

المؤسسة الدولية من أجل تنمية بديلة

international foundation for development alternatives

fundación internacional para alternativas de desarrollo

fondation internationale pour un autre développement

ifda dossier 35 , may/june 1983

EDITORIAL: The only way to peace (Petra Kelly) 2

BUILDING BLOCKS/MATÉRIAUX

- . Conflicts in access to food (Amartya K. Sen) 3
- . Techno-economic intelligence for development (Francisco R. Sagasti) 17
- . Technique and women's toil (Valentina Borremans) 27
- . Islam, technologie et développement (Bichara Khader) 39

MARKINGS

- . Beating swords into ploughshares - The Lucas experiment described from inside (Mike Cooley) 53

INTERACTIONS

- . If the era of full employment is over, what will come next? (James Robertson) 65
- . Revival of non-monetary economy makes economic growth unnecessary in the small industrialized countries (K. Pulliainen/H. Pietilä) 68
- . Alin Sitooye, a symbol of women's resistance to colonialism (F. Sow) 74
- . Les femmes et la crise alimentaire en Afrique (M.A. Savané) 76
- . Madres de Plaza Mayo - MPM - Mothers of Plaza Mayo (R. Martine) 79
- . Unions' solidarity with Chile 81
- . The food-energy nexus sub-programme: Seeking local solutions to a global problem 83

NOTICIAS DEL TERCER SISTEMA / NEWS FROM THE THIRD SYSTEM

- . Venezuela: CEREL 85
- . India: Development Alternatives 85
- . UK: Turning point 86
- . What is TIE? 86
- . Le monde que nous choisissons 87
- . IFDA seminar on another development in Grenada 88

FOOTNOTES/NOTES/NOTAS 89

MATERIALS RECEIVED FOR PUBLICATION 96

executive committee: ismail-sabri abdalla, ahmed ben salah, jan meijer, marc nerfin (president), md. anisur rahman, ignacy sachs, marie angélique savané, radolfa stovenhagen, juan samovia, inga thorsson, bernard waad

co-chairmen 1983-1984: joseph ki-zerbo, tharvald staltenberg

secretariat: 2, place du marché, ch-1260 nyan switzerland; telephone 41 (22) 61 82 82, telex 28840 ifda ch

rome office: 207 via panisperna, 00184 rome, italy; telephone 39 (6) 679 96 22

IFDA DOSSIER 35, APRIL/MAY 1983

THE ONLY WAY TO PEACE

by Petra Kelly*

The Green Party has an underlying thought which states clearly that humankind must not consider the land and what it supports in terms of property or real estate. We are all temporary custodians of the land - entrusted to us for passing on unimpaired to future generations. We argue that most urgent and most straight forward disarmament measures required at this juncture from an ecological standpoint are the absolute prohibition of all nuclear weapons, of all atomic, biological, chemical weapons and a complete demilitarization and conversion to "protective status" of ecologically important regions. Nuclear power states now comprise a large part of the world's population. There is only one way out - complete unilateral disarmament (...). We propose unilateral and calculated first steps towards complete disarmament - as a solution which we propose not only for the Federal Republic of Germany, but for all European countries, for all countries in the world. Each of our governments must take that first step which it expects the other governments to take! And if the governments do not take these first steps, so we shall take these first steps for them! We must work towards a disarmament race. Military balances, the balance of terror, the counting-game, are irrelevant. The greatest criticism that can be made of the nuclear arms race is its total irrelevance to the problems facing us today! World poverty, the diminishing natural resources, and pollution - they are the problems we are facing today. The only war we seek should be the war against humankind's ancient enemies - poverty, hunger illiteracy and preventable disease.

We need increased trust in world relationships, abolition of the belief of the so-called enemies, we must shed our Western paranoia in regard to the possible threats posed by the Soviet Union. This paranoia, this new hysteria in our established media and in government circles has prepared once again the ground for "just wars" to be fought against the so-called "red menace". But in both blocks, in the block of NATO and in the block of the Warsaw pact, lie many corpses, lie many strangulated and tortured men, women and children, may it be in El Salvador, in Turkey, in Vietnam, in Chile or in Afghanistan (...)

We can kill thousands, because we have first learned to call them the enemy. Wars commence in our culture first of all because we kill each other in euphemisms and abstractions long before the first missiles have been launched! (...)

All over the world, people from the grass roots, from below, are saying "no" to the games of the super-powers. They are coming in the thousands and in the hundred thousands tomorrow. (continued on p.95)

* Excerpted from Petra Kelly's speech in Stockholm, 9 December 1982, when receiving the Right Livelihood Foundation Award (cf. p.53).

Last March, Petra Kelly, together with 26 other members of her Green Party was elected to the West German Parliament. More than 2 million people (6% of the electorate) voted for the Green's.

CONFLICTS IN ACCESS TO FOOD

by Amartya K. Sen
 Drummond Professor of Political Economy
 All Souls College
 Oxford OX1 48A, UK

Original language: English

Abstract: This paper examines the case of India and three aspects of the conflicts involved in food accessibility:

1. Market conflicts: Only particular occupation groups - the economically most vulnerable, especially the rural poor - are affected in either famine situations or in persistent hunger, even within a country being self-sufficient in food.
2. Public action and access to food: A discussion of the economic and social consequences of growth-oriented (India) and need satisfaction-oriented (Sri Lanka and China) strategies and their effects on food battles, as well as the role of pressure groups within democratic societies. The principle of entitlement to food is examined within the context of capitalist and socialist economies and both systems are found to be unsatisfactory in effectively addressing the food question.
3. The perpetual losers: Inequalities in food distribution within families so that, in general situations of poverty, women's nutritional needs are subservient to family welfare, and deep-rooted inequities whereby the most deprived (e.g. landless peasants, labourers) accept their situations unquestioningly, thus making them a party to the persistence of their deprivation.

CONFLITS DANS L'ACCES A LA NATURE

Résumé: Cet article examine, à partir notamment de l'exemple de l'Inde, trois aspects des conflits dans l'accès à la nourriture:

1. Conflits dus au marché: seuls certains groupes, les plus vulnérables et notamment les ruraux pauvres, sont affectés soit par les famines soit par la faim permanente, même dans un pays auto-suffisant en nourriture.
2. Action publique et accès à la nourriture: les conséquences socio-économiques de stratégies de croissance (Inde) ou de satisfaction des besoins (Chine, Sri Lanka) et leurs effets sur les conflits ainsi que le rôle des groupes de pression au sein de sociétés démocratiques. Examen du principe du droit à la nourriture dans le contexte d'économies capitalistes et socialistes: deux systèmes inadéquats quant à la solution effective de la question alimentaire.

(Suite à la page 16)

Amartya Sen*

CONFLICTS IN ACCESS TO FOOD

Conflict over food is one of the oldest and most entrenched characteristics of human society. Yet it is often least visible. Sure enough, we see the battling moves and counter-moves when there is, say, a food riot, or when a hunger march breaks the peace of a town. But in our normal day-to-day life the battling aspects of food entitlement are very much below the surface. What food we can respectively get is so firmly regulated by well-established economic rules and social conventions, that it is difficult to see in this picture anything but mutual acceptance and order. But that picture is deeply illusory, and as I shall presently argue, the existence of that illusion is an important part of the reality - making the harsh facts acceptable.

Battles over food are persistently waged in widely different arenas, including (1) the market, (2) political processes, and even (3) family relations. In this lecture I would like to examine in turn each of these fields of battle.

Market Conflicts

I start with the market. Market conflicts are most clearly seen in famine situations. Superficially, a famine looks like a general disaster - affecting all. But, in fact, in virtually every recorded famine, some particular occupation groups are decimated, while others survive with little suffering - sometimes none at all. For example, in the Great Bengal Famine in 1943, landless rural labourers, fishermen, and some other groups were driven firmly to the wall, while many other occupation groups suffered very little and some even prospered. In the Bangladesh famine of 1974, rural wage labourers were also hit the hardest. Indeed in South Asian famines the rural wage labourers are, in general, the most usual victims. In the Ethiopian famines of 1973 and 1974, the peasants and rural servants and pastoralists died from starvation in very large numbers, while many others in Ethiopia did very well. In terms of total food supply, there was little general decline in any of these famines. In fact food availability was at its peak in the Bangladesh famine of 1974 - higher than in any other year during 1971 to 1975. Market power was used to command food and to snatch it from others, and the Devil took the hindmost. The hindmost came mostly from a few occupation groups. 1/

* Dr. Amartya Sen is Drummond Professor of Political Economy, Oxford University. This contribution is the text of the twelfth Coromandel lecture delivered by him in New Delhi on December 13, 1982 and reproduced in Mainstream, January 8 1983.

The same process is present in non-famine situations as well. India's so-called "self-sufficiency" in food goes hand in hand with keeping a quarter - perhaps a third - of the rural population as persistent losers in food battles, suffering from regular hunger and systematic malnourishment. The "order" of market equilibrium (market demand being met by market supply) relies on the tragic outcomes of these unequal battles. What food we can demand in the market depends on what we own and what is offered in exchange. Our entitlements can be little indeed if we don't own much, and if what we own does not command much food. The market gets into an equilibrium by ignoring needs that fail to get translated into market demand because of lack of purchasing power. Malnourishment and hunger co-exist with market demand being fully met by market supply.

While some may find the use of the word "battles" a rather over-dramatic way of referring to these conflicts, it is important to recognize that these serious conflicts and their terrible outcomes have the appearance of order and legitimacy precisely because we refuse to see them as what they are, namely, unequal struggles to capture enough food to eat and to survive. The astonishing tolerance of persistent hunger in India is greatly helped by our inclination to take a low-key approach to these deadly conflicts. It is indeed amazing that in a country with as much politicisation as India has, the subject of persistent hunger of a third of the rural population can be such a tame issue. The dynamite turns out to be soaked in cold water.

Public Action and Access to Food

The political processes also involve battles over food, since the command that people have over food is deeply influenced by government policy. Some countries - such as Sri Lanka and China - have been able to reduce vastly the incidence of regular malnourishment and hunger. The methods of achieving this have differed, but they have all been based on political commitment to provide command over food through government channels. Sri Lanka's policy of giving some free or subsidized rice to all those who need it has tended to put its citizens in a position of great advantage. This policy has been combined with providing other social services. Chinese state provisions are also very substantial. Though both Sri Lanka and China have tended to retreat somewhat from these policies recently, the extent of direct state provisions remains a great deal more than that in India. The fact that the average Sri Lankan or Chinese now lives more than a decade and a half longer than the average Indian - around 69 years, as opposed to our miserable 52 years - is not unconnected with these state-made provisions.

It is often argued that a poor country like India cannot

economically afford to provide - through governmental channels - a sizeable amount of free food to all who need it. It is worth noting in this context that the rice distribution policy has never cost Sri Lanka more than 5 per cent of its national income. If a similar policy would cost a corresponding proportion in India, this would be less than just one year's growth that India has experienced per year in the last couple of years. It is just not true that our penury rules out radical policies of this kind. Administrative problems may well provide a bigger barrier, but we are not likely to get a serious evaluation of this question, given the deeply conservative character of Indian economic planning.

Growth versus direct intervention

India has clearly opted for a growth-oriented strategy without "wasting" money on significantly expanding social services. The entitlement of people to food would be affected by this strategy only in the rather long run. The standard of living measured by such variables as life expectancy at birth will respond much more slowly than what could have been achieved by going directly to the root of the problem. Fast growth is a slow social redeemer. Fast growing South Korea, with a national income (GNP) per head that is now five and a half times that of Sri Lanka, still has a lower life expectancy than the latter country.

It is sometimes argued that by spending money in providing free rice to all those who need it, Sri Lanka has starved capital formation and reduced the economic growth of that poor country. In fact, Sri Lanka's growth rate has not been particularly low - indeed over the last few decades Sri Lanka has had one of the relatively higher growth rates in the category of low-income developing countries. On the other hand, Sri-Lanka's concern with social services and social security has been a major factor behind the high expectation of life in that country. The "rice policy" has played its part in giving the average Sri Lankan a longevity almost close to that of Europe and North America.

This does not, of course, deny that there may well be some trade-off between (1) the state taking direct responsibility for the entitlement of the people to food and other necessities such as medical services, and (2) the state trying to achieve a higher standard of living indirectly through encouraging economic growth. Investment for capital accumulation and growth may be, it is argued, substantially reduced by Sri Lanka's ambitious social service programme. It is interesting to ask how long would it have taken Sri Lanka to reach its present level of longevity if, instead of trying to do it through food distribution and social services, it did it through faster economic growth, following the pattern of other developing countries. There is obviously much uncertainty in calculations of this kind, and it is necessary to try out alternative assumptions regarding the effect of transferring social service

expenditures to capital formation.

Sri Lanka's longevity level is, of course, very much higher than what would correspond to its income per head in cross-country comparisons. To work out the trade-off between growth and direct state help what is calculated first is the income level at which Sri Lanka would have achieved its present level of longevity in that international fit. Then it is calculated, with alternative assumptions, how many years it would take Sri Lanka to raise its income per head from what it is now to that identified level of income, that is, the income per head that Sri Lanka would have to reach for it to achieve the same level of longevity as it already actually has, had Sri Lanka been just another country in the cross-country international comparison (that is, without its special programmes of social services).

The answer depends on the exact effects of transferring its social service expenditure to straight forward capital formation, and it turns out that the answer lies somewhere between 58 years and 152 years ^{2/} - a very long haul indeed no matter which figure we choose. To replicate what Sri Lanka has got from its social-service-oriented public policy through the more traditional market means of capital formation and growth would take a terribly long time. Paying direct attention to people's needs rather than doing it through economic growth is not such an expensive strategy after all in terms of human life.

How possible it may be for other countries to emulate Sri Lanka's social-service policy is not an easy question to answer. The Government of Sri Lanka itself has recently tended to underplay these remarkable aspects of its public policy. Certainly, the fact that Sri Lanka has so far avoided getting into heavy military development and has indeed shunned so-called "defence" makes it rather unique among the developing countries - indeed in the world. Sri Lanka's experience helps to bring out the real social costs and sacrifices induced by defence expenditure. But as was already stated, the rice policy of Sri Lanka never cost more than 5 per cent of its GNP (usually much less), and this cost cannot be the real source of difficulty in India's ability to do what Sri Lanka has done at least as far as food entitlement is concerned.

India and China

The advantages of state intervention in food battles is brought out also by the experience of China. Its performance in raising the expectation of life from a very low figure to one quite close to European standards has undoubtedly been helped much by its wide-coverage food policy. Citizens of our country are, in this respect, a good deal less well served by the state.

There is, however, one respect in which the picture is quite different - indeed quite the opposite. This relates not to the

elimination of persistent, orderly hunger, but to the avoidance of sudden open starvation and outbursts of famines. India has not had a famine since Independence, and given the nature of Indian politics and society, it is not likely that India can have a famine even in years of great food problem. The Government cannot afford to fail to take prompt action when large-scale starvation threatens. Newspapers play an important part in this, in making the facts known and forcing the challenge to be faced. So does the pressure of Opposition parties. Wherever and whenever a famine threatens - whether in Bihar in 1968, or in Maharashtra during 1971-73, or in West Bengal in 1978, or in many parts of the country today - Government intervention is decisive enough to stop the potential famine before it erupts. The country's political system and the press make information about potential famines hard to miss and hard for the Government in power to ignore.

In the absence of these pressures and free newspapers, famines can develop even in countries that normally perform much better than India. For example, it is now clear that China suffered what can only be described as a very large famine during 1959 to 1961, after the failure of the so-called Great Leap Forward. The order of magnitude of extra mortality during these food-shortage years can be assessed by comparison with other large famines in the rest of the world. The biggest famine in India in this century was the Great Bengal Famine of 1943. In that famine, the extra mortality was officially estimated to be 1.5 million, which - as is shown in my book Poverty and Famines - underestimates the real death toll; that toll was more like 3 million deaths.

Using similar methods of estimation of extra mortality and utilising recently released Chinese data yield remarkably high figures of extra mortality over the food-shortage years. Ansley Coale estimates 16.5 million extra deaths, while John Aird indicates that the data point towards an even larger figure (over 23 million), though there are serious data problems. ^{3/} Even if we chose a figure much lower than the lower estimate - the scale of the Chinese food-shortage-mortality must be seen to be much larger than the largest famine in India in the last century, which occurred before Independence. Since Independence India has had no real famines, or sudden massive mortality from food crises. Not so in China despite the fact that in a normal year the Chinese poor is much better fed than his Indian counterpart.

The contrast relates to the different political systems in the two countries and the effects of these political systems on food battles. The Chinese are much more committed to making state provisions for food distribution to guarantee some food to all, and in normal circumstances this commitment has the effect of avoiding the incidence of widespread malnourishment and non-acute hunger that we constantly observe in India. On the other

hand, if there is an economic and political crisis in China that confuses the regime which goes on diligently pursuing disastrous policies with confident dogmatism, then there are no crusading newspapers and hard-hitting opposition parties to force a change, as would clearly be the case in India. Indeed, there was little general knowledge of the famine conditions in China during 1959-61, though there were many rumours reaching abroad. The terrible facts have been acknowledged officially only very recently - nearly two decades after the event and following a political change, leading to a regime critical of past leadership. Battling opposition parties and newspapers play in India a protective role which seems to have been altogether absent in China. The political system and the structure of new distribution in India have a valuable role in spotting acute starvation and forcing the Government to save the really disastrous losers in the food battle from dying of starvation and related illnesses. But, at the same time, non-acute, regular starvation - even though extremely widespread - does not attract much attention in newspapers. These standard events in India seem to be not newsworthy! Furthermore, the Opposition parties are also astonishingly quiet about these regular events - despite their terrible consequences in terms of morbidity and longevity. The system works powerfully to prevent catastrophic losers in the food battle but comfortably accepts and takes in its stride the quiet presence of an immense number of ordinary losers - the chronically ill-fed who are rather more prone to disease and death than their better-fed compatriots. The strengths and weaknesses of the Indian system vis-a-vis the Chinese provide a pattern of varied contrasts of the style and content of food battles in the political arena.

Entitlements, economics and politics

In my book Poverty and Famines, I have tried to analyse the problem of hunger in terms of entitlement systems. Entitlement is a semi-legal concept, focussing on the bundles of goods and services that a person (or a family) can legitimately establish command over using the laws, regulations, conventions, opportunities and rights, ruling in the society in question. In market economies, entitlements reflect ownership, on the one hand, and opportunities of production and exchange, on the other. This application of the entitlement approach helps to explain why the Malthusian focus on food availability per capita is often so badly misleading, since the entitlements (based on ownership and markets) of specific occupation groups could easily collapse even when average food availability per head declines very little, or not at all, or even rises. This analysis points the accusing finger at capitalist market arrangements as setting the stage for very unequal battles.

In the Indian context, the landless rural labourers, with nothing to sell but their labour power, are very often forced into the role of being big losers in food battles. When they lose

moderately, as they frequently do, the sins of market are not much remedied by state intervention in India. Only when they lose catastrophically, the state seems to make a real effort to undo the decimation resulting from the market processes.

But capitalism is not the only system that shows a tendency of producing serious losers in food battles. The idea of entitlements does, of course, go well beyond that of markets and exchange of ownerships. In a socialist economy a person's entitlement to food is strongly influenced by one's rights against the state. Entitlements to food can be quite immune from vagaries of market processes in such a system, but they are not immune from other vagaries. Indeed, the record of socialist economies on the food front is far from brilliant. The Soviet famines of the thirties, the Chinese ones of 1959 to 1961, the Kampuchean disaster of the seventies, and even the recent problems in Poland, indicate how fragile the state guarantees can be. These failures have not been studied adequately in the economic literature because of an artificial dissociation of economic theories from analysis. The food battles in the political arena deserve more attention.

For example, it is not difficult to explain why food output was so low in China during the period 1959 to 1961, but that in itself cannot explain the famine. Why did not the Chinese Government import more food from abroad? Why did it not organise more redistribution between the different regions in the country since there were big differences in food availability over the country? Could there not have been a better rationing system if there was the political determination to avoid the disaster? In tackling these questions we have to look at the prevailing political beliefs and dogmas - including in this case the passion for "local self-sufficiency" - and we have to look also at the nature of political organisation and news-distribution systems in China. I have already commented on some of these issues.

People's entitlement to food depends not merely on the operation of economic forces, including the market mechanism, but also on political ones. Standards of legitimacy, operations of rights and availability of actual opportunities are all relevant to the entitlement approach to food and hunger, and these take us well beyond the narrow domain of traditional economics.

Family conflicts

I turn now to the third area of food conflicts - that of family relations - and this is perhaps the most difficult of the three fields that were identified. The family is usually seen as a cohesive unit, working for a uniform approach to the maximisation of welfare of all members of the family taken together. Sometimes, the united view goes further, and it is pointed out that the members of a close-knit family - as is commonly seen

in India - often do not even have any view of individual well-being as a separate notion from that of a family well-being. Indeed a dedicated rural housewife might not even comprehend - it is argued - what is being asked in being questioned on how well she is, as distinct from how well the family is. The distribution of food within the family is seen to fit into this general approach to family welfare.

I believe that there is some truth in this description of the way a family functions, especially in the rural Indian society, and the absence of the perception of individual welfare as opposed to family welfare is indeed very common. The difficult questions arise after this has been conceded. Do we take this absence of perception of individual welfare as a marvellous feature of selflessness in rural India, or at least an acceptable characteristic of it? Or should we see it instead as a reflection of the way deep inequalities within the family are tolerated, and women in particular are made to accept an astonishingly unequal deal, reinforced by their inability even to see how bad a deal they are getting? I find the latter view much more plausible than the former, even though stated in such bald terms it is bound to appear to be crude and simplistic.

Deprivation of Indian Women

Judged in terms of generally observed characteristics, women certainly do very badly in Indian society, outside elite groups. India is one of the truly exceptional countries in the world in which the life expectancy at birth of the female is less than that of the male, and the pattern of greater mortality of the female persists until they reach the age of forties. Economic and social progress has not changed this unusual feature. Indeed, the ratio of females to males in the Indian population has dropped from being 97.2 per cent in 1901 to only 93.5 per cent in 1981, with a slight reversal of the trend of decline in the last decade (though there are some statistical doubts even about that slight reversal).

Inequalities in the distribution of food fit into the story as do inequalities of other types including that of medical attention. I have tried to discuss this question more extensively elsewhere. 4/ Here I shall confine myself to making only a couple of general remarks.

First, it is hard to justify the lower food intake of the Indian woman entirely by the presumption of lower nutritional needs, as is often attempted. The FAO/WHO standards which are often used, not only take too mechanical a view of nutritional requirements as has been argued by Sukhatme and others, but also display an extraordinary bias in assuming very low energy requirements for activities performed by the typical woman. To classify housework as "sedentary" arouses the suspicion that the authors must have never seen housework (especially in a poor

society, untouched by gadgetry). The food intake statistics are not very easy to use to calculate nutritional fulfilment by employing such dubious norms of respective nutritional requirements. As it happens, even the observational problems in checking who eats what are also very serious. So the more fruitful approach is through the use of health data involving morbidity and observed malnutritional characteristics of the body. The relatively greater morbidity of women relates ultimately to the relatively greater mortality to which I referred earlier.

Perception and conflicts

Second, perception failure is a common characteristic of inequality and unusual deprivation in other fields also. Deep-seated inequities persist by making allies out of the deprived - making them a party to the persistence of deprivation. The over-worked family servant, the exploited share-cropper, the debt-burdened peasant losing his land to the moneylender, have all been traditionally groomed to play these respective roles, and their traditionally unquestioning acceptance of these roles plays an important part in the continuation of these inequities. A sense of legitimacy and order, and one of naturalness, make the inequities entrenched and hard to dislodge.

While this perception problem is present in the context of very many different types of inequities, it is especially important in the case of within-family distribution. The family is typically seen - with good reasons - as an area of affection, of love, of sacrifice for one another, and no family can work very well without these characteristics. This general element of good sense in the selflessness of family members gets hopelessly mixed up with extracting unequal and unusual sacrifices from Indian women, producing an enormous inequity in the position of women in traditional Indian society. The traditional family is a great compound of warmth, on the one hand, and exploitation on the other.

It might be interesting to consider an illustration of the perception failure of the type under discussion. In Singur, near Calcutta, in 1944 - the year after the Great Bengal Famine - there was a survey of health conditions carried out by the All-India Institute of Hygiene and Public Health, and there were questions on perception of the state of one's health in addition to medical examinations. Among the categories of people surveyed were many widows and widowers in that post-famine year. They were all asked whether they were "ill" or in "indifferent" health. As many as 48.5 per cent of widowers confided to being ill or in indifferent health. The proportion of widows, on the other hand, in this joint category was just 2.5 per cent. Leaving out being just ill, for which there are some objective criteria, and concentrating on the more subjective category of being in "indifferent" health, it was found

that 45.6 per cent of widowers confessed to being in indifferent health. What about the widows? It is reported that the proportion of widows who put themselves in this category was exactly zero! 5/

In the field of within-family distribution, the perception of the problem is a crucial part of the problem itself. Non-perception of the deep inequalities that exist both reflects the depth of these inequalities and also serves to sustain them. Role education of boys and girls trains them implicitly for the inequalities of the respective positions.

It is worth mentioning in this context that the sex inequalities on sustenance and life emerge very early in Indian society. It has been observed that girls between the ages of one and five have a significantly higher mortality rate than boys. The differences in food consumption become particularly sharp in distress situations. For example, as I have discussed elsewhere (using the data provided by a UNICEF survey), in the economic disaster following the 1978 floods in West Bengal, girls under five seem to have had a 60 per cent higher incidence of third-degree malnutrition than boys of the same age group. 6/ There is also much evidence that the female children receive much less medical attention than the corresponding male children. Inequalities in the distribution of food within the family fit into this general pattern of relative deprivation.

The perspective of battles may be very far from the way the conflicts of interest in the use of scarce food and other facilities are perceived within the family. But that - if the foregoing analysis is correct - is part of the problem itself, and the first step in changing the objective situation is to make subjective perception come closer to the observed reality. The placing of women, including little girls, in the position of persistent losers in these battles can be challenged and ultimately countered only by departing from the implicit acceptance of the losing role of the woman. A low-key and clinically academic discussion of the problem of intra-family distribution is not quite adequate. We can do it with a bit more rage, a bit more passion and anger.

