

M I N D



OUT OF NUCLEAR DARKNESS

THE INDIAN CASE FOR DISARMAMENT

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MIND

movement in india for nuclear disarmament

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Introduction

In May 1998, after the Pokharan blasts, a group of individuals—teachers and students, journalists and social activists, writers and artists, scientists and trade unionists—came together to reflect on the reality of a nuclear India, and to share their fears and ideas. The discussions that followed led to the formation of a group called MIND (Movement In India For Nuclear Disarmament). In the subsequent months MIND has held discussions in schools and colleges, organized meetings and demonstrations, designed posters, collected material for an exhibition on the nuclear issue, collated information dossiers, and prepared literature that would generate discussion.

This booklet is the first in a series to be issued by MIND. It puts together a set of essays which seek to question the justificatory logic of nuclear weaponisation. After Pokharan, the BJP, as always, has spoken in two contradictory voices. On the one hand, it is desperate to claim credit for taking a masculine decision in crossing the nuclear threshold, for being bold and decisive where past leaders dithered. On the other hand, confronted with criticism, it has sought to absolve itself of sin and presented the May explosions as the historic culmination of a long term policy, implicating past leaders in the making of BJP decisions. It has represented the present action as not so novel, and claimed to be the historic bearers of past will. The May blasts would not be acceptable even if they were the logical culmination of past policies. But is there, indeed, such a simple continuity between the past and the present? Praful Bidwai's essay shows how the

present policy marks a sharp break with the past. Gandhi abhorred the nuclear bomb, Jawaharlal Nehru consistently and actively opposed it. The first Pokharan explosion is carried out in 1974 but the discourse of nuclear deterrence is not officially accepted, and the military use of nuclear energy is condemned. With the BJP in power, the official language of nuclear politics changed dramatically. Ambiguities evaporate and the need for nuclear weaponization is aggressively asserted. Gandhi's pacifism and Nehru's anti-nuclear activism is thrown overboard.

In the debate that has followed the blasts the argument of deterrence has, expectedly, resurfaced. This old argument still retains its persuasive power, and captures the popular imagination. In his critique of deterrence thinking, Achin Vanaik systematically answers a series of common queries and misconceptions. He shows how there can be no stable deterrence, why nuclear deterrence can never work reliably. Deterrence has a degenerative logic. It seeks peace by preparing for war, by threatening the opponent. This inevitably deepens mutual suspicions, fears and tension. Instead of increasing security it intensifies the arms race. Vanaik persuasively emphasizes that no enduring peace and security in the world can be established without rejecting the logic of nuclear deterrence.

The rhetoric that justifies the bomb frequently presents the nuclear option as economically preferable. We are repeatedly told that reliance on nuclear weapons would be less expensive than conventional defence. What truth is there in this claim? Nuclear weaponization cannot be justified even if it was cheap; but the fact is that it is not. Nuclear bombs may not be expensive but the nuclear system is. For effective nuclearisation you need not only bombs, but effective delivery systems, along with a command, control, communications and intelligence infrastructure. All this costs enormous amounts of money. Estimating the actual figures is not easy since nuclearisation is sustained by a regime of secrecy. In India the nuclear power programme has subsidized the nuclear weapons programme, civil expenditures have been made to underwrite military expenditures, costs have been transferred to different heads in a way that hides the real expenditures.

Through a careful sifting of evidence Jayati Ghosh suggests that the cost of creating and deploying a small arsenal of nuclear weapons would be about Rs 20,000 crores, and an additional Rs 8,000 to Rs 16, 000 crores would be necessary each year for maintaining the arsenal. If all the hidden costs are taken into account then the defence budget would be at least 4 per cent of the GDP— a large proportion of the expenditure in foreign exchange. This is a a dangerously high figure likely to create a balance of payment crisis. We know that the US has had to spend \$ 5.5 trillion on its nuclearisation programme, and the Soviet economy suffered grievously under the strain of the arms race. Can we then afford the nuclear choice? At a time of mounting budgetary deficits, and cuts in budget allocations for education and health, a dramatic increase of expenditure on nuclearisation should alarm anyone concerned with the future of our society.

The nuclear tests have been widely projected as national achievements, an affirmation of the maturity of the Indian scientific establishment. This is a tragic claim, for two reasons. One: the manufacture of the nuclear bomb actually requires no great scientific expertise. Second: it glorifies the destructive potential of science. Satyajit Rath in his essay outlines the ugly facts about nuclear blasts, the underbelly of the science that the nation is being called upon to celebrate. By their very nature nuclear weapons are weapons of mass destruction which respect no distinction between civilian and military targets. Their punch and power is so intense that their destructive reach cannot be contained within space or time. The bomb will blast away entire cities, rolling fire-balls and fire storms will incarcerate humans, the radioactive energy released will contaminate water, air, soil and plant life for many thousand years to come. Innocent people would die, unborn children will be deformed. Violent genetic changes of all life forms and environmental degradation will follow. Rath explains how even an explosion in Pakistan would affect life within India. Environmental boundaries are permeable. Radioactive air cannot be confined within enemy territories: no state can stop breeze blowing across the border. If all this inevitably follows our great scientific achievement, then we need to rethink the nature of science that our society seeks to worship.

Nuclearisation sustains, and in turn is sustained by a specific kind of societal vision. It is a vision which prefers aggression to tolerance, hatred to love, violence to peace. It is not perturbed by war and destruction, death and deformation. It considers caring and loving as effeminate, and femininity as weakness. In their essay, Kumkum Sangari, Tanika Sarkar, Neeraj Malik, and Sheba Chhachhi, explore the nature and implication of this aggressive masculinist ideology . They suggest that women will be the worst sufferers of the nuclearisation process. They will have to bear a large part of the social and economic consequences of nuclearisation. Their access to resources, education and employment will decrease. Women will be controlled to perpetuate militarisation. Aggression, sanctified by society, would turn inwards, legitimating violence against women within society and at home.

Nuclear weaponisation is a policy of self-destruction. Even when it does not kill people, it transforms the social and normative fabric of a society, creating a mind-set that cries for blood and revenge. So our fight cannot be against government policy alone. We need to question the values that legitimate nuclearisation, the structure of popular will that sanctions programmes of mass annihilation, the ideology that celebrates violence and aggression, and the repressive nuclear nationalism which terms all voices of dissent as anti-national. We need to re-appropriate the many social and ethical ideals that masculinist war ideology demeans, and re-establish the value of humanity and tolerance, of peace and social justice.



Nuclear India: A Short History

Praful Bidwai

Supporters of nuclear weapons argue that India's decision to cross the nuclear threshold is in continuity with New Delhi's policies in the past. They claim that if there is any policy change under the BJP-led coalition, it is only in response to the altered ground situation, especially in our neighbourhood.

This is misleading, false and dishonest. At the doctrinal level, May 1998 marks a violent break with India's past postures. The decision to acquire nuclear weapons, and the plan to deploy them, is a betrayal of India's commitment to nuclear disarmament and its promise never to use nuclear energy for military purposes.

This does not mean that India's nuclear weapons policy has been constant and unchanging for 51 years since Independence. It has gone through four distinct phases, culminating in the disastrous decision to test, acquire and deploy these weapons of mass destruction.

PHASE I: THE NEHRU ERA, 1947 TO THE MID-1960S

This was a period of voluntary nuclear abstinence. Nehru was not only deeply committed to the complete elimination of all nuclear weapons, but also opposed to their manufacture and possession by any state, including India. He was opposed to nuclear

weapons on moral, political and strategic grounds, calling their possession a "crime against humanity". He integrated this opposition into India's foreign policy, giving it an activist edge. He was the first world leader to call for an end to all nuclear testing following U.S. bomb tests in the Pacific in 1954. However, India's civilian nuclear energy programme under the Department of Atomic Energy (DAE) also had a dual-use capacity; major figures such as Homi Bhabha were not unaware of this. Bhabha himself was not as categorically opposed to a possible future Bomb as was Nehru. On July 24, 1957, Nehru said in the Lok Sabha:

We have declared quite clearly that we are not interested in making atom bombs, even if we have the capacity to do so and that in no event will we use nuclear energy for destructive purposes... I hope that will be the policy of all future governments.

And just months before his death, when reports were pouring in of China's nuclear preparations, Nehru rejected the suggestion that India should follow China and acquire nuclear weapons for "deterrence"

PHASE II: MID-1960S TO 1974

In this period New Delhi became increasingly disenchanted with the prospect for global disarmament. Quiet preparations were being made to acquire a nuclear weapons capability, while retaining a strong opposition to deterrence and weaponisation. India's nuclear programme under Homi Bhabha underwent a significant shift at the ground level. Bhabha commissioned a plant to reprocess spent fuel from the CIRUS "research" reactor built with Canadian and U.S. assistance. In his speech in October 1964 following China's first test, he said that India too could conduct a test in 18 months. But such changes were not articulated at the policy level. In October 1965, Prime Minister Lal Bahadur Shastri told Parliament:

Despite the continued threat of aggression from China which has developed nuclear weapons, the government has

continued to adhere to decisions not to go in for nuclear weapons but to work for their elimination instead.

In April 1968, Prime Minister Indira Gandhi said in the Lok Sabha :

[India's nuclear] policy is framed after due consideration of the national interest, specifically with regard to national security.... we do feel that the events of the last twenty years clearly show that the possession of nuclear weapons have not given any military advantage in situations of bitter armed conflict.

She argued that "The choices before us involves.... engaging in an arms race with sophisticated nuclear warheads and an effective missile delivery system... Such a course, I do not think would strengthen national security.... it may well endanger our internal security by imposing a very heavy economic burden...."

Indian policy pronouncements in this post-Nehru period underwent a subtle shift from a categorical opposition to a "no Bombs now" orientation. The new uncertainties were reflected in the Indian attitude to the NPT negotiations, an arena where India had initially played a significant role. The final draft diluted what India and other non-nuclear weapons-states wanted — a better balance between the obligations of the nuclear weapons-states signatories and the non nuclear weapons-states signatories. Despite this watering down, the other non-nuclear weapons-states went along with the treaty, but India did not sign.

Why? First, there was China's decision not to sign the NPT and India's new reluctance to commit itself to complete or permanent future abstinence. Subsequent Indian opposition to the NPT is invariably and repeatedly stated in terms of India's "principled" opposition to the discriminatory character of the NPT, or the very fact of its enshrining differential obligations for nuclear weapons-states and non-nuclear weapons-states.

The ground level preparations, and accumulation of unsafeguarded plutonium from CIRUS, gave Indira Gandhi an oppor-

tunity to conduct Pokharan-I in May 1974 — a test which the DAE scientists had long been demanding. The test, purportedly for “peaceful” civilian purposes, or a peaceful nuclear explosion (PNE) was carried out for primarily domestic political reasons. Yet India continued to strongly reject nuclear deterrence or grant any kind of legitimacy to nuclear weapons.

