All of humanity is enveloped by an environmental crisis that even now contributes to the poor health of billions and may, in the longer term, threaten everyone’s survival. A significant driving force of the crisis is global militarism, which contributes to inappropriate development and, thus, is linked to environmental problems such as climate change, the population explosion and stratospheric ozone depletion. These problems are closely interwoven, have a cumulatively damaging effect on human health and well being and are shaking the already vulnerable foundations of our global security.

To clarify these issues we need to develop a framework that shows the interrelationships between the arms race (including of course the nuclear arms race) and the other threats to our global health and security. Figure 1 suggests the way in which militarism, ecological destruction, and inappropriate development encompass and contribute to human morbidity and mortality on a global scale. To give coherence to the triangle, we need to look for a unifying symptom that reflects each of the triangle’s three components: a symptom which, as health workers, we can analyze in a practically useful way and, thus, can use as a marker of our global disease. The third world debt, a manifestation of the long term and continuing inequity between the haves and the have-nots, hangs like a mushroom cloud over the majority of the world’s population. It reflects inappropriate development, militarism, and the environmental crisis in both the rich North and the poor South, and so is a significant marker of our global malaise.

The third world debt, described most simply, is the sum of money, both capital and interest, owed by the countries of the poor world to the countries of the rich world. The size of the debt and the nature of the lenders vary from country to country (Fig. 2). For example, most of the African debt is owed to the World Bank, whereas most of the Latin American debt is owed to private bankers. The World Bank and International Monetary Fund (IMF), however, police the system, so even indebted countries that don’t owe the money to these organizations are in thrall to them. The total third world debt is approximately one trillion dollars: coincidentally the same amount spent annually worldwide on the military. For many countries, merely paying the interest on the debt consumes more than 40% of their export earnings: in other words their debt service ratio is greater than 40%. The debt repayment results in an annual flow of money from the South to the North -- more than $280 billion over the past few years (Fig. 3). In more graphic terms, each person in the third world subsidises the North to the sum of $17 per year.

A History of Inequity

How did this debt come about? At its basis the debt reflects the inequity character-
istic of a relationship initially based on plunder and theft (from around 1500 AD) and later on trade, between the industrialised countries and those mainly southern, developing countries that are primary producers. This inequity, arguably the foundation for the accumulation of wealth in the industrialised countries, was and is the main reason for the rapid industrialisation of the North and the eroding capital base of the South.

Tea serves as a prosaic example of this process. One pound of fine Darjeeling tea in a retail shop in Bombay in 1980 cost $1.25. Transport costs to the U.S. were certainly under a dollar a pound, but fine Darjeeling tea retailed at $20 per pound in New York. The profit, which accrued to Northern middle men, could then be ploughed back into the North’s economy or used anywhere in the world as hard currency. The wealth generated by this and by many other initiatives in the North has been invested in, or loaned to, the developing world. As is the case in all unequal financial transactions of this kind, the rich with money have imposed their terms on the poor with out — a situation which obtains within as well as between countries, as the socially deprived in the rich North are only too well aware. If there has been resistance, the economic conditions of the relationship are backed up by the threat of force and the sale of arms. Indeed military force and economic domination go hand in hand, an important aspect of militarism in the evolution of the debt.

Ever since World War II, when the IMF and World Bank were set up ostensibly to make international financial affairs run smoothly, the control of lending between the haves and the have nots has been in the hands of these two. Up until the 1970s the majority of loans were actually channelled through the World Bank and IMF and the sums loaned were on a relatively small scale, although in retrospect we can now see that the problems inherent in these loans were already evolving.

The debt assumed the importance it now has, however, with the money generated from the oil profits of the mid 1970s, which many private banks in the North lent to the South at low interest rates. At the start both parties to the transaction were interested in enabling the poor South to travel the same development path forged by the rich North. This path was one of industrialisation through projects highly dependent on capital, skilled labor, and non-renewable resources, usually without regard to environmental impact. Stark testaments to this process are the sprawling coal and iron complexes, nuclear power stations, and traffic-choked cities in Northern industrial countries.

