Sustainable Development Policy Institute

Working Paper Series no: W-22

The Poverty of Security

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01 February 1995

A publication of the Sustainable Development Policy Institute (SDPI).

Sustainable Development Policy Institute is an independent, non-profit research institute on sustainable development.

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The Poverty Of Security

Zia Mian

Abstract

This paper looks at the crisis that the search for security has created for Pakistan. The pursuit of a state-led, centralised concept of military security has resulted in massive failure to meet even the most basic needs of Pakistan's citizens by siphoning off large amounts of national resources. All that this kind of security has generated is an ever more modern military structure, which relies increasingly on technology, and now with the effort to develop a nuclear weapons and ballistic missiles, the technology of mass destruction. This kind of security, it is argued, is unsustainable. An outline for a more decentralised and sustainable form of security arrangement is proposed.

Introduction

It is long past time to extend the traditional notions of development and security in a radical way. In fact, the process has already taken off in some "official" circles. The 1994 Human Development Report of the United Nations Development Programme has introduced what were once radical ideas into the official ways of talking. That this is still rhetoric is clear from the simple observation that there is still a United Nations "Security Council", and that its permanent members are the nuclear weapons states. Nevertheless, there is a contradiction between word and deed, and that is a start in the right direction. The Development Report begins with an observation that would have been unthinkable outside the peace movement at any time during the Cold War: "The world can never be at peace unless people have security in their daily lives." Their conclusion is inescapable: "The search for security in such a milieu lies in development, not in arms."

With most of their people trapped in grinding poverty, and stuck in a relationship of conflict that has led in the past to three wars, India and Pakistan are prime cases where the basic questions of "development" and "security" should be rethought. What is development and its relationship to security? Who and what needs to be developed? Who needs to be made to feel secure? And crucially, who is to pose these questions and answer them? It is in poor, over-armed, nuclearised South Asia that a new understanding of these questions should be taking root and producing concrete models of creating "security through development".

But in South Asia, the education in "security studies" that has been given to the public in India and Pakistan has been tragically simple. The lessons have been hammered home for decades, and as a consequence there is widespread support for the imperatives of security in general, and the diversion of social resources to create such security in particular. It is an old- fashioned way of realising security; more and more tanks, faster and faster jet fighters, bigger and bigger armies, and a continuous search for new capabilities, submarines, missiles and nuclear weapons. But there are economic facts of life, and responding to the increasingly tight squeeze on resources, South Asia's armourers and their ideologues are now seeking cover behind the notion that nuclear weapons can provide cheap security.

The need to justify nuclear programmes on the basis of "more bang for a rupee" is based on a recognition that there is a trade-off between spending on "military security" and spending on "development", and that development has been suffering from a lack of funds. But these strategists still look at security in terms of a territory that has to be secured by the state on behalf of a population - they want to do it now by being prepared to obliterate the "other's" territory. The sociological axiom underlying this way of talking about security is of national interests competing with each other. It appears as the pretence that there really are such things as India and Pakistan which can be treated as if they had single individualised interests and motives. In particular, arguments are constructed on the basis of a "national interest" represented in the decisions made and actions taken by the state.

The other place this idea of a single, over-riding national interest shows up in is the claims made for a particular kind of "development". In the same way that the nation has to be defended, it has to be developed, and the state has claimed its right to secure the territory on which it claims the right to bring about development. But this development has usually done little more than strengthen the state. Another dam, displacing thousands of people to provide electricity they will not get access to, another nuclear power station, poisoning the land and the people around it, satellites beaming down television programmes which the majority cannot watch, this has been the "development" the state has had to offer.

Measured in terms of gross domestic product, gross national product, and per capita income - all of which obscure how unequal a society actually is - this kind of development stands revealed as being unjust in its concepts of what constitutes development, as well as who and what needs to be developed. Moreover, in practice, development has been managed in unjust ways, often relying on state repression against any resistance, and its consequences have been disastrous for many poor people - those in whose name the whole process is often justified.

This way of looking at security and development has led the region down a blind alley. But rather than turn back and try a different direction, the governments of both India and Pakistan are blindly pressing ahead. The only difference now is that foreign investment and nuclear weapons are held out as the genies that will work the miracle the state could not quite manage with its armies and its planners. This new hope is, however, only a variant of the old dream, where a nuclear bomb destroys cities rather than conventional weapons, and where corporate planning by multinationals replaces state planning.