On May 22, 1974, four days after Pokharan-I, Indira Gandhi wrote to Bhutto to assure him:

I am aware that in popular parlance a nuclear explosion evokes an awesome and horrifying picture. However, this is because our minds have been conditioned by the misuse of nuclear energy for the development of weapons and by the use of these weapons in Hiroshima and Nagasaki. We in India have condemned and will continue to condemn military uses of nuclear energy as a threat to humanity.

Mrs. Gandhi emphasised that “it is strictly in this context that our scientists have launched on this experiment... There are no political or foreign policy implications of this test.”

PHASE III: 1974 TO 1995-96

Further work on India’s nuclear weapons capability was suspended after adverse fallout. A conscious policy of nuclear ambiguity was adopted by New Delhi. This consisted in both affirming and denying that India had/could have nuclear weapons/capability and seeking a special status as a Nuclear Threshold State. Meanwhile, in 1978, under Prime Minister Morarji Desai, the Indian government distanced itself from the 1974 PNE, and Desai emphasised the “peaceful” side of ambiguity while expressing misgivings about the safety of nuclear power.

After the mid-1980s, hawkish pressure mounted on New Delhi to go overtly nuclear in response to Pakistan’s reported nuclear preparations. India rejected seven proposals by Pakistan for nuclear restraint and regional disarmament, saying it would only discuss nuclear disarmament in “global, multilateral” fora,

and in a "non-discriminatory" framework.

India's sole strategy of containing an alleged "Pakistani threat" was to entreat the U.S. to exert pressure on Pakistan, through the Pressler Amendment, for instance. Meanwhile, its own stockpiling of high-grade plutonium continued, with an estimated 300 to 450 kg accumulated by the mid-1990s — enough for 60 to 90 fission bombs.

However, in 1986, India joined the Five-Continent Six-Nation Initiative for Nuclear Disarmament and in 1988 put forward the Rajiv Gandhi Plan for the elimination of nuclear weapons in the UN. This involved a step-by-step process including restraint at an early stage by the threshold states, including India. This was not energetically pursued. As the negotiations for a CTBT, which India had pioneered, entered their final phase, New Delhi stalled, making signing the CTBT conditional upon "time-bound" disarmament by the P-5. It tried to hedge the treaty in with clauses that appeared radical, but were meant to delay negotiations and prepare the ground for non-accession to a test ban agreement.

Domestically, New Delhi came under growing pressure to oppose the CTBT and then "logically" proceed to conduct test explosions: why reject the CTBT as a "trap" and "conspiracy" and then behave as if it were still in place; why bear the costs of opposition without reaping the "benefits" of nuclearisation?

In 1995, before the CTBT "rolling text" acquired its penultimate form, the Narasimha Rao government launched preparations for a test at Pokharan. The Cabinet was divided, and US military satellites detected preparations. Publicity, as well as the fear of economic sanctions, deterred India from testing. But a big shift had occurred at the ground level.

Yet, at the stated doctrinal level, there was no change. In 1995 India argued passionately before the International Court of Justice that "use of nuclear weapons in any armed conflict... even by way of reprisal or retaliation... is unlawful... Since the production and manufacture of nuclear weapons can only be with the

objective of their use, it must follow that.... their production and manufacture cannot under any circumstances be considered as permitted.... The threat of use of nuclear weapons in any circumstance, whether as a means or method of warfare or otherwise, is illegal and unlawful under international law.”

At the height of the CTBT debate, in March 1996, India's foreign secretary Salman Haidar made a special appearance before the Conference on Disarmament to say:

We do not believe that the acquisition of nuclear weapons is essential for national security, and we have followed a conscious decision in this regard. We are also convinced that the existence of nuclear weapons diminishes international security. We, therefore, seek their complete elimination. These are fundamental precepts that have been an integral basis of India's foreign and national security policy.

However, slippages from India's professed commitment to nuclear restraint and disarmament had by now become evident. “Ambiguity” degraded significantly. India blocked the CTBT's passage at the CD, but the text was taken to the UN General Assembly and signed. Hawks within and outside the government raised the level of rhetoric in favour of India crossing the threshold. The BJP and right-wing commentators in the media seized on the anti-CTBT rhetoric, to which there was little organised resistance.

PHASE IV: 1996 TO MAY 1998.

Having yielded so much ground to hawkish positions and stoked jingoistic nationalism, New Delhi had now become a prisoner of its own devious manoeuvres. The nuclear and defence establishments got hyperactive in lobbying for explosions and a policy break to permit full weaponisation.

The BJP articulated this point of view most vociferously at the political level. By 1997, its demands for overt nuclearisation became insistent. Its manifesto for the February 1998 general

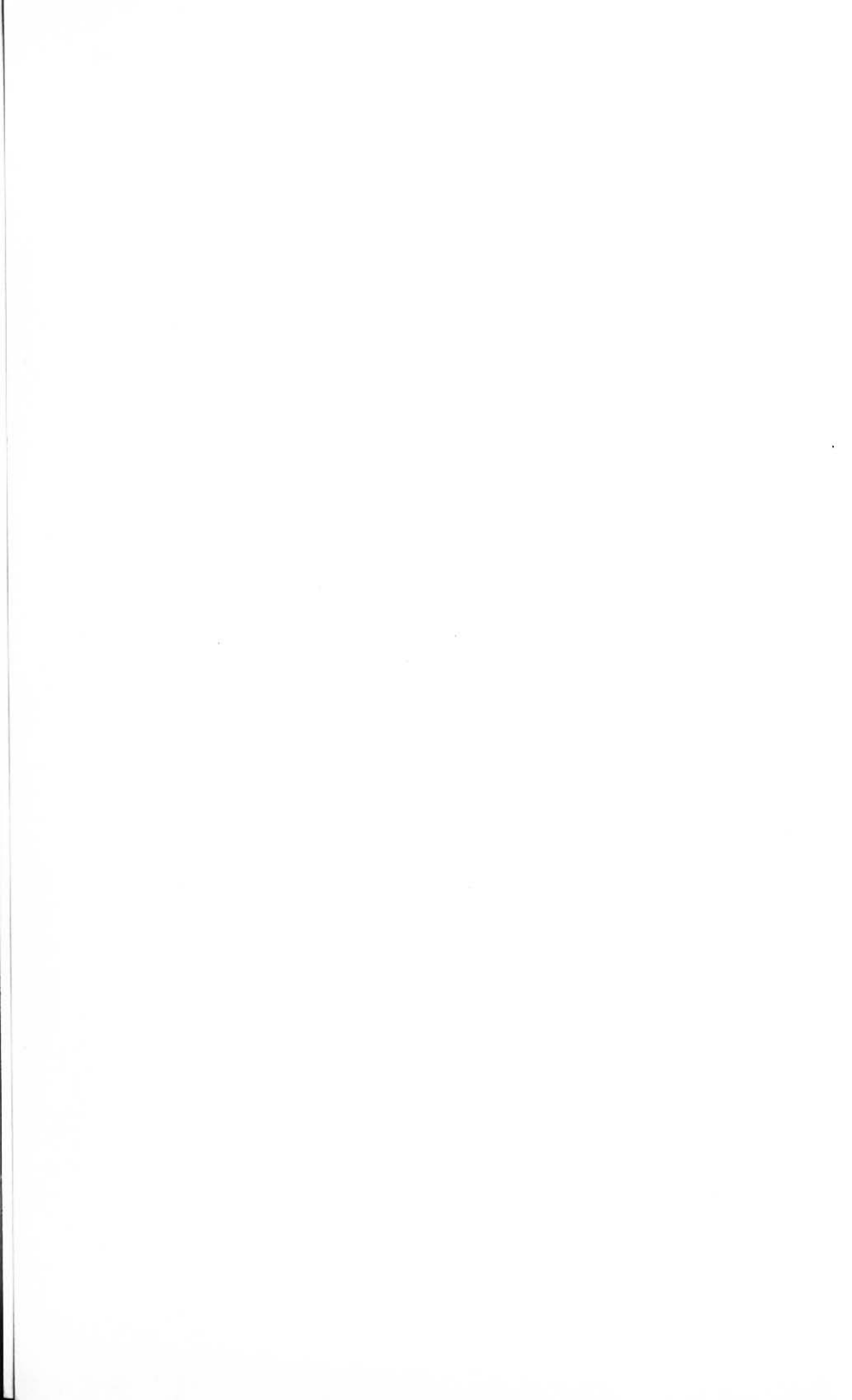
elections promised to “re-evaluate the country’s nuclear policy and exercise the option to induct nuclear weapons.”

Till March 1998, the BJP was the sole Indian party to advocate nuclearisation. But the situation changed with the BJP-led coalition’s “National Agenda for Governance” which repeated the precise formulation of the BJP manifesto. The BJP issued orders to the DAE, Defence Research & Development Organisation and the armed forces to prepare for and conduct tests — without consulting its coalition allies. But the RSS was privy to the decision.

The first statement of the strategic rationale of the tests was offered by Prime Minister Vajpayee, not to the people of India, but to the President of the United States. His statement made no reference whatever to the “unequal global nuclear order”, “nuclear apartheid” and the failure of the P-5 to disarm. Instead, it offered “close cooperation” to Washington to promote “the cause of nuclear disarmament” — thus wrongly conceding that the U.S. has such a commitment. It only spoke of the threat from China and Pakistan, heightened by Sino-Pakistani nuclear and missile collaboration.

On May 27, the government made a feeble but devious attempt to rationalise its reversal of earlier nuclear policies through a paper entitled “Evolution of India’s Nuclear Policy” laid in the Lok Sabha. This strung together half-truths and distortions to claim continuity — much in the same way that hawks seek to paint Mahatma Gandhi as a legitimiser of the Indian Bomb.





The Bomb, the Budget and the Economy

Jayati Ghosh

The completely irrational and mindlessly destructive nature of a nuclear arms race is well known. But quite apart from this aspect, nuclearisation of the defence programme also involves a major escalation in what is essentially wasteful and unproductive expenditure. The countries that have gone in for such programmes have already had to spend tens of trillions of dollars in the aggregate for developing and maintaining such nuclear defence programmes. These costs have always been much higher than those explicitly anticipated by the governments concerned, and the full extent of the costs involved may never be known because these programmes are typically shrouded in secrecy.

