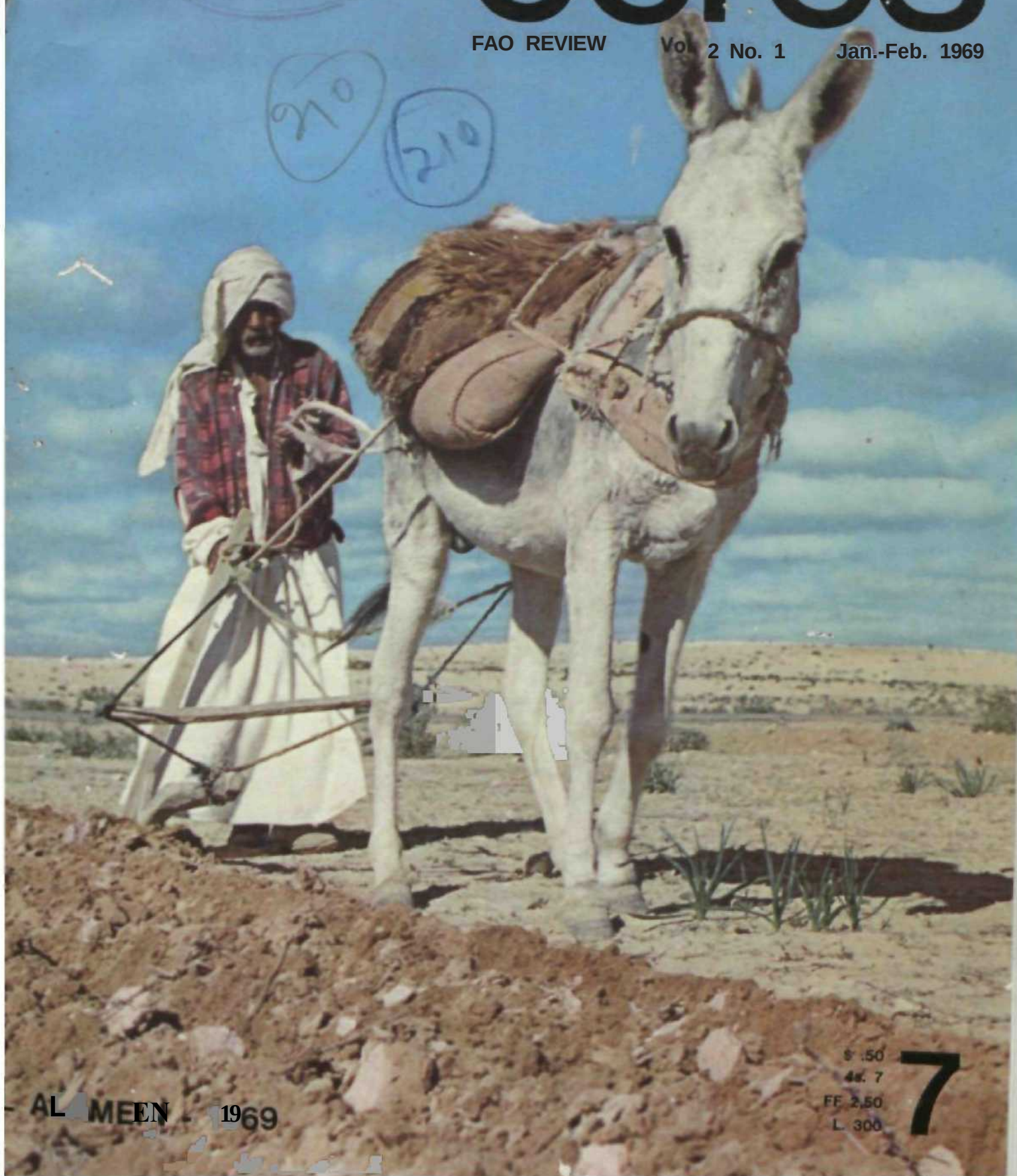


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Jan.-Feb. 1969

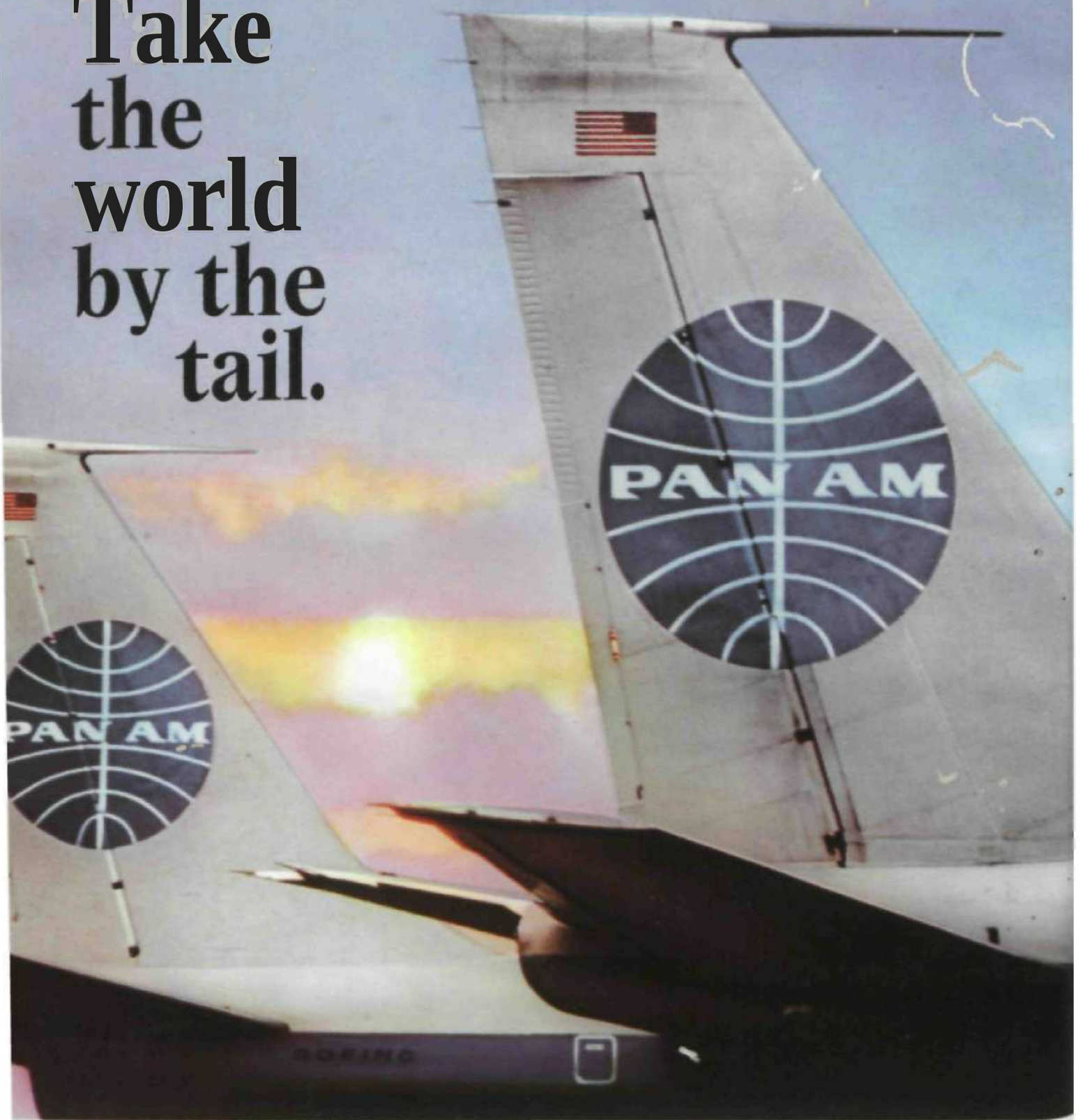


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66 Changing nomads into farmers seems a Wfc tor earner times. But in the N&er East, the cradle of Mediterranean civilization, the resettlement of the Bedouin is taking place right now, under the very shadow of conflict. Our reporter, George Zottola, has just visited Egypt's north-west (esef) to see how this experiment is being carried out and modern answers found to such an ancient problem (p. 34).

Resettling the Bedouin, or introducing farmers of the third world to new techniques are shock-provoking activities: the clash is unavoidable when old meets new. The men and women who must face it in the field — the advisors and the advised — know it full well. Born ward Joerges, a social psychologist who specializes in intercultural communications, analyses the problem and makes suggestions... (p. 41).

Even miracles are planned today. They cost years of intensive research by scores of scientific teams. This is how IR-8 was born, the late creation of IRRt, the International Rice Research Institute, which was immediately called a "miracle rice". IR-8 can double or triple the rice crop and thus feed hundreds of millions of people. But, cautions Hubertus zu Lowenstein, the miracle will happen only if... (P-44).

Feeding the hungry is a question of moral responsibility for mankind as a whole. Hunger, however, persists, bearing down on our world with all its weight even though we know, only too well, that it is the consequence of an imbalance in the fabric of social and economic development, the WFP (UN/FAD World Food Programme) is seeking new ways to contribute to development by using food for financing jobs. Noël Glv«le (tells us how (p. 47).

Aid or cooperation? Dr. B.J. Udink, the Netherlands' youngest cabinet minister, prefers the second solution. In this exclusive interview, where his realistic approach predominates, he tells us that relations between rich and poor countries must be based on mutual interest. Only thus can the term cooperation begin to take its true meaning (p. 26).

The explosive growth of the world's population in the last half of our century has become more than a threat. E.C. Carandang, Director of the Plant Industry Bureau of the Philippines Department of Agriculture (p. 31) shows how this fundamental problem affects his country's development. Peuf Bairoch, who specializes in economic history attributes a primary role to the same phenomenon, when he examines the choice of priorities — agriculture or industry — in the economic plans of the countries of the third world (p. 52).

How to turn a loss into a gain? Faced with the brain drain, which makes the rich countries richer and the poor poorer, R.E. Aisher, acting director of the Brookings Institution, Washington, wonders whether the idea of a blood bank could not be borrowed. Why not a brain bank? he asks (p. 22).

The next number (March-April) of CERES will be a special issue on private investment in the developing countries.



Bernard Joerges



H. zu Lowenstein



B. J. Udink



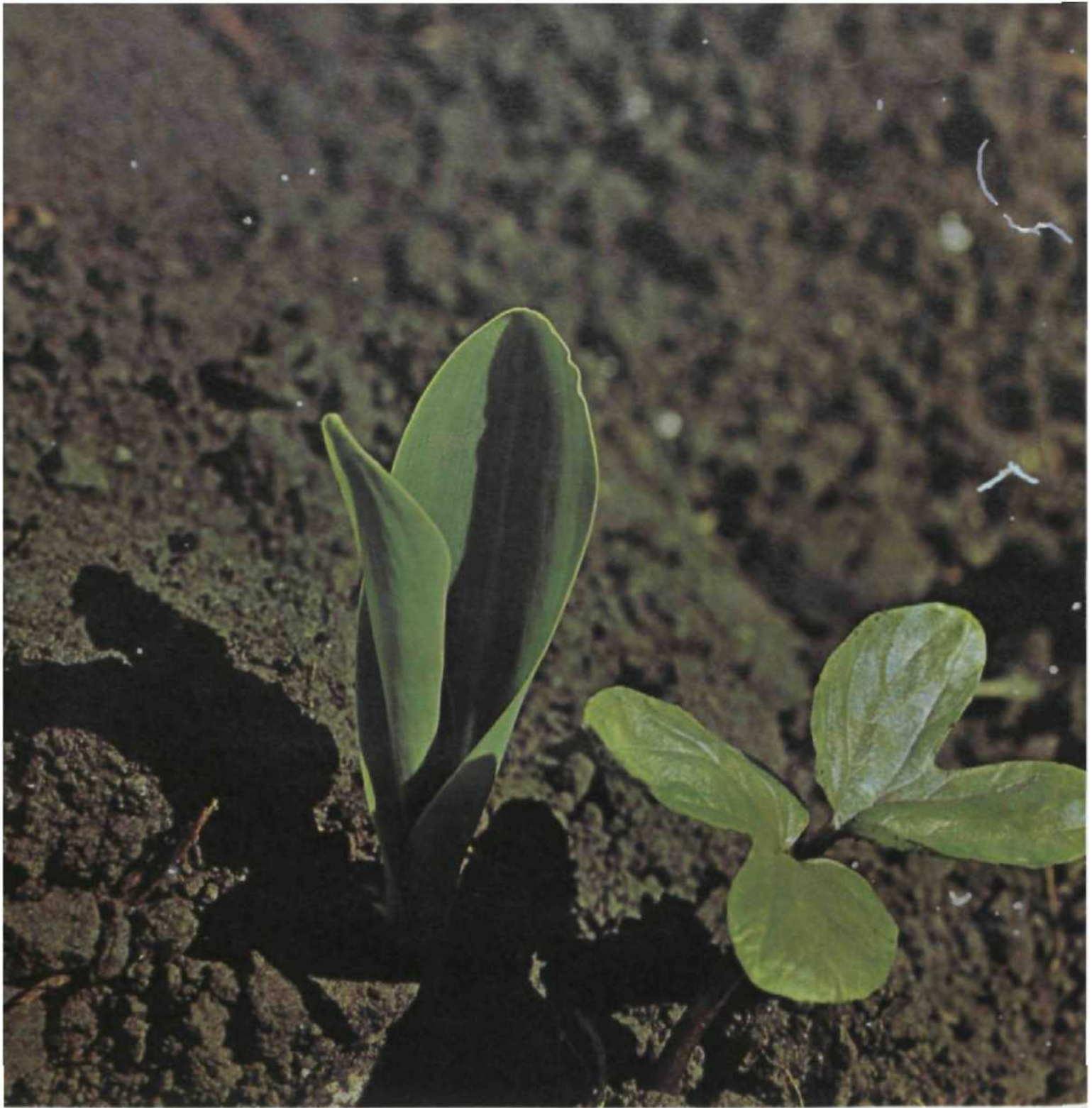
E. C. Carandang



Peuf Bairoch



Robert Aisher



The crop emerges.
With it the seed of destruction:
weeds

Wherever corn seedlings sprout, weeds are sprouting just as fast.

Soon the land will be too rank to grow corn, as if nature preferred weeds.

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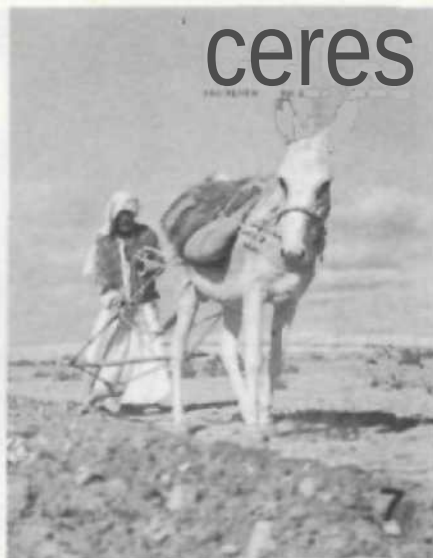
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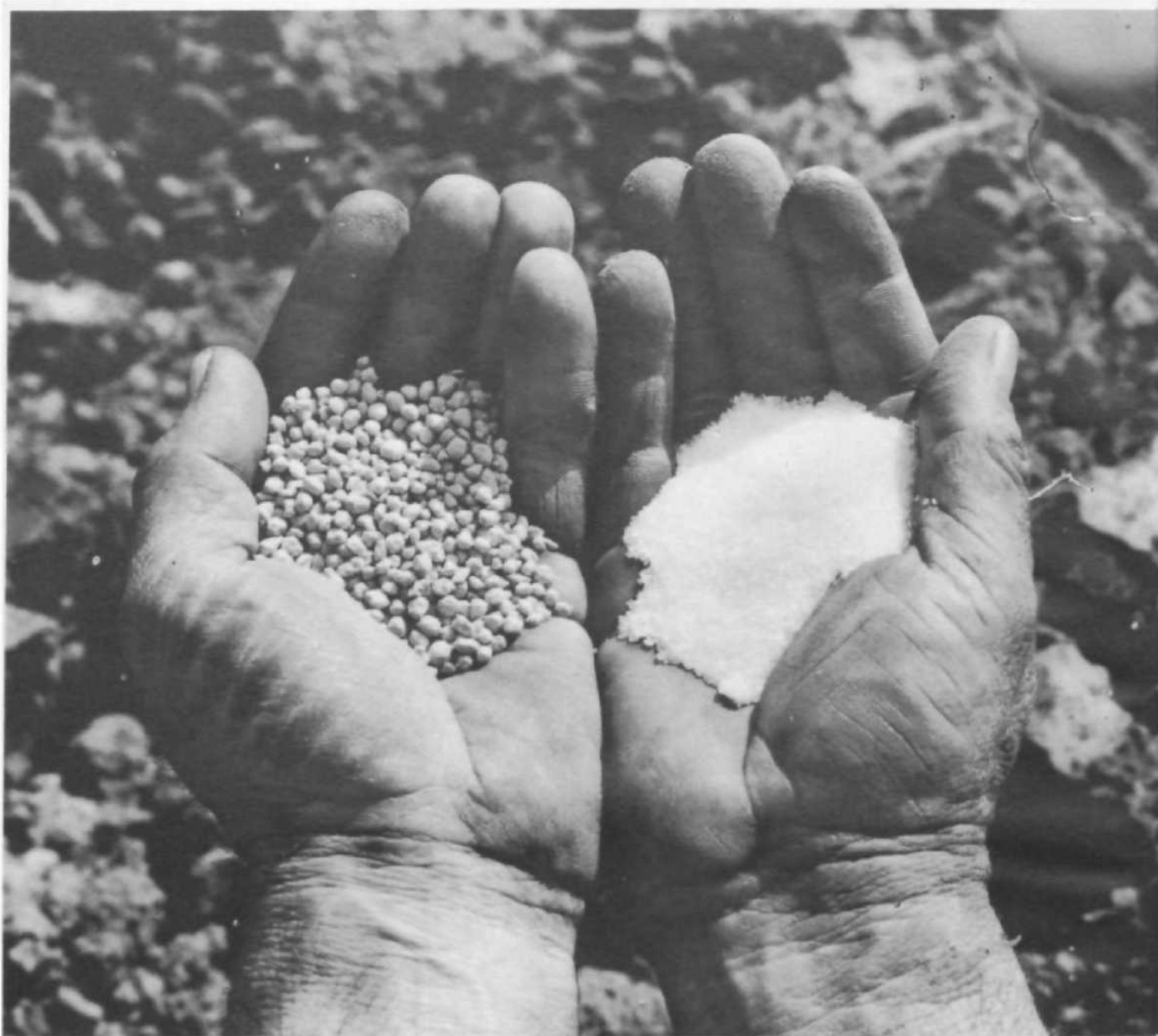


E(Alamein, one of the great battlefields of World War II. is today the site of a great social and agricultural experiment called Operation 017. The article on page 34 describes how the United Arab Republic is *smuloyng* education, propaganda and incentives to induce Bedouin herdsmer\ to become farmers and turn desert wastes into fertile land.

(Photo by ...)



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Granules or powders ?

Once this was a problem: in fact, when it comes to choosing fertilizers the farmer should have the last word, as his calculations are based on his own experience. Before deciding, however it is only right to consider all the advantages offered by a Seifafert granular complex fertilizer and Seifa, who also markets powdered fertilizers, knows perfectly well which these advantages are.

First and foremost, through a modern chemical synthesis, a Seifafert granule contains the three basic plant nutrients: nitrogen, phosphorus and potassium. The advantages of this concentration are evident: fewer transport and handling costs; more free space in the storeroom; less fertilizers leached away by rain or blown away by the wind; balanced rates of nutrients.

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• Lo*n% of % 126 mittian
fat* 3 African COuntries

The World Bank group has made a loan of S8 million to the Malagasy Republic for the construction of two roads totalling 88 miles and three major bridges. This will contribute to agricultural devel-

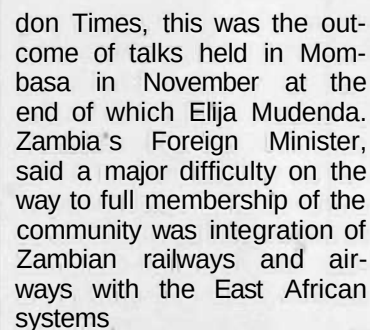
A \$3 million credit from IDA will contribute to a major effort to increase Uganda's beef cattle production. Funds will be provided for ranch investments by enterprises operating on some 400 000 acres of natural pastureland in various parts of Uganda, and for related technical services. Recent elimination of the tsetse fly from large areas of natural grassland suitable for cattle raising has made it possible to expand livestock production, said to be the best way to diversify Uganda's agriculture-

The Niger Dam Authority will be able to finance completion of the Kainji multipurpose project in Nigeria for the generation and transmission of electric power, river transportation and irrigation following a \$14.5 million loan from the *BRD. The Kainji project, the largest ever undertaken in Nigeria, includes a dam, a power station with an initial capacity of 320MW, a transmission system to link up with the facilities of the Electricity Corporation of Nigeria to form a national power grid, and a system of locks and canals for river transportation. In spite of the civil disturbances, the project is nearing completion on schedule, but the additional loan was necessary because of the cost increase over the original estimate.

Boke in northwest Guinea. The Boke project consists of two interrelated elements: the construction of an 85-mile railway from the mine site at Sangaredi in the Boke area to the coast, together with the construction of mining installations and a township at Sangaredi. The IBRD loan will finance the foreign exchange costs of the railway, the port and the township of Kamsar.

IBRD has also made a \$15 million loan to a development finance company, the Banque nationale pour le développement économique, to provide for additional resources to spur the growth of Moroccan private industry and tourism.

Zambia hopes to link with the postal and telecommunications network, the harbours corporation and the research and social services organization of the three states of the East African Community (Kenya, Uganda and Tanzania) as the first step toward full membership of the community. According to the Lon-



Niger's high transport costs will be substantially reduced by a four-year road maintenance programme to be earned out with the assistance of a \$6.12 mmii.i credit from the International Development Association (IDA), one of the World Bank group.

The International Bank for Reconstruction and Development (IBRD), of the World Bank group, has made a \$10.7 million loan to Zambia for the rebuilding of 235 miles of the Great North Road which forms part of the Tan-zam highway linking the Zam-

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• End of Union of Central African States?

The Central African Republic withdrew from the short-lived Union of Central African States in December, according to the **Herald Tribune**. General Jean-Bedel Bokassa, President of the Central African Republic, stated his country's intention of joining a rival grouping, the Customs Union of Central African States.

The Union of Central African States was left with two of 11 former three member countries: Chad and the Democratic Republic of the Congo. The Customs Union of Central African States (sometimes known as the Central African Customs and Economic Union) has four member countries: Chad, Congo (Brazzaville), Gabon and Cameroon.

• France agrees to help Ghana agricultural cooperation

Ghana's Commissioner for Agriculture, Albert Adomah, said that an agreement in principle for agricultural cooperation had been reached between France and Ghana, according to the **Ghana Pictorial**. The agreement will be for four years and its aim will be to increase Ghana cotton production with the help of France's CFDT (French Company for the Development of Textile Fibres).

Recently there have been some signs of a desire for closer relations between Ghana, which is English-speaking, and the five-member grouping of French-speaking countries called the Conseil de l'Entente: Niger, Dahomey, Togo, the Upper Volta and the Ivory Coast.

!|AR EAST

• IBRD loan for Turkish hydroelectric project

The World Bank, with a loan of \$25 million, is sharing the financing of the Keban hydroelectric project, the largest of several schemes to increase Turkey's electric power supply. The loan is for

the construction of about 910 miles (1 460 km) of 380 KV transmission lines and associated substations to transmit electricity to Ankara and Istanbul from the powerhouse at the dam on the Euphrates river in the mountains of eastern Turkey.

LATIN AMERICA

• Capital for Venezuelan agriculture

The International Finance Corporation (IFC) will assist the development of Venezuelan agriculture, and help expand Venezuela's capital market, by making the largest single commitment (9 million bolivars, equivalent to \$2 million) to the underwriting of 25 million bolivars in debentures offered by Protinal Compania Anonima of Valencia. Part of the issue will be convertible to Protinal stock.

Protinal is Venezuela's leading producer of concentrated animal feed, supplying over 60% of the Venezuelan market.

The funds being raised by the debenture offering to which IFC (the World Bank affiliate which finances private enterprises in developing countries) contributed will be used for additional working capital; extension of grain storage silos and modernization of incubation facilities at Valencia; and the construction of transit silos at Acariagua.

• Andean nations no franchising agreement

An agreement signed in Montevideo by Bolivia, Colombia, Paraguay and Chile will enable the two countries to manufacture 56 petrochemical products in addition to raw materials for plastics, synthetic fibres, rubber, paint, adhesives and insecticides.

The agreement covers investment programming, coordination of production policies and the establishment of plant in different countries. Other points of the agreement concern the handling of foreign

capital that is to be invested in the sector and promoting the formation of multilateral enterprises with capital contributions from the various participating countries. Investments amounting to \$300 million will be required to install the necessary plants.



Manuel Perez Guerrero has succeeded Raul Prebisch as Secretary-General of the UN Conference on Trade and Development for a term beginning March 1969 and ending March 1972. Mr. Perez Guerrero, a former Minister of Finance and Minister of Minerals and Hydrocarbons of Venezuela, has been Venezuela's permanent representative to the United Nations. He was President of the UN Economic and Social Council for 1968.

ASIA

• Giant Pakistan dam ahead of schedule

The Mangla reservoir, part of the world's largest water control project, was completed in November, a year ahead of the target date.

With a volume of 85 million cu yd the Mangla dam is the world's third largest. There are other noteworthy features in the \$2 000-million scheme.

The 400 miles of link canals will irrigate nearly 10 000 square miles, approximately the area of U.A.R. irrigated from the Nile. Supporting facilities include 160 miles of access roads and railway tracks and about the same length of power transmission lines.

The Mangla dam on the Jhelum river is part of the total Indus Basin Project because it controls the water supplies available for diversion to the rivers which have been depleted while flowing through India before reaching Pakistan.

The Mangla project was completed before time despite geological and political difficulties. A new technique in dam design had to be evolved after first designs had been completed because it was discovered that the whole area was affected by shear zones. Furthermore, the Indo-Pakistan war in September 1965 slowed the project. But in July this year the hydropower station at the southeast end of the Mangla dam began operating commercially. Eventually this station will generate 1 000 MW. In September the dam reached its design water level.

• India Government mulls freight market

In November the Indian Government made a long-awaited entry into the freight field by chartering several ships to transport grain from the United States to India. It hired ships, including tankers, bulk carriers and medium-sized freighters, to transport 138 000 tons of grain from the United States Gulf and one tramp steamer for both the St. Lawrence and the U.S.N.H. (United States North of Cape Hatteras) areas.

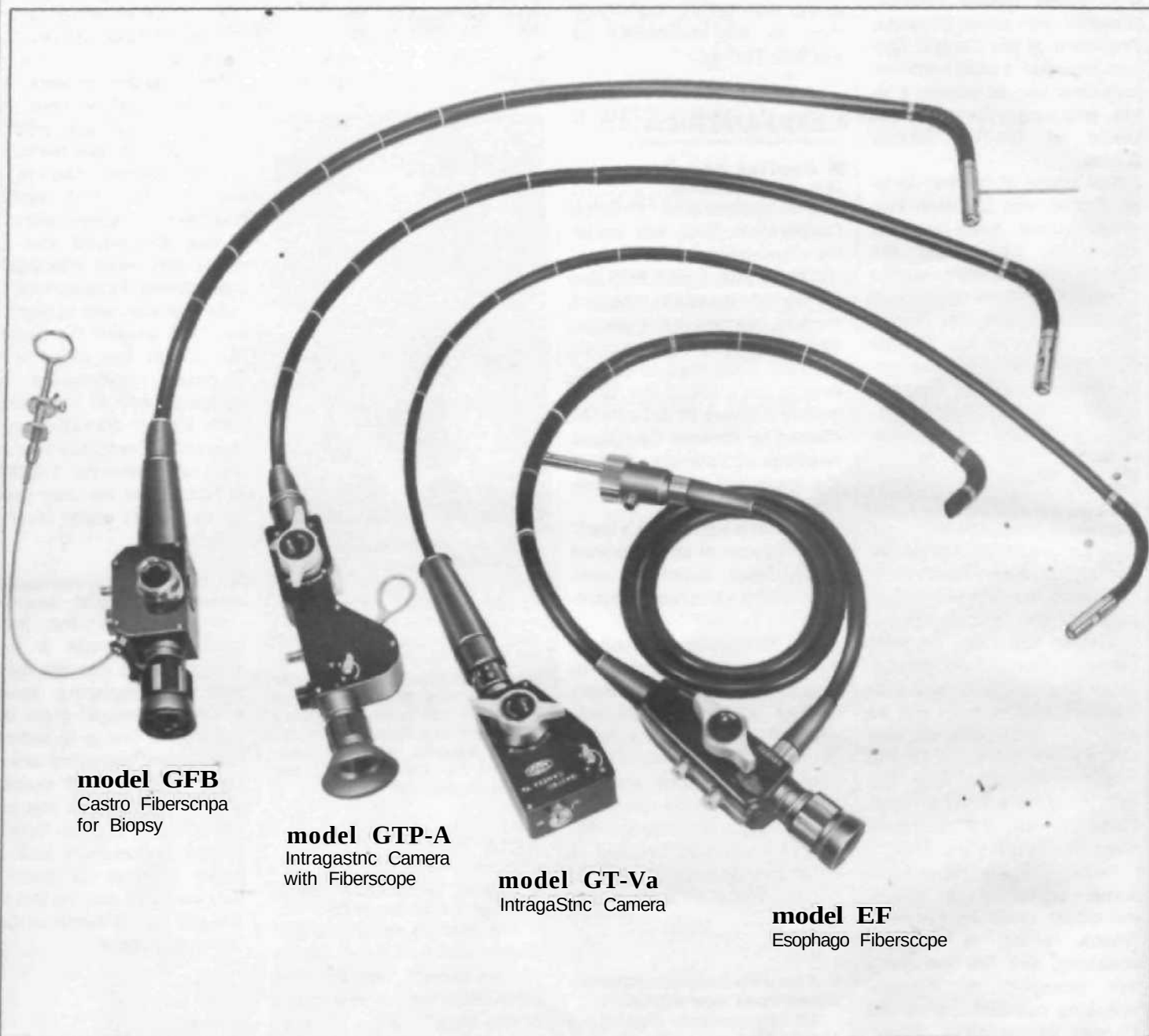
WORLD

• World trade growth in third quarter of 1968

World trade continued its strong growth in the third quarter of 1968. It exceeded \$200 000 million for the first time for the 12 months ending 30 September, the International Monetary Fund has reported.

The world export total for the third quarter was at an annual rate of £209 000 million, appreciably higher than

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the \$1B1 000 million in the same quarter of 1967. The second quarter figure for 1968 was \$206 800 million. For the third quarter, exports of the industrial countries were at an annual rate of \$154 600 million, \$24 000 million more than a year ago.

The figures showed that the 1968 monetary crises did not affect the flow of goods because they were resolved without adopting heavily restrictive trade measures or disrupting the fixed exchange rates among currencies.

ready the world's first fishing nation quantitatively, caught 10.1 million tons, up from 8.8 million tons the previous year. Japan was second with 7.5 million tons, compared with 7.1 million in 1966. The Soviet Union followed with 5.8 million tons, compared with 7.1 million the previous year. Norway ranked fourth, with 3.2 million tons, an increase from 2.9 million. The United States trailed Norway for the second straight year, with 2.4 million tons — down from 2.5 million in 1966 and the lowest

catches was due mainly to a fall in fishing effort rather than a decline in catch rates.

EUROPE

• North Africa and the EEC

Negotiations started late last year between the European Economic Community (EEC) and Morocco and Tunisia for preferential trade agreements as a first step

the EEC. Industrial products and some less important agricultural commodities — such as pulses, dates, spices and essential plants — would be imported duty-free. The levy on olive oil would be reduced but would be maintained on hard wheat. Import duties, in general, would be cut by 80%. Tunisia has already agreed in principle and has offered to extend preferences during the next three years to the five members of EEC, equivalent to 70% of those already granted to France.



COMMISSION ON INTERNATIONAL DEVELOPMENT

The members at the new Pearson Commission will meet in Montreal at Umont GMOTWI. Around the table, clockwise, Roberto Otivoira Campos (Brazil), Doug Aitken (USA), Saburo Okuma (Japan), Sir Arthur Lewis (St. Lucia), Lester B. Pearson, Chairman (Canada), Sir Edward Boyle (UK), Rottman (Virgin Islands), and Wilfrid Butler (FRG). The eight 'Wise Men of Development' will look into the progress and problems of the 30 years of development assistance, will make recommendations on the best policies and methods to promote economic growth of third world countries and report to the World Bank.

• Retort world fish

World fishing set significant records in 1967 when the total catch of marine and freshwater fish surpassed 60 million metric tons and Peru became the first nation to take more than 10 million tons. FAO estimated the total annual world catch for the calendar year 1967 at 60.5 million metric tons, a 5.5% increase over the 1966 figure of 57.3 million tons. The amount includes 7.2 million tons of fish caught in inland waters, including salmon, and other migratory fish species.

The total catch was almost twice that of 1957 (31.5 million tons), and more than three times the catch of 1948 (19.6 million tons), Peru, al-

for the country since 1962.

But a recent report by OECD says, on the other hand, that the North Atlantic catch was down 10% in 1967 and that for the first time in many years the demand for fish gave cause for anxiety.

The 24-nation report pointed out that government backing for the fishing industry can be dangerous: "Although such assurances might give the appearance of improving the condition of some fisheries and be politically expedient they certainly cannot lead to an improvement of the overall situation and furthermore could have adverse effects by distorting the normal conditions of the increasing competition between fishing countries."

The 1967 reduction in

toward full association of both countries with the EEC. Negotiations continued between Spain and Yugoslavia and the EEC, while exploratory talks started with Malta.

Belgium, the Netherlands and the Federal Republic of Germany have granted annual import quota for wines to Algeria, with reductions ranging from 50 to 75% in basic import duties. This preferential treatment, though much less favourable than the one earlier offered by France, is regarded as a first step toward a more comprehensive agreement between Algeria and the EEC as a whole.

The range of preferences which might be accorded to Morocco and Tunisia would cover 70% of their exports to

• Dutch grant for development

The Netherlands has made a \$1 million grant to help the United Nations formulate plans for the second international development decade.

The Dutch Minister for Development Aid, B.J. Ulink (see interview p. 26), announced the grant to assist the drafting of a 10-year world development plan by the United Nations and its specialized agencies, setting goals for foreign aid, agricultural output, education and health.

Foreign aid from the wealthier countries has fallen short of goals set by the United Nations while developing countries have not reached the proposed 5% annual increase in (their gross national product).



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•lt opinion



unrealistic and emotional

From the closing address to the General Assembly of the United Nations by 'J President. Eifliio Arenalfx of Guatemala.

The most striking feature of [he Assembly and which is a defect of the United Nations is the relatively unrealistic and emotional approach of numerous delegates. I use the word unrealistic because it is inevitable and sad to note 2° often that delegations or delegates use a)l their talenis and all their diplomatic efforts to produce a number of resolutions for each item, forgetting that the evils of this world arc not cured simply by nc-Sotiated resolution"; hut by the action of Governments. J use the word emotion because often emotion is placed before reason, regardless of the consequences for the Organization or for the world.



to check the drift

Reginald Prentice U.K. Minister of Overseas Development. in Venture.

The popular conception of world hunger lends to be that it exists as a problem jtt own, and th:ii the ultimate solution * sil iiply i» make more ftxid available to 1 liUnS'y areas. But the fact is thai r* is not a separate world food crisis dlv wv:ed from the general problem of wond poverty. The'chronic condition 7 poverty needs to be solved by com-P«hensive development, but this devel-

opment must include a higher investment in agricultural productivity in poorer countries. . .

But to bring about any long-term success in agricultural development in developing countries, many other factor* have u> fil inu> an overall pattern. In recognising that increasing attention should be given to rural development, it is necessary for the planners in developing eon nines, if necessary with the help of those who offer economic aid and technical assistance, to check the drift of manpower from the countryside to the urban areas.

This requires new policies and action in education and social studies, which would bring about changes in the traditional attitudes of ordinary village folk. Education must no longer be seen as an escape from rural life but a means of improving ii, and "f bringing the benefits of knowledge to the production of agriculture and the enhancement of rural life. To bring about changes in these traditional patterns is a major undertaking.



aid a liability?

Nicholas de B. Katzenbach in U.S. AID's War on Hunger.

As both we and the Soviets have found, the political payoff afforded by aid is even now very limited. Developing nations arc sensitive about their dependence on foreign aid. As a mailer of domestic polities they had to be: for. being so heavily dependent, they must bend over backwards to avoid the impression, before their own citizens, that they have sacrificed the independence of their foreign ijolicy.

Aid, for this reason, can be a liability as well as an asset to bilateral relations. rbese countries strongly resent the use of aid for purposes they consider extraneous to the aid relationship — namely ?s a lever to compel conformity to oui — or any other donor's — foreign policy. The fact is inai itvcsc counwics will not sacrifice what they consider important national concerns — even ai the cost of reduced aid.



praising private foreign investments

From an article by Abderrahman Tazi, former director-general of economic affairs in the Moroccan Ministry of Foreign Affairs, in Finance and Development.

The outstanding feature of the development scene today is the growing feeling of despair and disillusionment over the aL-liiL-vcments of the development decade. This feeling is not confined to the richer countries which helieve that the large amounts of capital and other assistance they have provided have not yielded tit-res u Its they expected. It is common among the poorer countries too: they are convinced lhat Ow flow of assistance for economic development, although if may seem Jarge in ubsoluic icrnis, is still painfully inadequate in lelatkm to the size of the problems they face. . .

The World Bank's estimates suggest that the developing countries have reached the stage where they arc in a position to use, efficiently and profitably, somewhere between S3-4 fKM) million more of capital each year than they are getting. That is to say, they arc at present receiving about S9 000 riill'on of cupitaj an- uiKilly; but they arc ablt to use — and, I emphasize, (he word 'use' here means ¹ use efficiently and profitably' — more than S12-13 000 million each year. This gap of S3-4 000 million gives some idea of the vast scope for useful investment in the developing countries today. . .