The Crisis of Development

One of the clearest expressions of where Pakistan has been going wrong in creating the conditions for "development" and "security" is undoubtedly the relative numbers of teachers and doctors as compared to the size of the armed forces. Pakistan has 550,000 soldiers, but less than 60,000 doctors. In other words, it has nearly nine times as many soldiers as doctors. Pakistan also has more soldiers than teachers, about one a half times as many. George Orwell's phrase from his book, *1984*, "ignorance is strength", takes on new poignancy.

Table 1: Development indicators for Pakistan

Public expenditure on education (% of GNP, 1990)	2.1

Infant mortality (per 1,000 live births)	99
Maternal mortality (per 100,000 live births)	600
Low-birth weight babies (%)	30
Underweight children (% of children under five)	42
Under five mortality rate (per 1,000 live births)	130
Mean years of schooling	1.9
Public expenditure on health (% of GDP, 1990)	1.8
Public expenditure on education (% of GNP, 1990)	3.4
Rural population with access to sanitation (%)	10
Rural population with access to water (%)	45
Population in absolute poverty (%)	28

Source: Human Development Report 1994, UNDP

Nowhere is Pakistan's failure to create the conditions for a viable future more acute than in the provision of education to the people. The present system has failed miserably to deliver what was expected of it. In the 1981 census, the literacy rate was given as about 26% (UNESCO gave an estimate nearer 20%). The official figure for literacy now is about 36% (what is a realistic figure one can only guess). In 12 years, the literacy rate has increased at less than 1% a year, while population has been increasing at over 3% a year. The result is that there are now some 80 million people who are illiterate, which means that they can neither write a simple letter nor read a newspaper. That is about as many people as the total population of Pakistan in 1981.

Pakistan also fares badly on other development indices. Out of a total of 173 countries, it ranks as the 132nd country on the Human Development Index produced annually by the United Nations Development Programme (see Table 1 for Pakistan's recent development indicators).

To appreciate how critical the present is for determining the future, and the pressing need for a new agenda, it is worth getting a sense of how close Pakistan is to the edge of societal breakdown. As the crunch comes, the potential for violence between individuals, and between communities increases, as does the possibility of violent conflict between states. It is easy to get a quick sense of how severe the problems Pakistan will face unless things change, and soon.

Just imagine Pakistan in 2047, as its people celebrate the first hundred years of independence. According to the last census, in 1981, the population of Pakistan was 84 million people. The rate of increase of this population is usually given as about 3%, and shows little sign of decreasing. It can be easily seen that ten years hence, in 2004, the population will be over 170 million, double that in 1981. In the year 2047, when Pakistan is celebrating 100 years of independence, there will be 600 million people, give or take a few million here or there.

These 600 million people will have to fit physically into Pakistan, and it is not obvious that they can. Out of a total area of some 800,000 square kilometres, some 30% (very roughly) of Pakistan is incapable of growing trees, shrubs or even grass. Another 30% will have to be set aside for agriculture, since all these people will have to be fed. It seems reasonable to presume that the population of 600 million will have to live in the remaining one-third of the country, only 250,000 square kilometres or so. This many people packed equally into this area means a population density of about 2,500 people per square kilometre. For comparison, Karachi has a population density that ranges from 1,500 to 2,500 people per square km. In other words, by 2047 all of the inhabited area of Pakistan could be comparable to Karachi - a giant city of about 100 million homes, stretching over an area larger than the size of Punjab.

Even more serious though will be the problem of water for Pakistan. Given the disputes over the allocation of water from the Indus, there is a possibility that major conflict could erupt between India and Pakistan over the issue of water. The geographical location of Kashmir, as the site where the major river systems of Pakistan and Western India begin, may be responsible for part of the value both states attach to the future of the area.

Pakistan is a hydraulic nation. It has huge rivers and extensive canals, reservoirs, dams and barrages all managed by the state. It has watercourses and field irrigation ditches which are said to be over a million miles in length. What seems inconceivable is that even this much water may not be enough, but this may well be the case. The 1991 Water Sector Investment Planning Study - carried out for the government by consultants hired by the World Bank and paid for by the United Nations Development Programme - looked at water availability in Pakistan and noted that "the system as a whole is short of water". An official 1992 report, 'Water for the 21st century', prepared as part of the National Conservation Strategy, echoed that "water is not as plentiful as needed". A lot of this is due to sheer wastage. For example, more than 50% of irrigation water is lost between the rivers and the farms where it is needed for irrigation. An obvious solution would appear to be to use this water more efficiently. It would be a solution of sorts, but the report says that "even if every drop of surface water is safely conveyed to the farmers, the projected water requirements cannot be met on a sustained basis".