I should bring this lecture to a close with a few general remarks. First, food battles take place over wide fronts, involving market conflicts, political conflicts and even conflicts of family relationships. The roles of markets, political pressures, news systems, family conventions, social perceptions, etc., have to be more clearly and more widely understood to solve the many-faceted problems of food and hunger in India.

Second, the market battles tend to take dramatic forms in situations of famine, but they are always important

in any fully or partly market economy. These battles tend to produce systematic losers from specific occupation groups, of which the class of rural landless labourers is particularly important in terms of both size and frequency of deprivation.

Third, state intervention in food battles can have the effect of saving millions of losers from regular starvation and hunger. India's record in eliminating endemic, non-acute hunger is quite bad and contrasts very unfavourably with the record of some other countries such as Sri Lanka and China. The high life expectancy in these countries, despite their poverty, relates strongly to their policy of public provision of food and social services such as medical attention. Direct public provision of means of survival seems to be a much quicker way of raising life expectancy than trying to do it through encouraging fast economic growth. Fast growth raises longevity remarkably slowly in comparison with a policy of public provision. India's choice of growth-oriented strategy with a very conservative policy of social services and food distribution promises a long haul in raising life expectancy.

Fourth, there is, however, one respect in which India has really turned a page on the food front. This refers not to the much-publicised self-sufficiency of India in food, since this so-called self-sufficiency co-exists with - indeed survives on - keeping a large class of people in a position of having little entitlement to food in the market. The real achievement relates to the elimination of sudden large-scale starvation and famines. Given the open political system in India, including the ability of newspapers and Opposition parties to pester the Central and State Governments, it is essential to avoid famines for any government keen on staying on in power, and famines, as I have argued elsewhere (Poverty and Famines) are very easy to prevent if the Government acts intelligently and in time. India's success in this respect contrasts with the unfortunate record of China in having a substantial famine during 1959 to 1961 with a death toll apparently much larger than the pre-Independence Bengal famine of India in 1943. The absence of effective opposition parties and independent newspapers makes a government free to pursue disastrous economic policies even if it causes a famine. A fraction of that Chinese death-toll in India would have had the effect of forcing the Government to resign.

Fifth, entitlements to food depend on both economic and political systems. The boundaries of traditional economics make it a rather limited tool to understand food battles and their outcomes. For example, the newsworthiness of sudden open starvation as opposed to the non-newsworthiness of endemic non-acute hunger - even in very large scale - is an important distinction in understanding the pattern of state intervention and the actual pattern of food deprivation in India.

Sixth, extraordinary inequalities in the distribution of food within the family seem to exist in India. While data are hard to get and difficult to interpret in this area, nevertheless the evidence does clearly indicate a persistent tendency for women to be more famished than men, including small girls doing significantly worse than boys, especially in times of economic distress. Even the greater mortality and lower life expectancy of Indian women compared with men relate to being losers in the food battles as well as losers in other, related battles (for example, in getting medical attention).

Finally, the absence of the perception of conflicts and battles contributes not a little to the persistent losers staying that way. The inability to perceive blatant inequalities and their implications is part of a value system that sustains these inequalities. The selflessness of the constant losers acquires some nobility in that value system. An admiration takes the place of a square deal. A just society cannot be built on so much delusion. The need to see food battles as battles is long overdue. There is nothing particularly noble in the haziness of vision. Nor justice in sanctimonious and hollow appreciation.

Amartya Sen's Coromandel lecture reproduced here has provoked quite a discussion in Mainstream, the Indian weekly, where it was originally published (8 January). Sen's critical observations on China's failure to avert famine in 1959-61 drew a rather sharp criticism from Prof. K.N. Raj (15 January), a reply by Sen and a rejoinder by Raj (12 February) and a rebuttal of Raj's point by Sen (19 February). Readers interested in this lively exchange may write to Mainstream, F-24 Bhagat Singh Market, New Delhi 1, India.

FOOTNOTES

- 1/ See my Poverty and Famines: An Essay on Entitlement and Deprivation (Oxford: Clarendon Press, 1981).
- 2/ See my "Public Action and the Quality of Life in Developing Countries" Oxford Bulletin of Economics and Statistics, 43 (1981), pp.301-6.
- 3/ See Ansley J. Coale, "Population Trends, Population Policy, and Population Studies in China", Population and Development Review, 7 1981; John S. Aird, "Population Studies and Population Policy in China", Population and Development Review, 8 (1982).
- 4/ "Family and Food: Sex-Bias in Poverty" forthcoming in P. Bardhan and T.N. Srinivasan, eds., Rural Poverty in South Asia, volume 2, to be published by Columbia University Press. See also the empirical studies relating to Bangladesh by L. Chen, Huq and D'Souza.

5/ R.B. Lal and S.C. Seal, General Rural Health Survey, Singur Health Centre, 1944 (Calcutta: All-Indian Institute of Hygiene and Public Health, 1949), p. 152.

6/ "Family and Food: Sex-Bias in Poverty" op. cit.

(Suite de la page 3)

3. Les perdant(e)s de toujours: Les inégalités à l'intérieur des familles existent aussi et ce sont les femmes qui en sont les victimes. Plus généralement, l'injustice est si enracinée que les plus pauvres (notamment les paysans sans terre) acceptent leur sort, facilitant ainsi la persistance de leur pauvreté.

CONFLICTOS EN EL ACCESO A LA ALIMENTACION

Resumen: Este artículo examina, especialmente a partir del ejemplo de la India, tres aspectos de conflictos relacionados con el acceso a la alimentación:

1. Conflictos debidos al mercado: sólo algunos grupos, los más vulnerables económicamente, en especial los rurales pobres son afectados, ya sea por las hambrunas o ya sea por el hambre permanente, aún en un país autosuficiente en alimentos.

2. Acción pública y acceso a la alimentación: se refiere a las consecuencias socio-económicas de estrategias de crecimiento (India) o de estrategias de satisfacción de necesidades (China, Sri Lanka) y sus efectos en los conflictos de alimentación, tanto como el rol de grupos de presión dentro de las sociedades democráticas. Se examina el principio de derecho a la alimentación en el contexto de las economías capitalista y socialista: dos sistemas inadecuados en cuanto a la solución efectiva del problema alimenticio.

3. Los (las) perdedores(as) de siempre: las desigualdades en el seno de las familias también existen y las víctimas son las mujeres cuyas necesidades nutritivas están subordinadas al bienestar de la familia. En general, la injusticia está tan enraizada que los más pobres (especialmente los campesinos sin tierra) aceptan su suerte resignadamente, facilitando así la continuación de su pobreza.

TECHNO-ECONOMIC INTELLIGENCE FOR DEVELOPMENT

by Francisco R. Sagasti

GRADE

Apartado 5316

Miraflores

Lima 18, Peru

Original language: English

Abstract: Techno-economic intelligence groups in the Third World usually operate in an unfavourable environment characterized by a generalized lack of resources of all types. The level of understanding and acceptance of their activities by policy-makers is generally low. On the international front, political realignments, military alliances and economic uncertainties add to the constraints. Last, but not least, the concepts, values and perspectives that are transferred with the technology are generally alien to indigenous habits of thought and modes of behaviour. This paper offers some speculations on the changing information environment and its implications for future techno-economic intelligence activities in the Third World.

INFORMATION TECHNO-ECONOMIQUE POUR LE DEVELOPPEMENT

Résumé: Les groupes concernés par l'information techno-économique dans le Tiers Monde opèrent généralement dans un environnement défavorable, caractérisé par un manque de ressources de tout genre. Le niveau de compréhension et d'acceptation par les décideurs est souvent assez bas. Sur le front international, les changements politiques, militaires et économiques semblent ne jamais cesser. Enfin, la dernière - mais non la moindre - des contraintes est que les cadres conceptuels, les valeurs et les perspectives transférées de l'extérieur sont en général étrangers aux habitudes de pensée et aux comportements endogènes. Cet article offre quelques spéculations relatives à un environnement changeant et ses implications pour les futures activités d'information techno-économique dans le Tiers Monde.

INFORMACION TECNICO-ECONOMICA PARA EL DESARROLLO

Resumen: Los grupos relacionados con la información técnico-económica en el Tercer Mundo trabajan generalmente en un ambiente desfavorable, caracterizado por una falta de toda clase de recursos. El nivel de comprensión y de aceptación de sus actividades en los que toman las decisiones es a menudo bastante bajo. En la esfera internacional, los cambios políticos, militares y económicos parecen no terminar nunca. Finalmente, el último pero no el menos importante de los obstáculos es que los cuadros conceptuales, los valores y las perspectivas transferidas desde el exterior son, en general, extranjeras a los hábitos internos de pensamiento y a los modos de comportamiento endógenos. Este artículo ofrece algunas especulaciones relativas al cambiante ambiente de la información y sus implicaciones para las futuras actividades de información técnico-económicas en el Tercer Mundo.

Francisco R. Sagasti

TECHNO-ECONOMIC INTELLIGENCE FOR DEVELOPMENT

These notes examine one aspect of the problem of acquiring, processing and using economic and technological information for the purpose of policy and decision-making that is intelligence by governments in Third World countries. To a large extent, they have been motivated by the articles and reports written by Stevan Dedijer on the subject of "Intelligence for Development", and presents the point of view of a Third World researcher and policy-maker. ^{1/} Rather than describing what exists or has been done in practice (very little indeed!), these notes offer some speculations on the changing information environment and its implications for future techno-economic intelligence activities in the Third World.

THE INFORMATION ENVIRONMENT OF THIRD WORLD COUNTRIES

A techno-economic intelligence group in a Third World country will usually operate in an unfavourable setting characterized by a generalised lack of resources of all types. The level of understanding and acceptances of these activities by policy-makers is generally low. Rivalries are heightened because of the small size of the technical and political elite, and because access to bureaucratic power is a limited and highly-priced good. The international context is changing rapidly: political re-alignments, military alliances and economic activities appear to be in a constant state of turmoil. And last, but not least, of these constraints, the prevalent conceptual frameworks, values and perspectives that are given to the Third World countries from abroad, are generally alien to their indigenous habits of thought and modes of behaviour, and are imposed to a large extent through the pervasive influence of international mass media.

The Techno-economic Intelligence Group

With this context in mind, it appears that a techno-economic intelligence group in a Third World country ought to evolve with a dual personality. It should pay attention to the local reality, the local culture, the values and outlook of the general population and of the elites, the nature and evolution of local power struggles and the degree of understanding and acceptance of techno-economic intelligence activities by policy-makers. At the same time it should follow closely the international scene, the frontiers of knowledge in the areas of critical importance to the country, the evolution of the spheres of influence and power in international relations and the possibilities of exploiting to the maximum extent the limited room for manoeuvre available for autonomous development. This requires

some sort of "institutionalised schizophrenia", in which the international and local components of the "personality" of a techno-economic intelligence group would evolve independently from one another in organisational terms, although they would be integrated in an organic fashion in the minds and actions of the leaders of the group.

The great expansion of the knowledge-generating activities in the industrialised countries, the growing degree of concentration of resources in scientific research, the increasing extent to which modern technologies are being based on scientific discoveries, and the widespread use of these science-based techniques in the productive system is what characterizes the evolution of the industrialised nations that belong to what has been called the "First Civilisation". In contrast, the Third World countries of the "Second Civilisation" have not managed to acquire a research base of their own to generate scientific knowledge in a systematic, large-scale, and continuous fashion, to transform this knowledge into production techniques, and to incorporate these new science-based techniques into production. In these countries science, technology and production have grown in an imitative, fragmented, and disjointed way, each being almost totally dependent on the evolution of their counterparts in industrialised countries. The contradictions and conflicts between these "two civilisations" and the process of searching for a "third civilisation" are likely to be the dominant features of the evolution of international relations during the next half-century ^{2/}.

The importance of a techno-economic intelligence group in a Third World country can be appreciated only in the face of the huge differences in the capacities to generate, select, absorb and use knowledge. A techno-economic intelligence group involved deeply in the process of development would have to undertake the highly improbable task of acting as the main focus for the gathering, transfer, and processing of critical information for the process of development. This difficult task appears more tractable when the concept of "critical information for development" is given a restricted meaning, adapting a selective approach, limiting the scope of information gathering and processing activities, and organising them sequentially in accordance with the priorities of the country.

Intelligence and national security

Even though the military aspects of intelligence are most important for the Third World countries involved in actual or potential conflict zones, they are less important to the majority of them. Furthermore, there appears to be a general shift from the purely military aspects of conflict towards economic, social, scientific, technological and even cultural battlegrounds. The newly-emerging arsenal includes the imposition of

economic sanctions, the use of the "food weapon", barring the access to technological resources, the use of mass media to conduct sophisticated "cultural battles" of concepts and ideologies, the use of an international forum to engage in "battles of words" in international negotiations, and a variety of more subtle forms of warfare that go well beyond the classical military confrontations. From this perspective, the issue of national defense and national security have been transformed from a strictly military programme into a broad multidimensional problem of national intelligence in all spheres and sectors of a country interacting within the world environment.

Indeed, as early as the mid-1950s, the Peruvian Centre for Higher Military Studies was already advancing the concept of "integral security doctrine", in which national defense and security were closely tied to socio-economic development. For example, it was sustained that a country could not be defended adequately from a foreign aggressor unless it had a well-developed economic system to back up any defense undertaking. To a large extent, this doctrine justified the social transformations introduced in Peru during the first years of the Revolutionary Government of the Armed Forces that took power in 1968.

THE EVOLUTION OF A "SOCIAL BRAIN"

Stevan Dedijer writes about "Babelian indicators of a tidal wave" used to characterize the enormous amount of data that has been put at the disposal of managers, government officers, executives, policy-makers, researchers and in general any body who is interested in gathering information for decision-making purposes. While the analogy of a "tidal wave" would be accurate for those in industrialised countries, that tidal wave has more the nature of an "avalanche" or "landslide" that descends suddenly and massively upon the Third World country policy and decision-maker, threatening to bury him under a mass of data, most of which is likely to be irrelevant. It would be useful to review the origins of this situation, exploring the ways in which a Third World country techno-economic intelligence group could react to such a mass of suddenly available information and learn to operate effectively in a heavily over-loaded information environment.

The last 80 years have seen three stages in the process of change of the information environment. From a first stage in which information sources were rather easy to identify and to gain access to, there was a transition (especially after 1945), towards a situation in which the amount of technical, economic, scientific, political, social and cultural information grew at a rapid pace and special efforts were required to follow the evolution and characteristics of information sources. We are

now entering a third stage in which the information overload is so great and the multiplicity of sources has increased to such a large degree, that once again it is possible to identify easily a potential source of information and even to gain access to it without much difficulty. Each of these stages will be analyzed in terms of several analogies.

First era: easy information

In the first stage, the sources of information were scattered, relatively easy to identify, and with few interconnections among them. An information gathering and processing organisation would operate as what Ashby³/has called an "iterated system" in which the various interactions between the system and its environment can be dealt with independently from one another. Reaction times to disturbances are short, adaptation responses are fast, and the changes do not pose serious threats to the existence of the system. At this stage the structure of the web of information sources would correspond to what Emery and Trist⁴/call "the placid-clustered" environment for an organisation, in which it is possible to ignore the interconnections within the environment of a system. Thus at this stage the organisation's capacity to process and use information would probably exceed the capacity of the environment to generate it. Using a literary analogy, the typical image of a technoeconomic intelligence officer in such an environment would correspond to Somerset Maugham's Ashenden, a British secret agent in the 1920s who has the adequate personal connections with information sources, who does not use technical gadgets, who is mostly interested in human nature, and who employs his personal judgement to assess the validity and relevance of information. Ashenden's main ability is a capacity to anticipate reactions and to search for interconnections between facts, personalities, and possible future events.

Second era: managed information

During the second stage there is a substantive increase in the generation of information, a multiplication of data sources, and a rapid growth in the amount of information provided to policy-makers, planners and decision-makers. The performance of an organisation is governed to a large extent by the advantages gained through the access to privileged information and by the capacity to acquire and process reliable information from specialised services. In this information-sensitive environment the "management of secrecy" (selective withholding of data, protection of information sources, dissemination of erroneous information, etc.) becomes a crucial aspect of competitive strategies. The increased speed of information transmission makes it necessary for organisations to develop short reaction times, which in turn requires the use of

computer processing, mathematical models, telecommunication facilities, and the establishment of specialised information processing units.

At this stage information processing and decision-making take place simultaneously. This is the era of management information systems, of computer data networks, of teleprocessing facilities, and of the "information on information" schools of thought. In cybernetic terms the new information environment would correspond to what Ashby has called the "poorly jointed system", in which there are many interconnections among the components of the environment and the system. This requires vastly increased information processing capabilities for the organisation, to react adequately to changes in the environment. The new information environment would also correspond to what Emery and Trist call the "disturbed-reactive" environment in which it is necessary to take into account not only the interactions between the organisation and its environment, but also the changes that take place within the environment itself. From the literary point of view, the typical image of a techno-economic intelligence officer during this period would correspond to that of Ian Fleming's James Bond, a man who can react quickly to unforeseen situations, who is helped by an array of technical gadgets and who has access to the information that allows him to take advantage of the most unusual situations.

Third era: information overload

At present we are entering into a new stage in the evolution of the information environment in which there is an information avalanche. There are many sources for each unit of information and a large amount of redundancy and interconnection in the networks and channels. There will be no need to devise sophisticated strategies for gaining access to data and for preserving secrecy.

With such overload and richly interconnected information networks, it would not be necessary to obtain access to a specific individual source, or to worry about accuracy. There will be ample opportunities to contrast different sources of information, checking them against each other. The "management of secrecy" will become less and less important, and there will be a need to devise strategies for competing in a "transparent" information environment. In cybernetic terms, this new environment would correspond to what Ashby called "the richly-jointed system", in which every change in a component of the system or its environment affects all the other components, even though, because there are so many interconnections, the effects of a change are attenuated and dampened by a series of reactions and counter-reactions. In a sense, the system acquires a certain immunity to environmental disturbances. In organisational theory terms, this new situation would correspond to what Emery and Trist have

called "the turbulent environment", in which the main task of a system is to maintain an unstable equilibrium and to develop organisational response capabilities.

Using again a literary analogy, there would be a return to the traditional concept of an intelligence officer and a reinstatement of old ways of handling information. The image of a techno-economic intelligence officer would now correspond to John LeCarre's George Smiley, a man who knows how to survive in a bureaucratic jungle, who is capable of judging values and motives, who can assess the importance of data, and who has the ability to offer interpretations while facing an information overload.

In a certain sense, the excess of data, the multiplication of channels and sources, and the generalised availability of information create a situation similar to that prevailing during the first stage, when there was relatively little information and sources were easy to identify and gain access to.

NEW STRATEGIES FOR INFORMATION GATHERING AND PROCESSING

This newly emerging information environment raises several interesting issues. For example, the fact that it is possible to put in contact two randomly selected persons through a limited number of intermediaries (around five) ^{5/} shows that it would be rather easy to identify the individuals that generate information on a specific subject. In turn this would make it necessary to alter information gathering and processing strategies. A situation will be reached in which, for all practical purposes, information will become a "free good", or at least a relatively cheap commodity. At that stage it would be more important to develop a capacity for processing information than to devise channels for acquiring it.

In the world of the next twenty years, the capacity to generate information is likely to exceed the capacity to process and use it. As a by-product of the microelectronics revolution, advances in communication technology will make transmission costs and times negligible, while advances in computer technology will make it possible to attain an intermediate stage of information processing rather easily, thus producing masses of data on almost any specific subject of interest to the techno-economic intelligence officer. As an indication of this trend it is possible to observe the emergence of worldwide institutions specifically designed to interconnect information sources and networks (United Nations and other international agencies, transnational corporations, the scientific community etc.).

In order to cope with the information environment of the future, a techno-economic intelligence group in a Third World country will have to devise an opportunistic strategy and an eclectic

approach to information gathering and processing. It will be necessary to accept that secrecy will not be possible to maintain, that exclusive or privileged information channels will no longer exist, and that most of the masses of data to be acquired is likely to be irrelevant. In this new situation the efforts of a techno-economic intelligence group should be directed towards building up data processing and interpretation capabilities in order to discern trends, detect critical events, anticipate responses, identify opportunities and threats, and in general to use the increased amount of information to the country's advantage.

Synthesists and pattern recognizers

Perhaps the most adequate analogies for examining this new situation would come from the science fiction literature. Stanislaw Lem's novel Chain of Chance explores the implications of a massive increase in the interactions of the social and material environments, which make it almost impossible to discern a pattern among a variety of small and large interconnected events and impede the design of an adequate interpretation strategy. Extrapolating Lem's ideas it would be possible to say that, regardless of the particular strategy to be followed in acquiring information, a techno-economic intelligence group will probably collect the data it needs, but it would find it difficult to process an interpret it.

Another analogy could be drawn from John Varley's novel The Ophiuchi Hotline, where he describes the new profession of "synthesist" (as opposed to the "analyst") 6/. Varley's "synthesist" scans huge masses of data over a long period of time in order to choose a fraction that merits further study, and which will be processed by specialists assisted by large electronic devices. The training of a "synthesist" is a complex and expensive undertaking, for a person of natural ability must be found, and trained, to establish interrelations, to assess relevance and, in general, to discern patterns among a seemingly incoherent mass of data.

John Brunner, in his award winning novel Stand on Zanzibar, also deals explicitly with the abilities of a "synthesist":

"There were people, extremely top people, whom specialists tended to refer to disparagingly as dilettanti but who dignified themselves with the title "synthesist", and who spent their entire working lives doing nothing but making cross references from one enclosed corner of research to another." Stand on Zanzibar (London: Arrow Books, 1978).

Brian Aldiss identifies a similar profession, that of "Seeker", in his short story An Appearance of Life and describes the training process as follows:

"To qualify as a Seeker, it is necessary to show a high serendipity factor. In my experimental behaviour pool as a child, I had exhibited such a factor, and had been selected for special training forthwith. I had taken additional courses in philosophicals, Alpha-numerals, Incidental Terachotomy, Apunctual Synchronocity, Homo-ontogenesis and other subjects, ultimately qualifying as a Prime Esemplastic Seeker. In other words, I put two and two together in situations where other people were not thinking about addition. I connected. I made wholes greater than parts. Mine was an invaluable profession in a cosmos increasingly full of parts."

In the information environment of the future, the techno-economic intelligence officer of a Third World country should be, above all, a synthesist. No longer will he have to worry about devising ways and means of securing access to information, of building privileged channels and of protecting the secrecy of his sources or his information. He will be concerned with the processing of large amounts of data, with checking and comparing various sources to choose the most reliable and least expensive ones, and with establishing interconnections among a variety of issues, problems and events of particular relevance to the country's development.

Considering the slow process involved in the organisation of a techno-economic intelligence group and the changes in the information environment that are beginning to take place, it would appear necessary to start in a limited way, undertaking specific techno-economic intelligence tasks that would serve as training exercises for a selected number of professionals. This training process should emphasize the "synthesist" approach, attempting to conform a small and coherent group of individuals with complementary disciplinary skills, who would be able to act as a link between policy-makers and the overloaded information environment of the future. They would articulate the acquisition and processing of information about the international situation and about the events taking place within the country, putting them both in the perspective of the country's short, medium and long-term objectives. The future prospects of the Third World will rest to an increasing degree on the successful establishment of an effective techno-economic intelligence group, however improbable this undertaking may appear at present.

-
- 1/ Cf. IFDA Dossier 29 and S. Dedijer "Intelligence for Development" (OECD Seminar, July 1981).
 - 2/ F. Sagasti, "The Two Civilizations and the Process of Development", Prospects, Vol. X, No 2, pp. 123-139.
 - 3/ W. Ross Ashby, Design for a Brain (London: Science Paperbacks, 1966).
 - 4/ Fred Emery and Eric Trist, "The Causal Texture of Organizational Environments", Human Relations Vol. 18 (1965), pp. 21-32.
 - 5/ For a review of experiments giving evidence on this matter see Eugene Garfield, "It's a Small World After All", Current Contents, (22.10.79).
 - 6/ Another dichotomy of this kind is "generalist" versus "specialist".

TO OUR READERS

In Dossier 34 (p. 16) we expressed our worries about the postal services, and we invited readers missing one or several copies, from Dossier 29 onward (i.e. when we started mailing from Rome), to let us know so that we might replace them. Further correspondence and some sample surveys suggest that the casualties were more than we first suspected.

To make as sure as possible that future Dossiers do reach individuals and associations on our mailing list, we have decided to resume both printing and mailing in Switzerland.

Since this issue is likely to reach more readers than the previous one, we repeat what we said in Dossier 34: if you are missing one or several issues of the Dossier (after 29) please write us at Nyon and we will mail them to you as long as they are available.

* * *

The decision to come back to Switzerland implies some additional costs - a reason to repeat another message which appeared in Dossier 34 (p. 41): financial contributions to the Dossier are welcome. We suggest a minimum of US\$30 or Swiss francs 48.- for those in the North, and half this amount for those in the South and students, but there is no upper limit... Please send cheque to IFDA, 2 Place du Marché, 1260 Nyon, Switzerland. To stimulate our readers in Switzerland, they will find enclosed in this Dossier a 'bulletin de versement postal' (CCP 10-23549, FIPAD, Nyon).

* * *

The Executive Committee of IFDA approved last year some changes in both the typing and the mailing system of the Dossier. We are examining several technical possibilities, including video treatment of text and computerised mailing list. When the initial investment has been amortized, this may result in significant savings. In the meantime there might be some disruption in the preparation of Dossier 36 (July/August, normally mailed at the end of June). So if by early July you have not received Dossier 36, please be patient and forgive us.

TECHNIQUE AND WOMEN'S TOIL

by Valentina Borremans
Apartado 479
Cuernavaca, Morelos, Mexico

Original language: English

Abstract: Ivan Illich summarizes this paper as follows: "Research for women aimed at providing them with new technologies has been part of development-oriented policies and has always increased the total toil of women. Only research by women, conducted by those who themselves use the new tools and techniques can reduce women's toil, decrease women's dependence on the cash nexus and consequently the severity of sexism". (Ivan Illich, Gender (New York: Pantheon Books, 1983) p.64.)

