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Economic Growth in the First World: Help or Hindrance to the Third World?

Nathan Keyfitz

WP-93-18
April 1993

IIASA

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ABSTRACT

Many would hold the First World responsible for Third World poverty. Much was written about exploitation of their colonies by the metropolis, and it is worth quickly reviewing this and other more recent points of contention. These have included pushing the colonies towards specialization in the production of tropical raw materials, development of synthetic substitutes as the colonies became restless and then declared independence, handling of loans to the Third World, copyright and other means of protection of intellectual property, environmental protection.

While differences between the First and Third Worlds along these lines persist and are still prominent in discussion, yet they may be less important than something quite different that is holding back the world's poor. That is the example that the First World sets in technology, and that the Third World strives to emulate.

Large projects--steel mills, aircraft factories, an elaborately automated textile industry, are not without their attractiveness to the elite of a poor country, as a sign that it is catching up, that it need not replicate the labor intensive aspects of the Industrial Revolution as it was played through in the West. Yet putting its scarce capital into these is a great deal short of optimum allocation from a social point of view. Plants built for show played no part in the success of Japan, Korea, and Taiwan since World War II; on the other hand they did play a part in the Iran of Shah Pahlevi, and led to the displacement of the forward-looking, westernizing Shah by the backward-looking Ayatollah Ruhollah Khomeini.

How did the Shah accomplish this unintended outcome of his high-technology programs? He did it by devoting too little attention to the little people. He disposed of exceptionally large amounts of capital, but it was not enough to create employment opportunities for all at the level of technology to which he wanted to jump in one stride. Capital was far less available to Japan in the 1950s, but what it had it used to make labor productive--starting with agriculture where as in any country a large part of the labor is located at the start of industrialization. By raising productivity across the board, encouraging artisan industry in the countryside and the city alike, rather than concentrating on a few high-tech labor-saving plants, East Asian countries could get their whole population into the act, and ultimately progress to a point that in many respects is ahead of the West.

What we know from Iran, Algeria, Egypt, the Philippines, and to some extent Latin America is that concentration of production may more quickly attain the appearance of development, but the process is unstable. The rural population could be disregarded in Adam Smith's day, but in a time of easy communication and irrepressible politicians the majority refuse to wait their turn while watching a minority become ostentatiously rich.

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The European powers were able to establish dominion over the other continents by virtue of their superiority in the technologies of war and of production. They used their power to reorient the dominated economies in a direction complementary to their own, which meant increase of tropical raw materials, and allowing traditional arts of weaving and pottery to decline. When they left the colonies their local successors expected the prices of peanuts, sisal, and many other products to remain at their high levels, and the flow of funds that the foreign masters had reaped could now be allocated to development. They were mistaken: laboratories in the rich countries invented substitutes for many raw materials and competition among ex-colonies intensified, so that most of the profits vanished.

Tired of hearing about markets, out of their control and seeming always to move against them, the reaction of the LDCs in the 1950s and 1960s was to protect their finances against the tempting goods of the rich countries, and behind high tariffs set up a comfortably noncompeting production system that would make them economically autonomous. It took a decade or two for the resulting inefficiency to drain out their foreign exchange reserves and then exhaust their borrowing capacity. This brought them around to what they had been told was the efficient way to run an economy: they lowered tariffs, liberalized their foreign exchange rules, and opened their gates to foreign investment by the multinational corporations of which they had once been suspicious. For some the new economic regime has been a success; for many it has brought unexpected difficulties, including some of a social and political nature.

An embarrassing feature of mainstream contemporary social and economic theory is that it makes the fate of the poor depend on the increase of wealth of those already rich. From the 1930s and up to the 1960s employment on public works seemed the right way to help the domestic unemployed; such a direct approach is now seen as an error. If the rich are taxed to provide direct benefits to the poor, it is said, that will slow down the economic growth of the rich, weaken national markets, and so deprive the poor of their best chance of selling their labor or their produce and prospering independently. The New Deal of the 1930s has given way to supply-side economics, in which the poor are to be helped by low interest rates and low

[1] Paper written for International Social Science Council, Comparative Research Program on Poverty (ISSC/CROP) Conference in Paris, April 16-18, 1993, Professor Else Øyen, Chair.

taxes whose initial beneficiaries are the rich. How much of the resulting benefits will trickle down to the poor is debated; the evidence of the past 10 years in the United States is not encouraging.[2]

By extension the same applies to the international poor; once the rich countries recover from the present depression they will be able to invest in the poor countries and buy their goods, and that is the best hope of worldwide development. Hence it said not to matter that direct foreign aid and loans are less plentiful than they were--such aid has in any case many defects as an instrument of development, and is made to look like a holdover from the time when the economics of development was less well understood. Continuance of the present net payments from the Third World to the First World will benefit the former if they jump-start the economies of the latter. Such is the argument frequently heard.

It is the third application of such a justification of temporary inequality--within the poor countries themselves--that will be a concern of this paper. The concentration of wealth in many LDCs is admittedly regrettable, but nonetheless the rich are in a position to save higher proportions of their income than do the poor, and this saving provides the capital for development, and ultimately it is development that will alleviate the lot of the poor. The wealthy entrepreneur tends to produce by the most advanced and labor saving methods; this should be encouraged insofar as learning takes place and the methods will diffuse, so that advanced methods of production will ultimately benefit everyone. Though no one has any idea of how soon is "ultimately", for the short run paying much attention to the poor would be a distraction from development.

The present paper comes to the conclusion that this elite approach, irrespective of how sound or unsound it may be as economics, leads to social disaster. An alternative route is described that leads through more equalitarian growth to a correspondingly more stable, modern and humane society. But before getting to that I quickly run through the modern history of relations between the West and the rest of the world, that is the ground for a lasting suspicion of the West on the one hand, and an intense desire to outdo the West on the other.

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[2]I am not the first to say this, nor is the statement regarded as radical. Thus Robert M. Solow, "Dr. Rivlin's Diagnosis and Mr. Clinton's Remedy", in The New York Review of Books, March 25, 1993, p. 13:

> The widening of inequality is clearly visible in incomes before tax and without income support payments. The Reagan-Bush achievement in taking from the poor and giving to the rich made things only slightly worse. If that policy had resulted in a resurgence of growth, the net result might have been adjudged beneficial. But the supply-side revolution was a dud.

THE THIRD WORLD

My use of the word "poor" above to refer to the populations of the LDCs will seem politically wrong. In the bright perspective of the years following World War II, with the founding of the United Nations and other institutional changes that were to lead to a more secure and more equitable world, the condition of the poor was recognized, but not the word. To speak of the "poor" would have been a reversion to 19th and earlier century thinking; the word has too much of inevitability about it, too much of "...the poor always ye have with you."[3] Benefits provided to people who are poor have the flavor of charity. No one wanted that except in extreme emergencies, so the word has been replaced in postwar documents, at first by "underdeveloped". But that too was found offensive, and "less developed" took its place, and that in turn gave way to "developing". The succession of terms was in search of a word that would suggest a transitional rather than a stable condition of low income. Yet in the end none of these seems quite right.

One word was invented that has been found unobjectionable from the start, that still retains its impartiality today, that over the course of 40 years has accumulated no unpleasant connotations. That word is Third World. It was coined by Alfred Sauvy, French demographer and economist, and first appeared in an article in l'Observateur of August 14, 1954, entitled Trois mondes, une planète. The time was an early stage of the Cold War, just after the death of Stalin. Said Sauvy,

> Nous parlons voluntiers des deux mondes en présence, de leur guerre possible, de leur coexistence, etc. oubliant trop souvent qu'il en existe un troisième, le plus important... C'est l'ensemble de ceux que l'on appelle...les pays sous-développés...ignoré, exploité, méprisé...veut, lui aussi, être quelque chose.[4]

The word "important" in French means both numerically preponderant, as well as important in the English sense, and Sauvy had reference to both. No one will question the numerical dominance of the Third World over the First World (the market economies) and the Second or Socialist World, but its dominance in other senses, particularly social and political? Sauvy wanted to form our minds to the idea that the poor countries were a problem, perhaps the chief problem, of the rich countries, whether the latter realized it or not.