Thus, the US government had declared, when it expanded its nuclear programme, that nuclear weapons were a cheaper option to conventional forces. However, a recent study by the Brookings Institution,* estimates that between 1940 and 1996 the US spent as much as \$5.5 trillion (at 1996 prices). Incidentally, this was more than the total US government expenditure on six other sectors including education, environment, space research and law enforcement, over the same period. It is widely accepted that the enormous costs of the nuclear programme in the former USSR put such a strain on the economy and involved such a diversion from productive expenditure, that mass consumption was adversely affected. This in turn certainly contributed to the collapse of that system of economic organisation. Even the "smaller" nuclear powers, those with what they claim is a "minimum deterrent capability", have had to make huge outlays for this. The

**Atomic Audit : The costs and consequences of US nuclear weapons since 1940, Stephen I Schwartz, Washington, D. C., 1998,*

French nuclear effort is estimated to have cost between 0.4 per cent and 1.2 per cent of GDP every year between 1964 and 1992.* In China, the total cost of the nuclear programme has been estimated at \$ 28 billion (1996 prices) just for the decade 1955-1964.**

Typically, governments try to camouflage the real costs of such a programme by referring only to the actual cost of producing a nuclear weapon. It is true that the cost of the nuclear weapon itself may not be very high; however the cost of the system as a whole is very high. This is because the more significant costs relate to the delivery systems, as well as to the command, control, communications and intelligence C3I systems that need to be put into place. Thus, the Brookings study for the US found that the bombs themselves accounted for only 7 per cent of total costs, while another 7 per cent went towards dealing with the effects of the tests, storing radioactive waste and cleaning up the environment. All the rest of the costs - 86 per cent - was for building the delivery systems and a C3I system.

Thus, when arguments are advanced regarding the low cost of nuclear weapons, what is sought to be hidden from public view is that the cost of the bomb is not the main cost of a nuclear weapons programme. This is certainly likely to be true in India as well. These enormous costs will necessarily cause a substantial diversion of resources away from productive and socially important uses. What is even worse is that such public expenditure is rarely open and explicit; it tends to be opaque and couched in secrecy. The lack of transparency — even in economic/financial terms — which is inherent in such weapons programmes is fundamentally antithetical to democracy.

THE 1998-99 BUDGET

The latest Budget just presented by the BJP government, after the nuclear explosions, involves a 14 per cent increase in the defence budget over last year's revised estimates. This comprises an increase of Rs. 4038 crore in revenue expenditure and Rs.

*Camille Grand, *Strategic Analysis*, July 1998

**Rammanohar Reddy, *The Hindu*, August 31, 1998

1063 in capital expenditure. The government has argued that most of this increase will go towards increased salaries as a result of Pay Commission awards. But if past practice is any guide, the likelihood is that the more substantial increases in expenditure that are associated with a nuclear programme, and especially with nuclear weaponisation, are not explicitly defined as being under the defence budget, but are put under various different Budget heads as well as in off-Budget items such as the resources/expenditure of certain public sector enterprises whose production is in related areas. The only explicit increases in budgetary expenditure which reflect the nuclear programme are in the outlays for the Department of Atomic Energy (a 59 per cent increase, from Rs. 987 crore to Rs. 1569 crore) and in the Department of Space (a 62 per cent increase, from Rs. 850 crore to Rs. 1381 crore), which are not a part of the stated Defence Budget.

To put some of these numbers in perspective, it is worth comparing them with some other items of central Government expenditure. Thus, the total outlay for the Ministry of Health and Family Welfare in the 1998-99 Budget is put at only Rs. 3684 crore, well below just the increase in defence expenditure. The increase in allocation to the Departments of Space and Atomic Energy alone (at Rs. 1366 crore) is more than 5 times greater than the increase in the outlay for health, 52 per cent higher than the increase in the Central education outlay, 72 per cent higher than the increase in allocation for rural employment and poverty alleviation. This reflects only the tip of the iceberg of the potential costs of a weaponisation programme, so that the scale of consequent diversion of resources can only be guessed at.

According to Indira Gandhi (1981), the cost of making one inter-continental ballistic missile was 340,000 primary schools or 65,000 health care centres. Our priorities are no longer schools and health care centres; that is why the Ministry of Human Resource Development (HRD) is looking at doing away with constitutional guarantees regarding education. The state can no longer take on itself the responsibility of educating the people, especially since its energies are now directed towards building and maintaining nuclear weapons!

THE COST OF THE NUCLEAR WEAPONS PROGRAM

Before we enter into a guesstimate of India's nuclear program, certain observations are in order. The cost of the weapons program that has already been undertaken — the fissile stockpile built — has already been paid for under the nuclear power programme. This makes it difficult to separate the costs of the weapons programme from that of the power programme. The Atomic Energy Commission can play with these figures to show a lower cost per bomb and absorb the rest in the power programme. Similarly, the cost of the missile program can also be underwritten by the satellite launch vehicle program of Indian Space Research Organisation (ISRO). These are not mere conjectures. It is well known that this has been the method that India has followed to develop its nuclear and missile capabilities in which the civilian programme has been used to underwrite the military programme. Further, there are other transfers that have been made in the past to hide the true defence costs — transfers to public sector undertakings, for example.

The few previous indications of the costs of creating and deploying nuclear weapons suggest that such costs would be much higher than the costs currently being bandied about. A study by the Ministry of Defence in 1985 estimated the cost of creating nuclear weapons which could be deployed at Rs. 7,000 crore at that time. In terms of the domestic rate of inflation, such an amount would come to around Rs. 18,000 crore in current prices. But a substantial part of the expenditure would involve imports, so if the change in rupee value (relative to the US dollar) is taken into account, then this amounts to Rs. 24,000 crore. If it is estimated that around one third of such expenditure involves imports, then the likely current cost works out to at least Rs. 20,000 crore. This relates to the total stock cost of a nuclear weaponisation programme. It should be noted that the major cost of deployment of nuclear arms is accounted for by non-nuclear missile components, C3I etc., and also that a very large proportion of such hardware tends to be imported.

This refers to the stock cost of creating a nuclear arsenal, but of course this is simply a projection of past costs, and it is well

known that in this area costs tend to escalate well above the overall rate of inflation. There is also a continuing cost involved in maintaining a credible nuclear deterrent. Further, these costs refer to the so-called "minimum deterrence" — but escalation is built into such a programme because it leads to a nuclear arms race with potential adversaries. Thus, China has already announced that it will have to review its nuclear programme in the light of the Pokhran tests, and since the BJP government has explicitly named China as a threat, this must affect the Indian government's programme in turn.

It is important to remember that a nuclear weapons programme is never a substitute but always in addition to non-nuclear defence expenditure. Thus all of these are additional expenditures. It is evident that such increases in defence expenditure have not been fully incorporated into the Budget, even accounting for the facts of opacity and cover-up. So if the government does decide to go in for weaponisation, such costs will then shoot up. In over all terms, we are then looking at a defence budget of at least 4% of the GDP (if all hidden costs are taken into account) and possibly even more. A large portion of this costs will be in foreign exchange. It may be noted that the balance of payments crisis that India had in 1991 was directly associated with the increased defence expenditure of the late 1980s, which went up to 4% of GDP under Rajiv Gandhi's government.

HIGH MILITARY RESEARCH AND DEVELOPMENT EXPENDITURE

Apart from the cost for defence as shown in the budget, India has a very high R&D expenditure for the military. Though a large part of this expenditure can be questioned regarding its utility — the Light Combat Aircraft (LCA) project, the Main Battle Tank (MBT) being some examples — a major part of this expenditure today is related to developing missile and other delivery systems. The other delivery systems also include the design and development of nuclear submarines and the sea-based missiles — the Sagarika. DRDO, which is the nodal agency for all defence research except the actual bomb development has a capital bud-

get of Rs.700 crore for 98-99. The total spending in 96-97 of DRDO was Rs.1,700 crore. India has one of the highest cost military R&D expenditure as a percentage of total military expenditure — 6.5%. Only four countries spend more on research as a percentage of their total military expenditure.

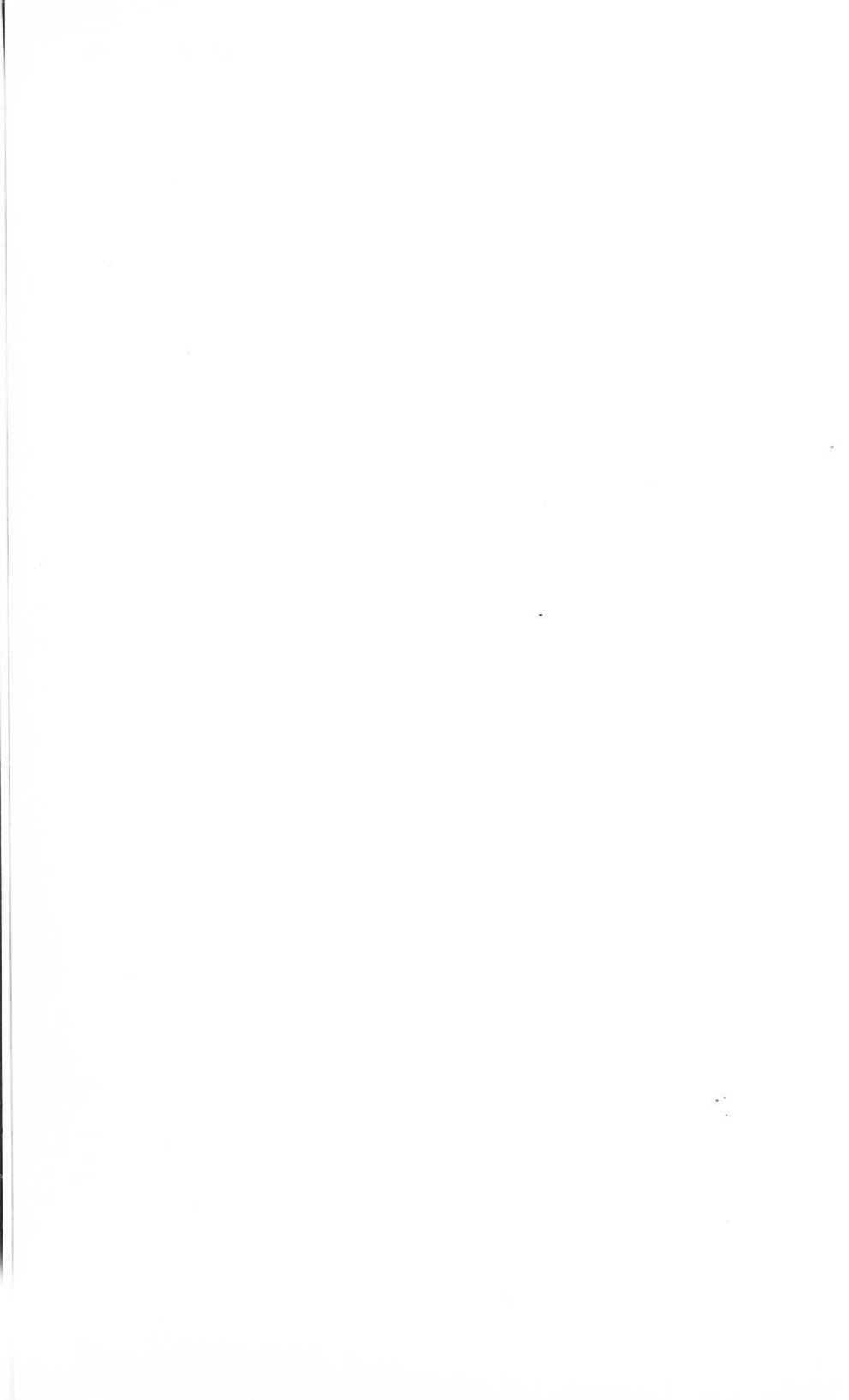
India also spends the major part of its R&D budget (68.5%) in Science and Technology (S&T) only on defence related areas: nuclear, space and direct military R&D. Only US spends a higher fraction of its S&T spending on defence.