LA TECHNIQUE ET LE LABEUR DES FEMMES

Résumé: Ivan Illich résume ainsi l'article de Valentina Borremans: La recherche pour les femmes tendant à les pourvoir de nouvelles techniques a été partie intégrante des politiques de développement et a toujours accru le labeur total des femmes: Seule la recherche par les femmes, menée par celles qui utilisent elles-mêmes les nouveaux outils et les nouvelles techniques, peut réduire le labeur des femmes, diminuer leur dépendance à l'égard du système monétaire et, par conséquent, la sévérité du sexisme. (Ivan Illich, Gender (New York: Pantheon Books, 1983) 192 pp. A paraître en français (Paris: Le Seuil).

LA TECNICA Y LA LABOR DE LAS MUJERES

Resumen: Ivan Illich resume así el artículo de Valentina Borremans: La investigación para las mujeres, pretendiendo dotarlas de nuevas técnicas, ha sido parte de políticas de desarrollo orientado y siempre ha aumentado la labor total de las mujeres. Solamente la investigación por las mujeres, conducida por ellas mismas, que son las que utilizan las nuevas herramientas y técnicas, puede reducir la labor de las mujeres, disminuir su dependencia con respecto al sistema monetario y en consecuencia, disminuir también el rigor del sexismo. (Ivan Illich, Gender (New York: Pantheon Books, 1983) 192 pp.

Valentina Borremans

TECHNIQUE AND WOMEN'S TOIL

This paper was prepared for delivery at a consultation called by the Belgian Ministry of Cooperation on "Appropriate Technology" which lightens women's daily heavy task, Brussels, September 1982.

For more than a decade, I have lived in a village on the south slope of the Sierra Madre. And I have made about a dozen slow trips throughout South America. These were the outgrowth of my work with CIDOC, the Centro Intercultural de Documentación, which I directed from its opening in 1966 to its closing in 1976. Since that year, my work comprises three activities: 1) I help village libraries equip themselves with reference books on convivial tools; 2) I act as the curator in charge of the former CIDOC collection on popular religion in Latin America, now housed in the Colegio de México. I edit selections from this collection for publication on microfilm. Every other year I travel through South America in search of new material for "L'histoire des mentalités"; 3) I help Ivan Illich with his research. For twenty years, I have had a privileged access to his readings, notes and drafts, together with the frequent stimulus of conversation. It is no wonder then if I have difficulty distinguishing between my views and positions and his thought and expression.*

What I am going to say, therefore, results from conversations with hundreds of people who participated in meetings at CIDOC, from personal observation during my travels throughout Latin America, from my discovery of the authors cited in my book, Reference Guide to Convivial Tools. 1/

My reflections bear on what I have seen - not on the intentions of development programmes, but on their results. When we founded CIDOC, development was still two-thirds utopia; today it is a mess which can be studied empirically. 2/ I want to examine, not the promise of development to women, but its impact on women. To do this I shall propose criteria for research on the effect which certain tools have on women. These are the tools which purportedly lighten women's toil, toil which extends to death.

By toil I mean the burden imposed on women through those things they must do because they are women. These include economic activities for which, more often than not, they are not paid,

* I wrote the present text while I was revising the proofs of Gender, Illich's last book to be published by Pantheon, New York; Boyars, London; Le Seuil, Paris.

and subsistence-oriented activities which economists cannot adequately measure. I am interested in the impact of new tools on the hardship, strain and drudgery with which women are burdened. I do not speak about lightening the toil of some individual woman. Rather, I am looking for criteria which assess the toil of women as a group.

Research on women and tools has multiplied during the seventies, 3/ but is of two profoundly different kinds. One looks at tools which lighten women's total lifelong toil. This research is done mostly by women who are themselves helped by the new techniques which they adopt. This inventive vernacular adoption of new techniques by women is rarely called "research"; indeed, it is generally overlooked. Few reporters recognize the genius who makes an oven out of a gearbox as a researcher.

The other kind of research is that for women. Its primary purpose tends to be the increase of women's productivity. It measures the "improvement" of women's well-being as viewed by the expert.

The two types of research are at odds with one another. Research by women tends to keep them outside the market, and to limit the community's productivity in monetary terms. But it also generally lightens the total burden carried by women.

The second type of research drafts women into development. It is carried out by experts, sometimes in consultation with clients and, as I shall show, increases both women's burden and sexist discrimination.

Both high and low technology can be appropriated by women themselves for their own purpose. At this conference I focus primarily on simple techniques that are locally available, cheap, non-compulsory in their use. This technology that is ecologically "soft", socially "decentralizing", mechanically often "intermediary" can become the subject of both research by and for women. Organic agriculture, gohar gas, passive solar heating, but also arguably microprocessor-equipped knitting machines can be made subservient to either subsistence or to growth.

Horticulture can be used by women to keep the household largely outside the cash-nexus and the market. On the other hand, it can also serve to multiply cash ties within the community, to increase everyone's commodity dependence and to increase the cash flow.

Under the label of "women's research on Appropriate Technology" (henceforth AT), research by and research for women have been hopelessly confused. I want to disentangle them because they are in fact separate, albeit complementary. Only when the

complementarity between research by and for women is recognized can we find a democratic balance between:

- . those technical and legal priorities which help women to lighten their own burdens, and
- . those other priorities which make women somewhat less unequal competitors for money.

As an example, let me cite a certain village where women reassert their control over the hoe and garden. Such a reconquest is quite likely at the end of a decade during which households headed by women have increased everywhere, doubled in nations such as Brazil, tripled in others such as Morocco.^{4/} Thanks to the new alchemy of organic agriculture cum AT, the recovery of the hoe by women is in no sense a romantic regression. Formerly undreamed of results can now be obtained with comparative ease. The new technical potential, however, does mean conflict with men, as well as among women themselves.

The claim to the hoe cannot but challenge the interests of males. The reconquest of the garden as women's domain reduces female "manpower" for weeding on the cropland where men drive tractors, cuts into the acreage and water supply now controlled by men, and removes women from men's control at work.^{5/} And the recovery of the hoe strengthens women against men, no matter if the hoe is used for subsistence or for a cash income. But these two ways of using a woman's garden are in conflict with one another.

In Chile, a given plot can easily grow the 35 species of vegetables, the fowl and fish to keep two women and five children in good health. But the same plot can be farmed as a truck garden which supplies a farmers' market with quality produce. Income thus generated can enable the seven people to survive on junk. In the first case the hoe becomes the symbol of a new subsistence; in the second, of self-enslavement, "participation" and economically measurable growth. The two AT gardens represent opposite visions of the good life, opposite expressions of woman's view of woman.

At this conference we are asked to recommend policies which ease women's burden through the use of AT. This means principally women in the Third World. But we cannot possibly make such recommendations without first looking at how development has affected women up to now.

Economic development as been tried for thirty years and has now become a subject for the social historian. For a large part of the men and women whom development has affected, it has meant the modernization of their poverty which must be distinguished from the feminization of poverty which has been empirically associated with it. I shall first mention three traits of genderless, modernized poverty, and then list three

further traits that aggravate it for women.

1. Everywhere subsistence activities have been degraded in the process of industrial growth. It has become more difficult to walk, to work, to build one's own house, to feed one's family, to learn a trade without buying into school.
2. Everywhere kinship, neighbourhood, village square and dozens of other support networks have been reduced to the cash-nexus. Gifts of all kinds are dissolved into money.
3. Everywhere professional norms have replaced vernacular values. Not someone from the village, but an outsider is believed to know how best to say something, treat a disease, get a job done.

These sad social side effects of 'development' are increasingly recognized. And they are as unavoidable as the much better publicized ecological side effects. Like pollution, the modernization of poverty affects both men and women. But there is another class of side effects which specifically affect women, and which have been little noted. I shall now describe three aspects of the feminization of poverty:

Inevitably, growth deprives women of their gender-specific tasks. It turns them into a mixed labour force; it makes them the second sex. Everywhere 'development' forces women into something formerly unknown: individual competition with men. Through common growth women are 'liberated' to enlist in a struggle with men for the same job, a struggle they are doomed to lose. Up to now, the crucial importance of sexism as a side effect of growth has been overlooked.

We easily forget that "work" which can be done indiscriminately by either men or women simply did not exist in pre-industrial societies. ^{6/} If examples appeared, they were confined to slaves, untouchables and outcasts. No farm implement, no household utensil, no domestic animal in a pre-industrial society was handled indistinctly or used in the same way by men and women. Genderless tools are an invention of the 19th century, the tools used in what is now called work.

The facts that I mention are widely documented, and I have seen nothing to contradict my statements. Yet I find no evidence that any of the many agencies engaged in "technology transfer" have ever seriously questioned what they do. For the last thirty years technical assistance has meant the export of a genderless work ethic, genderless tools and the destruction of gendered subsistence. But the elimination of gender-defined tasks and the creation of a mixed work force, within which men and women compete, has always hurt women. This process gives a chance to a few women, degrades many and brings these two groups into conflict with one another.

Let me say more about the destruction of gender. In every pre-industrial society, two distinct halves make up the local tool kit. Each community has its unique way of dividing the burden of existence, the grasp on reality, the use of time and space. Weaving, milking, pottting are done either by her or by him. The same task in the same culture is never done by both. Under the rule of gender, women could not, individually, compete with men; they were locked into their own domain. Not individuals, but gender domains were opposed to each other.

In the majority of cultures women's domain was never considered of equal dignity. Under the rule of patriarchy women were excluded from public power. Women's tasks and tools were openly downgraded. Every woman was in this way united with every other woman in a multiple common inferiority. But under the rule of gender women could not become individual losers. And development has changed this. Now, each woman is forced into competition in a man's world. True, development has somewhat weakened patriarchy. But this is greatly offset by the effect of compounding older patriarchal dominance with new sexist discrimination. Economic growth individualizes woman's inferiority, making it into something previously unknown, something personally degrading.

Industrialization, however, has no monopoly on the spread of sexism. AT can do equally well or better. For this reason I strongly recommend research on the dangers of genderless AT. I do so not because I am opposed to genderless AT, I welcome tools that fit the hands of women as well as those of men. But I call for research on the sexist effects of genderless AT because, even more effectively than industrial machines, AT can transform proud women into handicapped humans of the second sex. Sometimes this cannot be avoided. But I see no reason for blindly promoting it. Only research by women in each village and neighbourhood can ensure that the new wrenches and pliers, the new gauges and glues, the new fish tanks and hand mills, or the new breed of goats, above all empower the hands of women. Such research just cannot be done for a village.

A second gender-specific effect of growth must also be kept in mind. Its economically measurable benefits have accrued disproportionately to men, and have been produced disproportionately by women's unpaid work. This fact has been hidden by a simple device. Modern housework, the unpaid upgrading of commodities into use-values, has been denied recognition as an economic contribution to growth.

Recently this has changed. Ten years ago, Esther Boserup and Barbara Ward launched research on the economic impact of development on women. 7/ Since then, dozens of studies have confirmed and expanded their suspicions:

i) Economic growth has always added more to the working hours of women than to men.

ii) With the expansion of the cash-nexus, women's control over cash always declines. 8/ By 1975 women, considered throughout the world, provided two-thirds of all working hours and received ten per cent of all paid income.

iii) Paid labour does not decrease women's unpaid shadow work. It deprives women of leisure, mutual help and social control by gossip. The gum-chewing housewives in the laundromat are no political match for a group of women in conversation at the river. 9/

iv) Contrary to popular myth, stress on women grows when households are connected to gas, water, electricity and sewage. This is now an established conclusion reached by the historians of housework. When a faucet is installed in the home, water usage increases 25 to 50 times. 10/ Each drawn bucket requires little effort. But moving the toilet indoors, new standards of cleanliness of body, clothes, linen and fixtures increase the total toil connected with water.

v) These trends appear in all political systems. Everywhere women pay the bill for economic growth by toiling in more shadow work and in less desirable wage labour. 11/ In Minneapolis the housewife is turned into an unpaid taxi driver to shuttle kids from school to scouts to dancing lessons, while being forced to hold a job to pay for the second car. In Kiev she queues at the butcher shop and the apartment exchange office, while seeking employment in order to buy goods on the black market.

Again, I do not mention these inevitable effects of economic growth because, in principle, I oppose all growth. Without selling some herbs from the garden, women who have reappropriated the hoe will not have the money to buy salt for the goat or a pump for the windmill. I mention the replacement of patriarchal subordination by sexist victimization because this exchange is consistently associated with growth, is rarely considered in development policy and is decisive for anyone who wants to assess the impact of AT on women. We must learn to ask questions such as this: Up to what point does gobar gas reduce the total effort of women? When does it increase this total effort, even if it reduces the particular toil traditionally involved in the procurement of kitchen fuel? For answers to these questions, research by people, by women alone can be trusted. Expert advice for people must be mistrusted, even if it comes from the new, soft, conscience-messaging establishment, possibly represented by a woman.

Growth also has a third, equally inevitable gender-specific side effect. It deprives women of the traditional initiative which has enabled them to initiate cultural change. Of the three untoward effects of growth which hurt women, this loss of

initiative has been the least noticed but may be the most important to remedy, to recover.

To understand what women's initiative meant, we must review how vernacular cultures change. 12/ They do so by acquiring new traits. For our purposes here, tools are the decisive new traits. As I pointed out earlier, tools have never been genderless. They never fitted "human" hands, only those of either men or women. If a new tool was brought into a vernacular universe, this incorporation was done by either men or women. And any new object, method, vegetable, breed or skill which was recognized and accepted as the culture's tool, was immediately associated with either men's or women's domain. Tools were adopted by being locally gendered. Tool making meant the gendering of reality. And women were as powerful to gender reality as men. Both participated in cultural initiative. And neither could enlarge their own domain without, in some way, affecting the opposite one. When the women in the Jura adopted a new carrying net to gather the high mountain grass, the men had to adapt the shape of the old hay sled to receive the new load. Three dozen operations, each gender-specific, followed one another like the steps of a dance until the barn was filled. At each stage, both men and women could make an innovation in their technique, challenging the partner to follow the new step. In contrast, today's gender-neutral tools tend to be under man's control.

Again, I do not mention this evidence because I want to go back. I know that in the Jura he led the horses, a prestigious task, while she carried the luncheon basked and the rake. Nor do I cite gendered innovation because I want to return to a split set of tools. For me, convivial tools mean a balance between networks of subsistence and relations of production. I do not know if the former must be gendered. But I strongly believe that attention to gender is particularly important for those who explore the ways in which AT can spread. Throughout history, such diffusion has always been gendered, and had little need for missionaries or educators.

The loss of gender, the destruction of subsistence and the impotence "to gender" new tools have consistently hurt women in an exquisite way by wedding the inferiority of their gender to individual sexual discrimination. What industrial development began in the sixties, fashionable AT could now consummate and perfect. The new tools are cheaper; therefore, they can spread more equally. They are less violent; therefore more seductive. They allow each one who uses them to fancy him or herself a "worker", a creator of wealth. In retrospect, economic growth, with its three sexist side effects, seems to have been waiting for AT to wipe out subsistence completely.

Faced by this danger, we can now formulate a recommendation to the Belgian Ministry of Cooperation:

- . *AT can be adapted to both growth and subsistence. It is in the specific interest of women to support those legal, social, cultural and technical arrangements which permit and foster the adoption of AT in women-initiated and subsistence-oriented activities.*

We can also recommend how to do this:

- . *Research by women who themselves need and will use the new tools is the one touchstone to distinguish gimmicks which shift the burdens around from new techniques which genuinely ease and embellish women's subsistence.*

Third, it is necessary to propose a caution:

- . *It is incumbent on development agencies to protect research by women from interference by AT pedagogues - the new and soft breed of paternalists who make a living out of doing and then spreading research for women.*

A fourth recommendation sums up the conditions which minimize women's toil:

- . *Only a balance between policies which foster local growth and those - often opposed - which encourage much more tender and complex forms of subsistence can lighten the total burden carried by women.*

I do not believe that such recommendations can reasonably be called a feminist version of sexism, a hankering after the past, or a call for utopian asceticism. I only want to suggest how to lighten women's total toil, and believe that what is good for women is ultimately best for all.

FOOTNOTES

- 1/ Valentina Borremans, Reference Guide to Convivial Tools, Special Report No. 13, Library Journal, 1979. New York (1180 Sixth Avenue, New York 10036).
- 2/ Mayra Buvinić, 'A critical review of some research concepts and concerns' in: Irene Tinker, Michele Bo Bramsen, and Mayra Buvinić (ed., Women and World Development, with an annotated bibliography (New York: Praeger, 1976) 381 items, pp. 224-379. Published in connection with the World Conference of International Women's Year held in Mexico City in June 1975, sums up the state of research at that date.

For periodic information on publications, research projects and activities, see: Women's Studies International Forum, UK.

For periodic access to statistics: Women at Work (Geneva: International Labour Organization, Office for Women Workers' Questions).

For pre-publication of important drafts on Women and Development, see: Michigan State University, WID Working Papers, 202 International Center, East Lansing, Michigan 48824.

- 3/ For example: Martha W. Lewis, Women and Food: an annotated bibliography on food production, preservation and improved nutrition (Washington DC: AID, Office of Women in Development, 1979); Marilyn Carr, Appropriate Technology for African Women (United Nations Economic Commission for Africa, P.O. Box 3001, Addis Ababa, Ethiopia, 1978); Elisabeth O'Kelly, Rural Women: their integration in development programmes and how simple intermediate technology can help them, (published by the author, 3 Cumberland Gardens, Lloyd Square, London WC1X 9AF, 1978).
- 4/ Mayra Buvinić and Nadia Youssef, Women-headed households - The ignored factor in development planning (Washington DC: International Centre for Research on Women, 1978). The trends towards women headed households is not limited to the Third World. In the US the households headed by the mother grew 71% between the 1970 and 1980 census - single, never married mothers more than doubled. The rate of relative increase is more than twice that high if the black (and therefore poor) population is analysed separately.
- 5/ From Irene Tinker and Michele Bo Bramsen, "Food production and the introduction of small-scale technology in rural areas", in Tinker, Bo Bramsen and Buvinic, eds. Women and World Development (New York: Praeger, 1976, pp. 144-150), it appears clearly that when development sets in, men either are drawn away from the rural areas or they stay home on modernized farms. When the men are drawn into the city, women must do more of the traditional farming. In addition to their housework they must assume tasks formerly done only by men. If the men stay on the farm to expand cultivation with new machinery, women have a larger area to weed by hand - and have less time for the vegetable garden from which they drew healthy and traditional food. This pattern only repeats in "developing" areas today a transformation which was characteristic for the experience of rural women in the middle of the XIX century in Europe, when the railroad enforced a switch from subsistence to cash economies. See for instance David Sabeau, "Intensivierung der Arbeit und Alltagserfahrung auf dem Lande - ein beispiel aus Württemberg" in Sozialwissenschaftliche Informationen, 6, 1977, pp. 148-152.
- 6/ For discussion see Ivan Illich, Gender, chapter IV, for sources on Gender and Tools see footnote 70.
- 7/ Esther Boserup, Women's Role in Economic Development (New York: St. Martin's Press, 1974). Original 1970. Describes what happens to women during the transition from a traditional rural culture to modern, more cash-oriented economies. Far from incorporating women into the production process as paid labour, the new cash economy comes to depend on more unpaid but production-oriented work by women. The book is important because it is the first of its kind, and because it highlights the parallel developments in Latin America, Asia and Africa.
- Barbara Ward, "Women and Technology in Developing Countries" in: Impact of Science on Society, 20, 1, 1970, pp. 93-101. Contemporary with Boserup, but much better known, Ward called public attention to the consistently discriminatory impact of development on women. In a marxist perspective this point is brilliantly stated by Carmen Diana Deere, "Rural Women's Subsistence Production in the Capitalist Periphery" in: Review of Radical Political Economics, 8, 1976, pp.9-17.

Naomi Black and Ann Baker, eds. Women and World Change: Equity Issues in Development (Beverly Hills: Sage Publ. 1981). A dozen generally well documented essays by different authors each examining a different area. Regardless of the geographic area and the climate or the culture from which people come, growth increases the relative disadvantage of women.

- 8/ For instance: Vanessa Maher, The Relation of Work and Consumption to Authority within the Household: A Moroccan Case (Manuscript, Paris, 1981). Respectful and attentive observation the changes the development bring to a Berber household. Traditionally the spheres of men and women are distinct: men negotiate with the outside world, women deal with the animals, subsistence crops, kitchen, the care of the children and the old. Traditionally, when women get money it goes into jewellery. As the part of the household which depends on money (purchased goods that are consumed) increases, men acquire a formerly unknown control over the inside of the household.

Rita S. Gallin, "The Impact of Development on Women's Work and Status - A Case Study from Taiwan" in: Michigan State University, WID Working Papers No. 9, 1982). Participation in work outside the home has not been accompanied by a significant redefinition of women's status. Traditional ideology maintains and re-enforces the subordination of women to the family interest, to the needs of the state and the market.

Jane Guyer, "Food, Cocoa and the Division of Labour by Sex in Two West African Societies" in: Comparative Studies in Society and History, 22, 1980, pp. 355-373, comes for Africa to the same conclusion which Gallin reaches for Chinese culture. Compares Yoruba and Beti rural economics, before and after the introduction of cocoa as a cash crop. The two cultures, very different from each other, are both patrilinear with a strict separation of domains for women and men. In both the rising cash-income and commodity dependence sharply increases a traditional male dominance over women, and decreases the ability of women to get even with men. The bibliography of this article is a selective and critical orientation to the issue, worldwide.

Denise Paulme, Women in Tropical Africa (Berkeley: University of California, 1971), was one of the first who did research on this issue. She selects four cultures. Shows that colonialism has in each destroyed the complementarity of male and female task assignments. Shows that everywhere the result of a transition to a cash economy has led to previously unknown levels of status differences between men and women.

- 9/ Ruth Cowan Schwarz, "A Case Study of Technological and Social Change: The Washing Machine and the Working Wife", in: Mary Hartman and Loise Banner, Clio's Consciousness Raised (New York: Harper Torchbook, 1974). Two generations of American women used their electrical appliances convinced that these appliances relieved them of burdens, shortened their unpaid working hours. Only in a third generation, women came to suspect that these appliances did not create more hours of leisurely satisfaction but more hours of work. A pioneer study on the compound time loss through the acquisition of a time-saving device: the washing machine.

Sarah Fenstermaker Berk, ed. Women and Household Labor (Beverly Hills: Sage, 1980), an anthology of contributions that are representative of US current thought on women's activities as "work".

Susan Strasser, Never Done: A History of American Housework (New York: Pantheon, 1982). This is the first book that deals with the housework of American women since it came into existence as a form of shadow work in the early XIX century, as a historical reality sui generis.

- 10/ Joel A. Tarr and Francis Clay McMichael, "Decisions about Wastewater Technology: 1850-1932", in: Journal of the Water Resources Planning and Management Division, May 1977, pp. 47-61.
- 11/ M.P. Sacks, "Unchanging Times: A Comparison of the Everyday Life of Soviet Working Men and Women between 1923 and 1966", in: D. Atkinson, A. Dallin, and G.W. Lapidus, eds., Women in Russia (Sussex: Harvester Press, 1978).
- 12/ I here follow closely Ivan Illich, Gender, chapter IV.

Ivan Illich

G E N D E R

I. SEXISM AND ECONOMIC GROWTH	3	V. GENDER DOMAINS AND VERNACULAR MILIEU	105
II. ECONOMIC SEX	22	Space/Time and Gender	105
The Reported Economy	22	Gender and the Home	118
The Unreported Economy	36	Gender and the Grasp of Reality	127
Shadow Work	45	Gender and Speech	132
The Feminization of Poverty	60		
III. VERNACULAR GENDER	67	VI. GENDER THROUGH TIME	140
Ambiguous Complementarity	70	Gender and Transgression	142
Socio-Biological Sexism	75	The Rise of the Heterosexual	147
Social-Science Sexism	80	The Iconography of Sex	157
IV. VERNACULAR CULTURE	90		
Gender and Tools	91	VII. FROM BROKEN GENDER TO ECONOMIC SEX	169
Gender Rent, Trade, and Crafts	94	Index	181
Gender and Kinship	99		
Gender and Wedlock	100		

(New York: Pantheon Books, 1982. pp. 192)

ISLAM, TECHNOLOGIE ET DEVELOPPEMENT

par Bichara Khader
CERMAC
3, Place Montesquieu
1348 Louvain-la-Neuve, Belgique

Langue originale: français

Résumé: L'Islam est-il un frein ou un moteur dans l'effort de développement? Les réponses occidentales, souvent ethnocentriques, tendent au dénigrement tandis que bon nombre d'écrits musulmans contemporains tombent dans l'apologie inconditionnelle. Entre ces deux tendances, cet article s'efforce de clarifier les données du débat. L'auteur évoque l'histoire des contacts entre l'Islam et l'Occident, de l'influence culturelle arabe sur la civilisation européenne à la contre-offensive européenne par la balkanisation et la colonisation, en passant par la conquête automane. Il décrit les perceptions stéréotypées des valeurs culturelles et religieuses, qui sous-tendent les réponses de l'Islam à la modernisation ainsi que la tendance à sous-estimer la capacité de l'Islam d'adapter ou d'adopter le changement technologique. L'article se termine par une mise en garde contre les dangers des transferts en gros de techniques visant à 'rattraper' les pays industrialisés.

ISLAM, TECHNOLOGY AND DEVELOPMENT

Abstract: Does Islam hinder or does it promote development? Western perceptions are couched in either ethnocentricity or anti-Islamism while, on the other hand, the approach of a good number of contemporary Islamic writers indulges in complacency. This gives the debate an antagonistic and polemical orientation. The author briefly traces the history of the contact between the West and Islam, from the Arab cultural influence on European civilization through the Ottoman conquest, to the European counter-offensive through balkanization and colonization. He describes the stereotype perceptions of the religious and cultural norms underlying Islam's responses to modernization and the tendency to underestimate Islam's capacity to adopt or adapt technological change. Finally, the paper warns about the dangers inherent in technological transfers based on the concept of trying to 'catch up' with the industrialized countries.