The hoped for transfer of Northern development to the South was not realized for very good financial, organizational, technical, and cultural reasons. First among these reasons was the corruption in the developing world, whose elite (usually not more than 10% of the population) siphoned off much of the loan money to Swiss banks, enriching themselves fabulously by this process which is quaintly known as “capital flight.” For example, Zaire’s debt in 1986 was $5 billion, the same amount that Mobutu and his family stole from Zaire. Ferdinand Marcos pocketed the equivalent of 15% of the Philippines’ $26 billion debt. In Mexico between 1983 and 1985, whilst new borrowing was around $16 billion, there was a capital flight of $9 billion, mainly again to Swiss banks. In 1985 a local newspaper published the names of 575 Mexicans who were reputed to have at least $1 billion which had ‘flown’ to Western banks.

A consequence of this corruption is that the ostentatious and comparatively exorbitant wealth of the rich elite in the poor world has exacerbated tensions among their people, tensions which have often spiralled into threatened or actual uprisings against the state.

**The Arms Trade**

This unrest has been countered by substantial investment in the military, best reflected in the rapidly increasing arms traf-
fic, particularly during the 1980s between the five major arms exporting countries and the countries of the developing world. The big five, responsible for 80% of all arms exports, are the former U.S.S.R., the U.S., the U.K., France and the Peoples Republic of China, all permanent members of the UN Security Council. (Germany has recently acquired the dubious distinction of replacing France as one of the top five exporters, and so joining this morally odious club.) Many of the main arms importers are amongst the poorest countries of the world.

Burdensome though these arms expenditures are for all of us, the relative burden is greater in the South. Expressed as equivalent years of human income, the industrialised countries in 1989 spent 56 million person/years on the military, whereas the developing world spent 187 million person/years. Whilst the increasing purchase of arms by the South supported the polluting economies of the North, the North responded by relatively decreasing the aid money given to the South. Specifically the proportion of GDP devoted to aid by the U.K. fell from 0.6% in 1962 to 0.3% in 1990. Aid is, of course, often a mixed blessing; more often than not it is coupled to trade, and often perpetuates the dependency relationship which already exists.

Large Scale Development Projects

Much of the money invested in the South has been either stolen or used to buy arms. Much of the rest has been used for large scale or high technology developments in the South, such as the Upper Volta dam in Ghana, nuclear reactors in the Philippines, The Sardar Sarova dam in India, and the Aswan dam in Egypt, all of which were supposed to be the motors for rapid industrialisation. This proved to be unrealistic, however, as the poor world could not usefully use or sustain these developments for want of suitable infrastructure. This was not the end of the poor world’s troubles. This theft of money through capital flight, the inappropriate use of money for arms purchases, and the pursuit of what even at the time of their inception were seen to be inappropriate high-tech projects were compounded by two further problems.

First, commodity prices of primary exports from the developing world fell during the 1980s, with a resulting fall in income to these countries, both because of a glut in production and because demand from the North fell. Second, interest rates in the U.S. rose, which made repayment of any debt harder. This rise in interest rates was in large part due to the self-inflicted burden of military expenditure in the U.S. Even the relatively reduced U.S. military budget in the second half of the 1980s consumed 25% of total federal government spending -- $290 billion per year. This constituted 60% of the controllable element of the budget -- the uncontrollable elements being prior obligations, including civilian and military contracts for which funds had already been authorized, mandatory social payments, and interest on the national debt.

As a consequence of all the above, very little money was used to enable the developing world to pursue its own development path, even in countries which had aspirations to do so. Despite the initial intentions there is
still a very wide gap between the haves and have nots. Although most of the have nots live in the developing world, the burden of inappropriate development also falls on the underprivileged in the rich world. This is best reflected in the social and health statistics of the world's richest nation, the U.S., where 32 million people live below the official poverty line, one child in five is poor, 25% of poor families live in housing officially classified as inadequate, and 5.5 million children under 12 go hungry.