NUCLEAR “SECURITY” AND ECONOMIC SLAVERY: THE BJP SWADESHI

The most important economic cost of this programme of nuclear weaponisation may not be represented simply in the diversion of valuable resources which it entails. It has also involved a situation where the government, having flexed its military muscles, is now anxious to placate foreign governments and international capital by offering economic concessions, through greater liberalisation, greater incentives for foreign investors and offering the opportunity to enter captive Indian markets and buy up domestic assets cheaply. The Government has already been arguing that they will entice private capital to meet the sanctions. This will have the “benefit” of creating a stake in the US business community against sanctions. Already, counter guarantees to multinational power projects implying huge future revenue losses for the central government, highly lucrative oil and mining concessions that involve bartering away the mineral resources of the country, have all been given to foreign investors as a part of this policy. The BJP Government has also indicated that it is going to allow foreign insurance companies to enter India as a part of a package deal to lift sanctions. What other measures are involved in such a package is not known, but in all likelihood, it will mean further concessions in WTO, particularly allowing foreign investments under the new Multilateral Agreement on investment proposals that US and other advanced countries have been pushing for and in changes to the Patent Act.

This is the most dangerous path of all for the country, for it implies a double waste of our resources and our potential, and creates irrevocable changes which will truly compromise our national sovereignty and security. Thus along with the direct economic and social costs outlined above, there is the more long-term loss of economic independence that has been indirectly the result of this programme. Self-reliance and sovereignty are apparently restricted to only nuclear weapons in BJP's lexicon. Surrendering economic sovereignty and sabotaging Indian technology in all other areas except military is BJP's newest version of "Swadeshi" — the "Swadeshi" bomb and "Videshi" everything else. The pertinent question to ask is, if we surrender our economic sovereignty, what is the security that we have gained?





Why Are Nuclear Weapons Objectionable?

A SCIENTIST'S PERSPECTIVE

Satyajit Rath

In the aftermath of the South Asian nuclear blasts, there has been much enthusiasm among Indian strategic analysts about nuclear deterrence, weaponisation and command system development, and tactical weaponisation in particular in the context of the wide range of Indian devices tested. In the process, the peculiarly unpleasant scientific realities about nuclear weapons—particularly as they apply to the subcontinent—are in danger of being glossed over and forgotten.

There is a pressing need for these to be re-emphasized, since the great difference between having a nuclear 'capability' and having real nuclear weapons is the huge increase in the chance of actual use.

Everybody, including the strategists (of both the party and the defence varieties) agrees that nuclear weapons are 'weapons of mass destruction'. The meaning of the phrase, however, is either not understood or not remembered. The enormous destructive capabilities of a nuclear weapon are frequently dismissed by some 'defence experts' as the inevitable ugliness associated with any weapon of war. In fact, this is part of a more general argument that nuclear weapons are simply another mode of waging war, and that they should not therefore be singled out for condemnation. This entire argument is fallacious and perverted, for two major reasons.

BLAST QUANTITY PRECLUDES TARGET SELECTIVITY

The first and relatively smaller reason is connected to the 'advantage' of a nuclear weapon over a conventional one; which is that it packs more of a 'punch', since it uses subatomic binding energies which are far stronger than the interatomic binding energies used in a conventional explosive. A kilogram of fuel material can yield a blast equivalent to the explosion of thousands of tons of TNT. *But this advantage becomes less and less significant as the size of the explosion becomes less and less, since conventional explosives become more and more practical for smaller sizes of blasts.* Nuclear weapons would thus hold no decisive practical advantage over non-nuclear explosives in the ton range (which marks most battlefield weapons).

Therefore, nuclear weapons would be most 'useful' in strategic parlance mainly for destruction of very large targets, in other words, civilian ones such as cities. This makes nuclear weapons more and more 'attractive' as they get larger and larger; a state of affairs directly opposite to notions governing warfare such as distinctions between combatants and bystanders and civilian versus military targets.

It is then no surprise that most nuclear weapons tested fall in the megaton (meaning million tons) category, where the blast wave can break windows eight hundred miles away, as in the 1962 atmospheric US nuclear tests. It can be estimated that most people would be injured or killed in a radius of three to thirty miles by nuclear bombs between 10 kilotons and 10 megatons. Small or large, all nuclear blasts create fireballs with temperatures exceeding 300,000 degrees celsius, shock waves that blow down everything in their path for many kilometres around, hurricane winds and secondary firestorms over large areas. It is unconscionable to suggest that such weapons either have been developed as or can ever be 'selective' weapons.

RELEASE OF RADIOACTIVITY FROM NUCLEAR WEAPONS

However, the second and overwhelming reason for rejecting the notion that nuclear weapons are simply another way of waging war is that every nuclear explosion, big or small, releases both conventional and radioactive energy, contrary to assertions in a section of the 'strategic' brotherhood of 'clean' weapons. There are a number of ways that a nuclear weapon releases radioactivity. One, only a small part of the highly radioactive fuel material is actually converted into explosive energy during a nuclear blast. Both the Hiroshima and Nagasaki blasts, for example, used up less than 20 percent of the nuclear fuel available. While the efficiency of use has increased, it has not done so, nor can it ever do so, to the extent that ALL radioactivity will be converted to blast energy.

In other words, the bulk of the radioactivity of a nuclear weapon is likely to be dispersed over the blast area as intensely radioactive particles. It is said that 'small', battlefield nuclear weapons are 'strategically' feasible for a 'limited' nuclear war. However, smaller nuclear weapons are even less efficient than large ones and will therefore scatter large amounts of unused radioactive fuel.

Radioactivity from a nuclear blast comes in two broad forms. The first is an immediate radioactivity pulse, which can kill people where they stand if the dose is high enough. However, this pulse dissipates rapidly, and this fact of dissipation is used by strategic hawks to claim that radioactivity release by a nuclear blast is no special evil, but is simply another way of getting a bomb to do what it is designed to do.

However, the second form of radioactivity release is persistent radioactivity, partly from unused fuel as argued in the previous paragraph, partly from intermediate radioactive decay prod-

ucts of the fuel generated during the explosion, and in some part from 'induced' radioactivity generated in surrounding non-radioactive material by the immediate radioactive blast. All of these together constitute so-called radioactive 'dust' or 'fallout'. After the blast itself has dissipated, this radioactive dust hangs in the atmosphere, is spread by wind and rain, contaminates water and air, is taken up by plants and enters the food chain right at the bottom. The radioactive life span of many components of this dust is very long; plutonium 239 has a 'half-life' of twenty four thousand years, meaning that it takes that long for the radioactivity output of the plutonium to come down by one-half. Radioactive dust thus impregnates soil, air and water for long years to come. The nuclear accident at Chernobyl and nuclear test sites are 'living' evidence of this.

ALL NUCLEAR WEAPONS RELEASE HARMFUL RADIOACTIVITY

A defensive argument used by 'nuclear hawks' is that plutonium 239 emits only alpha particle radioactivity, which cannot even penetrate thick paper particularly well. This is true and would be a reasonable point if this plutonium was kept well away from people. But as plutonium oxide in the radioactive dust permeating the post-nuclear environment it can enter the lungs and the gut and cause local radiation damage as well as be absorbed in quantities small but sufficient to cause havoc in the body. In fact, such local radiation deep within the body is even more likely to cause extensive damage to health than strong external irradiation pulses.

Another argument made is that thermonuclear, fusion or 'H-' bombs (such as the one that India is dubiously supposed to have tested in May '98) emit almost no radioactivity and have no fallout. This is disingenuous, since the fusion reaction is set off by a regular nuclear fission reaction which has the normal radioac-

tivity and fallout consequences to be expected. Thus, while it is true to say that the amount of radioactivity released by a fusion bomb is less than would be released by a fission bomb, the distinction is of no practical relevance given the enormity of the consequences of even a one-kiloton nuclear fission explosion. It is even less relevant given some H-bomb designs where a 'fission shell' is actually used again to enhance the effects of the fusion explosion.

DAMAGE DUE TO RADIOACTIVITY IS INDISCRIMINATE IN SPACE AND TIME

What sort of damage does such radioactivity cause? Radioactivity is an energy pulse and therefore damages what it passes through. This includes the DNA, the blueprint, of the cells of the body. Apart from the immediate effects caused by such cell death, damage to the cells that act as the 'progenitors' of cell types such as skin, or the gut lining or blood cells can lead to cancers of these tissues.

Apart from such easily identified disease states, there is documentary evidence that many more subtle malfunctions of the body leading to ill-health are induced by nuclear weapon radiation exposure. Finally, radiation damage to the cells involved in reproduction, the sperm and egg, can cause stillbirths and congenital abnormalities, leading to the gene pool of the species being altered in violent and chaotic fashion.

To put some numbers to these abstract notions, it is useful to remember that a 'small', one-kiloton nuclear bomb will emit enough immediate radiation (300 rads per hour) to kill in an area of a kilometre in diameter, and a radiation dose of about 30 rads per hour, which will reach killing levels in overnight exposure, can be reached over a 25 square km region. These are the immediate killing effects.

The statistical risks of genetic damage are far wider. Consider only one striking example. Taking x-ray pictures of the mother's belly in pregnancy, doses of less than a rad, is likely to increase the risk for the baby of developing cancer before adulthood by two-fold. A fallout dose of one rad per hour will be reached, and last for years, in an area of over one hundred square kilometres by a 'small' one-kiloton nuclear bomb.

