A high-income world egalitarian scenario in the middle of the next century is sketched and the conditions for its achievement discussed. The question is first raised whether it would in fact meet the need for creative work or even seem materially satisfying. So far, technical progress has been associated with increased tensions: these could interfere with the growth of output. Another problem is energy. On moderate population projections, the achievement of US or even West European levels of per capita energy consumption by the whole world would imply the exhaustion of fossil fuels within a few decades, and the construction of very considerable nuclear capacity. Another condition for achieving 'modern' living standards on a world wide basis would be the mobilisation of vast amounts of capital. It is difficult to see how this can be transferred to countries requiring a 30 or 40 fold increase in per capita income, or what political forces will produce heavy internal redistribution. The prospect for the 21st century is therefore one of inequality and poverty. But if worldwide modernisation is not feasible, then policies of opening the door to foreign influences become questionable.
SCENARIOS FOR 'DEVELOPING' COUNTRIES:

THE FUNDAMENTAL ISSUES

Since 'developing' countries are now, in varying degrees, discussed into the world political economy, I cannot possibly refer scenarios without first referring to the future of the world as a whole. Naturally, to input thoroughly would require a very heavy research of the world, the main determinants of the structure internal economy can be broadly discussed, and the help of some scenarios investigated, with the help of some research.

A The world

Context

One possible long-term world scenario is as follows. By the middle of the next century, economic and gap (in terms of 'capita income) between today's 'developing' countries and 'developed' countries will have largely been eliminated by former's faster economic growth. The size of the gap in all continents will be in approximately a century, with an expectation of life of about made possible by the control of cancer and other chronic diseases, but very low birth rates. Migration will be disappearing with inter-marriage. Con- of income will be greatly reduced.

In all majorities of the world, people will live in modern flats in architecturally similar buildings. Virtually every family will own at least one car and a battery of electric devices that will 'automate' housework and provide ready communication (with friends, shops, banks, etc). Information available for everyone seeking work; women will do the same types of work as men and wear the same clothes. Almost everyone will be able to converse in English with the same ease as local dialects will be preserved, although local music and dancing, part of the local culture, will be controlled by behaviourist therapy, published in "Problems of Cultural Relations in the Modern World" (East-West Centre, Honolulu,
between governments by compulsory arbitration. The
United Nations will have become virtually a world govern-
ment. Civil liberties will everywhere be respected, and
there will be a high level of popular participation in
issues.

This hyper-modern scenario is widely deemed both desir-
able and inevitable, even among those with very different
philosophical views. Commissar and capitalist alike
take from the Hebraic roots of Western Civilization a
faith in the ultimate triumph of scientific method. They
therefore share a belief that there can and will be a
solution some day to the world's social problems.

Without such perspectives, their careers would lack a
central meaning, and any ruthlessness involved in exercis-
ing power would lose moral justification. All who share
the sort of scenario of this kind as a guide to action
are in fact more in common than is generally realized.
First, they all define the problem to be solved as
essentially economic. Second, they all treat economic
indicators, especially the national income, as a measure
of progress to a solution. Thirdly, they all see the
economic task as essentially one of 'modernisation', the
way in which industrialisation, with the modern sector
spreading until it eventually covers 'backward' areas as
well, and overcomes the primitive cultures to be found
there. Fourthly, they all assume (and it is merely an
assumption) that, after some economic level is univer-
sally achieved, social problems will disappear (even in
Marxist terms, that the state will wither away).

There is a basic political difference between Left and
Right on the route forward: whether this scenario will
represent the logical triumph of the market system, or
result from its crisis and collapse in world revolution.
This of course also come about through countries
moving along various paths that eventually converge).
In the economic and social objectives there is reason-
able agreement. Even apparent differences on the
national form of this scenario - whether the typical
way of production will be socialist or capitalist -
therefore how strong will be the economic controls

*The next 200 years" by Kahn, Brown and Mastell (1976):.

a recent views, "Mankind and the Year 2000" by Kosolapov
and "The Future of Society" by Modrzhinskaya and
Bulyan (1973). A characteristic of Kahn's work is
accepts a high degree of inequality as neither
nor politically implausible.
by governments (world and national), are not as they seem: the question is whether big public or private bureaucracies will triumph.

certainly evidence that, in many respects, we are in the general direction of this scenario. Economically and culturally, an international system is forming - incompletely and fitfully, but definitely in shape. Moreover, the causes are fairly obvious. Capital and expertise requirements of high-technology, notably aircraft, require output in each industry concentrated increasingly in a few models produced by transnational firms, eliminating small and medium firms and their brands. International agencies are spreading rapidly and, like the transnational corpora-
they require denationalised staff.