(Resumen en español pag. 52)

Bichara Khader

ISLAM, TECHNOLOGIE ET DEVELOPPEMENT

L'islam est-il un frein ou un moteur dans l'effort de développement? Les réponses à cette question simple oscillent entre deux tendances contradictoires. La première est la tendance du dénigrement systématique qui puise son argumentation dans un anti-islamisme primaire, imprégné d'un nombrilisme occidento-centriste que décrivent fort bien Edward Saïd^{1/} dans ses livres "l'Orientalisme" et "Covering Islam" et Hichem Djaït^{2/} dans son livre "l'Europe et l'Islam". La deuxième tendance, tout aussi dangereuse, est celle de l'apologie inconditionnelle, de l'auto-encensement, de la contemplation de soi, qui caractérise bon nombre d'écrits musulmans contemporains.

En somme, nous nous trouvons très souvent face à deux discours tout aussi idéologiques, en ce sens qu'ils ont la prétention d'être des discours vrais sur l'AUTRE ou sur soi-même. Le premier discours, généralement occidental, est souvent un discours sur "l'autre": l'Arabe, l'Oriental, le Musulman. Le deuxième discours, musulman celui-là, est souvent un discours sur soi. L'un accuse, l'autre récuse. L'un propose, l'autre s'oppose.

Entre ces deux tendances antagoniques et polémiques, le dialoque est-il dans une impasse?

Cette étude n'a pas l'intention d'apporter des réponses définitives et globales qui seraient de nature à clore la discussion. Elle voudrait simplement clarifier les données d'un débat actuel portant sur les rapports entre l'Islam, technologie et développement.

1. Occident et Islam

L'Occident chrétien, entre les 8^e et 10^e siècles, a été atteint dans sa chair et dans son âme par les derniers prolongements de la conquête arabe, lors de son deuxième souffle. Il ne pouvait évidemment qu'assimiler ces expéditions musulmanes aux autres "invasions barbares" dont il était l'objet. Jusqu'aujourd'hui, la confusion demeure établie dans les esprits, ce qui explique qu'un Marc Bloch parle des "repaires des Arabes", de "leurs infructueuses razzias" ^{3/}.

C'est dans cette expérience originelle de "l'agression arabe" que la conscience occidentale médiévale va puiser le fondement affectif de sa représentation de l'Islam, essentiellement pétrie d'hostilité. Aussi l'Islam a-t-il été mis à l'écart des débats du mouvement intellectuel européen. Et les visions de l'Islam par l'Occident restaient prisonnières de schémas sommaires et

de préjugés faciles. La vision de la scolastique était nourrie de la Croisade, et la vision du monde populaire de la confrontation islamo-chrétienne en Espagne 4/.

Dans les deux cas, l'Islam est considéré comme un perturbateur (qui a stoppé net l'évolution de l'humanité vers la christianisation généralisée) et un parvenu appelant la passion, parce qu'il prétend se placer sur le même terrain que le Christianisme. Si grands que soient ses succès, il n'est qu'un nouveau-né mal armé, primitif, sans élaboration doctrinale, simpliste, charnel, matériel, licencieux, agressif et violent.

Les préjugés médiévaux "se sont insinués dans l'inconscient collectif de l'Occident à un niveau si profond qu'on peut se demander, avec effroi, s'ils pourront jamais en être extirpés" 4/.

Aux 16^e et 17^e siècles, la conscience religieuse chrétienne et occidentale ne polémique plus avec l'Islam. Mais "elle reste incapable, dès lors qu'elle s'y intéresse, de dépasser ses racines dogmatiques, prenant pour cible la vérité de la prophétie muhammadienne. C'est dans cette perspective qu'il faudrait examiner le passage consacré par Pascal au Prophète, survivance de la dispute médiévale" 4/.

A partir du 18^e siècle, le sentiment de supériorité et de vérité se conjugue avec une conscience de suprématie politique et de progrès technique. "Le monde enfin trouve son axe puisque la force et la culture coïncident maintenant avec la vérité." L'Islam n'est plus perçu comme adversaire théologique, mais comme "une religion élémentaire à rejeter du courant spirituel central de l'humanité".

Au niveau politique, l'Islam était identifié à l'Empire ottoman. "L'Arabe s'efface de l'horizon européen, mais l'Islam turc s'y intègre". D'où des rapports largement sécularisés, obéissant surtout à la rationalité diplomatique. Mais Lépante même était-elle une bataille de puissances ou de religions?

Progressivement cependant, le regard intellectuel sur l'Islam se diversifie. La vision populaire oscille entre l'image d'un Orient splendide, merveilleux et celle d'un Orient lascif (Mille et une nuits), cruel (Ali Baba et les quarante voleurs), le tout coiffé par la vision idéologique d'un Islam religieux fanatique, agressif, fataliste, anti-féministe (le Harem).

Le phénomène de l'impérialisme colonial européen va conditionner au 19^e siècle toute la vision de l'Europe. L'ethnocentrisme méprisant justifiait la domination. Tout entier, le monde non-européen se trouvait dévalorisé, destitué de sa dignité historique, réduit à un niveau périphérique et folklorique. La vision par l'Occident du monde pouvait se poser comme vision du monde.5/

L'histoire universelle est confondue avec l'histoire occidentale. Or l'Occident n'est qu'un accident et son histoire fait partie intégrante d'une histoire universelle solidaire, qui a su intégrer, notamment, l'apport civilisationnel gréco-sémitique et arabo-islamique. Pour ce qui est des relations entre Europe et Islam, forcé est de reconnaître que "la naissance de l'Europe à l'histoire s'est faite et ne pouvait se faire que par le truchement de l'Islam: dans un premier temps par le repli défensif, dans un deuxième par une explosion offensive" ^{6/} avec la ruée européenne sur le monde arabe et la balkanisation, qui s'en était suivie. L'expansion de l'Europe avait toutes les allures d'un messianisme, mais cette fois sans messie. Les vieilles accusations rejaillissent, les vieux stéréotypes réapparaissent. On reproche aujourd'hui à l'Islam d'être un frein à la modernisation et au développement.

2. Islam et modernité.

Parmi les préjugés dans les typologies les plus usuelles dans le domaine des théories du développement, il en est un qui mérite une attention particulière. C'est le recours constant à des dichotomies sommaires comme l'opposition entre exogène/endogène, continu/discontinu, fonction/dysfonction et plus généralement tradition/modernité.

Toutes ces typologies dichotomiques induiraient une coupure stricte, selon les cas, c'est-à-dire les cultures, entre le frein culturel et l'impulsion culturelle vers le changement: il y aurait des cultures répressives (par nature, par essence) et d'autres progressives. Rien de plus significatif sur ce plan que l'hypothèse d'accélération culturelle (Hornell Hart).

Toute culture est dialectique. Il est dès lors aberrant, voire raciste, d'attribuer à chaque culture une essence particulière qui la prédisposerait soit au changement soit à la résistance. Pareille réduction simpliste conduirait à établir une échelle de valeurs en fonction du passage d'une culture à une autre; elle instituerait donc une coupure difficile à admettre et poserait au départ les sociétés non pas comme inégales mais comme hétérogènes. On comprend dès lors qu'on ait pu poser en termes d'intégration, le rapport entre la puissance industrielle et les structures traditionnelles.

Or, précisément, la modernité ne s'impose pas de l'extérieur à une culture passive ou réticente, sans historicité dynamique propre. En fait, il ne saurait y avoir de "modernisation que voulue et assumée" par une culture qui doit accomplir sa "transmutation" en politique ^{7/}. Le terme de référence est donc l'Etat, dont le rôle, effet et cause de la culture, est de promouvoir à maturité, la modernisation.

Il n'y a donc pas lieu d'opposer modernisation (technologie) et culture. Mais c'est précisément dans ces termes que l'idéologie dominante pose l'alternative: progrès technologique ou tradition. Récuser cette dichotomie c'est comprendre que le progrès ne doit être rien d'autre qu'une transformation sociale voulue, recherchée, contrôlée et conforme à la logique culturelle interne des sociétés. D'ailleurs, aucune transformation réelle n'est historiquement produite sans "enracinement" dans les traditions, à partir d'elles, en fonction d'elles.

Ces remarques s'imposaient parce qu'il est courant d'entendre des Occidentaux opposer de manière simpliste un Islam confondu avec l'archaïsme, la tradition répétitive, le conservatisme, à une modernité née et développée en Occident, conçue comme une marche accélérée vers le progrès, une acceptation sans réserve de l'innovation, une historicité dynamique.

Cela est d'autant plus grave que bien des intellectuels musulmans ont cédé et cèdent encore aux représentations imposées par une manipulation nettement idéologique du rapport tradition/modernité.

Certes, l'antériorité chronologique en matière d'évolution historique peut expliquer l'avance d'une société, ou l'efficacité conjoncturelle de son organisation; mais elle ne permet de postuler ni la supériorité intrinsèque d'un milieu de civilisation, ni la vocation de ce milieu pour assurer le meilleur contrôle de l'historicité. Or précisément, l'ethnologie classique a longtemps cru pouvoir opposer les sociétés occidentales à historicité dynamique, aux sociétés primitives figées dans la reproduction rituelle de leurs mécanismes. Les sociétés islamiques étaient dépeintes comme les sociétés primitives par excellence, imperméables au changement.

Cette dichotomie inspire bien des théories sur le développement et le sous-développement. Car pour beaucoup d'autres, généralement européen-centristes, le "retard économique" des sociétés islamiques est lié aux structures sociales dites "arriérées": existence de "freins" socio-culturels au développement ^{8/}, au premier rang desquels figure la religion ^{9/}, la "tradition", les systèmes de valeur, la "mentalité conservatrice du paysan", les "coutumes" ^{10/} rangées dans "un folklore" exotique, le manque d'esprit d'entreprise, le goût pour l'ostentation économique. Ces facteurs sont souvent considérés comme autant de "résistances" que le développement doit "vaincre". Dans cette théorie, le sous-développement est réduit à une sorte d'inadaptation presque radicale entre les systèmes socio-économiques des pays islamiques à "rythme lent" et ceux des pays industriels à "rythme rapide". Ceux qui soulignent ces "résistances", ces "facteurs inhibitifs" excluent toute possibilité d'"évolution auto-entretenu" car, pensent-ils, "les systèmes en cause ne portent pas en eux-mêmes les germes de processus dynamiques", la force de ces systèmes est vigoureuse, et ils sont capables

de dégager une "immense inertie". Par conséquent, c'est de l'extérieur et par voie "autoritaire" que seront apportés les "éléments moteurs" à leur "déblocage", à leur "décollage" et à leur "modernisation".

3. L'Islam est-il immuable?

La religion n'est pas immuable. "Ceux qui voient dans l'Islam un facteur de stagnation aussi bien que ceux qui y voient un facteur de progrès, supposent qu'une religion constitue un système d'idées perdurable, invariant, dont la nature est telle qu'il exerce sur le comportement de ses adhérents une influence identique en tous temps et en tous lieux". 11/

Aux attaques d'Ernest Renan, qui présentait l'Islam comme "fataliste", "fanatique", "plein d'une sorte de fierté de posséder ce qu'il croit la vérité absolue", les fondamentalistes musulmans, comme Jamâl al-Din al Afghani, tenaient à souligner le goût des Arabes et des Musulmans pour la science et la philosophie au Moyen-Age". 12/

En effet, la renaissance musulmane culturelle et politique insistait dès la fin du dernier siècle sur le fait que l'Islam est en plein accord avec la science et le progrès technique.

Pour étayer leur argumentation, certains réformistes musulmans rappellent l'apport considérable des savants musulmans au développement des sciences: Al-Khawarizimi (750-850) et Baba al-Din Muhammad Ibn Husayn al-Amili (1547-1622) aux sciences mathématiques, Musa Ibn Sakir et ses fils Mohammad, Ahmad et Hasan, Al Kindi Abu Nasr al-Farabi (872-950), Abu Saïd Abd-al Rahman Ibn Yunus (mort en 1009), Abu Ali al-Hasan Ibn al-Haytham (965-1039), Al-Jaldaki, Abu Rahyan Muhammad Ibn Ahmad al-Baytruni (973-1048), Abu al-Fath Abd el-Rahman al-Khazin de Marw et Qutb al-Din Mahmud Ibn Masu'Ud al-Sarazi (1236-1311) aux sciences physiques; Ibrahim Ibn Habib al-Farazi (mort en 777), Abu al-Tayyib Sind Ibn Ali (9ème siècle), Al-Battani (850-929), Abu al-Abbas Ibn Muhammad Ibn Kathir à l'astronomie; Abu al-Kasim Salamah Ibn Ahmad al-Majriti (aujourd'hui à Madrid), Ibn Sina (980-1036), Al-Makdisi (10ème siècle), Ibn Jazlah (mort en 1080), Ali Ibn Irfa' al-Ra's (mort en 1197), Al-Iraqi (13ème s.) Al-Jildagi (mort en 1361) aux sciences chimiques; et Al-Abbadi (807-877), Al-Razi (850-912), Al-Ahwazi (mort en 940), Al-Zahrawi (né en 939), Ibn al-Haytham, Ibn Sina (Avicenne) (980-1036), Ibn Jazlah (mort en 1080), Ibn Abu Al'Ala' Ibn Zahr (1091-1162), Al-Gafiqi, Ibn al-Baytar (1197-1248), Ibn al-Nafia (1210-1298), Al-Kutbi (14ème siècle), Khadir Ibn Hajji Ali Basa (14ème siècle) et Al-Antaki (mort en 1599) à la médecine et aux sciences pharmaceutiques. 13/

Ainsi, pour répliquer à leurs contradicteurs éventuels, les Musulmans dressent une liste impressionnante de savants ayant contribué au développement des sciences. Bien sûr, les Musulmans déplorent le retard actuel par rapport à l'Occident. Mais ils ne cessent de redire que ce retard n'est point imputable à l'Islam comme tel, mais à un ensemble de traditions inutiles, voire des superstitions, dont s'est alourdi le cadre quotidien de la vie musulmane, dont il s'agit maintenant de le défaire.

Ne perdons pas de vue le contexte historique où se déroule cette polémique. Nous sommes à la fin du siècle dernier, où le monde arabo-musulman est en proie à une véritable crise d'identification ^{14/}, engendrée par la domination coloniale de l'Europe, et accentuée par le fait que la "religion nationale (islamique)" prend rang de valeur méprisée et persécutée par le dominateur" ^{15/}.

Dans un tel contexte, il n'était pas étonnant que l'essentiel des constructions théoriques des idéologues musulmans appartenant au courant fondamentaliste visait tout naturellement à maintenir la validité du cadre idéologique formel traditionnel: l'Islam. Il s'agissait en somme de mettre l'Islam en accord avec le mythe progressiste bourgeois par une série d'exégèses hardies et de réinterprétations. Il s'agissait de montrer que l'Islam, dans son essence, n'est pas opposé au progrès, qu'au contraire le retour à l'Islam primitif permet le progrès ^{16/}.

Le reproche que fait Maxime Rodinson aussi bien aux dénigrateurs qu'aux apologues de l'Islam, est qu'ils considèrent la religion islamique comme immuable. Or, "une religion est d'abord un système idéologique global qui donne une explication générale du monde et de la place de l'homme dans le monde; corrélativement, ce système donne des directives pour le comportement de l'homme désireux de faire son salut". Ce système, ajoute Rodinson, est souvent "à la base d'un mouvement idéologique ... caractérisé par un programme temporel, par une organisation et enfin par des pratiques, rites et symboles qui manifestent l'unité du mouvement et la fidélité de ses adhérents" ^{17/}.

L'Islam est une idéologie religieuse liée à une organisation. Mais en tant que mouvement idéologique, l'Islam, pas plus et pas moins que toute autre religion, change de caractère avec le temps, oscillant entre une grande souplesse idéologique (aux débuts de l'Islam) et un conformisme rigide imposé très souvent par des Etats soucieux de contenir des mouvements révolutionnaires sociaux et nationaux (après le Moyen-Age).

En fin de compte, le déclin de la civilisation musulmane n'est dû ni à l'idéologie, ni à la religion musulmane. C'est au contraire la stagnation de la société, l'appauvrissement des masses, la rigidité des Etats, qui ont entraîné la stagnation des idées.

4. Islam et technologie.

L'on est tenté, trop souvent, d'opposer Islam et technologie. Cela tient au fait qu'on réduit la religion à "un traditionalisme au regard tourné vers des modèles hérités du passé" et qu'on postule au contraire que la technologie est un "modernisme au regard tourné vers le présent et l'avenir à construire"^{18/}.

Une telle façon de voir débouche sur des conclusions de type manichéen: le rejet soit de la religion par la technologie, soit de la technologie par la religion. Dans une telle vision, toute cohabitation, toute adaptation est difficile, voire impossible.

Cette problématique de l'incompatibilité entre tradition islamique et modernité technologique repose sur quelques arguments que H. Sanson résume comme suit:

- i. Les cinq prières rituelles quotidiennes et le jeûne annuel seraient trop difficiles à pratiquer dans un monde de la technologie. Il en irait de même pour les ablutions, les interdits alimentaires et le week-end du jeudi et du vendredi qui se révèle incommode pour les relations internationales.
- ii. La langue arabe ne se prête pas au langage technologique moderne.
- iii. La théologie de la causalité divine (en Islam) excluerait l'autonomie des causes secondes. La causalité immanente de la technologie n'est pas conciliable avec la causalité transcendante de la religion.
- iv. La civilisation technologique s'oppose à la civilisation islamique: d'une part, l'Islam engendrerait une civilisation de l'adoption de Dieu par l'Homme et de sa soumission au Coran. La technologie engendrerait une civilisation de la soumission de l'Homme à la nature et de la transformation;

d'autre part, la conception des rapports de l'homme au temps n'y serait pas davantage la même: l'Islam serait passéiste, nostalgique de sa première grandeur; la technologie serait tendue en avant;

enfin, la conception des rapports de l'homme à la femme, des parents aux enfants, des individus entre eux, ne serait pas la même non plus.

L'on pourrait réfuter une telle argumentation à coups d'autres arguments qui pourraient prouver le contraire. Là n'est pas le problème qui nous préoccupe.

Ce qui mérite d'être relevé, c'est que l'intrusion de la technologie importée en pays musulmans n'a pas amené le rejet de l'Islam. On a même l'impression, comme le souligne fort

justement H. Sanson, que c'est "en son mom que la plupart des pays adoptent la technique et la technologie. Les hydrocarbures et autres matières premières sont perçus comme une chance - providentielle - à ne pas gâcher. Le développement technique et technologique est perçu comme le complément nécessaire à l'indépendance économique et politique et ainsi à la libération du monde musulman. L'entrée dans la modernité est perçue comme le seul moyen pouvant permettre de ressurgir dans l'histoire et de redonner au monde musulman son lustre d'antan".

De même, l'Islam n'a pas rejeté la technologie occidentale. Bien au contraire. Toute la philosophie de développement dans les pays musulmans repose sur le recours aux acquisitions techniques et aux "transferts technologiques".

5. Islam et transferts technologiques.

Toutes les stratégies de développement dans les pays musulmans, qu'ils soient capitalistes ou socialistes, sont fondées sur une notion simple: le rattrapage ('to catch-up' en anglais).

L'idée sous-jacente à cette notion, c'est celle du retard historique des pays musulmans. Mais que signifie retard? Il signifie "qu'un beau jour, l'Occident a faussé compagnie au peloton de ses homologues ^{19/}et a pris sur eux une avance considérable. De ce fait, il est parvenu à imposer son rythme, ses choix, sa puissance, sa force, sa technologie et aussi sa civilisation. La modernité qui s'est développée dans l'aire occidentale s'universalise. Le modèle occidental de développement devient Le modèle.

Partant de là, toutes les théories de développement telles qu'elles sont enseignées en Occident et très souvent défendues par les élites du Tiers Monde musulman, présentent le développement comme étant une mise en conformité avec le modèle occidental. Il s'agit en somme de rattraper le retard historique. Quel que soit le cheminement sinueux des pays, l'objectif est le même: s'occidentaliser. Développement devient occidentalisation.

Pour "décoller" ('take-off'), il faudrait parcourir les étapes parcourues par l'Occident et qu'a décrites W.W. Rostov ^{20/}. Les moyens d'y parvenir sont multiples: mobilisation des capitaux et recours aux "transferts techniques". De là, vient cette fascination qu'exerce la technologie exogène sur toutes les sociétés islamiques.

C'est sans doute dans les pays pétroliers musulmans où le mimétisme technologique est la pratique la plus courante. Les responsables de ces pays entendent "bruler les étapes" tant leur capacité de paiement paraît illimitée. Les choix de ces pays sont ceux de la technique "la plus avancée", une technique

entièrement importée et greffée. Les usines "clés en main", "produits en main", "marché en main" qui s'implantent un peu partout, témoignent de cette volonté d'aller vite, de voir loin et de voir grand.

L'étroitesse des débouchés locaux, l'absence de prévision des débouchés mondiaux dans l'avenir et surtout l'incertitude sur la compétitivité des exportations industrielles forment l'aléa le plus important de ce pari.

6. L'impact de la technologie sur l'Islam.

Mais, l'aléa le plus important des importations technologiques est constitué par leur possible impact négatif sur la culture islamique.

Car on ne doit jamais perdre de vue que la technologie occidentale n'est pas neutre ^{21/}. Elle n'est pas un voyageur sans bagage. Elle est le produit d'un système socio-économique. Elle participe à un certain modèle de société, un type de civilisation. Elle ne circule pas innocemment mais véhicule avec elle les germes de profondes mutations sociales et culturelles^{22/}.

Sur le plan social, la "greffe technologique" produit des effets de désintégration vis-à-vis des représentations et des valeurs portées par la tradition ^{23/}.

Elle provoque une rupture dans le système social tout entier. La pénétration de corps étrangers (des techniques étrangères) dans les cultures traditionnelles, introduit une perturbation destructrice: à action directe sur le système de représentation, action indirecte sur l'environnement artificiel suscité par la technologie, emprise croissante sur les mentalités du projet porté par la technologie. La technologie moderne détruit donc à la fois la fonction auto-stabilisatrice des cultures traditionnelles et le rôle de système régulateur joué par les valeurs. Ce caractère perturbateur de la technologie pourrait se résumer par le terme de "déracinement".

La destruction de la culture, ce n'est pas seulement la mise en question de la tradition, de son autorité et de ses garanties, la perte d'efficacité des différentes formes de langage en lesquelles cette tradition s'était incorporée, le doute systématique jeté sur les normes reçues; c'est bien plus profondément l'ébranlement des assises mêmes sur lesquelles l'existence humaine jusqu'ici avait réussi à se construire ^{24/}; la rupture d'un certain accord qui, tant bien que mal, avait pu s'établir entre l'homme et les différentes composantes de sa condition, le cosmos, son propre passé et son propre monde intérieur.

Les effets induits d'une importation technologique indiscriminée se font sentir également dans le régime alimentaire,

vestimentaire, médical des sociétés "cibles" et produisent également la dégradation du tissu social, la division et le renforcement de la division de la société en classes, etc...

Un autre effet pernicieux est constitué par la soumission de l'homme à l'outil et la destruction de la société qu'Ivan Illich appelle "conviviale", c'est-à-dire une "société où l'homme contrôle l'outil" 25/. C'est précisément contre cette domination de l'homme par la machine, par la technologie, que s'est élevé le philosophe Herbert Marcuse dans son ouvrage célèbre: "L'homme unidimensionnel" 26/.

Sur le plan religieux, la confrontation de l'Islam et la technologie moderne conduisent souvent à une distention entre valeurs religieuses et réalisations humaines, au profit des secondes 27/. Ce n'est pas tant l'arrivée du savoir technique qui s'avère responsable d'une lente érosion des pratiques religieuses 28/.

Le fait que l'intrusion technologique se produit dans des sociétés restées "fossilisées" pendant de nombreux siècles aggrave les effets de l'impact. De même le décalage trop grand entre les sociétés musulmanes et le monde de la technique, rend plus ardue toute adaptation sans heurt. Les cadres anciens, les symboles, les valeurs, les normes qui protégeaient les sociétés islamiques craquent.

Parce que les dirigeants des pays musulmans ne veillent pas suffisamment à attendre la maturation sociale, à chercher à assimiler la technologie exogène, à choisir la technologie la plus appropriée à leurs sociétés, leur prise en charge d'une société technicisée est difficilement compatible avec le comportement religieux.

On serait tenté, à la lecture de ce qui précède, de céder au "désenchantement" et à une politique de rejet pur et simple de la technologie étrangère. Telle n'est pas notre intention. L'enjeu pour les pays musulmans n'est pas d'opposer à la culture technologique (sûre d'elle-même et dominatrice, basée sur la recherche de l'efficacité, le culte de la productivité, le souci de la rationalité scientifique, l'esprit prométhéen) une contre-culture musulmane fondée sur les valeurs de contact, de communication et même de communion, de spontanéité, d'un accord vrai avec soi-même, avec les autres, avec la nature.

La technologie elle-même n'est ni bonne ni mauvaise. C'est l'usage qu'on en fait qui la rend bonne ou mauvaise. De là la nécessité, pour les pays musulmans, de s'interroger non seulement sur le know-how (savoir-faire) ou le know-what (savoir-quoi), mais aussi sur le know-why (savoir-pourquoi).

La technologie doit rester un moyen pour la satisfaction des besoins de base des grandes masses et non l'outil d'une politique de prestige et d'ostentation.

Ayant posé le problème de cette manière, la véritable interrogation ne sera plus de savoir si Islam et technologie sont compatibles ou incompatibles, mais plutôt celle-ci: comment est-il possible à une société musulmane, à un Etat, qui entend se recommander de l'Islam, de prendre en charge "sans perdre son âme" les conquêtes de la révolution technique?

En d'autres termes, comment les sociétés islamiques peuvent-elles accepter la technologie sans se laisser dominer par elle, intégrer les outillages techniques de l'Occident sans se laisser engloutir dans la civilisation occidentale elle-même.