THERE ARE NO EFFECTIVE MEDICAL OR CIVIL DEFENCES AGAINST NUCLEAR WEAPONS

What can be done in civil defence against the effects of nuclear weapons, and how are the medical problems treated? There is much talk of 'bomb-proof' shelters and protected food and water supplies for civil defence, and of 'chelating agents' that would rapidly remove radioactive material from the body or 'anti-oxidants' that would obviate some of the secondary physiological effects of radiation.

However, in an atmosphere impregnated with radioactive particles that are going to be active for thousands of years, any such emergency measures are puerile; *there is no effective civil defence against nuclear blasts, nor is there any preventive or curative medical treatment for their effects even in the unlikely event of the best possible medical facilities being available in the aftermath of a bomb blast.*

Thus, unlike any conventional weapons of warfare, the damage caused by nuclear weapons is not limited either in space, or, even more devastatingly, in time. Nuclear weapons will leave effects transcending generations; not only innocent people but their unborn children will be deeply damaged, as will be the world around them, by even a 'small' nuclear weapon. There is no way of ensuring that damage will not be done to bystander

civilians, nor to limit the time for which damage will be caused.

The damage by nuclear blast radiation is likely to be at least as grave if not more for the environment, where there will be violent and chaotic genetic alterations resulting for every life form on earth. The degradation of the local environment, with both short-term and long-term debilitating effects on the human communities, is likely to be even more drastic and less predictable than with the commoner man-made causes of such degradation.

Therefore, nuclear weapons are weapons that by their very nature are expected to target the innocent, and as such are quintessential terrorist instruments.

HIGH RISKS OF 'UNINTENDED' USE OF NUCLEAR WEAPONS

All of this is true if nuclear weapons are used. A second argument used by the pro-nuclear lobby is that they are intended only to 'scare people into good behavior', and that they will never in fact be used. So what is the likelihood that they will be used? It is a matter of common sense that having nuclear weapons, having deployed them, having so-called strategic command systems set up for them, steadily increases the chance that they will be used; somewhat similar to the increase in the chance that windows will be broken if children (or men) in the house who don't have a ball are given one to play 'quietly' with.

A major part of the argument showing the futility of nuclear weapons as deterrence is technological. Given that more than one 'side' have nuclear weapons, watch systems need to be designed to warn for incoming missiles carrying nuclear weapons. Such surveillance systems are not and can never be fool-proof, and mistaken identification of all sorts of events as incoming nuclear missiles has occurred repeatedly in the past and will no doubt continue to occur.

Between the two erstwhile 'global nuclear superpowers', the warning time has been in the vicinity of 30 minutes, during which time much confirmation, cross-checking and diplomatic conversation could and can be attempted. Between the new South Asian 'nuclear superpowers', the time lag is likely to be about one to three minutes. This means that no confirmation can be sought, no diplomacy can intervene, and a decision to retaliate 'just to be on the safe side' (whatever being safe in such a situation means) becomes immensely more likely. This increases manifold the chances of an 'inadvertent' nuclear exchange in South Asia.

ANTI-NUCLEAR 'DEFENCE' DOES NOT PROTECT AGAINST NUCLEAR WEAPONS

In any actual, 'intended' exchange, the mutual targets—civilian or military—would certainly include nuclear installations. treaties notwithstanding, enhancing the potential for release of radioactivity still further. In fact, even if incoming nuclear missiles were to be 'successfully' intercepted and 'brought down' by defensive anti-missiles, this is quite likely to spread unexploded (and therefore heavily radioactive) nuclear weapon fragments over the subcontinental countryside. The South Asian subcontinent is an integral whole in many ways (political jingoism notwithstanding), which means that there is not a great deal of difference between 'us' hitting 'their' targets and 'them' hitting 'our' ones or simply both intercepting each other's missiles; given the integrated vagaries of weather patterns across Pakistan and North India, the radioactive fallout is equally likely to spread indiscriminately over both nations.

NUCLEAR WEAPONS ARE UNRELATED TO SCIENCE AND TECHNOLOGY

In both India and Pakistan, there has been much national hubris over these 'glowing achievements of cutting-edge science

and technology'. It is a sorry comment on the scientific establishments of both countries that the copying of fifty-year-old technology available in the public domain for decades to produce demonstration prototypes needs to be propped up as a major claim to fame for subcontinental science, since neither technological nor conceptual innovation has been involved in building these nuclear weapons. The point and purpose of innovative science is to comprehend our world and hopefully, ourselves, and that of innovative technology is to use the comprehension (and perhaps wisdom gained) to improve the quality of life of all human beings, everywhere. Nuclear weapons do not fit this bill. Instead, they foster a misleading and perverted view of science and technology as conquering and heroic activities in the aggressive macho -militaristic mode that is so inimical to social justice and equity. Such macho nuclear weaponization decreases the transparency with which science and technology are pursued, and this is inevitably accompanied by a fall in quality in these pursuits, to the detriment of society.

Ever since it discovered exactly what nuclear weapons can do, the bulk of the scientific community the world over (including those who developed the first nuclear weapons) has consistently argued that it is irrational to be steadily increasing the chances of use of weapons that 'cannot' be used, and has been in sustained and vehement opposition to nuclear weaponry. There is every reason for the scientists and technologists of India to join their voices to those of their global communities and urge their fellow-citizens to reject the acquisition of nuclear weapons; not because somebody compels us, but because reason impels us.



Nuclear Weapons and Security :

THE ISSUE OF DETERRENCE

Achin Vanaik

The advent of nuclear weapons poses a terrible dilemma for humanity. Is security —real and enduring — possible in a nuclear age?

There is, on one hand, the view that nuclear weapons are here to stay. Therefore we have no choice but to “live with nuclear weapons” and that it is possible to do so with confidence. After all, haven’t we always lived with weapons of one kind or another? And don’t we legitimately strive for security, especially national security, through the possession and use of non-nuclear or conventional weapons?

In contrast to this view is the claim by many others that there can never be enduring or adequate security except by “living without nuclear weapons” and that therefore there is no choice but to bring about complete, universal and permanent nuclear disarmament. What has been done by humans can be undone, indeed in the case of nuclear weapons *must* be undone. Moreover, we must do this as rapidly as possible. The longer nuclear weapons exist, the greater the chances of their being used, and the greater the possibility of a nuclear holocaust.

To understand why security in a nuclear age is possible only in a world without such weapons, we must grasp the fundamental difference between conventional and nuclear weapons. In the case of conventional weapons, one can, even if peace breaks down, use them to protect oneself or one’s country. But you cannot use nuclear weapons to protect your country or to achieve security. You can only hope that your possession of nuclear weapons will frighten a national rival (which also possesses nuclear weapons) into not using them.

This hope is justified by deterrence thinking. At the very heart of all attempts to justify the possession, development and deployment of nuclear weapons by a country — usually in the name of national security — is the concept of deterrence. The strategic case for having nuclear weapons stands or falls with the strengths or weaknesses of the arguments for or against nuclear deterrence.



WHAT IS DETERRENCE, PARTICULARLY NUCLEAR DETERRENCE? WHAT DOES IT MEAN TO REST YOUR HOPES FOR SECURITY ON NUCLEAR DETERRENCE?

A state of 'deterrence' is simply a 'state of mind'! That is all it is. To believe that deterrence will always hold or to believe it will hold for whenever or whomever you want, is to believe in a myth.

It is to believe that the people you want deterred, such as the 'enemy' nuclear elite — the people in and out of government who shape or make the decisions regarding nuclear weapons-related activity (including the pressing of the nuclear button) — will always behave as the deterrer (your own national nuclear elite) will want them to behave, although this opposing elite is subject to a whole host of military, economic, social, political, cultural factors and pressures as well as a variety of external and internal tensions and confusions which are never under the control of the supposed deterrer.

Pinning your hopes on nuclear weapons to bring about security is to make nuclear deterrence into a security doctrine. In its essence this doctrine when adopted, implicitly or explicitly by a country, becomes a conceptualisation, a rationalisation, that it is sensible and necessary to rely on the deterring capacity of weapons (ie. nuclear weapons) for one's national security.

However frightening nuclear weapons may be, they can *never* deter *certainly*, *confidently* or *enduringly*. Those who believe we must always live with nuclear weapons are even prepared to claim that nuclear weapons can deter *permanently*. Nuclear deterrence makes any or all of these claims and is an internally incoherent doctrine.

To rely on deterrence of any sort is to seek peace or stability by *threatening* the opponent, i.e. generating fear and hostility in the opponent. This heightens tensions. It is not an attempt to bring about greater peace through cooperation or reduction of mutual threats or hostilities but through the very opposite route. That is why such efforts at deterring so often break down. The *contradiction* inherent in deterrence — of tying war avoidance to war preparation, of seeking security through promoting hostility — is not necessarily fatal in the case of conventional weapons and warfare. You can have some security in spite of the failure of non-nuclear deterrence and the outbreak of conventional war. But you can never have any security if nuclear deterrence breaks down and a nuclear exchange takes place.

**BUT WHY DOESN'T
NUCLEAR DETERRENCE
WORK?**

Thus a burden of expectation and hope is placed on nuclear weapons and their possession which is never similarly placed on conventional weapons. It is to believe that nuclear deterrence will always hold for as long as you want it to although you can *never control fully* the conditions in which this deterrence is supposed to successfully operate. That is why to subscribe to nuclear deterrence as a doctrine or belief system is nothing but an *irrational act of faith*.

It is important to understand that nuclear weapons did not create a reality of deterrence. It was deterrence that was created to cope with the reality of nuclear weapons!



The only time nuclear weapons have been used so far is on Japan in 1945.

It would not have been enough for Japan to merely possess nuclear weapons. To even hope to deter the USA two conditions would have had to be met. The USA would a) have had to have *known* that Japan had them, and b) that Japan could deliver them on the USA. So Japan

**IF JAPAN HAD NUCLEAR
WEAPONS THEN,
WOULDN'T THE USA
HAVE BEEN DETERRED
FROM USING THEM ?**

would have had to use nuclear weapons either by exploding them in a public (and not secret test), or as is more likely, on some other country.

Moreover, if Japan had such weapons what would have prevented it from using it on the USA unless it knew that the USA had them as well? So the USA too, would have had to carry out a public test to show its nuclear prowess and not just the secret test it did at Almagordo if it wanted to deter Japan from using such weapons against it. In any case, what would have prevented Japan from using nuclear weapons if it had them against some other country in, say, Asia as part of its war drive?

In short, once we allow for systematic speculation about the likely historical possibilities if Japan had nuclear weapons, then we would literally have to consider not just the specific issue of whether or not the USA would have used nuclear weapons against Japan (i.e. been deterred) but to allow for a very different history emerging with no guarantee that the Axis powers — the World War II alliance between the dictatorships of Germany, Italy and Japan — would have been defeated in the way they were, or even at all!