I argue that this Utopia, is nevertheless unattain-
that policies based on its feasibility are ously mistaken. But first let me declare my own ideas. Of course, any sane person must welcome some of the Utopia especially a secure peace. Of it would be an immense social gain if basic needs were met. But taken as a whole, a scenario type arouses in me feelings of horror and revulsion may be reflected in my professional criticism.3 of course a subjective judgement, and therefore 'artific'. But there is no objective way of choosing criteria for evaluating long-term scenarios, because really involved is the meaning of human existence.

mentally one's choice of criteria is intuitive, and private set of values ('objective function') gives weight to human differences - in nation, race, sex, ability, etc. - and to creative work and beauty. Although personality cannot develop unless basic material needs are met, these are obviously part of our requirements, and if their satisfaction is sacrificing the roots of personal identity, or boring and repetitive work, either on assembly or in bureaucracies, these are heavy costs to weigh the benefits.

familiar with some of the literature in this field see that there is strong correlation between what expect and what they want to happen: even those who that doom is nigh seem to enjoy doing so.
Carrying out such an intuitive cost/benefit appraisal, you should bear in mind that these needs can be exaggerated. For the great majority of mankind, the basic needs (for food, water and shelter) have already been met; many of the further needs we see as important (including more food and many housing amenities) have been artificially induced - by emulation and advertising, in fact the very process of modernisation itself. These are wants, not needs: indeed, some of them are damaging certain foods, cigarettes, high-speed cars, etc.).

Material progress can, therefore, never satisfy even material demands because it creates new ones all the time.

There is no way of verifying the previous paragraphs, who object to them, as contrary to their own Marxist liberal ideologies, or to their introspective assessment of how deprived they would feel (and why) if their present income were halved, can only refer to a different subjective belief, which underlies these ideologies, essentially that human beings are perfectible if consumption wants are satisfied.

To say that these are non-verifiable propositions is to deny the possibility of finding material that throws light on them. If material progress is a sufficient condition for solving social problems, we may not expect any decline in neuroses as levels of living rise, or in such symptoms as violence, mental illness, suicide and addiction to drugs (whether in a more-or-less natural state, like tobacco and cannabis, or fermented into spirits, or manufactured into sedatives).

In this context, it is of course common knowledge that, on the contrary, there are upward trends in these symptoms in the capitalist and socialist societies. There is certainly evidence of violence on a worldwide scale in the 1970s, not excluding countries where material prosperity is greatest - rioting, looting, assassination, bombings, kidnapping, hijackings, etc. While there are various explanations of why these have become conspicuous, they must be broadly the products of technological advance. This suggests that the price for material progress is high.

However, not merely seem biased, but be professionally ineffective, to base a critique of modernisation on personal doubts about its widely accepted desirability. Runs the risk of being dismissed as another 'back to Utopia' crank. So I shall concentrate on whether this view is internally consistent - whether a homo-
question arises immediately out of what has been said are the social stresses of high technology not intrinsically undesirable but also capable of under-
ying the levels of production it makes possible and manpower to be diverted into security services ? can be argued that mental illness, suicide and drug deration have minimal effects on output. But violence primarily could become a threat to the functioning of society. So could strikes, the frequency and of which may be aggravated by the nature of work in any modern factories apart from the desire to obtain greater share in the affluence that seems readily avail-
over, the modern economy is so inter-dependent as to be vulnerable to its social stresses, as in: output reveal; holdups even in the manufacture of ball saying, let alone in electric power supplies, can production in a large sector of industry. The social is also vulnerable. Socio-economic unrest can pro-
ratherianism, as can be seen throughout the 'Third'. This inhibits innovations and their communication, are necessary to scientific advance and therefore to the creation of the life styles the scenario
re internal and international peace in the end admissible ? Is there not a possibility at least that authoritarian regimes (which take power with the slogan order must be restored) will take advantage of the use of public scrutiny of their policies to threaten the use of the military products of modern technology, raising danger of a pre-emptive strike, especially if their are precarious. One could certainly find material this view - as one example, the Arab-Israeli war. A major war, or even a series of localised con-
also inconsistencies (or as Marxists say 'internal also in this scenario which are more specific-
which worldwide spread of modern technology would amounts of energy, capital, etc., which can, very roughly and partially, be quantified. These would arise first out of the increasing popu-
especially in 'developing'countries, second from a consumption.
The many projections of world population, depending on assumptions about fertility. Here I shall only mention those which have been thoroughly worked out; of the United Nations" and Mesarovic and Pestel:-