The bottom line is sharp: "Pakistan may well have to do with the water supplies it now has for the foreseeable future." The crunch will come if agricultural yields increase only at the rate they have done in the past, and there are no improvements in the irrigation system, then "a 40% deficit in food grains, an 80% deficit in edible oils, and a 30% deficit in sugar will be facing Pakistan by 2000". In other words, the limits of the present model of "development" are in sight.

The response to this terrible possibility, however, is more of the same. Pesticides and fertiliser can be, and are being, used in ever-increasing amounts to boost agricultural production. The problem with this though, is that in the long term, these chemicals end up poisoning both surface and underground water supplies. The already limited water that is available becomes even more limited.

The other response is to claim that food can be imported - all that is needed is for industry to grow very quickly and become the major part of the economy. Pakistan could export manufactured goods and buy food, it already imports several millions of tonnes of wheat a year, costing about Rs 10 billion, and edible oils at a similar cost. But, again, it is clear that rapid industrialisation leads to unrestrained pollution.

Pakistani industry is no different from industry anywhere else. They all treat rivers as natural sewers, and dump everything into the nearest one, to be carried far away from the polluter, and so become someone else's problem. In Pakistan, from industry based in Rawalpindi, which dumps into the Soan River, to that in Lahore, which dumps into the Ravi, down to Karachi, which dumps everything into the Lyari and Malir rivers, there is literally a river of filth, gradually getting filthier, running through the heart of the country. Many of the chemicals that are produced will not conveniently get washed away, some will seep ever so slowly into the underground water reservoirs that are tapped by tubewells, and poison them for hundreds, if not thousands, of years.

Table 2: Military Expenditures for Pakistan 1947-1995

Year	Million Rs	Year	Million Rs
1947-1948	153.8	1971	3,725.5
1948-1949	461.5	1972	4,439.6
1949-1950	625.4	1973	4,948.6
1950	649.9	1974	6,914.2
1951	779.1	1975	8,103.4
1952	783.4	1976	8,120.6
1953	653.2	1977	9,674.5
1954	635.1	1978	10,167.6
1955	917.7	1979	12,655
1956	800.9	1980	15,300
1957	854.2	1981	18,631
1958	996.6 *	1982	23,224
1959	1,043.5	1983	26,798
1960	1,112.4	1984	31,866
1961	1,108.6	1985	35,606
1962	954.3	1986	41,335
1963	1,156.5	1987	47,015
1964	1,262.3	1988	51,053
1965	2,855.0	1989	58,708
1966	2,293.5	1990	64,623
1967	2,186.5	1991	75,751
1968	2,426.8	1992	87,461
1969	2,749.1	1993	93,781
1970	3,201.5	1994	100,220
		1995	115,254

Source: Economic Survey of Pakistan and Federal Budget 1995-1996
Note: * = Spending for 15 months)

The hopeful could argue that "planning" offers a way out of this doomsday scenario. Not here it doesn't. There have been five-year plans aplenty. They are substantially responsible for the present mess. For the failure of planning, just look at Islamabad, the capital, the only totally planned city in Pakistan. Planning has been complete here: an entire city built on a green field site. With a population of barely 350,000, Islamabad has had two severe water crises already in 1994. First, an outbreak of hepatitis due to contaminated water, and then a water shortage because of poor rains in the preceding winter and spring. There was a water riot and one person was shot and killed by the police. The new market solution will no doubt be "let them drink Coke".

The Crisis of Security

Since Independence, the government of Pakistan has been consistently spending large sums on its armed forces (see Table 2). This was not done unthinkingly. It was realised from the very beginning that there was a problem with high military spending, and that there would be consequences for social development. The finance minister, in the first budget speech, said, "I confess that the expenditure on defence is higher than would normally be justified for a young state like ours... money, some of which under better conditions should have been available for the social, industrial and economic development of the country" (Budget of the Central Government of Pakistan for 1947-1948).

Table 3: Military expenditure (me) as a fraction of total government expenditure (ge) 1947-1995

Year	me/ge (%)	Year	me/ge (%)

1947	65.2	1971	59.1
1948	71.3	1972	59.3
1949	73.1	1973	42.2
1950	51.3	1974	42.8
1951	54.9	1975	46.0
1952	56.7	1976	44.7
1953	58.1	1977	42.5
1954	57.1	1978	34.0
1955	64.0	1979	23.2
1956	60.0	1980	24.1
1957	56.0	1981	26.2
1958	50.9	1982	26.7
1959	56.5	1983	26.8
1960	58.7	1984	27.3
1961	55.8	1985	26.5
1962	53.2	1986	27.1
1963	49.5	1987	26.1
1964	46.1	1988	25.4
1965	63.5	1989	26.5
1966	60.9	1990	24.8
1967	53.6	1991	23.6
1968	55.5	1992	25.0
1969	53.8	1993	24.1
1970	55.7	1994	23.4
		1995	26.7