DEVELOPMENT A CHANGED RELATION BETWEEN TWO GROUPS OF COUNTRIES

At the time Sauvy wrote the First World expected to provide the aid required for development, and the poor countries would happily accept the aid and accordingly develop rapidly. With a big push the Development Decade, as the 1960s were called, would see most of the poor countries launched on the road to durable prosperity; they

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[3]John 12:8.

[4]We gladly speak of two worlds facing each other, of their possible war, of their coexistence, etc., forgetting too often that there is a third one, the most important... That is the group of those that are called...the underdeveloped countries...ignored, exploited, scorned...that want, they too, to be recognized.

would have "taken off" into an irreversible course of rising income. The reality has not been so smooth--but one feature remains, embedded in Sauvy's expression "Third World": the poor countries can only be understood in relation to the industrial countries.

Those relations are complex, and no short paper can hope to provide an exhaustive inventory. They include the fact that on the whole the leaders of the Third World get along rather well with the foreigners from the rich countries, and on the whole those leaders benefit conspicuously from the contacts. Even if these were traditional leaders that would be bad enough, in the view of those not benefitting, but in many instances they are upstarts as well, and upstarts installed by the First World.

My argument will be that these relations have been and are determined by technology; if the West has taught the world anything, starting with its first use of gunpowder in war in the 14th century, it is that the country that is technologically ahead is the master. This lesson of history has been so well learned that it is leading many of the LDCs into a path of development that can prove socially disastrous.

COLONIAL HISTORY WEIGHS ON THE LDCs[5]

While autocratic rule over alien peoples, even the establishment of a world empire, goes back at least to Alexander the Great, modern imperialism with its economic purpose has a much shorter history. It started in the 16th century with the Portuguese and Spanish, followed by the Dutch, the English and the French, first exploring and then taking over the Americas, Africa and much of Asia. The sailing ship, that efficiently concentrated energy and put more at the disposal of each worker than had ever before been possible, and the compass that permitted navigation out of sight of land, along with gunpowder that changed the nature of warfare, were the main technical innovations. By the time it was at its height colonial administration was facilitated by two civilian innovations: the steamship and the telegraph.

One has to emphasize technology in such a history, because only its mastery of a few such devices enabled a small peninsula at the western end of the Eurasian continent to take over the rest of the planet. For the efficiency of its day-to-day economy as well as political and military organization, not to mention the elegances and the arts of civilization, East Asia was far ahead of Europe.[6] And if the British came to worldwide supremacy over their European rivals as well as over indigenous peoples, it was again less

[5]Most of the present LDCs have been through a colonial experience, ruled by a colonial power for a longer or shorter time. In the case of Indonesia foreign rule over a part or a whole went on for a good part of three centuries; Burma had colonial rule for less than one century. China was never quite part of an alien colonial empire, but it certainly endured European and Japanese control of some of its affairs during a good part of the 19th century. Egypt was colored red on the maps as a British "possession" though it was not under as direct rule as was India. Thailand was always free.

[6]When the first British envoy approached the Emperor of China and proposed trade between the two countries he was told that China would be generous in offering the products of its civilization to Britain, but there was nothing that the British could possibly offer in return that had any value for the Chinese, so far in advance were they.

through a superior civilization than because they were several steps ahead in a few key technologies.

So both the assembly of empires, and the rivalry of European imperialisms hinged on technological superiority in peace and in war. I repeat that this is to be emphasized because it was what the Third World has principally learned from history, and the lesson is leading many of the new countries along a track of development whose endpoint we now know to be unsatisfactory.

COLONIES AN ABERRATION

Though Europe as a whole did not realize that imperialism was unprofitable until near the middle of the 20th century, good minds had seen that truth two centuries earlier. Adam Smith[7] told his contemporaries that colonies are an economic error, the money spent in their administration wasted, any advantage they could provide to the homeland was obtainable much less expensively by trade. Marx tended to concur: though colonies were probably of some advantage to capitalism, they were of marginal importance.[8] Thus 19th century intellectuals saw colonies as unessential, as useless expense. Schumpeter in this century agreed with these writers; for him capitalism was essentially anti-colonial, the colonies as anachronistic militarism surviving from the feudal past.[9]

To extract economic advantage the metropolis had to fashion colonial production to a form complementary to metropolitan, which translated into having the colony export the raw materials for metropolitan manufactures, stopping well short of producing the final goods. India's textile and other ancient industries produced as fine cloths as any known up to their time, of which British machine products were cheap imitations. Nonetheless it was the cheaper goods that won out and some of India's richest and most ancient handwork industries were abandoned. The workers who had produced these lost their economic base.

The division of labor sponsored by the European rulers did not require highly trained indigenous professionals in the colonies; planting sugarcane or peanuts does not need mathematics or even literacy. Moreover educating the colonials was risky. By 1950, after 300 years of colonial rule, there may have been fewer than 1000 college graduates in Indonesia's population of 80 million; Britain did better, with the institution in India after 1835 of a western-type educational system, but one hardly designed for the masses; Belgium in the Congo did much worse than Holland. France went the furthest towards making its culture available to colonial subjects.

The colonial masters had little wish to disturb the indigenous culture. Freezing the culture would suppress, or at least defer, the sort of ferment that everywhere comes with

[7] Adam Smith. 1776. An Enquiry into the Nature and Causes of the Wealth of Nations.

[8] Michael Twaddle. 1985. Imperialism. Page 377 in Kuper and Kuper, eds., The Social Science Encyclopedia. London: Routledge and Kegan Paul.

[9] Joseph A. Schumpeter. 1951 [1919]. Imperialism and Social Classes. Oxford.

the incipient stages of development, and that the colonial rulers feared. The process by which the Dutch administration tended to prevent the sort of evolution in politics and society that would have otherwise occurred is described for Indonesia by Kahin of Cornell.[10] The colonial powers on the one hand set up a dynamic economic process in their own interest, and at the same time imposed a degree of cultural and political inertia.

The one positive feature of the colonial epoch, common to all cases with no exception, was that it nourished an intense desire for independence. And after attaining that, the new countries sought to make the independence real by an economic development that would put them on the level of the former rulers. Just as the European bourgeoisie was inspired to imitate and supplant their aristocracy, so the newly freed elite wanted to supplant the one-time colonial masters, and also to take over some of their key traits.[11]

AFTER INDEPENDENCE

Having transformed the colonies into raw material producers for the world market where before they had been largely subsistence farmers, Europeans then quit the colonies, willingly in the case of Mauritius, peacefully enough in Ceylon, after a struggle in Indonesia from 1945 that ended with the Round Table Agreement transferring sovereignty in 1949. In Vietnam the war between the Viet Cong and the French lasted from 1946 to 1954. In Algeria it took a war from 1954 to 1962, with over 100,000 Muslim deaths and 10,000 French, before de Gaulle withdrew and left the National Liberation Front (FLN) in charge.

Trade should have allowed the new countries to continue the highly solvent productive arrangements of the colonies; all that need have changed would have been the substitution of democratic native governance for the alien autocrats, and the channelling of the receipts into investment for development rather than into the standard of living of the mother country. For a short while immediately after the ending of World War II that was more or less what happened. The developing countries had large financial reserves accumulated from sales of their produce during the War, and their incomes were high during the commodity boom of the Korean War. But that did not last long.

