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by R. Swaminathan

"Smiling Budha" on 18 May 1974 was India's first nuclear explosion. Budha Jayanti in 1998 witnessed Pokhran-II, codenamed Shakti (strength), when India tested five nuclear devices, three on 11 May and two on 13 May.

The fifth anniversary of Pokhran II, that had stunned the world and had resulted in sweeping global sanctions, has passed off without much fanfare - indicating that the nuclear issue has already retreated to the background. In a dramatic shift from the national euphoria five years ago, there were neither special events nor newspaper advertisements praising the government for making India a nuclear power. CTBT and NPT also do not seem any longer to be high on the national agenda.

Background : Facts about the Tests

The May 1974 test (with yield of about 12 kilotons, equivalent to about 12,000 kg of TNT) was euphemistically described as PNE (Peaceful Nuclear Explosion). That did not, however, save India from condemnation and economic sanctions. It was twenty-three years later that Dr. Raja Ramanna admitted in 1997 that the 1974 device was in fact "a bomb". In a paper written in October 2000, Dr Chidambaram stated that the common physics makes a PNE relevant for weapon design and, therefore, the success of the May 1974 test was important for India's nuclear weapons programme.

The three simultaneous detonations on 11 May 1998 included a 15 kt fission device (atom bomb), a 45 kt thermonuclear device

(hydrogen bomb) and a 0.2 kt (sub-kiloton) device. The two devices detonated simultaneously on May 13 were also in the sub-kiloton range - 0.5 kt and 0.3 kt. The 15 kt fission nuclear weapon had evolved from the PNE device tested in 1974, with substantial weaponisation changes to make it smaller in size and weight. The two-stage thermonuclear device, with features needed for integration with delivery vehicles, was tested at the controlled yield of 45 kt. The sub-kiloton devices had all the features needed for integration with delivery vehicles and were tested for developing low-yield weapons. The tests validated new weapon-related ideas and sub-systems. These carefully planned series of tests gave India the capability to build nuclear weapons from low-yields to around 200 kilotons. They were "fully successful in achieving their scientific objectives", to quote Dr. R.Chidambaram: These tests were the culmination of a committed team effort backed by development of the necessary knowledge and expertise over decades. A great deal of further scientific and technical development work has taken place since then.

There was an international debate about the yield of the "hydrogen bomb" tested on 11 May 1998. Dr. Chidambaram emphasised in October 1998 that the explosions had given a perfect match between calculated and measured yields. He alleged that the under-estimation of the yields by western experts was aimed at disproving that India had tested a hydrogen bomb. The dispute over the yield would appear to a layman to be somewhat irrelevant. A 10 or 20 kt atomic bomb, as those used in Hiroshima and Nagasaki, would kill only marginally fewer people than a 45 kt hydrogen bomb.

After the successful tests, the Prime Minister declared that India was a Nuclear Weapon State, ending years of nuclear ambiguity. He also declared a moratorium on further testing.

Causes & Effects : A Quick Overview After Five Years

India's quest for prestige and status in the international order

The five permanent members of the UN Security Council are the only "recognised" Nuclear-Weapon States (NWS). Many Indian analysts have argued that a country's possession of nuclear weapons does confer a degree of recognition and status. In his interview to Vir Sanghvi in November 2000, Brajesh Misra (Principal Secretary to the Prime Minister and National Security Adviser) said, "I have always felt that you cannot in today's world be counted for something without going nuclear." The unrequited Indian quest for international prestige and status has been a constant (though unstated) factor in Indian foreign policy since independence. It no doubt contributed to the overall drive to acquire nuclear weapons, given the BJP's faith in India's destiny as a major power.

The timing of Pokhran-II was probably dictated by the US-fashioned global coalition in favour of the indefinite and unconditional

extension of the NPT (on 12 May 1995) and the passage of CTBT in September 1996. CTBT sought to place legal restrictions on the horizontal spread of nuclear weapons but placed no limits on vertical proliferation. The EIF (Entry Into Force) clause of CTBT would require all 44 countries with ongoing nuclear programs to accede to the Treaty before it went into force. If India wanted to carry out nuclear tests and proceed toward overt weaponisation, it had to do so without much delay. External Affairs Minister Jaswant Singh clarified in May 2000, "The NPT community needs to understand that India cannot join the NPT as a non-nuclear weapon state. India is a nuclear weapon state. Though not a party to the NPT, India's policies have been consistent with the key provisions of the NPT that apply to nuclear weapons states."

What have been the developments in this area in the last five years? India has still not become a permanent member of the UN Security Council, but seems to be edging closer to it.

