Nuclear Deterrence and Southern Asia

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Situating Southern Asia

At the outset let me state that I am more comfortable with the term Southern Asia instead of South Asia.[1] This is primarily due to the fact that the issue of nuclear stability in the Indian sub-continent is not confined to only two players; namely, India and Pakistan but, four players: China, India, Pakistan and the USA. It is important to include the US in this dynamic because first, US actions influence the thinking in the other three countries about nuclear weapons and their decisions to acquire certain capabilities; secondly, the US has historically played an important role in crisis stability in the region between India and Pakistan. Given the existence of a triangular relationship between India, China and Pakistan with the US having an important influence on the several bilateral relationships and more so the trilateral relationship being an important element that is captured only if we use the term 'Southern Asia' to describe the region.

In the history of nuclear weapons and deterrence, Southern Asia is different because in the past we have not had three nuclear armed countries sharing borders which continue to be disputed. The geographical contiguity in essence results in shorter flight times which translate into less time available to the countries' command and control systems to plan a response and more importantly the certainty of radioactive fallout spreading across borders.

Another important factor that sets the region apart is the fact that the three countries have gone to war in the past over the contested borders. In particular, India, Pakistan and, to a lesser extent in recent times, China also continues to think and prepare for an armed conflict as a possible solution to settle the differences.[2]

The three countries continue to expand and incrementally modernise their nuclear stockpile and delivery systems. The region

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has been witness to introduction of long-range missiles like India's *Agni*-V, Pakistani *Shaheen*-II and *Shaheen*-III and Chinese DF-31; a general move away from liquid-fuelled missiles towards solid missiles, introduction of battlefield 'nuclear' missiles like *Nasr (Hatf IX)* and canisterisation of missiles by China and more recently by India.[3] Thus, the region is witnessing an important phase in terms of expansion of nuclear and delivery capabilities, acquisition of advanced weapon systems and thinking about nuclear strategy.

Vulnerabilities and Thinking about National Strategies

The rise of China and emergence of India have altered the balance of power in the Asia-Pacific Region. China's efforts to counter US dominance, India's efforts to counter China, and Pakistan's efforts to counter India are logical actions arising from the current situation. A China-Pakistan nexus that targets India is also a part of the current interplay between these parties. China, India, and Pakistan are nuclear weapon states with growing nuclear arsenals. Each of these states is pursuing a national strategy that includes a major role for nuclear and other advanced weaponry. These national strategies are based on an assessment of each nation state's vulnerabilities vis-à-vis their perceived adversaries.

The vulnerabilities of countries are shaped by a number of factors. These include their colonial and post-colonial historical experiences, internal political and governance structures, aspirations, and geographical location. These form a set of interconnected factors that determine a country's perception of vulnerabilities. Though major vulnerabilities arise from shared borders and shared history with neighboring countries, relationships with other major powers of the world, especially the US, also shape the country's perceptions of its vulnerabilities.

The aspirations of the countries, border problems, and the maritime claims of countries in the Asia-Pacific region remain the principal sources of friction and conflict. Issues related to these problems drive the political and military strategies of these countries. Though the US is not a part of this geographical area it remains the principal actor in this part of the world. Its power and influence evoke responses from an emerging China. This in turn results in responses from the other countries in the region in a kind of chain reaction. Alliances within the set of countries and their role in balancing power and bringing about some kind of stable order is

also an issue. The US-China-India-Pakistan relationships are crucial components of the security architecture of this region. Understanding the key drivers of these relationships and their implications for stability is, therefore, important.

China, India and Pakistan have sought to address their vulnerabilities in various ways which include both military and non-military approaches. A military component of such a strategy may require the deployment of nuclear weapons. The use of space-based assets for waging war has also seen major shifts in technologies and capabilities. Space may become a contested domain in case of conflicts between major powers and this brings in additional dimensions to be factored in looking at the changing role of nuclear and other kinds of advanced weapons in deterring war and conflict between countries.[4]

With the developments in technology and improvements in the capabilities of delivery vehicles like missiles, the clear separation between nuclear and non-nuclear weapons and their strategies of deployment seem to have moved away from the extremes of nuclear war and nuclear deterrence towards a more complex strategy of deterring war and conflict.

Chinese and Pakistani Thinking about Nuclear Weapons

To understand the trilateral nuclear dynamic between China, India and Pakistan, it is important to take into account the larger US-China dynamic which is the overall driver for many of these developments. India's geopolitical situation is quite unique. In China and Pakistan it shares borders and a troubled history with two nuclear armed neighbours. With continued modernisation of its missile and submarine-based delivery platforms, China is arguably the world's fastest growing nuclear force. Pakistan, on the other hand, is home to the fastest growing nuclear stockpile in the world today.

