

FACTS

against

MYTHS

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INFORMATION BULLETIN

War or Peace : The Myths of Nuclear Deterrence – I

"The atom bomb has not stopped violence. People's hearts are full of it and preparations for a Third World War may even be said to be going on".

— M.K. Gandhi, in Harijan, May 9, 1946

COMMENT

With the five nuclear tests in May and the event euphorically dubbed as "Technology Day" India's nuclear technology has thus an official rationality. But has it a clear reason?

How could a government in less than three weeks in office make a total strategic defence review, take a decision of such significance and give the scientist the saffron light on April 10?

The Government since then has made many hysterical claims but failed to produce any credible proof that the tests were necessary. Instead, it justifies and then attempts to rationalize the tests, concealing it under the cloak of "national security" simultaneously intimidating the public into believing that a nuclear bomb is the need of the hour for the "nation's" best interest. Those opposing are dubbed "anti-national". This is nothing but a mimicry of the prevailing nuclear mentality, a prominent mental state of the military industrial complex of the US, NATO among others.

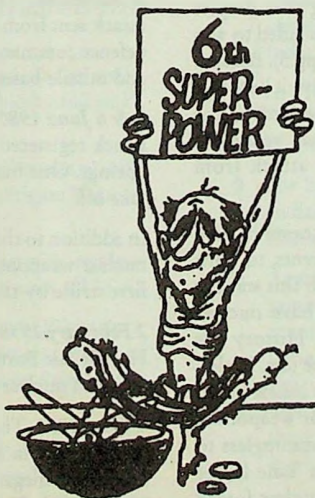
This nuclear mentality exhibits a blatant disregard for human life and environment. The accumulation of a nuclear arsenal that is sufficient to wipe out the entire world many times over is in itself an indication of an insatiable hunger for power. The expansion and promotion of

nuclear weapons for "stability" and domestic "growth" exposes the mendacity and madness of such a mindframe.

The nuclear mentality operates on the premise that people and resources are expendable:

- ❖ Adivasis and other locals are exploited for purposes of obtaining uranium;
- ❖ mounds of uranium tailings are abandoned by mining companies without accountability and responsibility for their clean-up;
- ❖ workers in nuclear energy and weapons plants lack proper safety regulations and work with "permissible" doses of radiation;
- ❖ media over-exposure and propaganda by the Govt. sector which design, build and operate nuclear plants promotes more use of electricity so as to justify building more such plants;
- ❖ nuclear weapons are developed for "national security" and "to save our people".

WE WANT BREAD,
NOT BOMBS & WARS



A major fallout over the nuclear tests is the pressure from the nuclear powers to persuade India to sign the CTBT. To abide by the framework of this Treaty it is necessary for India to be a part of it along with other countries. However, it must be noted that the very framework of this Treaty has severe limitations.

For one, it has totally failed in addressing the fears and concerns of a number of nations. Yet, what is of utmost relevance, prior to any such step, is the need for a total de-nuclearisation of the mind at especially the global level in general and that of the nuclear powers in particular.

At another level in the name of respecting religious tradition—communal outfits like the VHP are planning to construct a Shakti mandir at Pokharan. The question is: What will be worshipped in the mandir? A nuclear bomb? The original essence of Shakti is to destroy evil and injustice? What is to be worshipped at Pokharan is not the acquisition of destructive powers of the nuclear bomb. Instead there will be the nuclearisation of the already highly communalized mind.

To understand this nuclear mentality that has brought us to this point it is necessary to develop a clarity and a vision of peace and a non-nuclear future for India. The first line of the Pre-amble to UNESCO's Constitution states: "Since wars begin in the minds of men, it is in the minds of men that the defences of peace must be built". Krishnamurthi also states, "peace will come only when you yourself are peaceful, when you yourself are at peace with your neighbour". Side-by-side it is also essential to examine the havoc the dubious theory "nuclear deterrence" has generated and the myths it spreads.

MYTH : Nuclear Deterrence though a necessary evil is still an imperative need. It prevents other countries from attacking us.

FACT : Not so! The reality is the other way around. Having nuclear weapons in our country actually makes us a target for nuclear attack from any enemy because we pose a threat. Without nuclear weapons we would not be so. Certainly, no nation would want to conquer us using nuclear weapons because after a nuclear attack our country would be largely uninhabitable as a result of radiation. It is also worth recalling that despite having nuclear deterrence these countries failed to win the wars with non-nuclear countries (see pg.5). Because nuclear weapons are exorbitantly expensive it becomes necessary to cut down conventional armed forces (the army, navy and air force). This means that we are less well able to defend ourselves against attack from another country.