La réponse à ces interrogations est très difficile. Ce qui importe, c'est de les poser correctement. Il est possible que l'Islam ne pourra pas rattraper l'Occident dans sa science, dans sa technologie et dans sa puissance. Ne disons pas alors "qu'il renonce à la course, mais qu'il ne s'y perde pas". En d'autres termes "qu'il sauvegarde, cultive et affine sa part d'humain, qui est grande". La souffrance de l'Occident provient de ce que "sa modernité a dévoré sa culture". 29/

Et précisément, le danger qui guette les sociétés islamiques, ce n'est pas la technologie étrangère, mais une modernité non maîtrisée. La véritable confrontation n'est plus alors celle qui oppose l'Islam à l'Occident, mais celle qui oppose et l'Islam et l'Occident à une modernité débridée qui impose ses schémas, sa logique, son rythme et finit par vider les cultures de leur substance.

REFERENCES

- 1/ Edward Said: L'orientalisme: l'Orient créé par l'Occident (Paris: Seuil 1978) pp.393; Covering Islam: How the media and the experts determine how we see the rest of the world (New York: Pantheon Books, 1981) pp.186.
- 2/ Hichem Djait: L'Europe et l'Islam (Paris: Seuil 1978) pp.186; La personnalité et le devenir arabo-islamiques (Paris: Seuil, 1974) pp.300.
- 3/ Marc Bloch: La société féodale (Paris: Albin Michel, 1968) I, p.13.
- 4/ Hichem Djait: L'Europe et l'Islam (Paris: Seuil, 1978) pp.15-16.
- 5/ Anouar Abdel Malek: La dialectique sociale (Paris: Seuil, 1972) p.20.
- 6/ Hichem Djait: op. cit.

- 7/ Marie-Françoise Cassiau: "Idéologie de la puissance et résistance culturelle" in Anouar Abdel Malek: Spécificité et théorie sociale (Paris: Anthropos, 1976) p.385.
- 8/ René Gendarme: "La résistance des facteurs socio-culturels au développement économique: exemple de l'Islam en Algérie", in l'Economie de l'Algérie (Paris: Armand Colin, 1959) pp.126-141.
- 9/ On connaît la liaison qu'établit Max Weber entre le protestantisme et le capitalisme dans L'Éthique protestante et l'esprit du capitalisme (Paris: Plon, 1964). De l'autre côté, beaucoup d'auteurs se sont ingéniés à trouver des exemples démontrant le "fatalisme" inhérent à l'Islam et qui n'est pas de nature à encourager et favoriser le "développement", capitaliste bien sûr. Ernest Renan, L'Islamisme et la science (Paris: Calman-Lévy, 1883); J. Austruy: L'Islam face au développement économique (Paris: Editions Ouvrières, 1961).
- 10/ Cf. H. Riggren: Studies in arabian fatalism (Uppsala: Lundequist, 1955).
- 11/ Maxime Rodinson: "La controverse: Islam et développement", Vivant Univers, 1976, n° 305, p.21.
- 12/ Jamâl al-Din al-Afgâni: Réfutation des matérialistes, trans. A.M. Goichon (Paris, 1942).
- 13/ Il y a bien sûr un tel foisonnement de savants arabes et musulmans qu'il est impossible de les citer tous. Pour plus de détails sur cette question, voir: M. Ali Kettani: "Muslim contributions to the natural sciences", in Science and the Islamic World, numéro spécial de la revue de l'UNESCO, Impact of science on society n° 3, mai-sept. 1976, pp.135-151; R. Landau: Arab contribution to civilization (San Francisco, American Academy of Asian studies, 1958).
- 14/ Albert Hourani: Syria and Lebanon: a political essay (London: Oxford University Press, 1954) pp.70-71.
- 15/ Maxime Rodinson: Marxisme et monde musulman (Paris: Seuil, 1972).
- 16/ Voir Ahmed Aroua: L'Islam et la science (Alger: SNED, 1974).
- 17/ Maxime Rodinson: article cité.
- 18/ H. Sanson: "Islam et technologie", in Technologies et développement au Maghreb (Paris: CNRS, 1978).
- 19/ L'image est de Hicham Djait: L'Europe et l'Islam op. cit.
- 20/ W.W. Rostov: Les étapes de la croissance économique (Paris: Seuil, 1963).
- 21/ Pas plus que la science d'ailleurs. Voir Gérard Fourez: La science partisane (Gembloux, Duculot 1974) p.176.

- 22/ Voir Bichara Khader: "Du transfert technologique à la maîtrise de la technologie", in Cahiers du monde arabe (Université de Louvain, 1982) et "The social impact of the transfer of technology to the Arab world" in Arab studies quartely, 1982, vol.4, n° 3, pp.225-241.
- 23/ Sur l'ensemble de cette problématique, voir l'excellent ouvrage de Jean Ladrière: Les enjeux de la rationalité, le défi de la science et de la technologie aux cultures (Paris: Aubier/UNESCO, 1977) et l'ouvrage publié par l'OCDE: Science, technologie et maîtrise des problèmes complexes (Paris: OCDE 1976).
- 24/ Cf. Werner K. Ruf: "La technologie comme culture et idéologie universelle", in Options méditerranéennes, n° 27 et Jürgen Habermas: La technique et la science comme idéologie (Paris: Denoël-Gonthier, 1973).
- 25/ Ivan Illich: La convivialité (Paris: Seuil 1973).
- 26/ Herbert Marcuse: L'homme unidimensionnel (Paris: Ed. de Minuit, 1968).
- 27/ Louis Gardet: L'Islam: religion et communauté (Paris: Desclée de Brouwer, 1967) p.381.
- 28/ Voir l'excellent ouvrage édité par John Esposito: Islam and development: religion and socio-political change (Syracuse: University Press, 1980).
- 29/ Hicham Djaït: L'Europe et l'Islam, op. cit., p.185.

(Viene de la pag.39)

ISLAM, TECNOLOGIA Y DESARROLLO

Resumen: Es el Islam un freno a un motor en el esfuerzo por el desarrollo? Las respuestas occidentales, a menudo etnocéntricas tienen tendencia al anti-Islamismo, y por otra parte, un buen número de escritores musulmanes contemporáneos caen en la apología incondicional. Entre estas dos tendencias, este artículo intenta aclarar los elementos del debate. El autor evoca la historia de los contactos entre el Islam y el Occidente, desde la influencia cultural árabe en la civilización europea a través de la conquista otomana, hasta la contra-ofensiva europea a través de la balcanización y la colonización. Se describe las percepciones estereotipadas de valores culturales y religiosos que sirven de base a las respuestas del Islam a la modernización, así como a la tendencia a subestimar la capacidad del Islam para adaptarse o adoptar el cambio tecnológico. El artículo termina con una advertencia contra los peligros de transferencia indiscriminada de técnicas tendientes a "alcanzar" a los países industrializados.

BEATING SWORDS INTO PLOUGHSHARES

THE LUCAS EXPERIMENT DESCRIBED FROM INSIDE

by Mike Cooley

Mike Cooley, who was awarded the 1981 Right Livelihood Foundation, or 'Alternative Nobel' Prize 1/, is an engineer who has been dismissed by the British Lucas Aerospace Corporation for "working on problems that were more properly the concern of society as a whole". Indeed, he is the chairman of a team which developed the Lucas Alternative Corporate Plan. Drawn up by workers of all trade unions at all Lucas factories, the Plan suggests some 150 socially useful products as an alternative to military production 2/. We reproduce below the text of the address delivered by Mike Cooley in Stockholm when receiving the Award on 9 December 1981.

I'd like to start by apologising for speaking English. I am deeply concerned about cultural imperialism, and although I can read a certain amount of Swedish I couldn't make a speech, so please accept my apologies.

It seems to me that one of the major contradictions now confronting our so-called technologically advanced societies is the gap between that which technology could provide for society, and that which it actually does provide for society.

The science and technology of the military industrial complex, in which I've worked for twenty years, can now produce guidance systems so incredibly sophisticated that we can aim a missile system on to an entirely different continent with a degree of accuracy of a few millimetres; but the blind and the lame in our society still stumble across roads in rather the same way as they did in medieval times. We've got recognition systems which can recognize an enemy missile thousands of miles away, but we're incapable of recognizing the real enemies in our midst: the squalor, the disease and the filth which results in something like six hundred million people throughout this planet starving.

Probably the ultimate in our weapon sophistication is that we can now produce (and are producing) weapon systems which will destroy human beings and will leave property intact; yet we are incapable of eliminating poverty even here in metropolitan Europe. A recent EEC report suggests that something like thirteen million people in the EEC are undernourished, and in the Third World it's much worse.

I think it's a measure of the depravity of the whole value system of our society that in countries like Britain 50 per cent of our scientists and

1/ See IFDA Dossier 34 p. 89. For further information, write to Jakob von Uexkull, The Right Livelihood Foundation, Viking House, Wybourn Drive, Onchan, Isle of Man, British Isles.

2/ See also IFDA Dossier 33 pp.76-77 and Development Dialogue 1977:1.

technologists spend their lifetime working on weapon systems which they know in their heart of hearts - if they were ever used - would probably mean the end of humanity as we now know it.

Even when we get the so-called spin-offs from the military-industrial complex, we end up with something as sophisticated as Concorde, yet that very same society allows old age pensioners to die of hypothermia because they cannot get a simple effective heating system. The spin-off from the guidance systems and the communication networks for the missiles have meant that we can send messages around the world in fractions of a second, but it now takes longer to send an ordinary letter from Washington to New York than it did in the days of the stagecoach. By using some of the most advanced interactive graphic techniques from the aero-dynamic side of the armaments industry we can optimise car bodies so that they are aero-dynamically stable at about 180 km.p.h., when the average speed of a car through the centre of New York is now 11 km.p.h., at the turn of the century when they were horsedrawn.

It was in an attempt to reverse this sad history that the Lucas workers drew up the corporate plan. I would firstly like to describe to you the scale and nature of the company so that you get some idea of the kind of forces you have to face when you engage on an enterprise of this kind.

Lucas Aero-Space is owned by a vast transnational corporation employing seventy five thousand people in the UK, and something like thirty five thousand abroad. Its development in recent years has been characterised firstly by a shift of capital into Europe, so much so that the French government had to enact specific legislation to prevent Lucas monopolizing parts of their production. Even nation states now feel themselves threatened by these vast corporations. The company has been expanding rapidly into those parts of the world where labour is badly organized and where there are resources which can be exploited and developed. The Aero-Space division which I shall be describing, began towards the end of the 1960's to take over a whole range of smaller companies. This was a form of rationalization which has been repeated in ship-building in Sweden, in the automotive industry in West Germany and elsewhere. Some of the factories were small, quite flexible plants, employing about 300 people. Others were large dedicated plants employing something like 3,000 people. They grouped them all together and they ended up with a national configuration of seventeen plants throughout the UK employing something like 18,000 workers in the Aero-Space division.

It was clear to us that the company was going to rationalize that set-up out of existence, close down some of the plants, and set one against the other. In order that they could not do that, we established an organization which is still unique in the British Labour and Trade Union movement. It's called Lucas Aero-Space Combine Shop Stewards Committee, and it links together the highest level technologists in the company with the people on the shop floor. Thus you have in one organisation the analytical power of the scientist and the technologist linked together with, what in my experience is more important: the common sense of people who work on the shop floor.

Before we could get that organisation properly established, we established

our own small little newspaper so that the workforce had an alternative source of information rather than depend on the management. It very rapidly developed into quite an extensive newspaper which now goes to all our plants and informs people through their own network exactly what is happening in the other plants.

Before we could get the Committee properly going the company said it was going to close an old plant in a working class area of London. There were about 1,500 people working there, this was in 1972. We occupied the plant, even the laboratories, we prevented the company taking equipment in or out, but we were simply campaigning for the right to produce the same old products in the same old way. The work force couldn't see where all this was leading, and their morale had so declined by the sixth weekend that they didn't occupy it on Saturday and Sunday. The company heard that, they called in a demolition group, they tore the roof off the factory, they took the high capital equipment out and then set the building on fire to demolish it. Now I don't know about Sweden but there is much said in Britain about vandalism, by which is meant a few children having a punch-up at a football match, but as far as we were concerned this was vandalism of an infinitely greater order which had snatched from us overnight the sole means by which we express ourselves economically and otherwise.

So we were totally defeated. I think it is important when you've been defeated either in your private life or in your community or in whichever group you belong to, that you look realistically at that defeat, and you analyze it, and see how you can handle it more creatively next time around. In the discussion that arose out of that disaster one worker asked an elegantly simple question. He said "Why can we not use the skills and abilities that we've got to meet the interests of the community as a whole? Why can we not produce socially useful products which will help human beings rather than maim them?"

Now the first stage in that process was to get the workforce to begin to analyze its own skills and abilities. The process I now describe, in my view, could be applied to any city, to any industry or to any part of a country or indeed perhaps to a total country itself.

The work-force began to go out and look at what was going on in the different workshops and laboratories. They found that we had a high temperature, high pressure test facilities, climatic chambers in which we can assimilate conditions in near or outer space. We've got one of the most highly skilled workforces in the UK, although I would argue that skill in the sense of technical skill really had nothing to do with what happened. Some of the most exciting things that are happening are amongst unskilled and de-skilled people.

We were producing a range of equipment from high precision mechanical equipment to highly stressed but lightweight sections for the RB2-11 engines, complete gas turbines including all the gears and equipment, and we also have our own electronics industry where the airborne computers are produced to control the aircraft systems.

Now this was the first time in their lives that the Lucas workers actually

realized what was going on in the different workshops, what was going on in the different laboratories. In Britain we are conditioned to view the world through the one machine we operate or the one desk from which we function. Never are we encouraged to take a panoramic view of our industry, or see how that industry relates to other people and to other requirements.

Having collected all of that data, we then did what society conditions people like us to do. We asked 180 experts what they thought we could be doing with that skill and ability. We wrote to university professors who had given profound lectures in the monastic quiet of the universities; we wrote to intellectuals who had written massive books about how science and technology should be made relevant; we wrote to every professional body in the UK; we wrote to the bureaucracies of all the major trade unions. Out of all those 180 world authorities only three were able to say anything that was remotely useful. From the rest of them we got vague generalizations. Some of them said "If you refer to my paper of 1972 in Boston ref. 32 is relevant to the problem you wish to address". Nothing specific around which industrial workers could organize themselves to cope with the real problems which were grinding in on top of them.

We then did what we should have done in the first instance. We asked our own workforce what they thought they could and should be doing. We arranged discussions in all the factories, and then we followed that up with a unique questionnaire. We tried to discuss with some sociologists how we could design a questionnaire to elicit the information and creativity which I will describe in a moment. These were sociologists from both the left and the right, and one of them said to us, "One thing you should always remember is to design the questionnaire so that the consciousness of the person filling it in is not changed". They said "It is inadmissible as a research methodology to change the consciousness of those involved. You should be an objective researcher from outside examining the phenomena in a scientific way".

We sought to do precisely the opposite. We deliberately structured the questionnaire so that those filling it in were caused to have their consciousness turned right on it's head. We asked them to think of themselves in their dual role in society, both as producers and as consumers, so that we transcended that ridiculous division which suggests that there is one nation that works in factories, offices and schools; and an entirely different nation that lives in houses and communities. We said that what you do during the day should be relevant to the way that you and your family would hope to live for the rest of your life.

Within six weeks we had this incredible outpouring of creativity. We did not insist that people write those great theses about the products they felt we could be making. I don't know about Sweden, but in Britain we confuse linguistic ability with intelligence. We are far more impressed by what people say and write rather than by what they do. In my experience industrial workers express their intelligence by how they do things, how they organize them rather than how they talk about them. So we said to the workforce: "If you wish to make models of the products you want, just go and make the models; if you want to talk about it, come and we'll talk about it".

We have refined the 150 proposals we got into six product ranges, and I will briefly describe a few of them. We grouped these into six volumes where we describe each of the product ranges in some detail. The first product range is in the medical field. We were horrified to find that as part of the rationalization programme, the company was getting rid of two of the only socially useful products we were making. One was a pacemaker for people with weak hearts, the other one was a dialysis machine, a kidney machine. When we looked for the requirements of kidney machines in Britain we were horrified to learn that every year 3,000 people die because they cannot get a kidney machine. In the Birmingham area the patients are allowed, as the consultant so nicely put it to us, 'to go into decline'. If you are under 15 or over 45 you are allowed 'to go into decline'. The same kind of problem exists in Sweden, West Germany and the United States. To cut a long story short, we've redesigned the kidney machine, we've built in carbon filters and we've now got a micro-processor in it so the patients can wear it on their back like a rucksack. They have the dignity of doing a worthwhile job rather than be acted upon like a piece of wood, which is frequently what Western medical technology does.

Another product we've designed is a vehicle for children with spina bifida. Now it's frequently asked where we are going to get the money to produce these products. Very seldom do we ask what is the cost of not making something. In the modern industrial nations, if you put a worker out of work and they've got a couple of dependants, you have to pay them about 60% of the average industrial wage. There is a loss of revenue to the nation state of about 40%. Add the two together and it's about 100% of the average industrial wage.

We went to the then Labour government and said "Why could we not have this money and produce socially useful products?" Of course they were incapable of answering that, because it is so full of common sense that it is beyond the reason of politicians. We then looked at the social multipliers. You have the drug taking, the neuroses, the inter-personal violence, the illness which is directly related to unemployment. If you take all that into account, you get some measure of the cost to society as a whole of these large corporations as they rationalize themselves and put more and more people out of work.

We do not believe that our society can go on wasting materials and energy in the way in which it is now doing, and we've designed a whole range of energy conserving systems. One of them is a heat pump which runs on natural gas in an internal combustion engine. You can get 2.8 times as much useful energy in the house as you would get if you burn it directly, and about twice as much as you would get if you were driving the unit by electricity. Lucas said that they would not produce these as they were incompatible with their product range and would not be profitable. We intercepted a secret company report which showed that the market for these would be something like £1,000,000,000 in the EEC countries by 1986. But Lucas would not produce them because that would mean admitting that the workforce was able to say what could be made, how it should be made, and in whose interest. You see, we're dealing not just with an economic system, we're also dealing with a political system which is concerned about demonstrating its power and holding on to that power.

We have also designed a hybrid power-pack for cars, coaches or trains. You may or may not know that the engine in your car is about four times bigger than it need be, to give you take-off torque, that is to get the car going. Once you've got it moving a very much smaller one would do. On the other hand an electric motor has got a high starting torque, so we've linked the two together to create a hybrid power-pack. All the energy you waste as you idle at traffic lights, as you start cold in the morning, as you are caught in traffic jams is all going in as useful energy into the system. You can reduce energy consumption by 50% and toxic emissions, the poisonous gases, by about 80%.

But what is unique about this is that we've designed it with bolted construction, carefully selected the materials and increased the bearing sizes so that it is capable of running, with suitable maintenance, for about 20 years. And you can actually maintain it, it's deliberately designed so that you can repair it. Now some people said "If you do that it would cause unemployment". We had a guts feeling that if you designed so that you could repair it, there would be as much work repairing it as you would have on mass production lines producing on a throw away basis.

There has just been a report from the Batelle Institute in Geneva which shows that if you design cars and engines to last for twenty years, not only would you conserve energy and materials, but you would create 65% more work. And the work you would create would be the interesting diagnostic, fiddling type of work that human beings love doing, rather than the grotesque alienated work that you get on production lines. These are real options that are open to us!

Now we would like to see that built into a unique vehicle we have designed, which we call a Hybrid Road-Rail vehicle, which is capable of running as a bus on normal roads and also running railway line in particular branch lines. In order to design this vehicle, and even to think of it, it was necessary for us to look at different levels of reality of technology. The first level of reality of the transport systems is the ad man's version of the car. The car is always new and gleaming, it will typically have a power-pack in it four times bigger than it need have, to give you peak velocity which you can't even use on a motorway. You're given the impression that you're letting yourself and your family down if you don't have a new one every two or three years, and it is usually designed around the wheel arches or maybe the sub frame to ensure that it will begin to fall apart after two or three years. It's always shown in a rural setting, the beautiful countryside, the idea being that it liberates you at the evening and the weekends from the squalor you've spent the rest of your time producing.

The second order of reality is what this is doing to our cities, shaking antique buildings apart, polluting the centres. The third order of reality is the tragic wastage of energy and materials of all kinds. One could do an energy count of the sheet steel, the glass, the rubber. Suffice to say that if you throw away a car under 80,000 miles, or ten years, whichever comes first, you are throwing away the amount of energy that would be required to drive it.

But worst of all, it seems to us, is the waste of the lives of the human beings who, day in day out, have got to degrade themselves on production lines producing that sort of throw-away rubbish.

Coming back to the road-rail vehicle, how could you use it on railway systems? We found that the Canadians had simply got a normal car body and put two sets of guide wheels on front, so that you could go up an incline on one in six (because you were driving it with rubber tyres) which means that instead of having to flatten the mountains and fill up the valleys, which will typically cost a million pounds per track mile, you could follow the contours of the countryside.

But clearly that wouldn't work very well because you would have to lift off these guide wheels when you wanted to go from the road to the rail. So one of our colleagues suggested a simple mechanism that could link in to the guidance system on the railways, where you'd have a small wheel that would follow the contours of the track, and when you wanted to go from road to rail you could lift it up. We built a small prototype and it functioned perfectly. We then built a version where we've got the guide mechanism in-board with two sets of steering wheels.

In designing and building this we deliberately did not make a virtue of complexity. In the aero-space and the military industrial complex we love to make everything complex, and I'm a stress analyst myself and I can make most things look complex. We normally use very, very long mathematical formula, we then test the thing out in reality and if it doesn't function, we modify the mathematics to suit the reality. We still end up with a big formula, which means that we look very profound, but that practical manual workers on the shop floor just don't know what's going on.

In this case we deliberately didn't do it that way at all. We asked a skilled worker what size he thought the axle should be. He said 35 millimetres, we made it 35 millimetres and it's functioning perfectly - and of course it is, because that person had spent a lifetime making axles and components. In other words we were utilising that precious tacit knowledge which Polanyi described when he said: "There are things we know but cannot tell". By using this practical knowledge it is possible to democratise decision-making within the design process and involve masses of so-called ordinary people.

We then collected money throughout the factories and bought an old coach. We took out the steering mechanism and, in this unique centre we've set up at the North East London Polytechnic, we assembled it and we tested it on the Sussex railway line and it functioned perfectly. Now this has become our sort of technological agit-prop. We can now travel any place throughout the country on either road or rail. We've got video tapes and slides inside so that we can stop in communities and people can really see how you could begin to move towards an integrated ecologically desirable transport system. When there are demonstrations against unemployment this vehicle leads the parade as a demonstration of the kind of things that people could be doing.

We also produced the bob-cart for children with spina bifida. I should point out that this very, very simple little product was designed by

Mike Parry Evans, one of the leading systems designers in the world. He said that when he took this little cart down to this five year old child and saw the pleasure on its face, that meant far more to him than all these abstract problems we deal with in the military industrial complex. For the first time he actually saw the person who was going to use the product which he had designed and he was physically in contact with the problem because he had to make a clay mold of the child's back. Lucas refused to produce these hobcarts because they were 'incompatible' with their product range! Some 500 have now been produced in a Borstal - a prison for young people. Some of the social workers there have pointed out the extraordinary humanising effect this has had on the young prisoners.

At the beginning of the 1800s in the USA there used to be 86% of the population working in agriculture. Gradually that has been automated so that they now even have tractors which can find their way around the field and 4% can now produce an agricultural output many times greater than before automation. But the energy you get from the food so produced is actually less than the energy input if you take into account the tractors, the harvesters and the chemicals. Likewise, in manufacturing with this automation, for example in the case of the telephone industry where it used to take 26 workers to produce one unit of equivalent switching power, with first generation electronics it will be ten, soon it will be one. But I don't think anybody can seriously suggest that it's going to be possible to increase production by 26 times. We are confusing productivity and production. In our view, we are going to see the cyclical basis of unemployment going up and the base of unemployment continuing to rise, and the jobs vacant going down, so that the gap between the two gets bigger and bigger. There is now talk in one of the latest EEC reports that there could be 20,000,000 people out of work in the EEC countries by 1988. And as the unemployment grows so it will be said that we must have more armaments industries, that that's a way of overcoming the problems of unemployment.

What we feel is vital is that we point out that there are real alternatives, and that work is important to human beings. I don't mean grotesque alienated work, but work in its historical context, which needs hand and brain in a meaningful productive process. If you ask anybody what they are, they will never say I'm a Beethoven lover, a Bob Dylan fan or a James Joyce reader (it's perhaps a pity that they don't) but they say I'm a fitter, a turner, a teacher, a nurse or whatever. We relate to society and to other people by the work we do, and we learn and develop as we work on the world about us.

It used to be argued that, while there is unemployment, the new jobs which emerge from the new technology will be that much more fulfilling, exciting and interesting. A whole range of industrial sociologists have said that. We have examined what has been happening when you introduce the most advanced numerically controlled equipment and we found it to be incredibly de-skilling. There has recently been a report from the American Machinist in the United States, a leading technical paper, which says that the ideal worker at these machines should have a mental age of twelve, and, as one American sociologist put it, if they weren't mentally retarded when they went in, they certainly will be when they come out.

But there are real alternatives to that kind of technology. We've taken a conventional lathe (I don't want to bore you with the technical details because there is nothing worse than a technologist going on about technology) and we have looked at the intelligence that a worker uses as he goes through the skilled labour process of turning it. We found that there are 180 sub-sets, and we've found a way of integrating those sub-sets, so that we can now design an interface between the human being and the machine, where you use the tacit knowledge of the skilled turner. We therefore have a system in which a skilled worker will simply make a judgement of what the factor of rigidity of the system will be. You can get the advantage of advanced technology with human intelligence - absolutely the reverse of the way things are going. In the highest level fields of intellectual work exactly the same sort of de-skilling and control is taking place. I have described extensively in my book 'Architect or Bee' these developments in several fields of intellectual work including design using Computer Aided Design (CAD).

Now what we are already finding is that problems posed in that way are so abstract, so disconnected from the real world, that people don't actually recognise any longer what they're designing. We had a grotesque example where they were designing an igniter for an after-burner, that's like a spark plug. It was the first generation of designers who had never worked in the physical world about them, and everything is in X and Y and Z co-ordinates. The designer got the decimal point one place to the right and de-skilled workers on the shop floor frantically looked around for material ten times bigger in every direction and actually manufactured an igniter. When they took it up to the designer and crashed it down on his desk, he didn't recognise that it was ten times bigger than it should be.

