and fully appreciate Islamabad's signals by way of *Nasr*, it is important to look back at Pakistani and Indian nuclear strategies. Pakistan does not have a formal or declared nuclear doctrine. Its nuclear strategy can be surmised briefly in the following words. Firstly, Pakistan's nuclear weapons are directed at India; secondly, it espouses a policy of nuclear first use; thirdly, Pakistan seeks to use its nuclear arsenal to deter all forms of external aggression including any conventional military offensive by India. Such a strategy stems from Pakistan's twin fears of a lack of strategic depth due to its smaller physical size and its military asymmetry vis-à-vis India.

India on the other hand has a formal declared nuclear doctrine. New Delhi views nuclear weapons as political weapons whose sole aim is to deter any adversary from employing nuclear weapons against India. India while pursuing a credible minimum deterrent has a declared policy of No First Use (NFU). The Indian nuclear doctrine assures a massive retaliation against a nuclear attack on Indian territory or on Indian

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forces anywhere and retains the right to use nuclear weapons in the event of a major attack against India or Indian forces anywhere, by biological or chemical weapons.[3]

The fact that Islamabad embarked on the Kargil misadventure and continued its policy of supporting terrorist groups despite the 1998 Indian and Pakistani nuclear tests is quite telling. This is indicative of Islamabad's belief that overt nuclearisation of the sub-continent provides it with a cover for continuing its actions on the conventional and sub-conventional spectrums of conflict.

The Indian response to both the 1999 Kargil conflict and the 2001 Parliament attack provides an insight into how New Delhi would react to such crises against a nuclear backdrop. The Indian response could also be seen as an attempt on New Delhi's part to test Pakistan's nuclear threshold. The strong yet measured Indian response to the Kargil conflict pointed to the fact that despite the nuclear overhang, India would respond with military force if Indian territory was occupied. Pursuing a policy of compellence, India embarked upon Operation Parakram, its largest border mobilisation since the 1971 Indo-Pak war. Despite the debate about the utility and the manner in which the border mobilisation was carried out, India at least was able to impose enormous international pressure and financial burden on Pakistan. The message from New Delhi was loud and clear: continuing with its current policy would entail significant costs for Pakistan.

India too drew lessons from the amount of time it took for the army formations to mobilise from their peacetime locations in central India to take up positions near the Indo-Pak border. In April 2004, the Indian army released a new doctrine which attempted to reduce mobilisation times. The doctrine was perceived as indicative of India's willingness to modify its traditionally defensive orientation to conflicts/wars and undertake a more pro-active and nimbler stance by launching limited wars in a Nuclear, Biological, Chemical (NBC) environment.[4]

Various statements from Pakistani generals and scholars alike make it clear that Islamabad is concerned about this development. As India was no longer fighting an all-out conventional war, it could be argued that India was fighting below Pakistan's nuclear 'red-lines'.[5] This in essence undercut Pakistan's rationale and the credence of its threat of a conventional war escalating into a nuclear exchange.

In the above context, the *Nasr*/Hatf-IX battlefield 'nuclear' missile could be seen as an attempt by Pakistan to take back the initiative by threatening to lower the threshold further. The *Nasr* can be seen as an attempt on the part of the Pakistani decision makers to search for a 'flexible response' somewhere between a nuclear response to Indian actions, which in essence is a suicidal response, and engaging India in conventional battle, which as a result of the military asymmetry would translate into sure defeat as seen in previous Indo-Pak conflicts.

Is the *Nasr* credible?

After seeking to understand the Pakistani thinking behind *Nasr*, we now turn to the question of whether the *Nasr* is credible in Indian eyes. Nuclear deterrence boils down to a matter of perception. Given that Pakistan's nuclear weapons are directed at India and *Nasr* is a response to the Indian army's move towards smaller and more manoeuvrable Integrated Battle Groups (IBGs), India's perceptions of *Nasr* would be of interest to Pakistan. For Pakistan's gambit to succeed, it is essential that India perceives the threat posed by *Nasr* as credible.

India's perception of *Nasr* in turn would be influenced by whether or not it sees the Pakistani claim that *Nasr* carries nuclear warheads as being credible. Given Pakistan's ballistic and cruise missile capabilities, one can safely assume that Pakistan is capable of manufacturing a missile such as *Nasr*. The question therefore is whether a nuclear warhead can be fitted into the *Nasr*. A report from the International Strategic and Security Studies Programme (ISSSP), National Institute of Advanced Studies (NIAS), Bangalore, co-authored by this author, could be of use in this context.[6]

Using publicly available images and videos, the NIAS report estimates the *Nasr* missile as having a diameter of 361 mm, a length of 940 mm and a conical portion of about 660 mm. These are the dimensions the warhead would have to fit into. In May 1998, Pakistan tested only Highly Enriched Uranium (HEU) nuclear weapons. The Hatf-I, which was the smallest ballistic missile tested by Pakistan at that time, had a diameter of 560 mm. Thus, a warhead tested for the Hatf-I would be too large to fit the dimensions of the Hatf-IX/*Nasr*. There are means of reducing the size of the warhead further but that is possible only by using plutonium (Pu) linear implosion devices.