Source: Economic Survey of Pakistan and Federal Budget 1995-1996

These figures do not necessarily convey the seriousness of the situation. To put them in perspective, it is worth taking a closer look at what military spending for 1995-1996 - which has been set at 115.254 billion rupees - is actually worth. One can, for example, turn it from military spending in the whole year to how much is spent each day. This comes to 315.76 million rupees a day. A number that could be compared with this is the 239 million rupees that the Karachi Municipal Corporation intends to spend this *year* on development projects in the city as part of the Prime Minister's much-touted Karachi Package.

Taking 24 hours in the day, since the armed forces are eternally vigilant, military spending comes to just over 13 million rupees an hour. One comparison that can be drawn with this figure is the 15 million rupees that has been allocated for repairing the roads in Rawalpindi. An alternative comparison is the 12 million rupees being spent on building a swimming pool at President House.

The numbers start to take on an ever more human scale if this process is continued. Military spending in each minute is 219,280 rupees a minute. This is about the price of a small new car. Another comparison is that this is just about twice the loan that the House Building Finance Corporation gives out to build a house.

Taking this way of looking at a large number to its logical conclusion is always worthwhile. Military spending amounts to 3,654 rupees a second. As an amount of money, it is typical of what one comes across in everyday life. It can be compared, for example, with people's pay. It is comparable to the take-home pay of many people who work for the government. A typical skilled worker makes less than this every month, and an unskilled worker earns much less, even if he or she has work every day for a month.

Another comparison is with the 5,000 rupees that the government says is the cost of formal primary education for one child. Military spending for 1995-1996 is thus equivalent to what it would cost to educate 23 million children. Coincidentally, 5,000 rupees is what the government doles out to flood victims to rebuild a life for a family that have lost their home and all their belongings. In other words, a lifetime of work is valued at substantially less than twice what the government spends on the military every second.

While these kinds of comparisons help give a sense of what military spending in Pakistan actually means, an examination of data for military expenditure as a fraction of total government expenditure shows the hole that military spending creates in resources available for development. By looking at this over the last nearly 50 years conveys a sense of the cumulative loss that has been incurred.

The threat perception that is usually cited as the basis for Pakistan's militarisation is with regard to India. The basis for this perception, apart from the experience of three wars between the two states, is almost existential for some military planners. General (Retd) Mirza Aslam Beg, Pakistan's former Chief of Army Staff, has argued that Pakistan's nuclear weapons programme in particular, is a response to "geopolitical ambitions emanating from the deeper recesses of the Hindu psyche". It was, he says, "not an act of choice, but of compulsion"; Pakistan was forced to follow where India led.

The strategic notion that has motivated, at least on the part of Pakistan, its military search for security has been the idea of matching and balancing perceived threats with similar capabilities. Pakistan's General K. M. Arif has recently stated this very clearly: "To counter a threat you must possess the same capability as the opponent enjoys. We must have a nuclear device against a nuclear device, a missile against a missile, and a plane against a plane, and a tank against a tank." As a consequence, Pakistan has sought to acquire every kind of weapons system (see Table 4).

Table 4: Military Resources of Pakistan (1993-1994)

Army personnel	510,000
Main battle tanks	1,890
Helicopters	27
Navy personnel	22,000
Submarines	6
Principal surface ships	14
Air force personnel	45,000
Combat aircraft	393

Source: World Military Balance, International Institute of Strategic Studies, 1994

The military build-up manifested in the military resources available to Pakistan has largely been by imports of weapons systems. The share of weapons imports as a proportion of total imports, and the very low level of weapons exports as a fraction of total exports shows how much of a drain on foreign reserves such increases in military capability actually are (see Table 5).

The problems of finding the resources for such high levels of imports have been, and will be, increasingly acute for Pakistan. (In 1990, arms imports were 6.2% of national imports and in 1991 this had gone up to 8.3% according to the Human Development Reports for 1993 and 1994, respectively.) This heavy spending fails to "trickle down" to the rest of the economy not only because so much of it is spent on imports, but unlike imports of machinery for factories, military-related imports in general cannot produce anything that has economic value, anything that can be sold (except arms). There is, therefore, a constant pressure to increase exports of primary goods - the only goods available in Pakistan for export in

sufficient quantity - to pay for these economically unproductive imports. These exports, by the way, also have to finance the massive debt repayments Pakistan has to make. In fact, debt repayment now exceeds military spending as a share of the budget in Pakistan.