Nuclearats argue that the weapons would never be used as first-strike weapons, but only as deterrents, to warn off a potential enemy. The problem with this stand is that it assumes that all countries that have nuclear weapons are governed by sane leaders. History has shown that many leaders have been insane (e.g. Hitler, Mussolini, Pol Pot, among others), and an insane leader certainly would not hesitate to use nuclear weapons as a first-strike weapon. It is moreover meaningless to maintain that a particular country has a 'sane leader who would never use nuclear weapons unless forced

to'. What happens after an election, or a coup, when that same leader is replaced by a leader who is mentally unstable and itching to use whatever weapons comes to hand? There is also the risk of a nuclear war being started accidentally. (see below) For this reason alone there should be not only be a ban on any country owning nuclear weapons but also computer simulation.

Finally, the line that deterrence is a necessary evil — that is, the prevention of war through the threat of retaliation — is equally dubious. It means, among other things, that the capability and the will of the deterrent must not be doubted, resulting in periodic display of this 'credibility' on such occasions like Republic Day parades apart from the constant update of its weapon technology.

MYTH : Nuclear weapons serve only as deterrents at best. So, no country will start a nuclear war because no country really wants a nuclear war!

FACT : Even if this claim is accepted (most sane people do not. After all, someone is always starting a war somewhere or the other) what if a nuclear war should start by accident? Most weapons and radar systems are now computer-controlled. It would take just one error. And what about the age-old enemy, 'human error'?

The following were times when a nuclear war almost started 'by accident'.

5 October 1960 Radar malfunction in ballistic missile early-warning system at Thule, Greenland, falsely warns North American Air Defence (NORAD) headquarters of 'massive' Soviet missile approaching USA.

20 February 1971 Operator at NORAD headquarters accidentally transmits emergency message ordering all US broadcasting stations off the air by order of the President. For forty minutes the operator cannot find the code with which to cancel the message.

9 November 1978 False warning of limited missile attack sent from NORAD headquarters to nationwide defence command centres. Interceptor planes scrambled and missile bases put on alert.

3 & 6 June 1980 False alarm indicating Soviet missile attack registered by NORAD computers at Colorado Springs. One hundred nuclear-armed B-52s alerted for take-off.

In addition to these there were also accidents involving nuclear weapons that could have been interpreted as a first strike by the other side:

2 February 1958 B-47 bomber in mid-air collision near Hunter Air Force Base, Georgia, accidentally jettisons part of a nuclear weapon.

4 June 1962 Thor ICBM (Inter-continental Ballistic Missile) fails in high-altitude thermo-nuclear weapons tests. One-megaton warhead destroyed over Johnson Island Pacific Test Range.

20 June 1962 Second Thor failure. Missile and warhead destroyed at altitude of 320 km.

17 January 1966 B-52 carrying four H-bombs collides in mid-air with a KC-135 tanker near Palomares, Spain, and crashes.

21 January 1968 B-52 crashes near Thule, Greenland. Four H-bombs lost.

15 October 1969 B-52 carrying two nuclear weapons collides with KC-135 near Glen Bean, Kentucky.

23 October 1975 Canister containing 20 kiloton bomb falls down test shaft at Nevada Nuclear Test Site.

18 September 1980 Rocket fuel explosion due to 'human error' blows a Titan I warhead from its silo near Damascus, Arkansas.

There are all examples from the Western side. The Soviets are even more secretive about their nuclear activities than the West, but their nuclear weapon accidents include:

1968 A G-class ballistic-missile submarine sinks after an on-board explosion in the Pacific.

1970 An N-class nuclear submarine sinks in the Eastern Atlantic.

September 1974 A Kashin-class guided-missile destroyer carrying nuclear weapons explodes and sinks in the Black Sea.

August 1976 A Soviet nuclear-powered cruise-missile submarine collides with the American frigate Vago in the Ionian Sea.

October 1986 A Soviet submarine carrying nuclear missiles caught fire and then sunk off the coast of U.S.A.

MYTH : Nuclear deterrence works. Look! Right since World War II it helped prevent wars e.g. the Cold War between NATO and the Warsaw Pact ended because of deterrence.

