

# Ten dilemmas of nuclear deterrence

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Four and a half years after Pokharan II, where do we stand? One sensible way of assessing this is to look at the basic predictions that were made by the pro-bomb lobby which welcomed those tests and justified the new path which India was embarking upon. Not all our pro-bomb experts made each and every one of the following predictions and judgements, but each and every one of these experts did, in the public domain, make at least one, and usually several, of these predictions:

*- It is good that India and Pakistan are now open, self-declared nuclear powers. This will lead to greater regional peace and security.*

Since 1998, relations between the two countries have reached their nadir, with at least three major crises and a period that saw the most sustained and largest full-scale mobilisation of troops between any two countries in peacetime anywhere in the world since 1945.

*- The chances of a nuclear exchange between India and Pakistan will become even more remote. Both countries want nuclear weapons not to raise nuclear tensions through, for example, a politics of 'nuclear brinkmanship', but to reduce greatly such tensions and to avoid brinkmanship politics.*

Since 1998, nuclear tensions have risen sharply, with the governments and armed forces personnel of both countries exchanging nuclear threats and counter-threats. Both countries have hailed the 'virtues' of nuclear brinkmanship, especially during the mid-2002 crisis. Today, the Indian government is also raising the spectre of Pakistan's nuclear weapons falling into terrorist hands. And a new layer of tension has been added by the recent nuclear sabre-rattling by both the Musharraf and Vajpayee governments.

*- A conventional war between India and Pakistan will be deterred.*

There was the Kargil conflict in 1999 and at least one near-miss (mid-2002). The first was brought to a halt and the second averted, not by the logic of nuclear deterrence, but primarily by US intervention and pressure.

*- There will be no competitive nuclear arms race between the two countries.*

Both countries are a) accumulating stocks of fissile materials, b) busy weaponising and mating warheads to missiles, c) enhancing the range and accuracy of their missiles, d) putting in place ambitious command and control systems and e) aiming to develop extensive nuclear doctrines and policies.

*- India will establish a 'minimum credible deterrent'.*

No one in the government is prepared to say how much the minimum is or that this minimum position will be fixed and stable. This minimum cannot be stable or fixed but is always a moving position dependent on the changing quantity and quality of the nuclear arsenals of its presumed rivals which, in the eyes of India's nuclear strategists and experts, include not just Pakistan, but China as well.

- *The acquisition of nuclear weapons by India and Pakistan, by increasing their bargaining power, will actually promote the prospects of global nuclear disarmament.*

This argument can be translated as follows: the best way for the world to nuclearly disarm is for more countries to nuclearly arm. This is as silly as it sounds. Since 1998, we have had the US moving forward with its Ballistic Missile Defence (BMD) project as well as with preparations to build new kinds of smaller tactical and battlefield nuclear weapons (bunker-busters), taking the global nuclear problem to newer, more dangerous and insane levels. The less said about the above absurd argument of the Indian pro-bomb lobby, the better.

So why are pro-bomb Indian experts and strategists today not shamefaced and apologetic about their revealed ineptitude? There are several reasons for this, among which personal ego and a relatively supine Indian media, which does little or nothing to confront such experts with evidence of their failures of judgement, count for a great deal. But the main reason has to do with these experts' unshakeable faith in the supposedly wondrous and almost magical powers of nuclear deterrence. Nuclear weapons, it is claimed, because of their 'threat power', deter the nuclearly armed opponent, thus preventing nuclear war and bringing about greater nuclear security. Such an argument is called 'counterfactual'. It is a claim that can neither be decisively refuted nor confirmed because it claims to explain something that has not happened - which is much more difficult than explaining something that has happened - and whose not happening can also be explained by a host of other non-nuclear factors.