Recently, more and more of the developing countries have started to recognise the great contribution which private t-nicprise, especial I \ foreign private enterprise, can make to their economic progress. The tee way not be far off when private enterprise, in turn, begins to realise how impressively the scope for investment in the developing countries has grown in recent years — and, with ihe new emphasis on agricultural dcvelop-mcm. how rapidly it is likely to grow m the future. In this situation Ik the seeds for closet collaboration between foK\gn private investors and the developing countries — for collaboration of a kind that could brinj; immeasurable benefits to both.



Tetra Pak Aseptic provides the key to a distribution system

The distribution of fresh milk may be described as a race between man and bacteria to get at the milk first. In the industrial countries with their well-developed distribution systems and refrigeration equipment, the prize generally goes to man. In the developing countries, where there is a lack of both refrigeration and distribution facilities and where the climate favours the bacteria, man unfortunately loses out far too often.

In October 1957, when Tetra Pak presented the result of tests with aseptic filling in the well-known tetrahedral, plastic-coated milk carton, it was clear to everyone engaged in the distribution of fresh milk that here was a new solution. An inexpensive, disposable carton that could be filled aseptically would make it possible to handle milk without burdening the expensive refrigeration chain.

What has happened since? The first machines were placed in Europe. Since this was a new technology, the technician who was trained in the first place in Europe and then on the overseas markets. Moreover, the high labour costs and more rational distribution in the industrial countries called for a

milk with a prolonged lifetime.

At present, plants for aseptic filling are in operation in all of the countries of western Europe.

Still, many of these countries are exporting the long-life milk to developing countries. For example, milk is distributed from the United Kingdom to several parts of the Middle and Far East.

Even so, the supply of milk in the developing countries can be chiefly

There are many countries in which the actual production of milk is satisfactory but where the optimal conditions for this production do not always coincide with the centre of population. What is needed is a distribution apparatus. If that is based on pasteurized milk, large investments are required for re-equipment of the dairies from the dairy to the local community. If, instead, distribution is based on milk treated and packed in such a way that it will keep without refrigeration, these measures will be limited to mid-range equipment at the dairy. What is more, the production and distribution of wholesome milk can be organized within a matter of months.

The first factory outside Europe

look place at Lebanese foremost Dairies outside Beirut. From here the packed milk is transported in ordinary unrefrigerated trucks not only in Beirut but also across the desert to Saudi Arabia. This example from Beirut has been followed in many other places. The first aseptic plant in Japan started up in 1965, and today there are three dairies with aseptic machines in operation.

In Iran, the Teheran Pasteurized Milk Plant, financially a gift from UNICEF to the Iranian Government, is shortly to start distribution of long-life milk. The surplus production of milk in the Teheran district will thus be put to good use in the rural districts of Iran, particularly in the oil-producing region around the Persian Gulf. The production of long-life milk (of these areas can be extended with the long-life milk).

Long-life milk can be produced at a low cost from cow milk and under conditions which preclude the production of cow milk. The YL-O Haiap Seng Canning and Sauce Factory Ltd., Malaysia, has started producing soybean milk, packed in Tetra Pak Aseptic. Having previously been confined to a

(oca! market, the dairy can now cover the whok of Malaysia and even ship ihc mill to North Borneo. Combined with Uii.i Pak Aseptic, ihU cheap. proieib- **ich beverage** can be distributed without refrigeration under severe climatic conditions. Truly a **pitted** *iih exciting possibilities for the future.

'n the Greater Manila area alone the*c are more than 3 million consumers, and there arc seven thousand isiands in the Philippines, With such a complex distribution district, with **long distances** and diSficuVi sea *T(imports, the distribution of milk products is quite out of the question unkss **these** have a sufficiently prolonged lifetime. Fcxvd Masters inc. in Manila has built u completely new plant for the production of kmglife milk products.

A Sanio Dumtngo tlaiij. Quisqwiya **Cooperative Productora ck Lecbc** Inc.. **taj** four Tetra Standard Aseptic ftiachifics in a complete!) new plant, "Hdy fof a^pLk productuui. which has just started operation.

The first d\tpitii; plan! in Latin Anierica started up in **IMS**. A Mexico **GiJ** dair^ Producios dc Lecbc S-V is working pracikally round the clock. The first plant for packing milk isep- Heally in Australia. **Baker's Milk** fLowncBSiOB) Pt\.. Ltd.. is enporing the major part of its output IO Papua, ^ew fiujriLii, the Philippim^, **Thai-** land. Ma]i>asia and Singapore.

Pakistan, twir^ **OoaH** Kenya. **Mozam-** biquc — almost L-vi-ry da\ **BSMCOFIKS** **Ct** a dair> in the tropical region that hits lust suned 01 is preparing **ta** **ltan** rhe cUtribudOD of longlifr-'milk. lctra Pak AsL-ptic is **not** just it-carton, it **repnsents**; i; oonpleie diNttribution system that opens up **nr"** .',>is of cn- **suring** that large populations gd a sup- PH of protein fhis **system** is L-qua(!) MabJc for products **band** on natural **ra*** null, powdered milk **reoCHttitaccd** ^ih animiil (ir **v^dabk** f.it. or **BW**)

»)K * **producsd** trim] **vegetable** raw materials, e.g. soybeans. The t>- **sentia**l P"int is that the carton pre- serves !h<- contents however it is **Stored** a^d however it is distributed. The milk that reaches the consumer is in **1 s<alid** container and has the same Quahiy ar,d nutriiionnl value as when i* Vcft ;hc dairy.



MOZAMBIQUE



KENYA

MEXICO



MALAYSIA



LEBANON

PHILIPPINES



AUSTRALIA



JAPAN



DOMINICAN REPUBLIC

opinion



far from one percent

Edwin M. Martin, chairman of the OECD Development Assistance Committee, in the OECD Observer.

What remains to be done by both donors and recipients is enormous. Donors are still far from the 1% of GNP target accepted at the UNCTAD meeting in New Delhi — some \$3 500 million short in 1967. And 5.5% GNP growth means an average of 3% per capita, not much concretely for the hundreds of millions who now get \$100 or less per year. . .

It is thus essential (that the U.N. second development decade be planned and executed with all of our collective wisdom and energy, drawing fully on the lessons learned during the first decade, just as the third and fourth in this generation-killing battle will have to build on the experience of their predecessors...

targets for purchases

From an article in Le Monde by Henry Perroy, member of the Holy See delegation to the New Delhi Conference.

Common sense and a well-understood Ndi-interst should lead us to accept this line of thinking: the object of aid is not to provide for unproductive expenditures but for the improvement of the productivity of the third world's workers. Such progress must normally lead to the improvement of domestic productivity and of foreign export opportunities in developing countries. We should therefore expect simultaneous growth in both our

aid and our trade. The only formula which is both economically healthy and morally sound is that of trade and aid, (putting aid first for the less developed countries),

Regardless of their ideology, the rich countries would help the workers and the unemployed of the poor nations much more by buying their products than by paying extra taxes in their favour. At least the consumers know what they are buying, while taxes, . . .

Would it not be more desirable for free developed countries to set up targets for their purchases from developing countries, as they do with aid?

A target could be set at 1% of their Gross National Product, an apparently modest figure, but which is in fact at present reached by only a few ADC (Aid to Development Committee) countries: Portugal, Netherlands, Belgium, United Kingdom, Japan, Italy and France.

In the greater part of the ADC countries this percentage tends to decrease, not because the rich buy less from the poor (which is the case only in the U.K.), but because they buy more and more from the rich, carried away as they are by some sort of "uni-dimensional" development.

We readily admit that the ratio imports/CNP is not completely satisfactory, since countries do not all depend to the same extent on exports. But other ratios could be worked out: imports from developing countries/total imports, for example. However, since it is a question of a target whose symbolic implication is as important as its economic significance, any satisfactory formula must balance, on the basis of the GNP, the proportionate level of trade with that of aid.



guns into ploughshares?

From an interview with Robert Gardiner, member of the United Nations Economic Commission for Africa (ECA), in the Ghanaian Times.

In an age of vast conceptual changes and spectacular technology, Africa cannot

not afford to lag further behind in generating and controlling its energy resources, conserving and utilising its water, combating its diseases and fructifying its land.

Africa's armies, whose function is often negative, could find a socially useful role in intensive, disciplined, farming schemes — as says the biologist Henri Fabre: "History celebrates the battlefields whereon we meet our death, but scorns to speak of the ploughed fields whereby we live."

psychological, economic and political

From an article in La Tribune Africaine.

Third world economies cannot get off the ground without the active participation of the population, particularly the rural communities, in the implementation of development measures.

This participation in turn cannot be obtained without overcoming a number of obstacles of a psychological, economic and political nature.

The psychological obstacles stem, mostly, from the fact that the rural population is simply not aware that it constitutes an integral part of the development process.

This attitude is rooted in the traditions of a subsistence economy and the impact of colonialism which encouraged subservience, rather than initiative; the peasant neither knows about development.

The obstacles of an economic nature arise from the fact that the real needs of rural communities are inadequately satisfied by existing credit and marketing services.

Too often, these services were created for exploiting the wealth of the rural world and the enrichment of a few middlemen, rather than for the benefit of the producers.

The political obstacles stem mainly from the fact that the colonial regime deliberately neglected, for many years, the building of the structures which would have encouraged the participation of these

communities in the shaping of their
* national policy.

Though some structures of voluntary
• participatinn were set up or.¹ the eve of
independence, they were too much im-
bued with the spirit of colonialism to be
adapted to the national context within
which they were to function, In the face
of so many obstacles, no spontaneous
development was possible.

Therefore, large-scale State interven-
tion must be accepted in an attempt at
educating the public, and even at trans-
forming social customs whenever they
hamper economic progress to such an
extent that no technical skill can over-
come their resistance.



reshaping the pattern of relations

From tt statement by Felipe Herrera,
President of the Inter-American Devel-
opment Bank.

Regional integration, Far from being
an alternative to national development,
is an effective instrument for ?celcra-
on. . .

It is undeniable that national and
regional action by our countries can
strengthen our rates of capital formation
and, thereby, our national growth. It can
also help us improve our reserve posi-
tion. We even narrow our " trade gap "
by enlarging our regional trade

But the entire task will be a labor of
S. Syplnts unless, at the same time, we
are engaged in reshaping the pattern of re-
lationships between the industrialized world
and developing countries, in line with
the commercial, financial, technological
and institutional arrangements that have
been examined and debated at length
in the UNCTAD.

This makes it increasingly evident that
Latin America's fate is tied to the destiny
of the raw-materials producing na-
tions of the world. It is to the prospects
of a more suitable relationship between
the two thirds of mankind and the
other third.

they say ...

" Obviously, growth is a good thing in
so far as it helps to feed, clothe, and
house people, and reduce hunger and
misery. But we are now being forced
to realise that we are buying growth by
squandering planetary capital at a fright-
ening pace — fuel capital, mineral cap-
ital, water capital, soil capital, even ani-
mal capital (many whale and fish popu-
lations, for example, seem likely never
to recover from our triumphs of fishing
technology). . . "

John Davy, in the Observer

" There is not an orgy of procreation
going on. Parents in the developing
countries are not having more children
— more children are surviving. Tradi-
tionally parents had to have lots of chil-
dren because so many of them died. They
also needed children to work in the fields.
Now, most of their children will survive
and they have more hands than they need.
They also have more mouths to feed. "

Lord Ritchie Colder, President of the
Conservation Society, in the New York
Times

" The abolition of the system of absen-
tee landlordism, from the production
point of view, is justified when land-
lords do not re-invest the profits they
have gained from their tenants in land
productivity and in the well-being of the
cultivators, "

M. Mai el Ghonemy in Land Reform

• A 15-year tax equal to 20% of na-
tional incomes must be imposed on devel-
oped nations to solve the problem of de-
velopment. "

Academician Andrei D. Sakharov. in
War'Peace Review

" Protein malnutrition could be over-
come over much of the world if the avail-
able resources of oilseed protein were
utilized more efficiently and were supple-
mented with grain legumes and amino
acids. -

Dr. H.A.B. Parpia, director of the
Central Food Technological Research
Institute, in Science Journal

" The officials must leave their polished
desks and go to the farmers. They have
to find ways and means of moving crops
to the towns and cities and give the farm-
ers ready markets for what they can
produce. It is useless to urge our farm-
ers to increase production, when they
cannot dispose of their harvests. "

Editorial in the Ghana Echo

* Economic and social development is
a task not for sprinters but for long-
distance runners. "

Paul Montgomery in the London
Times

" Why not regional United Nations
assemblies for regional problems? In the
economic and social field the practice has
been growing of delegating responsibility
to United Nations regional commissions.
Why should we not adopt a similar ap-
proach to political questions? "

Mr. Lester Pearson, the former Prime
Minister of Canada, giving the Reith Lec-
tures on the BBC

" Because of the long 'braking dis-
tance' resulting from the momentum of
population growth inherent in the present
age structure of the population, it is es-
sential that, in countries still lacking pop-
ulation plans, effective action be initiated
as soon as possible. "

From the U-N, Report on Population

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WOOD

Wood-based panel products are making a major contribution toward solving the world's housing shortage said Mr. Jack Westoby, Deputy Director of FAO's Forestry and Forest Industries Division, when addressing the FAO Committee on Wood-based Panel Products recently.

In the past decade, the growth rate of these products has outstripped those of steel, cement, electricity and coal. The reason for this growth rate of between 10 and 11%

production for local consumption should be encouraged."

The meeting was presented with an FAO world survey of the estimated capacity of existing plants to produce plywood, particle board and fibreboard: categories which include veneers, hardboard and insulation board. The estimate did not include figures on Mainland China.

The survey showed that the world's capacity to produce wood-based panels is rising by about three million metric tons yearly. Tables showed that annual production capacity will have risen from 36.8 million metric tons in 1966 to 42.7 million in 1968 and is expected to exceed 42.7 million in 1969. The number of producing plants rose from 2900 in 1966 to 3000 in 1968, and was expected to go up to 3100 in 1969.

The most dynamic of the three industries covered by the generic term wood-based panels is particle board, whose global capacity is rising at 13% per annum as

compared with 6% for plywood and 5% for fibreboard. There is considerable underutilized capacity in all three industries though highest for fibreboard where difficulties have been experienced on the main markets in recent years.

The North American region was a clear leader in 1967 estimated capacity to produce wood-based panels with 45% of estimated world total. Europe was next with about 28%, followed by Asia and the Far East (about 14%), the Soviet Union (about 8%), Latin America (3%) and Africa and Oceania with 1% each.

The U.S.A. expected by 1969 to be four times higher (at 16.9 million metric tons) than the runner-up, Japan, at 4.3 million tons, was expected to be slightly ahead of the Soviet Union (4.2 million) by 1969. Other leaders in the same period are the Federal Republic of Germany (2.7 million), Canada (2.2 million) and France (1.3 million).

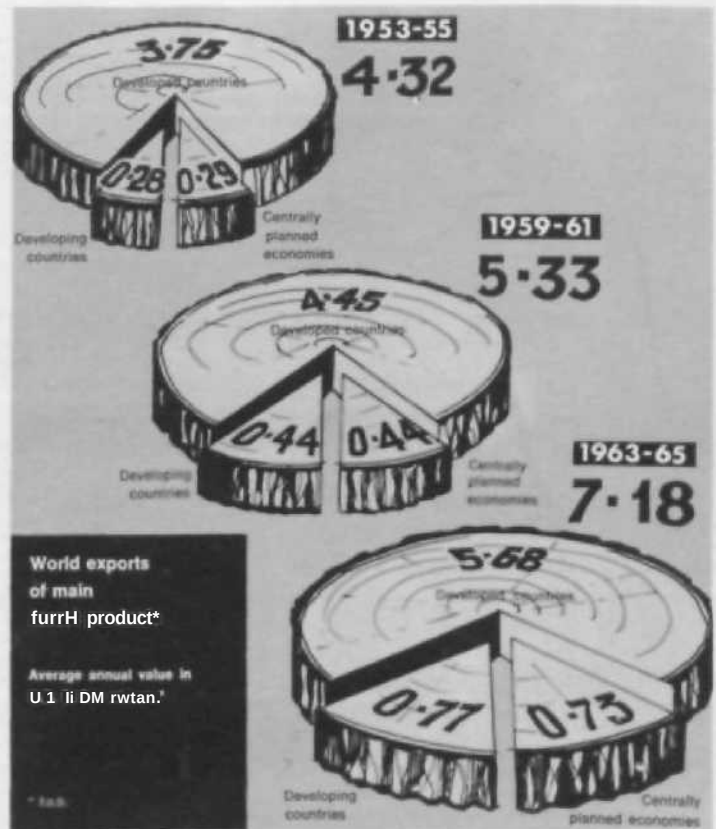
An FAO paper prepared for

annually was that wood-based panels had become a necessity in housing, agriculture and industry.

However the developing countries' consumption of wood-based panels remained at its 1960 figure of 5.7% of the world total.

A striking feature of recent years was the expansion of the production and export of plywood from Asia. Production had more than tripled between 1960 and 1967 and was expected to increase a further 250 per cent by 1975. This did not include Japan.

The slow growth of consumption in developing countries is partially explained, according to Mr. Westoby, by factors such as the availability of sawnwood and economic difficulties. "However," he continued "there are certain areas where wood resources are scarce or poor and where wood-based panel



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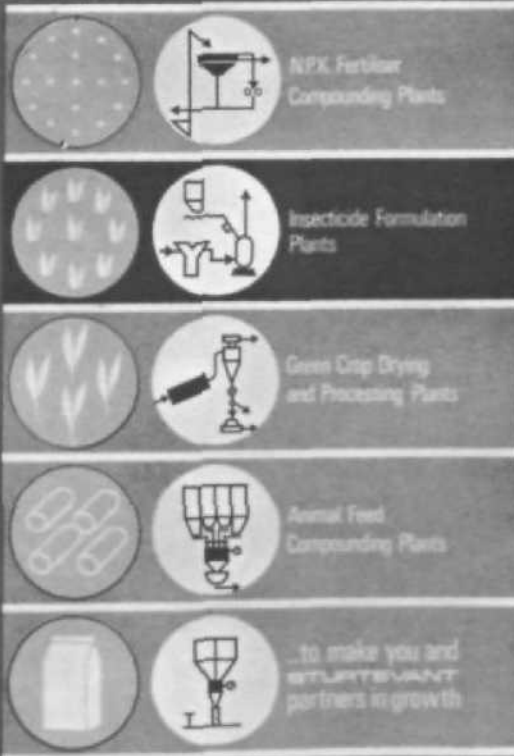
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the second United Nations Conference on Trade and Development (1968) forecasts that: 1) in the years up to 1975 demand for most forest products, and in particular for wood-based panels, paper and paperboard, will everywhere continue to rise rapidly; 2) the greater part of the additional quantities will be required in the developed centrally planned countries (i.e. U.S.S.R. and eastern Europe) which by 1975 in aggregate will require annually 15% more sawnwood than in 1961, nearly two and a half times as much wood-based panels and twice as much paper and paperboard; and 3) hardwood-rich developing countries will provide some of the sawnwood and much of the additional plywood and veneer or the log raw materials.

Exports of plywood from developing countries grew by more than 150% between 1959-61 and 1963-65. By 1963-65 developing countries accounted for more than one quarter of all plywood entering international trade, as compared with one sixth in 1959-61 and one tenth in 1953-55. The greater part of the increase was in Asia's exports to North America.

This spectacular growth rate should continue. By 1975, it is estimated, the developed countries will require one half to two thirds as much again annually of tropical hardwoods as in 1963-65. By 1975, developing countries could in aggregate be exporting over \$1 000 million of forest products to the developed countries.

The UNCTAD report states that at present about two fifths, by value, of developing countries' exports of forest products to developed countries are in processed form but by 1975 this share may increase considerably. Processed forest products present unusually favourable Prospects for early, rapid and large-scale expansion of exports from developing countries,

COCOA

Cocoa prices have increased sharply in the last few months in a climate of uncertainty regarding the outlook for the 1968/69 crops, particularly in west Africa. Although during the past three seasons world production had averaged some 200 000 tons below the record 1964 crop and world cocoa stocks had been drawn down over the period to sustain grindings at continuing high levels, prices remained fairly stable during the first half of 1968 as the prospects for the new crop seemed favourable. However, during the third quarter, persistent reports of above average rainfall in west Africa gave rise to concern regarding the development of the main crops and also attracted considerable speculative interest to the market. As expressed by the average of the three nearest future quotations on the New York Cocoa Exchange, prices increased from about 29 cents per pound in August to about 45 cents in December, the highest since January 1955.

The statistics committee of the FAO Study Group on Cocoa is scheduled to meet in March 1969 to issue its second forecast of 1968/69 production and of grindings in the calendar year 1969. At its meeting in early November 1968, the committee forecast that 1968/69 would be the fourth year in succession when consumption would exceed production.

Production was forecast by the committee at 1 287 000 tons, a decrease of 52 000 tons from the revised estimate for 1967/68. It was pointed out that this decline was due to a sharp fall in the crops of west Africa where abnormally heavy rains had continued long beyond their usual period and had had serious adverse effects on the setting of the pods and had stimulated black pod and other diseases. In Brazil, however, it was felt

that production might show some increase as a result of more favourable weather as well as the agricultural improvement work of CEPLAC - Executive Commission of the Plan for Rehabilitation of the Cocoa Growers' Organization.

The longer term prospects for production in Africa will be of great importance in determining future price trends.

Low world market prices for cocoa in 1965 and subsequent reductions in payments to farmers caused maintenance work and disease control measures to be very much reduced. However, payments to farmers have since been increased and measures have been taken by technical and research authorities to increase production.

WHEAT

Toward the end of 1968 it was estimated that world production for the year would reach a new record of about 290 million metric tons, 7% above last year and 3% more than the previous high of 282 millions in 1966.

All the main exporting countries have larger supplies available for export in 1968/69, but world trade in wheat may not be larger than in the previous season and end-of-season carryover stocks are expected to rise sharply. Competition for import markets is therefore sharp and growing; it has been particularly keen in Japan, the largest dollar market for wheat outside Europe.

This situation is providing a test for the new International Grains Arrangement right at the beginning of its three-year span of life. So far, it has stood up to the test, and the main exporting member countries (U.S.A., Canada, Australia, Argentina and the EEC) have declared their firm intention to cooperate in maintaining the agreed minimum price levels.

COFFEE

The International Coffee Council fixed quotas for 1968/69, the first year of the renewed Agreement, at its meeting which was held in August-September 1968. The overall annual export quota was set at 47.8 million bags (2.87 million tons). A further 15 million bags (90 000 tons) were established as a quota reserve to be released in three instalments during each of the last three quarters of the coffee year depending on market conditions. Beginning in the second quarter of the coffee year (January-March 1969), when the composite daily price — an average of the prices of the four groups of coffees — remains at or above U.S. cents 37.40 per pound for 15 marketing days, 500,000 bags will be released from the reserve and distributed on a pro rata basis among all exporting members. Two further releases, each of 500 000 bags, would be made in the third and fourth quarters under the same conditions.

The Council also decided that upward or downward adjustments in quotas under the selective price mechanism should operate apart from the releases from the reserve quota. For 1968/69, the Council set floor and ceiling prices for selective adjustment as follows:

	Floor price*	ceiling price
Colombia Milds	39.25	43.25
Other Milds	37.25	41.25
Unwashed Arabics*	35.25	39.25
Robustas	30.50	34.50

If the average of the daily market price of any group of coffee is below its floor or above its ceiling over 15 marketing days, the quota of each member of that group will be adjusted by an amount equal to three percent of its annual quota. Under the rules previously in effect, adjustments under the selective system were 2.5 percent.

Brain drain to brain gain?

High skills are part
of a developing country's irreplaceable wealth
but a man's brain is above all his own.
How to stop the experts' exodus
and woo them back requires even more skill

by ROBERT E. ASHER

To the expanding ranks of angels and devils that speed or impede man's march to the promised land of development, the so-called brain drain is a recent recruit. Little was said about it until the mid-1960s. This is not surprising. The brain drain is rarely a problem at the earliest stages of development. If it comes at all, it comes only after a build-up of skills that can be exported. Though widely employed as a shorthand term for the movement of professional persons from poorer to richer countries, the brain drain remains a fuzzy concept.

My object in this article is to raise some necessary questions concerning the nature of the problem, to try to relate it organically to the development process, and to mention certain measures for mitigating the drain or, better still, converting it into a gain. My thesis is that a problem exists which has more dimensions than many assume it to have and which, for its solution, requires action on the part of both developed and developing countries. It also requires collaboration between them until well after the need for financial and commodity assistance on concessional terms has ended.

I start with a reminder that the brain is at least as much the property of the person in whose head it rests as of the nation in which the person is born. This gives the individual owner some right and obligation to use his brain to further his own self-realization — to attain what is to him the most satisfying combination of psychic and economic income. Emigration permits many individuals not only to improve their personal status but also to make a substantially greater contribution to human welfare than if they were unable to leave their native lands.

In a world of sovereign states, however, countries tend to be more interested in maximizing national income and national welfare than individual or world income and welfare. If a man earning an above average income in a less developed

country leaves it to accept a better paying job in a developed country, at less than average income in that country, his move will reduce per capita income in both countries. But despite the fall in both places, world income will have risen because the only immediate change in income has been that of the emigrant, and his income has increased. Nevertheless, in social and political terms, the market forces to which the emigrant was responding may produce an undesirable concentration of talent and income.

Like so many other shortages from which less developed countries suffer, their shortage of skills is a shortage in relation to "need" rather than effective demand. They "need" virtually all the talent they have, all that they can produce, and more.

Export* of axpopli yioftf no earnings

Enlarging the domestic stock of skills lies at the heart of the development process, but the free market works in such a way that imports are extremely expensive and exports, far from constituting an offset, represent an additional sacrifice on the part of the developing country. Exports of commodities earn command over an amount of resources that more than covers the resources put into their production. Exports of skills, often produced at considerable cost to the developing country, appear to earn nothing, although the emigrants may eventually send back remittances or perform services that help their homelands. Rich countries may lose professional talent to still richer countries and become very exercised about the brain drain — this has been true of some western European nations — but, at the same time, they can and do import talent from poorer countries. The poor countries are not much of a magnet to anyone.

What can be done about the brain drain from poor countries? No self-respecting social scientist today, regardless of the problem confronting him, will advocate a single solution — I am fashionable enough to urge a multipronged attack —^{ut} dedicated enough to the Universal Declaration of Human Rights to exclude from my list measures that directly restrict man's freedom of movement.

On the outflow side, the remedies involve measure*

Robert E. Asher, Acting Director of the Foreign Policy Studies Program, Brookings Institution (US), founder and former vice-president of the Society for International Development, is the author of an impressive number of books and articles on the problems of development and foreign aid.

making, it more attractive for talented personnel in less developed countries to remain at home and, relatively speaking, less attractive for them to emigrate. On the inflow side, they involve making it easier for the less developed country to import professionals of other nationalities and to re-attract its own emigrés. Advanced countries can de-emphasise scholarships, fellowships, and training grants abroad for nationals of less developed countries, finance more training in those countries, and facilitate the release of highly skilled nationals of their own for temporary duty in less developed lands.

Development, it is now recognized, is not a stage attained when per capita incomes reach some specified level, or after a particular list of "obstacles" has been overcome. It is a

process, never-ending, dynamic, pervasive, destructive as well as constructive. The essence of the process is the inculcation of new attitudes and ideas, of a mind hospitable to change, eager for progress, capable of applying scientific approaches to an ever wider range of problems.

From the point of view of foreign aid, the critical period in the development process has been assumed to be a relatively short span of years during which, with outside help, an aided nation will move from a period of virtual stagnation in per capita income to a period of modest but sustainable increases. Two closely related, mutually reinforcing forms of assistance will be needed, capital assistance to help a low-income country overcome shortages such as raw saving shortage or the foreign exchange shortage, technical assistance to help it overcome the skill shortage. It permits the country to import high-level skills, which can be used to train others (i.e., to expand directly the stock of skills) and to train institutions (universities, research centres, laboratories) to produce and utilize high-level skills, technical staff and should be dedicated solely to the build-up of an elite; it can also introduce policies and practices that will bring latent talents and creativity possessed by ordinary women in the most humble walks of life.

Technical assistance is not only the first, but also the last. It is required in the foreign aid field. Partly because of the high level of skill required for the production of skills as compared with the production of commodities, self-sustaining growth in skill is not achieved until long after what is described as the "HIL" trade limit on growth has been reached. Were that the case, it would be no cause for concern. The less developed countries could purchase the skills they need and be at no great disadvantage as compared with

the more developed nations. Commodities can be ordered from a catalogue, or from an agent, at fixed prices. For imported experts, however, the price may well be 50% higher than it is in their home market, there is no catalogue to consult, and no convenient system for importing them. Meanwhile, the base price in major markets is high enough to start a brain drain from the less developed countries.

This brain drain, as Charles Frankel has pointed out, is a phenomenon common to all modernization — the movement of people away from the poorer and more isolated places toward the metropolitan centres of the world. Within the less developed countries, the exodus of talent from the rural areas to the cities represents a kind of internal brain drain.

Statistics concerning the proportions of people in different skill categories highlight the contrast between poor countries and rich countries, but do not explain whether larger cadres of specialists are a cause or a corollary of development. Whereas in developed countries 4 or 5% of the labour force are people with high-level skills, the average in developing countries is about 1% of the labour force. Three professions — engineering, medicine, and teaching — usually account for about half of the high-level manpower of a country. Developed countries appear to require about 50% more personnel of middle-level skills than of high-level skills, in other words,

some 40% of the labour force is represented by middle-level skills. In less developed countries, "there are often more doctors than nurses, more lawyers than shorthand typists, more engineers than draftsmen," wrote Angus Maddison in 1965.

The less developed countries' need for persons of middle and higher level skills is to a large extent associated with the role of modernization of agriculture, but above all with the growth and evolution of the nonagricultural sector. As W. Arthur Lewis has pointed out, whereas half the population is in agriculture, the number of jobs requiring university education is quite small and the number requiring a secondary education is very much smaller than the number requiring a primary one.

Nevertheless, the findings of science need to be applied both nationally and locally. Without a strong and growing cadre of personnel in the social and physical sciences on the local scene, "the prospects of developing a scientific outlook and of modifying attitudes toward modern technology are negligible. In a modernizing society or economy, it scarcely is a possibility to begin to have large percentages of the more trained minds moving abroad and to abandon the task of handing on the torch of learning to their compatriots." (William J. Gibbons of Fordham University).



There are no global estimates of the losses of skilled manpower from less developed to more developed countries through emigration. The available evidence, however, has convinced some analysts that "this is a serious problem indeed. It may go a long way toward offsetting the beneficial effects of technical assistance action." (OECD).

Where small numbers make big differences

In the years 1956 through 1967, for example, immigration of scientists, engineers, and physicians into the United States from all foreign countries tripled, rising from about 5,000 at the beginning of the period to more than 15,000 in 1967. Immigration from the developing countries, however, more than quadrupled, rising from about 1,800 in 1956 to nearly 8,000 in 1967. Consequently the share of the developing countries in the immigration of scientists, engineers and physicians went up from about a third to more than half of the total — a rise that would be highly encouraging if it were true of exports of primary commodities from poor countries, but as the record of an unrequited export evokes reactions that are, at best, ambivalent.

In absolute terms, the brain drain totals remain small, even after adding to the U.S. figures the number of emigrés from less developed lands to western Europe, eastern Europe, and the Soviet Union. But in highly specialized fields such as science, engineering and medicine, small numbers make big differences. Training is a long-drawn-out, costly process and the stock of trained manpower grows slowly.

According to information for the year 1962 gathered for a U.S. congressional subcommittee, the Dominican Republic sent the United States only 78 physicians, but they represented more than a third of that country's supply of new physician graduates. Eighteen engineers emigrating to the United States from Chile were the equivalent of one fifth of its graduating engineers (though not, of course, of its stock of engineers). *

Almost half of the scientists, engineers, and physicians immigrating into the United States from developing countries in 1967 were people who had originally entered the United States as students, with the declared intention of obtaining education or training and then returning home. The proportion of student to total scientific immigration is much higher than 50% for some countries — almost 90% for Taiwan, 80% for India, and more than 70% for Iran. The proportion of immigrants among graduate students is considerably higher than among undergraduates. It is also higher for those acquiring skills that are not geographically specific to their environment (mathematics, medicine, nuclear physics, etc.) than for those with skills more specific to their environment (law, politics, business management, etc.).

As I indicated earlier, reducing the brain drain requires action on the part of both the less developed countries and the more developed countries. Some of the necessary actions are independent of technical assistance policy. Others involve changes in such policy, particularly with a view to expanding fairly rapidly technical assistance of assured quality that is paid for, or partially paid for, by the receiver after his need for capital assistance has ended. We need, for example, a greater willingness on the part of governments of high-income

countries to "top off" the salaries offered to specialists by low-income countries, so that the specialists will not suffer financially by accepting posts in low-income countries at salaries that are reasonable by prevailing standards in those countries. We need more extensive use of the funds-in-trust arrangements which permit the United Nations to serve as an employment office in obtaining qualified specialists for countries willing to pay for them, as well as more extensive use of analogous national arrangements. Because governments find it difficult to offer careers in technical assistance, encouragement should be given to the creation of subsidized national or multinational foundations or corporations that can provide careers for persons whose services would then be obtainable more or less as those of consulting firms are already obtainable, though at lower cost.

At a more general level, one of the first requirements for the less developed countries is to make better use of the skills they already have. This is, of course, easier said than done. Skills are like tree crops in the sense that conditions may change drastically during the years between the planting of the seedlings and the availability of a marketable harvest; supply and demand can readily get out of phase. Nevertheless, if engineers cannot find suitable employment at home as engineers, if architects have nothing to build, if university professors have to hold additional clerical jobs to eke out a living, if doctors find a career in business or politics more rewarding than one in medicine, and if intellectuals are unable, to speak freely, the investment made in their education and training will be wholly or partially wasted.

If the contributions of highly trained personnel to the development of a low-income country are as crucial as is implied by widespread concern over the brain drain, then the low-income country can afford to offer higher salaries to such personnel. On the other hand, higher pay may exacerbate class distinctions that are already explosively sharp and in any event will not become high enough to match the salary scales of advanced countries. For those at the bottom of the professional ladder, promotion systems based on merit and increased responsibility without having to wait for the death of one's superior would be added attractions. Economic integration among neighbouring countries can widen the international market for specialized skills and enlarge the opportunities for self-realization within the less developed world.

Too many to ignore anticonn?

Intimately and inseparably linked to the external conditions are the attitudes affecting men's concepts of what constitutes suitable employment. If the specialist's lofty vision of his own role permits him to issue orders but prevents him from dirtying his hands by helping to execute those orders, his prestige may be preserved but his real utility will be limited. If people trained for jobs in the agricultural department are unwilling to serve in isolated rural areas or direct their talents to grass roots problems, agricultural development will lag.

Developing countries can do more to rationalize overseas training for their nationals. Colombia's Overseas Technical Specialization Institute (ICETEX), for example, makes studies to ascertain national priorities and allocates fellowships, loans, and other aid to those most likely to serve Colombia's needs.

ICETEX requires students whom it helps to work for at least twice as long in Colombia as they study abroad.

Developing countries should also be more ambitious to produce at home the kinds and quantities of skills needed, primarily through better utilization of the substantial number of universities, training institutes, research laboratories, and experiment stations that have been set up in the less developed world since 1950 — usually with foreign aid. Inadequate use of what are often quite handsome physical facilities leads to a further decline in standards, with more of the country's most talented nationals seeking training or employment abroad.

Finally, less developed countries must expand their efforts to secure the return of emigrés. Here again, much can be learned by studying the experiments already made by India, Taiwan, Greece, Iran and others. The basic impediment to the success of the well-publicized, broad-gauge, Indian effort appears to be the persistent scarcity of British jobs in India for highly trained returnees. The Iranian effort is more narrowly focused. Pahlavi University has entered into a contract with the University of Pennsylvania requiring the latter, among other things, to recruit Iranians in the United States for some very well paid faculty positions at Pahlavi. "Within a period of two years over 200 applicants, most of whom have doctoral

to something closer to 50% the proportion of grants for study at local or regional centres.

United States, United Kingdom and French universities are geared to the requirements of North American, British, and French society. To expect them to reorganize themselves in any very fundamental fashion to meet the special requirements of African, Asian, or Latin American visitors would be asking too much. Moreover, the methods of analysis, the open-minded search for evidence, the exposure to the best that has been thought and said, the appreciation of excellence, and other attitudes that they foster have universal relevance. Nevertheless, they can do more than they have yet done to make the training they give more specifically relevant to the needs of

the foreign students they attract. And their governments can make it a bit harder for foreign students to become immigrants.

Less dramatic but more practical are some further steps that developed countries can take to make professional life in developing countries more challenging, more rewarding, more professional. My own institution, The Brookings Institution, a private research agency in Washington, D.C., is engaged in a joint research program on Latin American economic integration with 19 South American institutions. It is a genuine partnership, from which all



"For imported experts, the price may well be 50% higher."

Agrees, have been recruited as candidates for positions in the Colleges of Agriculture, Arts and Sciences, Engineering, and Medicine. This figure represents between ten and twenty percent of the total Iranian graduate student population in the United States. Of the 200 recruited, Pahlavi University has extended offers to approximately one-half, and many other applications are still under consideration.

Let us turn now to actions that more developed countries (and international organizations) can take to staunch the brain drain from less developed countries. They can help to strengthen training institutions in those countries through some of the measures already mentioned — supplying staff and equipment, ¹¹ topping off the salaries of their own high-level nationals sent to such institutions, and making it easier for such people to adopt foreign service as a career. They can reduce their effort to lure nationals of low-income countries abroad for study and training. The multiplicity of scholarships and fellowships for Africans comes at the very time that Asian experience has revealed the extraordinary propensity of the students to remain in the developed countries, where salaries are higher, laboratories are better equipped, living conditions are better, and professional contacts more stimulating. Rich countries should increase from less than 10% of the total

benefit, and it appears to be raising the standards, relevance, and respect for economic research throughout the Latin American region. Whereas the Ford Foundation has supported the program coordinated by Brookings, the United States Agency for International Development has helped finance the Land Tenure Center at the University of Wisconsin, which is engaged in interdisciplinary investigation, in collaboration with local educational institutions in Chile and Colombia, of various aspects of rural change in Latin America.