FACT : The claim cannot be proved in the first place. At best, the absence of war coincided with both sides having nuclear weapons. It is illogical to deduce that

nuclear weapons prevented a war that would otherwise have taken place. The absence of war between the US and the Soviet Union may simply have been due to neither side wanting a war. The experience of total war in World War II was so tragic that this may have been sufficient to prevent a major war². Let us forget : 20 million Soviets were killed in that war.

For deterrence to succeed between two adversaries, both must pursue identical strategic policies (of relying

on threats to protect their security). Moreover, they must agree on levels of armed preparedness that can effectively deter. Deterrence must work 100 per cent of the time. Otherwise, it is meaningless. Any breakdown means disaster. In reality, there is no such congruence and no shared understanding on policy of preparedness. For instance, one side might seriously believe that in a situation where war seemed inevitable, the best course would be to strike pre-emptively. The other side may not. To illustrate³:

Nuclear Accidents

According to Greenpeace as many as 51 nuclear warheads (44 Soviet and 7 US) were lost at sea. 7 nuclear reactors (5 Soviet, 2 US) from nuclear powered submarines are under water. Referring to a book, "The Hidden Cost of Deterrence : Nuclear Weapons Accidents" Praful Bidwai shows how its author documented 224 accidents involving nuclear weapons. This includes-

- ❖ accidental or unauthorized detonation or possible detonation of a nuclear weapon, which could lead to war;
- ❖ accidental detonation without a war risk to radio-active contamination;
- ❖ accidents to vehicles transporting nuclear weapons;

There have been 10 accidents of the first type, 59 in the second, 137 in the third and 4 in the last. In the second type, as many as 17 involved radio-active contamination, 5 involved accidental detonation of a weapon and 112 seizures, theft or loss of a nuclear weapon or weapon component.

❖ In 1965, Ayub

Khan felt that the Kashmiris would rise in revolt against New Delhi if Pakistani troops infiltrated into the Valley, and hence it was strategically to start a pre-emptive war with India. The result is history;

- ❖ In 1987 General Sunderji's infamous "Operation Brasstacks" almost provoked a war with Pakistan;
- ❖ The Bangladesh War and the operation of the Indian Peace Keeping Force in Sri Lanka was also a strategic miscalculation;
- ❖ Again, countries that have run clandestine or semi-clandestine weapons and technology acquisition programmes — both Pakistan and India fall in this category — there are serious gaps in information on each others capabilities, weapons stocks and potentials. Therefore, there may be no shared understanding on the levels of arming adequately for deterrence.

Further, deterrence is also characterized with a runaway arms race, and is inherently unstable and degenerative in character.

Thirdly, nuclear weapons are incredibly expensive, accounting for one-half of or more of the costs of nuclear programmes — over \$2,500 b. in the US alone. It is typically associated with fear and nervousness, and proneness to panic.

Fourth, there is a real, serious risk of accidental, unauthorized or unintended use of nuclear weapons, and that very special measures are essential to reduce that danger. Such measures involve close surveillance through expensive satellites, radars and early-warning systems; PALs (permissive action links) or computer-chip based safety devices to prevent assembled weapons from being armed unless all necessary procedural requirement are fulfilled), etc.

The point is simple. No amount of technological sophistication could eliminate the risk of a nuclear attack/war even among the most advance NWSs.

However, a closer examination will reveal that in the ultimate analysis, deterrence fails in its real objective. General George Lee Butler former commandant of the US strategic Nuclear Weapons states that deterrence was not the reason for the world surviving the Cuban missile crisis. The only purpose that it served in this case was that the fear it had unleashed only ended up as an obstacle to peace. Even though the Cold War is no more and there is no Soviet Union, nuclear weapons continue to proliferate. The US still has 10,000 and Russia about as many. The fear today is no longer the other state, but the other's nuclear stockpiles. As long as there are nuclear weapons there cannot be real peace¹.

Wisdom of the ages and history teaches that nuclear fears cannot be calmed with nuclear weapons. The plain truth therefore, is that there has never been a weapon that can offer a defence against fear against which the only defence is courage and courage needs no weapons to make its presence felt.