There's a whole area of concern now amongst computer scientists that we're getting so separated from the real world that we're beginning to fail to recognise the actual world that we're working on. But there is another much more complex problem, as the human being interacts with this kind of equipment. The human being is the dialectical opposite of the machine. If we speak in systems terms, the human being is slow, inconsistent, unreliable, but highly creative. The machine is fast, consistent, reliable and totally non-creative. The system can handle the quantitative elements so fast that the decision rate of the designer can be forced up by 1800% as he attempts to keep pace and deal with the qualitative judgements.

We find that the interaction is so great that the creativity of the worker is reduced by 30% in the first hour, by 80% in the second hour, and thereafter they're shattered. They're now working out the response time of intellectual workers using this kind of equipment. They give them tasks of varying complexity and they work out the response rate. They've discovered, made the incredible discovery, that as you get older, so you get slower. Now I knew that as a child of five when I looked at my grandparents.

Having collected all of that data they then worked out the peak performance ages for different groups of workers. They found that a mathematician would reach his or her peak performance at the age of 24-25. For a theoretical physicist it's a little later, 26-27. Right the way through the spectrum to the mechanical engineer - apparently we're the most durable of all, it's

34, which means I'm thirteen years beyond my peak performance age. They then say we should have a careers plateau and thereafter a careers de-escalation. The point I want to make to you here is that not only does this kind of technology burn up energy and materials, it also burns up human beings. The shape of that performance curve is exactly the same as that which existed at earlier historical stages, for manual workers could reach their peak prowess when they were 18, could stand the pressure for about ten years and thereafter were burned up. If you look at the rate at which manual workers are required to work in modern industry, you get some idea of what has been happening to them. In one of the most highly automated and computerized plants in Europe, they've got an agreement that the work-force will have as its rest period 32.4 minutes, and the elements that make that up are as follows: trips to the lavatory 1.62 mins. (it's computer precise, it's not 1.6 or 1.7, it's 1.62 mins.), recovery from fatigue 1.3 mins., sitting down after standing too long 65 seconds, from monotony 32 seconds, and so the grotesque litany goes on. And that is the price we are paying at the point of production for our throw-away cars and the kind of infrastructure which we're building. But we are also dramatically de-humanising people within the industry. They now say that with these advanced computer systems we should no longer think of human beings; we should think of human materials. One of the leading systems designers said the following: "If this provides us with sufficient handles on human materials, so that we can think of them as we think of metal parts, electrical power or chemical reactions, then we have succeeded in placing human material on the same footing as any other material, and can begin to proceed with our problems of systems design. There are, however, many disadvantages in the use of these human operator units. They are somewhat fragile, they are subject to fatigue, obsolescence, disease and even death. They are frequently stupid, unreliable, and limited in memory capacity. But beyond all this they sometimes seek to design their own circuitry, and that in a material is unforgiveable, and any system utilising them must devise appropriate safeguards."

So, in other words, that which is most precious about a human being, the ability to think for themselves, is now said to be an attribute which should be suppressed by technology. It seems to me entirely consistent that the military industrial complex, which says that you should think of human materials, not human beings, can then quite easily take that little extra step and say it's alright to eliminate human beings with the neutron bomb and leave property intact.

The last three points I want to make are these. As the problems I've described get worse and worse, they produce more technology to solve the problems. One of the big diversification programmes in a French aero-space company has been to produce a 'bolt-hole'. Those of you who know about nature will know that that's what a rabbit runs through when it's terrified. Using the most advanced techniques of sealing and silencing, they've produced this absolutely sound-proof capsule. Depending on your level of neurosis, your psychiatrist can prescribe music, so you can lock yourself away in your own little private personal padded cell. In other words, you seal yourself off from the problems of society, rather than confronting them directly.

I understand that these are selling in their hundreds to neurotic executives in France. It's even portable, so you can take it out in the countryside, and you're not even disturbed by the birds and the bees!

The second but last point is this. Right on the front page of our corporate plan, we make a major point that we hope we will see more women in science and technology. We looked at one of the leading computer journals over 18 months, and 82% of the adverts that showed one person with equipment, showed a young dolly bird type person, the male image of what a woman should be like. In other words, the idea that women are play-things that you have around to sell equipment. We say right on the front page of our corporate plan, that if only more women would come into science and technology, not as imitation men, or as honorary males, because equality can never mean sameness, but to point out that our Western science and technology is dominated by the predominantly male value system, the value system of the white, male, capitalist, warrior hero. It would be an incredible philosophical contribution if we injected into science and technology the so-called female attributes of intuition, subjectivity and humanity.

The last point is that science and technology is not given. It's not like the sun or the moon or the stars. It was made by people like us. If it's not doing for us what we want, we have a right and responsibility to change it. Increasingly we have been conditioned to believe that we should change ourselves to suit the technology, and it's been done in all sorts of subtle ways. There is this very famous advert in Britain showing a woman suffering from what technology has done to her. She's suffering from 'high-rise blues' and the advert says very subtly that she cannot change her environment (and I would ask why not) but it goes on to say that you can change her mood with a tranquiliser. Now it's not pills and tranquilisers we need, but a clear view of what we want from science and technology, and the courage to stand up and do something about it. I would like to thank the Right Livelihood Foundation for this very great honour that they have given us at Lucas Aero-Space. I hope that we will be able to live up to the high aspirations of the Foundation. The entire sum of money is going to be used to develop the kind of products I've been showing you.

It's frequently asked of me, "Do you really think that ordinary people can deal with these problems?" I personally have never met an ordinary person in my life. All the people I meet are extraordinary. They've got all kinds of skills, abilities and talents and never are those talents used or developed or encouraged. What we've got to remember, as we're driven down this linear road of technology, is that the future is not out there someplace as America was out there before Columbus went to discover it. The future hasn't got pre-determined shapes and forms. The future has yet to be built by people like you and I, and we do have real choices. It can be a future in which we are not threatened with mass annihilation through nuclear weapons or ravaged with hunger. It could really be a world in which we treasure all our people equally and get science and technology to serve people rather than the other way round. In a word, we could begin to perform the modern miracle, we could help to make the blind see, the lame walk, and we could feed the hungry.

Labour divided or workers united?

The world of Lagos port and dock workers

A tape and slide show

The programme is concerned with the universal problem of division between rich and poor workers as it appears in the Port of Lagos, Nigeria. The rich workers are the better-paid, more-secure, more-skilled and more-organised ones employed by the state Corporation running the Port (the Nigerian Ports Authority). The poor ones are the badly-paid, casually-employed, unskilled and barely-organised workers employed by a large number of capitalist contractors.

The two types of worker are represented by two figures. Olu is a semi-skilled NPA worker, permanently employed and earning on a weekly basis perhaps four times as much as Yusuf, an unskilled and casually employed dock labourer. Although they are faced by common problems and common enemies, they are shown as identifying - at best - with their own half industry. The movement toward a broader consciousness and organisational forms is presented, but the programme presents rather the problems yet to be overcome than any immediate solution.

The show is divided into four distinct parts.

The introduction is entitled 'A particular problem for particular workers at a particular time' and sets the Lagos Port scene.

Part One is entitled 'The division of labour' and deals with the two patterns of ownership, two types of work situation,

two systems of labour control, and the implications of this for the workers in the industry as a whole.

Part Two is entitled 'The unification of the workers' and deals with the demands made by both types of worker, their forms of action, their forms of organisation, and the remaining obstacles to unity amongst them.

The Conclusion is entitled 'A universal problem for all workers at all times' and generalises from the Lagos Port case. It deals with the historical and contemporary divisions between labouring people of different nationalities, races or sexes, mentioning classical labour movement principles on such questions.

The show consists of 94 boxed slides, a 25-minute monaural cassette with audible and inaudible pulse, and accompanying script and information sheets. It has been directed by Peter Waterman with the technical assistance of Gerard van Alkemade. It uses original photos (black/white, colour), newspaper photos, documents, graphics, collages and colour wash drawings.

The show is intended for use with trade unions, students and solidarity groups, both in the third world and in industrialised countries. The simple soundtrack (commentator, one other voice, no sound mixing) makes translation from English into other languages feasible.

IF THE ERA OF FULL EMPLOYMENT IS OVER, WHAT WILL COME NEXT ?

by James Robertson *

Opinion polls are now beginning to show a reluctant consensus that, whoever is to blame and whatever happens from now on, high unemployment is probably here to stay. This means we shall have to find ways of sharing the available employment more widely, as John Hawkwood suggested in *Economics Agenda* (Sept. 1982).

But we need to go further. We must ask some fundamental questions about the future of work. Should we continue to treat employment as the norm? Should we not rather encourage many other ways for self-respecting people to work? Should we not create conditions in which many of us can work for ourselves, rather than for an employer? Should we not aim to revive the household and the neighbourhood, as well as the factory and the office, as centres of production and work?

The industrial age has been the only period of human history in which most people's work has taken the form of jobs. The industrial age may now be coming to an end, and some of the changes in work patterns which it brought may have to be reversed. This seems a daunting thought. But, in fact, it could offer the prospect of a better future for work. Universal employment, as its history shows, has not meant economic freedom.

Employment became widespread when the enclosures of the 17th and 18th centuries made many people dependent on paid work by depriving them of the use of land, and thus of the means to provide living for themselves. Then the factory system destroyed the cottage industries and removed work from people's homes. Later, as transport improved, first by rail and then by road, people commuted longer distances to their places of employment until, eventually, many people's work lost all connection with their home lives and the places in which they lived.

Meanwhile, employment put women at a disadvantage. In pre-industrial times, men and women had shared the productive work of the household and village community. Now it became customary for the husband to go out to paid employment, leaving the unpaid work of the home and family to his wife. Tax and benefit regulations still assume this norm today and restrict more flexible sharing of work roles between the sexes.

It was not only women whose work status suffered. As employment became the

* James Robertson is the author of The Sane Alternative (1978) and The Redistribution of Work, (Turning Point, Spring Cottage, 9 New Road, Ironbridge, Shropshire TF8 7AU, United Kingdom).

dominant form of work, young people and old people were excluded - a problem now, as more teenagers become frustrated at school and more retired people want to live active lives.

In modern times, public policy has assumed that work means employment. The interests of employers and employees have been consulted through the Confederation of British Industry and the Trades Union Congress. No other workers, such as housewives or the self-employed, have enjoyed the same privilege. Public money, including depreciation allowances and tax reliefs as well as outright grants, has been given to firms and other employing organisations on the assumption that they, and they only, are capable of organising people's work.

Recent attempts to aid small businesses and cooperatives are welcome. But nobody has thought of redistributing some of the nation's capital to people, rather than organisations, and giving people the wherewithal to work for themselves.

All this may now have to change. The time has certainly come to switch some effort and resources away from the utopian goal of creating jobs for all, to the urgent practical task of helping many people to manage without full-time jobs.

If they are to do this, people will need a source of basic income other than wage or salary. They will also have to be allowed and helped:

- . To top up this basic income with irregular paid work or regular part-time employment.
- . To supplement their money income by food-growing and all kinds of "do it yourself", thus providing some goods and services for themselves instead of buying them (if you want to call this leisure, not work, so be it).
- . To acquire facilities of their own (including land, buildings, workshops and equipment) to enable them to work on their own account or as members of family and neighbourhood groups.
- . To build up "sweat equity", for example by building their homes themselves instead of working as employees to pay off a mortgage.
- . To learn the skills to do these things, instead of much of the job-oriented education and training which people are offered today.

A top priority will be to change the existing system of taxes and benefits. First, all citizens, male and female, should be treated equally, as individuals, without discrimination. Next, we must stop discouraging people from useful activity if they are not employed.

The neatest solution will be a guaranteed basic income for everybody in the form of a negative income tax as proposed in a recent report from the European Centre for Work and Society ^{1/}. Finally, depreciation allowances

^{1/} Keith Roberts, Automation, Unemployment and the Distribution of Income, European Centre for Work and Society, P.O. Box 2077

and other investment incentives should be given for productive equipment installed in people's homes, as well as in factories and offices.

Planning regulations will also have to be changed. They assume that most people will work on employers' premises. They often prevent people working in or near their homes. More broadly, we must rethink what development means. Development agencies now concentrate on attracting employers to an area - usually from somewhere else! In future they should find ways of helping local people to support themselves.

One important factor, technology, points in the right direction. Miniaturization is the new frontier now. Advanced, inexpensive equipment and materials are becoming available for small-scale productive work in many fields: food-growing and food-processing; energy conservation and supply; carpentry, plumbing, electrics and other aspects of building construction and maintenance; textiles and clothing; and, of course, information technology.

The main problem, of course, is political. Most leading people in business trade unions and the public services, in management and the professions, together with politicians and economists of all persuasions, are deeply committed to employment as the way of work. A wider range of options, that would liberate millions of people from the alternatives of depending either on an employer for a job or on the state for the dole, will be hard for them to swallow.

In the early 19th century, the Whigs and Tories refused to accept that Britain was ceasing to be a primarily agricultural society. By delaying repeal of the Corn Laws and putting off the introduction of cheap food, they caused unnecessary hardship and distress to many working people. We may be facing an equally profound transition now - from an age of universal employment to a new work order. By refusing to recognise this, the various branches of today's establishment could impose unnecessary hardship and distress on millions of jobless people in the coming years. Let us make sure they don't.

CORRIGENDUM

The acronym "TN" for transnationals has been inadvertently spelt out wrongly in C. Raghavan's paper on the The world crisis and the challenge for the non-aligned (Dossier 34). Page 10, paragraph 1, 6th line from the bottom, 'trade negotiations' should read transnational. Page 12, paragraph 1, 5th and 3rd lines from the bottom, 'trade negotiation cartel(s)' should read transnational corporations. Sorry.

REVIVAL OF NON-MONETARY ECONOMY MAKES ECONOMIC GROWTH UNNECESSARY IN THE SMALL INDUSTRIALIZED COUNTRIES

by Kyösti Pulliainen / Hilikka Pietilä*

Usually a small national economy, in which foreign trade plays a major role is described as consisting of two sectors:

- . the open sector, which is composed of export production and production of goods and services which compete with imports in the domestic markets, and
- . the closed sector, composed of the production of goods and services for the domestic market.

The open sector is fettered to the world markets; the prices of the products in this sector are determined by the international markets. It can therefore be called the "fettered" sector. The basic problem in this sector is to maintain its competitiveness. The economic activities in the closed sector are to a great extent protected and guided by legislation and official means to produce goods and services for home markets. Therefore it can be called the protected sector. The prices of that production can be determined independently; not according to the price trends in the world markets but according to production costs and economic policy considerations.

However, this picture of economy is inadequate. One very important sector of the national economy is ignored: the productive work and activities for which monetary compensation is neither asked nor paid. Work performed in homes, families and other small communities produces goods and services both for use in the community itself and for direct exchange between people. This third sector, which is still quite large also in the industrialized economies, is included in the accompanying figure as a non-monetary sector. Only in this way does a picture of the entire economy emerge.

Economic policies in the industrialised countries have so far been geared towards guaranteeing the conditions necessary for economic growth. Such policies have concentrated on supporting the "fettered" sector in order to maintain competitiveness and to protect it from external threats and internal pressures. The protected sector has been considered to be a burden to the national economy as a whole; it has swallowed the surplus created by the fettered sector. The slower rise in productivity in the protected sector has increased the price level in domestic markets and in this way reduced the productivity and competitiveness of the fettered sector.

The free non-monetary sector has not been recognized as part of economy. Its volume has diminished and thus created markets for the monetary economy. Many goods and services which were formerly prepared or performed by families or together with neighbours are now obtained from State or local public services or purchased on the market. As no statistics have been kept, it is impossible to assess how much or what proportion of economic growth in recent decades has been due to this transfer alone without any real increase in the volume or improvement in the quality of services.

Although the free sector has declined, it is still vital for the satisfaction of basic needs. It is still the soft sector that makes society bearable, which gives purpose and meaning to life - something that work and conspicuous consumption are unable to do. It produces values which are not available for money.

The non-monetary sector is squeezed

Now this non-monetary sector has almost been squeezed dry. Bringing up children is an activity in which productivity cannot be maximized and rationalization is impossible. The essential factor of this production is time. A child grows up according to his own rhythm and nursing this growth requires adults who can adjust their schedules to his. This time has been taken away from families and cannot be replaced by State or municipal services. Children are unhappy and youth feel lost and frustrated.

Children and youth reflect the problems of adults. The multitude and richness of human relations, the need for support and encouragement and the need to exchange experiences cannot be satisfied through the minimal relations supplied by the nuclear family. But there are no other relations; grand-parents live elsewhere and there is no time to meet the neighbours, to say nothing of building cooperation and mutual assistance in the dull environment of urban suburbs.

One of the most important unifying factors in human society is work. Today, however, opportunity for human exchange within the working process has been virtually eliminated in the name of efficiency. And homes are designed so that there is hardly any space for the family to do things together. The necessary chores at home: cooking, cleaning, washing, are minimized or have to be performed under circumstances where only one person can work at a time. In box-like flats families have no space either outside or inside for working together or mutual hobbies.

Economic growth is destroying "welfare"

A slower rate of economic growth in the world market implies difficulties in the fettered sectors of national economies. If a country's entire economic policy is still geared to the problems of this sector, these difficulties will spread to the economy as a whole. If the whole society is geared to achieving success in international competition, the internal life of society may suffocate.

We should in fact take the opposite approach. The protected sector should not be considered only a burden, but rather an opportunity, and the possibilities of the non-monetary sector should be included in the economic policies of the country.

A small industrialized economy needs an open sector related to international exchange. This cannot be avoided and neither does it need to be. The aim of this open but "fettered" sector should not be growth as such; its aim should be to provide the necessary imported inputs for the needs of the other two sectors of economy, and to participate in international co-operation for the utilisation of global resources. Through this function it could become a real joining link to the global economy.

The obvious indications of social distress give ideas of how to create real improvement of welfare. It cannot be improved by just allocating more money from above. It can be improved by creating scope for homes, small communities, neighbourhoods, scope to enliven, revive and enhance those basic human functions which have been virtually eliminated by an efficient society geared to economic growth.

The terms of welfare

Unpaid labour in homes must be recognised at full value. Opportunities to care for children, the sick and the elderly at home should be increased, and it should be possible to produce the commodities and services which the family can produce together at home. Handicrafts and housekeeping are pleasant when done together. They can be done for pleasure and for just being together. It is certainly much more pleasant than looking at TV and much cheaper than going out.

It is necessary to realize that there are many things which are meaningful when done by oneself or with the family, even when it is not "profitable", i.e. they may be available on the market at a low price. But with money you cannot buy companionship, support, mutual recognition and encouragement, friendship and the feeling of security which working together within the family produces automatically.

Economic growth is therefore neither a necessary nor a sufficient condition for increasing welfare. But we have to reorganize and reconsider many things in our societies.

In order to revive activities within homes and small communities, there must first be time. People should have an opportunity to choose their working hours; the length and time of paid labour should be arranged much more flexibly than today. When people can use their money at will, why not their more precious and scarce resource - their time? People should be entitled to decide themselves how much time they want to use in paid labour. For instance in offices and service professions two six-hour shifts or preferably two four-hour shifts could be applied. This would make it easier for everybody, both for people working in the service professions and for their customers to manage their affairs. After all, reduced working hours are in any case the only way to provide employment or paid labour for everybody.

In planning society and new housing areas the needs of family life should finally be taken into consideration. Work places and homes have to be located as close to each other as possible in order to reduce the hours used in shuttling between home and work and in order to make it possible to combine house-keeping and employment. This of course also provides that industries, administration and headquarters are split into smaller units, because big units cannot be located in the midst of residential areas. Thus it would also make work places more humane. The remunerative work should also be possible at home more than nowadays.

Suburbs should be built in such a way that they become functional communities, that there is space and equipment for the people, for cooperation and joint activities. Apartment blocks shouldn't stand alone in the fields. Instead they should provide a structure for community activities. The houses and homes should also be planned for working. Children should be able to stay in the kitchen together with their mother and their father should have space for his work bench as well as for his desk.

Mutual assistance and cooperation between neighbours and friends will increase and enrich contacts between people and make life more enjoyable. In that way people could really organize services for each other and make everybody's life easier. Activities and hobbies in the suburbs could become a connecting link between people and unite them into a functional society. Child-care and youth activities can be provided by the people themselves, one need not wait for the professionals. Exchange between people will reduce alienation better than the best mental health services.

The fourth basic element is know-how. For several decades schools have produced people who don't "know how". They have been trained mainly for a specialized profession, but they lack the ability to do enjoyable things for themselves and for the family. An individual who is all thumbs easily remains also intellectually poor and in any case is helpless in his or her own life.

In reforming the schools, manual skills and social and aesthetic abilities should be given due recognition or even high priority. In the schools today these skills and abilities are very much neglected and the pupils are not even able to use the theoretical knowledge they have obtained for practical life and participation in society. People should grow up with a multitude of skills and with plenty of capacity for initiative.

Non-monetary economy replaces growth

The different sectors of the economy are of course closely interlinked. Thus far the fettered sector has been regarded as the mill which produces national income also for the use of other sectors.

Now revival of the free non-monetary sector would make economic growth unnecessary. The more we can produce at home and in small communities, take care of children, the sick, and each other, produce enjoyment and work together, the less need there is for the community to provide expensive public services for these purposes. And the less people need to earn money to buy these services. Both physical and mental illnesses will simply decline when life becomes more humane and meaningful. Youth will be integrated into the functions and activities of the community, different age groups will help each other and enrich each other's lives. The more people's initiative and self-reliance increases the less society's guardianship will be needed.

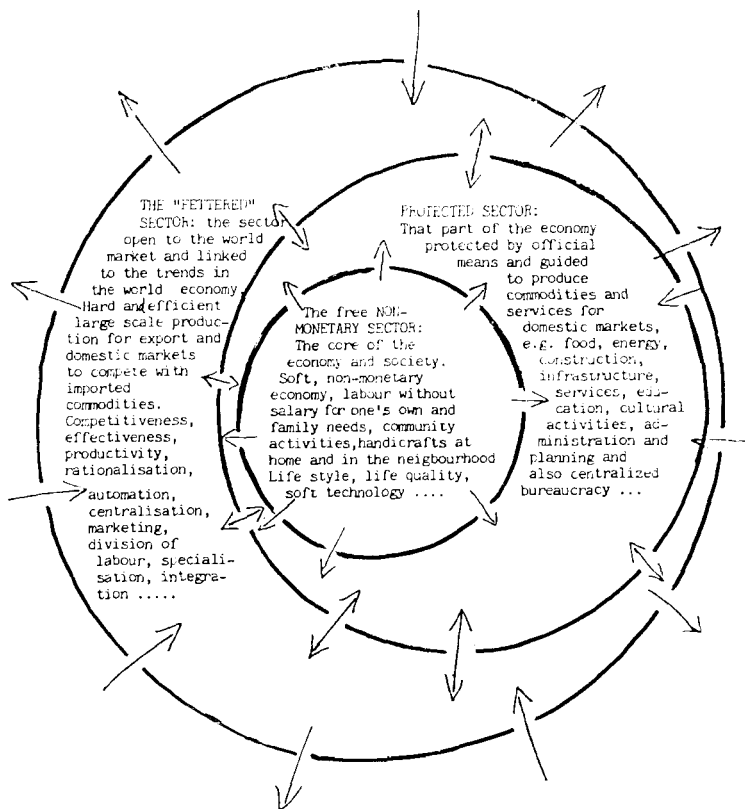
This means that we need not enlarge the protected sector. Society does not need to increase services for health, child care, hospitals and youth. In fact these services will be needed much less in the year 2000 than today if the revival of the non-monetary sector comes to pass. It will also mean that the fettered sector does not need to compete so bitterly on world markets because the pressure for growing production in society will decrease. In this way pressure will be released throughout society. We can save energy and natural resources, and we can reduce our dependence on the world markets in general.

This doctrine of a three-sector economy is nothing new. It differs from prevailing economic thinking only in that it also recognizes what has always existed - the non-monetary sector.

The professional economics has merely wanted to ignore this. It has always remained invisible in the statistics, calculations and plans.

When we make this sector visible in the picture of human economics the whole picture will correspond to reality. This will link the economy closely with the realities of human life and society. Instead of forcing, for instance, agriculture and home economies to serve business targets alone we could make the business economy serve real human needs and social interests.

The complete picture of the economy



ALIN SITOOCYE, A SYMBOL OF WOMEN'S RESISTANCE TO COLONIALISM

by Fatoumata Sow

Throughout the French colonial presence in Africa, African women's resistance played a large role in the overall anti-colonial struggle. Strangely enough, these women are now forgotten or simply are not known to the present generation of men and women. Alin Sitooye is one of them.

As other women in other regions of Africa (the rebellious women of Grand Bassam in the Ivory Coast), leaders of anti-colonial activities, such as Awa Keita in Mali, then French Sudan, or Mbalia Camara in Guinea, Alin Sitooye devoted her life to fighting the French presence. Sitooye was born around 1920 in Casamance, south of Senegal, where resistance to French rule was the strongest. The Casamance region was only taken over by the French army in 1919, while other areas had long been under occupation. Her family was poor, of peasant class, and Sitooye had to work hard to earn a living. She became a housemaid. Later, she managed to establish a small private business in Casamance and then in the Senegalese capital of Dakar, where she hoped she could make it better.

The exploitation and oppression of indigenous people in Dakar must have triggered Sitooye's determination to oppose the French. In the 1930's that standard of living was very low with the great depression at its peak. From 1936 to 1938, there had been 41 strikes and 14 strike threats: Senegalese workers felt they were being asked to pay for the European economic crisis. The Second World War, in which Senegalese troops were forced to fight alongside the French worsened relations between France and its colonial territory.

During and after the war, Senegalese villagers were compelled to pay to the French tax either in cash or in kind (meat or rice) to finance the subsistence of French troops and administrators stationed in Senegal. Those who refused to pay were beaten and/or imprisoned. But resistance in the form of spontaneous and uncoordinated protests was firm, to the surprise of many French officials.