The international brain drain is not an unmitigated disaster, [the truth is elusive, however, and emotions run high. The poor country that loses a doctor to the World Health Organization may be no better off than if it had lost the doctor to a New York or London hospital, but it may complain as loudly about its failure to achieve the former result as about its success in achieving the latter.

Remedial measures should not discourage cultural exchanges or higher levels of international trade in skills. They should seek rather to shorten the period of unrequited exports from poor countries because of unfavourable opportunities for self-realization there. Perhaps this is only an obscure way of saying that, if less developed countries were more developed, they would suffer less from the ailment now called the brain drain.



If I am not mistaken, you are the youngest ministerial member of your Government. Could you tell us something about yourself for our readers?

On leaving the Rotterdam School of Advanced Economic Studies, I began my career as secretary to the Board of Trade, subsequently becoming secretary-general. I have always felt at home dealing with ports and harbour commerce. Later, I became general manager of the National Centre for Foreign Trade, and held this post for five years, from 1962 to 1967, when I entered government service. I have been an active member of the Protestant Christian Democrat party since my days at the Board of Trade, and various responsibilities have been entrusted to me. Two years before becoming minister I was elected a member of the Regional Council of Rotterdam, and presided over the Protestant party block in the council.

To tell the truth, I was not a front-line

politician but kept rather in the background until, all of a sudden, I was appointed Minister of Development.

I do not know how the Dutch people feel about this, but in general in Europe a minister coming from his business is not necessarily welcome. What was the reaction when it became known that the Minister of Development came from private enterprise?

This question does not surprise me. In the House during the debate which preceded the government investiture, a deputy asked: "Is it possible that a representative of private enterprise should now be in charge of assistance to the developing countries?" I would like to make two points with regard to this.

Firstly, being responsible for the promotion of exports and the encouragement of trade, does not prevent one from holding opinions about the shape of tomorrow's world. If these opinions do

not find immediate application within the framework of the task in hand, this does not mean that they do not exist.

Secondly, it is completely wrong, and certainly unfair, to claim that one cannot, at the same time, come from private enterprise and be interested in the developing countries. The interests of both are not necessarily contradictory, and they may even meet. In any case, it is quite possible.

So far as I am concerned, my former colleagues often led me to take part in matters which concerned the developing countries. Naturally, at that time, I examined these questions from the point of view of the industrial and commercial interests of the Dutch people. But, even during that period, I always had a keen sense — I could call it an existential sense — of a world which forms a whole and in which each man, each country, must play their rightful part, one complementary to the parts played by others. The world is moving toward unity. No one does not know or feel it with the same intensity. However, everyone has his place in this

Udink:

"the Dutch intend to purchase the produce of the third world"

The youngest member of the Netherlands' Cabinet, Minister for Aid to Developing Countries

B.J. Udink, gives CERES

some* thought-provoking views

on world cooperation in this exclusive interview

world and, at any given moment of his life, may be called upon to help things move forward.

If one can fit into this perspective one can do good work, and it is of very little importance whether one comes from commerce or elsewhere. . .

As far as I know, the Netherlands is one of the most active countries in the field of development assistance. You have just formulated your personal philosophy. With regard to such great problems, I would like to ask you how you would put this word of your inner practice. And, why, in your opinion, this widespread commitment to development exists in the Netherlands?

I shall reply to the second question first. This commitment of the Dutch people has several sources. No doubt its origin can be traced back to our religious roots, which are deep. There are also the historical roots of people which

feels itself to be an integral part of the human community. Finally, an understanding of commercial interest undoubtedly plays its part.

You see, the Dutch know and feel that in our time it is not possible to live as rich people in a world of the poor. Without being able to determine to what extent and how, they can very clearly see that the poverty of the world around us represents an obstacle to the economic development of the rich countries themselves. I would add that the general policy of the Netherlands is aimed at contributing to the creation of a stable, peaceful world.

Naturally, this does not mean that peace will automatically follow prosperity, and it would be a great mistake to believe it. In fact, the great wars of the past have always come from the rivalries of the rich countries. It is false to say that poverty brings forth war, but it can be reasonably said that the elimination of poverty does away with one possible source of strife.

Now for your first question, which

dealt with the practical application of my personal philosophy. Since this corresponds to the profound beliefs of the Dutch people, it is absolutely necessary in this country to stress the fact that the problem of relations with the developing countries is a realistic one. It must not be coloured with too much emotion, or made a moral issue; morality has no part in the relations between countries.

In a certain sense, this much-publicized assistance to the developing countries consists of seeing that the circulation of capital on international markets works as it should. Nothing more. In some cases, when it is a question of countries whose balance of payments is fairly precarious and interest rates fairly low, this movement of capital must submit to relatively abnormal conditions and terms. In such cases one does not ask for an interest rate of 6 or 7%; one is satisfied with 3%. This is the only difference. If, in the international economy, pompous words such as "aid" or "assistance" are employed, it is because people are

trying to delude themselves. It must be clearly seen that it is to the interest, I would even say self-interest, of the rich countries that capital move freely over the surface of our planet without meeting obstacles at every turn. It is also in the interest of the developing countries to

we can provide free or against payment, according to circumstances. It needs capital since the balance of payments is precarious, and this also we can provide. All this is perfectly normal. We must take care not to divide the world into two categories; those who receive assistance

of the third world? It is not enough to announce that OUT markets are open. Measures must be taken to create a place for these products. And once this place is decided upon, we must decide which products from the developing countries can be accepted. Should we adapt our own industries to the new situation so that there is no duplication? What changes are necessary to integrate our market with the greater market which we, and others with us, have undertaken to create at an international level? This is the basic question.



Do you contemplate the imports of processed products, of industrial products, or largely the traditional imports of basic raw materials?

Both, I cannot promise that manufactured products will find easy markets in our region since it is a question of goods which are, for the most part, non-competitive in quality and price, facing strong competition. But we mean to open up this market. Only experience can tell whether it is more efficacious and rational for developing countries to sell these products to our buyers, or to those who are their immediate neighbours within the framework of regional markets.

take part in this movement of capital, sometimes at reduced rates.

The present policy of the Netherlands can better be understood on the basis of these somewhat prosaic remarks. It appears then not only possible, but necessary, to increase Dutch participation in cooperation with the developing countries.

// I understand you prefer the if tin " cooperation " to that of " assistance " ?

I much prefer it. For some time now cooperation between rich countries has been a fact. We are going to extend this cooperation with poor countries, with those who are at present poor and those who are undergoing the process of development. This follows naturally. Please note that we do not claim that we are developing these people; they are developing themselves. But this process of development has certain requirements; technical knowledge, for instance, which

and those who give it. In fact we are all involved, all passengers on the same boat of international cooperation.

So far as the Dutch people are concerned, they intend to participate in three ways: by providing technical knowledge to those who desire it; by supplying capital unredeemable on the one hand, reimbursable in the long term on the other; finally by committing ourselves to purchase the products of the third world.

In figures, the sums devoted to cooperation with the third world by the Netherlands will rise from \$22 million in 1966/67 to \$230-240 millions in 1971. This last figure represents 1% of the net national product of public capital. [It is a question of public funds, which constitute a hundredth part of the net national product. This is our position. Naturally, we earnestly hope that the other EEC countries will make a similar effort.

I have asked the National Advisory Council for Developing Countries to give an opinion on the following problem: what are the changes which our economic- and social structures must undergo in order to be able to absorb the product*

For many people in rich countries, hunger is the emotional trigger which moves them to cooperation with the third world. At present there is a certain apathy in public opinion with regard to assistance, since people do not see the tangible results of their charity. What is your personal viewpoint on the relation between hunger and cooperation and hunger-development ?

I think that many of us still do not see that this question of relations between rich and poor countries, developed and underdeveloped countries, has anything to do with the legend of Saint Martin and the beggar shivering with cold. We are creating an international world. We are creating it with states, with political and economic facts. We need a world market with capital working in the three, direct-

lions 1 have mentioned. For this we
* must set up development plans. The
third world countries will participate in
order to increase their prod action by 5,
6 or 7% per annum. Obviously, this
production will tw, in pan, composed of
perishable foodstuffs, and this brings us
to the problem of hunger.

It seems to me, all the same, that today
we regard this problem from a different
angle than even one or two years ago, in
the sense that we now find it vital not to
introduce personal emotion. You and I
would be happy, there is no question of
it, if hunger and poverty were to disap-
pear from the earth's surface within a
few years. But the problem of develop-
ment would not therefore disappear,

If one's outlook is too sentimental, if it
is dominated by the image of people dying
of hunger, unable to clothe their children,
then all is lost for as soon as these images
have faded, as soon as the most squalid
and scandalous aspects of misery and
malnutrition have been effaced, one's in-
terest in the question of development
would have vanished. Yet the basic prob-

*Regarding this development strategy,
as you know, the United Nations is pre-
paring a world plan in assist the second
development decade. One of your coun-
trymen. Professor Tinbergen, b chairman
of this plan. If I am not mistaken, the
Netherlands is a country will} a planned
economy. Are the budgets for coopera-
tion included in your national economic
development plan?*

To be efficient, the sums which we
dedicate to cooperation must correspond
to a surplus of (he same amount in the
balance of payments. In other words,
when Holland prepares to provide the
third world with an amount of, say, 900
million florins, it com mi is itself al the
same time to create an equivalent of 900
million ilorins in the balance of payments.
This means that the whole of OUT national
policy will be influencedr sakiriis; cur-
rency; industry; taxes, etc. All these
elements influence the economic level of
the country and its balance of payments,

tinual deficit, who pays the costs of the
operation? Does the country itself pay,
or do those who help to cover the deficit?
For a policy of cooperation to be real,
solid, efficient, a surplus must bs created
in the balance of payments. The nation-
al plan is Inevitably influenced by this.

*The Netherlands has absorbed the ques-
tion of cooperation info the economic
plan of the country. The third world
countries loo make plans. What do you
think of the relations between these dih
ferent programmes i those of " rich " and
those of "poor" countries) and the world
development plan?*

When we spealf of a strategy, of a
second development decade, we mean
that we hope that the developed coun-
tries will undertake long-term L-ummit-
ments to provide the third world with the
capital it requires. This means that all
these countries must undertake to create
equivalent surpluses in their balance of
payments, as the Netherlands has done.
It also means that they must open their
markets to the produce of the developing
countries and that, at the same time, they
provide these countries with the indis-
pensable technical know-how. These are
the three duties of the committed coun-
tries,

The developing countries also have du-
ties to fulfil. First they must formulate
precise development plans. They must
also decide on balanced fiscal, monetary,
industrialization und price policies. For
ul! the capital which we want to provide,
all the market op portunities we want to
create will be useless if the third world, in
the second decade, allows itself to be
drawn into a spiral of inflation. Every-
thing undertaken would then be useless.

A market can be created for their prod-
ucts, but if prices arc too high and ex-
change rates remain unchanged, these
products will not find any buyers in our
country. This is clear, even if we tio not
have customs duties. It is completely
irrational to provide capital and technical
knowledge if these are not employed to
create a balanced situation. It is difficult
to grow in a balanced way, we know this
front experience, but that is what must
be done.

Development plans, first at national
I hen a(regional level, must be integrated



le"i will not have changed, if only be-
cause all countries do not develop at the
same rate. What we must seek is world-
*kJe economic and social balance. This
w not a sentimental problem. M one of
'otig-trcm policy. For this reason we need
u dcvt c'opmcnt strategy.

All these elements must be therefore cm-
ployed to create (he surplus which will
allow us to fulfil our obligations to the
third world. One thing must be un-
derstood: if *e provide money to the
developing countries and if, al (he same
time, the balance of payments h in con-



with the large-scale microeconomic projects being prepared by [he United Nations. The inverse must also be true. These economic projects must also be continually confronted with the objectives and achievements of national and regional planning. Professor Millikan's idea of creating a kind of world council to central, step by step, all that is done in the field of development seems to me a good one.

*There is one question which has often been put with regard to our KAO indicative World Plan: who has the power of harnessing it, **imposing** if need be? In the Netherlands, with all the measures at the state's disposal, **you** can always rearrange your markets, or take other steps, **in** **then** is general agreement. But what happens at world plan level?*

This is a matter of willpower, political willpower. Nothing can succeed without the will to maintain the objectives we set ourselves in common. If governments have been able to determine the aims, they

are equally able to take the measures to achieve them. If they do not do this, it is obvious that nothing can succeed.

*The money and technical knowledge provided by the rich countries do not **always** attain their objectives, because there are **factors** which we do not completely understand, cultural or religious, which stand in the way. When we speak of the **glorious** approach, / somehow I fear that we have in view only economic **and** **technological** criteria and that the psychological and cultural elements are left aside. From this point of view, what is your personal opinion as to what a concrete development operation should **be**?*

I know that just now it is fashionable to mistrust economists who claim to give us clear **ideas** and teach us what we should do. People say this is not the last word. Economy does not make the world go round, economy does not **make** the man.

I willingly admit that economy is perhaps not the **last** word in development

ment. Economy is not a panacea; but it is the indispensable instrument for putting development into gear. In other words, if one wants to change the social situation of a developing country, if one wants to create a receptive climate for the rise of a new culture, one must begin by creating the material bases. But even so, it must be said that the true causes of development are mysterious; Historical **and** economic studies can be undertaken, theses written. But can one say why England changed, all of a sudden, at the end of the 18th century? And why, one day, GetaUHQ **was** transformed and began to develop? And the United States¹. No **one** knows exactly why. We have no definitive answer. All we know is that this **process** of change comes from the spirit of the people.

But the fact that we have no answer to this enigma does not dispense us from doing our duty. If there **is** no miracle of development, we equally will not know the reason why. We must, at least, do all we have **to** do, all together. If I say "we" it is to stress the fact that the developed countries are not alone. The developing countries are with us in the race toward a common goal.

Interview by * **fl**

The Philippines face family planning

**Its population density
is now five times
the world's average
and will double
every twenty years
but its islands
can't be stretched
to make room.
Threatened by the explosion
government and
private groups begin
to attack
the problem**

by EUSEO CARAHDAHU

The bleak outlook of the Philippine economy due to an imminent population explosion would be brightened were the average Filipino family size reduced. Through an effective family planning programme

Dr. Frank W. Lorimer of the Population Institute states that if the Philippines should attain a total fertility rate from the level of 6.5 in 1960-65 to 2.1 in 1995-2000, there would be some 41 million persons in 1980 and 72.7 million by the year 2000.

To expect the minimum increase projected above is wishful thinking. However, Dr. Mercedes B. Concepcion, of the Population Institute, states that if the present fertility rate could only be reduced from 6.5 to 4.8 between 1960 and 1980, the number of children from 5 to 14 years would be smaller than expected by 1.7 million. This reduction would afford the channelling of resources to the improvement of the quality of secondary and higher education as well as to agro-industrial development necessary to bolster Philippine economy.

The first attempt at family planning started only in 1972, when a group of private individuals banded themselves and began disseminating to the masses techniques of contraception, hitherto known and practised only by an insignificant few among the educated.

Unfortunately, there is as yet no national movement of sufficient force to control population growth. The national government, while not exactly opposed to family planning, has remained passive on the subject.

The city of Manila is the first local government that has endorsed it, by integrating into its health programme family services, including all kinds of contraception. Family clinics have been opened in all the 42 health centres of the city. This movement is, however, incongruous from the national point of view, considering that the greater bulk of the population (85%) live in the rural areas where the fertility rate is known to be higher.

The nationwide campaign on family planning is currently being undertaken by private organizations, and to a limited extent by individual government offices and institutions. There are at present

Euseo Canutdang is Director of the Hunan Plant Industry of the Philippine Department of Agriculture.

three private groups actively engaged in the movement: The Planned Parenthood Movement of the Philippines, the Family Planning Association of the Philippines, and the Philippine Family Planning Agency.

The Planned Parenthood Movement was originally a sectarian group and until lately confined its activities to church groups in the dissemination of information and contraceptives. Lately, however, it has started offering family planning

mainly from membership fees and donations and grants from philanthropic individuals and foundations.

While the Family Planning Association works independently, the Family Planning Agency teams up with government agencies in launching family planning movements. One such endeavour was undertaken in cooperation with the National Land Reform Council. This particular family planning programme is a supporting measure to the administration's land

rural areas military medical teams for the care and needs of rural people, and it is contemplated that family planning be integrated into this rural health programme, also with the help of the PFPA. Some 27 medical teams have already been fielded and it is planned that medical personnel in the reserve * force be called to active duty to increase their number.

The College of Agriculture of the University of the Philippines had integrated family planning as a part of the course

FACTS OF LIFE

The present Philippine population which is estimated at 34 million, occupies a total land area of 115,700 square miles or a population density of 237 people per square mile, five times the world's average. It increases at the yearly rate of 3.4%, the highest in Asia.

Over the past 60 years the birth rate has remained nearly constant at 45 to 50 per one thousand population yearly, a sharp contrast to the much reduced present death rate of 12 to 15 per one thousand population per year, brought about by modern strides in medical science and technology. At this rate, it is projected that the Philippine population will double itself every twenty years.

The average number of children in a Filipino family is 6.8, compared to 2.5 in the United States, and the women's average marrying age is 19.3 years.

Employment and Dependency

Almost one half of the population is under 15 or over 65, otherwise called the high consumption-low production age group. With only 51.6% in the productive age group of 15 to 65 years, 4 to 5 persons are dependent on every five persons in the productive age group. 47% of the population is under 15 years, the highest in southeast Asia. This high number of dependent young people are a heavy burden to their elders who must provide them with food, clothing, shelter, and education. To employ people such as these, the country must make available at least 400,000 new jobs a year.

The average net income of the Filipino family is only about \$105 a year; 76% earn less than \$500 annually. 10 to 15% in the productive age group are either underemployed or unemployed. Of the 65% of the labour force engaged in agriculture, one half are self-employed, tilling two-hectare farms at most. For lack of job opportunities for unskilled labour. 83% of the population live at a sub-standard economic level.

75% of the population (from 10 years and older) can read and write. Only about 17%, however, reach college level.

And yet, if the present trend of population growth continues, school facilities would have to be doubled in twenty years.

The Food Situation

The per capita food consumption, about 1 800 calories per day, is way below the minimum body requirement*. With a total area of 6.5 million hectares devoted to the cultivation of food crops, the rate of increase in production has only been 3.4% during the last ten years, barely able to keep pace with the backlog in food deficiency. It must also be considered that a good bulk of the increase in agricultural production during the said period consists of export crops such as copra and sugar.

The Philippines has to import to cover up deficiencies in consumption requirements. In 1963, 845 thousand metric tons of food items were imported, accounting for 7% of the available supply. Cereal importation in the same year reached more than 16% of the available supply. The net supply for energy foods is nutritionally sufficient but utterly inadequate in the protein-rich ones.

While cereal importation has notably decreased during the present calendar year and rice and corn sufficiency may be attained by 1970 as envisioned by government programme planners, it is likely that the country would continue to suffer from insufficiency of fruits, vegetables and protein-rich foods such as meat and meat products, milk, eggs, and fish and fish products within the next decade or two unless a similar boom, as is presently being experienced in rice production, takes place in the production of these items.

** Those are the latest available statistics, but the food situation has greatly improved thanks to the high-yielding 'rice breakthrough'.*

services to other interested individuals. It has also been providing logistics to both the FPAP and the PFPA in the form of equipment and supplies.

Military and civilian team*

Both the FPAP and the PFPA have branched out into chapters in the provinces and are operating family planning clinics. Information is disseminated through all mass communications media and seminars and house-to-house visits. The operational costs of these three groups come

reform programme. Besides directing its educational and motivational drives to the farmers, the PFPA also trains government technicians working under the land reform who are expected to augment the services of the PFPA technicians and to take over their activities eventually.

The PFPA is also waging a campaign among armed forces personnel, by conducting seminars in military installations and training military medical personnel on family planning techniques.

There is a new move to disperse to the

on family life in the home technology curriculum since 1954 and in the farm and home development projects. The college initiated and sponsored the first Family Planning Workshop in Manila in October, 1965. This was followed by a seminar in December of the same year with government rural workers as participants. A year later, a series of family planning seminars were held in the districts.

While these programmes launched by the three private groups are almost always

aimed directly at the spacing and limitation of child births, the educational campaign waged by the College of Agriculture covers a broader aspect of family life, with contraception techniques only a part of the overall educational campaign. This may be gleaned from the variety of topics discussed in the seminars conducted by the institution which include: responsibilities of parenthood, physiology of human reproduction, techniques of conception control, personal hygiene, maternal

The progress of the family planning movement cannot be expected to be as fast as desired. Such limitations as lack of funds and trained personnel have hampered, to a great extent, the operation of family clinics and the conduct of research studies. House-to-house visits, which are a must since the average rural housewife rarely reads newspapers and magazines, cannot be undertaken on a wider scope because either funds or qualified people are unavailable.

of statutes prohibiting the importation of family planning material such as literature, devices and drugs. These were also banned from ihc mails, but recently a new law lifted these restrictions.

Tremendous public response

The once popular belief that the high birth rate was due to the Philippines being a Catholic country no longer holds true today. A majority of women asked have expressed the desire to limit their children if they are shown how. Worthy of note is the fact that (the University of Santo Tomas, a Catholic institution, has joined the crusade for population control and is offering courses in the rhythm method of contraception.

Academic and financial grants have been extended to some of the planning groups. Such assistance has afforded some 100 scholarship trainees to attend international conferences, observe similar programmes in other countries and undertake postgraduate studies abroad.

To date, there are some 300 family planning clinics all over the country, including those operated by the Manila Health Department. Contrary to previous opinion, contraceptive birth control measures have been found acceptable by Filipino families. Data gathered by FPAP gave the following number of contraceptive practice tabs: Intrauterine devices, 11 000; Pills, 8 747; Foam, 1 400; Rhythm, 27; Condoms, 460; Withdrawal, 261; and all others, 1 619.

One family planning clinic operated by the Philippine General Hospital, a government hospital in Manila, has from 5(X) to 600 new patients every month. What is significant is the fact that this monthly average of cases was attained after only some 16 months of operation. The Philippine General Hospital is one of 26 hospitals in the world supported by the Population Council of New York.

Dr. Ruben Apclo, President of the Family Planning Association, expressed strong optimism that the movement will succeed in the country. He points out that although the only concrete gauge of the movement's success would be the country's population itself after 15 years, the public response is "tremendous."

Progress is certainly slow but steady. From all indications, family planning in the Philippines may yet succeed and contribute to the solution of the country's economic ills.



The tint couple to register for family planning in Barrio Tabon as the result of a series of family planning seminars held in conjunction with the country's land reform programme.

Car, child care and development and sex education. In search for facts and valid observations as a sound basis for formulation of a family planning programme, the UP C* has endeavoured to conduct researches on fertility behaviour, family life and nutrition.

* is noteworthy that some privately owned hospitals have integrated family planning in their maternal and child care programmes. Medical schools are likewise Stan ing to integrate family planning into their curricula.

This is not to imply, however, that family planning is not making headway. As a matter of fact, public response to the movement is very encouraging.

Until a few years ago, family planning was a taboo topic. Today, it has become the favourite one for conventions and seminars. Before the start of the movement some two years ago, contraception was known only to medical practitioners and applied by the monied class but unheard of by the public. The dearth of information was due to the existence



Operation 017

100 000 nomads
scattered throughout
the north-western desert
of Egypt,
leaping over millennia
of biblical Jiving
to join
the consumer society



L Aiiifiti;

by GEORGES ZOTTOIA

Guns arc thundering along ihc Sue/ Canal — artillery duels, skirmishes, comma ndn raids, The Arab-Israeli'conflict dominates the Near teas fem scene and no problem can be considered completely aPart from this conflict.

Bui put this burning reality aside for a iwmetu and turn ti> another which ^ millions of Egyptian fcilahn are creating In mud and sweat, day by day, stone by 5to ne. drop by drop. This reality, with tm e hard and heavy name of develop- " *it, will free man more completely than tnc mosi horrendous wars. It is the bMio P^oblcm of the people of the Nile valley.

Cut io essentials, the socio-agricultural situation of the United Arah Republic can oc seen as a galloping population growth — a popuiatian of 30 millions which has dimbJed in less than a gencr- at<en and is increasing ;ii the rate of 000 ml "on a year — mt against a country • ~J..**« 40«0(X) square miles. 96% of v n*n is desert. The green valley of OK tme covers only 12 000 square miles — an ar^ta smaller ^jn Switzerland.

The new Aswan dam is the hero of [he situation or, as U.A.R. officials say. " the backbone of the economic development plan." This cyclopcan achievement hus swallowed up 17 times as much granite as the Great Pyramid —55 million cubic yards.

From antiquity, the fcttah, slaw of ffc Nile, has been subject to the cruel rhythm of its Hoods and receding waters, its lean and lucky years. There was bardy time to gather a hasty harvest from the mud of the Nile before the next flood arrived. But the almighty river had to be lamed some lime; a lake the size of a sea had to be* created, from whith the fellah could draw all the water he needed ithroughoul the year.

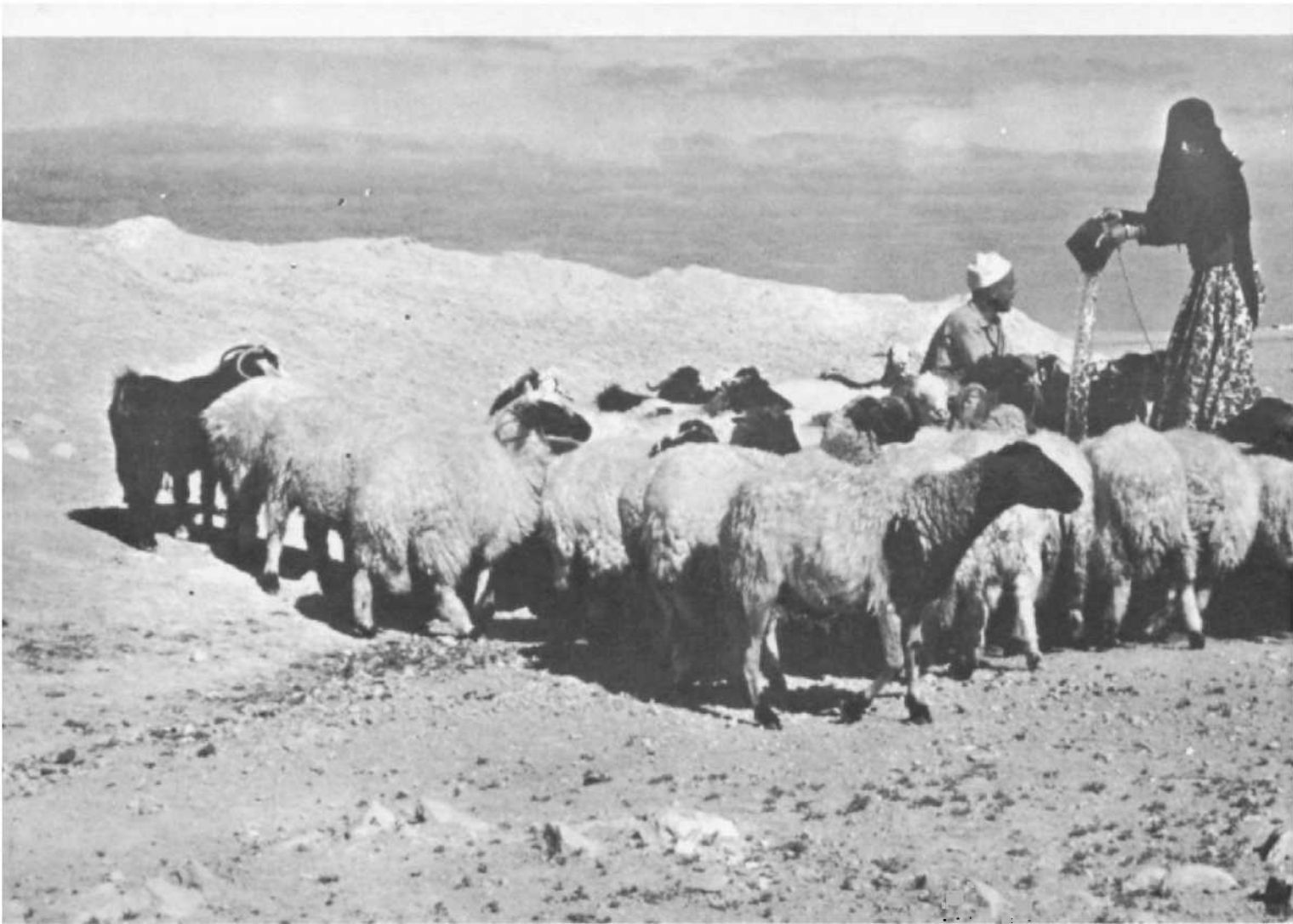
Thai work is now ncarng completion. An upsidt-dnwn pyramid of granite blocks the Nile. The level of Lake Nasser is rising to form a sea 360 miles long, covering 2 000 square miles. Five of 12 turbines arc already producing elcciik power. But irrigation wW be the finesr contribution of the dam. Millions of

peasants will harvest two or three crops a year instead of only one. Hundreds of thousands of.acres of desert will be opened up for agriculture. New names are appearing on the map of Egypt — New Valley. New Nubia, Liberation Province.

I should like to describe one of these operations extending from Alexandria to the Libyan border, along more than 300 miles of coast marked by famous names — Mcrsa Matruh, Alamein, I reported from Alamcirr in 194S sis years after the Montgomery-Rommel clash when the war wus still showing its wounds: wrecked tanks; burnt-out planes; crumbling trenches; dunes torn by mines; human bones lying beneath rusty barbed wire.

Today, only the ccmclerics along the coast recall the Alamein of the autumn of 1942. Dunes are covered with dive and almond groves. Windmills are pumping water from the earth. On this side of tly: Nile, war was silenced long ago.

Operation Of 7 — afmost a James Bond title — launched by the U.A.R.



Bedouins and their sheep range the old battlefields of El Alamein. Sometimes they find pieces of weapons and scattered bones. But sometimes IP above. Discovery and repair of these wells is encouraged by the government, if a family settles down by one to become farmers they receive a «

Government through its General Desert Development Organization (IGPDO), with the aid of the World Food Programme, decided to tackle a human problem first of all: some 1(XMX)O bedouin scattered with their flocks throughout the north-western desert of Egypt. In order to conquer the desert, it is necessary to settle the nomads and turn them into farmers. They have to be uprooted from a biblical age and projected ow millennia into our consumer society.

Buttling for windmill*

Bedouin means nomad. A nomad's prestige is gauged in terms, of his flock of sheep and goats. But goat is synonymous with erosion. In the opinion of many experts, the deserts of the Near

East are the ultimate testimony to the slow degradation of the soil for which the nomad, str:u.t:isL of the storehed earth, is said to be responsible.

The first step of the authorities — land distribution — can only be a chip in the mosaic of development for the land consists only of sand, und the mam-ing nomads' interests are guided by water and grazing grounds.

The NiJe waters will not irrigate the northwestern desert, even when Lake Nasser has become a sea. This will reach only as far as Dabbah, 1 G 3 miles west of Alexandria. The remaining 200 miles lying along the coast will have to rely on rainwater. Such water does exist, stored underground beneath the dunes.

"We offer a windmill to ill those who dig until they find water," the authorities

told the bedouin. And the first wind-mills went up in a Don Quixote landscape.

Fruitful with Mkr, the desert waited for seed. "We offer at a nominal price alt the olive, almond and date trees and all the hurley seed you want," said the enno officials, led by dynamic Hassan and Kashmiri. And the orchards were started.

In addition, the World Food Programme is giving every bedouin enough food for five persons for six months ^a >e;ir if he plants more than HO young fru¹ tu.vs on his land, and for nine months if he plants more than 200, until he >^ able to live i>n the produce of his har\^L

Food aid can be given for the entil* year if the bedouin takes part in ;iJtJ"" tional community development WOTL >^{1L} 11



Just water in ancient Roman cisterns such as the One
Pump the water and other agricultural activities



A Bedouin boy, one of 100,000 wanderers in Egypt's northwest desert, stops to drink tea.

as building earth barrages or cleaning the ancient Roman cisterns, rainwater traps dug by the contemporaries of Antony and Cleopatra. It is believed that some 10,000 such cisterns still exist, though only a few hundred have been repaired.

A delicate balance

This is how Operation 017 was started. Agricultural production led to the establishment of a marketing network. Bedouin-managed cooperatives have been set up in some 40 villages. The government authority built their headquarters and storage for food and clothing, together with schools and rural health centres, which have played the leading role in settling the nomads.

Primary education became compulsory

in the U.A.R. some years ago. The Bedouin, like all citizens, have to send their children to school. They are proud of it.

I visited one of these small desert schools. On one side, the sea shimmered through the white dunes, highlighting the date plantations. On the other side, the Weak wind sand extended as far as the eye could reach, broken here and there by the outline of a windmill.

In the classroom of the second form — the primary course consists of six forms — a little Bedouin girl in a long red robe, her plaits neatly tied by ribbons and a blue tattoo on her forehead, was doing subtraction in Arabic on the blackboard. Teacher and pupils — boys and girls — followed the exercise with great attention, acknowledging each cor-

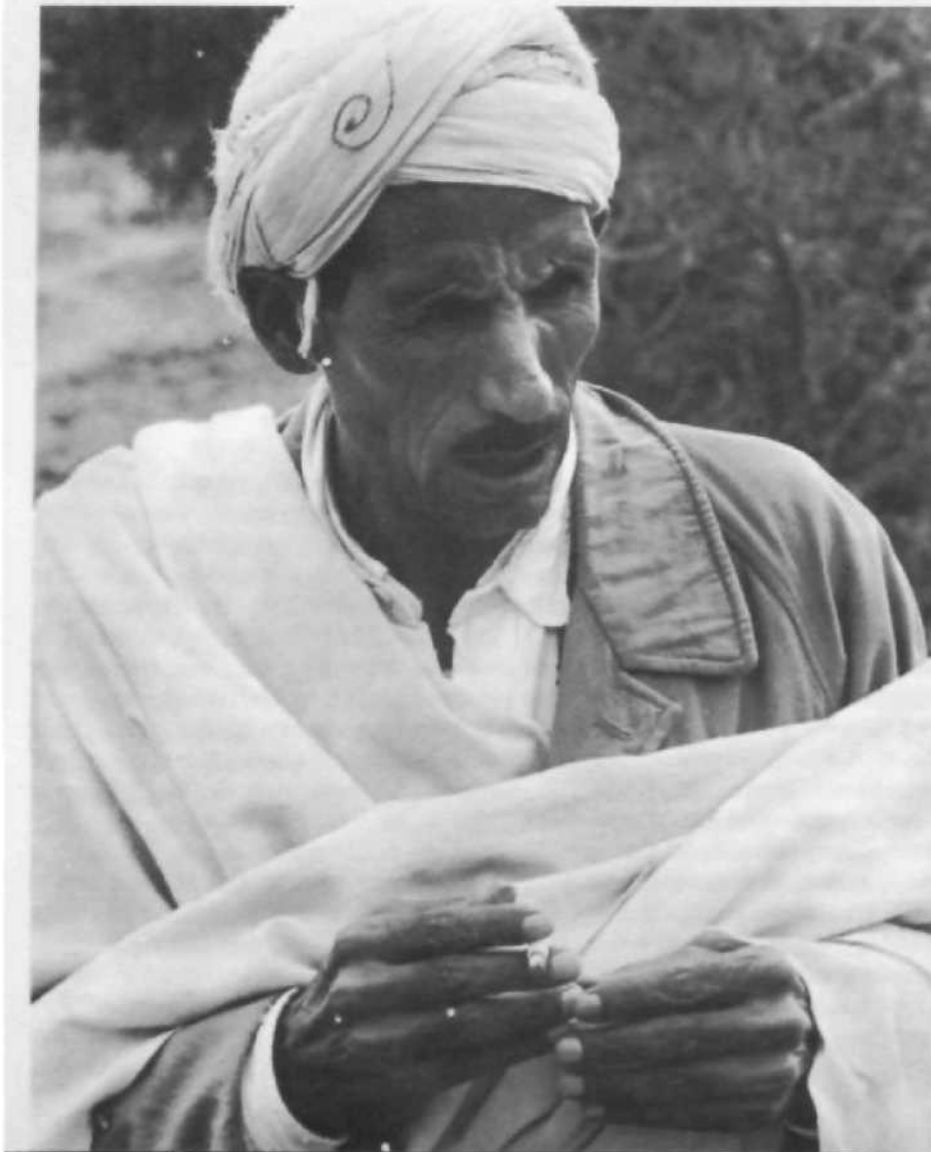
rect sum with loud applause. The bell rang. The children left the room in twos, while cloth satchels carried sling-fashions. A Bedouin girl on a donkey was wailing for her little brother. He climbed on to the animal and clung to his sister. The donkey trotted into the dunes, with the satchel full of books and copy-paper jerking up and down at each pace. Other pupils bravely trudged off into the desert. "Some of them walk up to 10 miles a day," the teacher told me.

The rural health centre is another achievement. In the U.A.R., one village out of two is now equipped with such a centre. Doctors fresh from the university generally serve at such centres for two years, the equivalent of military service. A doctor within reach — that is truly a revolution in the nomad's life.



• The worst of calamities is a large number of children with few resources," says a family planning poster from El Alamein. Quotation is from the Hadith Sharif, or Holy Scripture.

Hat Yaacoub Aouf is a farmer: • God does not give anything to these who sleep."



A poster urging family planning adorns every centre. It shows an ideal family of three members, echoed in the three pyramids shadowing the faces of father, mother and child. Birth-control policy takes its inspiration from a sentence of Mohammed the prophet: "The worst of calamities is a large number of children with few resources." This bold reference to the founder of Islam, intended to overcome Muslim resistance, underlines the government's determination to use birth control as one of the pivots of development.

A key problem remains unsolved because it is rooted deeply in tradition — the flock. A bedouin receives fodder, distributed by the World Food Programme and GDDO, only if he sacrifices 10% of his flock on the altar of marketing, and this proportion must consist of female animals capable of reproduction, his most precious property. The experts are adamant on this point. The existing pasturage of the region can only feed 500 000 animals and already there are 650 000. The operation was to have started last year, but drought decimated up to 20% of flocks. It is due to start

Bedouin children with a new status symbol, white



soon — and may be repeated later on — because the precarious balance between pastures and flocks must be respected at all costs; otherwise the regayicd soil will slowly deteriorate to desert again. Bui a bedouin told me: " Look at the Koran: Joseph laid in stocks for the lean years. Let us not sacrifice our female reproducers in advance, If our flocks become too big, ihere still remains an outlet for we can sell the surplus animals."