Table 1

<table>
<thead>
<tr>
<th></th>
<th>1975</th>
<th>2000</th>
<th>2050</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Nations</td>
<td>4.0</td>
<td>6.3</td>
<td>5.8</td>
</tr>
<tr>
<td>- Low variant</td>
<td>4.0</td>
<td>5.8</td>
<td></td>
</tr>
<tr>
<td>Mesarovic-Pestel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- High variant</td>
<td>6.7</td>
<td>11.2</td>
<td></td>
</tr>
<tr>
<td>- Low variant</td>
<td>5.2</td>
<td>6.3</td>
<td></td>
</tr>
</tbody>
</table>

The estimates were all prepared in 1973, and assume moderate mortality. I have omitted two higher UN variants, on constant and gradually declining fertility respectively, because since 1973 it has become clear that fertility is falling. The UN projections quoted are based on assumptions of moderate and fast fertility declines (outside Europe where it is assumed to stabilise). Intermediate values of 6 billion (2000) and 9 billion (2050) will for the purposes of the rough estimates in this paper, allowing a growth of 50% in the last quarter of this century and another 50% in the first half of the next, with a continuous deceleration. Some such slowing down would be necessary to make the scenario realisable.


"Beyond the Turning Point - The Second Report to the" (1974).

Energy Constraint

These projections for population can be combined with two hypotheses about energy consumption. The implication of estimates in a Ford Foundation study is that, by the year 2050, US consumption of energy would rise from its 1970 level of 12 tonnes of coal equivalent (tce) per capita to 25 tonnes on the assumption that relative energy prices returned to the early 1970s level. This would correspond to upper-middle-class US consumption levels today. If we take this as the world average in the mid-21st century, as is more implicit in the Utopian scenario - let us call this scenario A - and the population projection suggested above, we get very heavy energy consumption indeed, as Table II

Table II

The implications of different hypotheses on world energy consumption for 2050

<table>
<thead>
<tr>
<th>Scenarion</th>
<th>Assumed average (tce per capita)</th>
<th>World Total in 2050 (billions of tce)</th>
<th>Approx 1974-2050 cumulative (billions of tce)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario A</td>
<td>28 (US, 2000)</td>
<td>252</td>
<td>10,000</td>
</tr>
<tr>
<td>Scenario B</td>
<td>6 (Sweden, 1974)</td>
<td>54</td>
<td>2,000</td>
</tr>
</tbody>
</table>

The area under a logarithmic curve assuming a constant rate of growth.

These can be compared first with the actual world consumption less than 9 billions tce in 1975 (2.25 tce per capita), second with proven reserves of fossil fuels (coal, oil and natural gas) at about 1,500 billions tce, mostly coal.

I have drawn the basic material on energy consumption in a chapter by John Chesshire and Keith Pavitt in "World Futures: The Great Debate" ed Chris Freeman and John Tapola (Science Policy Research Unit, Sussex, to be published by Martin Robertson in 1978).

"Time to Choose" ed David Freeman (Ballinger, 1974).
Now for hydro-electric power and for ultimately fossil fuels being several times as great as proven reserves. There are of course also other national sources of energy which have hardly been all (geothermal, solar, wind, tidal). However, technical uncertainties (especially in range) and timelags and capital costs, as does the reserves yet unproven. So this hypothesis restricting fossil fuels (even in countries are abundant) to prime uses, especially vehicles by efficient and light-weight storage batteries.