THE DIRECTION OF TECHNICAL ADVANCE IN THE WORLD

Germany had pioneered the production of tropical goods in the laboratory; in the 19th century its chemist Liebig had synthesized indigo, and at one stroke Liebig's aniline dyes destroyed the commercial value of thousands of hectares of British plantation in India. Just before the last War rubber was synthesized; foam rubber began to take the place of kapok for cushions. The list of substitutions is long: artificial sweeteners for sugar, nylon for sisal in ropes, Coca-Cola for tea, glass fibers for copper wires in

[10]George McT. Kahin. 1952. Nationalism and Revolution in Indonesia. Ithaca: Cornell University Press.

[11]Yet the sense of challenge was also felt by Japan, that had never been under colonial rule, though it had been subjected to some rude indignities.

communication. Aluminum cans substituted for tin-plated steel, and where plating survived a new technique for coating uses much less tin. The net effect of all this has been a strong movement of the terms of trade against the LDCs, applying to all commodities except oil. And the process continues; as late as 1981 the largest consumer of the world's sugar was Coca Cola. A well-known Asian journal complains:

> That year [1981], in a move rapidly emulated by other soft-drink giants, Coke began to shift its sweetener from sugar to corn-syrup. ...Advances in plastics, synthetic fibres, food chemistry and biotechnology are bringing far-reaching changes to other commodity markets. The cumulative impact of these substitutions is to toss tens of millions of Third World workers into the margins of the marketplace.[12]

Technology was everywhere working against the former colonies. One need not be surprised that President Soekarno expressed Indonesia's helplessness in the face of this by calling for a 10-year international moratorium on invention; if you really want to help us, he seemed to be saying, just leave technologies where they are until we catch up, so that from then on the race will be reasonably fair and equal.

Those in the metropolis explained that the process was in the natural course of evolution; it was not that they wanted to pay less for rubber or coffee or peanuts, but like other participants they had to follow the market. They were as helpless before this impersonal process as were the ex-colonies.

Was it the access of the colonies to independence that incited the metropolis to the technical changes? Or was it the other way round--that the impending inventions made the colonies not worth the cost of holding? I incline to the latter connection, but proof of causation between two changes proceeding simultaneously is hard to come by.

Whatever the cause, let no one think that the process is at an end. Read two distinguished writers on the subject:

> Some say that chocolate can soon be produced by a biotechnological process, so there is no more need to have cocoa plantations. If they can do this with cocoa, why not with coffee, vanilla, and other aromatic products?[13]

SUCCESSIVE ECONOMIC POLICIES OF THE LDCS

In a typical feedback sequence, the falling prices of their products made for more intense sales competition among the ex-colonies. Orderly marketing managed by the colonial powers, that had ensured generous profits, was more difficult to arrange as the new countries into which the old empires had broken up competed with one another. A degree of diversification was attempted; for instance Africa expanded coffee production.

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[12] Far Eastern Economic Review, Feb. 9, 1989, p. 56.

[13] Harlan Cleveland and Mochtar Lubis. 1990. The Future of Development. Minneapolis: University of Minnesota Press.

The African coffee was of lower quality than that of Brazil and Colombia, but when vaporized into instant (another technical innovation) the quality of the original bean made little difference.

To appreciate the novelty of this state of affairs, recall the very different track of Canadian development.[14] Starting back in the 17th century a series of staples were produced for the European market, beaver skins for the hats worn by the Paris nobility being the first. Trade went on to other furs than beaver, to wood and wood products, to wheat, to base metals, each step furnishing the capital for the next step and for textile and other secondary industries. The technical advances that have now devalued the LDC staples make the Canadian development route obsolete. Raw materials could no longer serve to provide the capital for industrialization. To pessimists in the Third World the way forward was blocked, and at the same time reversion to the immemorial subsistence farming that preceded the colonial period could hardly be a goal of modern elites.

THE INTERNATIONAL DIVISION OF LABOR

Development has meant specialization from the time of Adam Smith onwards. In application to Africa, the Senegalese peasant can use his precious land and scarce water to raise peanuts, sell the crop at international prices, and buy millet or wheat that he needs to feed himself and his family, and be better off than if he was self-sufficient and raised his own grain. The Somali peasant can similarly be better off (in peacetime) selling livestock and bananas and buying cereal rather than raising cereal directly. Through international markets each region would derive the maximum advantage of its geographic and other assets.

The case for this has seemed unanswerable ever since Ricardo. Yet again and again in the course of the last two centuries it has been opposed as a policy. It dominated British economic thought once Britain had outdistanced all other countries in manufactures, but it found little resonance in the countries that were trailing. Alexander Hamilton[15] in the United States argued that the classic theory did not allow for structural change, and the United States was high tariff from the start until the 1930s. And just 50 years after Hamilton's Report, List[16] advanced the same argument in Germany, essentially that free trade is right for a country that has already industrialized, wrong for one that is just starting on the path. Canadian protectionism started as far back as Sir John A. Macdonald's National Policy in the 1870s, and only in recent decades has it been jettisoned.

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[14]This is a thumbnail sketch of the conclusions of Canada's great economic historian, Harold A. Innis, in a series of classic volumes, starting with The Fur Trade in Canada, University of Toronto Press, 2nd Revised Edition, 1956.

[15]Alexander Hamilton, Report on Manufactures, made to the United States Congress in 1791.

[16]Friederich List. 1841 [1885]. The National System of Political Economy. London: Longmans, Green and Co.

Today the classical view of the benefits of free trade prevails in the influential international agencies:

> The favorable performance of countries which adopted outward-oriented policies served to make trade liberalization, broadly understood, a central condition for World Bank lending.[17]

The peasant would certainly benefit from the division of labor if he received the international price. But after the goods are out of his sight, on their way abroad through Dakar or Mogadishu, he can expect the international price he has or will receive to be subject to some deductions. The government will take a share in the form of export tax, and there will be other less formal deductions by wholesalers and traders along the way, in addition to genuine transport costs. Devices that prevent the benefit of the division of labor from going to the peasant include an artificial value of the currency, tariffs on goods entering the country, exorbitant bank charges--so that the peasant can end up hungry--even when the country is at peace. And this hunger, artificially induced by policy, ends by pushing the peasant to the city, where his productivity is lower than it would have been had he not been driven off the land by inequitable treatment.

This matter has a place in the present argument because it contributes to the inequality that I will argue is a hindrance to economic advance, and the inequality makes for social instability. And it has a place also because when Western consultants show the gains from the international division of labor they tend to disregard the allocation of those gains within the Third World society.

OTHER WAYS OF RAISING CAPITAL FOR DEVELOPMENT--BORROWING

Having little surplus from raw material sales on the terms of trade prevailing after World War II, the LDCs borrowed capital for development in the 1960s and 1970s, setting up infrastructure and building import-replacing industries with the proceeds. Plentiful capital in the world at the time ensured moderate interest rates. Capital available increased further from 1973 with the rise in oil prices; those petrodollars deposited in American and German banks were freely loaned to and freely borrowed by the LDCs.

By the 1980s, after they were heavily committed to the loans and had no means of liquidating them, demand for capital increased in the world without any increase in savings; long-term interest rates rose everywhere, so that as the debts were rolled over the LDC obligations increased without their receiving any net new funding.

It is all very well to see that as the operation of impersonal markets, but this is hard to explain to the LDCs. The United States budget deficit is no small contributor to high long-term interest rates everywhere. U.S. citizens save too little to provide the funds

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[17] Rudiger Dornbusch. 1992. The case for trade liberalization in developing countries. The Journal of Economic Perspectives 6(1), p. 70.

needed by their government, so its financing falls to the rest of the world. Among other effects this puts the U.S. in direct competition with the LDCs for loan funds.