I *m up to MM*

Is the goat going to come out on top w the pastures, the desert or development, prestige or reason? Striking at a bedouin's rlock means wounding his self-respect; it means that the badge of the nomad is taken away from him and he becomes merely a small cog in our society.

However, life in the desert is changing l'tle by little. Children are going to school. Water is welling up amid the olive trees. The health centre is keeping roving m>n and animals, serves for receptions or children's games. One by one, Onuses havt risen from the sand. Wher-

ever the nomad has struck routs of stone. Operation " Settlement" has been successful.

A camel that once upon a lime used to lead the migration now dozes in the courtyard of a house. The lord of the desert has become a farmyard animal. At best it ploughs a small barley field, harnessed to the yoke as a draught anirrui]. Its masteT, friend of sand and stars, has bid down his olive baton. The great voice of the desert is silent and only the soft murmur of windmills can be heard.

I spent a day with a bedouin who quoted Joseph and the Koran — Haj Yaacoub Abdel Malek, chief of the co-operative at £1 Keisr. a village on the outskirts of Mersa Matruh.

Hmpit:ilin' reigns supreme with Ha] Yaacoub, a patriarchal figure with lynx eyes and an aquiline nose set in u triangular face. Silting under his tent, we drank the mint-flavoured tea of friendship from small glasses after a substantial meal of mutton and rice.

He told me about his life: bom under a tent in the desert; taking sheep and goats out to pasture as a child. " One day my father dbcovered a Roman cistern. We cleaned it. The dunes turned

into prating grounds, 1 thought: the Romans brought civilization. It's up to us to create it again."

He was 20 at the time of £1 Alamein. The war destroyed his efforts. Tanks and shells drove him deep into the desert. He started from scratch again in 1943. Today, he owns with his brother 240 olive trees, four windmills and about 50 acres of barky. He is the sole owner of 250 sheep and 250 goats (you do not share the flock with others). He is now trying to grow grapes.

Haj Yaacoub spoke in maxims, like a wise man of the Bible: "God did not give us water to let it flow stupidly into the sea, .". Without God, there is nothing to set man apart from animals . . . God docs not give anything to those who sleep."

Haj Yaacoub honoured me by inviting me to visit hts house. Girls in brightly coloured dresses — his daughters and nieces — moved in the semi-darkness. The house had seven rooms, three of ihem for his sons who went to high school. "They will go to the university, Inchallah." Haj Yaacoub said.

One of them, Salah cl Dine, 16, had just come home. Bent over a narrow

ags *thai show they attend school. Some waJ* ten miles a day to and from ffito class room. Opportunity for education also encourages nomads to settle.*





table with a smoky oil lamp, he was studying French. An inscription on the wall read, "God, help me increase my knowledge."

"Salah el Dine would like to go to the military school," Haj Yaacoub explained. "But I should like at least one of my sons to help me in the fields. I started as a simple shepherd. He is going to start as an agronomist."

His children were learning both French and English. Haj Yaacoub was proud of it: "I want my children to know several languages. I know only one. They will be able to communicate with other people. You can recognize a man by his relationship with others and the purity of his heart."

After a brief glass of mint, Haj Yaacoub produced a small coin from his wallet: "I found it at the bottom of a Roman cistern. Take it in token of friendship."

Let there be no mistake. The north-western desert of Egypt has not yet been harnessed for **agriculture**. For the time being, there are only islands of development. But Operation 017 — or "Operation Alamcin," as I prefer to call it — is remarkable above all for its high quality. Several million nomads live in the deserts of the Near East. This pilot experiment, if successful, may be tried elsewhere in the U.A.R.; similar operations have **been** launched in Syria and Jordan.

The first balance sheet would seem to be more than promising for the northwest: 40 cooperatives; 1,000 windmills; thousands of tons of olives, almonds and dates being produced each year; the first **mills** established for the processing of olive oil.

The U.N. Development Programme is completing a survey on the possibilities of development in the region: an interdisciplinary approach covering all aspects including tourism because the snow-white **beaches** among the most beautiful in the world.

The U.A.R. Government is evaluating ocean resources. Another discovery: oil under the dunes of El Alamcin where Rommel's tanks were stopped by lack of petrol.

El Alamcin of 1942, an autumn of war. El Alamcin of 1968, a spring of development. Development is one of the two key conditions for the rebirth of Egypt; the other is peace.

Haj Yaacoub's 18-year-old son Salah el Om studies French.

The pitfalls of communication

Thousands of experts
are roaming the third world:
Their success depends
on their impact
as agents of lasting change

by BERN WARD JOERGES

Social development at the community level and, in particular, the problem of how to obtain the participation of local populations, is of considerable interest to all those who have to design or carry out projects in the fields of agriculture, small-scale industry, health and nutrition, community development and resettlement, urban renewal, etc.

But political or administrative decisions in developing societies do not automatically lead to those infinitesimal and infinitely varied behavioural changes at community level which signal the emergence of new developments from the social vacuum. We are often confronted with a local time lag, a gulf between plans and their implementation, between new institutional frameworks and popular support, between national requirements and response at the grass roots.

For this reason, a good deal of effort in the development field is expended on creating effective instruments of communication between local communities and external agencies. Extension services and their expert advisers, closely associated with both the educational system and mass media, make it their business to perform such mediating tasks. Many thousands of national and foreign experts attempt to gain influence over the

behaviour and activities of local groups in this way.

Very often they try to stimulate culturally new modes of behaviour leading toward goals which are alien, or not always of prime importance, to local ways of life.

Focus on the advisor

Much has been said and written about the part such agents of change can play in local development work. In these discussions the character, attitudes, motivations and skills of the expert are often regarded as the prime condition for achieving success in advisory projects which cut across cultural boundaries.

Only secondary importance is attributed to the character of the group with which the advisor is dealing — its aims and problem-solving capacities, its resourcefulness and central preoccupations — and the broader social context is somehow only regarded as a series of modifying factors.

In order to realize how absurd such an expert-centred approach is, it is only necessary to imagine oneself in the position of a farmer, or slum-dweller, or small trader who is confronted with the temporary presence of a few foreign experts who start propagating all kinds of new ideas (without having the power to enforce their wholesale adaptation). The expert then appears much less important; much less a man who can induce and control complex processes of behavioural change. He appears, rather, as an intruder

who may be helpful, who is at times a nuisance, who is often incomprehensible, but is above all, of transitory significance.

One of the reasons for this biased view of things lies in the fact that most of the information which has been collected on the processes of intercultural communication comes from the experts themselves; hardly any systematic empirical surveys have been carried out. It also arises from the excessively narrow concept of communication which underlies the majority of research and theory and which, in turn, serves to strengthen the original conception.

Communication research is dominated by the dyadic frame (the relationship between the transmitter and receiver) and is often unduly confined by this to a study of meaningful symbols which pass between one individual, or one group, to another. This relationship is often naively regarded as that of the more knowledgeable, or superior, to the less knowledgeable, or somehow inferior, as, for example, in a parent-child or teacher-pupil or counsellor-client relationship.

The enforcement of this dyadic model upon problems of human communication seems, indeed, to be part of the cultural tradition of word-centred societies, such as ours, which place heavy emphasis on reading and writing, the encoding and decoding of verbal messages, books, films, TV, etc. Less literate people who do not rely so heavily on complex symbolic operations probably also rely less on rules of evidence in which symbolic

Bernward Joerges is a psychologist, member of the Board of the Centre on the Role of Education in Social Development of the Saar University. He is also a member of the development unit and the cultural

le presentation takes precedence over tangibility.

The central importance attributed to the dyadic relationship has adversely affected the way the expert communicates within technical **matanct** programmes. An expert is regarded as 'successful' if he is capable of establishing a smooth and trouble-free human relationship with the client group. The expert's ability to adapt himself is regarded as the principal prerequisite for this. Adapting himself means learning to understand the local culture, accepting local ways and values of the group and remaining mentally healthy while living through the culture shock.

However, effective communication is not merely a way of establishing a relationship with local groups. The only decisive factor is the resulting pattern of behaviour on the part of the client group. What is important is the emergence of new patterns of autonomous behaviour, i.e., behaviour which remains unaltered after the expert has left the scene.

It is not particularly important whether the expert manages to build up satisfactory personal relationships and an emotional dependence on him, or whether he achieves a high measure of adjustment to his task, judged by his personal well-being and health. The yardsticks of "real understanding" and "emotional identification" conceal a certain degree of unnecessary sentimentality.

This does not mean that the expert's subjective experience, and his capacity to sustain satisfactory relationships across cultural barriers, is irrelevant to the communication process. On the contrary, this factor deserves careful consideration. The expert's role is usually a rather ungrateful one and, for this reason, he obviously feels an increased desire for recognition, humanly satisfying relationships and personal success. Because of this he will apply, more or less consciously, strategies of communication which are apt to increase the personal rewards to be had from the client group; he may even select client groups according to this criterion.

TrmmHioitMI **mocimtiem**

But such strategies may consist of conforming with local conditions and expectations rather than attempting to induce change. Or it may consist of in-

roducing a whole range of formal new activities in the client community as proof of conspicuous and demonstrable action to the employing agency which is rewarding him. Thus, communication which pays off in status and personal satisfaction can often be detrimental to the initiation of autonomous new activities in the group.

If we wish to formulate a more suitable model for the relevant processes of communication, we must extend the range of the phenomena which determine behavioural change. The dyadic model ("Who says what ... to whom ...") must be extended to include stimuli from those parts of the human environment — usually conceptualized as social structure and ecosystem — which are contingent upon the symbolic interaction between advisor and client.

This requirement may, at first sight, seem banal — it can be argued that personal relationships are always dependent upon, and conditioned by, the social and physical environment. Communication theory has, nonetheless, always treated this environment as more or less independent, imposing on interpersonal communication fixed limits within which it runs according to certain psychological mechanisms. But it is impossible to impose this kind of assumption in a situation of general technological and social change.

Social changes and changes in the physical environment occur **between** face-to-face relationships; between community groups and external agents. The group's response to educational or advisory influences, on the other hand, is closely associated with its response to socio-organizational and ecological changes.

Where there is no change within the larger social and physical sphere, overall response within the cultural core of activities (especially sustenance activities) will be rather traditional — the expert may evaluate this as resistance to change.

To take another example, where the physical communication system changes rapidly bringing about higher rates of mobility but where, at the same time, local social controls remain unaltered, younger and more receptive people may respond by leaving the area. From a narrow view of the underlying communication process might evaluate this as a white collar complex, or reluctance to

undertake manual work, tracing it back to some supposedly wrong kind of formal education. Note the moral quality which **evaluation** tends to acquire when the expert fails to recognize major sources of behavioural discrepancies.

One could easily cite other instances of change — differentials which occur between the three levels against which the behaviour must be measured, namely physical environment, social organization



MBI? with the know-

and the behavioral disposition of the person (this last level being the one which is primarily engaged in educational and advisory techniques of communication).

Hattuvri beVraior, tsppci>ny collective solutions to problems of sustenance, must be understood as the individual's reconciliation of his inner disposition with ecological and social requirements, constraints and opportunities.

Sew habitual behaviour ultimately requires, changes on all levels. Disjunctive, non-concurrent change on different levels is, however, the distinguishing feature of transitional situations. Attempts to help

this transition by getting people to reorganize their situation cognitively, i.e., by direct symbolic communication, should be based on a systematic understanding of the ways in which changes in the physical and social environment produce new ways and opportunities for action.

Communication strategies which mainly rely on verbal or other symbolic interactions are faced with two major types of change situation. Firstly, where rapid



a nuisance or a help?

Living in rapid changes, leave behind a growing number of people who are not able to grasp the nature and significance of these changes, cognitive adaptation is not achieved and new opportunities for more differentiated satisfaction of their needs are not exploited. Here, advisory services are necessary and helpful.

Secondly, where due to education, mass media exposure, increasing mobility, political integration, etc., mental transformations take place while corresponding changes in the local environment, both material and institutional, lag behind. People begin to feel uneasy and

dissatisfied within such situations of "rising expectation," or "information explosion." Here, advisory and other educational strategies are comparatively ineffective — advice tends to take on a peculiarly hygienic quality, i.e., helping people to keep trying in the face of a hopeless situation, providing a basis for reforms left undone, busying itself with relatively peripheral activities, etc.

A similar distinction can be drawn between ecological and technological conditions on the one hand, and the institutional arrangement of relevant activities — i.e., political authority, administration, forms of economic cooperation, inter-community relations etc. — on the other.

The place and value of advisory work can be determined more rationally by keeping such categories of change in mind. It becomes easier to select criteria in choosing target populations and their kind and content of communication media. We can better understand the profit to be had from coordinating or synchronizing advice with other kinds of incentives. Ways of modifying behaviour through indirect communication — i.e., environmental and institutional design — may complement strategies in advisory work. While remaining a member of a service profession, the advisor might well use his professional competence in pursuit of communication of a more inclusive kind.

Not tided: training an expert

Advisors working with culturally distant groups tend to use communication techniques which are characteristic of relationships in their own culture. They usually enact some variation of a teacher-pupil or counsellor-and-client relationship. Even though such a relationship may be unfamiliar or even alien to the client's culture.

< It is very important to the advisor that he act within learned and proved (Kleinfeld) frames of reference. He stands for his status, his technical competence and his professional identity. But it is also clear that if his assumptions are mistaken, relationships based on them will remain superficial and meaningless at best.

Similarly, most cultures will have developed some form of polite and inconsequential ritual for dealing with strangers and outsiders. Again, such

rites serve to ensure the views and integrity of the host while, at the same time, allowing a smooth and even interesting interchange. But nothing really happens and the whole process resembles rather the encapsulation of a potentially dangerous microbe trying to attack an organism.

Experts may unwittingly accept role positions for purposefully seek to occupy such positions) which are pre-established in the host culture and endowed with a certain authority. However, they will seldom be able to fulfil either the expectations attached to these roles, or their own purposes through a remodelling process. If experts fail to respond, or over-respond, to dimly perceived (but nonetheless culturally clearly defined) expectations, they risk being regarded as morally in the wrong, or dangerous, by the local people.

We hardly know anything certain about the dynamics of interpersonal communication across cultures. What we can say is that smooth communication betrays, more often than not, ineffective communication. Open misunderstanding, a certain amount of tension and interpersonal conflict (the expression of which will again usually indicate that the change agent and the "change" are having it out with one another: many times it may even cause a complete breakdown of communication.

(h) brings us back to the personal characteristics and skills of the change agent. To find and train experts who can support and manipulate a certain degree of strain, instability and change in interpersonal relations should be of continuing concern to advisory services and technical assistance agencies.

To the extent that we are able to spell out the educational correlates of environmental changes per se, methods used in approaching local communities on the level of personal intercommunication will be more rationally adapted to (it special local condition. To the extent that familiar techniques of interpersonal influence and persuasion, methods of finding participation and involving the local people emotionally in the work of the expert prove ineffective, environmental design — which aims at a more inclusive control over important determinants of behaviour — could become a more important part of the profession. •

The story of a sophisticated breed

**Bountiful crops in southeast Asia:
"Miracle rice" said the people - but IR-8
performs only under skilful care,
proper irrigation, plenty of fertilizers
and incessant work**

by **HUBERTUS ZU LOWENSTEIN**

"Miracle rice" — that's what people are calling the most successful of the high-yielding varieties developed at the International Rice Research Institute (IRRI) in Los Banos, 40 miles southeast of Manila. But Dr. Robert F. Chandler, the director, does not like such expressions: "They are misleading and may induce complacency," he explains. "The more sophisticated the varieties, the more care they require — plenty of fertilizers, proper irrigation and drainage. Some of them are rather susceptible to various kinds of diseases — they need pesticides, insecticides and herbicides."

Dr. Chandler, a New Englander in his early sixties — greying or sandy-haired, it is difficult to tell which — was "raised on Maine potatoes," he told me. But for many years now he has been deeply interested in rice. When talking, he barely opens his mouth, but what comes out makes sense.

From 1950 until 1954, when he joined the Rockefeller Foundation, he was first dean and then president of the College of Agriculture of the University of New Hampshire. Before that, he was a soil scientist at Cornell.

IRRI was established as a joint venture of the Rockefeller and Ford Foundations, with the active cooperation of the Philippine Government. The original endowment was for \$7.5 million. It was officially dedicated on 7 February 1962

and operates on a yearly budget of about \$1.75 million.

"Our sponsors are very magnanimous," says Dr. Chandler, "All they want is that we spend the money for the purpose it is given." This purpose is clear: to increase the production of rice in Asian countries using all the resources of modern science and research. But Africa and Latin America, even Europe, are also benefiting from the Institute's work.

The staff of IRRI is housed in an air-conditioned, single-story building containing the offices and laboratories: biochemistry, bacteriology, plant pathology, microbiology, soil fertility and so on. The entomological collection is most comprehensive, from tiny stem borers, yellow and striped, to the larvae of tropical butterflies, beautiful creatures in their final stages, with wide, dazzling wings. Some greenhouses and a few special research buildings are located near the main building. There is a 200-acre experimental farm with underground irrigation and surface draining ditches. Any plot can be hooded or drained at any time of the year.

A magic word: "lodging"

IRRI has a permanent staff of 550 persons, among them 24 senior officials. The majority are Filipinos, the rest are divided among seven nations, with the United States representing 3%. In addition, there are 150 local, agricultural labourers.

When I was there the great fountain in the wide, open courtyard was turned on in honour of the birthday of some na-

tional figure. Behind its luminous spray, projected in soft colours against the horizon, one could discern a chain of prehistoric volcanos. "It's to them that we owe the fertility of our soil which is only about 10 000 years old," Dr. Chandler commented.

Rice is to the east what the "bread of life" is to the west; 60% of mankind live by it. 90% of the world's rice crop is produced and consumed in Asia but rice yields in the tropical and subtropical regions of Asia are low. The soil, unless fertilized by friendly volcanos, becomes exhausted. If crop yields are to be stepped up, to keep pace with the population explosion, artificial fertilizers must be applied. Field trials and experience indicate what kind; nitrogenous fertilizers are mainly needed in the Philippines.

"But to make the rice nitrogen-responsive, we had to change the plant type," Dr. Chandler explained. "The traditional varieties are too tall, 64-88 inches. All the strength goes into their big leaves. Wind and rain blow them over easily and they lodge when you apply fertilizer. So we started breeding short-stemmed varieties, the IR-8 and others, which have a much greater lodging resistance."

This is the magic word in modern rice production: "lodging." Its specific meaning is not explained in normal dictionaries: that the plants tilt over when their growth is stimulated by fertilizers.

"You can see it for yourself," Dr. Chandler said, when we were out in the fields. "The plants over there are already lodging, here they aren't." Each

Hubertus zu Lowenstein - Weirtheim-Freudeberg historian, newspaperman and world traveller has written many books and in recent years has become increasingly interested in agricultural development.

variety has its polite wooden name-tag:
 "IR - 8 - 288 - 3"; "IR - 5 - 47 - 2";
 "IR - 400 - 2K - 4 - 5." Another variety
 tested here, the "C4 • 63," was
 developed by the College of Agriculture
 of the University of the Philippines, adja-
 cent 10 IRRI.

These cryptic figures indicate the ge-
 netic lines, processes of painstaking plant
 crossings, which couldn't be more toil-
 some and complicated if one were breed-
 ing greyhounds or racehorses.

Take the now famous "IR 8 - 288 -
 3" as an example. In 1962 a short-
 stemmed rice from Taiwan, named
Dee-gto-woo-gett, was mated with a tall
Indira from Indonesia, called *Peia*. In
 IRRI's records this process was
 designated as "IR - 8." 130 seeds from
 this first pollination were grown in green-
 houses, where they produced the first
 generation. Seeds from the best speci-
 men were planted in the fields, the second
 generation of about 10 000 plants. All
 undesirables were removed, those too tall
 or too late in maturing for instance.
 Seeds from the remaining happy few were
 planted in the blast nursery and exposed
 to a Pandora's box full of diseases. Once
 more, the weak and undesirables were
 discarded. From this third generation —
 another 10,000 — the best 298 were se-
 lected and the seed from each plant sown
 separately in the blast nursery, providing
 298 pedigree rows of the fourth genera-
 tion. After another careful selection, a
 single plant — number 8 — was taken
 from row 288. The fifth generation
 sprang from it, the basic stock of today's
 "IR - 8 - 288 - 3", four years after the
 Wansunimati of the marriage between
 the short-stemmed *Dee-gto-woo-gen* and
 * *Peia*, his tall female spouse.

"IR - 8" (as it is called in short) stands
 only 36-42 inches high and matures in
 120-130 days. It is lodging-resistant and
 its total yield averages 5 000 lb per acre
 compared with *Peia*'s 2 200 lb per acre
 average yield. US dwarf Chinese (urban)
 varieties; WO 10 lb per acre average and the
 1980s average of most local
 varieties.

One may really talk about a break-
 through provided of course, that all other
 requirements are fulfilled. They are con-
 tained in the form of seven command-
 ments in a 1966 pamphlet published by
 IRRI. Here one must be very careful (cautioner,
 70-100 lb per acre, and it must be prop-



A Kanan researcher at the Rice Research Station is deliberately infecting this test plot as part of the long and painstaking process of selecting a new variety.

erly applied — as a rule 50% at pi an Ling, the remaining half 60 days before harvesting, or two-thirds at planting, the rest three weeks before flowering, depending on the quality of the soil. Other commandments deal with a continuous and well-regulated water supply; pest, weed and insect control, and — most important — the right time for harvesting.

"Many of the nitrogen-responsive varieties retain their dark-green leaves and stems even after the grains have fully matured." Dr. Chandler said. "The right time for harvesting is when more than 85% of the grains on the panicle are firm and clear in appearance, regardless of the greenness of the leaves or straw,"

IR-8 has a history similar to IR-5. It, too, descends from a *fi'ta*, but in the male line a Malaysian variety, called *Tangkai Rotan*, is its ancestor. IR-5 is taller (52-56 inches) than IR-8, hence it has less lodging resistance, and its yield is usually somewhat lower. But it has proved resistant to some plant diseases, like tungro virus, the bacterial leaf blight and the grassy stunt virus.

"Every variety has both its good and its bad features," Dr. Chandler said bluntly. "Only field trials and continued research can determine which is best under given circumstances,"

Because of its high amylose content, IR-5 cooks dry and fluffy, so some Asian peoples prefer it to IR-8, which tends to become soggy as it cools. "Others don't like the chalky spots in the IR-5 grains. They want their rice to be glistening," Dr. Chandler said. "But we are trying to change this whitish colour and make IR-5 more palatable"

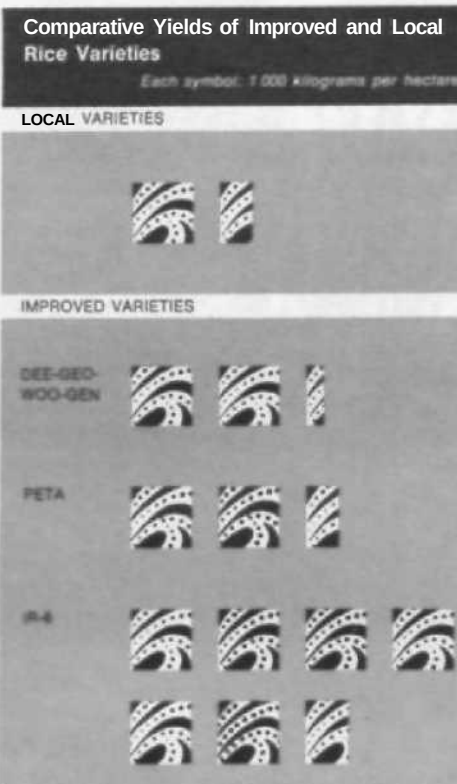
The Physiology Department at Miami discovered that one of the main reasons for lodging is that in the cloudy monsoon season the tall plants do not get enough sunlight, and therefore suffer a carbohydrate deficiency which affects their strength and lowers their yield. "The long, droopy leaves shadow the lower ones," Dr. Chandler commented, "so the new plant type had to have short, stiff, erect leaves which would permit the light to enter freely"

During the Crop Year 1967/68, some 750,000 acres, were planted with the high-yielding *Vietnam* in the Philippines. IR-8 accounted for two-thirds of the planted area, adopted now by more than half of the farmers. The average yield was about

3,500 lb per acre (compared with 1,330 lb per acre for the local varieties). The highest yield of IR-8 was recorded in Quezon Province - 10,000 lbs per acre.

The library at Miami has a most comprehensive collection of the world's technical rice literature. There are over 15,000 bibliographic references written in 22 languages and drawn from some 800 scientific journals and periodicals.

The major part of all rice literature comes from Japan. This remarkable country — through hard work, frugality



and ingenuity — has achieved the second highest yield in the world, next to Australia, an average of 4,590 lb per acre. More than half of the arable land is used for paddy farming, subsidized to the tune of \$800 million a year. The Japanese paddy farmer receives twice the world market price for his product. This is a policy that pays. Not only has Japan become independent of rice imports but its industries — chemical, fertilizer, farm machinery — stimulated by the demands of the home market, then made Japan one of the leading export nations of the world.

Taiwan, with 2,050 lb per acre and two rice crops a year, and Korea, with 2,100 lb per acre, come next. Then India, with yields dropping sharply; Ceylon averages 1,780 lb per acre; Pakistan 1,510 lb

per acre; India 1,440 lb per acre; Thailand 1,420 lb per acre; Cambodia 980 lb per acre and Laos 775 lb per acre.

Eighty nations are working with IR-8. In Ceylon, Mr. C.P. de Silva, Minister of Lands, Irrigation and Power, who is growing IR-8 on his own fields, told me about his experience: "It needs plenty of oxygen. Drain your paddies three or four times and let the soil crack in the sun to increase the ventilation." His yield, he affirmed, was four times higher than the local varieties.

Malaysia, West Pakistan, Cambodia and Indonesia also report excellent results with the IR-8 varieties. Where they have not been introduced on a large scale — because of taste preference or due to local conditions, where paddies are flooded too deep for the short-stemmed IR-8, for instance — they have still stimulated the use of other high-yielding varieties.

AN told, during the crop year 1967/68, almost ten million acres were planted with the new varieties. They produced an additional yield of six million tons meaning \$360 million (at \$60 a ton) more for the farmer.

"But is there not a danger that these varieties will eventually overstock the world market and cause a slump in rice prices?" I asked Dr. Chandler. "For some time to come the birth rate will be outrunning food production," he replied.

"The whole of modern agronomy and technology must come into play to make the new varieties produce as they should," says Dr. Chandler emphatically. "There just isn't such a thing as a miracle rice. No improved variety will solve the world food problem by itself. And how does it help mankind if the additional crops are eaten up by rats, destroyed by insects or withered by disease! What we have done so far is only the first salvo in the battle against world hunger," he concluded. "There is hope and we can be happy about our successes. But we must persist here."

New poetic experiments have already begun, once more with tens of thousands of experimental plantings. Just as the tall *ir-8* and the squat *ir-8* became the forbears of IR-8, so too may soon be relegated into history the fields of Los Banos. Dr. Chandler's gentle "children" — IR-8 and IR-5 progeny — are now in their second or third generation.

Profits from losses

Food surpluses on one side, economic lag on the other: by using food aid for investment financing in development countries, the World Food Programme is trying to restore some balance

by NOËL OIYELET

Nothing irks a scientist more than a problem in which he cannot find a satisfactory answer. Economists have been sorely tried since the beginning of the century by the baffling question of agricultural surpluses. The tendency was, until recently, to regard them as mere unfortunate accidents caused by some fault in the economic machinery — the United States did not know what to do with its wheat. Brazil "burned its coffee in its locomotive engines," and the peasant from Brittany sprinkled his artichoke surplus with kerosene.

Meanwhile, a few observers became aware of the fact that people were dying of hunger in other parts of the world. This discovery first provoked shock, then anger, then irritation, and finally fell into oblivion.

Today we know that agricultural surpluses are a consequence of technological progress and that they will plague us for some time to come. A report submitted by Sicco Mamholt, Vice-Chairman of the European Economic Community in December 1968, to the "Six" Ministers of Foreign Affairs and Agriculture states that although the agricultural production of the Common Market enjoys a 3.3% yearly growth, on the other hand the raw material expenditure is slowing down from 3.6% per year be-

tween 1960 and 1965, to 2.7% for the period 1967-70.

We must admit, therefore, that even the "developed" countries are themselves still "developing" to some extent, and will remain that way for a period of time which cannot be predicted. This, for the very simple reason that the growth of their agricultural productivity, the shrinking of their agricultural population (one farm "dies" every ten minutes in the European Community), and the rise in the consumption of agricultural products do not follow the same pace. Because of this gap, which is impossible to bridge, agricultural surpluses will continue to CMSI in rich countries unless these three factors — productivity, size of the active population and consumption — adjust to one another as smoothly as parts of a well-run machine in the three sectors of the economy: agriculture, industry and services. This may not happen before the end of this millennium.

Orthodox economists have urged governments to legislate, tax, fix quotas, and subsidize. In spite of all this, agricultural surpluses rather than vanishing kept growing. Faced with a troublesome torrent, it is easier to change its course than plug it at source, or, better still, channel it to good use.

This is the economic justification of

the World Food Programme [WFP] to (he developed countries.

In the glass and steel skyscraper south of Rome, where the WFP offices are relocated, Sushil Kumar Dey, Associate Executive Director, brilliantly explains the other aspect of the question. The 62-year-old Indian, schooled in all aspects of application of economics to public administration, has lived through the difficult task of getting his country's economy off the ground. He knows what he is talking about. For almost forty years he has been driving himself to observe, understand, live with and whenever possible solve the problems of development.

Why must we do it?

If help to poor countries were to come only from produce needed by the rich ones — produce which could be sold on their own markets — it would slow down the development of the poor, says Sushil Dey. And since we must be economists and not sentimentalists if we are to be lastingly effective, we believe that profitable production can only be exchanged for equally profitable work. But developing countries, for the time being, are in no position to offer such profitable work. To undertake such an unequal type of exchange between rich and poor countries would only amount to shifting the problem without really solving it.

Furthermore, developing countries must undertake a certain number of operations which do not yield immediate profits. These operations seldom attract bankers and economists. One cannot expect the afforestation of a region, a literacy campaign, or the fight against soil erosion, drought and floods to yield so much percent the following year. This is even more true of providing nourishment for the young.

To support these activities, marginal, yet of paramount importance to the developing countries, and to help them get started, we must find equally marginal products. In other words, to support projects of no immediate economic value, we must procure products which are deprived of value because they cannot be marketed. This is where the surpluses of the rich countries come in, for they fit exactly this description. They will play the part of the water used to prime the pump. It is "extra" water, which is



No Egyptian banker in right mind would undertake alone a gigantic task men at Egypt's raw Nile basin irrigation. These workers demand compensation in food from the

not included in the consumption quota. It, too, is a surplus, but it is indispensable. These surpluses cost the developed countries very little since, by definition, they had no market value. They were produced with already amortized equipment.

To the recipient countries, these surpluses offered the only means of employing, on projects requiring considerable manpower, unskilled workers usually considered as marginal labour.

When United States industrialists understood that paying higher wages to their workers, thus increasing their purchasing power, was to their own best interest, American industrial development made a tremendous leap forward.

This concept can now be applied on a world scale. Today's proletariat consists of the unemployed or underemployed populations of the poorer countries and it would be well within the **fettered** of the richer ones to transform these populations into future solvent customers.

4 OAW strategy

All humanitarian aspects being considered — their "moral" content is self-evident — we see that we can state this problem in economic terms.

This notion has only now begun to dawn upon governments who, after a lengthy period of groping, are starting to think in terms of what we call the "strategy for development."

It took nearly two decades after the end of the second world war for the World Food Programme to come to life, thanks to a joint initiative of the United Nations and the Food and Agriculture Organization. It was established on 1 January 1963 for a trial period of three years. The General Assembly of the United Nations drafted its terms of reference on 19 December 1961, providing it with a structure including a UN/FAO Intergovernmental Committee and a mixed administrative body. It also called for a Plying Conference at which all member countries were invited to pool their surpluses.

A goal was set at the start, aiming at helping, on a voluntary basis, one hundred million dollars worth of contributions — two thirds of which in commodities, and the rest in cash and services, to put rice, wheat or meal at the disposal of whom was not enough. These had yet to be shipped out, and the

The *tan mat*** contribution for 196B-1970

	U.S \$
1. United States	63 000 000
2. Canada	20 000 000
3. Netherlands	7 222 222
4. Federal Republic of Germany	6000 000
5. Sweden	6000000
6. Norway	3 050 000
7. United Kingdom	2 976 761
8. France (pending)	2 040 316
9. Italy	1000 000
10. Japan	940000

Note: These figures represent contributions to the World Food Programme only, not the total aid to development given by the above countries. In some cases, these figures represent in fact no more than a small percentage of their total aid to development.

organization to be supplied with the means with which to operate. One of the advantages of this method is that, by not paying workers entirely in cash, the danger of a too fast rise of their purchasing power is checked, and this in turn prevents inflationary food prices from spreading throughout the country. Another advantage is that, once freed from utilization for marginal projects, local financial capital can be more profitably invested in other undertakings.

The risks are obvious: by introducing food supplies in the economic sector of a given country, the danger arises of com-

THE GOLDEN RULES

To qualify for WFP acceptance and sponsorship, a government proposed project must have a high coefficient of manpower;

— the commodities received must be distributed in kind and not sold (except, of course, in cases where sales form an integral part of the project);

— the project must be broad enough to produce notable results;

— assistance programmes already operating in the country must be coordinated and other possible sources of assistance taken into consideration.

— the self-help factor must be brought into play;

— the country must be capable of continuing to operate the project once WFP assistance is terminated.

putting either with the local production or the country's food imports.

This is why WFP has made a use of scrupulous care the possible repercussions in every field.

Another category concerns the feeding of school children or students, to increase school attendance and improve academic results. We know that an empty head goes with a hollow stomach; thus we cannot expect a good mental performance from undernourished youngsters. This is what one might call an investment in human resources.*

As WFP's Executive Director, Francisco Aquino pointed out, "the shortage of skilled manpower in the industrial, as well as other sectors, paralyzes growth even when the necessary financial resources are available." He recalled that WFP was currently feeding, among others, thousands of students in vocational training or professional schools in Bolivia, Chile, Colombia, Peru and Jamaica.

The Tunisian experiment

The third category concerns the settlement of people in new lands — displaced communities, refugees, nomads. Food aid fills the gap until the settlers can harvest their own crops.*

The fourth and last category deals with the feeding of livestock which amounts to the transformation of vegetable into animal protein on the spot. Which brings us to another important asset, common to all these types of aid utilization, that is, the introduction of changes in the recipients' food habits. The acquisition of new tastes in food hopefully may lead the people to increase the local production of new types of foodstuffs.

Here is an example of how food aid can help development: the concept of food aid as an additional source of investment first made its first appearance in Tunisia in 1958, when the Government decided to draft all the unemployed workers for its campaign to fight underdevelopment. When WFP started its operations in Tunisia in 1963, it found a population already familiar with the utilization of food aid for investment financing.

The Government considered WFP aid as a complement to its own efforts, and it

* See George Zolotarev's article on p. 34.

was agreed from the start that at least half of the total value of the approved investments would be supplied by Tunisia itself. And here are the elements of the problem; according to the 1966 census, 50% of the Tunisian population is engaged in agriculture, and more than half of the total population consists of people under twenty years of age. The conclusion is that two top priorities must be established: agriculture and education.

On the agricultural side, the emphasis now is on building up large flocks of sheep and poultry. With wheat, maize, mixed with other fodder, animal feed is prepared and sold at low cost to farmers. The proceeds are partly used to finance the production of the feed, and partly for promoting vaccination campaigns. Once this new circuit runs smoothly, WFP's assistance will no longer be necessary and will be discontinued. And this is exactly what we meant by comparing the Programme's role to that of water in a pump-priming operation.

Work for the unemployed

As far as education is concerned, WFP contributes to pre-vocational, vocational and agricultural training, not by sending teachers — which is the concern of other organizations such as UNESCO, or which may be done through bilateral agreements — but by providing, as usual, food aid. This is how, for instance, several intensive six-week training courses turned 17 500 agricultural trainees in two years. The contribution of WFP, amounting to U.S.\$610 000, enabled the Tunisian Government to subsidize these workers during their training period.

Here, among others, a few more WFP operations in Tunisia: foodstuffs for school canteens and several youth centres, for students participating in the establishment of new villages; support to two soil conservation and afforestation projects in the north of the country and construction of small dams in the south.

Over and above their intrinsic value, these operations have the advantage of providing work for an underemployed labour force. And that is, precisely, the primary goal of the World Food Programme, and its official, institutional function.

However, with sizeable stocks of foodstuffs at its disposal, WFP could hardly re-

frain from apportioning at least part of it to the relief of distress caused by disasters — floods, earthquakes, famines, wars, revolutions. . . . An emergency food aid scheme was established for that purpose but, no matter how greatly needed for humanitarian reasons, it constitutes,

aid does not reach the stricken areas fast enough. The usual time lag is of four to five months, and the question was raised by the French delegate to the Intergovernmental Conference at its 14th session in Rome last November. The answer was that it was difficult to remedy the situation, because many donor countries were quite far from the recipient areas, and that shipping was not always immediately available. There were also cases of many shipments being held up by strikes — a paradoxical situation in which a relatively needy group of people, fighting for a better deal, plunge into deeper misery while entire populations much worse off than they are.

Emergency and development

But even late, emergency food aid is far from useless.