Also mean the development of very great nuclear in particular breeder reactors. The greater is capacity would have to be constructed in, which would be very short of fossil fuel re- the consumption levels postulated. The capital producing enough money to raise the whole of Asia y, Africa and Latin America to this level would ; so would the environmental problems. These would be consuming more than three-quarters of s total energy. Moreover, fossil fuels would sensitive as they became more difficult to extract, production declined in an increasing number of rs, aggravating their need for revenue. This to stimulate production of new sources of energy, or countries with limited reserves of fossil fuels energy or install massive nuclear capacity, it e them even more severe financial problems than price rises, making it very hard indeed for them up economically.

Uncertainty of 'modernisers' faced with such arguments is, ally, to fall back on miracles - in this case a n ways will be found to develop unconventional energy in time and cheaply. And that some system discovered for monitoring the output of plutonium illing its uses, involving even more remarkable ative and political assumptions. Much the same answer are offered to those who point to the nuclear 'incidents' and the certainty of highly effluents difficult to store.

It is very doubtful whether such immense nuclear would be consistent with the libertarian aspects enario, in view of the serious security problems nuclear power stations, and whether this capacity restricted to peaceful uses.
hard to avoid the conclusion that scenario A has to be abandoned. Let us turn to an alternative scenario (B), in which more modest consumption standards and patterns are assumed, such as are current in Sweden, where energy consumption in 1974 ran at 6 tce per capita. Yet this would mean too big a growth of energy consumption to be satisfied by fossil fuels, or even non-conventional sources. To reach the level projected for 2050 in Table I will require supplies of at least 20 billion tce in the year 2000, or more than double the level of 1974. It is unlikely that energy from fossil fuels could double in period or great progress be made with new sources. Before nuclear power would have to make a contribution in the order of 5 billion tce, and rising rapidly, involving increasing reliance on fast breeders in the 21st century though not nearly as much as in scenario A. It is drawing attention to the fact that heavy reliance on nuclear power seems very probable in Sweden itself in the future, and it will be inevitable when oil becomes scarce.

Reductions in energy consumption are, however, already more than twice the figure mentioned above, and further increases would need to be prevented throughout the "developed" world. On paper, the growth of energy use could be halted by various means. Improved energy conversion techniques could make some contribution. But incomes and industrial production could only continue to rise in the USA and other developed countries - with average energy consumption being held to this level - if there were substantial changes in patterns of consumption, especially in the use of energy in private motoring, central heating, electrical gadgets, etc.

Could these changes be brought about? Of course, if energy prices are virtually implicit and would change consumption patterns in the right direction, they would hardly be compatible with an egalitarian society as has been pointed out above. So either a halt to economic growth or strict consumption controls (or taxes) would be needed. Yet there seems, even embryonically, a powerful enough to compel the publics of 'developed' countries to accept an end to economic growth or

OPEC countries, notably Kuwait and Venezuela, have already passed its peak and is likely to further by 2000. To double coal output would be very heavy investments.
their life styles to this degree. On the companies and unions in sectors producing energy, especially electricity, and equipment for energy production, owning energy (especially motor cars), would be powerful adversaries. In the absence of a feasible political mechanism, why should even this, much less ambitious plan, be taken seriously?

Another threatening problem would be raised by carbon dioxide emission. A cumulative energy use of 2,000 tera (largely of fossil fuels) over the next 75 years would cause a total emission of over 2,000 billion tonnes of carbon dioxide. Even if half of that were absorbed, mainly by the sea, as is believed to be happening currently, (and there is some question mark over the absorptive capacity of the oceans), there would be a significant addition to the amount currently in the atmosphere, about 30 billion tonnes. Each 1,000 billion tonnes may raise the average temperature of the earth by more than 1°C.

However, we need to allow for the dust particles, some of which originate in the burning of fossil fuels, also raising surface heat radiation. However, it is by no means certain that this warming effect would be unwelcome. Experts argue that this 'carbon dioxide greenhouse' effect of industrialisation has recently been offset, at least up to 1970, and even outweighed by basic cooling tendencies, also partly man-made (due to deforestation etc.)

An ending economic growth would mean changing life because of the employment problem. Growing production could only be offset by increased leisure and shifts towards intensive forms of production, if unemployment is to be avoided.

I have heavily here on a draft chapter for a study to be done by the INTERFUTURES group of OECD.

"Hypothetical climatic changes in the coming decade" by George Kukla Unf for the Future Vol II No 1 (UNITAR, 1977).