Table 5: Arms sales to and by Pakistan (1979-1989)

Year	Arms impots*	Arms exports*
1979	6.2	0.5
1980	8.4	0.4
1981	5.7	1.4
1982	10.1	0.8
1983	8.1	9.7
1984	10.7	12.1
1985	8.0	1.5
1986	5.8	0.1
1987	5.5	0.1
1988	6.4	0.2
1989	6.4	0.4

Source: US Arms Control And Disarmament Agency
Note: * = as percentages of total imports and exports

One of the less discussed problems that tax a defence system based on high-tech expensive weapons systems is the unreliability of such weapons. Kaldor, in his *The Baroque Arsenal,* describes how even the most technologically sophisticated weapons systems produced by the most technologically advanced military state fail. There is, for example, the US F-14 fighter aircraft which leaks when it rains, and the F-16 whose engine has a tendency to stall in flight. Then there is the fact that two-thirds of US F-111D bombers used to be grounded at any one time because of maintenance problems; the time between failures for such aircraft when they are operational is only 12 minutes, and the maintenance of these planes requires 98 hours per flight. This is to say nothing of the immense logistical problems of the number and variety of spare parts for such complex weapons, all of which lead to armed forces that have a real problem in actual battle conditions.

The lessons of the Gulf War only confirm this view of the unreliability of baroque military technology. A recent US congressional report (August 1993) suggests that the perception of the Gulf War as an overwhelming victory made possible by 'smart weapons', is fatally flawed. US forces overestimated their effectiveness against Iraqi forces, often by factors of three or four. For example, US forces believed they had destroyed about 400 Iraqi tanks; it seems only 166 were destroyed. The number of Iraqi ships reported sunk was actually three times larger than the total number of ships in the Iraqi navy. Most spectacularly, there is no evidence for even a single Iraqi scud missile having been destroyed.

The reliance on such high-tech, war-fighting capability is also accompanied by a declining "teeth to tail ratio" in modern armed forces. The number of personnel who actually do the fighting has decreased dramatically as a proportion of the total in the armed forces. Kaldor cites a study showing that in the US, fewer than one in six of those in uniform now serve in a combat role, compared with nine out of ten during the American Civil War. The rest of the military personnel are engaged in command, control, communication and technical support for the few that actually fight.

The paucity of technically qualified military personnel available to Pakistan, personnel that can use to some effect the current generation of weapons systems, seems to be causing concern to the armed forces.

A National University of Science and Technology (NUST) has been set up by the military to meet these needs. This is presumably because the existing educational structures, crippled by years of under-funding due to high military spending, cannot produce the requisite skilled people.

Weapons of Mass Destruction

At its most general, the experience of the last nearly 50 years of hot and cold war in South Asia, as well as the superpower cold war, suggests that military confrontation between states engenders competition and a process of technological rivalry; new weapons on one side lead to new weapons on the other side, and so on. This only confirms the experience of earlier conflicts in world history. As the process of competition becomes a systemic feature in the relation between states, they start to replicate each other's practices and organisational structures. Powerful interests grow which are fostered by this state of permanent confrontation. It is particularly important to realise that these interests are in a paired relation to similar interests on the "other" side.

The pursuit of security through qualitative parity in weapons systems, if not numerical equality, has led inexorably to an extension of the India-Pakistan military relationship into the domain of nuclear weapons and missile-based delivery systems. As mentioned earlier, while Pakistan has been responding to a threat perception centred on India, India in turn has been looking outwards beyond the region. In particular, the development of a Chinese nuclear weapons arsenal has driven an Indian search for matching capability. It is worth mentioning here that the Chinese have pointed, in turn, to the US as a source of threat, and the former USSR.

There are many histories available of the route to nuclear capability that Pakistan has taken over the last few decades (see, for example, Leonard Spector's *Nuclear Ambitions*, and David Albright, 'India and Pakistan's nuclear arms race: Out of the closet but not in the street', in *Arms Control Today*, vol.23, no.5, June 1993). Pakistan has followed a uranium enrichment route to nuclear weapons. That this has been successful, even though Pakistan has not exploded a nuclear weapon, is suggested by statements from senior government officials. In 1992, the foreign secretary confirmed in an interview that Pakistan had the components to assemble at least one nuclear weapon, but that production of nuclear weapons-grade uranium had been frozen.