A distinguished British journal[18] joins in the resulting outcry: "the [US] federal government outspends its revenues by between $150,000 million and twice as much, depending on how (and by whom) the arithmetic is done." And now, it says, we are threatened with a budget settlement between the President and Congress that would have been the solution a few years back, but with the slowing of the economy is extremely dangerous for the U.S. and the world. "The United States would find a serious recession uncomfortable, but many among the rest of us would find it calamitous as well."

DIRECT INVESTMENT

In Latin America Raul Prebisch argued for import substitution against the liberal views of Jacob Viner, Gottfried Haberler and others. One cannot escape the fact that:

> Import substitution meant the development of domestic industry behind a high protective barrier of tariffs, quotas and licenses[19]

and the result is a less productive economy than with an open trading system. Behind Prebisch's somewhat fanciful notions of center and periphery, of "development dialectics", of the "hegemonic domination" of the transnational corporation,[20] there lies a sense that the rules of the game played between the First and the Third World are somehow biassed against the latter--not against their elites, but against their poorer members.

Prebisch and the Third World generally gain this impression not from one feature of the history, but from the succession. That is what I have tried to trace in this introductory part of the paper: first colonialism that altered the LDC economies to the export of tropical raw materials, then the devaluation of those materials by the invention of substitutes, then the tempting offers of cheap loans for investment, succeeded by the rise of interest rates after the borrowed money had been committed to investment. These might be treated as temporary and incidental injustice at the worst, to be tolerated until the entire population has risen to affluence, except for the surprising power that the poor members are beginning to show in a number of countries. Prebisch believes (page 44) that the answer is a synthesis of socialism and liberalism, but he is not clear on just how this would work. Like other leftist writers in the literature of protest, he has lost much of his following with the collapse of Communism in Eastern Europe.

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[18]Nature, Vol. 347, 11 October 1990.

[19]Dornbusch, op. cit., p. 71.

[20]Raul Prebisch. 1983. The Latin-American periphery in the global system of capitalism. Pages 30-51 in Shigeto Tsuru, ed., Human Resources, Employment and Unemployment. London: Macmillan.

As economic understanding increased,[21] most of the LDCs changed to policies that were relatively liberal, reducing tariffs and administrative hindrances to trade, and at least in principle abandoning import-replacement to aim at an export-oriented economy. The Government of India ceased trying to take over physically "the commanding heights of the economy," starting with the steel industry, a policy earlier fostered by Nehru and Mahalanobis.

If borrowing, say in the form of selling bonds, had become too expensive for the Third World, direct investment was still possible. That had been urged in the 1950s and 1960s, but at that time the newly-freed countries feared neo-colonialism. With the failure of alternative ways of raising capital, and a generation coming to power with fewer complexes from the indignities of the colonial experience, and a worldwide swing towards liberalism, the Third World opened to branch plants of the multi-nationals.

Now that the LDCs have swallowed their apprehensions and made liberal policies their own, including promise of repatriation of capital and interest, they should have access to the plentiful direct investment held out to them only a few years back. But the world of finance had changed in the meantime. The same worldwide capital shortage that raised interest rates and kept increasing their indebtedness reappeared in the limited capacity of the multi-national concerns to set up plants, and coincided with more intense competition among LDC countries for these plants.

Thus just as we have convinced the LDCs that what they need is our funds invested by free enterprise in unplanned market economies, we have to limit our participation. With capital scarce in the world, the new demands from Eastern Europe and the USSR could make it scarcer yet. The Bangkok Post[22] is one of hundreds of papers in Asia and Latin America to voice concern:

> In many countries of the developing world, hope for the future is tinged with the fear that while the countries of Eastern Europe are being dragged into the market mechanisms of the industrialized world, those of the developing world will become sidelined. This fear takes its most potent form in a scenario in which the industrialized states eventually band together to maintain their own prosperity in the face of the increasing poverty of Third World Countries.

All that leaves just one possibility: the LDCs will have to secure capital through the surplus generated in their own production:

> ...since the days of plentiful credit are gone, attention must shift to productivity gains as the source of growth.[23]

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[21]Repeating this conventional statement gives me trouble, because I do not believe that Alexander Hamilton and Friederich List were ignorant.

[22]As quoted in The International Herald Tribune of September 10, 1990, p. 8.

[23]Dornbusch, op. cit., pp. 69-70.

Though investment funds are not now as great as they were, yet some do exist and some investment is coming to the Third World from abroad, bringing its own physical capital, management and access to markets. That makes for efficient production indeed, in the sense of output per person employed in the plant. But efficiency can be defined in a broader sense, to be discussed later. Here I say only that efficiency in the narrow sense was the method of the Shah of Iran, while a broader notion of efficiency animated Japanese industrial policy.

PATENTS AND COPYRIGHT

Intellectual property is another matter on which the First World policies seem to the Third World less than altruistic.

For the advanced country copyright is essential to stimulate invention in everything from software to engineering and medicine, not to mention music and literature. For the less advanced it seems a way of withholding such inventions, or at best of charging a high price for an invisible and intangible entity. The dilemma facing the First World is well put by John Armstrong, Vice-President for Science and Technology at IBM:

> Without an intellectual property regime that provides an opportunity for us and for others to gain a return on our various investments, our R & D spending would be both less efficient and less in absolute terms.[24]

If one is not well enough off to pay the fees then the insistence on copyright has all the marks of a malicious withholding, a dog-in-the-manger attitude.

When questions arose about tightening regulations on intellectual property at a meeting related to GATT, Carlos Braga of Brazil

> expressed concern about the impacts on developing countries...in areas such as pharmaceuticals because of the impact on consumer prices.[25]

There is surely enough goodwill on the part of the rich countries that free or nearly free copying of books, software, even pharmaceuticals and other copyright materials would be permitted, all as part of foreign aid, except for one circumstance. That is that the holder of the copyright would have no feasible way of preventing the copies from circulating back to the rich countries that provide the royalties that are the return to the inventors and those who back them.

WHAT NEW INVENTIONS WILL THERE BE?

If there is little profit in inventing industrial procedures suited to the ample labor supplies of the less developed countries, then these will not come into existence in First

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[24] News Report of the National Academy of Sciences, National Research Council, February-March 1992, p. 15.

[25] Newsletter of the Institute for Research on Public Policy, Vol. 12, No. 3, May/June 1990.

World laboratories, and this has enormous consequences for the route of development being followed by the LDCs.

Another application of the same principle is the fighting of disease in the Third World, still serious, in some aspects more serious than ever. It costs many millions of dollars to create, develop, test and merchandise a new pharmaceutical, one estimate I have seen being $100 million. Only large firms can undertake it, and they can only do so when they have a prospect of profitable sales. Rare diseases are not (commercially) worth working on, and common diseases that affect mostly poor people are equally unattractive. That is a main reason why so little progress has been made against malaria, river blindness, schistosomiasis, and other African scourges. Can the corporations be blamed for this? Not at all; like so many other features of the modern world, good and bad, this one is impersonally controlled by the market process.

Even if the poor can be brought to understand why it is that new research on their ailments cannot be financed, it is entirely beyond them why they cannot have access to existing medicaments. Just as for any other intellectual property, why not give them the legal right to copy pharmaceuticals, as well as photocopy books, to use software? If we are serious about wanting their development, what easier way is there for us to provide help, and at virtually no cost, since the benefits would go to countries that could not afford to pay copyright prices in any case?

The answer is the same as before: the one thing that the inventors could not accept is these products drifting back to into the markets of the rich countries. And there is no way of sealing frontiers to their transport.

THE ENVIRONMENT--ANOTHER STUMBLING BLOCK?[26]

On top of all this come environmental difficulties, for which the LDCs seem unprepared both economically and politically.

> Brazil, with its huge foreign debt, needs the World Bank. But the Bank is facing pressure from conservationists to withhold funds until Brazil reins in Amazon development. While the Bank tries to steer clear of the politics, Brazilians, trying to bolster their economy, are fed up with the environmentalists.[27]

We need not be surprised at Brazil's reaction--Canada reacted in much the same way when U.S. conservationists came up to protest against the killing of baby seals, whose pelts are a significant Canadian export.