In the following issue in which Irving Kaplan makes an extreme) suggestion that there is a basic cooling 1°C a decade and forecasting a climatic crisis in
The trend is apparently unpredictable in the present knowledge, but whichever way it went its effects could be very serious.13 Another argument against scenario A is that it might well have devastating effects, especially on the polar ice caps.

**Capital needs**

The shortage of capital has already been mentioned as an ingredient to solving the energy shortage. However, even scenario B would require very big capital investments in sectors. Of course, capital is only one requirement for growth (less important than technical progress) but it is essential.

The per capita income of Sweden was $7,200 in 1974. If the poorest countries are to achieve anything like this level, say $5,000 (at 1974 prices), the great bulk of world investment would have to be devoted to Africa, and parts of Latin America - the opposite to its present distribution.

There were 33 countries in 1974 with a population of 1,130 million where income was less than $200 per capita. Even if one must take these figures as very tentative (house incomes in poor rural areas are very inadequately reported), their average income was $130. To raise that $1,000 would mean a nearly 40-fold increase; if it is to be done by 2050, that would require a growth of 5% per year. These countries, which include India, Indonesia, Pakistan and Bangladesh, are among those where population is growing at a relatively fast pace, and might well treble in the next three-quarters of a century (this would need more than 2% a year) so that total GNP would have to rise by more than 100-fold or say by $20,000 billions. Using an arbitrary incremental capital output ratio of 3 (low in view of the capital needs of energy above), would require some $60,000 billions of capital investment altogether, starting with an annual rate of $400 billions in the 1970s, and then growing rapidly, with a trend intermediate between the 'low' and 'medium' projections for South Asia, but one rather sceptical about the implied density of population. There are already signs that mortality is falling in this region.
is quite beyond the savings capacities of the countries concerned, especially if their incomes are to become less concentrated, and there is to be more participation in government. The capital requirements of scenario A would of course be even greater. Since the energy constraint (at least for the 21st century) is ultimately a capital constraint, that is all that one need to say to demonstrate that a "modern" living standard for the masses of South Asia or several other regions cannot be financed out of their own resources within the foreseeable future.

A paper possibility is an increase in foreign aid. This would have to be massive and on very easy terms, but one comes back to the question: where is the necessary political force to come from? Humanitarian motives in rich countries are not to be despised, but in fact they have carried little political muscle so far. Moreover, as energy supplies become more expensive, the long-term economic trends of many rich countries which import oil will include chronic inflation and recurring foreign exchange deficits; these will induce deflationary policies, further weakening their aid lobbies.

Conceivably, concerted action by the governments of 'developed' countries, using their bargaining weapons collectively, could shift capital towards them via commodity support and other devices. Indeed, this is what has been roughly sketched in the 'New International Economic Order'. However, there is little reason to expect from recent diplomatic history that such a coalition would survive the detailed and strenuous bargaining need to bring about such a redistribution of the world's wealth.

Another possibility which somehow sustains the optimism is that a united international proletariat will overthrow world capitalism at its centre. It is now very reasonable whether this old dream is in any way realistic. Real wages in 'developing' countries can only be increased greatly without depriving 'developed' countries of the means to buy enough energy and other resources to maintain the real incomes of their working classes. Even were a revolutionary govern-b TAKE over a core-capitalist country, it could afford to let real incomes, especially of industrial workers, decline substantially. What the oil crisis revealed was that even if in any case been undermined by the widening of national wage differences in the past century, and to nationalism.
Another possible constraint would be educational. To raise the technical level of the population, especially of Africa, to today's West European levels within 75 years would be an immense task, especially in tropical Africa. It would imply achieving virtually universal education up to age 16, and numerous big institutions of higher education. This would not in itself be impossible. It would, however, increase the financial strain on the poorest countries, especially in view of the large and increasing fraction of their population in the school age groups. It would also require the retention within the educational system of a big fraction of the output of its higher level to teach the swelling numbers: this would make it more difficult to find the qualified manpower for the other sectors.

If all these problems were solved and all sections of the community had full access to secondary education, there would be a big question about who would do the manual jobs, especially on the farms, in the mines and the hotels. This gap has been largely filled in Western Europe and North America by use of migrant labour and by mechanisation. But there would, in this scenario, be no labour available (even for the 'developed' countries to import) and widespread mechanisation in 'developing' countries would make the capital costs of full employment extremely high. A degree of direction of labour would seem inevitable, as in the socialist countries today, but that would be a major defect in the scenario.