**The North Generates Hard Currency**

By the early part of the 1980s poor countries, locked into financial and technological dependency on the rich North, had accumulated debts that could only be paid through the generation of hard currency (usually U.S. dollars). This has led to an emphasis on industrial and agricultural activity designed to generate foreign exchange, regardless of ecological proprieties. Indeed in some countries more than 50% of agricultural land has been used to grow products for export. Clearly you cannot eat what you export. The immediate consequences of these activities were, therefore, to the detriment of the local population. Most of the foreign exchange so generated went to pay the country's debt, compounding the negative impact. Deforestation is another example. Wood from the tropical forests has been used as an export commodity and there is a close association between the degree of deforestation, which has been substantial, and the debt burden of countries that have stripped their forests. Forests have been cut down to enable gigantic capital-intensive projects (e.g., the Carajas iron ore project in Brazil); the displaced poor in the indebted countries have been driven to cut down forests to eke out a living as subsistence farmers and the indigenous forest people have lost their livelihoods.

Hard currency has also been used to buy arms, which the third world elite have seen as increasingly necessary to control populations becoming restive in the face of social decline. Indeed 20% of all borrowing by the South between 1975 and 1990 has been to buy arms and up to 33% of some countries’ debts relates to arms. In addition to the financial burden imposed by these arms sales, the arming of the third world has other dire consequences. Since World War II, there have been 127 wars and 21.8 million war related deaths. All but a few of these have been fought in the third world, but the conflicts have been inflamed by the military powers of the industrialised world and have only been possible because of the arms that those powers had sold to the third world. The 21 million deaths are only part of the mayhem, which has also included loss of crops (Vietnam lost some 50% of its cropland through defoliants), loss of schools, loss of health centres (in Mozambique in the mid 1980s RENAMO destroyed 450 health centres, which are often targeted in civil wars) and homes, a decline in national income, and the dislocation of whole populations (there are now millions of internal and external refugees in the third world countries).

**Debt Repayment Strategems**

The debt is seen by many politicians in the developed countries as a simple economic problem. Their role is merely to insist on debt repayment, with the IMF acting as policeman. IMF policing -- where necessary through the imposition of so-called economic structural adjustment programs (ESAPs) -- encourages economic rectitude. The essence of ESAPs is that countries are required to spend less and earn more. Public expenditures are thus reduced, with the notable exception, until very recently, of expenditures on arms. User charges for services have also been introduced, privatisation and wage freezes have been encouraged, subsidies on food have decreased, and currencies have been devalued, a measure designed to discourage imports and to encourage exports.

To earn more, environmental resources such as forests are plundered, and production is switched from locally useful products to those which can be exported. These combined measures further impoverish those who are already seriously impoverished: 40 countries, including Bolivia, Tanzania and Vietnam, are now poorer than they were in 1980. ESAPs seem to aggravate rather than ameliorate the problems. As a result, the indices of health status in many countries are getting worse. Expected falls in infant and five year mortality have not occurred. Large numbers of adults, especially women, remain illiterate and less than half the children of the developing world complete primary school. Of those who do only one third are girls. This lamentable record of female literacy and education is of particular importance in the context of population control. Reduced birth rates are a universal accompaniment of economic and/or social advancement, and are specifically marked by increased female literacy, reduced death rates among children, and effective family planning programs. All of these reflect the importance of appropriate development in achieving a reduction in the world’s population and of the three the most important is female literacy. Provided it is taught in a culturally supportive fashion, lit-
eracy is accompanied by improvement in the social and economic status of women. Population control is only likely to occur in the context of appropriate development, yet the increasing inequity in an already heavily skewed economy means that millions of people still live in absolute poverty and that the number of malnourished children -- currently 117 million worldwide -- continues to increase (Fig 4).