A publication by a group of Senegalese nationalists, called the Senegalese Cultural Front, said, in a book on the life of Alin Sitooye that one day she heard a voice calling her to her village of Nabrus to fight the French and preserve the Joola's (her ethnic grouping) ancestral traditions. On her return there, she was hailed as a prophet and people from the neighbourhood and bordering countries came to listen to her. Sitooye spelled out a programme on the social, cultural, economic and political fronts to fight off the Frenchmen and regain the country's independence.

According to a book by a French historian, Jean Girard, called "Genesis of the Charismatic Power in Lower Casamance", Sitooye's mystic songs said: "Here they are the French coming/watch out, be on your guard/let everyone have a gun/let's do it the European way/what have we done to them/why did they come to mistreat us, tire us?". She asked the population to pay no more taxes and to stop growing peanuts, a source of substantial revenue

but also a source of famine for the peasants. Sitooye exhorted everyone to get back into subsistence farming, especially rice, and to use the local honey instead of the sugar sold by the French. On her social and cultural programme, she called for equality between the sexes and women's social promotion. Equality should disregard considerations of village, ethnic, religious or family grouping, she said.

Senegalese, Sitooye said, should shy away from the French culture and return to Joola ancestral cultural traditions and values. She wanted to re-establish the Joola week consisting of six days' work and one day's rest in opposition to the seven day work week. These messages in fact meant to fight both the French and the local feudal lord's practices. What she was saying then seems to be a current issue in today's independent Senegal. Her messages were heard and followed. In 1942, for example, she successfully convinced her fellow Joolas not to give to the French the rice they were asking for.

Another French historian, Jean Suret Canale, in his book "Black Africa: The Colonial Era, 1900-1945" said the French administrators sent "their troops, one soldier was killed. The whole village of Effoc was wiped out".

Sitooye was seen as a threat for the colonial rulers. The French army officer in the region, Colonel Sajous, vowed to get rid of her. The Senegalese Cultural Front said in its book that the Colonel could not control himself when he first met with Sitooye "he jumped on her, and cruelly hurt her". After some resistance, Alin Sitooye gave herself up on January 29, 1943, in order to avoid the mass retaliation by the French against her village and its inhabitants. She was condemned to ten years' imprisonment for "leading the Floup (casamance) country to disobedience". She was later deported to Mali, and the rumour has it that she was removed to Gabon, Congo or Madagascar. The struggle did not however stop for one of her followers called Alan Diiso took over.

But where is Alin Sitooye herself? Is she alive? Dead? No one seems to know. And now the Senegalese people are asking.

(An African Women's Feature Service/IPS feature).

LES FEMMES ET LA CRISE ALIMENTAIRE EN AFRIQUE ^{1/}

par Marie Angélique Savané*

La plupart des sociétés consacrent une partie importante de leurs ressources naturelles, de leurs énergies, de leur créativité et de leurs capacités organisationnelles à nourrir tous les membres de leur groupe. Les systèmes alimentaires, c'est-à-dire l'organisation de la production, de la transformation, de la commercialisation et de la distribution des aliments ainsi que les pratiques nutritionnelles, occupent une place très importante dans les structures de n'importe quelle société.

En Afrique, l'agriculture est au coeur de l'économie représentant, dans la majorité des pays, de 30 à 60% du produit intérieur brut.

L'agriculture africaine est en crise, et cette dernière coïncide historiquement avec une période de récession et de crise du système économique mondial, crise qui ne cesse de s'élargir et de s'approfondir. La crise de l'agriculture africaine est reflétée par:

- . une diminution du taux d'expansion de la production agricole tombé dans les années 70 en dessous du taux d'accroissement de la population;
- . un arrêt du développement des exportations et une diminution de la part de l'Afrique dans le commerce mondial pour de nombreux produits de base;
- . une constante de la production vivrière par habitant dans les années 60, puis une chute brutale dans la décennie suivante;
- . une augmentation des importations commerciales de céréales alimentaires trois fois plus vite que la population et une augmentation de l'aide alimentaire dans des proportions importantes;
- . une part de plus en plus grande du blé et du riz dans l'alimentation, ce qui a accru la dépendance alimentaire.

Mais la crise se traduit surtout par une aggravation de la pénurie alimentaire qui revêt, à cause de la crise mondiale, les dimensions d'une crise alimentaire aiguë spécifique.

Cette crise prend, en Afrique, des proportions de famines et des taux de malnutrition très élevés. Le déficit céréalier y est, proportionnellement, presque deux fois plus élevé que le déficit moyen du Tiers Monde. Selon la F.A.O., le déficit céréalier, qui était de 14% en 1975, sera de 30% en 1990 et de 39% en l'an 2000.

Mais ce déficit touche aussi l'ensemble de la production alimentaire qui, selon des estimations, serait de l'ordre de 19% en 1985, alors qu'il était de 2% en 1962-64 et de 10% en 1972-74.

* Association of African Women for Research and Development, B.F. 3186, Dakar, Senegal.

^{1/} Texte présenté au séminaire de l'Association des femmes africaines pour la recherche sur le développement (AFARD) sur "Les femmes et le développement rural en Afrique", Alger, septembre 1982.

Cette évolution traduit assurément un processus général de dégradation au niveau de l'autosuffisance alimentaire. Pourtant, dans le même temps, l'Afrique ne cesse d'être un exportateur net de produits agricoles en direction des pays capitalistes avancés. Et, en fait, ce sont ces exportations massives qui créent des structures de dépendance alimentaire.

Le taux annuel de croissance des importations alimentaires est de 17 fois supérieur à celui de la croissance de la production alimentaire interne. Le poste des importations alimentaires revêt progressivement une importance dramatique pour les pays africains, par ailleurs en état de pénurie chronique et croissante en devises. Ceci réduit considérablement les possibilités, pour ces pays, d'acheter des biens d'équipements, une technologie moderne, des engrais et autres facteurs de production. Mais dans l'immédiat, cette situation pose le problème de la faim de manière grave et urgente. Et à long terme, elle remet en question toute tentative de développement auto-centré et d'indépendance économique et sociale.

Cependant, contrairement à plusieurs points de vue, cette situation n'est pas le seul fait de la croissance démographique, de l'urbanisation accélérée ou d'une quelconque calamité naturelle telle que la sécheresse. Elle s'expliquerait plutôt par la persistance de structures agro-marchandes extraverties, dans un contexte de crise mondiale qui se caractérise par l'instabilité croissante des marchés, la baisse des prix des exportations traditionnelles et par la détérioration des termes de l'échange. Sur le plan interne, elle se traduit par une hausse des prix des denrées de première nécessité, des ruptures de stocks, la malnutrition et la famine dans certains cas.

Ainsi, l'extraversion des économies africaines est amenée à affronter les contradictions découlant de la nature même de ce modèle. A cela, il faut ajouter les déséquilibres et distorsions internes concernant la distribution des forces de travail parmi les secteurs de la production. Une expression fondamentale de ce type de distribution est la division sexuelle du travail, caractérisée par le fait que le secteur de production vivrière, à destination des marchés internes, est assuré à plus de 80% par le travail des femmes, principalement en Afrique au Sud du Sahara. En effet, selon le Centre Africain de Recherche et de Formation des Femmes de la Commission Economique pour l'Afrique (C.E.A.), les femmes représentent 60 à 80% de la force de travail en milieu rural. Elles effectuent 60% du travail agricole, et exécutent 44% des prestations nécessaires à l'alimentation familiale et transportent 80% des récoltes des champs au village.

Le transport de l'eau et du bois, ainsi que la transformation artisanale des céréales, des tubercules et des légumes, sont sous l'entière responsabilité des femmes. La commercialisation des denrées est une activité par excellence des femmes qui, dans le golfe du Bénin, contrôlent jusqu'à 80% du petit commerce local dans les marchés.

Mais la place et l'importance des femmes dans la production alimentaire sont sujettes aux changements qui interviennent dans les conditions matérielles de production. Car la division sexuelle du travail n'est pas un phénomène statique; elle est partie intégrante du procès du travail et elle évolue selon les exigences de l'accumulation du capital.

Ainsi, le développement de la production pour l'exportation avait provoqué une nouvelle répartition sexuelle des tâches dans l'agriculture selon les écosystèmes et selon les besoins du capital en matières premières et/ou en main d'oeuvre bon marché. Les femmes ont dû alors, dans le cas de l'économie agricole céréalière, participer de plus en plus dans la culture des mils, alors que dans l'économie de plantations ou dans les zones minières, elles se sont vu octroyer l'ensemble des tâches liées aux productions vivrières.

La mécanisation de l'agriculture, le développement des agro-industries, a permis aussi la naissance d'un semi-prolétariat rural chez les femmes. Le travail des femmes dans l'économie familiale est gratuit et dans les agro-industries les femmes ne bénéficient ni des mêmes conditions de travail, ni des mêmes salaires que les hommes. Cette division sexuelle du travail, tout en correspondant à la nécessité de comprimer les frais du fonctionnement et de la reproduction du système extraverti, constitue d'un autre côté un élément fondamental de la dépendance alimentaire croissante de l'Afrique. Car les ressources humaines, physiques et technologiques, sont souvent transférées et investies dans les secteurs d'exportation à domination masculine, alors que le secteur alimentaire interne, où les femmes jouent un rôle capital, est délaissé dans des conditions d'arriération technologique, d'insuffisance de l'investissement et de la surexploitation du travail féminin qui s'offre à bon marché, ou même gratuitement.

Cette surexploitation est rendue possible par la subordination des femmes au patriarcat, un système symbolisé par la domination du père, et par extension de la gent masculine, qui a des racines dans la culture et l'économie, qui se justifie par les lois, les religions, les idéologies, et qui se transmet par l'éducation en tant que processus de socialisation. Cette subordination, il est vrai, varie selon les aires géo-culturelles mais son fondement est unique.

Il apparaît donc que les femmes africaines peuvent jouer un rôle déterminant dans la résolution des problèmes alimentaires en Afrique. Mais cela exige au préalable une réelle volonté politique des états de la région à asseoir une autosuffisance nationale et collective en vue d'une indépendance réelle des peuples, hommes et femmes, vis-à-vis de toute forme de domination politique, économique, sociale et sexuelle.

Cette volonté politique a été affirmée par l'adoption du Plan d'Action de Lagos, en avril 1980, par les chefs d'état et de gouvernement. La mise en pratique d'un tel plan dépendra des rapports de force au sein des nations et entre les états. Cependant, nous pouvons, dès à présent, nous inquiéter du peu d'importance qui est accordé aux femmes au chapitre de l'alimentation et de l'agriculture.

Or, comme nous l'avons déjà dit, ce sont les femmes qui produisent et transforment les denrées alimentaires; mais en dernière analyse, ce sont elles qui déterminent en grande partie les qualités nutritionnelles de la famille et des enfants en particulier. Aussi, toute nouvelle politique de promotion de l'autosuffisance et de la sécurité alimentaires devra, dans son approche sur le plan interne, diversifier les interventions afin de tenir compte du rôle joué par chacun des sexes dans la production. L'encadrement technique, l'alphabétisation, la formation aux méthodes de gestion moderne,

l'accès à la terre, aux crédits et aux institutions du monde rural, l'allègement et le regroupement des tâches domestiques, sont autant de moyens à promouvoir et à organiser pour atteindre cet objectif.

Mais cette participation des femmes doit être basée sur une planification capable de traduire la volonté politique. D'où la nécessité d'avoir des données fiables tant quantitatives que qualitatives, basées sur des concepts capables de traduire les réalités sociales et psycho-culturelles des femmes.

C'est cette nécessité que des femmes africaines chercheurs ont profondément ressentie en se dotant d'une organisation, l'Association des Femmes Africaines pour la Recherche sur le Développement, capable de créer les conditions objectives à une meilleure connaissance de la situation des femmes pour leur donner les outils de leur libération et permettre aux planificateurs et aux forces sociales d'inclure leurs préoccupations dans les promesses nationales.

Mais la création de l'A.F.A.R.D. représente aussi une phase importante dans la prise de conscience des femmes chercheurs quant à leurs rôles dans le devenir politique de l'Afrique. Elle se manifeste donc comme un acte d'indépendance à l'égard des paternalismes et des maternalismes de tout bord, car elle se veut comme une étape importante dans le processus de la décolonisation de la recherche sur les femmes et de la solidarité agissante entre les femmes africaines, mais aussi avec les autres femmes du Tiers Monde, et dans les autres parties du monde, qui luttent pour la justice entre les nations, au sein des nations et entre les sexes.

MADRES DE PLAZA MAYO - MPM - MOTHERS OF PLAZA MAYO

by Roberto Martine

In 1976, rightist extremists overthrew Argentina's elected government by force and then went on a rampage of slaughter of practically anyone they considered their opponents. This was done mostly in night-time Nazi-SS-style round-ups for imprisonment and indiscriminate killing of thousands of people - men, women and even their children.

Some 25,000 people "disappeared" in this way and as the police and all courts of justice were forced under by the military, the bereaved had nobody to appeal to. However, as the repression continued, there appeared a few of the most unlikely kind of protestors imaginable - a mere half-dozen anguished women walking towards the military-occupied government house - to plead for some explanation of the unjustified disappearance of their relatives.

On being denied entry or hearing of any kind, the tearful women tried to console one-another and went off home. But the next Thursday they were back, and a few more of them. On getting the same negative treatment, this time they hesitated, then walked around the Liberty monument in the centre of Government Square; then they returned home, seemingly defeated.

But thereafter, every Thursday afternoon they reappeared, to repeat their silent protest; then walking slowly around, in suffering testimony, in full view of government house. Their persistence attracted considerable public sympathy in the busy centre-city square, as the occupying military were very unpopular indeed, deriding the protestors as "mad women".

In time, through their courage and persistence, these few desperate women were to become known as "The Mothers of Plaza Mayo".

Military derision soon turned to anger and they ordered their police to "escort" the "mad women" from the official square. All police in Argentina carry truncheons, handcuffs and heavy .45 revolvers, which they are not backward in using when they feel like it. The Mothers made no resistance of any kind.

But they were back again the following Thursday! Their numbers were growing slowly and they attracted more public attention every week.

About two years ago, an Argentine architect, Adolfo Pérez Esquivel, who had bitter personal experience of military "justice", having been imprisoned under no stated charge in far southern Patagonia - the Argentine "Siberia" - was awarded the Nobel Prize for Peace. This world-renowned honour was granted in recognition of his work for Human Rights.

On his Human Rights group contacting the Mothers, threats increased with vandalism against private homes, from "unknown sources" according to the local police when requested protection. However, with this Human Rights group backing, the growing number of marching Mothers became astonishing, so much so that a veritable army of the military's armed goons had to be present on Thursdays to "protect" the government house from peaceful entry by the ladies.

The only answer the Mothers ever managed to get was: "No official knowledge of alleged disappeared persons".

But they were not taking this "lying" down, and drew up lists of their missing relatives, with names and dates of their disappearance, hoping to have these published; but the muzzled local press were too scared to handle the information.

Undaunted, the Mothers then invited grandmothers to join their movement, with great and immediate success. That was what sparked our brainwave of spreading around pamphlets congratulating the courageous granmas, and ending in large print: "BUT WHERE ARE THE PAPAS AND THE GRANDPAS? THE UNCLES AND AUNTS? THE BROTHERS AND SISTERS, OTHER RELATIVES AND FRIENDS...?"

The following Thursday, when the Mothers and Grannies met as usual, they found they were followed by a large crowd of men - old, middle-aged and young - as well as boys and girls, all disciplinedly silent but with determined faces.

Then the ousted political parties, insulted and disgruntled, now growing restless, called upon their adherents to swell the weekly Mothers Mob,

which was done so successfully as to crowd out the entire government square.

The writing was becoming clear on the wall... So the military had to spawn a warlike scheme to try to attract patriots to their support. This was the Falkland war which ended in a resoundingly definite fracas.

Even so, the military were not convinced and went on a specially virulent all-out propaganda of lies and misinformation for the maintaining of their grip on power. It was then that our Human Rights organization, though small and weak, but greatly backed now by the political parties, came up with a shattering blow that justified the Mothers from the very beginning.

This was, in late 1982, the result of much private search for "disappeared persons", that disclosed hundreds of earth mounds around the city, that when dug up were found to contain the decomposing bodies of countless people, most of them clearly shot through the head and indiscriminately thrown into these graves or common pits not registered in any court or cemetery records.

Immediate public uproar forced the military into fearfully disgorging and setting free thousands of the "disappeared" who had been imprisoned for the last six years under no specified charges, most of them in pitiful conditions.

By the first week of 1983, the Mothers had got published a series of quarter-page lists of the "missing persons" in the Buenos Aires newspapers, copies of which we sent abroad. Then the Mothers handed over a final full-page special effort to the Grandmas, this a claim for "the missing children of our missing children!" - hundreds of them, with names, places and dates of the disappearances of the kids...

But where did the money come from for this costly effort? From international contributions, along with long lists of signatures from nearly a dozen countries, along with their claims for missing compatriots in Argentina. This has been the biggest of all body blows for the military.

So after years of darkness, and as a result of efforts such as those of the Madres de Plaza Mayo, there appears to be some light early in 1983.

UNIONS' SOLIDARITY WITH CHILE

The International Free Trade Union Conference on Human and Trade Union Rights in Chile, held in Madrid on 11 and 12 March 1983 under the auspices of the International Confederation of Free Trade Unions, notes with great concern and horror that ten years of military dictatorship in Chile have resulted in:

- . An appalling number of political and trade union leaders being arrested, tortured, assassinated and deported. The systematic destruction of national production facilities. An unprecedented increase in the foreign debt which already amounts to 18,000 million dollars; labour legislation which aims at breaking up the trade union structures and paralysing collective bargaining; in other words, legislation which puts the labour world back in a situation which existed nearly a century ago;

- . an economic policy inspired by the most reactionary interests of national and transnational capitalism, which has resulted in a rate of unemployment of around 25 to 30% of the wage-earning population, an unprecedented decrease in national income; the aberrant impoverishment of the population, rocketing prices and the spectacular reduction of wages and social security benefits; the dismantling of the public services, etc.;
- . the application of the doctrine of National Security which has transformed the armed forces into an occupation army at war with the Chilean people and the workers in particular.

In the face of the crimes and the economic disaster for which Pinochet's regime is responsible, the Conference calls on the ICFTU governing bodies and the International Trade Secretariats (ITS) to urgently take the most appropriate and effective action:

- (a) to promote unity of action within the democratic Chilean trade union movement - welcoming all the action already taken in this context - and to encourage agreement between all the country's democratic social and political movements in order to define a democratic alternative to Pinochet's dictatorship regime;
- (b) to continue to denounce the Chilean military regime's crimes and violations of human and trade union rights to the ILO and the other inter-governmental organisations, with the ICFTU affiliated organisations and ITS joining in a constant and adequate campaign for informing and mobilizing the workers and public opinion in this connection;
- (c) in close co-operation with the International Trade Secretariats (ITS) to urge the free and democratic trade union movement to take appropriate action against those transnationals in Chile which do not respect human and trade union rights.
- (d) to step up trade union action by all available means, in order to isolate Pinochet's dictatorship politically and economically;
- (e) to urge all the affiliated organisations to bring pressure to bear on their respective governments with a view to ensuring that all international political, economic and financial relations with Chile are subject to the proviso that human and trade union rights are respected, including the return of the exiles. The Conference also calls for the suspension of all kinds of military aid to the present regime.

The Conference expresses the conviction that, today more than ever, the international free trade union movement, in accordance with its commitment to defend human and trade union rights throughout the world, in East and West, North and South, can and must continue its decisive assistance to the Chilean working people in order to restore freedom and democracy after many years of suffering.

THE FOOD-ENERGY NEXUS SUB-PROGRAMME:

SEEKING LOCAL SOLUTIONS TO A GLOBAL PROBLEM

Objectives: The price of fuels, boosting agricultural and transportation costs, has pushed food prices beyond the reach of hundreds of millions of already hungry people. It is becoming clear that the Third World countries will not be able to solve their food problem without solving their energy problem. The centrality of the food-energy nexus calls for a comprehensive policy approach and a sustained interdisciplinary research effort. Both food and energy issues are being extensively studied and recognizing the gravity of this problem, the United Nations University has initiated a new multi-disciplinary sub-programme in the area of Food-Energy Nexus. The primary emphasis of this sub-programme under the Regional and Global studies Division will be the study of the implications of the linkages between food and energy for policy options and integrated development planning. These activities will collaborate closely with the work already going on in the Development Studies Division in relation to projects on energy conservation, post-harvest techniques and efficient utilization of biomass. After a period of exploratory activities, the UN University is planning to start, in 1983, the Sub-programme with the following objectives:

1. to increase the understanding of the relationships between food and energy in specific socio-economic, cultural and ecological contexts;
2. to devise and test methodologies for the analysis of the energy profile of the food production, distribution and consumption systems with the purpose of identifying technological choices and policy options for improving the energy efficiency of such systems in different natural and socio-economic environments;
3. in particular, to design integrated food energy development schemes adapted to diverse ecosystems and in this manner reduce the competition for scarce resources between food and energy.

The Sub-programme will also study the possible contribution of global modeling research on food and energy in relation to the above.

Overview: The Sub-programme will benefit from an important pilot activity in Brazil, implemented by the FINEP (the government research financing agency) and the CNPQ (National Council for Scientific Research). FINEP is sponsoring three projects of "agro-energy communities" in the states of Bahia, Rio Grande do Sul and Minas Gerais. CNPQ is launching an "agro-energy project" aimed at assessing the national capability in non-conventional energy technologies, providing guidelines for the evaluation of integrated rural energy projects, estimating the energy requirements for food production at both the regional and ecosystem levels and proposing alternative energy-efficient solutions.

Building from this set of research and demonstration projects which associates several universities, research centres and planning organizations, as well as from the UN University projects of integrated rural

resource management in China, the Food-Energy Nexus Sub-programme will promote comparative research and exchanges of results and experiences between researchers from different Third World countries. This will be done through a newsletter, circulation of state-of-the-art reports and direct contacts and mutual assessment of demonstration projects, through a fellowship programme.

Other activities of the Sub-programme will include:

1. workshops on case studies leading to the formulation of guidelines for planners on integrated food-energy schemes in different ecosystems. The first four workshops will deal with agricultural frontiers in rain tropic, marginal lands, aquatic environments, and arid lands;
2. assistance to planning agencies in analyzing the energy profile of the food production, distribution and consumption systems. A pilot activity in a Sub-Saharan country is under consideration;
3. workshops on global modelling of the food-energy linkages.

Expected results: Stimulating research on a subject of great practical importance hitherto neglected; assisting co-operation among Third World countries; providing planners with guidelines and case studies to help them in defining policy options; identifying demonstration projects to UNDP and other international agencies promoting local solutions for the global food-energy problem.

Participation: It is expected that a network of research and planning institutions will be created in Third World and industrialized countries.

For further information, contact: Dr. Ignacy Sachs, Programme Director, Food-Energy Nexus Sub-programme, Ecole des Hautes Etudes en Sciences Sociales, 54 Boulevard Raspail, Paris 75006, France.

Venezuela: Cerel

La Fundación Centro de Estudios de la Realidad Latinoamericana (CEREL), es una Fundación sin fines de lucro constituida en el año 1978 como un aporte a la investigación sociopolítica y al enriquecimiento del dialogo político.

Desde sus inicios la Fundación CEREL viene realizando una serie de actividades de estudio y de reflexión. Es así como ha efectuado conjuntamente con la FIPAD un seminario sobre "Alternativas del Desarrollo para Venezuela", que contó con la participación de expositores nacionales e internacionales de alto rango académico, político y/o empresarial.

En la actualidad la Fundación CEREL atribuye la mayor importancia a una investigación sobre Cultura Política en Venezuela que viene llevando a cabo como un esfuerzo fundamental para el esclarecimiento de los esquemas de actitudes y valores que detentan los Venezolanos y del proyecto político-económico que se plantean las élites dirigentes. Este proyecto cuenta con la participación activa de un grupo de investigadores que ejercen su actividad académica a todas las ramas de las ciencias sociales.

De igual modo promueve una serie de eventos, bien como apoyo al programa de estudios, investigación y difusión de los problemas contemporáneos, o bien como contribución al conocimiento de la relación investigación-desarrollo económico.

El presidente de CEREL, Luis Raúl Matos Azocar, es también miembro del Consejo de FIPAD, y cuya directora ejecutiva es Beatrice Rangel Mantilla. CEREL publica una revista, Nueva Frontera. Su primer numero incluye un artículo de Luis Matos "Nacionalización del Futuro" (Calle Real cruce con calle Los Jabillos, Edif. Los Jabillitos PL, Sabana Grande, Caracas 1062-A, Venezuela).

India: Development Alternatives

Dear Colleague, Development Alternatives is a non-profit organization recently established to design, promote and disseminate environmentally-sound and appropriate technologies in the Third World. Among our first activities, we have set up a full-scale information system to act as a clearing house and to provide technical and other documentation to groups working in the areas of environment and appropriate technology.

We would like to receive from you: information on your activities; list of your publications and documents; samples of your newsletter and publications; your annual reports.

We should also be glad to explore with you regular arrangements: to exchange publications and information; to review books and documents; to accept trainees and volunteers; to collaborate in joint/shared activities.

We look forward to hearing from you very soon.

Ashok Khosla, President
(22 Palam Marg, New Delhi, 110 057).

UK: Turning Point

Turning point is an international network of people whose individual concerns range very widely - environment, sex equality, Third World, peace and disarmament, community politics, appropriate technology and alternatives in economics, health, education, agriculture, religion, etc. - but who share a common feeling that humankind is at a turning point. We see that old values, old lifestyles and an old system of society are breaking down, and that new ones must be helped to break through. Turning Point does not demand adherence to doctrines, manifestos and resolutions. It enables us, as volunteers, to help and to seek help from one another.

There is an ad hoc committee whose members are: Beata Bishop, Peter Cadogan, Margaret Chisman, Alison Pritchard and James Robertson. Enquiries and communications should be made by post to Alison Pritchard, Spring Cottage, 9 New Road, Ironbridge, Shropshire TF8 7AU, England, or by phone to her (Ironbridge (095 245) 2224) or to Peter Cadogan (01-794 5590).