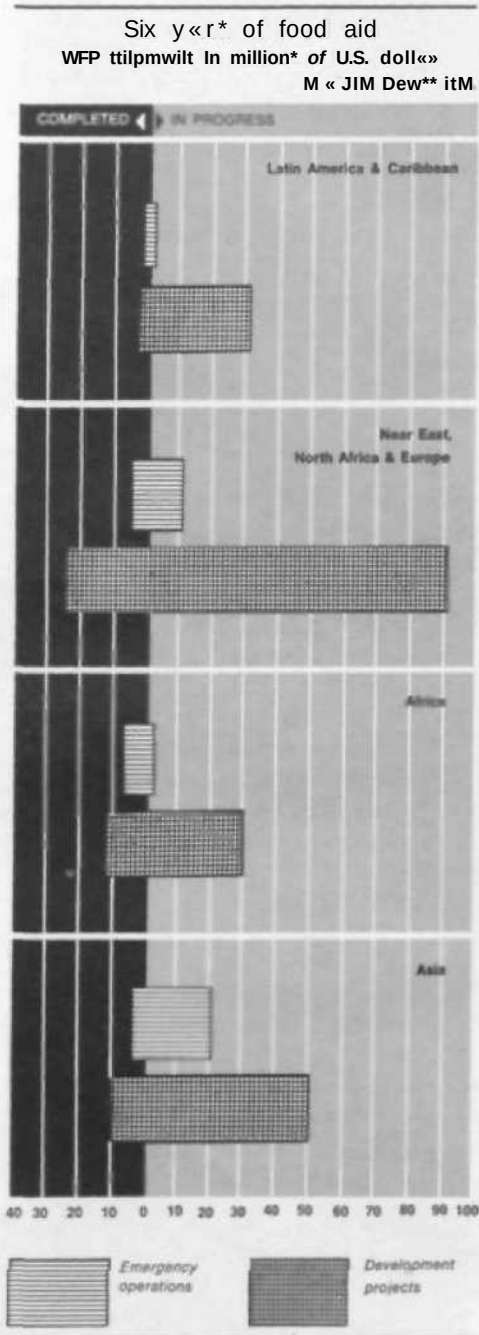
People still remember the major disasters which occurred in various parts of the world in recent years. By bringing them to public notice, press, radio and television have helped generate worldwide surges of generosity which brought quick relief where needed.

But generosity is short-lived and while the image of the refugees soon fades out of memory, the refugees themselves remain and continue to ask for bread.

It is usually at this point that WFP relief is utilized for reconstruction work. In any case, WFP action (which may cover both emergency and development projects) is expected to complement the work of other relief organizations and to dovetail its action with theirs.

Needs as can be seen, are immense. How are they met? Where do the resources come from? Earlier we noted that a pledging conference was being held every two years at the headquarters of the United Nations. It is attended by delegates from member countries of the United Nations and the Food and Agriculture Organization, who pledge a certain amount of tons of wheat, sugar, powdered milk or whatever other food or feed commodities they can contribute, as well as cash and services.

Contrary to what one may think, it's not rich countries that are the only donors. Many developing countries also participate in pledging, as a matter of principle. This is the free soup kitchen operation, not a one-way traffic of charity-



after all, a secondary and small section of WFP's activities, involving only 16 to 17% of its operating budget.

Recently we had cases of emergency aid to Nigeria, Pakistan and Syria.* We must add that, unfortunately, emergency

* See report No. 6.

but an exercise of mutual aid, a **cooperative** enterprise in the truest sense. Naturally, everyone cannot contribute to the same **extent**, in quantity as well as quality. But everyone participates.

Taking a look at the report of the latest pledging conference for 1969/70.

offer of two tons of canned beef, Cuba with 5 <XX> ions of sugar, Niger with 30 tons of millet and Pakistan with 1 200 tons, of rice. The U.A.R. gave beans and Morocco, fish meal. Other countries with no surpluses pledged token contributions in the (J nhndij. 1 tKM) J:ILirs; H;ir-

the truly multilateral nature of the Programme, whereby the United States **matches** other nations' contributions, this donor will have to reduce its own pledge because it must never exceed 50% of the total pledges in goods, cash and services contributed by other nations, which amounted to \$83 million. The result is that only \$186 million out of the 200 million goal will be available to WFP. Already during its experimental period (1963-1965), contributions had fallen short of the (00 million dollar goal, by yielding only 94 million.

Next, during the second three-year period* 1966-68), \$187 million were collected out of a goal of 275 million. Splitting (new triennium figures in yearly terms, one finds that the first budget had raised **31.3** million instead of 33.3, or 94% of the goal; the second, 62.2 instead of 91.6 (68% of the goal) and the latest, 83 million instead of 100 million dollars (83%). Which means that there **has been** progress in absolute value terms and wavering in percentages.

This is quite encouraging. It is also satisfying to note that developing countries have contributed, this time, 91 million dollars, as against 2.8 million dollars during the **experimental period**, it is equally satisfying to know that what had been considered an experimental venture has twice been confirmed and is now being established on a lasting basis: the Programme is expected to be prolonged every biennium "as long as multilateral food aid is found feasible and desirable."^{*}

We must admit that it is "feasible and desirable" to do much more than has been done so far and for a long time to come. As long as productive capacity exceeds what can be paid for and yet there remains unsatisfied need, not only of those who by their situation can give nothing in return, but also of those who can make use of the supplies to rise in due course to full productive stature, so long will there be scope for this Programme.

We also know that the countries of the Third World will not achieve development by next week, nor within the next ten or twenty years. They must follow the path of evolution of their predecessors, the richer countries.

Such are the factors which we cannot ignore, any longer, which condition the range of the possible and of the desirable.



Bolivian **incngshoramtm unioact ftrmf surplus cargo which will tied seven thousand stdv,nts.**

held at United Nations headquarters on 8 January 1968, we find some startling things: side by side with the United States, **WMC initial pledge was of \$100 million** (70 in goods and the rest in cash) and there is Botswana with an

bados, 4 000; Cyprus 1 000 and Ethiopia **2000..**

Unfortunately, the callers are soon out of breath, and the report shows that the **ftpi** of \$200 million will not be reached. According to the roles devised to preserve

The agricultural revolution came first

The early XIXth century industrialists
were farmers of humble origin

The industrial revolution is nothing but
the result of an agricultural productivity breakthrough

by PAUL BAIRQCH

The industrialized societies of today are becoming more aware of the basic importance of scientific research as a promoter of economic development. Since science has long been looked upon as an effect of economic development, rather than as a cause, this is indeed a change of attitude.

The level of economic development we know today came into being through agriculture. Some 10 000 years ago the changeover to the Neolithic civilization — a change from an economy based on fruit-gathering, hunting and fishing to one based on agriculture and livestock raising — made possible, for the first time in history, a lasting food surplus per capita per worker and, in consequence, a significant consumption of non food products.

From this new situation came the beginning of specialization and the creation of an urban way of life. From these non agricultural communities came, in turn, those intellectual and technical developments which formed the basis for ancient civilization and, eventually, modern science.

However, this first agricultural surplus remained very small, even after the successive progress made by ancient and western civilizations. Thus, at the beginning of the 18th century on the eve of the industrial revolution, about 75% of the working population of the most fully developed societies was still engaged in agriculture, although average consumption of agricultural products was very low. In such traditional societies, excess production over consumption was not more than 25% for the average family unit. The inadequacy of this surplus becomes obvious when it is remembered that annual fluctuations in agricultural crop yields average more than 25% even at the national level.

This imbalance lay at the root of recurrent subsistence crises, the most serious of which could so weaken the economy of a country that the result was a decline in the civilization based on that economy. As long as agricultural productivity did not rise above the 25% surplus level, any progress in the development of civilizations was impossible.

Widespread changes in the system of agricultural productivity which preceded the industrial revolution broke through this hierarchy. The resulting increase in productivity brought the average surplus level up from 25% to more than 50%, over a period of 40 to 60 years. In this new framework, a very poor harvest no longer meant severe scarcity or famine. The agricultural revolution — as these widespread changes in rural life have been called — gave rise to the cumulative economic development known as the industrial revolution.

Without cotton, no modernization

Agriculture played a vital part in the industrial revolution. In societies where only one or two of the active population out of twenty are agricultural workers, it is easy to forget that just before the industrial revolution fifteen to eighteen out of every twenty of the working population worked at agriculture. Such an economic structure meant that a very large proportion of the active population — that is, of the consumers — participated in the development process. Without such a large degree of participation, indeed, upheavals such as the industrial revolution are not possible.

All countries in which development started in the 18th and 19th centuries experienced progress in the agricultural sector 20 to 30 years ahead of the industrial sector. In Great Britain, cradle of the industrial revolution, agricultural development preceded the industrial revolution by about 20 years, while the industrial revolution began in 1760. In France, the period of growth in agriculture took place in 1760-1800; industrialization did not start

Paul Hirst is a specialist in economic development, and heads the Economic Research Unit of the Institute of Development Studies, University of Manchester. His latest book is *The Agricultural Revolution and the Industrial Revolution* (Cambridge University Press).

until 20 or 30 years later. The list could be continued to include **almost** all countries now considered to be developed.

Again, if the level of 19th century agricultural productivity is compared with that of, 19th century industrial development, the two can be seen as closely related.

These facts led to the conclusion that a low level of agricultural productivity has been an insurmountable barrier to any further development in the non agricultural sectors. Without progress in agricultural productivity, the transfer of **work** to the industrial sector would have resulted in a more than proportionate **fall** in agricultural production, since **very few forms had reached the stage** of diminishing returns. The impact of foreign trade did not yet exist, due to the very high transport cost which would have stemmed from a large differential between levels of development. It is significant that Great Britain waited for eighty years after the industrial revolution to engage in the large-scale importation of foodstuffs.

Progress in agricultural productivity brought about a cumulative process of expansion in several ways.

The first essential fact is that increased productivity brought extra money resources to the rural population (80%

the conclusion that the mechanization of the textile industry — an important factor in the early industrial revolution — would probably not have taken place without the existence of a fibre so perfectly adapted to mechanical processing,

Thus, through giving rise to an increase in the demand for consumer goods and, in particular, textile products, agricultural development provided a powerful stimulus to the early industrial revolution. But another industry also had to undergo change for full advantage to be taken of this stimulus. This was the metal industry — without cheap iron the pace of the industrial revolution, would have been retarded, perhaps even rendered impossible, because it would have been unprofitable.

The role played by agriculture in the creation of the modern metallurgical industry was a basic one. Upon analysis, it appears that the tremendous increase in iron consumption which preceded the industrial revolution by 20 or even 40 years was a consequence of the demand through the increased wear on implements caused by the new rational methods, and the need for improving existing equipment and introducing new types of equipment. In Great Britain, the additional demand coming from the agricultural sector stimulated



When the world turned raw materials, this cotton being stopped from New Orient. But this industrial revolution was preceded by an agricultural revolution many years earlier. The same historical sequence occurred in other western countries.

of the total population) fairly quickly. At first, greater prosperity produced an improvement in the amount and quality of goods consumed but, very soon, these extra resources were devoted to clothing, and the resultant rapid growth in textile demand stimulated the use of mechanical processes. The traditional supply of textiles was unable to meet this growing demand and cotton, therefore, imported in larger quantities, first in the form of cloth, then as raw material to be processed in the importing country.

Cotton played an important part in the process of mechanization of the textile industry, for the special characteristics of the fibres were well suited to mechanical processing. When the difficulties in adapting cotton-spinning machinery to wool and to flax are considered, one comes to

research into substitutes for the existing fuel, i.e., wood. We have to thank this demand for the introduction of the use of coal, a technical innovation of prime importance for metallurgy. The use of coal spread rapidly and opened the way to the many technical inventions which formed a large part of the so-called industrial revolution.

Lastly, but not least, the decisive part played by agriculture and **the** in the birth of the new class of factory managers and the **the** of industrialization must not be forgotten. An examination of the biographies of many industrialists shows a preponderance of humble people, above all former farmers, among the founders of industries.

The decisive role of farmers and farm workers may be explained by three major factors: (1) the interdependence of

agriculture and industry (above all the textile industry in pre-industrial societies, meaning that the agricultural worker possessed the technical knowledge necessary for industry; (2) the absence, for obvious sociological reasons, of former capitalists in the adventure that was the industrial revolution; and (3), lastly and most important, the fact that the capital investment per worker was much larger in agriculture than in industry. In other words, the capital necessary to put a man to work in industry was considerably lower than that required to put the same man to work in agriculture, the ratio being about 1 to 8. This was the case, of course, only in the early stages of industrialization, characterized by simple industrial techniques involving low investment costs.

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The problem here is of a different order. Today, industrial determinism, the rule previous to the second half of the 19th century, has disappeared. Vast importation of food products is not only a possibility but a fact since, to take an example, the amount of wheat imported at world level today represents almost a quarter of world production. A large and growing proportion of the cereal surpluses of developed countries is imported by the third world, whose balance of credit in prewar exchanges of cereals has gradually become a deficit. Today, in the noncommunist underdeveloped countries, imports of cereals represent 9% of their own production.

This does not necessarily mean that the need for progress in agriculture to satisfy the shortage of food **no longer** exists in the third world. **But it does** imply that it is extremely difficult to anticipate the continuation, let alone any name, in the growing **importation** of food products. **TW» it (or two** reasons: (1) countries having a **percentage** have not got unlimited possibilities; and (2) the means to **purchase** **Nfbcr qumikki** of food are lacking in these underdeveloped countries. Already imports of foodstuffs total **wome** \$7 000 million yearly. Warnings by FAO, and such agronomists as Rene Dumont, about the real dangers of famine confirm that the purely nutritional aspect of agriculture will remain of prime importance to these **DOBTriei** for a long time.

Apart from these nutritional aspects, agriculture in the third world assumes an importance which recalls the situation in the developed countries in the 18th and 19th centuries. Today, agriculture — **occupying 70%** of the **Klto** population and thus representing a percentage close to that of consumers — conditions the development of the industrial sectors in developing **coitBUim** **ta a pan UtBtti**.

No widespread development of industry can be hoped for unless the home markets of underdeveloped countries expand; and in this expansion the rural clasps have to take an important part. It is significant that the production curves of agriculture and industry in the third world are closely related. The widespread recession in Indian industrial production after the bad harvest of 1945 is an illustration.

Thus, in the regions of the third world, the relation between the evolution of a range of primary agricultural products **•Bd** the original raw material is very close. At country level this relationship is much closer, shown not only by statistics: industrialists and **bmiaetsflmfl** of the third world well know

that the volume of their turnover is bound up with the fluctuations of agricultural yields. What is more, as the process of substitution of local industrial production for imports continues, this interdependence will be felt more keenly.

This brings us to the statement that the well-known dilemma of choosing priorities between agriculture and industry is, in fact, a false one. Insofar as industrialization is rightly considered the best means for most countries to reach a higher level of economic development, and as industrialization de-



Traditional farming activities, like the wheat being harvested

pend to a considerable degree on rural demand, every result obtained in the field of agriculture facilitates economic development.

A digression must be made here to consider the problems raised by demographic pressure in the third world, since the very rapid increase of the population considerably retards the necessary progress of agricultural productivity.

It has been estimated that the employed agricultural population of the underdeveloped countries doubled between the beginning of this century and 1950. Since the area given over to agriculture has increased only slightly, this has brought about a large reduction of the area available to each worker in agriculture, resulting in a decrease of agricultural productivity, above all in the **COM tries of AMU**.

From 1970 to 1980 it can be estimated that the working rural population will increase by 30%, or 2.7% per annum against 19% increase between 1950 and 1960. In the early stages of development of western countries the percentage of population increase was of the order of 0.5%. With such a slow rate of increase (0.59%) of the working population it was possible for the early manufacturing industry to absorb about 50% of the surplus working rural population, rising to 100% later. In today's underdeveloped countries, industry



... must change its agriculture to lend to industrial development

was able to absorb only about 10% of the surplus between 1950 and 1960.

How far is agriculture in the underdeveloped countries capable of promoting industrialization — in the sense of transfers to the secondary sector of industrial management and of transfers of capital — as took place in the 19th century in what we now call the developed countries?

The very much higher cost of investment in industry in underdeveloped countries, following technical development, has resulted in the average capital investment per worker being much greater in industry than in agriculture, making the transfer from one sector to another more difficult, if not impossible.

One can estimate that the total capital required to put a man to work in industry in the 19th century represented the

equivalent of about 6 months of a labourer's salary at that time. Today, in the underdeveloped countries, the average figure can be equated with 350 months' salary.

The basic causes of the non-mergence of a management class in the third world can be understood from this: a class which, coming from humble, and often agricultural backgrounds, marked the beginning of development in western countries, and without which any spontaneous process of industrialization is difficult to conceive. The formation of such a class in the underdeveloped countries is made even more problematical by the fact that present-day techniques require larger units of production to ensure a minimum return. If a difference is presumed — say, a ratio of 1 to 3 between what could be called the minimum-entrance fee to the industrial sector at the beginning of the 19th century and that necessary today — there is a divergence of 1 to 300 in the minimum capital required to enter industry between western countries at the beginning of the 19th century and present-day underdeveloped countries.

Agriculturists into industrial managers

In all probability, the international situation of which much has been said recently, may help in this; this problem: the fact that educated workers, agricultural workers are excluded from taking part in this development, even an infinitely smaller part than they did during the development of the developed countries. To the main obstacle — the high cost of capital — must be added, among others, that of the almost total disappearance of rural industry, due to the massive penetration of cheap industrial products coming from the developed countries.

The difficulty of converting agriculturists into industrial managers in today's world evidently limits the possibility of transferring capital by this route. Such transfers cannot take place without the setting up of a saving fund, whether spontaneous or enforced. But although this solution offers considerable promises, the main obstacle is the impracticability of swing to the low level of productivity and the impact of demographic pressure.

Thus, if we accept that the economic development of the third world cannot take place if agriculture is neglected, we must also accept the fact that agriculture is not now. If it has been in the past, a royal road leading almost automatically, through industrialization, to general economic development. Agriculture must certainly be given priority since, with very few exceptions, the economic development of the third world cannot take place without it. But, even with such priorities, the major problem remains: a developed world exists, and its influence is felt in many ways — in the forms of demographic pressure, complex technology, strongly competitive attitudes, emulation of standards, etc.

Since demographic pressure is the main obstacle to development, the measures of family planning and number of birth control campaigns should be intensified.

However, until the effect of the policy can be felt, efforts should be concentrated above all on the internal levels in promoting an increase in agricultural productivity and thereby facilitating the whole process of economic development.

INDONESIA

• *Unique West Irian development plan*

A unique venture in economic development has been launched in West Irian, the sparsely populated, underdeveloped and easternmost province of Indonesia.

A development plan for the region, utilizing the \$30 million Fund of the United Nations for the Development of West Irian (FUNOWDI), has been approved by the Indonesian Government. Under this plan the United Nations is joining forces with government and private industry for regional development for the first time.

sian Irian with capital provided on a tripartite basis by FUNOWDI (a \$2 million investment). Indonesia, and foreign investors. Earnings accruing to FUNOWDI as a major stockholder in the scheme will be used for further West Irian development. Forestry appears to be the most promising sector of development: West Irian has one of the largest reserves in the world of untapped tropical forest.

To develop West Irian's fisheries resources, FUNOWDI has proposed a new form of collaboration with industry (to establish a tuna and skipjack fishery). FUNOWDI is seeking a joint financial investment with a foreign firm which would also operate the programme as a contractor on a commercial basis.

The Joint Development Commission (JDC) will serve as: a) a focal point for stimulating and coordinating development in all sectors; and b) a development corporation with \$4.5 million of FUNOWDI capital to provide financial and investment funds. The Indonesian Government has welcomed JDC as a means of coping with decentralization in a land of 3000 islands.

West Irian is more than 2000 miles east of the capital, Djakarta. Its 170,000 square miles accounts for 22% of the total area of Indonesia but with less than a million inhabitants it has only 0.5% of the population. About a third of its inhabitants live in the central highland. The remainder exist on a subsistence economy in the coastal areas but communications between these communities are rendered extremely difficult by jungle mountains, swamps and mangroves.

CAMBODIA

• *Regional cooperation for the Mekong*

Eleven countries have agreed to launch the \$27 million Prek Thnom power and irrigation development in the

lower Mekong river basin of Cambodia; a major step in the coordinated development of the huge basin. In addition to Cambodia, the governments concerned are Australia, Canada, Federal Republic of Germany, India, Italy, Japan, Netherlands, Pakistan, Philippines and the United Kingdom.

The ten governments and the United Nations Development Programme (UNDP) will contribute \$17,745,000 toward the \$27 million cost of the first stage, with Cambodia supplying the remainder.

The Prek Thnom river dam will provide irrigation for about 500 acres; a power installation with a capacity of 18,000 kilowatts (with a mean yearly output of 50 million kilowatt-hours); a storage dam; a diversion weir; and supplementary construction.

INDIA

• *Firm merchant bank opened*

India's first fully fledged merchant bank began operating in November with offices in Bombay and Calcutta. National and Grindlays Bank formed this division to offer a range of services including financial planning, capital issues, amalgamations, taxation advice, and arranging foreign collaboration for the country's increasingly sophisticated money market.

■ *Newsprint from new mill in Kerala*

A huge newsprint mill in Kerala, one of the few in the world to produce newsprint wholly from eucalyptus, could result from the first close look at some of India's forests. Experts of the United Nations-assisted preliminary survey of forest resources have also achieved a major breakthrough with a successful attempt to make printing paper entirely from tropical hardwoods.

The survey, operated by the Indian Government and FAO, is likely to suggest invest-

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The plan includes a Forest Industries Development Corporation to exploit West Irian's extensive timber resources and a joint FUNOWDI Development Commission to finance and promote a wide range of development activities in industrial, agriculture, fishing, shipping and other sectors. FUNOWDI is the first United Nations unit to authorize such activities.

The development plan recommends a strategy in which major emphasis is on transportation, education and vocational training centres and forestry and fisheries. Secondary emphasis is on power and water; minerals development; and agriculture and livestock.

The Forest Industries Development Corporation will be established under Indone-

men is of over Rs 80 crore (\$107 million) in three major mills in Kerala and Madhya Pradesh. These could make India largely self-sufficient in newsprint and writing/printing paper. Total capacity would eventually be 1 100 tons a day, about half the country's present capacity.

The pulp and paper findings, a small part of the survey's 3½-year investigation of the needs and potential of India's forest industries, foresee demands nearly quadrupling by 1980. Newsprint capacity, soon approaching 70 000 tons annually, would need to increase six times to meet demand by 1980.

The pioneer work in the use of hardwoods in paper manufacture could ease India's traditional and unique reliance on bamboo, reserves of which are fast becoming inadequate. As in the 1920s, when bamboo was proved feasibly, a new raw material supply has to be found if the paper industry is to develop.

In its search over 19 000 square miles, mainly in Himachal Pradesh, Madhya Pradesh and Kerala, the survey experts considered the various alternatives. Himalayan conifers, already tapped, were seen as insufficient because of limited quantity and 'largely inaccessible' stands unless there are revolutionary developments in extraction methods. Hardwoods such as **Bija** and **Saja** were found to be abundant, however, and will form the bulk of forest resources until industrial eucalyptus plantations become exploitable. Successful pioneering attempts to make printing and writing paper from tropical hardwoods were made.

Detailed aerial surveys and tests, involving thousands of calculations by computer, have gone into the survey's work, which finished in December. Total cost was Rs 1.4 crore (\$1.9 million), two-thirds being provided by India and the rest under the United Nations Development Programme.

• **Efficient production method in poultry**

A 12-acre experimental poultry farm at Bagugrah, 40 miles northeast of Delhi, is producing results significant for many developing countries. It was started in 1965 as a centre for stockbreeding and testing equipment



Poultry breeders, using the Oldest to (tie newest techniques, are trying to increase India's egg production, to procure, simultaneously, protein-rich food and better incomes to farmers. Both WFP and the IFHC programme are involved in pilot projects.

and feed with 2,000 newly hatched white Leghorn and Australorp chicks flown from Australia. Its stock now consists of 6500 birds. 3,000 of them layers. It sells 60,000 of the 100,000 chicks it produces annually to farmers who start their own flocks.

The farm was set up under FAO's Freedom from Hunger Campaign with Australia as donor country. Run by the Animal Husbandry Department of Uttar Pradesh State, it is the first of 15 regional units to be established throughout the country under the United Nations Applied Nutrition (ANP) Programme.

The programme aims to increase egg consumption in order to improve diets and promote poultry-breeding on a self-help basis. The chief contributor in men and money to ANP is the Indian Government. The United Nations Children's Fund (UNICEF) provides the equipment, and FAO technical advice. Under

the programme, egg production has doubled in India in the past five years.

The original incubators, feed grinders and mixers, and egg-graders at the farm were supplied by Australia but the replacements for them are completely Indian. India is now in a position to provide

ment On requirements for new legislation, the improvement of the game laws and the establishment of wildlife reserves. This committee will provide a link with the International Union for the Conservation of Nature, a focal point for technical and scientific information.

In 1966 President Ayub Khan, alerted by trustees of the World Wildlife Fund to the slaughter of Pakistan's wildlife, invited a team of experts to make a survey. This was followed by a second survey in 1968. The main causes for the destruction of Pakistan's wildlife were listed as: land clearance involving destruction of primary forests, suppression of natural regeneration by millions of domestic goats, widespread use of the more virulent chemical pesticides and of poisoned baits to kill animals suspected of harming crops or cattle, and largely uncontrolled shooting and trapping.

One of the main victims has been the cat family. Deprived of their natural habitats, ruthlessly hunted for sport, and poisoned, trapped or shot by skin traders, they have slender chances of survival. The Asiatic cheetah is already extinct and there are few remaining tigers in the Sunderbans swamp. The snow leopard, perhaps the most beautiful of cats, has been a particular victim of the skin traders who must now seek prey outside Pakistan.

Recommendations were made by the second team of experts for creation of national parks and reserves. One, in the Himalayas at Gilgit, may be the most spectacular yet established. On one side Nanga Parbat rises to 26 660 feet and, on the other, the 26 250 feet peak of K-2 is visible. A wildlife sanctuary has been established on Khabbak lake following the discovery that the lake harbours a large wintering flock, probably half the world population, of the rare white-headed duck as well as other wildlife.

PAKISTAN

• **Wildlife Fund helps the snow leopard**

Pakistan has imposed a total ban on the export of skins of all wild animals, the shooting of black buck and gazelle, and the shooting and netting of certain rare ducks.

A wildlife conservation committee (in effect a government commission) has been formed under the chairmanship of an eminent High Court judge to advise the govern-

New funds pledged for agricultural development

The largest number of pre-investment projects to be added to the current roster of the United Nations Development Programme (UNDP) at any time — 104 — was approved on 10 January by the UNDP Governing Council. The 52 projects listed below, representing 40% of the total allocation, will be executed by FAO; and, where specified, in association with others.

- Afghanistan:** Supplementary assistance for training and demonstration in animal health and animal husbandry. UNDP — \$426,100; government — \$438,000.
- Algeria:** To improve livestock production in the Si Lakhdad and Sou Saada-Djelfa areas. UNDP — \$1,304,500; govt. — \$4,924,000.
- Bolivia:** To assess the agro-industrial potential of the Abapotozozog region. UNDP — \$1,391,100; government — \$1,268,000.
- Brazil:** For expanding the Faculties of Agronomy and Veterinary Medicine at the Federal University of Santa Maria, FAO in association with Unesco. UNDP — \$1,729,900; government — \$4,871,000.
- Brazil:** To assist wheat production in the major wheat growing states of Rio Grande do Sul, Santa Catarina and Parana. UNDP — \$1,065,100; government — \$1,658,000.
- Burundi:** Initial preparations for launching an integrated rural settlement and development project in the Mosso and Cankuzo areas of Eastern Burundi. FAO in association with ILO and Unesco. UNDP — \$1,433,100; government — \$350,000.
- Central African Republic:** Assistance for establishing a programme of control of rinderpest and rinderpest-like diseases. UNDP — \$83,400; government — \$29,000.
- Ceylon:** To assist in establishing an Agrarian Research and Training Institute. UNDP — \$882,600; government — \$643,000.
- China (Republic of):** To set up a Swine Science Institute at Tapu. UNDP — \$785,200; government — \$1,513,000.
- Congo (Democratic Republic of):** Assistance to Yangambi Agronomic Centre in restoring and promoting agricultural production. UNDP — \$1,034,600; govt. — \$1,131,000. Promotion of agricultural production in the Ruzizi Plain. UNDP — \$609,100; govt. — \$274,000.
- Cuba:** Establishment of a Forestry Research and Training Centre. UNDP — \$992,800; government — \$1,634,000.
- Cyprus:** To strengthen veterinary services. UNDP — \$448,400; government — \$460,000.
- Dominican Republic:** To promote crops diversification and increased food production in the Cibao Valley. UNDP — \$1,127,000; government — \$1,028,000.
- Ethiopia:** Supplementary assistance to strengthen the Awash Valley Authority. UNDP — \$92,800; government — \$47,000.
- Greece:** Research into the control of olive pests and diseases. UNDP — \$1,192,000; government — \$1,135,000.
- India:** To strengthen farmer training centres, develop farm radio broadcast services and expand functional literacy programmes. UNDP — \$1,502,400; government — \$5,795,000. Supplementary assistance to the National Apprenticeship Scheme. ILO in association with FAO. UNDP — \$221,800; government — \$887,000. Pelagic fishery investigation on the Southwest Coast. UNDP — \$2,018,800; govt. — \$932,000.
- Indonesia:** To obtain aerial photographs and mosaics of priority land development areas in Indonesia, FAO in association with the United Nations. UNDP — \$424,200; government — \$25,000.
- Iraq:** To strengthen the College of Agriculture, Mosul University, for training high-level agricultural technicians. FAO in association with Unesco. UNDP — \$1,105,600; government — \$3,578,000. To improve the training programmes for middle level technicians at the Institute of Agricultural Technology, University of Baghdad, FAO in association with Unesco. UNDP — \$1,006,700; govt. — \$3,357,000.
- Jordan:** Pilot catchment programme of soil and water conservation and agricultural development in the Baqa Valley. UNDP — \$1,068,600; government — \$262,000.
- Liberia:** Phase II assistance to the College of Agriculture and Forestry, Monrovia. UNDP — \$1,336,200; government — \$1,718,000.
- Malagasy Republic:** To assist rural development and civic service in three pilot work-orientec literacy projects. Unesco in association with FAO and ILO. UNDP — \$876,300; government — \$1,164,000.
- Malawi:** Training of lake fishermen in improved techniques. UNDP — \$375,200; government — \$150,000.
- Mauritania:** Studies on the feasibility of developing irrigated rice cultivation and sugar production in the Gogol Valley. UNDP — \$1,071,100; government — \$198,000.
- Mexico:** Planning, programming and promotional activities for the regional development of the Lerma Zone. United Nations in association with FAO and ILO. UNDP — \$1,124,800; govt. — \$667,000.
- Morocco:** Supplementary assistance for feasibility studies in the Sebou Basin and Western Hif Region. UNDP — \$252,600; govt. — \$300,000.
- Nepal:** To assist in developing the forest resources of the Terai zone. UNDP — \$1,014,400; government — \$345,000.
- Nigeria:** Pilot project for rural employment promotion in the Western State. ILO in association with FAO. UNDP — \$558,500; government — \$550,000.
- Pakistan:** To improve the existing facilities of the West Pakistan Veterinary Research Institute, Lahore. UNDP — \$946,200; government — \$662,000. To develop a research and training programme at the experimental Poultry Production Institute, Malir. UNDP — \$1,246,000; government — \$1,259,000.
- Peru:** To establish a Centre for Fish Utilization to improve the production and handling of fish products. UNDP — \$1,147,500; government — \$1,339,000. Supplementary assistance to the Forestry Research Institute to expand its training and research programmes. UNDP — \$324,700; government — \$297,000.
- Spain:** Pilot project of groundwater utilization for agricultural development in the Guadalquivir River Basin (Phase II). UNDP — \$791,400; government — \$1,663,000.
- Syrian Arab Republic:** For a new Institute for Rural and Co-operative Development, Aleppo. ILO in association with FAO. UNDP — \$1,050,700; government — \$1,008,000. To strengthen the Tobacco Institute and Research Centre. UNDP — \$386,700; govt. — \$725,000.
- United Republic of Tanzania:** To develop better tick control methods. UNDP — \$531,100; government — \$341,000.
- Togo:** To train the Togolese personnel needed for rural development and extension work in the Kara Region. UNDP — \$758,500; government — \$1,513,000.
- Tunisia:** To increase the exploitation of groundwater in Northern and Central Tunisia. UNDP — \$319,300; government — \$621,000. To strengthen the North African College of Agricultural Engineering, Medjez-el-Bab. UNDP — \$348,800; govt. — \$1,045,000.
- Turkey:** Assistance to the Foot and Mouth Disease Institute, Ankara, for the production of vaccine and the training of personnel. UNDP — \$553,300; government — \$547,000.
- Uganda:** To assist in establishing an Institute of Statistics and Applied Economics at Makerere College. United Nations in association with FAO and Unesco. UNDP — \$1,069,200; govt. — \$961,000.
- Western Samoa:** To investigate the agricultural potential of the islands of Savaii and Upolu and to initiate a programme of water development for the inland regions. UNDP — \$876,500; government — \$378,000.
- Yugoslavia:** To help plan the sound economic development of forestry and forest industries in the Republics of Bosnia-Herzegovina and Montenegro, FAO in association with UNIDO. UNDP — \$983,200; government — \$1,331,000.
- Republic of Zambia:** To improve the government's nutrition programmes and policies on the basis of household food consumption surveys. UNDP — \$646,500; government — \$571,000.
- Regional:** Cameroon. Central African Republic, Chad, Congo (Brazzaville), Congo (Democratic Republic of), Dahomey, Gambia, Ghana, Kenya, Ivory Coast, Mali, Mauritania, Niger, Nigeria, Sierra Leone, Senegal, Sudan, Tanzania, Uganda and Upper Volta. To assist in the control of the African Migratory locust. FAO in association with WMO. UNDP — \$656,500; governments — \$525,000.
- Colombia and Venezuela:** For the social and economic development of the Guajiro Indians in Upper and Middle Guajira Peninsula. ILO in association with the United Nations. FAO and Unesco. UNDP — \$780,200; governments — \$1,450,000.
- Bolivia, Ecuador and Peru:** For the integration of the rural populations of the Andes into their national economies, ILO in association with the United Nations, FAO, Unesco and WHO. UNDP — \$515,700; governments — \$300,000.
- Ceylon, Republic of China, United Kingdom (Kong), India, Indonesia, Iran, Japan, Republic of Korea, Laos, Malaysia, Nepal, Pakistan, Philippines, Singapore, Thailand, Republic of Vietnam, Western Samoa:** To assist in the establishment of an Asian Statistical Institute in Tokyo. United Nations in association with FAO and Unesco. UNDP — \$2,411,600; governments — \$1,404,000.
- South Pacific:** Australia, France, New Zealand, United Kingdom, United States of America, and Western Samoa: To establish a Fisheries Development Agency. UNDP — \$477,700; governments — \$410,000.

GUYANA

• *Making it the Holland Of Latin America*

A comprehensive sea-defence programme planned over the next twelve years is designed to provide protection against erosion and flooding of Guyana's fertile coastal plains which lie below sea level. A World Bank loan of \$5 million and a United Kingdom Government loan of \$7.5 million will contribute to financing the first phase of the programme.

Although Guyana's coastal plains account for less than 3% of the land area, 95% of the population live there and they produce almost 80% of the gross domestic product.

The sea walls to be built with Bank assistance will be along the highly developed east and west Demerara coasts to protect an area which accounts for nearly a fifth of Guyana's agricultural production.

The U.K. sea defence project will involve the building of a wall protecting the densely populated area in the suburbs of the capital, Georgetown, as well as some of the high-value agricultural land along the east Demerara coast.

GABON

• *200000 sq km of forest survey*

A French firm, Centre technique Wrester tropical, has received a \$1 million contract from the U.N. Development Programme and the Government of Gabon to assist in the development of a vast, untouched rain forest in Gabon's eastern zone.

The project's total cost is \$2 146 000 shared 40% by Gabon and 60% by UNDP. The survey is a four-and-a-half year task scheduled to be completed by March 1973.

The survey of an area of 20 000 square miles will include detailed forest inventories, regeneration and growth studies and transportation and

economic studies. Possibilities of establishing new wood-using industries within the eastern zone or expanding existing industries in other parts of Gabon will be investigated.

Gabon is already an important producer of okoumé, a hardwood much favoured for plywood and veneers. Part of the eastern zone is also rich in okoumé and it is a virgin territory as yet untouched by timber companies.

SUDAN

• *Mow land for mechanized farming*

Large-scale mechanized farming is being started on rainfed land with the assistance of a \$5 million World Bank loan. This pays for the foreign exchange costs of developing some 145 000 acres in the Sim Sim area over the next four years. About 140 farms are to be established in this virtually uninhabited and uncultivated area. It is hoped that farming will eventually be established over some 620 000 acres in this area of the country.

A semiautonomous agency, the Mechanized Farming Corporation, has been established by the Sudanese Government to carry out the project. Farmers are to grow sorghum, sesame for export and cotton for local textile mills, yet to be established.

VENEZUELA

■ *Guri dam inaugurated*

The \$150-million Guri dam was inaugurated in November. In its first year more than 500 000 kilowatts of energy will be produced. On its completion in 1976, it will be one of the world's largest hydroelectric complexes producing six million kilowatts, three times the output of U.A.R.'s Aswan dam. The dam, just over 300 feet high, will be able to supply most of Venezuela's energy requirements.

JAMAICA

• *Solving the coconut mystery*

A white fly has now been accused of the death of at least 30 000 coconut palms in Jamaica yearly. A mysterious disease known as lethal yellowing has killed coconut trees in Jamaica since 1891. It causes heavy losses in



Nylon-boxed coconut trees of experimental station at Canewood, Jamaica, where research is being carried out on the lethal yellowing caused by a white fly.

other Caribbean islands and Mexico and similar diseases affect coconut palms in Southeast Asia and the Pacific where it is known as the "tree of one hundred uses."

An Australian entomologist, N.E. Grylls, sent by FAO to Jamaica to investigate the problem, has obtained evidence that the disease is transmitted by the white fly.

NIGER

• *Radar tracks tingle locusts*

Radar was used to track single locusts for the first time in September and October. The experiment was carried out in the southern Sahara region of Niger by a joint team from the Antilope Research Centre and the University of Technology, Loughborough.

The team tracked the solitary locusts which fly at night and which are difficult to follow by other means. It also detected their density, destroying swarms at distances up to 25 miles. This will make

it possible to detect day-flying locusts at much lower densities than previously. Consequently, aerial spraying aircraft will be dispatched direct to their targets, saving valuable time.

The discovery is most important for there is a plague of desert locusts swarming in 11 countries from Mauritania to India. Following the success of the Sahara trials, the

radar was moved to Kenya where the swarms are expected to move this year.