This counterfactuality allows both pro- and anti-nuclear thinkers to remain where they are with no decisive refutation of each other. But the issue does not end here. The side whose arguments are more plausible, logically structured and compatible with the historical evidence about the relationship between security/insecurity and nuclear weapons is the side that should be favoured. Here, the anti-nuclear side wins hands down. The pro-nuclear side cannot escape two huge problems - one historical, the other logical - that lie at the heart of its case for nuclear weapons. No *sensible* notion of the efficacy of nuclear deterrence can justify the existence of the enormous overkill capacities that the US and Russia, in particular, have accumulated and retain to this day - enough to blow up the world many times over! This is explainable once one recognises what is called the *degenerative logic* of security thinking and behaviour based on the principle of nuclear deterrence. Thus, the historical evidence of overkill capacities and the continuing search (through the BMD) by the US for *further reassurances* of security through the qualitative extension of the nuclear arms arsenal is powerful testimony to how nuclear weapons, far from resolving the problem of security, only promote greater insecurity. Whatever their formal diplomatic positions about the BMD, given their need to avoid antagonising today's all-powerful US, you can be sure that Russia and China also feel quite insecure about where all this is heading and what 'benefits' the US might have, or think it has, if it succeeds in building the BMD.

The second problem lies in the very nature of the process that is initiated when one seeks security through nuclear deterrence. We shall investigate here what can be called the 'Ten Dilemmas of Nuclear Deterrence':

**1. No guarantees:** The possession of nuclear weapons by rival countries cannot guarantee the prevention of nuclear exchange or war. It is always a gamble, and it is a gamble that can always fail at some time, in some place. The claim that nuclear deterrence 'works', at least to such an extent that you can safely rely upon it, is untenable. It is untenable because the conditions that must be established for assured safety to arise from the workings of nuclear deterrence are so restrictive that these are impossible to establish in practice in the real world in which we live. This defect becomes clear when we understand what nuclear deterrence is: it is simply a psychological state of mind! It is a state of mind that must exist in one's nuclear opponents, i.e., among those who decide

on whether or not to push the nuclear button. And it is a state of mind that you (who are relying on nuclear deterrence for your country's security) must ensure will always exist in your opponent, although you can never guarantee or ensure that it will always so hold.

To put it another way, *nuclear deterrence is nothing but the irrational hope that a terrible fear of the consequences of nuclear war will continuously promote wise decisions by fallible human beings operating under intense pressure in changing circumstances that neither they nor you can fully control.*

**2. The vulnerability paradox:** If you need the threat power of nuclear weapons to become more secure, then you are trying to establish your security by making the other side vulnerable and more insecure, because they are afraid of what your nuclear weapons can do to them. Similarly, the other side must try to make itself more secure by making you more vulnerable and insecure with respect to its own nuclear arsenal. This situation is often called the 'security-insecurity paradox'. Your own security is supposed to rest on making the other side more fearful and insecure, so that it behaves the way you want it to. Then the other side seeks to overcome its insecurity and to make itself more secure by promoting greater insecurity and vulnerability in its opponent. Thus we have what can also be called the 'vulnerability paradox'. The way out of this would seem to lie in both sides accepting mutual vulnerability and a mutual 'balance of terror'. This, then, should be a form of stability in the nuclear equation.

Unfortunately, no such stability arises and, instead, we have a constant and powerful incentive to continuous nuclear arms racing. To appreciate why this is so, we first need to understand the basic conditions that have to be met if there is to be nuclear security, even by the logic of nuclear deterrence thinking. According to this 'logic', a country must have what is called 'an assured second-strike capacity'. Between two countries with nuclear weapons, there is always the possibility (and the temptation) that the country that uses its nuclear weapons in a properly targeted fashion first can hope or expect to finish off all or most of the opponent's nuclear capacity to retaliate after such a first strike. Therefore, a country must be able to 'absorb' a first strike and have enough left over to devastate the opponent so that the opponent is not tempted to strike first.

Developing more nuclear weapons in this way may seem, to the side doing it, a reasonable thing to do in order to protect itself. But to the other side this means your opponent is making itself stronger in the name of developing second-strike capacities, but can also make an even more massive first strike (regardless of whether or not it declares a policy of No First Use), and therefore spur the threatened side to also develop more nuclear weapons in the name of strengthening and ensuring the survival of its own second-strike capacity.

**3. The predictability issue:** Since deterrence is a state of mind in your opponent, you are always tempted to try ways of making that opponent's behaviour more predictable, i.e., in accordance with what you want. Rather than simply hope that fear of your nuclear arsenal will make the opponent behave the way you want it to, you try and replace hope with some form of compulsion. To demand a high degree of predictability about an opponent's behaviour means to demand repeated, regular, institutionalised predictability and symmetry by each nuclear player vis-à-vis the other. In reality, this is not possible. But as long as one nuclear player or the other seeks to establish what it thinks can be the conditions in which such assured and predictable behaviour by the other side will be forthcoming, then this slides easily into a strategy of not just simple deterrence but aggressive compellence.