The simple point is that when pro-deterrence thinkers try to use a hypothetical historical example to support their case — if Japan had nuclear bombs they would have deterred the USA from using them during World War II — they just end up in a complete mess because logical thinking demands that they then allow for all sorts of ‘reasonable’ though hypothetical possibilities.

Much of what is called ‘strategic thinking’ is unavoidably speculative. But when it involves thinking about what countries might do or not do if they have nuclear weapons, it is all too often speculative in a particularly superficial and undisciplined way. When we use *actual* historical evidence, then far from supporting the case for the supposed efficacy of nuclear deterrence, such evidence enormously weakens the claims made on behalf of the power of nuclear deterrence.

In fact, history shows that far from increasing nuclear security, the possession and deployment of nuclear weapons, whether in the name of deterrence or as instruments of foreign policy, only increases nuclear insecurity! Otherwise you cannot understand the nuclear arms race between East and West when both sides accumulated enormous overkill capacities, each side's arsenal being enough to destroy the world twenty to thirty times over. Can any 'sensible' notion of deterrence explain such insanity? The explanation lies not in the peculiar mental deficiency of U.S. and Soviet elites but in the *inherently* degenerative or unstable logic of deterrence thinking that promoted an ever spiralling arms race!

**HASN'T HISTORY SHOWN
THAT DETERRENCE WORKS?
AFTER ALL, DIDN'T NUCLEAR
WEAPONS (THE FACE-OFF
BETWEEN EAST AND WEST)
PREVENT WORLD WAR III?**

As for nuclear weapons preventing the outbreak of a Third World War in Europe — this is a speculative and hypothetical explanation which should be compared to other alternative — more intelligent and plausible — explanations. To believe nuclear weapons prevented World War III is to believe that in their absence, World War III would have happened. But why should it have? World wars neither 'happen', nor are they avoided, because of the presence or absence of a *single* factor such as nuclear weapons! World wars take place because of a whole *complex* of factors operating in an extremely turbulent context.

The processes that can lead to a world war depend on a combination of structural and contingent factors and causes. In the case of the East - West conflict, the freezing of the status quo in Europe came about because of numerous factors creating and sustaining the Cold War, *not* from the presence of nuclear weapons. This is precisely why, when the Cold War ended, bitter conventional warfare broke out in ex-USSR and ex-Yugoslavia although the overhang of nuclear weapons in Europe remains very much in place!

WHY SHOULD NUCLEAR DETERRENCE THINKING PROMOTE AN ARMS RACE? WHY CAN'T INDIA ESTABLISH A STABLE SITUATION (OR WHAT IS CALLED "STABLE MINIMUM DETERRENCE") AGAINST ITS OPPONENTS AND STAY THERE?

of course, is assuming he doesn't create a nuclear winter world-wide through destroying the atmosphere — the critical point of explosion after which this would happen is not yet properly known.). Your use in retaliation to such an attack can only be an act of revenge, not of security, and it may only instigate a further attack by the initiator. Because there is such an advantage to the country which strikes first, deterrence thinking requires that a country set up what is called a "credible second-strike capacity". This means that your opponent should have strong reasons to believe that if he strikes first you will still have enough weapons, delivery vehicles (planes and missiles) and enough of a functioning command, control, communications and intelligence system to carry out a second-strike which will so seriously damage the attacking country that their rulers will decide not to strike first, i.e. be deterred.

Nuclear weapons are quintessentially offensive weapons; they cannot be used 'defensively' to bring about security. If your opponent uses them first to attack you, he has a great advantage. (This,

It is clear that it is not enough to simply have a nuclear stick to counter an opponent's nuclear stick. You have to have quite a few nuclear sticks. Moreover, if your opponent's nuclear sticks get more and more sophisticated then so must yours, even if not equally so. If his ability to devastate your deterring capacities increases you also have to continue to make or try to make more sophisticated nuclear clubs of different sizes, shapes, materials, purposes, etc.

Technology doesn't stand still. Nor does politics. To deter an opponent systematically and regularly means that your 'credibility' as a nuclear opponent must always be maintained. That is to say, both your will and your capability to use nuclear weapons as a last resort or in retaliation must not be doubted by your 'enemy' or 'enemies'. So this 'will' must be periodically shown and the 'capability' must be regularly upgraded. A pattern of

institutionalised belligerence i.e. a hostility-induced and hostility-generating arms race is established.

To cut a long story short, there is no such thing as a "stable minimum deterrence". Minimum deterrence is not a fixed position but a moving and unstable one, depending on the nuclear preparations and improvements your presumed opponent is making or can make.

Indian pro-nuclearists can never agree even among themselves on what constitutes an "adequate deterrence" against, say, Pakistan and China. So those at the extreme end of the spectrum who make the highest demands for a 'viable' weapons system invariably get preferred because if you have satisfied them you have more than covered what the 'moderate' nuclearists are clamouring for.



We cannot be confident that nuclear war will never happen. Nor can we afford to be wrong or make a mistake even once. We can also say with greater confidence and accuracy than our pro-deterrence opponents who dismiss fears of a nuclear outbreak, that as long as nuclear weapons are around they are almost certain to be used at some time or the other even if we don't know exactly when. Furthermore, if you look at the actual history of nuclear conflict, especially between the East and the West, then there were clearly occasions when, either by accident, miscalculation or design, nuclear weapons came close to being used or detonated.

**BUT ISN'T IT TRUE THAT THOUGH A
NUMBER OF COUNTRIES HAVE HAD
NUCLEAR WEAPONS AFTER 1945
THERE HAS BEEN NO OUTBREAK OF
NUCLEAR WAR ANYWHERE?**

Perhaps the closest we came to it as a matter of design, was in the 1962 Cuban missile crisis when very senior defence officials and civilian bureaucrats advised John Kennedy to attack first. This has now been revealed in recently released U.S. government papers. A number of former top officials who used to be pro-bomb during the Cold War have now said that deterrence thinking should not be relied upon.

General Lee Butler, former head of the USA's Strategic Air Command said the world "survived the Cuban missile crisis no thanks to deterrence, but only by the grace of God". He also said that during the Cold War the honest truth was that the USA never felt nuclearly secure but constantly insecure. They were never reassured by the so-called state of deterrence apparently established by the respective capacities/ arsenals of the superpowers.

There have also been over 224 accidents of various types concerning nuclear weapons systems. These have been classified in four ways:

Group 1 is accidental, unauthorised or possible detonation of a weapon.

Group 2 covers accidental detonation without war risk but radioactive contamination.

Group 3 refers to accidents to vehicles carrying nuclear weapons.

Group 4 refers to other significant accidents.

In group 1 there were at least 10 such accidents. This record does not include an accident we now know about — in 1954 in North Carolina, a nuclear bomb accidentally fell off from a plane and five of its six safety mechanisms against detonation failed! *



**BUT WHY SHOULD WE
BELIEVE THAT INDIA AND
PAKISTAN WILL REPEAT
THE FOLLY OF THE
NUCLEAR ARMS RACE
BETWEEN USA AND USSR?**

India and Pakistan are more likely to have a nuclear conflict than any other pair of nuclearly equipped rivals because a nuclear dimension has now been added to an already hostile relationship between the two governments.

South Asia is now the only part of the world where a continuous hot-cold war has existed between the same two combatants for over 50 years. In short, the conditions for a spiralling nuclear arms race and constant tension (repeating the East-West experience) are very much in place.

*Shaun Gregory, *The Hidden Cost of Deterrence: Nuclear Weapons Accidents*, Brassey's London, 1990.

The circumstances in which nuclear weapons are most likely to be used are, of course, in the framework of a war-like situation or atmosphere where their use is most likely to be perceived as 'unavoidable' or in pre-emptive 'self-defence'. The hatreds and hostilities associated with the existence of such an atmosphere are not far from the surface in the case of India and Pakistan. One can easily envisage circumstances in which they could erupt.

The conflict between East and West, for all their strategic posturing, was essentially an ideological one. The conflict between India and Pakistan is a concrete one centred on disputed territory, historical enmities since the birth of the two countries, and geographical proximity. Another 'hot' war is a very real possibility.

Missile flight time between USA and USSR was 25 minutes. Here it is less than three minutes. There is not even time to reverse any fateful decision to launch a conventional or nuclear exchange via missiles.



Here, there is a question of logic and a question of historical fact. The question of logic is that to have any hope of deterring (in nuclear terms) a nuclearly equipped rival you have to have a second-strike capacity against it. The country which has most often attempted nuclear blackmail in an explicit or implicit manner is the USA. Estimates vary from 26 to 37 American attempts.

**WHAT ABOUT THE THREAT OF
NUCLEAR BLACKMAIL, SAY
FROM CHINA? DON'T WE
HAVE TO DETER THAT BY
NUCLEAR WEAPONS?**

But to nuclearly deter the USA you have to have a 'credible minimum deterrent' against it and the only country that has had this and still has it is Russia. Even China does not have this. India can never hope to have this in the next twenty years or more unless the USA rapidly reduces its current nuclear arsenal. The only country to have carried out an action that some Indians called attempted nuclear blackmail was when the USA in 1971 sent the USS Enterprise battleship into the Bay of Bengal loaded with nuclear missiles.

India, however, has had no choice but to live with the U.S. bomb for so many decades and it has done so comfortably. As a matter of historical fact not only did the U.S. action in 1971— if it was attempted blackmail— fail, but there is no plausible evidence that *any* act of attempted nuclear blackmail by *any* nuclear weapons state has ever succeeded. It is also a matter of historical fact that in the 34 years that China has had the bomb, it has never attempted blackmail against any country including India. Nor has possession of such bombs prevented nuclear weapons states from being militarily and politically defeated by non-nuclear countries and forces — China being bloodied in a military conflict with non-nuclear Vietnam in 1979, France losing in Algeria, Britain in Suez, the USA in Vietnam and Russia in Afghanistan.

One of the most important reasons why every attempt at nuclear blackmail has failed is precisely because nuclear weapons are remarkably *astrategic* weapons. Apart from the most dire circumstances concerning the self-defense of one's country it is extremely difficult to justify their use by a possessor country even to its home population. Precisely because the use of nuclear weapons or even the threat of their use is so utterly disproportionate to whatever political ends governments may desire, their potential for blackmail can be safely disregarded. It is effectively nil.

The regime which the USA today wants to destroy more than any other is Cuba's. It is using every political, military, economic and other means to strangle the country. But nuclear weapons are utterly irrelevant to this effort.