One of the most articulate speakers for the Third World in this field is Mahathir Mohamad, long-time Prime Minister of Malaysia, who complains about the "undue focus

[26]IHT, "In Chile, Protests Over Saving the Forest", October 4, 1990, p. 3.

[27]World Development Forum, Vol. 7, No. 9, May 15, 1989, p. 1.

on the tropical forest." When eight foreigners chained themselves to cranes and barges loading logs in Sarawak, the government news agency described their action as "a war against Malaysia."[28]

Herman Daly puts the issue well:

> Now that the Brazilians have learned to beat us at our own game of growthmanship, it seems ungracious to declare that game obsolete. We can sympathize with Brazilian disbelief and suspicion regarding the motives of the neo-Malthusians. But the dialectic of change has no rule against irony.[29]

In Robert Dorfman's authoritative runthrough of development theory[30] we find a due recognition of environmental questions, and what I interpret as repudiation of the Rostow optimism.[31] For the latter, as long as there are no wars, including no revival of the Cold War, strong economic growth in the rich countries with minimal trade restrictions, some attention to the environment, development will proceed to completion, at least for most countries outside of Subsaharan Africa. Dorfman is more realistic--he

> can't share Rostow's complacent confidence that the environment will be able to stand high mass consumption by the 11.2 billion inhabitants that he [Rostow] foresees on the planet by the middle of the [21st] century.[32]

I fully share the doubt expressed by Dorfman, and in this paper would add one further doubt. This is a serious obstacle whichever of the two routes of development outlined at the end of this paper is followed. It would take a separate paper even to present the issues raised by environment questions, and I will mention only one aspect that shows the difference of perspective between the First and the Third Worlds.

HISTORY OF INDUSTRIAL CONTAMINATION

In the rush for development it is easy to neglect ecological consequences, and certainly Britain and the United States gave little attention to the effects of what they were doing on their own long-term welfare. Destroying the forests to make coke for iron manufacture, blackening the air, was progress in 19th century England; now it is destruction. It is not forgotten that enslaving, even killing, the native peoples, was alright when Westerners did it, but now the West is scandalized by the treatment of the

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[28] The Economist, February 15, 1992, p. 60.

[29] Herman Daly. 1977. Steady-State Economics: The Economics of Biophysical Equilibrium and Moral Growth. New York: W.H. Freeman.

[30] Robert Dorfman. 1991. Development theory from the beginning to Rostow. Journal of Economic Literature 29(2):573-591.

[31] Walt W. Rostow. 1990. Theorists of Economic Growth from David Hume to the Present. New York: Oxford University Press.

[32] Dorfman, op. cit., p. 588.

Yanomani in the Amazon. How can the First World explain to the Third why we have become so much more humane in the 20th century than we were in the 19th?

THE HIDDEN DEBT OF THE DEVELOPED COUNTRIES

In any extended discussion on environment between LDC and MDC representatives it is sure to emerge that Brazil and Indonesia, in cutting their forests, in burning fossil fuels, are doing exactly what Britain and the United States did when they were in the same stage of development. Everyone admits that if all interference with the environment is forbidden then there will be no development at all, indeed no economy, and that applied 100 years ago as it does today.

In principle all should be able to agree to take the perspective of an earlier time, say 1900, or further back yet, to the beginning of the Industrial Revolution. From the perspective of that moment zero of world development, the planet could stand so much carbon (for example) without any appreciable climate change. That initial degree of absorptive tolerance can be seen as a bank account. The industrial countries put so much carbon into the atmosphere, and thus used up so much of the total credit balance. Simplifying somewhat, and disregarding uncertainties on the facts, if the atmosphere could stand x gigatons of carbon, and y have been put into it by the North in the course of its industrialization, then there is only x-y left. Call y a hidden debt that has been incurred by the North? If the amount of pollution that can take place without irreversible damage is a bank account belonging to all humanity, then it can be said that we have withdrawn far more than our share, and should somehow compensate the Third World.

It is hard to imagine this tune playing well in Washington, even though it ties in with the notion of polluting rights that is at the moment popular. Starting the clock at the present is certainly unfair to the Third World, but starting at any earlier time will be unacceptable to the First World.

GENERAL INTEREST IN THE LDCs DECLINES

After World War II the air was full of goodwill on the part of the First World towards the Third. Now the Western interest and concern for the LDCs seem to be declining. James Speth, President of the World Resources Institute of Washington, D.C., reports "foreign aid's eroding consensus". He quotes the Chairman of the House of Representatives Committee on Foreign Affairs on the "fear factor", that a pro-foreign aid vote could hurt a Congressman's re-election prospects.[33] Far from discussing increased aid, Jim Hoagland proposes

> a reappraisal of why and where aid money goes in Africa, Asia and Latin America... It is time to make genuine political reform a condition for receiving

[33]James Speth. 1992. WRI Issues and Ideas (March), p. 1.

> economic and military assistance from the nations and institutions of the developed world.[34]

And whatever aid is given has a far from altruistic objective:

> the French...in North Africa, the United States in Mexico and Central America...face a huge volume of unwanted migration if economic and political conditions dramatically worsen... ,[35]

so to prevent a flood of immigrants we should be generous with development aid, just as West Germany was generous with aid to East Germany to enable the latter to develop quickly and offer its residents jobs at home.

Speth goes on to speak of the possibility of a

> closing down of US concern with the developing countries at the precise moment when what is needed for them and for us is a revitalization of that concern.[36]

As a subject of scholarly research, says David L. Featherman, President of the Social Science Research Council:[37]

> The Ford Foundation correctly diagnosed a declining emphasis on foreign research--and on the prerequisite linguistic skills and area knowledge--in graduate programs of the more quantitatively oriented social science disciplines... It also detected a trend, corroborated in our own records of...dissertation fellowships, away from research about the developing countries.

PROGRESS IN THE THIRD WORLD

The 1970s and 1980s have by and large been decades of progress for many parts of the Third World despite hesitating international trade. The LDCs of East Asia went from an average income (GNP per capita) of $180 US dollars in 1970 to $520 in 1990 (both at 1987 prices). Multiplying real income by nearly threefold, and mostly without the help of oil, during 20 years is no small achievement. South Asia did less well, moving only from $240 to $330--which is to say starting higher than East Asia and ending lower.

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[34]Jim Hoagland, writing in the Washington Post, quoted in World Development Forum, Vol. 8, No. 18, October 15, 1990, p. 4.

[35]Hoagland, Ibid.

[36]Speth, op. cit.

[37]David L. Featherman. 1990. Presidential items. In the Social Science Research Council, Items 44(2-3):33.

And Latin America started much higher, at $1350, and climbed proportionately less to $1680. At the extreme, Africa south of the Sahara rose not at all--was $290 in 1970 and after some fluctuation was the same again in 1990.

RESPONSE TO PROGRESS

Among the countries that made what looks like real progress was Iran under the Shah. Let us disregard here the democracy and human rights sides of the Shah regime, for the new rulers who brought him down are even less attentive to these issues. The Shah went excessively for import substitution, now seen as the wrong path, but again we do not blame him for following what was the fashion of his time.

His economic policies seemed on the whole to be accepted internally and approved by outside observers. Says one of these, assessing the achievements of the Shah's regime:

> the goal of using oil to build a self-sustaining economic structure, which is set out in the Third, Fourth, and Fifth Development Plans, has been espoused by successive governments and by contending political groups.[38]

This was written some months after the Shah had been toppled, and the new regime, under the Ayatollah Khomeini, had taken over the reins of government. That was a good time to survey the gains of the Shah's regime. Lieberman continued:

> Iran now produces a wide range of consumer durables and nondurables, along with certain...capital goods. Progress has been noteworthy in the production of textiles, shoes, vehicles, tires, and electrical machinery for industrial and nonindustrial use. The integrated iron and steel mill in Isfahan, a heavy machine tool plant and aluminum smelting plant in Arak, the tractor factory in Tabriz....

