

INDIA'S NUCLEAR TESTS -- SHOULD THEY HAVE BEEN CARRIED OUT AND WHAT NEXT¹?

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1. **Our Challenge**

Since 15 May 1974 (Pokhran-I), the world knew that India had the capability of developing nuclear weapons. On 11 May 1998, India confirmed what everyone knew..... and reconfirmed the “non-information” on 13 May 1998. And then Pakistan responded with its own tests! How do we react to these new developments?

2. **The Central Reality of India**

Poverty is the defining characteristic of India.

In 1951, India's poor numbered 164 millions; in 1993-94, the number had increased to 312 millions, e.g., double the Independence number of people who could not meet their daily subsistence requirements. Between 1950-51 and 1993-94, the population below the poverty line declined by less than 1% per year. One in three Indians go to bed hungry. Life expectancy is about 60 which is almost 10 years less than in China. Half the Indian population cannot read or write. The Human Poverty Index (HPI) is about 37% -- this index is a composite of Longevity (19.4% of population expected to die before 40), Knowledge (48.8% illiterate), and Standard of Living (19% w/o access to safe drinking water, 15% w/o access to health services and 53% malnourished/underweight children). India belongs well and truly to the club of poorest nations.

Poverty reduction should be the touchstone we should use for reacting to the nuclear tests.

3. **The Gandhi Talisman**

Gandhi would have agreed. He said: “Recall the face of the poorest and most helpless person whom you have seen and ask yourself if the step you contemplate is going to be of any use to him. Will he be able to gain anything by it? Will it restore him to control over his life and destiny?”

4. **Have the Tests reduced Poverty?**

If there is any positive impact of the tests, the Government have certainly kept it a dark secret. The people have not been enlightened on this very important issue. Not one single positive impact has been cited.

In fact, all the impacts are negative. The security of India has not improved -- nuclear bombs are not weapons of war because they cannot be used. They are only deterrents. And India's deterrent capability was as credible before the tests. The security of the region has deteriorated -- Pakistan has followed suit even without extracting some greater benefit. The economic effects of the sanctions have not yet been fully comprehended. They were not even explained in the budget. The approach seems to be: “shoot first, and think afterwards!” The

thrust of Indian S&T, which is already markedly elitist and militaristic, will be further skewed against the interests of the people.

Thus, one cannot foresee any reduction in poverty as a result of the tests; in fact, there is likely to be a worsening of poverty.

5. Are the Tests a Great Achievement of Indian Science?

It is a great achievement only if one has an inferiority complex, and has doubts about whether Indian scientists are as good as their “Western” counterparts. There is no need at all for such inferiority. Indians are as good as the best -- after all, the best labs and industries of the US are filled with Indian scientists.

Given a clear mission and the necessary resources, Indian science can reach the highest heights of achievement. The tests have only confirmed this truth. There is no need for euphoria.

Of course, it is difficult under Indian conditions to deliver a *product* -- as distinct from an idea or concept. This has been done. Hence, the tests are an achievement. It is widely believed that Indians have problems working together. The bomb squad has worked as a team. This is another achievement. But, we must take into account the large number of scientists in DAE, the enormous amount of money spent over the years and the decades of time (\approx 20 years for Pokhran I and 24 years for Pokhran II).

A great deal of information is available on the Web. Even the Teller-Ulam configuration of the hydrogen bomb. In any case, we must not forget that the fission bomb is 53 years old technology, and the fusion bomb is 46 years old technology. So, we have replicated half a century old achievements. And, as the saying goes “What one fool can do, another can!” as Pakistan has demonstrated.

6. Are those against the tests anti-national?

The question is: what is patriotism? It is repaying the people the debts one owes them. Patriotism consists of “wiping every tear from every face”. So, those who stress that making bombs increases tears are patriotic; those who divert attention from the central reality of India -- its poverty -- are anti-national.

7. Concluding Statement

“Without the necessary economic infrastructure, all talk of a bomb can be just so much bombast. And should any government discuss such a proposition seriously without first taking steps to provide all citizens of the country with food, clothes, shelter, pure drinking water, education and a chance to live a life befitting human beings, such a government can be called nothing but criminal.”

That statement was made after Pokhran-I from Tihar Jail by India's present Defense Minister George Fernandes. Perhaps jail made him see things from the people's perspective.

Now that the tests are over, let us move forward by stopping (a) the jingoistic exploitation of the event by forces with short-term political interests, (b) the erosion of democracy, (c) the further diversion of scientific talent away from the problems of the poor towards military applications of science and (d) an arms race with our neighbors. Let us contribute to the process of international disarmament. And above all, let us turn our attention to our historic mission of giving all our citizens -- and particularly the underprivileged -- a better life at least in the next century.

Do we have a role as intelligent people privileged with technical training?

(1) Let us spread awareness of the enormous consequences of the path we have chosen from nuclear option to tested weapons to deployed weapons to weapons on hair-trigger alert. For example, let us estimate the effects of one primitive Hiroshima-type bomb on Bangalore or Chennai or Calcutta or Delhi or Mumbai. And let us make independent calculations of the financial costs of the path we are being urged to choose.

(2) Let us build an independent peer group outside the establishment to verify the claims being made. Secrecy stifles independence, erodes excellence and breeds mistakes (and even lies). My independent estimate of the costs of nuclear power revealed serious flaws in DAE's costing.

(3) Let us reorient the thrust of Indian S & T. Let us remember that fundamental research is a "C" class item accounting for <10-15% of the expenditure. Give the money to the fundamental scientist's community; in return, insist that they set up and implement quality control. The real problem is applied research and technology which consumes the bulk of the R & D funds. Ensure that it corresponds to the country's problems and don't forget that we are a dual society with a powerful elite and disempowered masses.

(4) There is value system underlying all this *Jai Vigyan* stuff which is only a ploy of the rulers to win over the military scientists. By going euphoric over science as an instrument of mega-death, the Government is sending a message commending the nexus between science and evil. Let us re-establish the link between science and morality.

(5) Let us build new coalitions of people against this militaristic turn in the affairs of the nation. Let us bring together peace activists, development workers, environmentalists, women, dalits -- in fact, all those who are concerned about the future.