WON'T A NUCLEAR INDIA AND PAKISTAN PROMOTE GLOBAL NUCLEAR DISARMAMENT BECAUSE THE OTHER NUCLEAR WEAPONS STATES WILL NOW BECOME MORE SERIOUS ABOUT DISARMING? DIDN'T THE USA'S ACCELERATION OF ITS NUCLEAR WEAPONS PROGRAMME UNDER PRESIDENT REAGAN IN THE EIGHTIES ULTIMATELY FORCE THE USSR TO PRESS FOR NUCLEAR DISARMAMENT?

This kind of thinking is typical of pro-nuclearists but it is again an example of inverted logic as well as being contradicted by the historical evidence. Does anyone believe that the USA, for example, can be frightened, awed or worried into disarming because India has developed nuclear weapons? Well, that is what the claim amounts to saying! In reality, hawkish behaviour by one nuclear weapons state promotes hawkish behaviour by other nuclear weapons states. Hawks in different countries feed off each other's importance and power.

The Indian nuclear elite has talked a great deal about how it had to have the bomb because of the potential threat posed by China and the fact that it is a potential nuclear rival. The truth is that China has never seen India as a nuclear threat so far and has not behaved as if India was such a threat. There has been no reason for it to do so. For China, the border dispute is a distant and minor matter though for the Indian elite it is something of a running sore which it constantly reminds itself of. However, after the Indian justifications that the bomb was partly directed at China, the latter country must begin to consider India as just such a nuclear rival; and if not now, then certainly in the future. And China will have to make its nuclear preparations (including targeting) accordingly. In short, India by its actions has moved a long way to making sure that China is no longer simply a potential nuclear rival but becomes an actual one. This increases Indian and Chinese nuclear insecurities.

As for the idea that President Reagan's nuclear belligerence so worried the Gorbachev leadership of the USSR that they wanted to reduce their nuclear arsenals: it was Gorbachev's determination to end the Cold War, to reduce and eventually eliminate its associated tensions first that made possible the subsequent reduction of nuclear weapons.

India and Pakistan or India and China must first improve their political relationship in order to reduce mutual nuclear tensions. It is absurd to think that you should increase nuclear tensions by nuclearly arming in order to reduce political tensions! For over fifteen years now the political relationship between India and

China was improving slowly but steadily. Now this decisive setback will ensure that things will not be as they once were.

After a gap of 34 years, India and Pakistan have become the first new additions to the group of countries openly possessing and justifying their possession of nuclear weapons. This will encourage other countries which have the capability but have not yet decided to go openly nuclear to do the same. They will cite the same kind of national security considerations and the same kind of nuclear deterrence arguments to justify their actions.

The prospects for making the world permanently free of nuclear weapons will be worsened, not improved, by more and more countries going openly nuclear. In truth, the mind-set of nuclear elites everywhere, dominated as it is by the concept of nuclear deterrence and its illusory virtues or strengths, is exactly the same. Only the nationalities of such nuclear elites are different and therefore the 'national interests' they claim to represent and fight for.

It is this mind-set, which believes so strongly in the value of nuclear deterrence, that constitutes the greatest single barrier to bringing about universal nuclear disarmament.

The single most important reason why it has been easier to move towards universal elimination of other kinds of weapons of mass destruction like agents of biological and chemical warfare is because those weapons have not carried the same baggage of deterrence arguments which have justified their possession, deployment and use for 'national security' or other political purposes.



Why Women Must Reject Nuclearisation

**Kumkum Sangari, Neeraj Malik,
Sheba Chhachhi and Tanika Sarkar**

A nuclear bomb does not discriminate, nuclearisation does. A nuclear bomb when dropped on any population does not distinguish between Hindus or Muslims, poor or rich, civilian or military, child or adult, men or women. However, nuclearisation—developing, manufacturing and maintaining nuclear weapons— affects specific social groups in particular ways.

India's decision to become a nuclear weapon state has a profoundly negative impact on women's lives. On the one hand, women being already disadvantaged within existing social and familial structures, will bear a larger part of the social cost of nuclearisation. This means a decrease in access to resources, education, employment, services; a reduction in both physical and social mobility and an increase in violence, fear and sexual oppression. On the other hand: a valorisation of the ideologies which underwrite nuclearisation is a valorisation of ideologies that justify and maintain the existing status of women in society.

The economic sanctions against India have given the government an opportunity to proceed with a detrimental economic liberalization in the name of 'survival'. The secrecy, disinformation and lack of public accountability that accompany nuclearisation are a recipe for anti-democratic and authoritarian regimes. They exclude the majority of citizens, and of course women, from any policy and decision-making.

Nuclearisation produces social consent for increasing levels of violence. It legitimizes male aggression, and breeds the idea that nuclear explosions give a 'virility' to the nation which men as individuals can somehow also share.

In the present political situation, the masculinist rhetoric of nuclearisation has been combined with a false patriotism and Hindutva ideologies. This effects all women in so far as it gives new militaristic meanings to national identity, and demands 'othering' and animosity towards our neighbours. It effects women from the minorities even more since they become the implicit or explicit targets of this chauvinism.

SOCIAL COSTS AND DISTRIBUTION OF RESOURCES

The social costs of nuclear weaponisation in a country where the basic needs of shelter, food and water, electricity, health and education have not been met are obvious. What should also be obvious is that the major brunt of this burden will have to be borne by the most vulnerable sections of society among which are the lower classes and women.

The high costs of keeping up with the nuclear arms race together with the threatened sanctions by the powerful nations will exacerbate an already grim economic situation. While the inevitable cutbacks in social security and welfare will hurt and damage all poor people, the proportion of the poor who are steadfastly denied a fair share of even the scarce resources, will undoubtedly become larger.

The state of female health, nutrition and literacy is abysmally low, lower even than that of poor, deprived men. Moreover, since patriarchal family norms place the task of looking after the daily needs of the family mainly upon women, scarcity of resources always hits women the hardest. Less food for the family inevitably means an even smaller share for women and female children just as water shortages mean an increase in women's labour who have to spend more time and energy in fetching water from distant places at odd hours of the day.

Crimes against women, including domestic violence, are often linked to deprivation, economic pressures and unemployment. For instance, female infanticide often occurs in very deprived households. And if a selection is made about which hungry mouths to feed, social and cultural values ensure that the girl is found more dispensable. These trends will now intensify; and the prospects of reversing them will weaken.

Despite the BJP leadership's claims to the contrary we can expect a steep cutback in several sectors rendered 'insignificant' in the face of their macho assertion of national pride and self-esteem. We need to question these false notions of national pride — does it rest on proving the capacity to destroy the planet or on providing basic life-sustaining amenities to its citizens?

In the field of education, though the recent budget boasts an increased outlay together with the claim that the government will aim to provide free and compulsory education for girls upto college level, the real picture is sharply different. New policies and cutbacks will hit girls and poorer students hardest, at the level of both primary and higher education.

For instance, the UGC which finances the universities has been progressively cutting back maintenance and other grants to institutions. In a recent move it has even directed colleges and universities to raise their own resources to meet 20% of the additional costs of increase in staff salaries and has unilaterally cut back its grants accordingly. As a result most colleges of Delhi University have decided to raise students' fees by Rs. 3000-4000 annually. So much for the government's commitment to education, especially women's education!

Similarly the areas of health and welfare are bound to suffer. Safe contraception has still not become a major priority of scientific research and public spending. Instead the present government has chosen to exploit the frequently expressed middle class fear about the pressure on resources created by increasing population, in which there is often a subconscious balancing of the dread of a population explosion with the means of annihilating ever-larger numbers of people.

Since women carry most of the burden of care of the sick, family health etc, the health hazards that are directly caused by nuclearisation will also affect them more severely both in terms of increased labour and in terms of social attitudes which tend to blame women for genetic malformations.

Education about the consequences of nuclear experiments, explosions, and manufacture of nuclear missiles on civilian populations, public health and the environment should be a priority expenditure, especially if India is to meet its goal, till now, of promoting universal disarmament. Instead these are shrouded in secrecy. The Department of Atomic Energy in India has not made public any report on the health effects of radiation in its atomic plants. Though there have been several accidents at nuclear installations affecting the health of workers and the people in the areas, no data had been disclosed. And the Atomic Energy Act (1962) ensures its non-availability to the public as all information related to nuclear technology is classified data.

There have been reports from Pokhran that, since the nuclear test in 1974, there has been a higher incidence of cases of cancer (particularly blood and bone) and Down's syndrome (a form of congenital mental retardation in new born babies). The government has not bothered to investigate these. Instead it has glibly announced that the present Pokhran tests are 'safe'.

In fact there are millions of radiation victims all over the world — workers in nuclear plants, the peoples of Hiroshima and Nagasaki where bombs have been dropped, people in the Pacific islands where several tests have been conducted, the uranium miners, as well as the victims of nuclear weapons testing,, waste dumping and the accidents that have happened in many parts of the world.

Nuclearisation of India will now involve decisions about the disposal of very large sums of money and resources that could have had innumerable constructive uses in our poor, under-educated country. One could say that, in any case, there was very little spending on social welfare even before 11 May 1998.

However, the possibility was far more real; all governments were accountable for ignoring such vital priorities.

Now, with increasing tension on all sides, it will be far easier for this government to side step the issues altogether and to constantly cite the need for national security to undermine any demand for social welfare.

CONVENTIONAL WEAPONS AND NUCLEAR WEAPONS

The option of nuclear weaponisation means embarking on a self-destructive and never-ending race for more and more lethal and costly weapons. The argument that it is cheaper to make a bomb than invest in conventional weapons is not convincing. Nuclearisation will not eliminate the necessity for conventional weapons. On the contrary, by provoking neighbouring countries severely, it has made the prospect of conventional warfare far more imminent, and has stepped up military investment altogether.

So, investment in non-nuclear weapons will increase, and on top of that the cost of the arms race will have to be met. All this will come out of the strained resources of a country where nearly half the people live below the poverty line. If militarism distorts the economy and polity so that no goals of social justice can be met, nuclearisation distorts it even more. In sum, we will have to carry the double burden of conventional militarisation and nuclear weaponisation. And this burden is both material and ideological.

Militarisation has been tied to global processes corresponding to Cold War policies, the arms race, and deployment of new missiles. It tends to produce a more self-assertive policing of societies, new nationalisms, alongside new avenues of consumption.

Toys, games, computer games, popular films and television programmes have already naturalised an inordinate degree of militarisation through representation and simulation of warfare

and the values associated with it. These values range from the glorification of motherhood to social constructions of masculinity and femininity; it is after all necessary to control women in order to militarise men.

The depersonalisation of warfare because of new technologies (as in the Gulf War) masks human suffering and casualties involved, and produces a tolerance for very high levels of violence.