This strategy of compellence involves certain kinds of nuclear preparations and their associated political implications and signals, whereby the other side is supposedly 'compelled' to follow the pattern set by, and more 'controlled' by, the first nuclear player. Not only is nuclear arms escalation

written into this 'compellence' script, but nuclear tensions are even more heightened than otherwise. The 'certainties' of compellence are substituted for the 'uncertain certainties' of 'normal' deterrence. Something like this happened with the US pursuing such a compellence strategy as part of its efforts to 'stabilise' and 'control' to its own 'advantage' the nuclear arms race of the late Seventies and Eighties. It is also a script written into the BMD, which represents the US ambition, nuclearly and militarily, to dominate the world via domination of space itself. Compellence is a more aggressive form of seeking 'political advantage' through nuclear weapons and there is no natural firebreak between the dangerous instability of deterrence-based nuclear behaviour and the more dangerous instability of compellence-based nuclear behaviour.

**4. The credibility conundrum:** It is not enough just to have nuclear weapons or to claim that they are never going to be used and that their purpose is only to prevent a nuclear conflict. Your nuclear threat must be credible. Indeed, an opponent will not be deterred if it believes that the deterrer will never use his nuclear weapons. Thus the 'capability' and the 'will' of the deterring country must not be doubted. The 'enemy' should be convinced that its nuclear opponent will use nuclear weapons if pushed to the brink, or at least be uncertain whether or not they will be used, but never certain or confident that they will not be used. However, any second-use of nuclear weapons is not, and cannot be, an act of security retrieval or enhancement. Once an opponent has launched a first strike against you, your security is gone. By using your nuclear weapons second, all you are doing is engaging in an act of revenge - to make the other country suffer too. This is also a senseless act of revenge because it only sets off a chain of further launches and counter-launches, which further devastates both countries. This being so, the side using nuclear weapons first can entertain ideas that a second strike is not credible.

Thus the question of 'credibility' or willingness to use nuclear weapons becomes very important. So governments that have nuclear weapons, despite occasional pronouncements that these will never be used, do not actually want the public or other governments to seriously believe them. This would undermine that country's credibility. In the face of all kinds of challenges and uncertainties - technological, military, etc. - the capability to use nuclear weapons must be constantly updated and fine-tuned and available for showing in a variety of circumstances. Also, the political will to use nuclear weapons (presumably in the last resort) must be periodically displayed. Thus the requirements of making one's nuclear deterrence credible creates powerful pressure for the generation and sustenance of both an enduring politics of nuclear-related hostility - including nuclear brandishing and brinkmanship - and of arms racing between rivals.

**5. Shifting equations:** Nuclear perspectives and behaviour are the prisoner of and subordinated to the more fundamental and overarching framework and context of political hostility between nuclear-political rivals. Nuclearisation and militarisation are themselves the symptoms or results or expressions of this prior hostility. They are not their primary causes and, therefore, cannot be the solutions undoing this hostility. Indeed, they exacerbate such tensions and hostilities because nuclearisation is itself the announcement that one is willing to inflict the utmost devastation on the opponent country and its society. It was not the supposed deterrent qualities of the US-Soviet nuclear standoff that eroded political hostilities but the other way around. It was the Gorbachev-initiated unravelling of Cold War politics that paved the way for the erosion of nuclear tensions. The same principle of the prior importance of politics applies to the India-Pakistan situation. And nuclear weapons, including the presumed powers of nuclear deterrence, operate within this wider and more determining political context. The rhythms of deterrence behaviour are subordinated to the more powerful rhythms of political behaviour between mutually hostile countries.

This gives rise to a classic paradox in the search for stable deterrence: the conditions that are thought to make it necessary to apply deterrence guarantee that it will not be stable. The extent to which deterrence is genuinely stable is the extent to which it is unnecessary! India and Pakistan

cannot have a stable deterrence equation, and nor did the US and the Soviet Union. But Britain and France can have a stable deterrent equation with each other precisely because it is unnecessary for them to have such a nuclear equation.