As of 1992, it is estimated that Pakistan had accumulated between 130 and 220 kg of weapons-usable material, enough for eight to 15 bombs. The general assessment is that Pakistan has developed and stockpiled all the components for assembling first generation nuclear weapons. It is reasonable to presume that Pakistan, too, is developing more sophisticated bomb designs, which use less weapons-grade material, thus allowing it to manufacture more weapons with its limited amount of weapons-usable material. A Pakistani hydrogen bomb programme is probably not beyond the conceptual stage, given the limited scientific and technological resources available.
In the specific case of Pakistan's nuclear programme, the pressures to increase the "readiness" of its "nuclear capability" are sure to mount. A former chairman of Pakistan's Atomic Energy Commission has already observed that "all weapons systems, including nuclear devices, lose their effectiveness over time. New technological advances render them obsolete". This implied, to him, that "defence preparedness has to be renewed and upgraded year after year". However, the open-ended and unlimited renewal and improvement of "defence preparedness" is certain to claim scarce resources "year after year".

The demands this makes on a society are clear. It must be internally able to generate the necessary resources to maintain this ever-increasing cost of "defence preparedness". That is, it must be economically strong to even set out on such a course. If it is, then it may be able to sustain its search for security through military means, as the US has been able to do. If it is not economically strong, then the search for security through military means actually serves to weaken it. The demand for resources grows and grows, the diversion of these resources from meeting other social needs becomes ever greater, society begins to buckle, and will eventually break under the strain. In this situation, for a poor country, the very pursuit of security based on military power creates insecurity.

Partly in response to such arguments, Indian and Pakistani supporters of nuclear weapons are beginning to claim that there are positive economic implications of developing such weapons. They argue that relying on nuclear weapons allows for a "substantial" reduction in military spending. Disentangling this argument shows that there are actually two distinct but connected claims being made here. Firstly, that reliance on nuclear weapons allows for a small army, and thus a substantial reduction in the present size of conventional military forces. Since a high proportion of defence spending is salaries, pensions and so on, by reducing the size of the armed forces these costs will no longer be that large. Secondly, it is claimed that nuclear weapons themselves not only offer security, but are cheap. The appeal made to the public by this claim of "cheap nuclear security" is that the nation concerned will be better off, economically, with nuclear weapons than without, and thus more will be available for "development", sustainable or otherwise.

There is a limited amount of information about Pakistan to test the claim of "cheap nuclear security". If the impressions that have been created by senior military figures about the development of Pakistan's nuclear weapons are taken as credible, that is if Pakistan's threats to use nuclear weapons in 1987 (in response to the Indian military exercise "Brass Tacks") and again in May 1990 were based on fact rather than hot air and bluff, then surely defence spending could have been reduced from 1987 onwards. A quick look at defence spending from then to the present should show "substantial" reductions. Defence spending for 1987-1988 was about 26% of total (current) expenditure, in 1988-1989 it was 25.5%, and in 1989-1990 it had increased to 26.5%. Defence spending fell to about 25%, and then to 24%, in the two subsequent years, but for 1992-1993 it was 28.7% of (current) expenditure, and in 1993-1994 was set at 26.8%. There seems to have been little long-term economic benefit for Pakistan from the achievement of "nuclear capability".

What is clear from the outset is that the narrow economic costs and implications of trying to build "nuclear security" vary depending on the base from which any particular state starts. Neither the hidden social and human costs of the lost opportunities for building schools, hospitals, water and sewage systems, etc. (the opportunity costs), nor the long-term effects of exposing people and their environment to processes involving radioactive materials are included here. To build nuclear weapons requires production of the material for the nuclear bombs, either enriched uranium or plutonium, the assembly and testing of such a nuclear weapon, and, of course, the development of a delivery system, such as missiles or aircraft, which can take these bombs to intended targets.

Table 6: Pakistani missiles and capabilities

	Harf-1	**Harf-2**	**Harf-3**
		Planned	
Length (m)	6	9.35	10-12
Diameter (m)	0.55	0.82	0.82-1.0
Launch weight (kg)	1,500	5,500	5,500

Payload (kg)	500	500	500
Guidance	Inertial	Inertial	Inertial
Propulsion	Solid	Solid	Solid
Number of stages	1	2	2
Range	80 km	300 km	800 km

Source: S. Chandrashekar, 'An Assessment of Pakistan's Missile Capability', Missile Monitor, Spring 1993

There is now considerable evidence of an emergent missile race in South Asia associated with the development of nuclear weapons capability. Missiles in themselves are not weapons of mass destruction, it is the "payload", the kind of bomb, that they carry which matters. The available evidence, from wars in which missiles with ranges of several hundred km with conventional payloads were used (for example, the Iran-Iraq war), suggests that these missiles do not significantly affect the result. It is only by using a nuclear warhead that a missile with a range greater than a few tens of km becomes a significant weapon, unless it is a precision guided weapon that can deliver a conventional payload very accurately to a target.