The poor in the South pollute through necessity, trapped between the economic and military policies of the North and the greed of the rich elites in their own countries. The social devastation caused by this process, to which the debt and its repayment are the most eloquent testimony, is the driving force behind the developing world’s contribution to our environmental problems that affect all of us. These problems include drug production, which constitutes for some countries an important source of foreign exchange, unregulated deforestation, pressure to emigrate, and population growth, all of which are compounded by war and the threat of war.

The Role of the North

The materially acquisitive ethos of the Northern consumer society, where the ownership of possessions has replaced traditional values as a mark of worth, is considered by many to be the fundamental motor of the North’s seemingly insatiable consumption. Despite this spiritual poverty, the North is still seen by most of the world’s policy makers as the role model for development. It is still by far the most important polluter, accounting for 80% of C02, CFC and toxic waste production. Much of this pollution is generated by the military and by industries serving the military. The vigour of this industry is reflected by both the public investment in military research and development (45% of the $110 billion spent annually by the industrialised countries) as well as by the number of people working for the military.

The polluting trend of the Northern economies is closely linked to their economic growth. Over the past 100 years 80% of global C02 production has come from the industrialised nations, as has 80% of global GDP. Both rise and fall together. This symmetry is no coincidence: economic growth and pollution are inextricably linked. From the North’s perspective, we can view the third world debt as a symptom of our Northern consumer society, driven by growth economics, exploiting the South to ensure that the illusion of growth without problems can be sustained. The exploitation is, where necessary, enforced by the militaries of both the North and the South which, in their turn, consume enormous amounts of human and material resources. We in the North have, in a highly effective way, exported the immediate social and environmental problems of industrialisation to the developing world. Our social consensus and high living standards are largely dependent on cheap imports, social divisiveness, and high unemployment among those who can least afford it, both in our own and in developing countries. We also dump our waste in developing countries, far away from our own back yards.

It is worth mentioning here that the rich/poor divide, whilst most stark between the countries of the North and South, also occurs within countries, within cities and even within homes. Indeed this divide is an economic fractal, a persisting pattern across size. Whilst we can clearly see and measure the consequences of this process to the health of about two thirds of the global population living in the poor South and in the poorer parts of the North, the richer North has so far been buffered, at least with regard to physical health. The global environmental changes resulting from our polluting activities are only just beginning to cause the North serious problems that we can now confidently predict. There is thus an ironic symmetry: money from the North, responsible for most of the world’s pollution with all the actual and potential environmental and health consequences it entails, has been misused by the undemocratically elected elites in the South, with clearly evident consequences to health and the environment. The debt is the symptom of the entire lunatic process, a process which has dire consequences for humanity, second only to nuclear war.

The Pivotal Role of the Third World Debt in Forming A Blueprint for Action

The third world debt is not only a symptom, but also a blueprint for action. Mitigating the debt can help not only those in the third world who suffer directly from it, but also those in the industrialised world who, whilst suffering somewhat less, at least for the moment, have the greater part of the responsibility.

Any solution of the debt problem has to address not only the situation in the developing world, but also the fundamental causes in the developed world. Any solution must be seen to contribute to the evolution of a more equitable, less profligate society where wealth is used to address fundamental social needs, and where we all work within the bounds imposed by the global capacity to handle the consequences of our activities. In short, we must learn to work in partnership...
with nature if we are not to destroy both our world and ourselves.