**6. Technological advances:** Constant technology advances in the development of nuclear warheads and in the designing of the range and accuracy of delivery systems is also a major input in ensuring the degenerative logic of deterrence-based thinking and behaviour. The more inaccurate and relatively invulnerable or undetectable nuclear missiles are, the more 'stabilising' they are. That is to say, if the missiles are not very accurate then they can be used to attack cities but not specific military targets. This makes them less useful as first-strike weapons aiming to, or capable of, knocking out an opponent's military installations (including its nuclear missile installations and airbases) and more useful as second-strike weapons able to devastate cities. In the jargon, this is called the difference between counter-value targets (e.g. cities) and counter-force ones (e.g. military/nuclear infrastructure). Moreover, the best second-strike nuclear weapons are considered to be those that combine low accuracy with relative invulnerability to a first strike. Thus, submarine-based nuclear-tipped missiles are seen as the best guarantors of second-strike capacity.

What happens, however, when land missile systems become more mobile (always being moved around on rail or road systems rather than being stationed in fixed silos), when there is 24-hour rotation of airplanes carrying nuclear weapons, and when submarine-launched missiles become ever more accurate (which is happening), and when efforts at detection of submarines and anti-submarine warfare make steady technical advances? What all this means is that technology advances are themselves undermining the distinction between 'stabilising' second-strike weapons and 'destabilising' first-strike weapons, since the former can increasingly double up to do the job of the latter. In short, this undermines hopes of stabilising the nuclear equation. What is more, new technological breakthroughs, like a developed Star Wars project of the kind envisaged by the US, are profoundly destabilising. One would need a separate essay to explain this complexity fully. In short, because technology does not stand still, neither does nuclear arms development. This is not just a matter of replacing the old with the new, but also of creating new problems, difficulties and dangers.

**7. To centralise or not:** The fear of a first strike leads to the search for what are called 'survivability-enhancing practices'. These are measures aiming to ensure that one's second-strike capacity, even after a first strike, is relatively unimpaired. But these very practices themselves undermine the stability of the deterrence equation. The two most important such measures are a) to disperse one's nuclear arsenal as widely as possible, and b) to adopt what is in effect a 'launch-on-warning' posture for one's missiles. Both give rise to grave problems. The first involves a centralisation-decentralisation dilemma. It is not enough to disperse the locations of nuclear delivery systems. There is also the problem of decentralising command and control over such systems. This is because there is always the danger of what is called a 'decapitating first strike'. That is to say, an opponent can not only strike first, but also seek to decapitate the command and control system of the opponent by finishing off the key decision-makers at the apex of the chain of command over the nuclear arsenal. Even the establishment of 'redundant' or multiple chains of command which become operative in wartime may not prove equal to the impact of an effective decapitating first strike.

To avoid this dilemma, one has to greatly decentralise command and control to junior levels and more localised personnel at much lower rungs of the chain of command, so that they can carry out a second strike. But any such decentralisation greatly enhances the possibility of an accidental launch or a miscalculation (especially in wartime situations) that leads to a launch on the presumption that an enemy nuclear attack is taking place or is about to take place. We now know from recently disclosed official documents how close a Russian submarine was to launching a nuclear attack on a

US ship during the Cuban Missile crisis on the basis of just such decentralised authority, because it thought the ship was torpedoing it (This event is now to be enshrined in a Hollywood movie). Pakistan, as a much smaller country fearful of a possible decapitating first strike by India, will have to face a particularly acute dilemma of centralisation-decentralisation. But the problem is acute enough for India as well.

As for adopting a 'launch-on-warning' posture to ensure second-strike capacity, this was the dominant form taken by the stationing of land-based missiles of both the USSR and the US during most of the Cold War. What this means, of course, is that there is an inescapable trade-off between the requirements of nuclear safety and guarding against the risks of a launch by accident or miscalculation, and the requirements of deterrence efficacy. During the Cold War period (and even afterwards) there were various false alarms and in some of those cases, matters came close to a head with the near-launch of missiles (The best study in the area is *The Logic of Accidental Nuclear War* by Bruce Blair, Brookings Institution, 1993.). But another rarely noticed point is that launch-on-warning raised a fundamental question about nuclear deterrence. This question is not about whether or not deterrence actually worked, but whether it ever existed!