Pakistan's missile capability (see Table 6 below) can be traced back to the early 1960s when the French helped Pakistan set up a space science programme. In fact, Pakistan's Hatf 1 and 2 are said to be "copies" of French rockets. The strategic requirement seems to be to build missiles that can carry nuclear weapons further into India than the F-16 or the Mirage aircraft Pakistan already has, with less likelihood of interception, and able to fly under all weather conditions. In other words, to ultimately produce an intermediate-range ballistic missile with ranges of about 1,000 km that can carry a nuclear warhead.

The driving motivation for Pakistan's missiles is now claimed to be the "threat" from Indian missiles, particularly Prithvi with its range of between 150 and 350 km. Pakistan's response is supposed to replicate this. Although it is by no means clear that reproducing a particular military capability serves as a defence against that capability - after all, a sword is not a defence against another sword - it is a shield that is a defence.

But in the military mind, as mentioned earlier, it seems that like can only be countered with like. No one has put this better than E. P. Thompson, the English socialist, peace campaigner, and historian. Describing the superpower arms race, he said, "The armourers excite the other's armourers, the hawks feed the hawks, the ideologists rant at each other like rival auctioneers, and the missiles copulate with each other, and breed on each others' foul bodies the next generation of missiles."

This competitive dimension is common to all attempts to create security by military means, nuclear and non-nuclear. It follows from the strategic notion of "deterrence", which is not peculiar to nuclear strategists, but has been associated with weapons throughout history. In fact, ever since the first caveman with his stone axe decided that, now that his neighbour also had a stone axe, he needed a spear, and in time, a bow and arrow, guns, tanks, nuclear bombs. This process is driven by pressures that are brought into being as soon as the first step is taken.

Underlying it is a logic of "deterrence" which says that a nation always has to be prepared to fight. The Polish strategist, General Sikorski, writing in 1935 had already observed that "[i]n the world of today, peace is nothing but the suspension of war". There is, therefore, a great deal of importance attached to being ready to fight a war, at any moment. Society is on a perpetual war-footing - another of Orwell's luminous phrases comes to mind: "War is Peace". Deterrence theorists argue that this "readiness" defers the outbreak of war. What they omit is that as war is "deterred", so is peace. The rituals of enmity that maintain this state become customary, then traditional, and finally seem inevitable. It is a recipe for permanent war, until one of the contestants collapses.

Alternative Security

Recognizing the nature and scale of the problem still leaves a very real question. If security, especially for poor third world countries, cannot be created by high military spending, a large army, conventional high-tech weapons systems, and nuclear weapons and missiles, then how can a sense of security be created? Any alternative approach to security must begin by rejecting the insistence on 'inherited' enemy states which may have conventional and even nuclear superiority. This presupposition is presented as if the present was some fixed and eternal state of affairs that could not be changed by any other means than a war. Argument about the right and appropriate defence strategy in all alternative thinking goes back to first principles to address the question: *What is security?* Or, more specifically, who and what is to be defended? From whom does it need to be defended, and why? Once these are answered, then the exact nature of the defence strategy can be developed.

If the question of security is separated into a set of related questions, the way forward may be clearer. One possible set of questions is how are the people of a nation-state to be allowed to feel secure, what are possible strategies for realising this sense of security while being able in principle to defend themselves from some neighbouring or distant state?

Accepting that it is the people of a nation-state that have to be defended from some neighbouring or distant, state, and given that a nation refuses to consider a nuclear option, viewing it as both immoral and unworkable, and actually an option that reduces its security, then how should a nation set about building a defence? The radical answer has usually been a defence strategy based on territorial defence, a defensive, or non-provocative, defence (Johan Galtung, 'What kind of defence should we have?', in *Dynamics of European Nuclear Disarmament*, eds. Alva Myrdal et al. Spokesman, 1981). That is to say, a societal defence, where a society works together to defend itself. A very clear argument can be made that such a defence should be one that cannot go abroad or reach abroad, a defence nobody could possible feel threatened by.