ALRC coordinates reports of locust sightings from all over the world and prepares regular forecasts of the insects' movements. The radar tests not only represent an important breakthrough in the fight against the desert locust but should be valuable also in the study of other insects and birds which destroy crops.

IRAN

• *Romanian aid aims at animal husbandry*

Iran has signed a \$45 million contract with the Romanian firm of AgroZoo Technical Company for improvement of the livestock industry in the Gilan region. The project is to include the conversion of some 25 000 acres of land for animal husbandry, together with the setting up of facilities for breeding, rearing, slaughtering and processing of chicken, sheep and cattle.

PACKING THE PLANETS

Two perturbing views of the
population explosion

The title, the publisher's comment, the foreword and even the preface all announce disaster. The first lines of the book portray a nightmare. In 900 years from now, a comparatively short time in **total** of the history of humanity, there will be 60 000 000 000 **people** on **earth**, or 100 people for ever? **square** yard of the planet's surface, including the **sea***. **Cat*** cutta will have 60 million inhabitant* in the year 2000. that » in thirty year time.

All this sounds absurd; it runs **counter** to common sense **and rational thought**. "The population of **Cata Rica** is doubling every 17 **year**," you read, and in page 30 you break into a cold **i*cai**. You throw this small book **down on a table** and it falls closed with the cover uppermost — the title. *The Population Bomb*, is in red. In the lower lefthand corner there is a black grenade with the fuse lit, the caption reads: "The population bomb keeps ticking."

The tone of this book is deliberately dramatic. It begins with a sentence which could equally well have appeared at the end: "The battle to feed all of humanity is over." It is frankly pessimistic. It reveals nothing new, nothing we have not read somewhere else, but it unquestionably adds more convincing arguments.

First of all, it destroys our illusory hopes of some hypothetical scientific safety valve which will save the day. As Paul Ehrlich observes, we expect too many miracles from science with a capital "S." We might, for example, learn how to travel to other planets. But the author shows, according to **FT**claim, that in fifty years we would have packed Venus, Mercury, Mars, the moon, Jupiter and Saturn with a population density equal to that of the earth — assuming these **planets**

were habitable and accessible without involving far-fetched technological innovations. What then? The final image is one of a teeming human ball growing at the speed of light.

While the mind can accept this grotesque vision on grounds of logic, it rejects it on grounds of intelligence. Everyone feels, instinctively, that the human species will not come to this. Ehrlich raises the vital question: what regulating measures can we set up to limit our own proliferation? There are only two possible ways out of the situation: to control either the birthrate or the death rate. To put it more crudely, to prevent the birth of children, or to let them die.

Ehrlich's book is an appeal to intelligence in the face of mounting chaos. It is a warning not to give way to deceptive illusions. It would be wise to re-examine what we think we know: irrigation is all very well, but irrigated lands accumulate mineral salts and quickly become sterile. The use of DDT, unless applied with extreme caution, upsets highly delicate biological balances and, in the long run, leads to catastrophe (p. 51). We consume more oxygen than the natural mechanisms of photosynthesis can produce. In 1955, 75 million pounds of fish were caught in Lake Erie. Today no sane person would expect to catch more than a few. In any case, there is not a single one left (p. 62).

In other words, there are too many cars, factories, detergents, pesticides and fuels — as well as too little water — all for the same reason: too many people.

What can we do? What is going to happen? Ehrlich suggests a number of future alternatives along the lines made fashionable by Hermann Kahn at the Hudson Institute. In one of them, set in 1979, the United States is surrounded by a starving and hostile world, of which Europe is a part; food rationing has been established and water distribution is limited; the sea level is rising, since the polar icecaps have begun to melt; 90 000 people are killed in a few days in Los Angeles by a particularly virulent **doud** of smog; in the cities, order can no longer be maintained except by martial law; the number dying from the indirect effects of pesticides has become greater than the number of mortalities from cardiac diseases.

In another scene — the only optimistic

one — 500 000 people have died from **tatvatkn** and Pope Paul XIII appeals to Catholics throughout the world to practise birth control by all possible means, including abortion: slowly the world's population begins to decrease, reaching 2 billion in 2025 and 1.5 billion in 2100 — there is some hope.

In the meantime, what can be done to control births? Should a sterilizing substance be added to drinking water? Should we increase taxes on large families? Should we write letters to our politicians based on those suggested at the end of Ehrlich's book?

The author believes that we must try everything but that in spite of all this it is already too late. Nevertheless, he preaches immediate personal action with a conviction and disregard of human conventions admirable in a professor: knock on every door and — the first and foremost recommendation — never have more than two children.

Edouard Bonnefous' book, *Le monde est-il surpeuplé?* repeats some of these arguments with the same goodwill but certainly with less naive conviction. Yet in this field ingenuousness is not necessarily a fault, insofar as it enables us to set certain confused scientific theories in their proper perspective.

Certainly, the mass of mankind will continue to expand at a breathtaking rate.

Miraculous solutions for feeding this mass are still only in the hypothetical or experimental stage. But, even assuming that many do not die of hunger, this is only the first solution to the many problems of their existence. We must begin now to prepare a world policy which looks beyond the next harvest, the risks of the monsoon, the industrial processing of algae as food for human beings, beyond the extraction of protein from petroleum.

These two works constantly echo the book by the earlier authorities. Paul and William Paddock, *Famine* 1975, reviewed in *cents* 3. These are as pessimistic books as any ever written, curiously dissonant in the chorus of reassurances it is considered in good taste to accept at present. But, bitter as they are, they are books to be read at once.

Alain Herve

The Population Bomb by Paul R. Ehrlich. Sierra Club / Bantam Books New York. 1968. \$ 0.99 (paperback). *Le monde est-il surpeuplé?* by Edouard Bonnefous. Hachette. Paris. 1968. in FF.

by I. JohnMin and J. Kviuk-I

This is no criticism of a book which
 out to be a survey, but it is difficult
 to remember (hat The Evjok *has tb'n linri-*
ation. 1% there really room in a survey
 for an attempt [o com pan; and contrast
 Fisher's analysis or variance and Wright's
 method of path coefficients? It certainly
 cannot be done in a wav *hkh **wffi DBM**
 much to The uninitiated in the space a*ail-
 ably. On the other hand, the penulti-
 m^milc chapter on the wiyy one >ould go
 a**bbou** (**adding** the task of improving spec-
 c^ss of livestock by breeding Is admirable

The chapter on twins is al*o mwl wet-

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The transfer of technologies

edited by Daniel Spencer
and Alexander Woroniak

Based on papers presented at a conference on transfer of technology, held in Virginia in 1966, this book includes the views of economists, accountants, administrators and scientists. But, despite the number of distinguished contributors, it does not provide a clear presentation of the problems involved in transferring technology from developed to developing countries.

It contains chapters on economic theory, economic history, mathematical methods, and social and moral considerations whose relationship to each other, and even in some cases to the central theme of technology transfer, is obscure. The editors' introduction and summary do not provide a summary guide to the relative significance of the papers, nor to their place in the growing amount of literature which is developing on this subject, as indicated in the notes and comments to each chapter.

More serious than disordered presentation, however, is the almost complete neglect of the role of developing countries as receivers of technology. One chapter describes the transfer of technology between countries during the nineteenth century industrial revolution, but does not explain the relevance of the history to present-day transfers. Another defines mathematically the concept of the technological gap without showing how the data for the variables can be obtained, or how the concept can be used as a planning tool to narrow the gap. There is an outline of the Schumpeterian theory of invention and innovation but no discussion of its applicability to developing countries. A chapter with the comprehensive title "The Socio-Economic Variables" is almost entirely concerned with

the rate of scientific advance in developed countries. Simulation studies and their differences from other analytical methods are described in some detail, but there is little attempt to show how they can be used practically, to analyse the technology transfer problem and the relationships between donor and donee countries.

The portion of developing countries is only given proper consideration by two of the seven contributors; one describes "Training and Human Capital" and the other "The Strategy of Transfer." Despite these omissions, the editors fear that "the study perhaps overemphasizes the problems of the donee country!"

Along with neglect of the problems of developing countries, there is a tendency to overemphasize the theoretical aspects of the transfer of technology. In what has been dubbed the "majestic approach," the problem of technology transfer are considered in the light of neoclassical and Schumpeterian economic theory. The general conclusion is that each of them has only limited applicability.

A more fruitful approach is to analyse the practical problem encountered in industrializing developing countries as a basis for the formulation of general principles. This is only done in the chapter on "The Strategy of Transfer" by Professor Ingvar Svennilson, who cites the Food and Agricultural Centre in East Pakistan, as well as the activities of subsidiaries established by western companies in developing countries.

The final chapter is a summary of the studies which took place at the conference (based on the papers). These are centred mainly on the practical problems of technology transfer and are based on a wide experience of developing countries. Unfortunately, the large number of case studies cited are only briefly described. The promise of the book's title would probably have been better fulfilled had it been confined to a fuller description of such cases.

Alan A. Kerr

The Transfer of Technology in Developing Countries, edited with an introduction and summary by Daniel L. Spencer and Alexander Woroniak.
New York: Frederick A. Praeger, 1967. 120 p.

Choice of techniques in planned development

A theoretical study

by A.K. Sen

This study deals mainly with the problem of choosing the best capital/labour ratio in the industry of a developing labour surplus economy.

Labour surplus favours labour-intensive techniques in order to maximize immediate output. However, the assumedly low savings rate of wage earners and the assumedly high savings rate of capital owners (possibly the state) tend to favour capital-intensive techniques in order to maximize savings, and hence growth. It is shown how different investment criteria proposed in the literature fall into two groups according to these two different objectives of maximization.

The main text of the book is the same as that of the second edition in 1962 and need not be summarized here. It can be understood with the simple mathematics of a first-year calculus course.

For the third edition the author has added a fifteen-page introduction which places the earlier material in the perspective of more recent studies on optimal savings, using more sophisticated techniques like mathematical programming and Pontryagin's Maximum Principle. The approach of the book can be clearly seen when it is stated, concisely and aptly with the notion of optimal savings, that "the type of investment outlined in this book becomes relevant for project selection in the context of an overall sub-optimal rate of savings" (p. xiv, emphasis by reviewer). Sophisticated arguments are given as to why both in a private enterprise economy (e.g. by the "Isolation Paradox") and in a socialist economy (by political limitations) savings may be expected to be sub-optimal. But there is no discussion on whether instrument other than technological choice could be

used to increase the savings rate. New discussion on the "real cost of labour" in terms of a static model and of a dynamic optimization model (of S. Ruffin) is Ciampi, at the cost of considerably more sophisticated mathematical techniques.

The fact that a dissertation, written mainly in 1955-56 is going through a third edition in 1968 shows how well the subject was chosen, and that the book has filled a need. Its virtue has certainly been its simplicity, clarity, shortness and yet comprehensiveness in indicating the relevant issues. Although the added introduction has sacrificed the simplicity, it has certainly clarified some issues and has made the discussion more up to date.

The book has become, however, even more of a theoretical test serving as a good and concise introduction on the subject for courses in development planning and for practitioners in development planning who should remember the relevant issues when confronted with technological choice situations.

Some of these aspects are not covered, like economies of scale and skill requirements, dealing with different techniques. The choice of "Techniques in agriculture" is discussed ingeniously but without reference to the relevant institutional aspects, like the ownership of the means of production. The derivation of the relative weight to be given to investment compared to consumption, if it is to be used for practical considerations, should also have taken account of the openness of the economy; with respect to the balance of payments constraints and the possibilities for getting foreign aid.

These slight objections could be met, however, only at the cost of a considerable extension of the text, and do not impede my warm recommendation of this book for the above-stated purposes.

J. Georgt Waarttenburg

Aspects of Techniques, An Aspects of the "Planned Economic Development, by A.K. Sen. Basil Blackwell. Oxford. 1968, third edition, (142 p.).

IS FAMINE UNAVOIDABLE?

Some German scientists think so

One of the numerous slogans that appeared on the walls of the Sorbonne in Paris during the revolution of the students in spring 1968 read: "Be realistic, demand the impossible!" This motto could be the subtitle of this book, whose English title would be: "World Food Crisis, or. Is a Hunger Catastrophe Unavoidable?"

A group of German scientists from a number of different disciplines are using the Vereinigung Deutscher Wissenschaftler as a "rostrum" from which to appeal to scientists, politicians and the public to forget their laboratories, lobbies and TV sets for a while and to become aware of their responsibility in one of the two most crucial problems of the world: hunger. The spirit of intellectuals who have left the seclusion of their ivory tower to dedicate themselves to a practical social task can be sensed throughout the book.

The authors used a paperback edition in order to broadcast to as many readers as possible their warnings of a potentially widening food gap between rich and poor nations. The recent flood of literature on this topic has had little effect on the attitudes of people in most economically developed countries toward development aid. If anything, the understanding for its necessity has reached an all-time low.

The three main parts of the book form a logical sequence. In the first part the present situation is analysed. The facts on calory and protein deficiency in developing countries, the frightening population growth, future food needs, etc., are certainly well known to those professionally engaged in the task of freeing the world from hunger, but this book was written for a less familiar public.

The second part deals with the tasks of the scientists. It calls for (an) expanded interdisciplinary cooperation of scientists from a great number of fields in order to avoid disaster in the future. It is, for instance, widely recognized by now that only with a proper marketing system can a policy for increased production for the market have any sense, and this in turn can only be achieved if sociological restraint in the behaviour patterns of tenants are known. Everything is interdependent of everything else, each discipline consequently dependent on others. Interdisciplinary cooperation on all levels is postulated, and it is agreed that a comprehensive analysis of all aspects of the problem is needed for comprehensive planning of each project. All projects must be integrated into an overall plan of development aid covering all sectors, agricultural as well as nonagricultural.

The third part lists possible measures which could be taken in the light of such an interdisciplinary approach. The many approaches to the hunger problem — methods for increasing food production, industrialization and infrastructure, general educational policy, education in nutrition, unconventional foods, family planning and financing — are touched upon and preconditions for their success are suggested.

The date of publication was somewhat unfortunate, insofar as 1967 developments in agriculture became known only after it had gone to press. Hence, the authors refer to declining per capita food production in 1965 and 1966 but not to the recovery in 1967, due perhaps to the more widespread use of high-yielding varieties, fertilizers, etc. Thus, it does not mention that some developing countries are facing problems of food surplus.

Nevertheless, this book, on the whole, falls into an optimistic category regarding the future. However, and this is heavily stressed, some preconditions will have to be fulfilled, of which the principal ones are: a change in the structure of the society of developing countries; a change in the attitude of peoples and governments in the developed countries; and greater international cooperation toward a global plan.

Werner Lomade

"Wissenschaftler - n. Hungerkatastrophe imitiert?"

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CROITS

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LETTERS

The dialogue on different aspects of development in the third world, started in *Ceres*, could be greatly helped by the active participation of our readers. The editors invite letters from all those who wish to express their opinions, comments and suggestions.

A RIBS for farm implements

Dear Editor,

As soon as agricultural development is mentioned, many people think automatically of tractors. This, according to them, is the universal cure-all which is supposed to immediately overcome poverty, hunger and underdevelopment.

But let's take a closer look at the reality of the situation. In order to achieve progress, agriculture must try to obtain and use equipment appropriate to the work in hand, keeping the farmers' educational level in mind. However, between tilling with wooden picks and the heavy artillery of highly specialized machinery there stands a wide range of tools which can enable agriculture in these countries to make substantial advances: these are the so-called farm implements.

The supermachines of the 21st century come later, when the labour force of the primary sector no longer accounts for more than a small proportion of the total population. By then, the few farmers left will have reached the level of agricultural engineers, and the utilization of millions of underemployed will no longer be a problem.

Meanwhile, we must be realistic. Let's examine the advantages and drawbacks to the introduction of improved farm implements in the developing countries.

As far as the advantages are concerned: agricultural commodity prices are too low to permit the purchase of heavy farm machinery; farm implements are lacking while those available are outdated or in poor repair; farm plots are usually too small to allow the use of farm machinery while climatic conditions (frequent rain, humid soil) often make the use of mechanized equipment impossible — tractors cannot necessarily go over the same ground as horses; farmers already have domestic draught animals (horses, mules, oxen, camels, and even cows) which are often not used to the full because of the lack of animal-drawn equipment; farm machinery can often be rented from a cooperative while for some operations (second tilling, weeding and hoeing, ridging, etc) farm implements are more appropriate; second tilling is water-saving provided it is done at the right time. In dry regions this is obviously of vital importance. Animal-drawn hoes and weeders are particularly suitable for this kind of operation.

Undoubtedly the main obstacle to the introduction of farm implements in the developing countries is the poor understanding of their possibilities among those directly involved for they, too, are dominated by the mythical faith in mechanization at all costs. As E.F. Schumacher pointed out in *CHRS* 3, the poorer countries do not have enough experts studying this problem. Other drawbacks include the fact that local small-scale manufacturers are often discouraged by lack of experience and appropriate raw materials. Local traders often push the sales of what pays most, rather than what is most useful. For lack of advice, farmers find that they have purchased unsuitable equipment at too high prices.

Under these circumstances, what can be done? Group purchases, by lowering retail prices could provide a useful first step. [5 000 multi-purpose cultivators were ordered simulta-

neously, while, at the same time, transport and sales were reorganized, the price per unit could be brought down by about 25 percent.

According to my calculations, with the money now being spent to improve 11 000 acres (increasing yields by 40 000 quintals), one could supply 66 000 multi-purpose cultivators to the same number of farmers. These cultivators should increase production by more than 1 300 000 quintals and yields would be 33 times higher. A multi-purpose cultivator can be amortized in one year of intensive production, two years of semi-intensive production or three years of extensive production.

Some encouraging signs are beginning to appear. Certain countries, assisted by FAO, are becoming more interested in improved farm implements; some have even begun to manufacture them locally.

But we must go further and faster. The main problem is information. The people who need improved farm implements most do not know about them and, when such tools are presented to them, they have no criteria for choosing from a range of articles.

The questions most urgently requiring answers are: what improved tools are being manufactured? Where are they being produced? How can they be bought and how much do they cost? What are the most appropriate implements for specific situations? And, finally, how can all this equipment best be used? This is a job of popular education which must be accelerated without delay — the sooner the better.

Ivetic Obrad
Tunisia

The Paddocks almost agree

Dear Sir,

I have just returned from six weeks in Peru to find the last issue of *CERES* (No. 3) containing the review of our book *Famine 1975*.

The book has been widely reviewed but, in every case where someone involved with United Nations organization has handled the review, we have found a failure to understand the perspective we have followed. However, your review is extremely objective and, in my view, eminently fair.

Let me say that I hope that our conclusions are wrong and that the Paddocks will find that their pessimism was completely unjustified. Perhaps you are right; the crisis may be on a lesser scale than we predicted.

William and Paul Fairclough
Washington

Eureka!

Dear Editor,

Thank you indeed for an informative, balanced and interesting journal. I have been looking for something like this for a long time.

The Rev. Paul Malt,
Walnut Creek, California

The future of the farmer in the market

Dear Editor,

1968 has proved what a lot of people have suspected for a long time, that it is not technical factors which impede agricultural development but economic, it is not problems of irrigation, fertilisers, pesticides and farming methods which will depress agricultural development in the coming years, but the ability of the farmer to sell his product at a profit...

Therefore it can be seen that the future of increased agricultural productivity lies, as does all man's industry, in the market place. What then are the future market prospects for agriculture? ... The developing nations are becoming increasingly aware of the importance of the international market to absorb the increases in production which they themselves are unable to do, due to an inability to sufficiently increase internal demand. "Trade not aid" has become the watchword of many of the leaders of the third world. What then are the prospects of increasing demand from the developing regions of the world?

Unfortunately they do not appear too bright... The prospect of increased exports from developing countries is rather poor. If anything, they will have to protect themselves from 'dumping'. The reason behind the increased agricultural production of the Third World has sinister implications for it is this increased production which must inevitably thwart the efforts of the developing nations from exporting into these markets, and indeed is threatening their own internal markets due to dumping of excess subsidised production.

There are only two ways out of this whole dilemma. The first is to increase buying power, economic demand, or per capita gross national production, that is what you will, of the people in the developing countries themselves, thereby freeing their agriculture of its dependence on international markets. This itself is a highly complex and ill-understood process and will not be discussed here.

The second, and this is perhaps more hypothetical, is to reduce the support structure for agriculture in the industrialised nations so that production will decline and they therefore will need to import increasingly large amounts from the third world. In this way agricultural development can proceed in the poorer countries to a certain extent independently of the rate of growth of their own economic demand. This could be done by progressively removing support policies and acquisition by the state of rural land. Recent moves within the European Economic Community to reduce agricultural surpluses by exactly these methods may be interpreted as movements in this direction.

Naturally, this "running down" of agriculture in the industrialised nations can not be achieved without some hardship and opposition from the rural community. However, it must be that the same reasoning that prompted internal agricultural support thirty years ago now realise that national concepts of internal support have been superseded by international demands and that today's world demands global action to the questions that arise from it.

George Matynick
Petersham, N.S.W., Australia

Dieldrin v The Desert Locust

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formulations, and when used as directed is harmless to both applicators and consumers of crops.

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March-April 1964

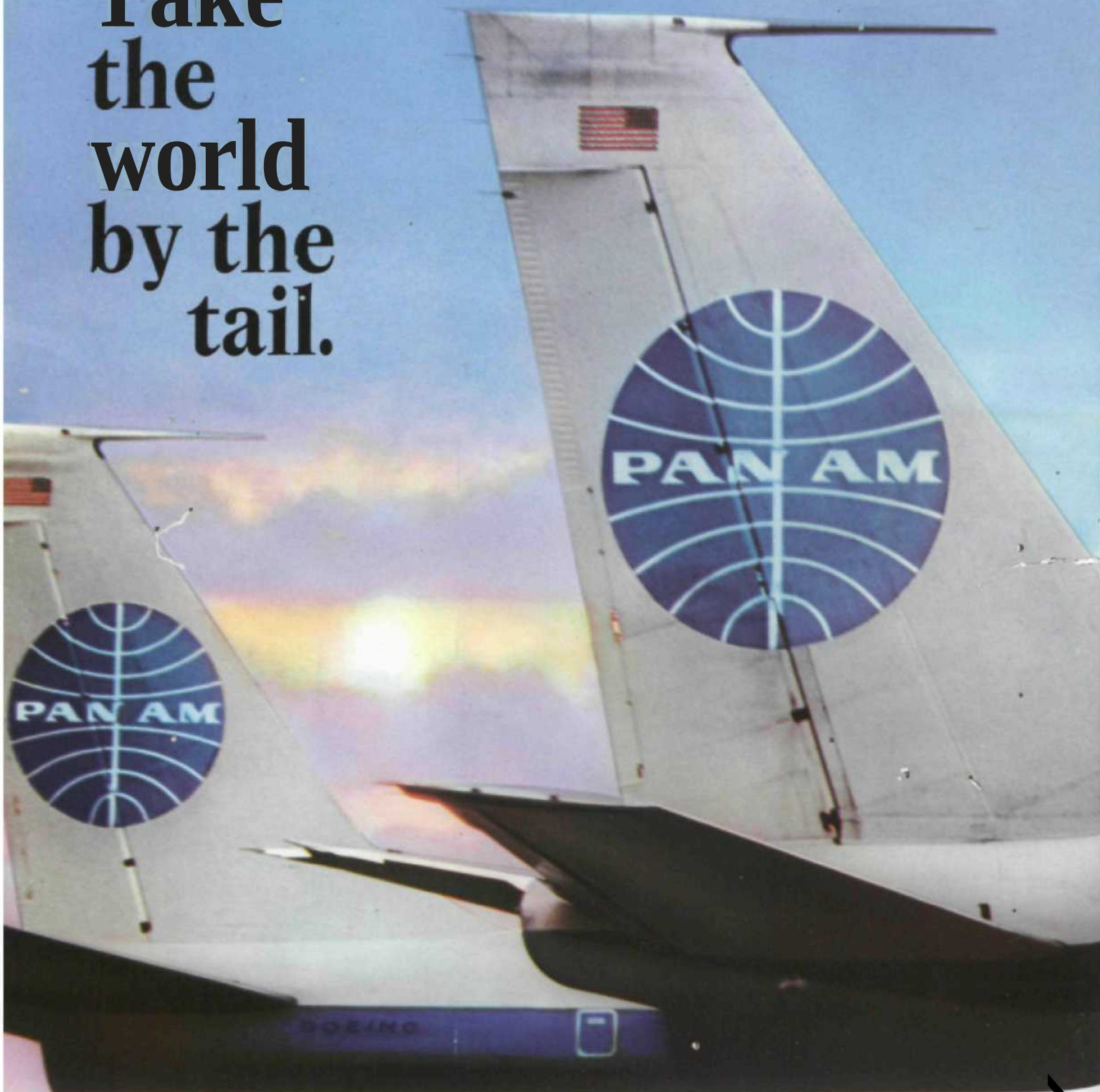
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IN THE THIRD WORLD**

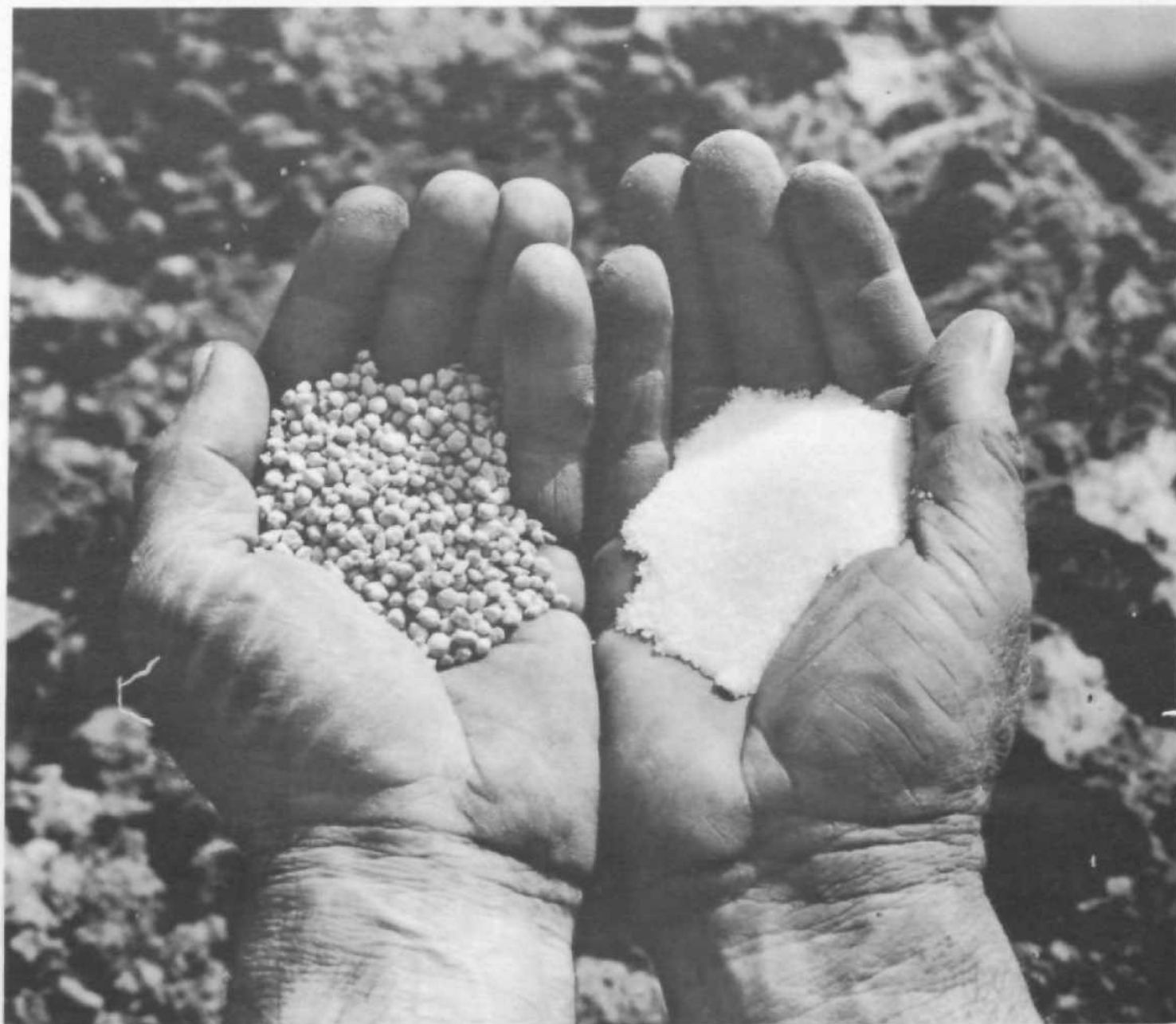
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Granules or powders?

Once this was a problem: in fact, when it comes to choosing fertilizers the farmer should have the last word, as his calculations are based on his own experience. Before deciding, however it is only right to consider the advantages offered by a Seifafert granular complex fertilizer and Seifa, who also markets powdered fertilizer!, knows perfectly well which **One** advantages are.

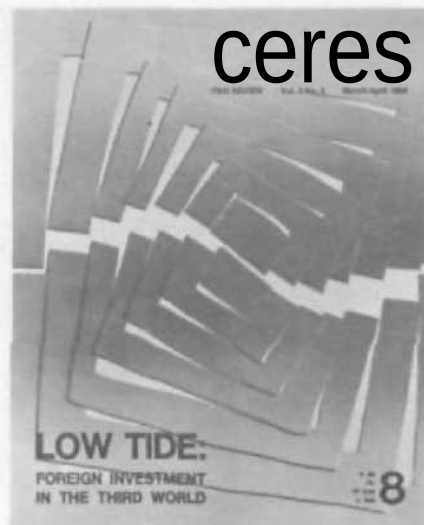
Firstly, and **fatewoX**, through modern chemical synthesis, a Seifafert granule contains the three basic plant nutrients: nitrogen, phosphorus and potassium. The advantages of this concentration are evident: fewer transport and handling costs; more free space in the storeroom; less fertilizer leached away by rain or blown away by the wind; balanced rates of nutrients.

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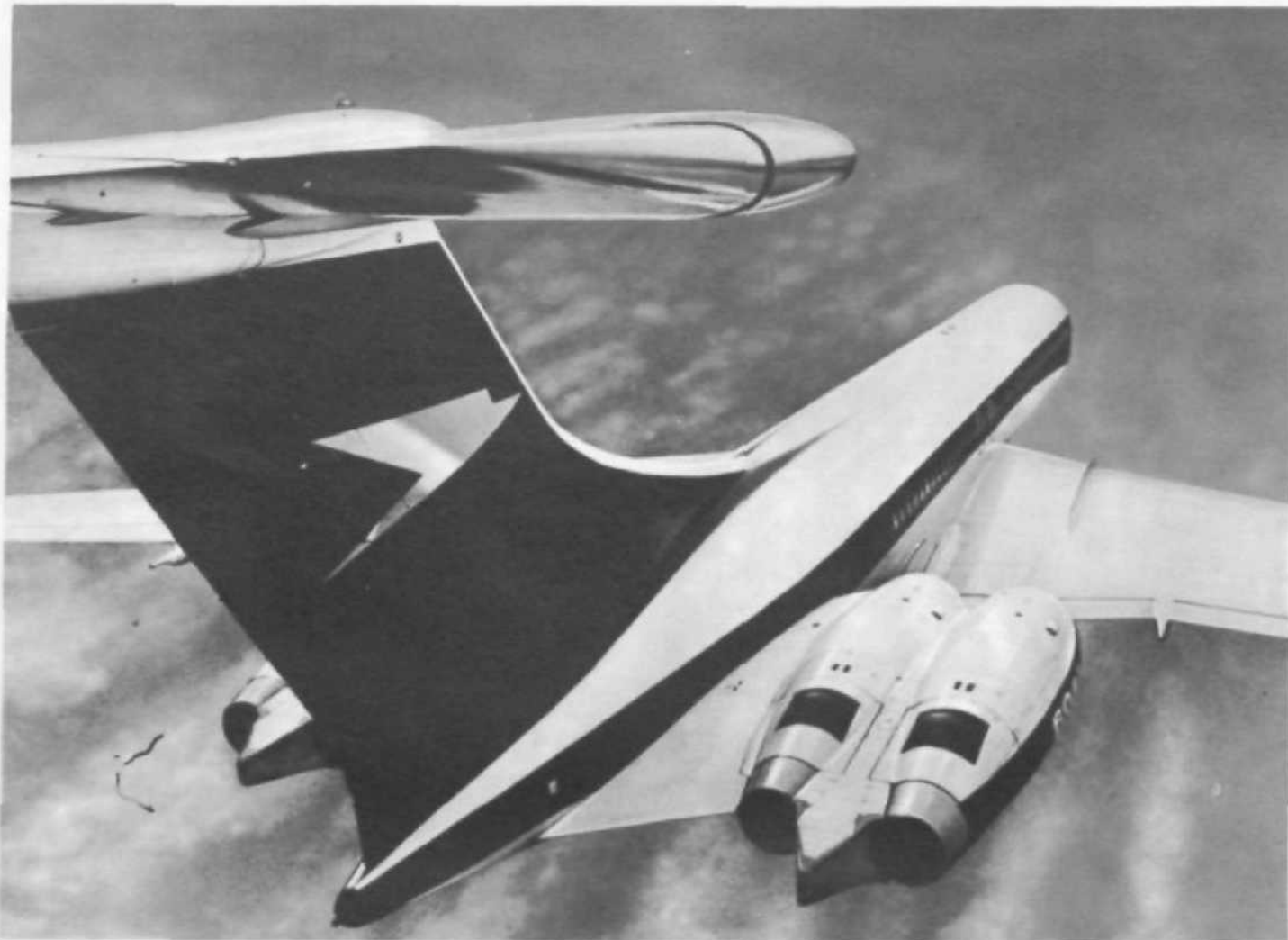


Low tide!
How can we reverse this trend?
Firstly, by analyzing the difficulties
and obstacles, and secondly
by suggesting ways of accelerating
the investment flow.

(Art work by P*ul<|

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The Centre panafricain de cooperative, located on the premises of the former headquarters of the Union Africaineet Malgache inCotonou, was opened recently and expects to begin its activities this year Its purpose is to train cooperative leaders for work in the African continent, it was established following the pan-African labour conference held in 1967 in Cotonou in liaison with the Afro-American Labour Centre (CAAT).

Through a joint operation of the IDA and the French Fund for Assistance and Cooperation (FAC), Dahomey will be granted a loan of W-2 million for a project in the Hmvi region in the southern part of the country. The project provides (or preparation Of 14,826 acres for production of annual crops, particularly maije groundnuts and cotton, improvement of another 14,826 acres for oil palms construction of a palm oil plant with a minimum capacity of 70,000 tons p* Y*** and construction of stios for maize storage. The project atso foresees purchase of 300 need of cartle for development of b*ef production, planting Of MtJk and cassia trees as windbreaks and firebreaks and tor production of firewood and timber.

pour le developpement rural du Dahomey — SONADER a state-operated company created in 1962 to develop Dahomey's agricultural production. SONADER employs only national personnel of a high level of competence and efficiency both at headquarters and in the field. It has already organized the planting, on a cooperative basis, of 32,124 acres of an improved variety of oil palms. The company will establish ten cooperatives in the project area and train the staff needed for management of the palm plantations and for agricultural extension services, and will supervise the activity of farmers working independently on the lands under annual crops.

In ten years, income from export of paim oi]. cotton and groundnuts obtained within the framework of the project will reach about \$2.4 million per year or 20 percent of the annual income from Dahomey's total exports in the last few years.

At a recent mastng with Bamako DuainesffiBn Mali's Minister of Finance. Louis Negre. outlined his country's trsos reorganisation plans.

The law of 25 March 1965 which discriminated against private business, had been replaced by a decree simplifying the exercise of the profession to a maximum. Al-

The reorganization was needed because the activity of the private business sector (Bxcept for petroleum prod-



ucts) in 1967 accounted for only 47.3 percent of its 1964 total. On the other hand, in 1966-67 the state sector accounted for about 50 percent of total turnover (excluding petroleum products) or 75 percent including petroleum products.

During the first quarter of 1969 the *Journal Officiel* of Algeria published the most significant reorganization of self-management in agriculture since the decrees of 1963. An addendum to those decrees, the reorganization meets a twofold aim: the limitation of state control and wider autonomy to independently managed enterprises.

The Ministry of Agriculture will be responsible hereafter for appointing and controlling the directors of its farms. Their management, however, is assigned to four bodies acting as representatives of a "workers' community", the general assembly, the workers' council, the managing

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committee and the president, 30 that the farm becomes fully responsible for its own sound operation. At the same time, the workers will have the right to cultivate a small plot of land of five acres, and engage in some animal husbandry on the farm.

The reorganization affects 2,000 self-managing enterprises covering over 5,683,000 acres of fertile land where 180,000 agricultural workers are employed permanently. Or an average of 2.842 acres and 1,277 workers per farm.

Under the new provisions part of the profits will be paid back to the workers for their labour and, in addition, they will receive productivity premiums. They will be granted a "statutory and minimum" advance during the year on this part of the income.

ASIA

• Growth of Japanese trade

Japan's economy and trade are making spectacular progress, reported the *Bangkok World*. Japan's Minister of Finance, announced that in 1968 the country overtook France and Italy, becoming the world's fourth largest exporter, and that it expects to displace Great Britain from third place in a few years.

Although the larger portion of these exchanges was with western Europe and the United States. *Togo Presse* points out that Africa too has absorbed a very large share. In 1968 the figures for trade between Japan and Africa (excluding South Africa and Liberia) were as follows: Japanese exports totalled over \$6942 million, an increase of 10.8% compared to 1967, while imports exceeded \$447 million, an increase of 27.2% over the previous year.