The reference to the so-called proven deterrence theory of the Cold War over which a nuclear war has not occurred may be a long period in the context of the lifetime of an individual, but it is insignificant when considering an act that

could destroy humankind. And even if it supposedly worked in the Cold War years, that experience does not foreclose the possibility of deterrence failing either by accident or by design. In the bipolar world, the world's major nuclear arsenals had been controlled by just two powers. Now that there could be a large number of independent nuclear arsenals, the chances of a nuclear mishap increases. However, this line of thinking has no relevance to the Indo-Pak situation. In the Cold War, there was never any dispute between the two superpowers, except for largely their propaganda purposes. In South Asia, however, there are many outstanding problems that need to be resolved including the delicate issue of Jammu & Kashmir. Clearly, nothing but a political understanding will really resolve these issues and not nuclear deterrence.

MYTH : *India's 5 nuclear tests have finally provided the necessary nuclear deterrent and thus improved national security.*

FACT : Not so!

These five nuclear tests displayed merely India's ability rather than capability to carry out such tests albeit these tests were at a much higher technological level than in 1974. India has still a long way to go before acquiring a credible deterrence. For instance, Agni will have to be further tested and produced; weapons will have to be coupled with warheads, a strategy for the application of the weapons will have to be defined, and a command control and intelligence system will have to be put in place. Finally, will come deployment if it is at all considered "Urgent". Above all, acquisition of nuclear deterrence will necessarily have to be combined with an all-round development inspite of the sanctions.

Underground Nuclear Testing

Underground nuclear testing has triggered earthquakes in a number of places. In April 1968 underground testing of a series of 1,200 tonnes bombs at the Nevada Test Site in the USA set off over 30 minor earthquakes in the area in the following three days. Since 1966 the Polynesian island of Moruroa (Meaning literally 'place of a great secret') has been the site of over 80 underground nuclear explosion tests by France. More than 120,000 people live on the island. On 11, September, 1966 a 120,000 tonnes nuclear device was triggered there, producing radioactive fallout which was measured over 3,000 km downwind, and seriously rocking the whole area. More recently (in 1995) underground nuclear testing in the western Pacific was resumed by France, despite a massive show of public opposition and concern at the health and environmental risks of the operation.

Source : Chris Park, *The Environment*, Routledge, London 97.

Deterrence is dependent on certain fundamental factors. A proven and visible infrastructure of weapons, delivery system and command and control structures is the first factor. The national determination to accept the costs of a nuclear weapons strike is another.

The related myth on the so-called national security, the critical issues which affected security since 1947 are however still intact. Their resolution has received a major setback. Mutual distrust and fears continue to prevail. No one is likely to believe that the otherside will honour a non-first-use

Interview : Anish Trivedi, host of F.M.'s Radio Star programme, interviewed Cap. B.K. Subha Rao, former Indian Navy Captain, Ph.D. in Nuclear Technology, IIT, Mumbai, for his views on the 5 Nuclear Tests. Excerpts :

Q. Has there been or will there be an effect on the environment?

A. Well in real science and technology sense there is going to be an effect on the environment but there is difference between an underground and the test conducted in the air. The radiation that is released by conducting the test over the surface is much more. But the underground test is going to contain a lot of this radiation. But to say there is no radiation released to the environment, there is no affect on the environment is not true... When the test is underground, When the earth is blown up alongwith that all the earth and the radiation which contaminated, the earth particles travel through the air to great distances. It is those particles which contain the radiation. So that is why we have seen in the news papers that the Americans have deployed their aircraft to go around the sub-continent to monitor radiation levels in the air.

Q. Do you think there is likely to be significant radiation increase?

A. Radiation increase is bound to be there; the increase compared to the background radiation that we have. But how much it is, that is going to be monitored. I am sure our people also must be monitoring that.

Q. Is it going to be harmful?

A. Well, it depends on the concentration of the radiation at those levels. In all probability I should say that this 45 kilo ton explosion and the amount of earth that is thrown out, I don't think that the levels will be dangerous level.

agreement even if we were to sign it. Given the kind of emotional leadership in both India and Pakistan the risks of accidental or adventurist use to preempt the other cannot be over-ruled. To illustrate India's Minister for Parliamentary affairs in a true Rambo-like manner taunted Pakistan to name the place, the date and the time for the next war. In response, the Pakistan Foreign Minister bragged that Pakistan will win the war in 90 minutes. They were national leaders! Imagine such an 'option' falling in the charge of a tiny coterie of disinformed or zealot officers from either side who could precipitate a full-scale nuclear war by pressing the nuclear trigger!