It is even more fundamentally a distributional problem, despite the prospective continued loss of agricultural land due to erosion and urbanisation. Total output could no doubt keep pace with the increase in world population indicated above - a rise of 1¾% a year would suffice. In many areas, however, food consumption would need to rise much faster than this in the near future, not merely to achieve nutritional standards which are acceptable on humanitarian grounds, but to satisfy the scenario. One reason is that if are born and grow up undernourished in the last quarter of this century, the work force of the next will be physically or mentally capable of the output needed even on scenario B.

There are, however, great doubts about the possibility of fish output rising substantially, especially if allowances for the increased hydrocarbon pollution of the oceans (both fallout and tanker spillage) implicit in scenario B. In addition, growing pressures on land to produce meat production. A faster increase in crop would therefore be needed.
A fast increase in agricultural production in Africa and Asia would be implicit in the scenario, not merely to satisfy food needs, but also to provide employment, especially in the decades before urbanisation there is high. This raises problems of rural organisation, including technological diffusion and reforming systems of land tenure, and the time lags involved are great. To increase food consumption to adequate levels in the poorest areas with the fastest increase in population growth (and the greatest difficulty in affording fertilisers and other inputs) could hardly be done without an acceleration of the current flows of food from the main cereal exporters, especially the USA, and heavy internal redistribution of income. Questions are again raised about the political feasibility of this, whether we look at the international or internal requirements, and also about its economic implications, because it is difficult to transfer food without discouraging its production by recipients.\(^{16}\)

Metals could be another constraint, especially on achieving world incomes of the levels indicated above, but the possibility always exists of mining lower-grade or deeper ores in response to rising prices. This will only slow world economic growth if policymakers cannot either control or tolerate price inflation or find it difficult to raise the necessary capital.

Various types of pollution (pesticides, phosphates, nitrates etc) would also be very high at these levels of output. The problem is one of identifying and then abating them. It seems that considerable progress has already been made in the former and that the costs of the latter need not be unreasonable.\(^{17}\) The problems are again ones of political motivation, in this case especially in the countries that would need to grow fastest.

\(^{16}\) There would also be resistance on the part of food importers, especially Japan and many Western European countries, the terms of trade being turned in favour of food producers, as this scenario implies.

\(^{17}\) "The United Nations World Input-Output Model", W.dontief (1976)
sum up the argument so far, it is technically and economically unfeasible - if only because of the energy and capital implications - to achieve by the middle of the next century consumption standards for the mass of the world's population at a level corresponding to today's higher incomes in the United States, if only because of the energy and investment demands. Equality at less energy-intensive levels, such as those of Sweden today, would possibly be technically and economically feasible but politically highly doubtful, because it would mean putting a ceiling on incomes and/or drastically changing consumption habits in the 'developed' countries.

In fact, the only reasonable expectation is that there will still be large international inequalities in the middle of the 21st century, although around an income level much higher than today. Some people will, as today, enjoy 'modern' living standards: some will not. Whether any individual does so will depend, also as today, partly on what bargaining strength his or her government possesses or can develop. Indeed, in the harsh world of natural resource shortages, bargaining capacity will be more important. Oil exporters will enjoy long-term improvements in the terms of trade and fast rates of economic growth - as long as their oil revenues persist. But there is little prospect of countries without many trump cards to play, or considerable technological and political capacity, doing much more economically than keeping pace with population growth, unless it slows down considerably. Big, poor countries, like India, Bangladesh, Burma and Egypt, may well continue in a state of semi-stagnation. So, while there will be changes in the ranking of countries, the prospect is for the concentration of income between them to continue increasing.

b National scenarios

Income distribution

Let us however also explore the consistency of the internal dimensions of the scenario sketched at the beginning. This envisaged greater equality within countries, especially 'developing' countries. In half of these, the poorest 40% have only 9% of income 18 (although the caution about rural

18 "Income Inequality" by Montek Ahluwalia in Redistribuition with Growth (IBRD-IDS, 1974), p 7.
income measurement must be born in mind), as against 14% of income in Sweden. Even if average incomes rise 40-fold, as would be necessary in some countries to achieve scenario B, let alone A, the incomes of the local rich would have to be held back if those with the lowest incomes were to attain current Swedish-style levels of living. Yet it is precisely those who are already rich who have the technical expertise and capital to benefit from growth and there is little sign of a decrease in the concentration of income in any of the fast-growing economies where this can be measured.