USA displayed initial concern and anger, less because of India going officially nuclear but more due to Washington being taken by surprise and its intelligence agencies not having been able to detect the preparations for the tests. However, USA quickly reconciled itself to the fact that India was now a declared nuclear power and began to deal with New Delhi on those terms. Teresita Schaffer, a former South Asia specialist in the State Department and now an analyst with the Washington-based Centre for Strategic and International Studies, has said that, despite being apprehensive of India's nuclear status, the US decided to accept the reality very early on. "It led to the first really strategic dialogue that India and the United States ever conducted". This further led to the beginning of a closer relationship between the two countries, helped by US interest in India's expanding economy and pool of information technology specialists. India's whole-hearted support to the "global war on terrorism" after the 9/11 incidents did not hurt - though some differences about Pakistan's support to terrorism in Kashmir persist. Ambassador Robert D. Blackwill wrote in the Hindu on 13 May 2003 that "joint (military) training, visits, and exchanges have become familiar evidence of how U.S.-India relations have changed significantly. The way both countries now view defence sales presages greater bilateral co-operation in the future." A dramatic demonstration of the rapidly growing U.S.-India defence relationship took place recently in Mizoram, where American Special Operations Forces engaged their Indian counterparts in combined training called Exercise Balance Iroquois / Vajra Prahar. "Morale and camaraderie among the troops on both sides were outstanding - U.S. and Indian units learning from one another about the challenges of combating terrorism in a jungle environment."

Bolstering the BJP's Standing

Some analysts, Indian and foreign, have argued that the tests were designed to bolster the fortunes of the Bharatiya Janata Party (BJP). There are indications, however, that the revival of nuclear testing and declaration of India to be a Nuclear Weapon State had been a long-term goal of the party well before forming the government on 19 March 1998. In his interview to Vir Sanghvi in November 2000, Brajesh Misra recalled having told Sanghvi during a panel discussion in the mid-1990s that if the BJP came to

power, it would immediately explode a nuclear device. Further, the tests took place before the BJP could recognise how weak and fractious the new coalition was. In the days and weeks after the tests, the BJP did gain some fleeting popularity. However, the tests did little or nothing to improve BJP's overall standing in the Indian political scene - as evidenced by the need to go in for a fresh parliamentary election fairly soon.

Bureaucratic-scientific-technological momentum

It has been suggested that the tests represented the culmination of a scientific and technological momentum. The Indian nuclear establishment had pursued two goals from the days of Dr. Homi Jehangir Bhaba. It helped develop the capabilities to harness nuclear power to address the country's energy needs and scientific development, and it laid the foundations of a nuclear weapons program in incremental steps. Bhaba's successors, to varying degrees, shared his commitments. The AEC and the DRDO needed to prove their computer simulated weapon-related techniques developed since 1974, in order to get the confidence that India can build functional nuclear weapons. However, that could never be the sole reason for nuclear test explosions, given the primacy of the political authority over the military and scientific establishments. India had possessed sufficient fissile material since the mid-1980s. Yet, it did not actively contemplate carrying out nuclear tests until December 1995, when the political leadership under Prime Minister Narasimha Rao almost decided to authorise the tests - but held back because of the possible economic and other consequences.

The nuclear and defence establishments would no doubt seek to conduct more tests to refine the weapons technology and to develop failure-proof weapons systems. The timing of further tests would depend on when the political establishment considers them cost-effective in terms of international opinion and relations.

Nuclear Deterrent

Dr Chidambaram claimed in October 1998 that the tests had provided the necessary database required for a "credible nuclear deterrent". Political terminology prefers to say "minimum nuclear deterrent".

Indian decision-makers had to be concerned about growing Sino-Pakistani and Sino-DPR Korea collusion in the realms of nuclear weaponry and ballistic missile technology. Various attempts to persuade the USA to impose sanctions under the Missile Technology Control Regime had failed. Misra had told Sanghvi that, "discussion (about nuclear testing) took place two weeks or so after the Prime Minister took oath, and we left it at that. Then came the (Pakistani) missile and all the claims from the other side of a war. At that point, the Prime Minister said, OK, let us go ahead."

Former Chief of Army Staff, Gen (retired) Shankar Roychowdhury, Member of Parliament, had said that Pokhran-II checkmated the coercive potential of Chagai and was "a prudent measure of future insurance in the military context of China's four modernisations. Whatever trajectory our mutual relations subsequently assume, China must and will remain a permanent factor in our security perceptions". In a situation of nuclear asymmetry, the only credible and viable counterbalance was an indigenous countervailing nuclear capability.

By declaring itself a Nuclear Weapon State after Pokhran-II, India practically forced Pakistan to conduct reciprocal (or, more appropriately, retaliatory) tests at Chagai. Pakistan came out of the closet of its clandestine nuclear programme and declared itself in possession of nuclear weapons. Whatever may be the differences in the levels of sophistication, miniaturisation and delivery capabilities, Pakistan has achieved a credible nuclear parity with India. This has, to some extent, blunted India's edge in conventional weaponry.

Some analysts, including Dr. Stephen Cohen of the Brookings Institution, hold the view that the near-parity in nuclear weaponry between India and Pakistan has successfully kept the two countries away from total war. This view ignores the fact that "wars" between India and Pakistan had taken place only in 1948, 1965 and 1971 and only under grave provocation.