Furthermore, if a country is economically underdeveloped it can lead to its collapse as in the case of the Soviet Union. It cannot buy greater security with the help of nuclear bombs. Much of the vital resources needed it for meeting the most essential needs of the people get diverted to making bombs. Thus, such weapons of mass destruction have no legitimate role in our national security. Internal security is as important as external security. The country has gone through the worst days of both communal and ethnic conflicts. These have weakened the country internally. The priority should instead be in strengthening internal unity by resolving these conflicts by overcoming pressing economic problems⁴.

Thus, rather than providing the nuclear umbrella the nuclear tests have launched the country on to the path on which nuclear dilemmas will be the millstones of the future.

MYTH : *Nuclear deterrence succeeded in preventing wars from breaking out since 1945.*

FACT : The figures do not support this. Nuclear weapon states have fought a number of wars, on a number of occasions and have lost many of them. For instance,

- ❖ Britain fought and lost at Suez, in the Middle East; despite being in possession of nuclear weapons;
- ❖ The US suffered severe defeats during the Korean War (1950-53);
- ❖ The French with nuclear weapons lost the war with Algeria
- ❖ China with nuclear weapons failed to defeat Vietnam
- ❖ Above all, the US was defeated in the Vietnam War (1965-73)
- ❖ The Soviet Union with all its nuclear weapons lost the war in Afghanistan (1969)

In all these cases, a non-nuclear state fought and won against a nuclear armed state.

MYTH : *The underground nuclear tests at Pokharan do not pose any danger by way of adverse impact on health, environment and ecology, etc., through radiation discharges.*

FACT : India and Pakistan have together conducted 11 underground nuclear tests. These tests have been termed as "light earthquakes" by seismologists, capable of destroying the entire planet "if taken to their logical conclusion". Though the exact details will not be known till the two Governments allow inspection of the sites, it is estimated that roughly a third of all underground nuclear tests release radio-active gases into the atmosphere. Underground radioactivity may

surface through groundwater later. The effects may be seen in the short term or thousand years later. In the meanwhile, according to Asian Age (21-5-98) and other press reports, villagers at Pokhran village have since complained of health problems. Complaints about parched throats, nose bleeds, itching and eye irritation among many residents have been reported. Neighboring villages have also complained about similar symptoms. Apart from this, 40 percent of the houses of Khetolai village in Pokhran tehsil developed cracks allegedly due to the impact of tremour caused by the tests according to a report in the Hindu (14-5-1998). Most of the residents belong to the Bishnoi community and a few belong to the Scheduled Caste community. Lest we forget: In the aftermath of the 1974 nuclear test at Pokhran villagers then had also complained of skin irritation and similar ailments that the Pokhran villagers are complaining today. Moreover, according to the Statesman (17-5-1998) there had been deaths following the 1974 blast. Six died of cancer, one of heart complication and another five were under treatment for heart valve dysfunctioning. Apart from these deaths, the locals had earlier been promised that there would be no radiation leaks. Three to four years later calves were born deformed and died immediately. One of the victims is still alive today, Indira w/o Mange Ram of Khetolai, but dying from dysfunctioning of her heart valve. (See also boxes on pgs. 4 & 5).

MYTH: *The arms race originated with the Soviet Union hellbent on spreading its ideology of socialism and communism worldwide making the US to prepare to defend the Free World (which was not communist) against this threat.*

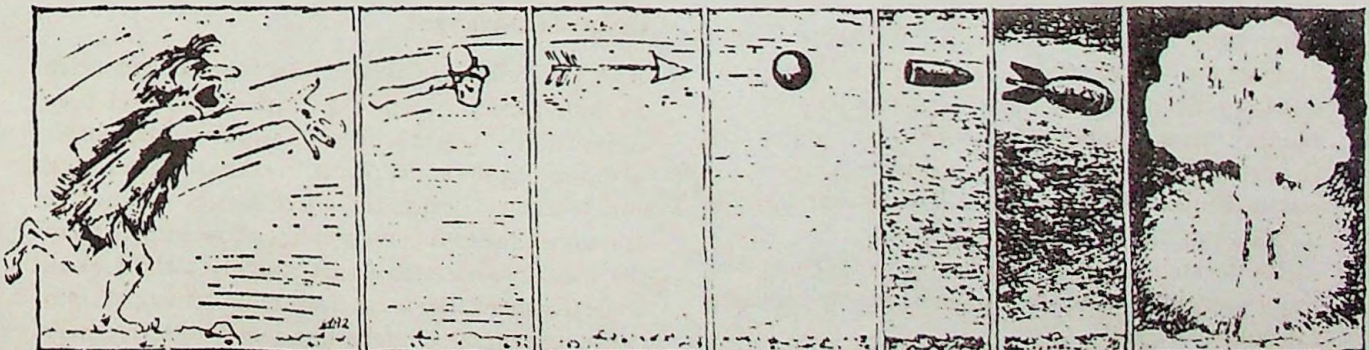
FACT: The "Red Threat" was a delusion¹. The Soviets had enough problems internally following the Revolution apart from its gains. They were not in a position, either economically or militarily, to invade the US. After all, they had just recently been part of the war in which they had lost 20 million people. They were still struggling to put together a country that the Revolution of 1917 had dragged from the Middle Ages into the 20th century almost overnight. There were severe differences between the Soviet leader, Stalin, and