Pakistan has never tested a plutonium device. Also, a Pu linear implosion warhead would require more than double (about 15–20 kg) of fissile material per device as compared to a normal plutonium-based warhead which requires about 6 kg of Pu. This presents the most vexing problem for Pakistan given the limited quantity and poor concentration of its domestically available uranium ore. Pakistan has been building nuclear reactors at Kushab, signalling its interest in pursuing the plutonium route. However, given that it is not a member of the Nuclear Nonproliferation Treaty (NPT), it cannot import uranium from abroad for military purposes. Therefore, Pakistan has to seriously consider its fissile material production strategies and utilisation priorities.

Given the untested nature of the nuclear warhead that would fit into the *Nasr*, the question Pakistani decision makers are posed with is the following one. Would they choose to rely on a tested HEU warhead or an untested Pu warhead? If deterrence is the end objective, the answer obviously would be the former as the *Nasr* warhead has not been tested and is therefore not credible.

Nasr and Indo-Pakistan deterrence

The third question is one of implications of *Nasr* for Indo-Pak deterrence. Given the lack of response from the Indian side, it could be surmised that India does not give much credence to the Pakistani claim that *Nasr* carries a nuclear warhead. By extending the logic further, one could argue that the Indo-Pak deterrence relationship remains unaffected by the *Nasr*. It would, however, be quite premature to make such an assumption.

Nasr does offer a peek into Pakistan's thinking about nuclear deterrence and what it assumes Indian responses to be during a crisis. Another issue *Nasr* alludes to is whether Pakistan draws lessons from the nature of Indian responses to terror attacks in India by Pak-backed terror groups and is seeking to apply them to anticipate the possible Indian response in the nuclear spectrum. Such an effort at transposition is dangerous to say the least and could have disastrous consequences.

Pakistan might be several years away from a decision about deploying the *Nasr*. However, the introduction of the short range battlefield 'nuclear' missile into the

sub-continent does pose real risks for Indo-Pak deterrence. One of the apparent dangers is the fact that *Nasr* would necessitate a move away from Pakistan's centralised nuclear command and control (C^2) structure to a more pre-delegated C^2 structure. Given the thinking behind *Nasr*, it seems likely that it would be deployed against advancing Indian conventional forces.[7] Such a role, in addition to the *Nasr*'s 60 km range, would require the weapon system being positioned closer to the border.

The introduction of *Nasr* in fact opens up the possibility of inadvertent escalation of the conflict beyond the nuclear threshold. In such a situation, either side uses nuclear weapons without actually intending to do so. Stationing of *Nasr* along the border opens Pakistan up to pre-emptive conventional Indian aerial strikes.[8] Such a possibility therefore necessitates pre-delegation of use of the weapon system to the local battlefield commanders. This is in essence the 'use them or lose them' dilemma. Similarly, when faced with a worsening situation on his battle front, a battlefield commander could decide to use the *Nasr* without waiting for express consent from the higher command. Pre-delegation therefore heightens dangers of inadvertent escalation where use of such a nuclear weapon might take place without the country actually wanting it.

Another risk that arises from possible pre-delegation of *Nasr* is unauthorised use. In battle conditions it is quite possible that channels of communication, despite the existence of redundancies, could become disrupted. In such a situation and when faced with a worsening situation on his battlefield, local commanders could decide to employ the *Nasr* against the adversary.

Given the fact that *Nasr* is likely to be deployed close to the border, there is a very real possibility that it could fall into the hands of the advancing adversary or a terrorist. This dilemma has been aptly described by Scott Sagan as 'goal displacement'.[9] *Nasr* could result in a situation where Pakistan ends up spending additional money and manpower to safeguard the *Nasr* and ensuring that it does not fall into the wrong hands instead of the weapon system bolstering Pakistan's nuclear deterrence.

In conclusion

Pakistan's ploy of using *Nasr* to signal a lowering of its nuclear threshold to counter conventional military action by India in response to a terrorist attack by Pak-supported terrorist groups raises several questions.

Firstly, does *Nasr* herald Pakistan's search for a more 'flexible' nuclear response between nuclear use and conventional military response? If so, could this result in a situation where Pakistan threatens to use its nuclear weapons when such use or threat of use is unwarranted and therefore lacks credibility? Does pursuing such a tack lead Pakistan into a 'commitment trap' where Islamabad would be forced to follow through just because of its past assertions? Another point for Islamabad to ponder is whether or not the untested nature of *Nasr*'s warhead in essence weakens Pakistan's nuclear deterrent.