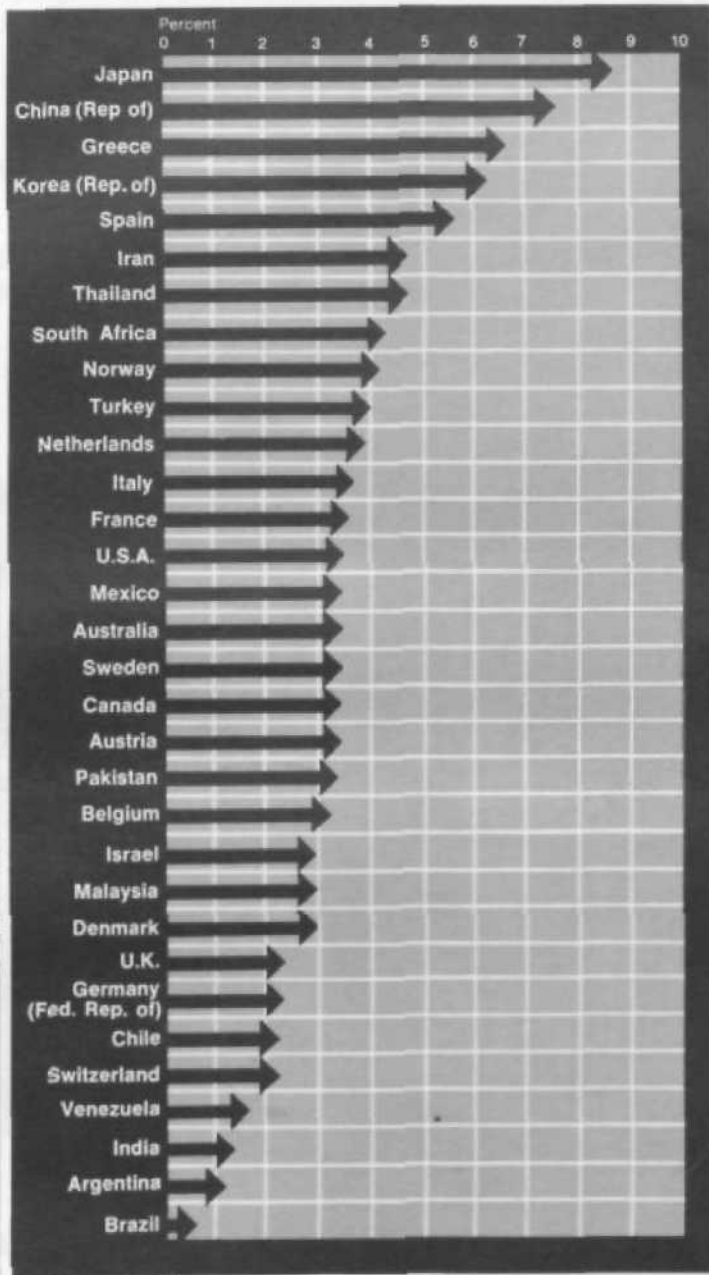
Trade with South Africa — holding fifteenth place among Japan's customers and tenth as a supplier — was particularly active last year, Japanese exports were-

\$109.811. a rise of 8.5%; Imports reached 5333,462, a rise of 24.7%. With respect to Liberia, Japan's sizable export turnover is due mainly

The *Herald Tribune* notes that Japanese investment in Latin America at the end of March 1968 totalled \$372 million, or 26.3% of the total in

How the nations rank in economic growth

Average annual rise in real GNP per capita. 1962-67



The growth of real GNP per capita is a better measure of economic growth than the rate of increase in prices. In dollar terms, the USA leads with a per capita GNP of \$3,400. Sweden, \$2,100. Canada, \$2,086; Switzerland, \$1,519; Denmark, \$1,340.

to the sale of ships. Exports totalled \$439,030 or 116% more and imports reached \$17,279 or 409% more than the previous year.

this region. The main share concerns Brazil where over 70 Japanese enterprises are engaged in the fields of finance, insurance, electronics.

fisheries, machine tools, and in the building, automotive. Steel, textile and food industries.

LATIN AMERICA

• Hotdurm timber & paper project

The international Finance Corporation (IFC) will participate in preliminary surveys involving timber and paper pulp production in Honduras. A new company, the "Industria Papelera Centroamericana S.A." (IPACA) will be responsible for conducting the necessary research and negotiations.

The project, which has the full support of the Government, aims at the acceleration of industrial development not only in Honduras but in all Central America by utilizing its natural wealth, and especially the 2,965,000 acres of the Clanchito forest reserves.

The present capital of IPACA is \$500,000, of which \$50,000 come from IFC. The international Paper Company is providing most of the capital and assuming responsibility for management. The remainder is divided among the Banco Nacional de Fomento, the ADELA Investment Company, the Central American Bank for economic integration, the Standard Fruit Company and the United Fruit Company. It is recommended that these organizations may consider additional financing, and other sources may also be sought.

• U.S. multinational dam-plant

A series of large atomic plants, producing 2,000 megawatts of electricity and 4.8 million cubic yards of fresh water each per day would meet water requirements in the arid zones on the western borders of Mexico and the United States, reported a team of experts. For three years this team, appointed by the United States and Mex-

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lean governments and the International Atomic Energy Agency has studied the region, which covers southern California and Arizona in the United States and the states of Baja California and Sonora in Mexico.

Although it is crossed by the Colorado river, this semitropical desert region suffers from an acute water shortage. The deficit is expected to increase from 7.3 million cubic yards per day in 1980 to 22 million cubic yards per day in 1995, even if agriculture is not developed there.

In their survey the experts took into account the estimated investment and operation costs of the complete installations and water piping systems based on both current and more advanced techniques. The use of the high power reactors of the future and the progress of desalination methods will undoubtedly lead in the long run to an appreciable cut in the costs of power and desalination.

The most suitable locations for the plants appear to be on the frontier east of San Luis Rio Colorado, or near El Golfo de Santa Clara, or between the two near Riio. The final choice will be determined by "a more detailed economic evaluation of all these site factors including geology and seismology,

The investment for the initial installations will probably come to between \$850,000 and \$1-2 million. The cost of the water to be provided to a large distribution centre is estimated at about 4 to 10 cents per cubic yard depending on the site selected, the pipeline route and the interest rates involved.

On the basis of communications and discussions by the colloquium organized by the IAEA in Madrid it appears that these plants could begin operating around 1980.

It may be noted that, well ahead of that date, the desalination plant of Tijuana (Baja California, Mexico) be-

gan operations toward the end of November 1968 after completion of work lasting for a period of twelve years,

• **Hydroelectric complex in Argentina***

A World Bank loan of \$82 million will help Argentina to establish the largest hydro-

Buenos Aires. Commercial operations are expected to begin around the middle of 1973.

At the same time work will begin at Porto Zuelo Grande to regulate the flow of the Neuquen river. Together with El Chocon, they will constitute the first part of the

participate in the loan with a total contribution of \$800,000.

NEAR EAST

World's first natural gas liquefaction plant

The Esso Standard Libya Inc. recently completed in-

AMSTERDAM: THE TWO FACES OF FOREIGN INVESTMENT



A Panel on Foreign Investment in Developing Countries met in Amsterdam under the auspices of the United Nations, with the Netherlands Government acting as host.

Grouped together around the same table, leading figures from governments in developing countries (left), leading members of a cross section of the business community in industrialized countries (right) and officials of international organizations held discussions during five days. They concluded that private foreign investment is playing an important role in the economic growth of the developing countries by supplying them not only with much needed capital, but also with managerial and technological know-how, but that investment must find its place within the framework of national development programmes and policies.

The Group acknowledged the fact that governments of host countries are the best judges of their development objectives and priorities and stated that joint ventures ideally provide a highly desirable arrangement for bringing together foreign private capital, host governments and local entrepreneurs.

electric complex ever built in the country. It is to be located at El Chocon-Cerro Colorado, and will have a production capacity of 1,650 megawatts. In the first stage the World Bank loan will make it possible to reach a provisional capacity of 600 MW. Most of this production will be used in the Buenos Aires coastal area where the largest part of the population, industry and business is concentrated and which accounts for about 70% of all electricity consumption in Argentina.

The El Chocon project includes a dam on the Limay in northern Patagonia, an electric power plant consisting of three units of 200 MW each, and a 700-mile powerline linking this installation to

El Chocon-Cerro Colorado complex. The second part is planned for 1972-76 and includes installation of three additional 200 MW units at the El Chocon plant and a catchment basin equipped with a 450 MW hydroelectric plant located at Planicie Banderita on the Neuquen river.

The World Bank loan will be turned over to the Hidro-electrica Norpatagonica S.A. (Hidronor), a company recently established to execute this project. The loan, which is guaranteed by the Argentine Republic, will run for 25 years at a rate of 6.5% with a six-year interest franchise.

Four other financial institutions, among them Banca Commerciale di Milano Group, have also agreed to

installation of a large natural gas liquefaction plant at Marsa el-Brega, worth over \$350 million, according to the weekly *Jeune Afrique*. The first of its kind anywhere. It uses natural gas from the deposits of Zintan and Raguba (725,000 barrels of crude oil per day). The gas, which was formerly burned, is now pressure-pumped by a 109-mile gas pipeline to Marsa el-Brega where it is liquefied by refrigeration at -170°F and then transported by LNG tankers to Spain and Italy.

This operation constitutes another milestone in Libya's spectacular growth in recent years, placing the country sixth among the world's crude oil producers, thanks to a 49.2 percent output rise between 1967 and 1968.

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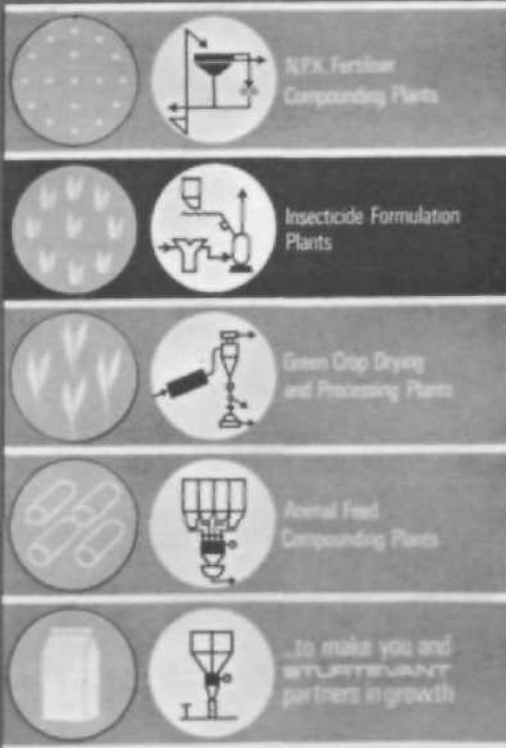
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• It inion

always the loser

Daotnia Baifanw. Minister of Fgn affairs for Dahomey in the Canadian fnirnutitintti Development Aftaurfl International Dcvelopmem

It is perfectly obvious that the increase of our agricultural resources does not serve to enrich us. Whether we are selling our raw materials or buying manufactured products, whichever it may be, the prices are always imposed on us, and always to our disadvantage.

strange operators

A Ztuiihian representative at the Com-monweaSh Conference, published in African Development

Genuine investors are granted a tax holiday in Zamfiui. But the government has learned by L-pcrionce to be wary of foreign investors who (Impend on local finance for **backing**, undcrtur native "icrchani, and pull out. **having** invested "heir £i(X) in the Zatnbtai economy to make £30(1 from it.

necessary evil

From the Bangkok Bank Monthly Review

There usually are many middlemen involved in the marketing process before the products reach the consumer. In consequence the marketing costs increase at each step, from the farm to the final consumer.

The farmers hardly ever obtain fair prices for their products. They have **little**, if any, bargaining power with the middlemen who, more often than not, happen to be their creditors. Farm products have to be disposed of as soon as possible after the harvesting as, in most cases, the farmers do not have **storage** facilities. Consequently they are forced to make quick sales in order to have at least **some** cash available.

Even if the government or a farmers' cooperative should venture into the marketing business it is doubtful whether they could do it cheaper and more efficiently than the middlemen. Furthermore government officials are notorious for their bureaucratic practices. Although this is a gross generalization, it is nevertheless sadly true.



...bearing gifts?

Galo Plaza, of the Organization of American States in International Commerce

A semantic cloud hangs over United States aid programmes and makes it difficult to see them as they really are. Much U.S. aid under the Alliance for **Progress** is not a gift, as is commonly believed. By far, the largest proportion of **external** financing received by Latin America is in the form of loans that are being repaid. In the past seven years, they have earned the U.S. \$734 million in interest. Total amortization and interest payments have amounted to about \$2.9 thousand million. In other words, the **cooperative** development effort of the Alliance nations benefits the lender as well as the borrower.

As a matter of fact, it is not at all unreasonable to turn the picture around, and think about the benefits accruing to the United States as a result of what we call aid. In the past seven years, the U.S. official sector has disbursed nearly \$5 thousand million in credits to Latin America. Nearly all of this is **being** spent in the United States on United States goods. In this way, they help

create jobs for U.S. workers. They generate earnings for U.S. manufacturing enterprises and their stockholders, and taxable income for the U.S. **Government**. They give the U.S. a surplus in its balance of payments with Latin America.

A large segment of American industry benefits from Export-Import Bank and AID credits for financing overseas exports. Whether the **island** is of an entire steel mill to Brazil, or a small printing press to **Guatemala**, United States suppliers are important beneficiaries.

cultural invasion

Russell Train, president of the Conservation Foundation, in The Christian Science Monitor

The adverse environmental consequences of much well-accepted technological progress are perhaps most readily and dramatically seen, in international development programmes where alien technology and alien goals interact with traditional culture and values.

Developing countries are defenceless before the self-assured wisdom of western planners. We have a very heavy moral obligation to assess the full range or consequences of those international development programmes, both bilateral and multilateral, which we have undertaken so confidently.

the rich have it

Philippe Simotatot in Le Monde

From 1965 to 1968 Latin America received \$1,1 thousand million in capital and "paid out" \$5.4 thousand million in profits, a sizeable deficit balance of \$4.3 thousand million. In the same period western Europe had a favourable **balance** totalling \$800 million. In short, it looks as if the poor countries, during these four years, had partly financed — through the United States — the development of the rich countries of western Europe.



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Bananas - the world outlook for 1972

World trade in bananas rose by 3% and earned roughly \$500 million for the exporting countries in 1968 and despite serious problems affecting this highly perishable fruit, such as falling prices, trade restriction* and surpluses, all available evidence points to a vast expansion of production for export in the near future.

Total world exports amounted to 5,600,000 tons in 1968 and, according to the latest projections prepared by FAO, total world export availabilities for 1972 are estimated at 7.6 to 9.1 million tons.

that reduced costs and increased sales tonnage could compensate for lower unit returns.

The world import demand for 1972 (excluding the USSR and Eastern Europe) could range from 6.2 million tons at constant price* to 7 million tons at retail prices. Even at the latter level there would still be a substantial surplus, compared with the highest export availability figure of 9.1 million tons. But the projected surplus, already partly absorbed by an expected lower production, could be further

dried, for livestock feeding, mostly for cattle and pigs, and to a lesser extent for goats and sheep.

The expansion of production in Central America has been the outstanding feature in the world banana situation in recent years. It almost recovered its former dominant position. Thanks to successful planting of new Cavendish varieties, immune to Panama disease and resistant to wind damage. Exports rose from 1.2 to 1.7 million tons between 1962 and 1967, and to 2 million in 1968 representing a 15% rise over the previous year. Costa Rica, Honduras and Panama recorded the largest increases. Total production for the area for 1972 is estimated at 3.2 to 4.2 million tons, with the highest expansion in Honduras and Costa Rica.

South America's share of the world banana market, which rose from about 20 to 40% in 1963, fell to 33% in 1966 and 1967, with Ecuador, however, emerging as the world's leading exporter. Despite increasing competition from Central America, Ecuador, with exports at 1,242,300 tons in 1968, was able to maintain its place by diversifying its markets, and by converting from the Gros Michel variety to the more popular and higher priced Cavendish. Ecuador is expected to maintain exportable production through 1972 at a minimum level of 1.4 to 1.5 million tons a year, which would provide

an adequate reserve for most contingencies including substantial increases for new outlets — Japan, the USSR and eastern Europe. While export production in Colombia and Brazil is not expected to be because of the banana market*. Surinam has

an industry in the past four-five years, and the Government has signed a contract with the United Fruit Company to market all its exportable fruit. Exports reached 35,000 tons

by the end of 1968, and are expected to rise to 40,000 tons by 1972.

Export availabilities for the whole of South America have been estimated to range by 1972 from 1 to 2.2 million tons.

• *Emraimmm mmpkmtm*

Production in the French Antilles is particularly prone to cyclone losses. Limited market outlets and an uneven production record indicate a rather moderate growth rate. Export availabilities for 1972 for Martinique and Guadeloupe are estimated at 250,000 and 150,000 tons respectively.

In Africa, the Ivory Coast production is unlikely to rise significantly: limited market outlets have led to stabilization of production and the Government's efforts seem to be directed at improving productive efficiency rather than increasing output.

Cameroon's exports have fallen drastically in the past five years from 130,000 tons to 50,000. A major factor in this decline was the loss of Commonwealth preferences for West Cameroon, but there were others, such as the spread of disease and production changeovers. Cameroon has applied for assistance to the European Development Fund (FED) to revitalize its banana industry.

Madagascar's exports, geared entirely to the French market, have suffered as a result of the closure of the Suez Canal, and exports might not exceed 40,000 tons in 1972. Preliminary estimates for 1968 total 25,000 tons.

Since 1967, Jamaica and the Windward Islands have exported to the United Kingdom an allocated quota of roughly 200,000 and 160,000 tons respectively. Both areas export almost exclusively to the United Kingdom where they receive the benefit of Commonwealth preference and are protected from competition by a ban on imports

commodities
commodities
commodities
commodities

Taking into consideration adverse circumstances* which could modify the upper figure, the minimum one is very likely to be achieved. In most instances, expansion plans are already being put into effect and even a sharp fall in prices might not have an immediate influence on the reduction of plantings.

Low cost producers in particular might be more likely to maintain output, at least in the short term, in the hope of driving their high cost competitors out of the market. It is difficult to make assumptions with regard to export prices but it is understood that many Central American producing countries have planned their expansion on the expectation of substantially lower foreign returns than prevailing in 1966-67, feeling

reduced by possibilities of creating new demands — by developing new markets, lowering or removing restrictions on access to existing ones and by aggressive sales promotion such as brand advertising and quality improvement. And technological improvements, particularly in the packaging field, could have the same favourable impact on demand as the change from bundle to cartons.

The trade is also looking for ways to utilize surplus and also bananas which do not meet the export standards.

But preference for fresh fruit, and the high cost of processing are limiting the possibilities. There is hope on one particular front, the utilization of bananas and plantains, either fresh or

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from the dollar area in excess of 4,000 tons. On the other hand there is little possibility of their expanding exports to other areas, because of their cost structure. Bananas are the most important export item of the Windward Islands, which is one of the few remaining areas still shipping in bunches. This means that Windward exports include stem weight, and that on the net weight basis the export figure for 1967 was 130,000 tons rather than 160,000.

• Far East

The region most likely to expand banana production for export during the next four to five years is the Far East, to supply the Japanese market. Japan's 33% rise in imports in 1968 constitutes the most spectacular development of that year — particularly since it followed upon a 14% increase in 1967 — replacing the Federal Republic of Germany as the world's second largest banana importer, with 640,000 tons, after the United States (1,687,000 tons). The Federal Republic is now in third place with 555,000.

An important factor in this development was most likely the 6% reduction in the import duty on bananas (from 70 to 65%) which came into effect on 1 January 1968, followed by another 5% tariff reduction on 1 January 1969.

China (Taiwan) supplies the bulk of the Japanese market and despite heavy typhoon losses during the first half of 1968, exports reached 385,000 tons. Taiwan is currently intensifying production and production techniques and has begun the changeover from baskets to cartons.

In the Philippines, an independent planter programme developed by the Standard Fruit Company is rearing the first stage of completion. Approximately 6,000 acres have been planted to Giant Cavendish bananas, shipments have already begun and by the end of 1969 or early 1970 the company hopes to reach

100,000 tons per year, in cartons, enough to load one ship per week to Japan. The Philippines seem ideally suited (or supplying bananas to Japan, being at a shipping distance of three or four days only).

Other Asian countries are keenly interested in exporting to Japan. India, a major producer but an insignificant exporter until now, has set an export target of 50,000 tons for 1970; Thailand is making attractive offers to companies to establish large-scale banana

export treatment enjoyed by Somalia on the Italian market — 30 lire a kilogramme (Le, \$48 per ton) up to 100,000 tons instead of 90 lire — expires on 31 December 1969. But Somalia will still have a preference over third country suppliers since it is not subject to the EEC common external tariff of 20%.

Its present marketing structure, completely geared to the Italian outlet, makes it hard for a country almost entirely dependent on bananas

Scandinavian, German, British and other western European markets. It is estimated that the Japanese lands' total exportable production over the next four years will level off at around 400,000-450,000 tons — of which nearly 40 to 50,000 tons will go to foreign markets. Total exports including domestic shipments amounted to 360,000 tons in 1968.

The rest of the banana exporting countries, including Fiji, Samoa, the Cook Islands, Ethiopia, Lebanon, Jordan and Israel, are expected to total 200,000 tons by 1972.

• USSR « export to Europe

Producing and consuming countries are considering various possible ways of bridging the gap between potential export availabilities and import demand other than by heavy and, in many cases, possibly disastrous reductions in export prices. Among these, the search for new markets, processing of surpluses for other uses, removal of import restrictions and possible international arrangements.

Though in many importing areas consumption of fresh fruit has reached the saturation point with about 9 kilograms per capita per year, there are other hopeful prospects besides the Japanese market; the opening up of the U.S.S.A. and eastern European countries, where banana imports have risen by 15% annually during the past five years. According to interest expressed by these countries in larger imports of tropical fruit and particularly bananas, if there is further liberalization of the market, imports could rise to about 200,000-300,000 by 1972. The total for 1968 was 85,000 tons for the whole area.

Were all trade controls to be removed, conclude FAO experts, world trade in bananas could rise as much as 500,000 tons per year, and the theoretical impact of removal of import duties and major taxes alone would approximate an increase of 280,000 tons per year, M. F.

Banana production and demand, 1972

Estimated export availabilities by regions				Projected import demand by regions			
thousand tons				thousand tons			
Central America and Dominican Republic	3170	to	4170	EEC	1701	to	1701
Somalia	100	to	110	EEC (44% of total)	480	to	480
Supply to U.S.	690			EEC (44% of total)	384	to	384
Supply to U.S. (Kingdom)	400			EEC (44% of total)	317	to	317
Far East	730	to	730	Non-Europe	1911	to	2577
Other major exporters	500	to	500	South America	100	to	100
Rest of the world	100	to	100	North Africa and Near East	100	to	100
				Japan	70	to	70
				Rest of the world	300	to	300
World total	7000	to	7000	World total	1000	to	1000

These figures are based on the latest available data on banana production and demand in the U.S.S.R. and other countries.

production for export, and Malaysia too is seeking the Japanese market. It is known that the United Fruit Company is also interested in establishing a supply source in the Far East, which might be in either of these two countries or the Philippines. But although the Japanese market offers a great potential. It is likely to be supplied increasingly by producing countries of the southeast Asian region.

Somalia, greatly hampered in its exports by the closure of the Suez Canal, has nevertheless maintained its shipments to Italy around the Cape of Good Hope at a relatively high level. The preferential

tariff treatment enjoyed by Somalia on the Italian market — 30 lire a kilogramme (Le, \$48 per ton) up to 100,000 tons instead of 90 lire — expires on 31 December 1969. But Somalia will still have a preference over third country suppliers since it is not subject to the EEC common external tariff of 20%.

Production in Spain's Canary Islands has increased significantly in recent years but shipments to foreign countries have declined from 123,000 tons in 1960 to 52,000 in 1967. This was partly due to rising consumption in mainland Spain as a result of higher living standards and to the Islands losing ground to competitors on the

Sometime in the seventies a zero hour will strike

**If the flow of capital is not increased
repayment of debts and interest payments
will equal the rate of assistance to developing nations**

by OAVID HOROWITZ

The race of the underdeveloped countries against time, the race to narrow the gap between them and the developed nations, cannot be won if investment per head remains at its present level.

The distance in investment between the developed and underdeveloped parts of the world is now so wide that the potential for development cannot be realized; the gap in standards of living and social and political stability seems destined to grow wider.

The yearly net capital investment per head today is \$213 in the developed countries and \$17 in the developing states, a ratio of 1 to 12.5, which, if perpetuated, provides a most depressing outlook for the future.

The problem of capital supply is a crucial one for the two thirds of mankind in the developing world.

The industrialized, developed economy of the west is based on the formation of capital by ruthless lowering of the standards of life of broad sections of the population in the 18th and 19th centuries. Such a solution is not available, to the same extent, to the underdeveloped nations because the minimum subsistence level for keeping body and soul together is already so low that not much more can be squeezed out for investment. Moreover, modern technology magnifies the capital requirements for investment. Further, even now, some 80% of all capital formation in the underdeveloped nations is derived from internal sources of saving and accumulation of capital.

This apparently positive situation is not an unmixed blessing. It implies a reduction in consumption of local products as capital goods are, generally, imported.

David Horowitz, Governor of the Bank of Israel since 1954, is an active participant to UNCTAD meetings, a former journalist, and the author of several books on economic questions, among which Hemispheres North and South and the Economics of Israel.

Paradoxical as it may seem, in the underdeveloped world it is almost as important to finance primary consumption as it is to finance development, for the driving force for any stepping-up of production is, first and foremost, a larger market. Higher consumption spurs demand, in the initial stages of development, and allows for the establishment of many enterprises whose possibility is predicated on economies of scale.

The experience of countries presented as success stories in development shows that their development is based, above all else, on effective demand serving as a basis for economies of scale in numerous industries. Rising levels of consumption, moreover, prompt a rise in productivity and efficiency through higher standards of nutrition and education.

While there was no alternative in the 18th and 19th centuries to internal formation of capital, today such an alternative exists — the simple device of transfer of capital. In a later period, the hardship of primary accumulation of capital was remarkably mitigated — by transfer of capital from more developed countries — in such new areas as the United States, Canada and Australia.

Today, capital resources are available and, furthermore! there is an excess of production capacity in the west. Periodic recessions in the developed economies mainly affect industries producing capital goods, reducing their output four to five times below that of other industries. A transfer of capital to underdeveloped nations, particularly in periods of recession, would help to iron out the violent fluctuations of boom and depression in the industrialized world.

At the present moment, the transfer of capital is stagnating at some \$10 thousand million a year net. Such stagnation is practically tantamount to retrogression, taking into account: 1) the rapid rise of population in the developing nations, which reduces the capital transferred per head of population;

2) the decline of prices of primary products and the mounting prices of capital goods and industrial products, which erode the real value of the capital transferred. This net amount of transferred capital will decline with the growing burden of debt repayments.

One of the delusions which has to be dispelled is that the problem of the underdeveloped world can be solved by private investment. In the report of the DAC there is the following statement: "Unfortunately, it appears that the increase in official net disbursements was more than offset by a reduction in private investment. This decline has taken place despite increased efforts by governments in various developed countries to encourage foreign investment."

Private capital is not attracted to investment in the third world because of low profitability, shortage of skilled labour, lack of scientific facilities, limited internal markets and higher risk.

Thus, governmental and international economic assistance becomes an important instrument for the transfer of capital from developed to underdeveloped nations. But such assistance is actually declining, measured by both the needs and the capacity of the developed nations.

So far as the capacity of the developed world is concerned, out of a gross national product (GNP) of the developed world of at least \$1,561 thousand million in 1966, the amount devoted to the development of the third world was

low as 0.62% after having risen to 0.72% in 1965. This decline in aid to underdeveloped nations as a share of the GNP of the developed world bears testimony to frustration, futility and failure in this crucial period of human endeavour.

In the light of these figures the problem confronting us becomes even more acute. Internal formation of capital in underdeveloped nations is necessarily limited by the low level of incomes per head. Where is the capital to come from?

Most of those countries — like Iran, Israel, the Republic of Korea, Malaysia, Mexico, Pakistan, Taiwan, Thailand, Tunisia, Venezuela and Yugoslavia — which were catalogued at the last meeting of the board of governors of the World Bank as successes in economic growth, are clear testimonies that investment, although not the only condition, is one of the main preconditions of development.

The flow of capital to underdeveloped nations as a share of the GNP is on the downward grade. The debt explosion will add momentum to this erosive process. Already, about half of the financial assistance to the underdeveloped nations is absorbed by repayment of debts, both principal and interest. Some time in the seventies a zero hour will strike, if the flow of capital is not increased, when repayment of debt and interest payments will equal the rate of that assistance to developing nations.

The developing nations have nearly reached saturation level so far as credit on commercial terms, even from the

Where's the capital to come from?

Average annual per capita incomes below \$100 of the peoples of some of the poorer countries. These figures make it starkly clear that significant capital formation cannot be hoped for from local savings.



Source: U.N. Yearbook of National Accounts Statistics, 1966.

...7 thousand million, or less than two thirds of one percent. Moreover, a substantial proportion of that amount consisted of commercial credits, such as the financing of exports and other similar short-term devices.

In 1962 the flow of financial resources to the underdeveloped world constituted 0.76% of the GNP at the developed countries, in 1963 it declined to 0.70%, in 1964 « dropped further to 0.69% while, in 1966, it fell to as

World Bank, is concerned. Their creditworthiness is severely affected by the burden of debts and may be affected even more if the device of rescheduling is applied. The implication is that grants, or concessionary terms of loans, are imperative if a complete invalidation of aid is to be avoided.

Obviously, more and not less investment is required if the developing world is ever to catch up with the developed world. Investment, however, depends largely on capital flow

and economic growth is the function of investment.

A new myth is now being propagated — that what is needed is not capital, but skill and know-how. There is no sense in minimizing the importance of technical assistance, but it should not be used as an excuse or substitute for a diminishing of capital flow. The very fact that technical assistance requires less capital is helpful in advancing this very important development activity. Within four years, technical assistance has increased by some 65% and capital transfers by only 5%. Technical assistance should not become a form of relieving and lightening the guilt complex of the developed world.

The problem in development is political

Capital transfer remains the central problem of the economic growth of the developing world. The disparity between the demand and supply of capital is, doubtless, due to the fact that the present direction of the flow of capital is at variance with humanity's global needs.

The flow of capital is a clear-cut case of priorities. Some \$39 thousand million of domestic fixed-interest securities have been launched on the capital markets of the world, plus some \$3 thousand million of international and foreign securities. According to the UNCTAD secretariat report: "During the period 1960-66, there has been a substantial increase in the volume of net issues by both the public and private sectors of these countries. Public and private borrowing on a net basis rose from approximately \$16.7 billion in 1960 to \$39.2 billion in 1966, " (\$1 billion = 1 000 million).

The share of the developing nations in that gigantic accumulation of capital is negligible, limited to two or three countries with special conditions.

The 1967 OECD Review. "Development Assistance, Efforts and Policies," puts the case in unequivocal and striking terms: - "The problem for the members of OECD's Development Assistance Commission is essentially one of the degree of priority which is being given to aid. Governments may consider as obstacles to increases of assistance such conditions as balance of payments difficulties, fear of overheating the economy with resultant inflation and budgetary limitations. The last item is merely a polite way of saying that domestic claims — such as more road building, agricultural support, defence, space exploration or more generous social security scales — take priority. Of course, one should not set these various objectives one against the other. The choices which underlie budgetary decisions are not made in terms of absolute priority but of shifts at the margin. And a slight marginal shift in some larger budgetary areas could provide quite substantial increases in aid resources. The problem for countries wishing to provide assistance is also, like that of the recipients, essentially political."

Opening the world's resources — a matter of timing

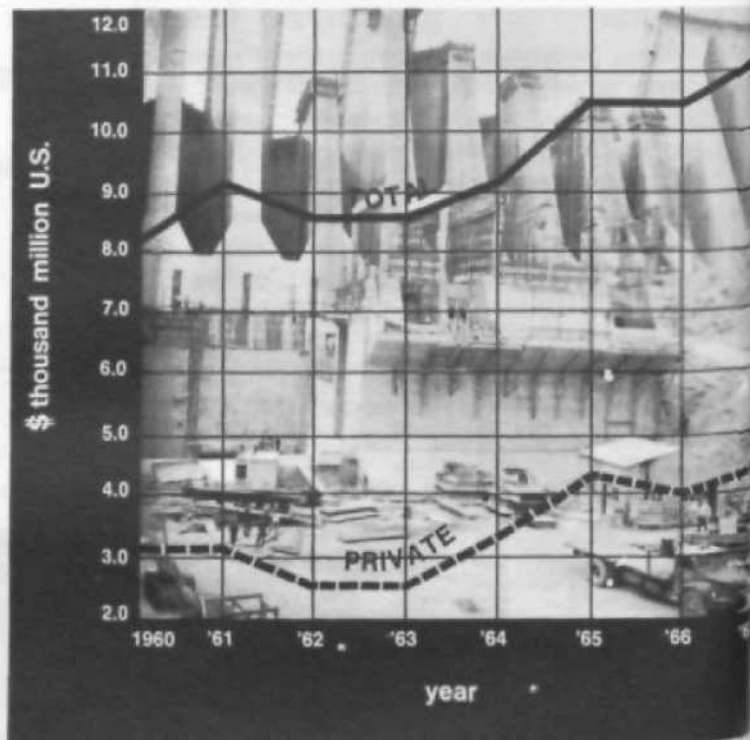
It cannot be denied that a 1% allocation from a CNP of some \$1,650 thousand million in 1967 would be a heavy burden on a developed and 'wealthy world which is getting richer every year — yet it would nearly double the

capital flow of the year 1966*. This is really far from crying for the moon.

Even balance of payments difficulties could be met by some such device as suggested by the president of the World Bank with regard to the International Development Association (IDA) replenishment. This system would provide for a coordination of the use of the equivalent of sale of bonds in the various countries, with purchases in their markets if balance of payments difficulties were to entail that procedure. This would escape the pitfalls and shortcomings of

Flow of development

Private investments and total* (low in thousands of millions of dollars. . .



* Total investment in the developing countries, excluding the flow of capital from the developed countries to the developing countries, is estimated at 11.5 thousand million U.S. in 1966. This is based on the data of the UNCTAD secretariat report, 1967. The private investment in the developing countries is estimated at 4.5 thousand million U.S. in 1966. This is based on the data of the UNCTAD secretariat report, 1967.

tied aid as it would apply to timing only, and would prevent the repercussions of tied aid on prices and terms.

In the light of the present experience of budgetary allocations, it seems well-nigh impossible to substantially augment aid by the simple method of state transfers. Even the World Bank and similar institutions could not obtain a thousand million dollars or more a year in such budgetary allocations as a priority within the political framework of democracy. The activity of such institutions becomes possible only through access to the capital markets of the world for the benefit of the development of the third world.

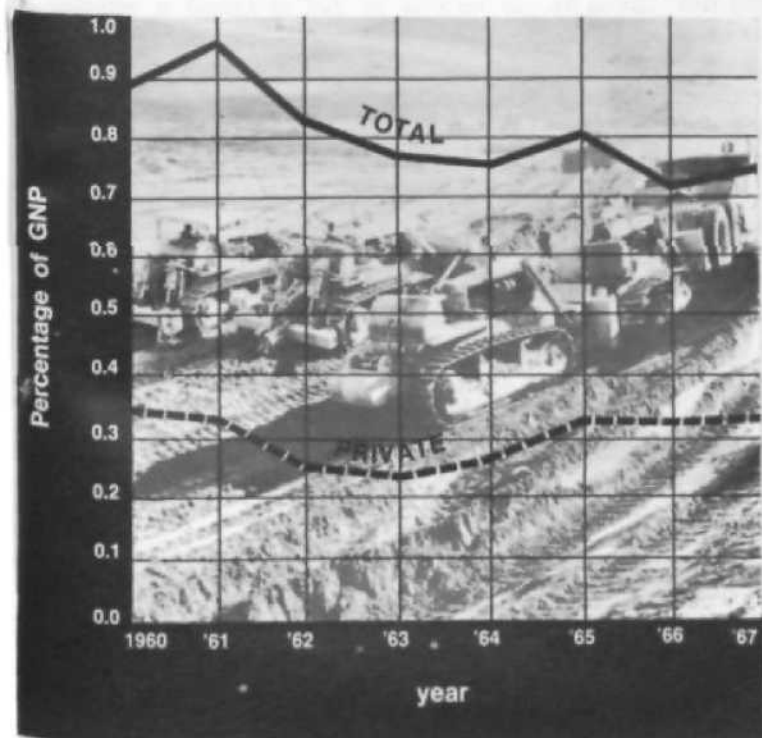
The developing countries themselves are barred from access to the capital markets by lack of security and high interest rates which they are unable to pay: the second impediment has become more pronounced in the few years, with the rise in interest rates.

The arguments against allowing developing nations access to the capital markets of the world include the scarceness and high cost of money. But this is a double-edged sword and cuts both ways: these conditions make it more imperative than ever to provide special facilities for the developing nations, otherwise they have not the slightest prospect of raising funds or those markets.

This is first (and foremost a question of priorities. It is impossible to believe that every one of the \$42 thousand million of internal and external issues presently floated on

Finance to the third world

...and as percentage of the developed countries gross national products"



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in capital markets of the world hat, from a global point of view, absolute priority over the needs of the undeveloped Pans of the world.

Analysis of the capital markets provides incontrovertible evidence that they should be capable, on the basis of priority, of allocating some share of the amounts nttsid by fixed-interest bonds to stimulate the growth of developing nations.

Again, from the report of the tttCTAS secretariat: "The foregoing account makes it ckar that during the 1960s there has been significant growth in the capital markets of developed countries. It is, of course, true that many of Hcse marktti have been faced in recent years with light c°nditRms. But this is because the demand for long-term finds has increased even faster than the supply. However, tightness of markets has not always been due to the shortagc of savings." And, as an UK report pointed

out: " The present shortcomings of the capital markets are due not so much to insufficient savings as to the impossibility of adjusting correctly supply and demand on markets that are too narrow. "

This is fine, of course, provided that the flow of capital to developing nations is not residual after all other needs, more or less urgent, are satisfied.

tffmiom, paradoxes mtt* prejudices

It is decidedly preferable to enable the developing nations to buy money on the market, on conditions compatible with their capacity to repay, than to rely entirely on taxation for the required capital. It is an illusion to suppose that taxation sufficient to provide assistance to other nations is a realistic concept in a democracy. Experience of the extent of capital flow to developing nations, particularly the problem of replenishing IDA, attests to the truth of this.

Money is always available if the proper collateral and interest are forthcoming. The most specious of the arguments advanced against the implementation of the plan for mobilization of capital on the capital market for the development of the third world — by an interest equalization fund and guarantee of the developed nation guarantee of the developed nation, as 1 proposed to JUNCTAD* — is that of the tight money market. But the money market will always be tight so long as the curve of economic activity is rising; its tightness can only be relaxed under conditions of recession.