In its March Turning Point Newsletter: comments on and/or references to books, articles and events relating to people and contributions; a shift of values; health and care; green people; local and regional initiatives; work; learning and education; peace and disarmament.

What is TIE?

It has been estimated that within a few years transnational corporations are likely to control over 40% of investment in the western world.

Increasing unemployment, the introduction of technologies which deskill, increase work rates and enhance managerial control, together with lowering living standards are all manifestations of this process.

This growth of corporate power has yet to be challenged effectively - trade unions, now on the defensive, have to develop international perspectives and strategies which involve their members.

These issues concern many workers, action groups, trade unions and researchers all over the world. Since its formation in 1978 TIE has attempted to act as an international forum for such groups and individuals. TIE promotes the exchange of information and experience between those working in this area, and in particular to make this information fully accessible to those that it most concerns - working people. Central to TIE's work is the strengthening of contacts between workers from transnational subsidiaries in different countries and the development of effective trade union strategies.

As a network of some 40 action/research groups and workers' organizations, TIE has established three working groups to pursue its objectives in specific areas: the auto industry; new technology; agribusiness. With the support of some important trade unions, like the Italian Metalworkers' Federation and many shop stewards' committees, TIE has been successful in establishing or strengthening international links between workers in

companies like Peugeot-Citroen-Talbot, Ford, Massey Ferguson and Philips.

In facing the world economic crisis, only organisations of working people can develop the perspectives and the power to bring a rational social vision to the public eye. The task is an enormous one, since plainly the first major effect of an economic crisis is to undermine the organisation and capacity of trade unions to fight. With growing dole queues and the very real threat of redundancy, not only the strength to defend wage levels, but also the ability to develop an alternative vision, are really threatened.

In this situation TIE has a very real role to play in building grass-roots contacts and developing a widespread consciousness of the international dimensions of those issues facing workers and communities most affected by the restructuring of industry. (TIE-EUROPE, c/o Transnational Institute, Paulus Potterstraat 20, 1071 DA Amsterdam, The Netherlands).

Le monde que nous choisissons

"Le monde que nous choisissons" -Festival Européen 1983- accueillera du 27 au 29 mai 1983 au Parc des expositions de Heysel, Bruxelles, Belgique, plusieurs centaines d'organismes actifs dans les secteurs de l'environnement, de la qualité de la vie, de la croissance personnelle, de l'éducation, des dimensions communautaires et coopératives de la vie (social, Tiers Monde, volontariat...), des mouvements autogestionnaires, des mouvements pour la paix...

La crise: une occasion unique. Dans tous les domaines, les autorités s'accordent sur la gravité de la situation actuelle: les prochaines années et décennies, sans aucun doute, comporteront des difficultés majeures et verront des changements radicaux. Des réajustements importants sont nécessaires aux niveaux de l'économie mondiale, de la protection de l'environnement, de la production alimentaire, de l'utilisation des ressources, et également aux niveaux de l'éducation, de la croissance personnelle, du désarmement et de la sauvegarde de la paix. Ces problèmes, atteignant en même temps un degré d'intensité maximum, convergent en une "méga-crise" dans laquelle rien ne peut plus être résolu séparément.

Des milliers d'individus, d'organisations, de mouvements à travers le monde, conscients de cet état de fait, refusent le défaitisme et se sont engagés dans une démarche positive destinée à rendre au monde un visage plus humain.

Le Festival Européen pour *"Le monde que nous choisissons"* veut être un point de convergence pour tous ces efforts, une démonstration de leur complémentarité et l'affirmation massive que "le futur est entre nos mains" et que nous pouvons, par un engagement personnel, surmonter nos anxiétés et les graves problèmes mondiaux de façon créative et constructive.

Objectifs du Festival. Les initiateurs de ce SALON DE LA QUALITE DE LA VIE ET DES VALEURS HUMAINES ont pour objectifs:

- . de célébrer la créativité et les forces transformatrices porteuses d'espoir pour l'avenir;
- . d'offrir un lieu de rencontres et de convergences;

- . de stimuler une prise de conscience auprès du grand public dans un esprit de solidarité, de respect de la différence, d'engagement et d'ouverture;
- . de faciliter un rapprochement entre les démarches "officielles" et les "alternatives";
- . d'affirmer et de démarginaliser des valeurs qui, dans notre système de vie, n'ont pas toujours leur juste place;
- . de contribuer au développement d'un vaste consensus quant à l'importance à attribuer aux principales de ces valeurs et aux attitudes et priorités qui en découlent.

Le Festival Européen 1983 sera un préliminaire européen au CONGRES PLANAIRE pour *"Le monde que nous choisissons"*, qui aura lieu à Toronto (Canada) du 17 au 21 juin 1983.

Programme. Le Festival comportera plusieurs centaines de stands, un programme de conférences et débats, des expositions techniques, des galeries d'art, de animations, danses et jeux divers, des spectacles, représentations et concerts.

(Secrétariat: ASBL L'ARC, 71 Chaussée de Charleroi B-1060 Bruxelles, tél. 02/538.22.52 - 091/86.33.77).

IFDA seminar on Another Development in Grenada

IFDA organized from 6 to 13 February a seminar on Another Development in Grenada with the participation of a number of IFDA associates, members of the Government of Grenada and several senior civil servants. Participants from abroad included Aldo Ajello, Italy, Member of Parliament; Ahmed Ben Salah, Tunisia, former Minister for Development, Secretary General of the Movement for Popular Unity; Sven Hamrell, Sweden, Executive Director, Dag Hammarskjöld Foundation; Eveline Herfkens, The Netherlands, Member of Parliament; Helan Jaworski, Peru, former Deputy Minister of Social Mobilization and Director of the Centro de estudios para el desarrollo y la participación; Luis Maira, Chile, Director, Instituto de Estudios de Estados Unidos, Mexico City; Md. Anisur Rahman, Bangladesh, former Member of the Planning Commission; Marie Angélique Savané, Senegal, President, Association of African Women for Research and Development, as well as Dawne Preiswerk-Fletcher and Marc Nerfin of the IFDA Secretariat.

The seminar took place in two phases. During the first one, participants from abroad acquainted themselves with the country through conversations with representatives of the government, the private sector (including the Chamber of Commerce) and the cooperative sector and visits to the international airport under construction, as well as several other development projects. The second part of the seminar took place on the island of Carriacou under the joint chairmanship of the Minister of Health and the IFDA President. The Prime Minister and six cabinet ministers, including those for Foreign Affairs, Planning and Finance, Agriculture, Health, Education, Tourism) and the senior civil servants from these ministries interacted with IFDA associates both in formal sessions and in private conversations (see also IFDA Dossier 24).

INNER SPACE

. T.C. McLuhan (ed.), Touch the earth: A self-portrait of Indian existence (New York: Promontory Press, 1971), 186pp.

LOCAL SPACE

. Michèle Mattelart, Women and the cultural industries (Paris: Unesco Documentary Dossier 23), 70pp.

. Myra Lewinter (ed.), Theoretical and methodological problems in research on women in developing countries (Women's Research Centre in Social Science, H.C. Andersens Blvd., 38, mezz., 1553 Copenhagen V, Denmark), 1982, 65pp.

. James P. Grant, The state of the world's children 1982-83 (New York: UNICEF, 1982), 136pp.

. Amartya Sen, "Unequal access to food - Causes, conflicts, options", Future: Development Perspectives on Children (no.5, 1982), (UNICEF, 73 Lodi Estate, New Delhi 110003, India), pp.11-16.

. Lela Vandenberg and Crissy Kateregga, Nutrition and food - Education, policy and practice: A selected, annotated bibliography (Non-Formal Education Information Center, College of Education, Michigan State University, East Lansing, MI 48824, USA), 1982, 76pp.

. Abhay Bang and Ashvin J. Patel (eds.), Health Care: Which way to go? Examination of issues and alternatives (New Delhi: Medico Friend Circle), 256pp. Distributor: Voluntary Health Association of India, C14, Community Centre Safderjang Development Area, New Delhi 110016, India.

. Uno Winblad and Wen Kilama, Sanitation without water (Stockholm: SIDA Health Division, 1980), 133pp. This book deals with dry systems for on-site composting or disposal of excreta and organic residues. It has been prepared to meet increasing demands for practical information on how to design, build and operate compost latrines and improved pit latrines. The emphasis is on simple measures that can be implemented with limited resources. Primarily intended for health officers, medical auxiliaries and village technicians, it should also be of relevance to other medical professions and to architects, engineers, physical planners and administrators concerned with appropriate technology. It is available from SIDA at no charge.

. Pascal de Pury, People's technologies and people's participation (Geneva: World Council of Churches, 1983), 164pp. An account of ten years' experience by the People's Technologies Service in the WCC/Department of the Commission on Churches' Participation in Development.

. Richard Whitcombe and Marilyn Carr, Appropriate technology institutions: A review (London: Intermediate Technology Development Group, 1983), 74pp.

(9 King Street, Covent Garden, London WC2 8HN, UK) This booklet is one of a series of Occasional Papers (no.7) on the social and economic aspects of technology choice, and their implications for policy. Through this series ITDG seeks to inform and encourage further debate about these issues.

. La serie Catastro nacional de tecnologías campesinas contiene una breve información técnica (medio 5 paginas) de instrucciones ilustradas sobre la construcción de: Microniveladora de tiro animal (Ficha no.1); Invernadero (no.2); Usos del hinojo (no.3); Estufa ambiental (no.4); Limpiador de malezas (no.5); Estufa para ahumar pescado (no.6); Secador de maíz (no.7); Ahumador para colmenas (no.8); Bebedero para aves (no.9). Publicación del Grupo de investigaciones agrarias, Proyecto de tecnología campesina y organización, Academia de Humanismo Cristiano, Casilla 6122 Correo 22, Santiago, Chile.

. Ignacy Sachs, "L'ecosviluppo: Una scelta non rinviabile", Politica Internazionale (n.1 Gennaio 1983), pp.73-78.

. Jacques Bugnicourt, "Popular participation in development in Africa", Assignment Children (no.59/60, 1982), pp.57-77.

. L'Afrique au quotidien: Cahier 2, "La voix de la terre: De nouveaux intermédiaires" (Octobre 1982); Cahier 3, "La voix de la terre: Les plus pauvres dans les villes" (Novembre 1982). (Mouvement international ATD Quart Monde, 107 av. du Général Leclerc, 95480 Pierrelaye, France.)

. Piotr Zyedler-Zborowski, "Grassroots action in Poland: Recent changes and another development in Poland", Development: Seeds of Change (1982:3), pp.24-27.

. Simon Nicholson (U.K. Open University), "Choice, chance and utopia: Futures related questions developed by children in Sweden, using a participatory and multi-media approach", Education and psychological interactions (no.79, December 1982), 54pp. (Department of Educational and Psychological Research, Malmo School of Education, Lund University, Sweden.)

. Stan Windass (ed.), Local initiatives in Great Britain (1981) (Banbury, Oxon, UK: Foundation for Alternatives, 1981), 126pp.

. Kenneth Hermele, The Knack, or how to get the work done: Discipline and control in the auto industry (Uppsala: AKUT, 1982), 40pp. (AKUT, c/o Dept. of Development Studies, University of Uppsala, St. Olofsgatan 11 B, S-753 21 Uppsala, Sweden.)

. A. Bonnafous et H. Peul, Physionomies de la ville (Paris: Les Editions ouvrières, 1983), 168pp.

. Collection pouvoir local, collection dirigée par Roger Beaunez avec la participation de l'A.D.E.L.S. (Paris: Les Editions ouvrières).

. Ross Kidd, "Popular theatre and popular struggle in Kenya: The story of Kamiriithu", Race & Class (vol.XXIV, no.3, Winter 1983: Special issue on the politics of repression in Kenya). An abridged version of this article appeared in IFDA Dossier 33 (November/December 1982).

NATIONAL SPACE

- . Denyse Harari and Jorge Garcia-Bouza, Social conflict and development: Basic needs and survival strategies in four national settings (Paris: OECD, 1982), 110pp. Deals with Egypt, India, Nepal and Peru.
- . Frances Moore Lappé and Joseph Collins, Now we can speak: A journey through the new Nicaragua (127pp.) +
- . ---- with Nick Allen, What difference could a revolution make? Food and farming in the new Nicaragua (San Francisco, California: Institute for Food and Development Policy, 1982), 185pp. These two books are based on personal experience by the authors, in working and consulting with Nicaraguan government officials and interviews with a cross-section of the population. In the first book, travel and interviews give an insight of how ordinary Nicaraguans interpret the changes brought to their lives by the revolution: their success, disappointments and hopes for the future. The second book takes a sympathetic yet critical look at Nicaragua's efforts to transform a brutal, wasteful agricultural system into one that meets the basic needs of the poor majority. In examining the difficulties as well as the successes of the agrarian reform, it shatters many of the myths created in the USA, particularly those propounded by the Reagan Administration.
- . Solon Barraclough, A preliminary analysis of the Nicaraguan food system (Geneva: UNRISD, 1982), 133pp.
- . Jon Halliday, "The North Korean phenomemon", New Left Review (no.127, May/June 1981), pp.18-52
- . ----, "The North Korean model: Gaps and questions", World Development (vol.9, no.9/10, 1981), pp.889-905.
- . James Walls (ed.), Combating desertification in China (Nairobi: UNEP, 1982), 70pp.
- . Surendra J. Patel, "Planned development in India: Review of major changes 1950-1975", Mainstream (January 1980), pp.1-10; and "Planned development in India-II: Reflections on choices: 1980 to 2000", Mainstream (February 1980), pp.15-26.

THIRD WORLD SPACE

- . Anton Vratusa, "Mobilization on the basis of individual and collective self-reliance - Highlights from the report of the President of the Council to the Third Session of the ICPE Assembly", Public Enterprise (vol.3, no.2, 1982), pp5-10.
- . Voker Matthies, Süd-Süd-Beziehungen Zur Kommunikation, Kooperation und Solidarität zwischen Entwicklungsländern (Köln: Weltforum Verlag, 1982), 423pp.
- . Armand Mattelart, Hector Schmucler, L'ordinateur et le Tiers Monde: L'Amérique latine à l'heure des choix télématiques (Paris: Maspero, 1983), 206pp.

. Mahdi Elmandjra, "La recherche scientifique en tant que création. Le cas de la Méditerranée: Antécédents et prospective", Futuribles (no.62, Janvier 1983), pp.35-43.

. ESCAP, Development strategies for the 1980s in South Asia (Bangkok: United Nations, 1981), 60pp. (Development Papers no.1: ST/ESCAP/154.)

. UNEP, Environment and development in Asia and the Pacific: Experience and prospects (Nairobi: UNEP, 1982), 432pp. Report and background papers of a regional seminar, "Alternative patterns of development and life-styles in Asia and the Pacific", jointly convened by ESCAP and UNEP (Bangkok, 14-18 August 1979).

GLOBAL SPACE

. Bernard Benson, The peace book (Toronto: Bantam Books, 1982), 224pp. This is a tale about a small boy, the son of a nuclear strategist, who hears discussions about nuclear death and destruction at the dinner table. Horrified, he contrives to appear on a live television programme and tells the viewers that he is just a small boy who doesn't wish to die because of the decision of a handful of world leaders. He becomes instantly famous and is summoned to meet with heads of state. They all explain that they don't dare disarm because they don't trust each other. All seems lost until the little boy comes up with an ingenious solution.

. Ruth Leger Sivard, World military and social expenditures, 1982 (New York: Institute for World Order, 1983).

. Richard Falk, Samuel S. Kim and Saul H. Mendlovitz (eds.), Toward a just world order (Vol.I) (New York: Institute for World Order, 1982), 652pp.

. Peter Wallensteen, Incompatibility, confrontation and war: Four models and three historical systems, 1816-1976 (Uppsala University, Department of Peace and Conflict Research, Report no.22, October 1982), 34pp.

. George F. Kennan, The nuclear delusion: Soviet-American relations in the atomic age (New York: Pantheon, 1982), 207pp.

. Robert Scheer, With enough shovels: Reagan, Bush and nuclear war (New York: Random House, 1982), 285pp.

. PNUE, L'état de l'environnement mondial, 1972-1982 (Nairobi: PNUE (Programme des Nations Unies pour l'environnement), 1982), 65pp.

. Alexandre Charles Kiss (ed.), Recueil de traites multilatéraux relatifs à la protection de l'environnement (Nairobi: PNUE, 1982), 543pp.

. IBFAN, Breaking the rules - 1982: A year-end compilation of violations of the international code of marketing of breast-milk substitutes (Geneva: IBFAN (International Baby Food Action Network), 1983). (CA 157, 1211 Geneva 19, Switzerland). The report summarises, month-by-month during 1982, violations of the WMO Code to control the marketing of artificial infant feeding products totalling nearly 15 million. In all 83 companies in 50 count-

ries were involved. Their marketing activities included direct advertising to the public, using health care facilities to push the products, distribution of samples, inappropriate promotion to health workers, and incorrect labelling. Only four countries - Argentina, Portugal, Trinidad & Tobago and Yugoslavia - have implemented the Code in its entirety.

. Carolyn Campbell, The decline in breastfeeding: An analysis of the role of the Nestlé Corporation from two perspectives (Cornell International Nutrition Monograph Series), 61pp. This monograph analyzes in terms of the conflicting ideologies of marxism and capitalism, the ascendancy of formula feeding. The decline of breastfeeding is traced, and is related especially to the free market economic system and to the domination of women by men in most societies. The author uses the rise of the Nestlé Corporation from a small Swiss firm to a giant transnational corporation as the vehicle for her discussion of these important issues. The monograph suggests that the loss of control by women over their lives and bodies are linked both with capitalism and with changing infant feeding practices.

. United Nations Centre on Transnational Corporations, Transnational Corporations in the power equipment industry (New York: UN, 1982), 95pp.

. ----, Transnational corporations in the fertilizer industry (New York: UN, 1982), 69pp.

. Barbara Dinham and Colin Hines, Agribusiness in Africa: A study of the impact of big business on Africa's food and agricultural production (London: Earth Resources Research Ltd., 1983). The authors blame big business for much of Africa's food problem and question the approach of African governments who, by accepting agribusiness advice, technology and even management, are putting the demands of big business before those of their own people.

. Michel Lelart, "Les mécanismes compensatoires au FMI", Revue Tiers Monde (t. XXIII, no.91, Juil-Sept. 1982), pp.619-628.

. ----, "La facilité alimentaire du FMI" in J. Bourrinet, L'ordre alimentaire mondial (Paris, Economica, 1982), pp.151-157.

. ----, "L'aide du FMI aux pays en voie de développement", Revue canadienne d'études du développement (vol.III, no.1, 1982), pp.38-65.

. ----, "FMI: L'incidence du relèvement des quotes-parts et de l'allocation de DTS", Revue Banque (Mars 1982), pp.342-350.

. ----, "La démonétisation de l'or: Conséquences d'un échec", Eurépargne (1ère partie, Novembre 1982, pp.18-26; 2e partie, Décembre 1982, pp.8-16).

. Cheryl Payer, The World Bank: A critical analysis (New York, London: Monthly Review Press, 1982).

PERIODICALS

- . Alternatives (vol.VIII, no.2, Fall 1982) includes articles by Richard Falk, "The global setting and transition to democracy"; Celso Furtado, "Dependence in a unified world"; and an interview with Inga Thorsson on the UN Special Session entitled "Disarmament and global security". (Centre for the Study of Developing Societies, 29 Rajpur Road, Delhi 110054, India; Institute for World Order, 777 United Nations Plaza, New York, NY 10017).
- . Development and Peace (vol.3, no.1, Spring 1982): Karl P. Sauvant contributes an article, "Organizational infrastructure for self-reliance: The Non-Aligned countries and the Group of 77" to the debate on ECDC: Achievements, obstacles and prospects. Also includes in this issue is a paper by Miguel S. Wionczek, "Mexican experiences with international pharmaceutical industry: The major future issues in research and development". (KULTURA, H-1389 Budapest, P.O. Box 149, Hungary).
- . IDOC Bulletin (no.1-2, 1983). Focus on information and human rights. (IDOC International, Via S. Maria dell'Anima, 30, 00186 Rome, Italy).
- . LAWC Letter (vol.VIII, no.1, 1983) analyzes the Central American refugee issue from the perspective of its economic and political context. (Latin American Working Group, Box 2207, Station P, Toronto, Ontario, Canada M5S 2T2).
- . Multinational Monitor (vol.4, no.1, January 1983). J. Cavanagh and F.F. Clairmonte on twenty years of corporate expansion.
- . Balai (vol.II, no.1, 1983) on land and poverty in Asia. (P.O. Box SM-366, Manila, Philippines).
- . Changing Villages (vol.4, no.5, Sept.-Oct. 1982). (Consortium on Rural Technology, 10 Panchshila Park Shopping Centre, New Delhi-110017, India).
- . A.T. 80 (A journal on Appropriate Technology) (vol.1, no.2, October 1982) (c/o Association of Foundations, 4th Fl., Yutivo Bldg., 270 Dasmarinas St., Binondo, Manila, Philippines).
- . Third World First, with contributions by André Gunder Frank, "Global crisis", and Reginald Green, "The long revolution". (232 Cowley Road, Oxford OX4 1UH, UK).
- . Alternatives Economiques (no. 14, 15 janvier - 15 mars 1983). (57 Bd. de la Motte, 21800 Quetigny, France). Journal d'information critique sur l'actualité économique et sociale. Dossier: les mystères de la distribution et 'peut-on décoloniser la coopération'?
- . La lettre de Solagral (no. 13, Mars 1983): L'évolution des habitudes alimentaires. (100 rue St.Héliier, F-35100 Rennes, France.)
- . Revue Tiers-Monde (Tome XXIII, No. 92, Octobre-Décembre 1982): L'Islam et son actualité pour le Tiers Monde, sous la direction d'Ahmed Moatassime.

- . CoEvolution (no. 11, Hiver 1983): Spirales et labyrinthes, avec un article de Michaël Royston, "Les spirales de l'histoire". (B.P. 43, 75661 Paris Cedex 14, France).
- . Temps Libre (no. 6, Hiver 1982). (73 ave. Paul-Doumer, 75016 Paris, France). Temps, âge et prospective, avec "les enfants et leur image du futur" par Eleonora Masini.
- . Cuadernos del Tercer Mundo (Año VI, no. 58, Enero-Febrero 1983). Brasil post electoral: Rumbo a la democracia... y al Fondo. (Apartado 20572, 01000 México DF.)
- . Homines (Revista de Ciencias Sociales Puerto Rico), vol. 6, núm. 2, Julio 1982-Enero 1983). (Universidad Interamericana de Puerto Rico, Recinto Metropolitano, Apartado 1293, Hato Rey, Puerto Rico.)
- . Cuadernos de Economía Social (Año IV, no. 11, Mayo-Agosto 1982). (1093 Moreno 1729, Buenos Aires, Argentina.
- . Pensamiento Iberoamericano (no. 2, Julio-Diciembre 1982): Crisis y vigencia de la planificación. (Avda. de Reyes Católicos 4, Madrid-3, España.)
- . Autogestión y Participación (nos. 9, Julio 1982 y 10, Noviembre 1982). (Casilla Postal 4822, Lima 18, Perú.)
- . Politica Internazionale (no. 2, Febbraio 1983): Aldo Ajello, "Un argina contro la cultura della violenza", pp. 53-57. (IPALMO, Via del Tritone 62b, 00187 Roma, Italia.)

(continued from p. 2)

We must do all we can to prevent an Euroshima. We must resort to non-violent blockades, sit-ins, die-ins, hours of silence, fasting periods, information campaigns, discussions with the police and with military personnel. We must rejoice with the many reserve officers who recently have handed in their reserve passes and with the many (60 000) thousands of war resisters this year. We must also resist any attempt by the statesmen and politicians of East and West to manipulate this movement to their own advantage... Our objectives must be to free Europe from confrontation and to lead this Europe out of both blocks.

One day the great military alliances must be dissolved by the people in both blocks (...)

We must build up the power of the people which will be a power different from the power of the state. We need to restructure and we need to overhaul the entire social fabric, for it is at this moment woven by violence. I want both peace and a non-violent revolution. If we want peace, then, as Mahatma Gandhi has said, the only way to peace is peace itself.

MATERIALS RECEIVED FOR PUBLICATION

LOCAL SPACE

- . K.M.S. Benjamin, An experience of rural intervention: A case study of CHDSC-Rural community development programme (Centre for Human Development and Social Change, 9, First Cross St., Shastri Nagar, Madras-600 020, India), 11pp.
- . Eghbal Afsaneh, Ethnicité et structures étatiques en Afrique - Violences présentes et perspectives (80, rue de Turenne, 75003 Paris, France), 14pp.
- . Anil K. Gupta, Underdevelopment process: An action research enquiry in a semi-arid region of North India (Indian Institute of Management, Vastrapur, Ahmedabad-380 015, India), 12pp.

NATIONAL SPACE

- . Anil K. Gupta, Designing development organizations: Search for an Indian theory (same address as above), 28 + ii pp.
- . ----, Technology and its transfer in agriculture and allied sectors (11pp.)
- . Walter R. Stahel, The product-life factor (7, chemin des Vignettes, P.O. Box 832, CH-1211 Geneva 3), 43pp.

THIRD WORLD SPACE

- . Peter Oakley, The Third World in the Eighties: The critical issues (Agricultural Extension & Rural Development Centre, University of Reading, Reading, RG1 5AQ, UK), 15 + i pp.
- . Jack Westoby, How to save the tropical forests ("Calcioli", Via Collegalle 12, 50022 Greve in Chianti (FI), Italy), 14pp.

GLOBAL SPACE

- . Syed Sikander Mahdi, Nuclear Israel and the denuclearization of the Middle East (A-855, Block-'H', North Nazimabad, Karachi-33, Pakistan), 29pp.
- . Willis W. Harman, Dealing with resistance on the path to peace (SRI International, 333 Ravenswood Ave., Menlo Park, CA 94025, USA), 13pp.

Contributions to the IFDA Dossier are presented under the sole responsibility of their authors. They are not covered by any copyright. They may be reproduced or transmitted in any form or by any means without permission of the author or IFDA. In case of reprint, acknowledgement of source and receipt of a copy would be appreciated. The IFDA Dossier is published bi-monthly. Printed in 12,000 copies.