What would be needed to achieve such massive internal redistributions of income would be drastic changes in the ownership of property, particularly land. The scenario would be incompatible with anything like the present concentration of land ownership, if only because large farms are normally producing at low levels of output per hectare, mostly livestock products, so the necessary rise in cereal output could not be obtained; yet landowners constitute one of the main bases of political power for existing regimes. The scenario would also imply taking away many of the economic and political privileges of state bureaucracies. To identify plausible internal forces to bring about the situation described in either scenario is almost as difficult as to discern what would achieve it on the international plane.19

Those living the 'modern' life have every incentive not to give up their privileges, even if it means (as it often does) using political repression to preserve them: indeed the increasing price of oil has already reinforced their determination not to sacrifice energy-intensive life styles. Such consumption tastes are shaped by external cultural examples, in contrast of course to those of their counterparts in the industrialising countries of Europe in the 19th century. They also receive political support from abroad (which inhibits their exercising what bargaining power they have in international negotiations). Moreover, world scenario B requires them not only to accept such economic sacrifices but simultaneously to implement complex socio-economic plans that would need great effort and judgement. Yet it has been argued that scenario B is politically unfeasible - in that event, all the capital and educational costs of ending massive rural and urban poverty would require even greater internal redistribution.

One consequence is that a fast decline in population growth and its levelling off seems improbable. Population

19. Not quite, because those who are most deprived can get within stone-throwing distance of the national elite.
must ultimately be an endogenous variable in scenarios, and though the causal mechanism is complex and not clearly established, it clearly depends in large part and general on socio-economic progress.

The original vision of 'dualism' theorists was that the modern sector would spread gradually until it enveloped the whole population - as had apparently happened in the 'developed' countries. This is obviously very improbable.

External Links

Here we have come to a crucial point in the argument. Suppose the contrary were true and 'modernisation' could be relied on sooner or later to eliminate poverty, and create internal scenarios with high and fairly well-dispersed incomes. Then it would be argued that the optimal strategy in most 'developing' countries would be to open the doors to the inflow of foreign capital and technology and the associated political and cultural influences, because the price in terms of the partial destruction of national culture would, on humanitarian grounds, be worth paying and perhaps be politically inevitable. It would be correct to consider, as 'modernisers' do, local languages, religions, traditional customs, etc. as 'obstacles' which would (no doubt regrettably) need to be removed. But it is clearly not worth paying that price unless there is a good prospect that this sort of scenario can in fact be realised. A more plausible world scenario is indicated by this analysis - and in my personal view also more desirable. It envisages strong and more independent nations (not necessarily with the same frontiers as today) restricting foreign political and cultural influences, and therefore limiting economic contacts. Consumption would be physiologically adequate but its pattern would not be a copy of those in the 'developed' countries. Development plans would build on local traditions, which would be seen as the essential conditions of achieving the scenario not as 'obstacles'.

This does not by any means necessarily mean autarchy, i.e. cutting off foreign influences completely. For countries that are already integrated into the world economy, especially small ones, this option is not really open. In many, industries rely heavily on inputs from abroad (e.g. tractors, mining machinery, steel, heavy chemicals). Armaments, food and energy often have to be imported. Technological progress may be largely obtained through the transnational corporations. To sever external links with the major powers would mean painful social costs in the form of increased unemployment and lower real incomes for large sections of the population, especially those in export industries, the bureaucracy and sections of the professions and industrial working classes. In such countries, the political basis for a 'closed door' policy therefore narrow. On the other hand, those opposing
such a policy get powerful foreign support, including on occasion military intervention.\textsuperscript{20}

One should not draw the conclusion, on the other hand that a more egalitarian and self-sufficient scenario must necessarily prove unworkable. Great political change can be expected in many countries because of growing income inequality and the continuation of severe poverty. What it does mean is that to succeed, a revolutionary strategy would need to allow scope for foreign links for some decades at least. This appears to be true even of China, to judge from the defeat of the xenophobic and highly egalitarian 'gang of four'. It is true \textit{a fortiori} of smaller countries which are much less able to insulate themselves politically, culturally or economically.\textsuperscript{21}

The clue to the survival of any type of government is a selective policy towards foreign influences, judging each proposition (e.g. an investment project) on the basis of an objective appraisal of its social costs and benefits. This applies to 'developed' countries as well as the 'developing' (and the previous sharp contrast is becoming obsolete). Selectivity has been and still is the Japanese practice. It is now implied by the very elastic term 'self-reliance'. It means training cadres capable of deciding what foreign inputs are necessary for national development; how high a price should be paid for them (in cultural and political as well as economic terms); and which country is the best source, taking account of the need for a technology appropriate to national circumstances - and of the intrinsic advantage of diversification. It also means avoiding being politically dependent on any single great power.