And the social side was not neglected:

> gains in the literacy, health, and security of the population, and specifically in the status and well-being of women should be noted.

What LDC would not envy these achievements, admittedly due to oil but with excellent prospects that before oil deposits were exhausted the economy would have taken off.

The writer thought that some small changes might take place under the new regime, especially in the direction of more support for small farming, but on the whole he took for granted that the main track established by the Shah would be followed. No need here to recount how wrong that has proven to be; Islamic fundamentalism is established there for the indefinite future.

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[38]Samuel S. Lieberman. 1979. Prospects for development and population growth in Iran. Population and Development Review 5(2).

That Iran should be among the first countries to have fallen off the development track is especially remarkable given that its economy has been one of the most successful. By 1980 it had attained an income per capita of over $2000 current dollars, as against $380 in 1970. During the same decade its population grew from 28 to 38 million. It was not without an elite that took a considerable share of the benefits of development, but much of what the elite took went in turn into development projects.

It has not been easy to secure detailed figures on Iran for the recent period, that has been complicated by the Iran-Iraq war, but clearly there has been a reversion back to small-scale farming, with little inclination to build on the Shah's industrial effort.

Algeria's income per capita is not very different from Iran's and it would have followed Iran and substituted another ideology from that of development by now if it was not restrained by a firm government willing to suspend democratic institutions. That government called off an election in 1992 that it was sure the fundamentalists would win, and it has put many of the opposition leaders in jail. Such measures disappointed Western governments, or so they said; one is not sure whether it was the firm action or the need to take firm action that they were protesting about. The Algerian public largely opposes the drastic measures taken, but so far the current regime remains in the saddle.

Indonesia is not as well off as either of these, with an income per capita that at its peak reached $610 current dollars per capita (1983), and yet it too is under considerable pressure from the fundamentalists. The Economist comments on

> the country [being] 88 percent Muslim--and increasingly conscious of the fact.[39]

Some observers fear that the nonideological and more or less secular leaders now in charge will have to apply increasing force to prevent the country from falling off the development track as Iran has done and Algeria would do.

Fundamentalism has been the subject of a major research project sponsored by the American Academy of Arts and Sciences and based in the University of Chicago's Divinity School under Martin Marty that is providing a better understanding of "why they have sprung up with such force at the end of the 20th century, and what they hope to achieve." [40]

> The movements...aim either for political power or to change society in some radical respect... All see themselves as 'fighting back', using violence if necessary, against the forces of secularism and modernism. ...Foremost among fundamentalists aspiration is a 'return' to 'family values', with women as mothers and housewives and men as the principal or only breadwinners... Causes of the new religious activism include the collapse of Marxism, the

[39] The Economist, March 13, 1993, p. 65.

[40] The Economist, March 27-April 2, 1993, p. 51.

> failure of national governments to honour promises made after independence, and the emergence of a world market... Fundamentalist ideologies...stress social justice and the redistribution of wealth.[41]

Fundamentalist religion is the most articulate of the ways in which disillusionment is showing itself. Innumerable tribal conflicts in Africa, wars like the three between India and Pakistan, or that between India and China, or Iraq and Iran, or the civil war that has raged in the north of Sri Lanka, all have the appearance of diversions, taken up when for whatever reason the basic task of development seems too difficult, too protracted, or for some other reason too unrewarding. As a minimum we can say that development in the direction now going forward is not the unique popular objective.

UNEMPLOYMENT

Proofs abound that unemployment cannot occur in a genuine free economy. Alfred Sauvy proves the proposition with a circular flow argument[42] that I find convincing enough. Yet the more convincing in logic such an argument is the more the situation demands that we search for the mechanism that creates the unemployment we see actually existing.

Leontiev shows statistically that each boom registers more unemployment than the previous boom, and each trough more than the previous trough. Can this upward trend be the outcome of violations of the conditions for a free economy, such as minimum wages and monopoly prices? Many think so, while others, including Keynes, sought some specific mechanism that would operate even in the absence of any such constraints on the free market. He believed he had found it in the benefits of liquidity to holders of capital, that keeps the market interest rate higher than the marginal productivity of capital. Putting it crudely there are profits to be had in financial operations that make money too expensive for the marginal producer. Money passed among speculators has fallen out of the productive system; it does not buy goods whose production would employ people.

When he spoke of liquidity preference Keynes thought of money passing among wealthy capitalists in London, but surely the same applies in a poor Indonesian village or city. If people are willing to borrow for their private consumption at 50 percent per year, or much higher, then one who wants to set up a textile operation, even using local materials, has to be very sure before he starts that he will have something left over after paying wages and 50 percent on the cost of his initial setup. Lawgivers know all this, and they pass usury laws, but as I have myself witnessed in the Canadian Civil Service, these are not easy to enforce.[43]

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[41] Ibid.

[42] Alfred Sauvy. 1980. La Machine et le Chomage. Paris: Dunod.

[43] In my time civil servants typically spent their month's salaries well before the next payday. When a week before the end of the month someone had an unexpected visit from a relative or other domestic need the emergency had to be met by borrowing, say $50, from the usurer in the next office. The borrower would actually receive only $45, and a week later pay back $50. Because of the special character of this market, the

Whatever the reason, no one can deny that "unemployment plagues most 20th century economies."[44] Whether in North Africa or in South Asia, the availability of purchased (not homemade) physical capital is crucial for employment. This is the more true the more the world is a single integrated market. A country that has a billion dollars to invest, and needs to spend ten thousand dollars abroad to create one employment slot in its modern sector (plus the domestic capital component required), will be able to provide for a hundred thousand new entrants into its labor market and no more.

India tried to circumvent the constraints by itself producing the physical capital needed for development. In principle this is the answer; if the village carpenter using local wood constructs the loom on which the housewife weaves her cotton saris then there is no need to depend on the outside world for the capital needed in this activity. What has the most serious effort for the Third World is not only that physical capital has mostly to be bought abroad, but that its labor saving quality is determined by the cost of labor in the major markets, which are the developed countries.

The amount of funds being limited, if some unit of capital is required for opening each slot for a new member of the labor force, then it is the limits of financial capital that causes the unemployment. It is this limited amount of capital controlled in a centralized fashion (public or private) that permits some fraction of the labor force to be rather well paid, and leaves the remainder of the labor force outside.[45] Better than to speak of the people who are left out of the formal economy as unemployed, is to refer to them as workers in the dual or the informal economy.

WHAT KEEPS A COUNTRY ON THE TRACK OF POLITICAL AND ECONOMIC PROGRESS?

My thesis will be that what keeps a country on the track is the choice it makes in the first place between two versions of development. Let us call one high technology, the other low, the first aiming at efficiency in international markets, the latter aiming at the highest level of efficiency compatible with full employment.

The temptation to follow the high technology track is strong. At every stage, as we saw, the West has conquered, outwitted, subordinated, the LDCs by means of its technology. The entire history of the relations between the First World and the Third World gives the appearance that the more advanced technology will always beat the low tech. In case the Third World has forgotten that, the Gulf War was a refresher.

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interest was the same whatever time during the month the money was borrowed, so we count that as a rate of "only" 10 percent per month, not per week. Even so, this money changing could outbid all but the most profitable real enterprise seeking capital. Usury laws making such transactions illegal only made them more expensive to the borrower.

[44] Paul Davidson. 1991. Is probability theory relevant for uncertainty? The Journal of Economic Perspectives 5(1):137.