the other Soviet leaders, which led to purges which caused many deaths, and economic hardships for the Soviets. What the Soviet Union wanted was to sort out its own problems. However, it viewed the US Government's build-up of weapons as a threat, and so it also began to build up its own nuclear weapons. The situation worsened in 1960 when Cuba became a communist country. As Cuba was not far from the US, the US viewed this as the first real step towards an invasion of the US by communist forces. In 1961, it sent anti-Castro Cubans to sabotage the Revolution but the attempt was foiled.

In 1962 came the most razor-edge confrontation between the Soviet Union and the US. President Kennedy demanded that the Soviet missile base, installed in Cuba, be dismantled. Prime Minister Khrushchev claimed that the missiles were only there to counter-balance the American nuclear missiles on the Russian borders in Western Europe. The Americans insisted that the missiles be removed, and sent warships to surround Cuba. For a few days, it looked as if the world was about to suffer its first full-scale nuclear war as other western countries waited for the US government to attack the Cuban missile base, and the Russians to counter-attack.

Fortunately, sanity prevailed and the Soviet Union withdrew its missiles, and the US its warships. But what

Ever since man first began fighting with each other over territory, etc., he has worked to get bigger and better weapons than his enemies (these include anyone who might turn out to be an enemy at some distant time in the future). If a Stone Age man of one tribe had invented a spear that could travel for 50 meters and kill a person, as soon as a rival tribe got to hear about it they would get their weapons expert to produce a spear that could travel for 75 meters. The first tribe would then try and come up with a spear that could travel 120 metres, and so on. This what is known as 'Weapons Proliferation' or 'Weapons Escalation'



would the position have been if both countries had different leaders? According to many historians, both Krushchev and Kennedy were 'sane liberals'. What if one of them, or both, had not been as sane, or as liberal?

This, in part, is one important factor — the fear part of the equation — that precipitated the build-up of nuclear weapons in the world. The other 'Power' part of the answer was well advanced, with the influence of the Soviet Union spreading beyond the borders of Eastern Europe to the newly-emerging countries in Africa. Equally, the USA was doing its best to make its influence felt by establishing military and financial footholds in Western Europe, Central and South America and Asia. And everywhere the two powers set up a base, strategic weapons were nearly always put in place to protect it.

In other words, both the Soviet Union and the US have been empire building since 1945. It is this empire-building, based on fear of the other side, that has led to Northern half of the world becoming a huge missile base. The whole nuclear arms build-up is based on a policy of Mutually Assured Destruction, or MAD for short, the appropriate way to describe it.

MYTH : *The lessons of Hiroshima and Nagasaki led to the realisation of promoting nuclear power for peaceful purposes rather than for war and violence, giving birth of a new vision, the Atoms for Peace Programme.*

FACT : First and foremost, nuclear power is inextricably linked to nuclear weapons. Both are two sides of the same coin. One cannot exist without the other.

Following the Second World War the 600,000 people whose jobs, the laboratories and defense contracts had depended on the Manhattan Project (the secretive US race to quickly invent the first nuclear weapons — "before the demented A. Hitler would get the bomb first...") found themselves with a bleak future. They, therefore, had to perforce reinvent their roles for peacetime. But the Manhattan Project and the various nuclear tests subsequently, led to panic among the American public and as a major dilemma to the nuclear industry and the establishment; how to circumvent this panic!