\textsuperscript{20}All this was demonstrated by the failure of the insurrection in Sri Lanka in 1971, which was based precisely on a policy of achieving autarchy by converting the tea estates to food production. Support from Colombo workers, which the JVP hoped for, never materialised.

\textsuperscript{21}It might be argued that the Cuban Revolution has survived despite the severance of nearly all links with the United States. However, this was largely due to the Soviet government stepping in to replace the United States and to offer not merely a guaranteed market for the leading export (sugar) but also credits for arms and for the inputs essential to keep the economy running. They could hardly provide help on this scale to many countries (even if their basic foreign policy in the years ahead permitted them to sponsor additional revolutions of the Cuban type).
Such a basically nationalist strategy also requires a sufficient cultural basis and a knowledgeable political leadership.

National Structures

Here we come into a field where the crystal ball is even more cloudy, and generalisation very difficult. However, it seems that the scenario just sketched may require the elimination of caste and other social differences, and a moderation of income inequality, to achieve the necessary national unity (especially since egalitarian ideas cannot be completely kept out, in the late 20th century). Moreover, import-intensive consumption patterns cannot easily be changed without reducing the concentration of income. However, policies to achieve this would come up against the same vested interests as would obstruct egalitarian tendencies in the 'modernising' scenario. In fact, a scenario of this type might well also prove unattainable in countries with deep social and/or ethnic divisions. In such countries, the likelihood is a continuation of a vacillating strategy, alternating between different ideologies and different internal and external sources of support as they each in turn prove politically unmanageable. Ghana has been a case in point.

Size may also be a constraint. Very small economies can hardly develop the necessary bargaining capacity, and their specialised economies are likely to be heavily dependent on foreign markets as well as foreign sources of the essential goods listed above. In economic theory, these weaknesses can be reduced by regional integration, but so far, none of the regional groupings of small countries (in East Africa, the Caribbean, Central America or the Andean region, for example) have been very effective. There may not be, even in these groups of neighbours, efficient cultural and political homogeneity to build the political framework for integration. 22

22 Some countries, like Puerto Rico, may be able to reduce poverty by becoming part of a big neighbour and enjoying the guaranteed protection of its fiscal system. However, there may be a heavy price to pay in the weakening of national culture, for example the perversion of music and dances into entertainment spectacles, and a contamination of the language.
Some countries may seem to have sufficient assets to be able to envisage a future scenario with a high degree of self-reliance, e.g. oil exporters. However, most of them are heavily dependent on foreign firms for production technology and for marketing their oil. Moreover, the exchange rates and wage levels made possible by oil revenues inhibit the emergence of other sectors, so that when oil revenues decline, the economic structure ceases to be viable. Despite the prospect of rising oil prices, such revenue declines are likely before 2050 for all existing exporters, except perhaps Saudi Arabia, because of the exhaustion of resources. In the meantime, in the smaller ones, national unity is undermined by dependence on migrant labour, and great inequality.

It is the larger economy, with oil enough to provide for local needs, but not enough to distort the economy (e.g. Brazil, Nigeria, Indonesia, or China) which is most likely to achieve high incomes, widely dispersed, and a degree of self-reliance in the next century, provided social and ethnic differences do not disrupt them.

Further than this one can hardly go. The analysis points to a patchwork map in the next century, with some countries still dependent on the capitalist powers and showing income and internal inequalities, alongside perhaps neighbours with more highly controlled economies linked to the Soviet Union or China and others (probably bigger) able to pursue a partially independent strategy with a big emphasis on nationalism. In another dimension, some would have very high average incomes by today's standards, high enough to have eliminated mass poverty; in others, the combination of slow growth and increasing inequality will imply that large-scale poverty persists.