[45] Michael P. Todaro. 1989. Economic Development in the Third World, Fourth Edition. New York and London: Longmans. Todaro is preoccupied by the dual economy.

The whole configuration puts the dignity of the LDC on the line. Its sensitivity heightened by decades or centuries of colonial rule, it tends to shun production methods that are not the best.

And yet experience is showing that the high tech line will lead to inequality, to massive unemployment, and ultimately to an upset of the whole development structure. If East Asia leads in the GNP race; if it has less unemployment than elsewhere; if it is socially more stable; that is above all because for the most part it has chosen technologies that would make the maximum use of its labor. Employment translates into participation in the economy and the society, and that above all is what people want; they do not want development that is carried out by others, even if they believe--which would be naive--that it is all being done for them.

The multinational corporation that sets up in a distant part of the world can afford to make little concession to the wish of the local people for participation. It knows only one way to produce, and it brings in the equipment for that from the advanced country where it has gained its management and other production skills. Local wages are low--that is why it has come--but nonetheless the fewer it hires the greater its efficiency, and the less the interaction with the locals. Without wanting to it contributes to the distinction between a formal sector in which workers are relatively well-paid and working with advanced capital equipment, and an informal sector of all those who are left out and have to struggle on their own with virtually no capital at all.

The foreign multinational has no reason to consider equalitarian issues in the host question--to do so could be interpreted as interference. In any case it is not their business. But it is the business of the governments of the Third World, who dispose of certain amounts of financial capital, and can invest them where the good of the country as a whole requires. The most that can be said is that some do and some do not; the one thing that all governments have in common is that it is not easy for them to stand against the interests of influential private citizens, even when these directly conflict with the interests of the country.

PARTICIPATION, EQUALITY, JUSTICE

A heated discussion is now going on in many parts of the world, revolving around the concept of "justice". Does "development" mean that some few people become visibly and ostentatiously very rich, those people including foreigners or persons of alien religion or in some other respect socially unqualified for wealth? Does it mean that the honest majority are left with only the not-very-credible promise that they too will be rich some day if only they will work hard and be patient?

One can appreciate the response of those left out: better not to have development if it means only wealth for a few, and they are the wrong people, and just waiting for the rest of us. If we are to be poor anyhow, then it is better to be poor in an orderly traditional fashion, and at least enjoy the support of traditional religion and remain in harmony with traditional norms of justice.

AVERAGES AND DISTRIBUTIONS

The kind of study I am here attempting is seriously handicapped by lack of data on distributions. There is plentiful detail, careful definition and infinite refinement on Gross National Product, on GNP per capita, on imports and exports of various commodities, on real earnings per employee in manufacturing. These matters of total and average are not unimportant, but one could study them for a long time in the Shah's Iran and in the Mexico of the same period, and not tumble to the impending revolution in the one, and the relative stability in the other.

There are purposes for which rough indications on distribution would be of more use than precise data on averages.

PROMISES AND PLANS

Promises should buy time in which the more painful phases of development could be accomplished, but in fact they exchange for very little. They are a coin everywhere debased in these days of ambitious politicians using modern means of communication.

Making promises more credible occupies a good deal of the attention of many LDC governments. National development plans started out as a sincere if naive sketch of the intended route of growth, describing what was actually intended to be done in the next five or twenty-five years to bring the nation closer to the developed condition. They included a capital budget to announce the direction of industrial expansion, equivalent to what in France or Japan is "industrial policy", except that the State component was usually larger.

From that start there has been a steady evolution of the planning process to make it less a serious outline of effort to be taken than a promise of results. The national Plans are admitted to be political documents, intended for public relations rather than for that coordination between the various components that they started out to be.

We go on to routes of development, that have been very much the subject of consultation between rich and poor countries during the postwar years, and on which the bias of western industrialists and consultants tends to be, not surprisingly, on the side that comes out of their experience and knowledge.

THE TWO ROUTES OF DEVELOPMENT

1) THE ROUTE OF LABOR-SAVING CAPITAL

After a history in which the First World's use of technology had so disadvantaged the Third World, it was natural that the LDCs should see our high technology factories as their best defence and means of advance. But they ask whether it is necessary for them to travel the path by which we arrived at them, in which miserably paid laborers engaged for long hours in work that was both strenuous and boring. Why not jump immediately to modern methods of production, come directly into the late 20th century? Invite foreign corporations to establish branch plants; use all available local capital to found plants using the latest technologies. Little need be said about this; it is being followed in the Philippines, in Thailand, and up to a dozen years ago in Iran.

2) THE ROUTE OF LABOR-INTENSIVE INDUSTRY WITH GRADUALLY RISING PRODUCTIVITY

Yet even if capital was much cheaper and more available than it is this route of development still has a fatal defect: it does too little for employment. It is development that leaves out most of the population for what could be the indefinite future. The part left out is all the greater if the birth rates remain high. Much better to control births, and so lessen the number in the next generation for which jobs will have to be found, and stretch existing capital resources to the utmost so that the productivity of all citizens will benefit. The aim ought to be in the first place an equalitarian distribution of increases in productivity.

That is the way that Japan, Taiwan, and South Korea proceeded, starting about 1950. They started by putting people to work, and whatever small amounts of capital could be mobilized went to that end. High tech was not even thought about. The initial work in these countries, as in any poor society, was necessarily of low productivity and mostly in agriculture. But the most important thing to say about that initial step was that universal participation was the all important goal.

After full employment was attained, in a relatively equalitarian labor force, attention could be given to raising productivity. This second phase still did not reach what we would could call high tech, and it was not allowed to disturb the equalitarian wage structure.

In what I call the third phase it becomes possible to move into advanced technology. Still no purchase of turnkey factories from Europe and the United States, complete with manuals that told the managers what to do. Nothing was imported from abroad just to be used as it was; rather individual machines were imported to be studied by engineers, modified and improved where possible, and then installed and put to intensive use, perhaps 24 hours a day. Those heavy roadmaking machines from the United States used an hour or two a day and the rest of the day standing by the side of the road were not seen in Japan.

Among those who have expounded this equalitarian full-employment route of development none has written more convincingly than the distinguished Japanese economist Harry Oshima.

> Based on the experience of Japan, Taiwan, and South Korea, the transformation into an industrial society can be related to the growth in productivity as follows: with rapid and sustained growth in gross domestic product per worker exceeding the growth of the labor force, these countries began to approach full employment. The rise in product per worker took the form initially of rises in the annual product per family in the agricultural sector, as yield per hectare rose with increased multiple cropping, and as income from nonfarm work during the slack periods expanded. With the

sustained rise in product per worker exceeding the growth of the labor force, full employment in the rural sector was attained, and, as wages rose, peasants began to buy labor-saving equipment and machines. At the same time, the increase in the purchasing power of the peasantry (the largest segment of the population in the early period of the transition) induced expansion of import-substituting industries, especially textiles, which led to increased employment opportunities in urban areas. More jobs were created as labor-intensive exports began to make headway in the world market and as industrial productivity rose with better utilization of capacity and scale economies.[46]

The advantages of this second route are several. Starting with full employment it ensures that the most valuable productive asset--the country's labor force--would not be wasted and demoralized through idleness and exclusion. Not importing whole factories but only individual machines, it did not incur heavy indebtedness abroad. Being equalitarian it did not disturb social stability.

With all those advantages why is it not universally chosen? That is a social and political question, not an economic one. For one thing it does not (at the outset) produce showpiece supermodern factories that awe visitors. For another the preexisting elite has no reason to favor an equal distribution of the benefits of development. That the existing elite should want some goods for themselves, that they should want to live in luxury, is understandable and does not do much harm; that the elite should distort the whole process of development in its own interest is more difficult to pardon.