In the wake of the Bikini nuclear test, the US military decided to change the whole arsenal to thermo-nuclear devices i.e., hydrogen bombs. Plans were launched for a bomb, a bomb that combined fission with fusion. The former could destroy cities, the H-Bomb could destroy whole regions whereas the latter could slam together hydrogen nuclei to form helium and create a thermo-nuclear chain reaction. The US military establishment however needed public sanction for this game-plan as well as cooperation from various institutions, etc. All this would be impossible during peacetime because their only motive was in producing weapons of mass

वि स्फोट

विस्फोट से विस्फोट की बात निकली,
इस लिये कहता हूँ
एक वह भी था ब्रम्हास्त्र
मदांघ, मतीहीन अश्वत्थामा ने जिसे छोड़ा था।
रूका नहीं था पार्थ भी
योगिराज कृष्ण के लिये
जवाबी हमला उसने भी दिया था बोल।

हाँ लिखा है कुछ भांडे के भाटों ने
विजयी अधिकृत राजपुरुष ने अपना अस्त्र वापस लिया।

भला ऐसे भी कभी होता है?
कहा गया शब्द, दागा गया तीर, अभिमंत्रित अस्त्र
कभी वापस हुए है?

जल नहीं गये गर्भ सिर्फ उत्तरा के
ना बनी बाँझ केवल द्रोपदी की स्नुषा,

जल गये सारे पृथ्वी के तृणांकुर
बिरान बंजर हुई मानवता।

जलूर मनाया होगा जशन
शायद बगैर कीमत लिये
बिकाऊ चारणों ने,

पौछे होंगे छुपकर आँसू कृष्ण ने,
छलके होंगे गांधारी के बंधे नैन,
मनाया होगा मातम कुंती ने
फिर एक बार
उन कर्णों के नाम
जो जनम नहीं सकते।

- संदीप पेंडसे

destruction. Fortunately, for them, they were well placed to claim resources from a host of military top brass, scientific institutions, government bureaucrats and MNCs like DuPont, Westinghouse, and General Electric. Educational institutions like the University of California were also deeply involved⁴.

In the meantime US President Eisenhower addressed the UN shortly after the H-Bomb explosion with a speech* "The Peaceful Atom", informing the audience of how this awesome nuclear energy was now tamed and could produce vast amount of electricity so cheap that it would make metering unnecessary⁵. It would immediately usher in prosperity to all and third world countries could benefit from a modern and high standard of living. Above all, there would be no wars. His message struck a positive chord all around and the world over to the point of exhilaration. Academics, who were rightly sick of the bomb now began to study

nuclear physics, etc. It became popular in schools and people even began to tolerate nuclear effluents and waste. Nuclear engineers and physicists became heroes, admired for their high intelligence and charisma. Thanks to the expression, 'Atoms For Peace', invented to encourage social and public acceptance of the continued massive supply of tax-payers' funds to keep the nuclear industry alive. It also successfully helped in assuaging any guilt for these deadly acts inflicted on Japan. An important, but little published benefit of the programme was the continuous export of nuclear weapons material following from the power plant. It proceeded in a semi-covert manner, generally using as a cover the world trade in "peaceful" nuclear technology. The facilities required for nuclear energy programmes were largely the same as those required for construction of nuclear weapons. Under the cover of an interest in nuclear energy, or simply in basic nuclear research, several countries have since acquired nuclear capability⁷. Any purchaser of a nuclear reactor has the essential first component of nuclear weapons capability. But serious military ambitions imply the acquisition not only of a reactor, but also the more 'sensitive' facilities. This so-called peaceful nuclear technology is being bought and sold in the full knowledge that it will be applied to military ends. Within a couple of decades a number of nuclear bombs and missiles were built in the West, the former Soviet

Union, China and France. As more nuclear reactors came up in different countries, a number of them scrambled for nuclear weapons capability as well. France followed one of the most ambitious nuclear power programmes, and built an entrenched nuclear hierarchy which is driving the quest for more weapons development today.

Other ideas of 'Atoms For Peace' were schemes for a nuclear-powered artificial human heart, nuclear powered rocket engines, weather stations and light buoys, nuclear power agro-industrial complex nuclear bomb-excavated harbour and canals. All these had to be abandoned because of the obvious hazards. Nevertheless, numerous secret experiments involving radiation have been carried out on unsuspecting human subjects, and food irradiation is one crazy idea.

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FOOD not BOMBS

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