International experience has shown that the declared or undeclared possession of nuclear weapons may deter nuclear attacks or unacceptable levels of provocation, but not limited (localised) wars and low-intensity conflicts. Pritish Nandy wrote on 29 June 1998 that neither India nor Pakistan is stupid enough to believe that nuclear weapons can protect them from each other. This is a position taken to satisfy domestic constituencies, saffron in India and green in Pakistan. According to him, the real message from Pokhran and Chagai was the need for a global re-arrangement of power. "What India and Pakistan were telling the world was the simple fact that the five nuclear states can no longer hold everyone to ransom. We are all knocking on the doors, and you cannot keep us out just because you were there first."

Accidental Nuclear War

India has declared its adherence to the "No First Use" (NFU) doctrine. It is interested in a global and regional NFU; but Pakistan is not. Neither is likely to have a change of mind in a hurry. India, for the present, is more than willing to be satisfied with conventional retaliation against cross-border terrorism and other Pakistani misadventures. Pakistan, on the other hand, resorts to frequent threats of the use of nuclear weapons to protect itself. The risk in this situation is that India may feel compelled to resort to limited war under nuclear conditions - to indicate that Pakistan is not immune from retaliation - if she is convinced that Pakistan is using first use threats only to promote asymmetric warfare. The more Pakistan sees India moving in that direction, the more

Pakistan will emphasise her first use option.

The possibility of an accidental nuclear war between India and Pakistan has received some domestic and international publicity and apprehension. The fear of dying in a nuclear holocaust understandably arouses strong emotions; but this fear is neither pragmatic nor rational. The chances or prospects of an accidental nuclear exchange are not very great. Even if there is war, the restraint (such as avoiding civilian targets) with which they have fought previously suggests that they will do so again. A nuclear escalation is not inevitable and hardly makes good strategy or good sense. Both New Delhi and Islamabad tightly control their nuclear weapons, civilians in India and military in Pakistan - though the controls may not be as good as those of the US. The somewhat condescending attitude and derisive tone adopted by the international press and foreign leaders to the sub-continental safeguards have exaggerated the magnitude of the risks of accidental or unauthorised use. This stems from a mix of genuine altruism and calculated self-interest.

Kashmir

Pokhran and Chagai dramatically raised the stakes in the standoff over Kashmir, one of the world's longest-running feuds. It has been argued that Pokhran-II offered Pakistan an opportunity to force escalated conventional military confrontation in J&K - a la Siachen and Kargil - and test the credibility of the nuclear deterrent.

India has long held the position that the Kashmir dispute should be settled bilaterally and that there is no place for a third party. However, analysts warned that the tests had opened the door to international (say American) intervention in Kashmir. After five years, it is clear that the US is willing and eager to have an active role and that both India and Pakistan have tacitly accepted it. It may be said that American intervention has actually worked in India's favour. During the Kargil conflict, US pressure forced Islamabad to back off. United States has begun to favour India's position on Kashmir, even seriously considering a possible division of the state or converting the ceasefire line into an international border. A recent CIA map has shown Jammu & Kashmir as Indian territory, with Pakistan occupying parts of it -in recognition of the situation on the ground. The Govt of India seems to be willing to allow Washington to engage itself in some capacity, apparently confident that Delhi's post-nuclear relationship with the US has secured its interests.

Sanctions

Economic and technology-related sanctions have repeatedly not proved to be very effective in compelling nations to change their sovereign decisions made in enlightened self-interest. India faced severe sanctions after Pokhran-I and sanctions that were more comprehensive were imposed following Pokhran-II. There were dire predictions of the collapse of the economy, double-

digit inflation etc. In reality, the 1974 sanctions had little lasting effect on the Indian economy; and the 1998 sanctions had even less effect. The percentage rate of growth of GNP (at 1993-94 prices), despite the global recession of the last few years, were:

1995-96	7.5
1996-97	8.2
1997-98	4.8
1998-99	6.4
1999-00	6.2
2000-01	4.4
2001-02	5.6
2002-03	5.8
2002-04	

After five years, most of the sanctions have been lifted and the Indian economy is continuing to grow at an acceptably satisfactory rate. The anticipated growth rate for 2003-04 is 6.0%. Though India's Gross National Income is only \$477.4 billion by conventional calculations, it translates into \$2,913 billion purchasing power parity (PPP), according to the latest world development indicators. In PPP terms, it is the world's fourth largest economy, behind only the US, China and Japan.

Conclusion

Five years after Pokhran-II, there is no clear verdict on whether India lost more than it gained by going nuclear. However, it is being increasingly felt that by becoming part of the nuclear club, India has forced the world to take it more seriously and has strengthened its diplomatic position. Countries such as France, Germany and the United States have begun engaging New Delhi in strategic and security dialogues.

Let us assume that the tests had been undertaken after fully considering all the possible consequences. In my personal view, the greatest gain has been India's demonstrated ability to take hard decisions based on its perceived supreme national interest, without any excess baggage of considerations of "morality" and "international opinion"; and the attendant preparedness to face and overcome consequential opprobrium and sanctions from the "international community".

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R.Swaminathan is former Special Secretary, DG (Security), Government of India.

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