Yet this last is what happens when a country initiates automobile and aircraft manufacture, and buys from abroad fully automatic textile mills, leaving a good part of its population picking up cigarette butts to gain a few pennies. It is argued that the new production methods will diffuse from the aircraft plant, but in fact such plants are enclaves, communicating very little with the country as a whole. They simply cannot diffuse without large amounts of capital.

In fact there should be nothing new or surprising in Route 2--it merely applies the elementary principles of economizing. Given initial quantities and qualities of land, labor and capital, the strategy is to make use of all of them. To place all that capital on a few high tech plants and to leave some of the land and much of the labor unused cannot be optimum.

Is not the informal sector in a country like the Philippines, then, just doing what the whole economy is doing in the labor route that is here recommended? In fact there is a crucial difference. If whatever capital is available goes to the formal sector and the informal gets almost none and no leadership it remains stagnant. Japan devoted much of its capital to raising productivity at the very lowest activities. The point seems to be that the workers in a shoe factory or a pottery plant can become more productive with a little capital, and with a little guidance, than if they are wholly neglected.

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[46] Harry T. Oshima. 1983. The industrial and demographic transitions in East Asia. Population and Development Review 9(4):583-607, p. 585.

THE LABOR-INTENSIVE VERSUS THE HIGH TECHNOLOGY ROUTES

That the issue is very much alive today is suggested by a recent article on Indonesia. It contrasts the position of the technocrats, western-trained economists, who despite the appellation favor the labor-intensive approach, as against B.J. Habibie, who was a high technology executive in Germany:

> The [economists] have pursued a low-technology, export-oriented economy, exploiting the country's low labor costs. Their chief ideological opponent is B.J. Habibie, an ambitious enthusiast for a high technology approach--which is likely to require large subsidies and protection against import.[47]

In a perfect world, in which there was plenty of capital looking for investment possibilities, where inventiveness of foreign owners of capital was available to create new instruments of production that would use the plentiful labor of the LDCs, in which the option of reversion to tradition and fundamentalist religion did not present itself to large numbers of the frustrated, one might argue against what I have called Route 2 as the preferred strategy of development. Plentiful capital would flow to the points where labor was abundant, and there would be no major unemployment problem. (Though even in this ideal situation economics does not have much to say about what would happen to income distribution; it could be very wide.)

In the actual world the LDCs, especially those of large populations, have little real option if they are to engage the participation of their populations. Without such engagement the cause of modernization is lost.

My point has little to do with political ideology. Thus Oshima gives Japan, in ruins at the end of World War II, as the prime example of a country following this path. He speaks of South Korea and Taiwan as other examples. Now China comes close to it. The Philippines does not, and its government and society are notoriously unstable. And Iran did not, with an outcome that we know, that could not be prevented by an enormous oil subsidy and relative success in raising average income.

THREE CLOCKS ARE TICKING

If development, however beautiful it may ultimately make the world and the lives of its inhabitants, has to be taken on trust for more than a certain length of time, then the ordinary people on which it depends will give up. The events in Iran and Algeria, perhaps tomorrow in Egypt and Indonesia, suggest a time constraint on development. Three clocks are ticking, of which the first two are well-known:

1) The population clock; development will indeed bring a stationary population, but each year of delay adds something like 1.8 percent to the planetary population and makes development more difficult; will population growth check the development that would halt population growth?

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[47] The Economist, March 13, 1993, p. 66.

2) The environment clock; in the model presented by Peter Rogers,[48] and for which there is some empirical support, the damage to the environment is considerable at the start of development, gradually rises to a peak, and then diminishes after a certain maturity has been reached; rich societies can afford the cost of shifting to non-polluting sources of energy, of cleaning up rivers and the air. If the initial progress is slow and the period of high emission is too protracted the damage to the environment may be irreversible.

3) The patience clock; if the track of development taken is such that the majority of the population cannot see benefit for themselves but only lavish benefit for a few, especially if these few are of alien culture or for other reason not the most admired social types, then they will revolt. Whether the fundamentalist revolt of Iran will be typical is hard to say; there are alternative ways in which a society can drop out. A society, like a boy at school, will drop out when most of its members do not see the exertion required as worth the prospective result for themselves.

ECONOMIC GROWTH IN THE FIRST WORLD: HELP OR HINDRANCE TO THE THIRD WORLD?

So at the end of all this how do I answer the question posed in the title of this paper? The direct help in the form of foreign aid is small in relation to a) the wealth of the First World, b) the needs of the Third World and c) the overhang of debt of the Third World.

The challenges offered by the First World during the colonial period and since have left their mark on people's thinking everywhere. I refer to the tantalizing military and industrial superiority of the West. The residue today of our military superiority is the dissemination of many billions of dollars worth of weapons; if these are not the direct cause of the numerous conflicts on all continents, they certainly make those conflicts more murderous.

On the industrial side the superiority of the West not only presents the Third World with a target to aim at, which is a positive element, but on the other hand suggests a wrong way of attaining that aim.

That wrong way is through the example and the challenge of advanced production that suits the present population-capital ratios of the First World, but is wholly inappropriate to the ratios of the Third World. Following it in the latter bequeaths small enclaves of development and elsewhere exclusion and unemployment. The outcome would show itself clearly in statistics of distribution--if we had them rather than the present concentration on totals and averages. Iran and Algeria are the forerunners of many other countries if this path of development continues to be followed. At the end of the path is an alternative to the secular and humane ideology embedded in the idea

[48]Peter Rogers. 1992. Paper at Symposium in honor of Roger R. Revelle, at 9 Bow Street, Cambridge, Mass., October 1992.

of development--the retreat to medieval forms of religion in the name of traditional justice.

On the second path are Japan, South Korea and Taiwan, and probably China.

To put the distinction between the two paths in one sentence: the first starts with a concentration of the most efficient and modern capital and engages whatever personnel is needed to tend this capital, leaving the rest of the labor to look after itself; the second starts by employing all available labor, and contributing whatever capital is to be had to making that labor as uniformly productive as possible. The second, among many other advantages, leads to a more equalitarian outcome, but is very difficult to introduce if the preceding inequality is great. The first path is more to the taste of a pre-existing wealthy elite, but with modern communication operated by ambitious politicians leads to a rich enclave in an otherwise impoverished society, and so prepares the ground for an Iran-type revolution.

At the moment of writing the Prime Minister of Pakistan is Nawaz Sharif, and he is attempting to reduce the President's powers. We have some information on his standing and his ambitions:

> Mr. Sharif's vision of himself as a Moghul emperor...makes people jittery... He is fond of grand but wasteful building schemes... On top of all this his family's business empire is already the largest in Pakistan.[49]

There is little evidence that Mr. Sharif plans to apply the financial capital of the State primarily to raising the productivity of the small farmer and artisan. Only with a wider distribution of political power can one hope for a distribution of disposable capital that would incorporate the poorer members of the society in the development process. Experience of recent decades makes us skeptical of such metaphors as "a rising tide raises all boats", or its "trickle down".

Beyond this the most important thing to say about development and economic organization in general is that there ought to be the maximum competition between firms, the maximum cooperation and loyalty within firms. There is no writer who brings this out more clearly than does Ezra Vogel in his work on Japan.[50] I suggest that the right model for representing a modern economy that is working well is Little League baseball rather than either the maximizing of individual utility on one side or universal cooperation on the other. The baseball league model combining cooperation among members of each team with competition between teams appears in its clearest form in East Asia. All that is the subject of a sequel to the present paper.

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[49]The Economist, March 6-12, 1993, p. 61.

[50]Some of the ideas presented in this paper emerge from discussions with Ezra Vogel of some years back. He is especially interested in the social aspect of Japanese production, while Oshima concentrates on the purely economic. Vogel's Japan as Number 1; Lessons for America (Cambridge, Mass.: Harvard University Press, 1979) is especially important as showing how the social works along with the economic; without appreciating the solidarity within the Japanese corporation there is no way of understanding its high productivity.