A launch-on-warning posture meant that the US had less than 25 minutes before a Soviet missile could hit it and, therefore, a maximum of only that much time to decide whether the alarm was a false one or not. Since the US had submarines much more closely positioned to the Soviet mainland, the latter had only around 10 minutes before a hit - that much less time to decide on its response. In the case of the US, from the time the alarm is raised about a possible Soviet launch, ten to twelve minutes would have to elapse for the missile to be identified, its path tracked and the necessary information relayed to the top command. Another two to three minutes would elapse before this could be communicated to the President. Any decision (whether this was a false alarm or a real one calling for the order to launch) taken by the President, if it was to be communicated to all necessary stations so as to be carried out, would require another eight to ten minutes. In short, out of the roughly 25 minutes in which a decision by the President has to be made - even if the President was in direct telephonic communication with key aides - he has literally only one or two minutes in which to take a truly momentous decision. When the space and time allowed for human decision is so shortened by adopting the posture of launch-on-warning, what is one to make of the claim that deterrence is in operation when there can never be any foolproof check on an accidental launch by an opponent or a false alarm by one's own system?

In the case of India, the best survivability practice would be for both sides to move towards a launch-on-warning posture, which is something they may well do in the future. But the missile flight time between the two countries of five to eight minutes is so much shorter than even in the Cold War case for the US. There is no way there can be even the illusion of being able to maintain a proper check on preventing launches by accident or miscalculation. The trade-off between wanting greater nuclear safety and deterrence efficacy in South Asia is an even starker one than was the case between the great Cold War rivals.

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**8. Defining 'unacceptable damage':** According to the logic of nuclear deterrence thinking, it is not enough to have a second-strike capacity that survives a possible first strike. This capacity must be able to inflict what is called 'unacceptable damage' on the opponent. If after a first strike you only

have a few weapons left over, then your opponent may be prepared to take the risk of a first strike and 'absorb' the second strike. But what is 'unacceptable damage'? And how do you ensure that you have it after a devastating first strike? The simple answer is that the concept is inescapably vague and impossible to quantify and there is no assurance that you can retain the ability to inflict such 'unacceptable damage' after an enemy first strike on you, or that the damage you might be able to inflict would be unacceptable to the opponent. All that happens is that both sides have to embark on the escalator of making more and better nuclear weapons in the futile search for such second-strike capacity. George Lee Butler, who for 12 years headed the US Strategic Air Command (the service that has overall control of the US nuclear arsenal) and who, between 1992, and 1995 was the key Presidential adviser (the one person the President must consult before pressing the nuclear button) and subsequently turned nuclear disarmer, said quite correctly in regard to the 'unacceptable damage' issue that this was impossible to quantify or operationalise. The US ended up targeting over 16,000 locations in the USSR with ready delivery systems, but could still never be sure that they could have an 'adequate' second-strike capacity to cause 'unacceptable damage'. Butler revealed that he was himself so shaken, when he took over supreme command, by the revelation of the insane logic that was operating in US nuclear preparations in the name of deterrence efficacy, that he began to systematically question the basic assumptions of such thinking and the security paradigm based on it.

**9. Real vs. Surreal:** Seeking security through nuclear weapons and the supposedly wondrous powers of deterrence is itself reflective of a particular political approach to matters of security for a country. This approach has a name - it is called Realism or Realist thinking in international relations. This approach gives prime importance in politics to military power (even more than to economic power) and believes that great military power provides the leverage for getting great political advantages. It is this kind of thinking that lies behind the belief in the efficacy of nuclear weapons through its 'threat power'. Given this mental-intellectual predilection, invariably the justifications for the importance of nuclear weapons go beyond the simple claim that they provide, through deterrence, security against a nuclear attack. Since nuclear weapons are the supreme form of military threat power, and since military threat power is considered to provide so many other potential political advantages, even greater value is attributed to nuclear arsenals and it comes to be seen as the means for pursuing many more political goals.

Nuclear weapons are then seen as not just preventing nuclear war but as helping to achieve crisis-stability, to prevent even conventional war, to provide general foreign policy support, to provide global status and prestige, to help secure arms control and even to secure eventual nuclear disarmament. Now if one thing - nuclear weapons - can help give us all these advantages, then how on earth can one oppose having them? Alternatively, one can see this ridiculous expansion of the qualities attributed to the possession of nuclear weapons as reflecting a profound inability to think through the complexities of the notion of power, the inability to perceive its different forms and the specific limitations of each. What we have here is a set of God-worshippers for whom nuclear weapons have become the new God that can magically deliver all kinds of political goodies. This unwarranted expansion of the 'value' of nuclear weapons, then, makes it even more difficult to want to, or work to, get rid of them.