Changing our energy policy could be one component of the solution. In the North, profligate use of fossil-fuel-derived energy, much of which supports the military, generates the income which can then be used to colonise the developing world. This profligate energy use is also the main factor in the production of greenhouse gases, in ozone depletion, and in the formation of acid rain. The South buys fossil-fuel energy to sustain its present economies, yet the money goes largely to buy arms and to repay debt, and is a major factor in the perpetuation of that debt. The implementation of a sensible energy policy in the rich North, and its promotion with relevant funding in the poor South, would be an excellent way of coping with the root problems. A marker of the efficacy of this policy would be the quickest possible reduction in the emission of C02 and other greenhouse gases. In the North this should be a four pronged initiative:

- First, a radical reduction in useless energy consumption -- particularly that used for making and testing arms and for keeping the military in a state of readiness;
- Second, energy conservation, with the governments of the North giving cash incentives, as the Danes have done;
- Third, a recognition of the need for transitional fossil-fuel energy production as a bridge to renewable non-polluting energy. The fossil fuel burning should be as clean as possible so that as little C02 (or other pollutants, such as nuclear waste) as possible is produced.
- Fourth, the development of a spectrum of alternative energy sources, such as micro-hydroelectric schemes, photogalvanic cells, biogas, wind, wave, tidal, geothermal, and other renewable forms of energy.

All these need to be undertaken in conjunction with the South, but obviously the emphasis will be different in different localities.

Such a policy has the merit of reducing C02 production as well as enabling relevant development, much of which is based on the availability of a reliable energy source and its appropriate use. An additional crucial benefit is that the local production of energy through a series of small renewable energy producers would promote worldwide autonomy of action, an essential prerequisite of empowerment and democracy.

Conclusions and Recommendations

We can understand third world debt as a symptom of each component of our triangular crisis, and advocate its resolution as a way of finding solutions to the apparently forbidding range of problems that we all have to face. I want to end by showing how each of us can play a part in this process.

We can use these principles to develop a clear program of action, a program in which each individual can act at five levels -- personal, in the local community, through local institutions, nationally, and internationally. At each level, action can clearly be seen to be consonant with the aim of resolving the third world debt in a way which would help us evolve towards a sustainable society. Where symptoms truly reflect causes, as is the case with the third world debt, symptomatic improvement is an excellent marker of our progress in handling the underlying disease.

1. Personal. As individuals we often resolve our personal problems in the same way as do nations: with force and with inappropriate consumption and, therefore, with predictable consequences to ourselves and our environments. We are a microcosm of the macrocosmic problems, and we need to recognize our contribution to both the psychological mindset which underlies the global crisis and to the pollution this spawns. Our overconsumption is thoughtless and a phased reduction in it would often enhance our life styles. Each of us should set out objectives to show an annual reduction in the amount of non-renewable inputs we use, as well as ensuring that as much as possible of the waste output can be recycled.

2. Communal. We need to find ways to help each other reach targets in our local communities which we set for ourselves -- for instance, we might try the regular publicising of energy consumption per individual household, with a reward for the most efficiency, and the regular publicising of waste production, again linked to some kind of reward. The collective endeavour necessary might well engender a new sense of community, with an emphasis on resolving conflict through debate.

3. Institutional. Many of us work in institutions, and we should promote programs directed at decreasing the production of pollutants. CO2 production, as a general indicator of pollution, could be monitored and lower levels could be set on an annual basis. Imaginative rewards for those coming to work by non-polluting means could also be explored, as could rewards for the best performing institutions. The initiatives that these measures require would promote coop-
erative and participatory management in these institutions. We should also press for ecological audits in our institutions and link into the various worldwide networks that are developing the tools which enable us to do this. Further, we could suggest that our local institutions implement Agenda 21 as suggested by the Rio Conference.

4. National. We need to talk with government about its role in directing sensible resource usage, the creation of conservation jobs, appropriate taxation of inputs, public transportation policies, and the shift of resources from the arms industry to socially beneficial production (the Dutch national development plan may be a model). Retraining programs for those working in the arms industry should be given high priority.

5. International. Health workers are familiar with the need to look behind presenting symptoms and to deal with root causes. Debt is such a symptom. Focusing on third world debt and its resolution as an international priority, through the implementation of some of the proposals already suggested, will allow us all to feel empowered to act in ways which have multiple benefits to the health of humanity. A key element in all this is to debate how best to reform the UN, as well as international organizations.