China

Given the fact that Chinese short and medium range missiles (like the DF-21) can carry both nuclear and conventional warheads, Beijing is seeking to create ambiguity in the nuclear or non-nuclear use of such weapons. China is attempting to raise the US threshold for fighting a conventional war and thus hopes to deter the US from intervening in a Taiwan conflict.[5] One of the major Chinese

objectives in the long term is to prevent any US intervention in a future Taiwan Straits crisis. To achieve this objective, China has been strengthening its conventional forces as a part of its Anti-Access/Area Denial (A2AD) strategy. The development and operationalisation of its Anti-ship Ballistic Missile (ASBM) system that will deter active US intervention in a conflict over Taiwan is a key element of Beijing's strategy. Chinese space assets, its strong missile design capabilities along with ground based sensing and, command and control capabilities, have been integrated in a new architecture that will raise the risks for American involvement in a future conflict over Taiwan.[6]

China, India and Pakistan seem to be responding in different ways to these developments which have largely emanated from the US. These responses seem to have taken different forms ranging from the development of Ballistic Missile Defence (BMD) systems, Anti-Satellite (ASAT) capabilities and advanced weapons such as the ASBM.[7]

Pakistan

Pakistan's nuclear weapons and strategy are India-centric. In the nuclear weapon and missile domains, it is trying to change the terms of its engagement with India from a strategic nuclear weapons game into a more conventional war-deterrence game. In recent years, Pakistan has focussed on the plutonium route to stockpile its fissile material. This has resulted in Islamabad building additional heavy water-based plutonium production reactors at Khushab. The construction of Khushab reactors which began in 1990s has expanded by leaps and bounds to four plutonium producing reactors between 2000 and 2015.[8] In addition, Islamabad has been developing cruise missiles like *Babur* and *Ra'ad*[9] and the *Nasr* battlefield missile that it claims can carry a nuclear warhead.[10]

Pakistani signals of possible use of the *Nasr* in a war with India are clear indications of a shift away from a simple nuclear deterrence strategy towards a more complex conflict / war deterring strategy. Such a strategy uses the threat of nuclear escalation to deter India. Importantly, such a strategy provides Pakistan the space for continuing its support to jihadi terrorist groups with a low probability of punitive response from India.

Similar, Yet Different: Chinese and Pakistani Thinking about Nuclear Weapons

Since the first nuclear test 'Trinity' in July 16, 1945, the world has witnessed 2056 nuclear tests. The US has led with 1032 tests followed by former Soviet Union/Russia with 715, France with 210 tests, the UK and China with 45 tests.[11] The numerous nuclear tests served several purposes. It allowed for analysing the physical results of the tests, testing and validating newer designs and most importantly served as a signal to the country's adversary of its growing capabilities. This was largely true also of the various missile flight tests carried out by these countries.

Despite their similarities, the Chinese and the Pakistani thinking and strategy about nuclear weapons are fundamentally different because of the credibility with which their adversaries view their claims. In the Chinese case, Beijing has tested various kinds of nuclear weapons ranging from normal fission weapons of yield ranging from 15-40 kilo tons to a few megatons (Mt). In addition, the Chinese have also tested weapons of miniaturised design as well as enhanced radiation (ER) weapons. Similarly, in the case of the ASBM, the Chinese have tested and demonstrated the credibility of every element of the architecture beginning with the DF-21D missile, the ELINT, Synthetic Aperture Radar (SAR) and Earth Observation (EO) Satellites, the Over the Horizon (OTH) Radars and the command and control architecture.[12]

Now to the Pakistani claim that the *Nasr/Hatf-IX* battlefield missile can carry a nuclear warhead. As brought out in this technical analysis and sizing of the *Nasr* missile, given the limited space available to house a nuclear warhead in the *Nasr* missile, it is likely that the warhead on the missile will be a Plutonium-based linear implosion warhead. Pakistan in its 1998 nuclear tests did not test a Plutonium weapon. In the absence of such a successfully demonstrated test, there are doubts about Pakistan's claims that the *Nasr* missile can carry a nuclear warhead.[13]

However, the Chinese thinking with regard to the ASBM and its strategy of addressing its vulnerabilities vis-à-vis American involvement in a future Taiwan crisis and the Pakistani thinking behind the *Nasr* directed towards an Indian land-based response following a future terrorist strike, are similar. Both the responses

are 'rational' especially when pursued by the weaker player in an asymmetric relationship. The strategies adopted by both the countries seek to ship the onus onto the more powerful actor and throws at the latter the very difficult challenge as to whether they would like to risk escalating the conflict to the nuclear threshold.

Conclusion

In the Southern Asia context, there are two very important aspects which shape the deterrence relationship between India, China and Pakistan. Thinking and Perceptions are important keywords. First is the countries' thinking about these capabilities and employing ambiguity to deter not only nuclear war but also conventional war/ conflict. Second is the credibility of the countries' claims and capabilities and how they are perceived by their adversary.

Though inferences can be made about the countries' strategies from the posture and signals being sent out by them, there has so far been no attempt by the parties concerned to reach a common understanding on the role of nuclear weapons in deterring conflict between them. In addition to this lack of common understanding the situation on the ground is fraught with a large number of uncertainties. These include uncertainties related to weapon performance, organisational and institutional capabilities, intentions, strategies and doctrines. As a consequence the postures adopted by them and the signals that are being exchanged between them are confusing and liable to misinterpretation.

It is therefore important to attempt to have a better and more nuanced understanding of the relationship between the vulnerabilities of the respective countries and their strategies. With such an understanding, it might be possible to explore the specific pathways of achieving some kind of stability in the complex relationships that governs the strategies of these powers in the Asia-Pacific region.

Endnotes

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[11] "Estimated Number of Nuclear Explosions 1945-2006,” SIPRI, n.d., https://www.ctbto.org/fileadmin/user_upload/pdf/Sipri_table12b.pdf. I have added three tests by North Korea in 2009, 2013 and 2016 to take the tally to 2056.

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[13] Nagappa, Vishwanathan, and Malhotra, *Op. Cit.*