There are two central pillars of such alternative defence. The first pillar is that defence must not be centralised. Traditional military doctrines rely on a very hierarchical command and control system, and the rest of the country becomes demobilised because all initiatives are directed to military personnel only from a few key centres. The second is that the defence of the country should not rely on military technology that is complicated. This complexity effectively demobilises the bulk of the population. This last point is surprising because there is an almost universal consensus among armed forces in all states on military organisation, equipment and war-fighting plans. The assumption seems to be that war can only be fought between equals, states and armies identical in all respects, with victory going to the state able to mobilise more weapons, bigger bombs, more planes, ships and troops.

The societal defence scenario posits as an alternative several defence systems consisting of conventional military defence, guerrilla, and non-military defence. The conventional defence would be a first line of defence, but one that may not necessarily be able to withstand a massive assault. The remaining two defensive systems would then come into operation under occupation, their task would be "to make the country so indigestible for an antagonist that he will think twice before he starts attacking" (Galtung 1981). Many such alternative defence scenarios point to Sweden and Switzerland as examples where such policies have been partially adopted and preparations made for decentralised command, a citizens' army, and the use of natural defensive positions.

Denial under occupation is a difficult idea to accept for many people, especially military planners, and to those with a vested interest in the present state structures it seems to be a strategy for defeat rather than for war fighting. There are, however, few real objections to the use of territorial defence, decentralised forces, etc., against even an overwhelmingly more powerful attacker able to muster conventional and nuclear arms. Alternative defence thinking is based on an assessment of why any country should invade any other. Presuming that any such invasion has to do with deriving some benefit, political, economic, or strategic, for the attacker, then societal defence in depth denies any such benefits. The attacker, now occupier, is confronted with a well-organised campaign of guerrilla actions, industrial sabotage, active civil disobedience and societal rebelliousness through non-cooperation, requiring ever more substantial allocations of personnel and material.

Given the high degree of permeability of any national border, it is clear from a large number of recent examples that there will be a steady flow of arms and equipment into the occupied country to sustain such resistance for as long as necessary. In addition, there is the lesson of the willingness and ability of a civilian population to carry out civil and guerrilla struggles, evident from the tiny number of Palestinians that have been able to resist the Israeli occupation of the West Bank for nearly 30 years. In combination with armed forces, such struggles have proved successful against even the most massively armed and ruthless enemy, as demonstrated by the Vietnamese against the US.

In South Asia, the movement for independence from British rule serves as a historic reminder of successful experience of sustained and often painful struggle against an occupying power with an effective monopoly over coercive force. In the end, the British just had to pack up and go home. The point that turns a strategy of denial into a viable military option is the knowledge and commitment of the population to a cause to which they are prepared to dedicate themselves. In a nation-state this requires a civilian population imbued with a determined patriotism, and a state that has demonstrated, through its social policies in peace time, that it is worth making heroic sacrifices to restore the status quo ante.

The policy of denial under occupation, prepared in advance by educating the population in the methods of civil resistance, non-violent as well as guerrilla war, has enormous repercussions for the relationship between the civil population and the state during peace time. This may be one reason why states have, by and large, been so reluctant to encourage and train a spirit of rebelliousness in their people. These skills, after all, could easily be turned against any government that the people found unacceptable and unresponsive to their demands, and used as part of the political struggles that characterise all states and societies.

Conclusion

The kind of approach to the question of security that has been discussed can best be described as a strategy for "societal security". That is to say, a society that works together to defend itself, rather than allocating some members of it to stand guard permanently. The core characteristic of a society willing to defend itself is that it not be riddled with injustice and inequality. Each such field of discord reduces the sense of collective involvement: why should one defend a society in which one does not have a sense of participation?

It is here that development re-enters the discussion. In the context of poor third world countries, the multiple oppressions and indignities that are usually lumped together as poverty are important processes of reducing the sense of involvement in, and commitment to, a particular social order. It follows then that the pursuit of development, its style and speed, are linked to security.

The link, however, is more significant than may appear at first sight. A centralised, state-led development, where the heroic far-sighted few take responsibility for developing the pathetic many, mimicking the relationship between armed forces and citizens in the field of security, similarly disempowers. As many proponents of "sustainable development" have pointed out, development has to start with people as the agents, beneficiaries and victims of development, since change is intrinsic to the very idea. Sustainable development works on the premise that the active participation, rather than the marshalling, of people is critical to equitable development.

The key to such a self-sustaining society is that it must not be centralised. Traditional military and development doctrines, have both relied on a very hierarchical command and control system. The people, organised in communities, are treated as sites to be controlled, or developed, rather than groups that can mobilise themselves, and become agents of change in their own right. Alongside this decentralisation in terms of power comes local autonomy and self-reliance. With this "locality" there is diversity, a diversity that serves to make the system less vulnerable as a whole.

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