Pakistan by way of *Nasr* and describing it as a battlefield nuclear weapon is trying to force a distinction where none exists. India's nuclear doctrine does not differentiate between tactical and strategic nuclear weapons or such use of a nuclear weapon. India's nuclear doctrine and more recently the chairman of India's National Security Advisory Board (NSAB), Ambassador Shyam Saran, reiterated this point, stating that '… the label on a nuclear weapon used for attacking India, strategic or tactical, is irrelevant from the Indian perspective'.[10]

There seems to be a debate currently underway in Rawalpindi about *Nasr*'s utility. It seems Pakistan's top generals are divided over whether the *Nasr* strengthens or in some ways weakens the robustness of Pakistan's nuclear deterrent. *Nasr* does not offer significant advantages to the Pakistani military in any domain. It complicates Pakistan's nuclear stockpiling requirement and does not offer much in terms of damage potential against advancing Indian armoured formations. In sum, questions about *Nasr*'s credibility weaken the Pakistani deterrent as a whole. There has been a change in the wording of the ISPR statement following the fourth (November 2013) flight test of *Nasr*. This change seems to be indicative of a move towards adopting a more ambiguous wording when referring to *Nasr*'s nuclear potential. This could in essence be indicative of a growing realisation among Pakistan's generals that the *Nasr* could prove to be the proverbial albatross around their neck.

Notes

1. 'Press Release', Inter Services Public Relations, No. PR94/2011-ISPR, April 19, 2011, at http://www.ispr.gov.pk/front/main.asp?o=t-press_release&id=1721; 'Press Release', Inter Services Public Relations, No. PR130/2012-ISPR, May 29, 2012, at https://www.ispr.gov.pk/front/main.asp?o=t-press_release&id=2075#pr_link2075; 'Press Release', Inter Services Public Relations, No. PR17/2013-ISPR, February 11, 2013, at https://www.ispr.gov.pk/front/main.asp?o=t-press_release&date=2013/2/11#pr_link2239 (Accessed February 25, 2014).
2. 'Press Release', Inter Services Public Relations, PR179/2013-ISPR, November 5, 2013, at https://www.ispr.gov.pk/front/main.asp?o=t-press_release&date=2013/11/5#pr_link2409 (Accessed February 25, 2014).
3. 'Cabinet Committee on Security Reviews Progress in Operationalizing India's Nuclear Doctrine', Press Information Bureau, New Delhi, January 4, 2003, at http://pib.nic.in/archieve/lreleng/lyr2003/rjan2003/04012003/r040120033.html (Accessed February 20, 2014).
4. 'Indian Army Doctrine', Headquarters Army Training Command—Indian Army, Shimla, October 2004, at http://ids.nic.in/Indian%20Army%20Doctrine/indianarmydoctrine_1.doc (Accessed February 12, 2014).
5. P. Cotta-Ramusino and M. Martellini, 'Nuclear Safety, Nuclear Stability and Nuclear Strategy in Pakistan', Report of a visit by Landau Network, Italy, January 14, 2002, at http://www.pugwash.org/september11/pakistan-nuclear.htm (Accessed January 12, 2014).
6. For more details about the sizing of the missile and Pakistan's fissile material priorities, see Rajaram Nagappa, Arun Vishwanathan and Aditi Malhotra, *Hatf-IX/ NASR—Pakistan's Tactical Nuclear Weapon: Implications for Indo-Pak Deterrence*, National Institute of Advanced Studies, Bangalore, 2013, at http://isssp.in/pakistans-hatf-ix-nasr-implications-for-indo-pak-deterrence/ (Accessed December 29, 2013).
7. However, *Nasr*'s warhead which would be of sub-kiloton or low kiloton yield is unlikely to cause substantial damage to advancing Indian armoured formations. It would therefore be necessary to produce the *Nasr* in larger numbers, a proposition difficult due to Pakistan's limited fissile material stockpile. See Rajaram Nagappa et al., no. 6, pp. 26–27.
8. The author is grateful to Ambassador Arundhati Ghose for highlighting the point that Pakistan's *Nasr* is primarily targeted at taking away from India the space for limited land-based action. *Nasr* however cannot counter alternatives like aerial action which remain part of India's military repertoire.
9. Scott D. Sagan, 'The Evolution of Pakistani and Indian Nuclear Doctrine', in Scott D. Sagan (ed.), *Inside Nuclear South Asia*, Cambridge University Press, New Delhi, 2011, p. 237.
10. Shyam Saran, 'Is India's Nuclear Deterrent Credible?', Lecture organised by the India Habitat Centre, the Subbu Forum and the Society for Policy Studies (SPS), India Habitat Centre, New Delhi, April 24, 2013.