All of these are intensified with nuclearisation which is, in addition, far more committed to secrecy and notions of expertise, and is controlled by a tiny bureaucratic and scientific elite. Nuclearisation, even more than militarisation, is breeding a new language of scientism. Secrecy and lack of information in fact assists in creating media hype that can project a false consensus around the issue. In turn, public ignorance is one of the keystones of this so-called consensus. For example, few people are aware that the costs that have been acknowledged are only the tip of the iceberg.

The massive cost of maintaining and upgrading nuclear weapons remains hidden. Secrecy also feeds the myth of scientific and bureaucratic expertise. Women, for whom even primary literacy is hard to come by, often have a common-sensical gut reaction against nuclear weaponisation but since they are educationally the most deprived, they are less likely to be able to monitor and sift the information they get with confidence.

What is more, the strange character of nuclear policy-making not only sidelines moral and ethical questions but genders them. This elite gets to be represented as rational, scientific, modern, and of course masculine, while ethical questions, questions about the social and environmental costs are made to seem emotional, effeminate, regressive and not modern.

This rather dangerous way of thinking which suggests that questions about human life and welfare are somehow neither modern nor properly masculine questions, or that men have no

capacity and concern for peace and morality, can have disastrous consequences for both men and women.

It trivializes human suffering. It perjoratively casts human caring as a sign of weakness or effeminacy, as concerns simply of the oppressed, as irrelevant to modern life.

It carelessly rejects the histories of such caring in our own country or callously reverses them, as in the misuse of Buddhist symbolism in describing the success of the nuclear tests.

It downgrades non-nuclear countries as 'backward' and as unequipped to step into the twenty-first century. In short, it breeds a politics based on relegation of the weak and a neo-Darwinian survival of the fittest.

What is more, the type of nationalism that accompanies nuclearisation demands obedience and conformity. It is repressive, silences dissent, and dubs all humane and democratic protest as anti-national. In short, it makes it more difficult to imagine and work towards a better existence.

INCREASE IN AGGRESSION

Nuclearisation, then, is not a matter of military and technological decision or activities alone. A nuclearised India will tend to construct a cultural and educational environment that promotes a preference for aggression, violence and revenge. There will have to be a systematic deployment of technologies and scientific training that are geared to this, at the cost of their peaceful, constructive or welfare deployment.

In order to justify these priorities, people are likely to be fed with more images of militaristic heroism, of brutality, of relentless pursuit of aggrandisement. On the other hand, images that grow out of peaceability, of tolerance and universal goodwill, are likely to be systematically denigrated. The possibility of drawing upon human values and perceptions (traditionally associated with the nurturant roles of women) to develop life-affirming and sus-

taining attitudes and methods for the entire social body will be reduced.

Such new cultural activity and new education to rationalize and gain public consent for nuclear weapons are likely to promote a mindset that enhances what are conventionally known as masculine values: violence, eagerness to retaliate, or a tendency towards brutality. The difference, of course, will be that now, such values will no longer be restricted to men. Women will be included in the new values since mothers conventionally are socialising agents and are the first to teach children about the world.

Under the auspices of the BJP-led government, this in effect can mean a wider proliferation of the values that the RSS has already been trying to establish and propagate. Of all the political formations, the Sangh had been the only one to develop a systematic training programme to teach their women how to hate single-mindedly, and how to translate that hate into martial action. Since 1936 their women's 'shakhas' have worshipped the icon of the armed Goddess, recited incantations invoking war, and taught women how to handle weapons. In their 'boudhik' or daily ideological training session, they have explained how every Hindu woman must hate Muslims. They have gone beyond glorifying women as mothers of soldiers. They have attempted to perfect a formidable machine for producing an ideal-type woman who is herself a fully militarised being. And she is further exhorted, in their training programme, to pass all this on to her children.

Since the RSS provides the basic ideology of the BJP, there is a real danger of the multiplication of this ideology, especially since it fits quite neatly into their aims. Their aggression and demand for violence against Muslims within the country is already showing signs of extending to a country deemed to be Islamic.

The dangers are more acute given state control over the educational and media apparatus, and the fact that the BJP is now in a position to overhaul it in order to extend the values and training

of the 'shakhas' into schools and homes. Conventionally, the qualities of caring, preservation, peace and forbearance have been associated with women alone. This is a stereotype and these values should not be restricted to women. In fact just and humane social perspectives, including the feminist, have tried to spread these values among both men and women. However the presence of the bomb, and the new culture that it can engender, will make this extremely difficult. The Sangh Parivar will try to detach not simply men but also women from these values and teach them to turn to beliefs that actively desire destruction and extinction.

Nuclearisation, more than conventional militarisation, creates an atmosphere of tension, insecurity, fear, even panic. It gains consent for weapons of mass destruction by spreading the utterly false premise that economic pressures and social problems can be redressed through an accumulation of the capacity for violence. This sense of an increased capacity for violence against so-called enemies translates into and justifies everyday aggression against women, minorities and other underprivileged sections. Consequently, women's fear of sexual violence, used even otherwise as a form of containment, increases with the celebration of masculinist violence. Such a milieu can impede women's struggles for personal independence and a safe society, and trap them into either accepting greater containment of their activity and mobility or militarising themselves, into either retreating from public spaces or allowing themselves to be pulled into the language of violence against 'others'.

There can, however, be no development without peace, without eliminating the different, inter-related types of violence to which women are subjected — in the military and political sphere, in homes, neighbourhoods and workplaces.

CONCLUSION

We need to reject nuclearisation because of its social cost, new patriarchalism, danger of state authoritarianism, damage

to the environment, and erosion of our rights as citizens. And we need to reject it from the standpoint of democratic and ethical principles, from a defence of citizen's rights.

DEMANDS

◆ Nuclearisation must stop. There should be no further tests and no weaponisation.

◆ There has to be a full democratisation of nuclear decision-making through:

Transparency and honouring the right of citizens to information.

Open and informed debate across the political spectrum

Strict and open monitoring of the environment

Increase in education on the implications and effects of nuclear experiments even for peaceful purposes.

◆ The government must undertake to spread information about their consequences: depletion of the ozone layer, destruction of forests, the results of radioactive fallout, the contamination of water resources, changes in the climate, damage to unborn foetuses, and the long list of diseases caused by radiation from cataracts, mental diseases to cancer.

◆ The state must provide genuine security for citizens through expansion of health, education and housing services.



MIND *movement in india for nuclear disarmament*

Our Principles and Objectives:

1. WE ARE DEEPLY AND FIRMLY COMMITTED TO UNIVERSAL NUCLEAR DISARMAMENT.

We reject the argument that we must live forever with such weapons or that the nuclear genie cannot be put back into the bottle. We, as ethical and rational human beings can make this choice: the responsibility is ours. There is a special obligation on the nuclear weapons-states and nuclear-capable states to rapidly move towards universal nuclear disarmament.

2. NUCLEAR WEAPONS, POSSESSED NO MATTER BY WHICH COUNTRY OR GOVERNMENT, DO NOT INCREASE, BUT REDUCE, NATIONAL SECURITY.

The Club of nuclear weapons-states has always been a collection of hypocrites who claim that their possession of these weapons is the best insurance for global peace, while their acquisition by others would be a threat! India has now put in its application for joining this Club, albeit as a junior member. The Cold War era has conclusively shown that national nuclear posturing aggravates existing rivalries and hostilities and creates new ones. It is dangerous to use external threats as diversionary tactics, as the present government seems to be doing through nuclear weaponisation. A nuclear weapons regime is by its very nature secretive and elitist, and thus profoundly anti-democratic. It further promotes and deepens the ugly militarisation of everyday life and thinking that is already taking place in India. The ideology of

nuclearism which is currently being touted as nuclear nationalism is inseparable from the promotion of an ideology of masculinist aggressiveness. Today, this can be identified as the hallmark of communal nationalism. This has nothing in common with India's pluralist tradition. National nuclear arming creates a false sense of pride and imposes continuing and rising economic, social and political costs.

The social and economic costs of nuclearisation, both through missed opportunities and direct weapons manufacture and deployment, can be crippling. Nuclear weapons are incompatible with rational development goals. They represent a wasteful diversion from the true and fundamental security needs of ordinary people. In India the high costs of development of a nuclear arsenal, of its maintenance, storage, constant upgradation and expansion, will impair our ability to redress our basic ills such as sharp inequalities, casteism, communalism and sexism.

3. INDIA MUST DECLARE THAT IT WILL NEVER USE NUCLEAR WEAPONS UNDER ANY CIRCUMSTANCES.

The government's initial position that it will only use such weapons for "defence", not for aggression, allows their first use. The vague claim for "defence purposes" can justify any act, and does not distinguish between nuclear and non-nuclear conflicts. The government's subsequent contradictory offer of conditional no-first-use is inadequate. The use of nuclear weapons is wholly immoral and unacceptable and indefensible under all circumstances. India must also seek no use pledge from all nuclear weapon states.

4. INDIA AND PAKISTAN MUST PUT AN END TO ALL NUCLEAR TESTING.

There is no justification for any further testing by either India or Pakistan. The Pakistani retaliatory tests must not be used to rationalise more Indian tests, let alone open deployment of nuclear weapons.

5. NO PRODUCTION AND NO DEPLOYMENT OF NUCLEAR WEAPONS, EITHER BY INDIA OR PAKISTAN. ABOVE ALL, NO ARMING OF PLANES, MISSILES AND OTHER DELIVERY VEHICLES WITH NUCLEAR WEAPONS, AND NO DEPLOYMENT OF SUCH DELIVERY VEHICLES.

Unlike in 1974, the 1998 tests are connected to a programme of weaponisation of bombs of different sizes and yields. They suggest that India is even thinking of producing battlefield nuclear weapons like nuclear-tipped artillery shells, etc. This raises the chances of their being used, leading to dangerous nuclearisation of conventional military exchanges, possibly triggering a full-scale nuclear exchange.

There must be complete transparency in the nuclear-related regime. In order to decide about its own security, the public must always know fully what is done by the powerful who talk in the name of the people but are determined to keep information and power to themselves alone.

If India and Pakistan do not deploy nuclear weapons, we may still escape a nuclear arms race. Maintaining the firebreak between tests and open deployment or operationalisation of India's nuclear capability has become crucial. If this firebreak is established—and holds—we can still prevent a futile descent into headlong nuclear hostility, tension and rivalry and therefore into a spiral of ever-growing insecurity.

India can still salvage some credibility as a serious campaigner for global nuclear disarmament if it refrains from open deployment.

6. IT IS IMPERATIVE THAT INDIA RETURNS SINCERELY, SERIOUSLY AND ENERGETICALLY TO THE NUCLEAR DISARMAMENT AGENDA. OUR REAL SECURITY LIES IN A WORLD FREE OF NUCLEAR WEAPONS.

For further information:

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