**10. What if?** Finally, there is the 'What if?' question. What if nuclear deterrence breaks down and there is a nuclear exchange? In fact, those involved in running a nuclear weapons system, for all their publicly pronounced assurances, know that neither they nor anyone else can ever guarantee that someone, somewhere, including their enemies, will not use such weapons. All countries with nuclear weapons must think about, and have some plans for, what to do if deterrence breaks down. That is to say, they have to make some kind of preparations to actually fight a nuclear war. This itself mocks their claim that since one has nuclear weapons, there is less danger of having a nuclear

exchange or war. India, for all its pretentious claims about the efficacy of deterrence after Pokharan II, had to subsequently launch Operation Purnima Vijay with General Padmanabhan, the first Chief of Army Staff of a nuclear India, publicly declaring that these were exercises to help equip the Indian forces to fight in actual nuclear warfare conditions. But these very war-fighting preparations themselves undermine confidence in deterrence postures and the claim that one can rely on the efficacy of deterrence.

***Has the world become more nuclearly safe over all these decades? If nuclear deterrence is efficacious, then its spread to more countries should logically make the world safer. If it works to make India and Pakistan more secure, then surely the same logic applies to other countries striving to make themselves more nuclearly secure? Does anybody in his or her right mind think this is actually the case? That their spread to Iran, Iraq (Israel already has them) and elsewhere, or their possession by non-State actors, will mean greater safety?***

At the end of it all, one can still imagine Indian nuclear hawks resorting to the counterfactual and saying, "Look, deterrence works because after 1945, there has still been no nuclear exchange between nuclear weapons powers." This is not a serious form of reassurance. Indeed, no one who has studied the record of the nuclear age since 1945 would ever try to pass off this absence of nuclear war as a source of reassurance. There have been some very close misses, with the Cuban Missile crisis bringing the world to within a hair's breadth of a nuclear holocaust. On a number of occasions, there were key people advocating the use of such weapons but, fortunately, each time those who opposed them got the better of the decision, if not always the argument. There is never any guarantee that such a situation will always prevail in the future. Indeed, some of the key former believers in the efficacy of nuclear deterrence have turned against their earlier beliefs, and many like George Lee Butler have said that it was only "by the grace of God" that a nuclear disaster was averted during the Cold War era. Today, the danger of a nuclear conflict has taken a more regional turn. If the chances of a global nuclear holocaust have receded due to the end of the Cold War, the chances of a regional nuclear exchange (with South Asia the current frontrunner for fulfilling this possibility) have become greater.

Moreover, the test for whether nuclear weapons bring about greater security is not established simply by asking whether or not deterrence has broken down completely through the eruption of a nuclear war. There is another, more routine, test question for assessing whether or not nuclear deterrence works. And that question is simply whether the countries that have such weapons are or feel more nuclearly secure from their rivals or enemies, actual or potential! Has the world become more nuclearly safe over all these decades? If nuclear deterrence is efficacious, then its spread to more countries should logically make the world safer. If it works to make India and Pakistan more secure, then surely the same logic applies to other countries striving to make themselves more nuclearly secure? Does anybody in his or her right mind think this is actually the case? That their spread to Iran, Iraq (Israel already has them) and elsewhere, or their possession by non-State actors, will mean greater safety?

Why is it so difficult for people, especially our bomb-supporters, to see what is staring them in the face - that the world is in a deep nuclear mess? The single biggest culprit for helping to create this mess is the mindset of those who believe in the efficacy of nuclear deterrence. This is the mindset that must be delegitimised, undermined and exposed for the bankrupt politics that it leads to, if we are ever to secure a truly nuclear-safe world. This can only be in a nuclear-free world.

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**P.S.**

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<http://www.littlemag.com/bloodsport/achinvanaik.html>

\* Achin Vanaik is Political commentator and former journalist, Achin Vanaik is currently Visiting Lecturer at the Jawaharlal Nehru University. He lives in New Delhi.