A stagnant economy, with a reduced demand for capital, would readjust the supply and demand of funds on the capital markets on a lower level. Is this really desirable? The palpable correlation of accelerated growth and lightness of capital markets, caused by added demand for capital, results in a paradoxical situation in which we are told that the greater the prosperity and the increment of the GW of the developed world, the more restricted (he possibilities for augmenting the capill flow to developing nations, because prosperity, full employment and rapid economic growth are correlated with light money markets. It is difficult to grasp (hat kind of reasoning. The answer, naturally, U to be found in the allocation of priorities.

The report of the LNCTAD secretariat shows that capital markets expand, particularly in Europe, even for international issues. But all this extra capital is diverted (o developed economics, which arc already overheated and where more investment results in inflationary pressures,

The establishment of the World Bank and of the International Monetary Fund at Brctton Woods was a revolutionary departure. It initiated measures for the access of developing nations to capital markets. What is needed now is a new departure, one step further in the transferring of resources from the developed and industrialized world to the developing nations, particularly in view of recent development* of the world's monetary system and the creation of new reserves.

It is frequently maintained that there should be no connection between the creation of reserves and the provision

• The Horowitz Plan fur rhr financing of development of under-developed nations troi retommt-itted Ay UNCTAD in 1964.

(Continued an Pa50 58)



Victor H. Umbricht. Managing Director, CIBA, Switzerland.

The main obstacle is risk

says Victor H. Umbricht

dialogue MH^HBHMBHHI^ABi

while Carlos Massad affirms,

The real risk is the short-term view



Carlos Uuud. Governor of the Bank of Chile.

Ceres WHAT IS, IN YOUR OPINION, THE MAIN ROLE OF PRIVATE INDUSTRY IN THE DEVELOPMENT OF THE THIRD WORLD?

UMBRICHT To begin, I would like to make two general observations. Firstly, that countries which don't recognize private, intellectual and industrial property do not meet the conditions necessary for receiving private investment.

Secondly, when private industry invests in a country — underdeveloped or not — it does so to make a profit. At the end of the day, when the accounts are drawn up, there must be a gain. Otherwise the industry is bound to fail, or at least to leave the country.

So it is extremely important that the developing countries recognize the concept of profit; a reasonable profit, of course, the rate of which can be discussed. They must also accept the transfer of that profit.

Ceres BY TRANSFER DO YOU MEAN THE RETURN OF THE PROFIT TO THE INVESTOR COUNTRY?

UMBRICHT That's right. This doesn't mean the profit is to be transferred automatically and at all times. It certainly won't be in the beginning for the sound reason that at this stage there won't be any. Even afterwards, we may want to reinvest most of the earnings locally. Still, if the industrialist wishes to transfer his earnings for whatever reason, he must have the opportunity to do so.

The same applies to the invested capital, which we must be able to recover if necessary. The developing countries should give certain guarantees to that effect. I don't want to exaggerate the role of profit. But normally it should be estimated so as to cover the risks involved. And undeniably the risks are higher in the third world countries.

Once that's established, I think that private industry can play an enormous role in the development of the poorer countries. First of all, capital is needed to launch an enterprise, and not only to launch it but to support it in its first stages. It is also necessary to provide the know-how, the technical

skill, which is certainly the basis of the wealth of a large industrial enterprise. After all, we can always find capital if we take the trouble to look for it; but technical know-how is the result of a hundred years of research!

That's the real capital, the real wealth of business firms, and that's why they demand protection for their intellectual property, that's why they want licences and patents. It seems to me that bringing this technical experience to the developing countries is of the greatest importance, since without it they won't be able to enter the mainstream of modern economic growth.

Like ourselves, they need the knowledge acquired in the last hundred years, but provided they recognize intellectual property and allow for fair royalties and fees.

There are countries that do this, plenty of them. Then there are those that don't, and even go so far as to copy everything you do. What interest do you have in going to work in a country which, without paying anything at all, copies the results of your research? You've put a

Ceres WHAT ARE THE ADVANTAGES AND THE DRAWBACKS OF PRIVATE FOREIGN INVESTMENT, FOR THE DEVELOPING COUNTRIES IN GENERAL, AND CHILE IN PARTICULAR?

WASSAD The first advantage is in obtaining additional resources from foreign countries. This is not necessarily a long-run advantage: because sometimes the flow of profits and amortization may outweigh the inflow of new capital. It is very difficult to assess this burden because private foreign investment can help to substitute imports and the effects of this substitution cannot be directly assessed; Or- it may further exports. This is something which really merits deeper study before a definite conclusion is made.

Anyway, if we take a look at many developing countries and compare, say, profit remittances with capital inflow, we find that for a long period of time the results have been negative.

As for Chile, the net results are positive. There have been important foreign investments, especially in the copper pro-

duction area, and in this case the government is a partner in the investment. In one particular company it is the majority partner, in other companies it is a minority one but in all instances the government has its say in the most important decisions. Copper is such a crucial sector of Chile's economy that the government must be in it. The second advantage is the introduction of new technology into the country's economy through know-how both in terms of entrepreneurial organization and of technology proper.

In some instances there is the advantage of getting what one might call 'captive markets': for example, a subsidiary of a larger firm, established in a developing country, may produce pieces and parts which it exports directly to the main country for assembly of the final product. But there is another side to this advantage.

This sometimes works in the opposite way, when the products are sold by the parent company to a subsidiary at prices higher than would be obtained in the free market. So there are two sides to

this question of captive markets, and one has to be quite careful when analysing a given project, to see which way it will work.

These are, I suppose, the main advantages of private foreign investment. Now let's look at the drawbacks; first, you find that sometimes there are difficulties with the local entrepreneurs who are reluctant to accept the establishment of an important foreign firm which may deprive them of an opportunity of investment open to domestic capital and domestic entrepreneurship. This may become in some cases a problem. Perhaps the best solution would be to make a thorough project evaluation and see whether domestic entrepreneurs are able to carry a good project forward and, on the other hand, to think in terms of joint ventures, that is, to put together foreign and domestic capital, either private or public, to undertake a particular project.

There are other problems, linked with difficulties arising when the policy of a given subsidiary in a developing country is in some measure determined by the

lot of money, personnel, and scientists, into that research, you've worked on it for years. For what?

And now we come to another kind of contribution: management know-how. You don't hire amateurs to set up a factory: it takes experience and knowledge how to run a business.

The developing countries don't have such a thorough knowledge of management yet. Some of them have it to some extent but, in general, the developed countries have something to contribute and should do it. Next, there is the training of personnel from the technical, commercial, economic and financial standpoint, the training of managerial staff.

ceres DO YOU THINK A FOREIGN BUSINESS ENTERPRISE CAN REALLY BECOME INTEGRATED IN THE SOCIAL AND ECONOMIC FABRIC OF A COUNTRY OF THE THIRD WORLD, AND TO WHAT EXTENT?

UMBRICHT Certainly, such an enterprise can very well become integrated.

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policy of the country of the investor. This is in a sense a problem of nationalities, and there is growing interest today for setting up multinational institutions for private investment, of the ADELA* type, where the nationality element is not the main consideration.

Then there are problems connected with what is called the 'climate of confidence,' or 'the security of the investment.' We find that in many countries, and in Chile in any case, this question is grossly exaggerated in business discussions; for when you talk to investors and they say that they are not interested, in fact they are interested, and in a hurry too...

So there is a difference between words and deeds in this matter, and disentangling the difference may be of great help in improving the 'climate' of foreign investment.

* The ADELA Investment Company S.A. groups banks and industrial corporations from 16 developed countries with the object of intensifying investments in the priority sectors of Latin American countries.

at least partly. This can be done in two ways. First, at the social level, by co-operating with the local communities. From this standpoint, a lot can be done for the schools, hospitals, churches and existing groups. Sports clubs, stadia and libraries can be established.

Also — and this would be still better — we can extend this integration to the structure of capital itself by letting the local people participate in its formation.

This doesn't necessarily mean a majority participation — that raises another problem which I won't discuss here — but anyway a participation involving the addition of local representatives to boards of directors.

It would also be advisable to give responsible posts to managerial staff from the countries concerned, since it's not right that all the good jobs be held by foreigners, and only second and third class ones available to the others. But obviously, to reach that point, training courses must be planned. We can't afford to give a job to someone unless he qualifies.

ceres INVESTORS SPEAK OF MANY RISKS — POLITICAL RISKS, MEANING THE POSSIBILITY OR NOT TO TRANSFER THEIR PROFITS AND CAPITAL — AND EVEN TECHNOLOGICAL RISKS. IS THIS PART OF THE 'CLIMATE OF CONFIDENCE,' OR IS THERE A TENDENCY TO EXAGGERATE THE SITUATION ?

MASSAD My impression is that it is quite exaggerated. Indeed, you find foreign private investment going on in countries with very different political structures and different social goals or economic goals.

Furthermore, many countries are setting up insurance systems enabling investors to buy coverage against noncommercial risks, and this is quite a positive factor.

When budgeting his own project and its rate of profits or returns, the investor will include in his outlay the cost of this insurance which, as far as I know, is not prohibitive. As a matter of fact, the insurance systems operating today are

But once we've found the man with the qualifications, or trained him, we should give him the same responsibilities we give foreigners.

Just in passing, I might say that the developing countries should be more generous in issuing residence permits to foreigners. When you establish a plant, it takes technicians who know how to organize production, who have a scientific background, and know the finer, critical points of an industrial operation.

To guarantee the success of an enterprise, a company must be allowed to bring in its own people, at least for the first few years, to get it off the ground. Unfortunately, when we apply for a permit we run into enormous problems and bureaucratic delays.

This is regrettable but even more, it's not in the best interest of the developing countries to act this way.

That's my idea of the place private industry could have in the countries of the third world. Does that answer your question?

making a good profit, and that's another indication that here is a smarter risk in foreign investment than is commonly thought?

ceres WHAT IS A REASONABLE PROMT? COULD YOU DEFINE IT?

MASSAD I don't think anyone can. If a firm, after studying a project with the institutions which most developing countries have for that purpose, decides to go ahead with it, then I suppose the profit is reasonable. The question is not simply what constitutes a reasonable profit from the investor's viewpoint, but also what might be a reasonable participation of the domestic economy in a given project. And this point cannot be answered only in terms of rates of profits. There are many other elements involved — external economics, to mention one, which deserve important consideration.

ceres TO WHICH SECTORS DO YOU THINK PRIVATE FOREIGN INVESTMENT



... technical know-how is the result at a hundred years of research

CSfeS It CERTAINLY DOES. I'M GOING TO ASK YOU ANOTHER, TO TRY TO STIMULATE A DIALOGUE BETWEEN YOU AND THE COUNTRIES WHERE YOU BECOME ESTABLISHED. THEY SAY: "You'RE REALISTS^ YOU SEE THINGS FROM THE ECONOMIC ANGLE, YOU MAKE PROFITS. THAT'S FINE. BUT AT THE SAME TIME, DO YOU TAKE SUFFICIENTLY INTO ACCOUNT OUR DEVELOPMENT NEEDS?" MAYBE THIS CAN BE THE STARTING POINT FOR AN EXCHANGE OF IDEAS.

UMBRICHT We don't invest only to make profits, but profit is indispensable. Investments are made because there is a market for them, for a series of reasons. Once this decision is made, of course, we must fit in with the planning of the host government. All countries are drawing up fairly long-term development plans, and some define what are known as sensitive areas, that is, sectors of the economy where they don't want foreign investments, or at least not a majority participation by foreigners.

SHOULD - BETTER BE DIRECTED? FOR THIS IS A PROBLEM EVEN BIGGER THAN INVESTMENT ITSELF.

MASSAD I really think this is a question that each country must solve by itself. It is a question of deciding on a developing strategy and defining priorities from the country's point of view.

For agriculture, my thinking is that foreign investment could make a better contribution in the processing and marketing areas, rather than directly in the production area. Now, marketing and processing implies improving production, implies introducing new production techniques, establishing more buying points, better transportation systems and the like. So perhaps by working at this level technological development in agriculture can be brought up to production.

And I think that in the case of agriculture this is probably the most promising aspect of foreign investment.

AND THAT IT'S A NEW VENTURE, A JOINT ONE. COULD YOU TELL US ABOUT ADELA'S IMPACT ON CHILE?

MASSAD ADELA has helped in many fields: in metallurgical industry, in food processing and many others. They usually are minority partners and they also provide technical assistance. There are some clauses incorporated in the agreements, to help improve management whenever it is needed. This is, I think, a positive approach to a programme of investment.

ceres THE EFFECTIVENESS OF PUBLIC AID HAS COME UNDER HEAVY CUTS* FISCALISM, AND SUGGESTIONS WERE MADE FOR SHIFTING THIS AID WITH PRIVATE INVESTMENT. HOW DO YOU FEEL ABOUT IT?

MAft** They are not substitutes. Definitely not? They may be complementary, but not at all substitutes. And

let us recall that developing countries need to do only too many things that private investment cannot do — infrastructure, education and social and economic reforms which require resources. And they usually produce pressures on the balance of payments. These are problems which private foreign investment cannot solve. It might help a bit, but it does not solve them.

So, when a country is hard pressed for resources, it should not think in terms of private foreign investment exclusively. The world should give us opportunities for thinking also in terms of assistance for development.

This is not just a question of moral principles. World peace is involved, and the United Nations and other international bodies have recognized it. But the conditions of development and public aid should be liberalized and, to that aim, we need that the developed countries should solve their own balance of payments problems as soon as possible, and will as much cooperation among them selves as possible. But, definitely, private

Ceres You SPOKE ABOUT ADELA.

In Mexico, for instance, the petrochemical industry is supposed to be a purely national industry. In some other countries, industries connected with petrochemicals must be financed by local majority participation.

In still others, some sectors are completely off bounds for foreign investors: for instance, maritime transport sometimes and, usually, everything connected with national defence.

Knowing this, foreign investors can only choose the activities which interest them in the remaining sectors.

Personally, I have never noticed any major conflict between local interests and those of the investors.

In any case, we have always found a basis of agreement in the private sector, and I would say this problem doesn't worry me much.

Ceres Now, WHAT ABOUT RISK? A LOT HAS BEEN SAID ABOUT THIS, AND I CERTAINLY AGREE WITH YOU WHEN YOU SAY THERE IS A RISK INVOLVED IN

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foreign investment is not a substitute for aid, cannot be a substitute.

Ceres FIFTY OR TWENTY YEARS AGO THERE WAS CAPITAL FLOWING FROM RICH TO POOR COUNTRIES. HAS ITS NATURE CHANGED SINCE, AND IN WHAT WAY?

M ASSAD There have been several changes. To begin with, there are different types of capital inflow. In the case of private foreign investment there is one important change: private investment is not looking as much as before toward the extractive industries and is coming more and more into the manufacturing field. This is an interesting and positive change.

As for public aid, the terms of aid are being made more and more difficult to comply with. Tied loans are now a generalized practice, which may move us into a world of bilateral trade rather than into a world of more open international trade. The cost of capital is ris-

INVESTING ABROAD, BUT DON'T YOU THINK THIS ASPECT OF THE PROBLEM HAS BEEN SOMEWHAT EXAGGERATED?

UMBRICHT Let's try to identify the risks. First of all, there's political instability. In the last ten years there have been *no* less than 62 coups d'etat in the developing countries. That's enormous! It creates an atmosphere of unrest, of political chaos, with all the expropriations and nationalizations that go with it.

You think you're working in a particular framework whose laws you've accepted, but you never know whether next week a new government won't upset everything. You see, what's worse than expropriation is the fear of it.

Then there's the uncertainty concerning the protection of intellectual property. Will they let us keep our patents, our products, everything we've acquired by years of work, or will they consider it all "a scrap of paper?" In many countries attacks are being made on patents in the pharmaceutical sector. These countries say: products must be

sold as cheaply as possible to our people so that they can benefit by the latest scientific findings.

I agree entirely with this generous point of view, but not when, to achieve this result, they abolish protection of intellectual property. How can we engage in research, which is very costly, if we cannot make a profit on our investments?

There is a further and by no means lesser risk, when an investment cannot include the entire production process from A to Z but, let's say, only the second half. We must necessarily bring in the basic commodities if we are to process them locally.

All of a sudden a rule is imposed forbidding the import of these basic commodities, and we have to make new investments, and establish new factories to manufacture them locally. It's not only a financial investment you're making, you're also importing technology into the developing countries. Producing chemical for the pharmaceutical industry is probably the most difficult kind of production there is.

ing, interest rates are going up, and are going up rather fast, which also implies difficulties for developing countries. Some very imaginative and practical proposals have been put forward by Mr. Horowitz * in this context and they should be explored more seriously and systematically.

I suppose these are the main changes one could mention. There are also some other elements which make for differences in the flow of capital and also for differences in investment opportunities: trade is supposed to be — or some people think it should be — a substitute for aid... again these things are considered substitutes.

Aid could not be used profitably without trade. Trade implies more investment opportunities in the developing countries and as long as difficulties in trade are created — such as tariff barriers, etc., in developed countries — this means narrowing the margin of profit-

able investment opportunities, not only for foreign investment but also for domestic investment; and that also means affecting the rate of growth of the developing countries. *

There is already a differential in the rate of growth of developed and developing countries and this difference runs against the developing world, and, as it widens, then, to put it very broadly, peace will be a very difficult goal to achieve in the future.

ceres INVESTORS COMPLAIN ABOUT LEGAL AND BUREAUCRATIC DIFFICULTIES — THEY SAY THEY DON'T GET ENOUGH ADMINISTRATIVE COOPERATION ABOUT ISSUANCE OF PERMITS AND PEOPLE'S MOVEMENTS. ABOVE ALL, THEY WORRY ABOUT PATENTS, ABOUT WHAT THEY CALL 'INTELLECTUAL INVESTMENT'. THEY ARE AFRAID THAT THEIR PRODUCT* MIGHT BE COPIED, WHAT DO YOU THINK**

MASSAD There are too many things⁵ involved in this question. Intellect⁸¹

* *Stt article, page 20.*

It requires absolute precision, to the milligramme or hundredth milligramme, since people's lives are at stake.

Can this be done locally? Are the people there aware of the quality or hygienic standards needed for this kind of work?

Finally, there is the risk of taxation. Suddenly, these countries find they need money. What do they do? They raise taxes to the point where your business loses all incentive. Very often, unfortunately, foreign companies can't defend themselves as well as local businesses. Obviously, it is easier to investigate foreign firms than local ones.

Roughly speaking, these are the risks run by foreign investors in the third world. I don't mean to exaggerate them; actually, we are investing enormous amounts. But I do want to point out that along with the positive experiences we've had some others, negative ones as well.

cares WOULD THAT BE THE REA-

SON WHY FOREIGN INVESTMENTS, WHICH USED TO COME TO ABOUT THREE THOUSAND MILLION DOLLARS A YEAR, ARE BEGINNING TO FALL OFF?

UMBRICHT That's right. It's unfortunate that in this world where the population in the developing countries is growing at the rate we all know, public and private investments are decreasing. Or rather, private investments are increasing, but not in the poorer countries.

They are increasing in certain selected countries, but dropping in others which, unfortunately, are the ones which need them most. This is deplorable, but it's because of the political and economic instability I mentioned before.

For example, you know some countries have nationalised everything. Who wants to invest there now? Nobody. Some other governments show a tendency toward communism.

Every country has a right to be as

government-controlled, as centralized, as socialist as it wishes, and I'm the last to deny them that right. I'm simply pointing out that this doesn't create the best conditions for the industries which want to invest.

That's why, much to our regret, investments have gone down in the countries which need them most.

ceres ANOTHER EXTREMELY IMPORTANT PROBLEM IS THE LACK OF INFRASTRUCTURE. SAY YOU WANT TO ESTABLISH A FACTORY SOMEWHERE, YOU HAVE THE POSSIBILITY OF BUILDING IT AND BRINGING IN NEW TECHNOLOGY, BUT YOU ARE PARALYZED BY THE ABSENCE OF ROADS, ELECTRICITY, WATER SUPPLY, ETC. ALL THIS DOESN'T DEPEND ON PRIVATE INDUSTRY BUT ON THE GOVERNMENT.

DON'T YOU SEE THIS AS AN AREA OF COMMON INTEREST TO BOTH THE PRIVATE INVESTOR AND THE RECIPIENT COUNTRY?



...we can't wait one or two hundred years, we don't have that much time ahead of us...

knowledge is usually the product of the investment of resources and in that sense trying to get a yield out of this investment seems to be legitimate. But, on the other hand, we have found in several cases that negotiating royalties for patents is a problem — the cost sometimes is too high. And we have had some experiences in our own committee which studies these problems: take the case of one domestic entrepreneur who was willing to pay royalties too high by international standards; after the problem was evaluated by our committee, and more information was put at his disposal, he could negotiate a much better deal.

There is quite a lack of information concerning real prices in the patent market, and this often prevents domestic entrepreneurs from striking a fair bargain. Oddly enough, they don't even know what technical alternatives can be used, therefore they are often in a difficult position to negotiate; and since this is a matter of negotiation, the more they know about the subject the better their chances to bring it off successfully.

Another point: the question of technical knowledge is quite a difficult one in terms of goals, for many developing countries. It may happen for instance that in order to use the best techniques available for a given product you must make a large investment, rather intensive in the use of capital and little intensive in the use of labour.

Usually, for a particular product, there is a small range of selection of alternative techniques. I suppose quite a lot of research is needed to find whether alternative techniques exist for the efficient production of a given item with a different resource-mix, techniques more adapted to the resource-mix available in developing countries.

But this is not the whole question because it concerns only one particular product for which the range of selection of alternative techniques is narrow.

The hardest decision concerns the choice among different products — and you may select among products those whose techniques are the best available; and are more intensive in labour than

UMBRIGHT In my sector, chemistry, the state of infrastructure doesn't raise a serious obstacle to investment, since it's necessary to others as well, especially to agriculture or heavier industries than ours. So roads, railways and ports don't worry us so much.

Rather, what's lacking in our case is an established banking system, then specialists, skilled workers, and an administration capable of shortening the delays for granting licences.

Think of it, in some countries it takes eighteen months as a rule to obtain one, and sometimes two or three years!

ceres You BELONG TO THE BOARD DEALING WITH THE MEKONG DELTA AND THE DEVELOPMENT OF THAT REGION. THERE ARE SEVERAL PROJECTS OF THIS KIND IN THE WORLD, AND THEY ARE INTERNATIONAL IN TWO WAYS: BECAUSE RICH AND POORER COUNTRIES COOPERATE IN THEM; AND ALSO BECAUSE MANY COUNTRIES OF THE THIRD WORLD ARE

ASSOCIATED IN THEM THROUGH COMMON MARKETS OR, AT LEAST, COMMON PROGRAMMES, COULD YOU GIVE US YOUR VIEWS ON THE FUNCTIONING OF SUCH OPERATIONS?

UMBRIGHT Yes, I am a member of the Mekong Advisory Board. Our task is to assist four countries bordering the Mekong river — Cambodia, Laos, Thailand and Viet-Nam — which might be joined by others later.

But these four are too poor to go it alone and a regional approach is indispensable for their economic future. The Mekong river traces their borders, but also links them and from the Mekong they get their electric power, their transport and communications, their trade — everything.

If you build a bridge on the Mekong, it becomes an international project right away, and if you build a power plant it will be the same, servicing the four countries at once. You don't build roads across one country but run them throughout the region.

Only thus, we believe, can one utilize the great resources of the area by having a regional, international, multinational and not a national approach. This requires joint planning, so that each country knows what the others want, and they can reach an agreement.

I am very much in favour of this regionalization and of a common market for south Asia such as those of Europe, and Latin America and other parts of Asia.

And here the question of financing arises. The whole world bears a heavy responsibility toward the countries of southeast Asia which, unfortunately, have been so much in the news during the past years. We must help them to rise from the ruins and rebuild what wars have destroyed. And countries outside southeast Asia must realize that without this help progress will be very slow.

Maybe not priority over other countries but at least restore the balance considering that they have suffered more than others, and have not received their fair share of international aid.

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in capital. Very positive inducements to investment are offered in this field, such as accelerated amortization. But this works in favour of projects which are highly capital-intensive, because what is amortized fast is capital... So here we have a very good inducement to investment which, however, has as a side effect the selection of products which are highly intensive in capital and less intensive in labour, in the techniques available for their production. The result is the opposite of what you wanted to obtain.

These are pressing questions, and they will become even more pressing in the near future. They don't affect developed countries, because new techniques require new capital goods, and there is a demand for capital goods in the same developed countries where they are produced. While in the case of developing countries you may produce a limited amount of capital goods, and in general you have to import them; so the situation is completely different.

ceres LET'S SPEAK FRANKLY, THERE IS A POLITICAL RISK ESPECIALLY ABOUT COUNTRIES WITH A SOCIAL-MINDED GOVERNMENT. DO YOU THINK THAT PRIVATE FOREIGN CAPITAL CAN COOPERATE WITH COUNTRIES WHICH PUT SOCIAL PREOCCUPATIONS ABOVE OTHERS?

MASSAD I think it certainly can. It certainly can contribute under these conditions. There would perhaps be a request for flexibility, in this context, to the private investor either foreign or domestic. Flexibility in terms that are not unknown to investors. These investors should always look — good investors do — to the long-run results of a given project.

Now, a country undertaking basic reforms in order to modernize its economy and introduce more justice in the functioning of the system is changing what I call the rules of the game — or at least some of the rules of the game.

But these very changes were made by developed countries one hundred or two hundred years ago, while we have to

make them now, and cannot wait one or two hundred years for making them. We don't have the time that the presently developed countries had — we don't have it! So we have to make these changes at a much faster pace.

And if an investor with a long-range view realizes that these changes will bring forth a more just society, a more open society with opportunities available to everyone, a better distribution of income, closer to that existing in developed countries, he will also see that these conditions are the ones which will give him more security in the long run.

And here you have to differentiate between the long and short run. Some one said that the long run is made of a series of short runs. This is certainly true, but what an investor looks at is not the present short run but the series of movements which will carry a given society economy toward a more socially stable and just situation and that WHO^{ff} be his best security in the long run.

Were these things left undone then ^{ee}would be running far greater risks than^{a(1}

ceres Now I'D LIKE YOUR OPINION ON A HIGHLY DEBATABLE POINT. IT IS WIDELY THOUGHT THAT INDUSTRIALIZATION IS THE FASTEST WAY TO REACH A CERTAIN LIVING STANDARD. AT THE SAME TIME, WE FIND THAT A MINIMUM OF 70 TO 75% OF THE POPULATION IN THE THIRD WORLD LIVES ON AGRICULTURE. WE ALSO KNOW THAT IN THE PRESENT DEVELOPED COUNTRIES INDUSTRIALIZATION WAS NOT ACHIEVED BEFORE THE START OF REAL AGRICULTURAL PROGRESS. AS A REPRESENTATIVE OF INDUSTRY, WHAT ARE YOUR VIEWS ON THE MATTER?

UMBRICHT It's a question of priorities. Since we can't do everything at once, we have to choose. Personally I would give agriculture top priority at present because it's already there and people know what it is, while industry still has to be created. It is more logical and efficient to first try and improve what exists' and — more or less — works.

At the same time, something should be done for industry. And for learning

too (by this I mean the elementary, secondary and technical schools to start with, and then the university faculties and institutes of higher education) since they represent the future of every country. On the other hand, I would give national defence a rather low priority: if only half the amounts spent on it were used for development, things would certainly advance much faster!

Ceres ONE MORE QUESTION. ARE YOU, PERSONALLY, OPTIMISTIC OR PESSIMISTIC ABOUT DEVELOPMENT.

UMBRICHT I'm optimistic in the sense that I believe the rich countries are becoming increasingly aware of their responsibilities, and that the industrialists of these countries understand better than in the past that to invest in the third world is in their own interest. There has been undeniable progress in the development of the mental outlook, and in this respect I'm optimistic. Unfortunately, I think government aid is still far

from increasing in proportion to needs. As you know, the developing countries require 1 % of the GDP. This would mean 15 thousand million dollars for 1968 alone. That's a lot. This figure and percentage have never been reached in the past and won't be* in the immediate future. Yet it is increasingly necessary to invest large amounts in the third world, and I don't think progress is being made in this direction as quickly as it should be.

That's why it's urgent that both parties, the developed and the developing countries, should thoroughly understand their responsibilities and the measures to be adopted to remedy this situation. There exists a \Whole list of recommendations designed for the use of these two categories of countries. Each group should read it and draw on it for future action.

Everybody wants to invest, but in spite of this willingness, we aren't making progress as we hoped. What are the obstacles? I think I've described them fairly clearly at the beginning of this interview. They also point to my conclusions.

those many governments have to face at this time to undertake such changes.

A far-sighted investor should take these things into consideration, — and I found in practice that many of them do.

Ceres TAKING INTO ACCOUNT THIS FACTOR AND THE CURRENT ATTITUDE OF THE THIRD WORLD TOWARD PRIVATE ENTERPRISE, ARE YOU OPTIMISTIC OR PESSIMISTIC ABOUT THE FUTURE TREND OF PRIVATE FOREIGN INVESTMENT?

MASSAD It is hard to be either optimistic or pessimistic. One must be realistic. Let's put it this way: private investors and private enterprise have a lot to contribute to society, have done a lot in the past and have a lot to do in the future.

The question now is whether the private investor feels as his own personal obligation to do his utmost to Maintain the status quo; assuming that

maintaining the status quo means, in good faith, maintaining the rules of the game, maintaining stability and maintaining really possible development for the future.

They might be wrong, sometimes, in these terms. I mean, if they recognize the type of changes which a society must adopt to create more opportunities for the entire population as changes which should be accepted and supported by them rather than fought, then certainly one could be optimistic.

But if the private investor thinks — and I believe this would be a mistake — that these changes affect so much the rules of the game that he cannot continue investing, then he himself is creating the conditions that will perhaps force societies to move in a different direction.

Investment is needed. If it is not forthcoming through one type of system, it will have to come through another one; and if it is not, then everyone will start thinking about how to change the whole structure, the whole set-up, in

order to obtain investment needed for growth.

Growth, and improvement of the standard of living of the people are such a pressing objective that it may go further than many people think.

If these objectives are not met soon enough, conditions in the developing world will change, I am afraid, in a direction which will not receive the support of private investors.

But we have here a question of alternatives, and one has to do one's best to make some of the alternatives work. But if they don't, despite these efforts, then society will choose a different alternative.

This is really what I mean when I say that if you don't have development you won't have peace. If you really can't move forward at a faster pace than most of the developed world is moving at the present time, then the pressure of expectations, legitimate expectations, will be too strong to permit a stable social system to work smoothly, and this is the basis for the disappearance of peace.

New investment codes in Africa

- to protect the investor's capital and the countries' resources
- and coordinate financing with development plans

by KRISHNA ANOOJA-PATEL

Africa's agricultural resources, although barely tapped at present, are immense. The continent is ideally suited to growing all types of crops, for food as well as for industries. The oceans around it, its lakes and rivers, provide unlimited opportunities for fishing. Its rich forest resources amount to one sixth of the world's total.

And yet, the African countries produce on a per capita basis no more than

one third of the per capita agricultural output in the industrially developed countries. The vast potential of raising agricultural output is thus plainly evident.

This realization has found a clear expression in the development plans of most African countries. Even where rapid industrialization, including the creation of basic industries in the public sector, formed the backbone of the development strategy, there has been present nearly everywhere the emphasis on agricultural expansion.

This emphasis is also to be found in the investment codes and laws, which have served as the legal complements to the development strategy of the develop-

ment plans of the African countries. But since the legal enactments merit more often than not give a generic expression to policy instruments for raising the level of investments in a country, it is easy to appreciate why the specific provisions concerning agriculture alone, as distinct from those concerning any other economic activity (e.g. industry, transport, etc.), are much less clearly spelled out in the investment codes or laws than in the development plans. It is important therefore to examine agricultural development legislation in the broad context of their main provisions of these investment codes and laws.

In the early sixties, only seventeen countries out of thirty-three independent States in Africa had enacted such laws. Since then, the number has steadily increased with the result that now a country without a development plan and without a complementary investment code has become a near-rarity.

The Investment Code of Dahomey was specifically adopted for the purpose of "coordinating private investments with the development plan." In Kenya, the Foreign Investments Protection Act clearly states that a certificate for an "approved project" may be withheld by the Minister of Finance, if it is not for the "benefit" of the country. Morocco has stated in its Investment Code that private capital is welcome in economic sectors to which the development plan has given "priority."

The use of the words "approved project" or "priority" conveys somewhat different emphasis in the investment legislation in the African countries. The former signifies that the Investment Committee or a government agency has already drawn up a list of concrete projects in the light of the criteria laid down in the development plan of the country. The word "priority" on the other hand is used to convey a wider coverage, referring to broad areas or enterprises.

The main object of investment laws is to facilitate or attract foreign, domestic or both types of investments. The investment laws or codes normally describe the executive authority responsible for examining and supervising investment. They usually incorporate conditions of entry of foreign capital and the rules of remittance. Regulations invariably include tax exemptions which are related

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to the size of investment over a specific period. Items and goods that can be imported duty free for new enterprises and their expansion are also listed.

The existing investment laws, particularly of ex-English-speaking countries, are not comprehensive; they do not always contain essential information for the potential investor. In some cases it is necessary for the potential investor to refer to exchange or custom regulations to get a complete picture of the legal structure essential for his venture. The ex-French-speaking colonies, on the other hand, follow a more or less uniform pattern in enumerating special incentives for investments in Agriculture. The typical examples are the investment codes of Chad, Gabon, Central African Republic, Ivory Coast, Rwanda, etc,

The economic policies of African governments fall into three groups, according to the emphasis placed on a particular form of organization for their accelerated economic and social development. At one extreme are the countries depending on the public sector as the main instrument of rapid agricultural development; at the other are those who expect to rely exclusively on private domestic and foreign investment. Between these two are a large number of countries where the attitude is more or less pragmatic: relying on private investment where feasible, and undertaking the project in the public sector where necessary.

A majority of the investment laws offer a vast range of economic inducements, including tax incentives, rural customs exonerations, to encourage "new" and expansion of "established" enterprises, in industry and agriculture. Apart from a few exceptions like Uganda, Kenya, Somalia and Libya, investment laws of most African countries usually apply to both foreign and domestic investments,

Economic benefits to the investor range from complete tax exemption to partial tax concessions related to a specific period. There are also provisions for generous depreciation allowances, reducing reductions in turnover tax, standard tax and business tax. In general, all tax benefits are granted after an enterprise has acquired a certificate of completion or approval from a recognized government agency.

SEIEGTEO INVESTMENT LAWS

- Algeria - Ordinance No. 66-284, 15 November 1966. Preamble to the Investment Code. Law No. 63-277, 26 July 1963, establishing a Code Of Investment.
- Burundi - Law Instituting the Code of Investment, 8 August 1963.
- Central African Republic - Law No. 02-355, 14 December 1967, establishing a Code of Investment, amended 19 February 1963.
- Chad - Decree No. 156/PR, 28 August 1963, establishing a Code of Investment.
- Congo (Brazzaville) - Law No. 39-61, 20 June 1961, providing an Investment Code, supplementing the general code and amending the code on registration, stamps, and tax on income from securities.
- Cote d'Ivoire - Law No. 61-53, 31 December 1961, establishing the Code of Investment.
- Ethiopia - Decree No. 61, 1963, providing for the Encouragement of Capital Investment in Ethiopia, 16 September 1963.
- Gabon - Law No. 55-G1, 4 December 1961, providing for an Investment Code, (This replaces a more general code which was drawn up by the four Equatorial States: Central African Republic, Chad, Congo (Brazzaville) and Gabon. See also Treaty establishing the Central African Economic and Customs Union (Gabon, Cameroon, Central African Republic, Chad and Congo (Brazzaville), 8 December 1964).
- Ghana - Capital Investment Act, 1963.
- Guinea - Decree No. 136/PRG, promulgated by Law No. 50 AN/62, 5 April 1962, instituting an Investment Code.
- Guinea-Bissau - Law No. 59-134, 3 September 1959, determining rules regarding private investment in the Republic and Decree No. 60-09, 6 January 1960.
- Kenya - Foreign Investments Protection Act, 11 December 1964.
- Liberia - Investment Incentive Code, 15 April 1966.
- Libya - Law of 30 January 1958, on the investment of Foreign Capital.
- Madagascar - Ordinance No. 62-02*, 19 September 1962. Law No. 62-025, harmonizing provisions with the Investment Code constitution and organic law 15 October 1962.
- Mali - Law No. 62-5AN-RM, 15 January 1962, establishing a statute for enterprise operating under agreements.
- Mauritania - Law No. 61-122, 26 June 1961, determining the regime of private investments.
- Morocco - Investment Code. Dahir No. 1-40-383 (31 December 1960) Dahir of 9 Ramadan 1331.
- Niger - Law No. 61-21, 12 July 1961, establishing an Investment Code of Niger, modified by Law No. 63-2, 1 February 1963.
- Rwanda - Investment Code, 4 May 1968*.
- Senegal - Law No. 61-33, 22 March 1962, instituting an Investment Code.
- Somalia - Foreign Investment Law No. 10, 13 February 1960.
- Sudan - Act No. 8, 1956, Concessions for Approved Enterprises.
- Tanzania - An Act to give preference to certain approved foreign investments, 20 September 1963.
- Togo - Act No. 65-10, establishing the Investment Code, 21 July 1965 as amended by Act No. 65-26, 22 December 1965. Law No. 57-36, 11 September 1957 on the fiscal regime of the contractual enterprises.
- TUAWI - Laws for the Encouragement of Investments: 19 September 1946, Law No. 1047, 30 March 1953, 27 June 1954 (Certificate of Agreement); 1 January 1955, 10 March 1956, 30 March 1957 (Guarantee of Equipment Loan) 29 December 1955 (Tax Reliefs) and 10 February 1958. Decree, 4 June 1957, on the Guarantee Fund for the Repatriation of capital and profits derived from foreign investments, (United Arab Republic) - Law No. 156 on Investments of Foreign Capital in Economic Development projects, 1963. Amended, 1054.
- Upper Volta - Act No. 14-62 Issuing consolidated Fiscal Regulation for Approved Enterprises, 22 June 1967.

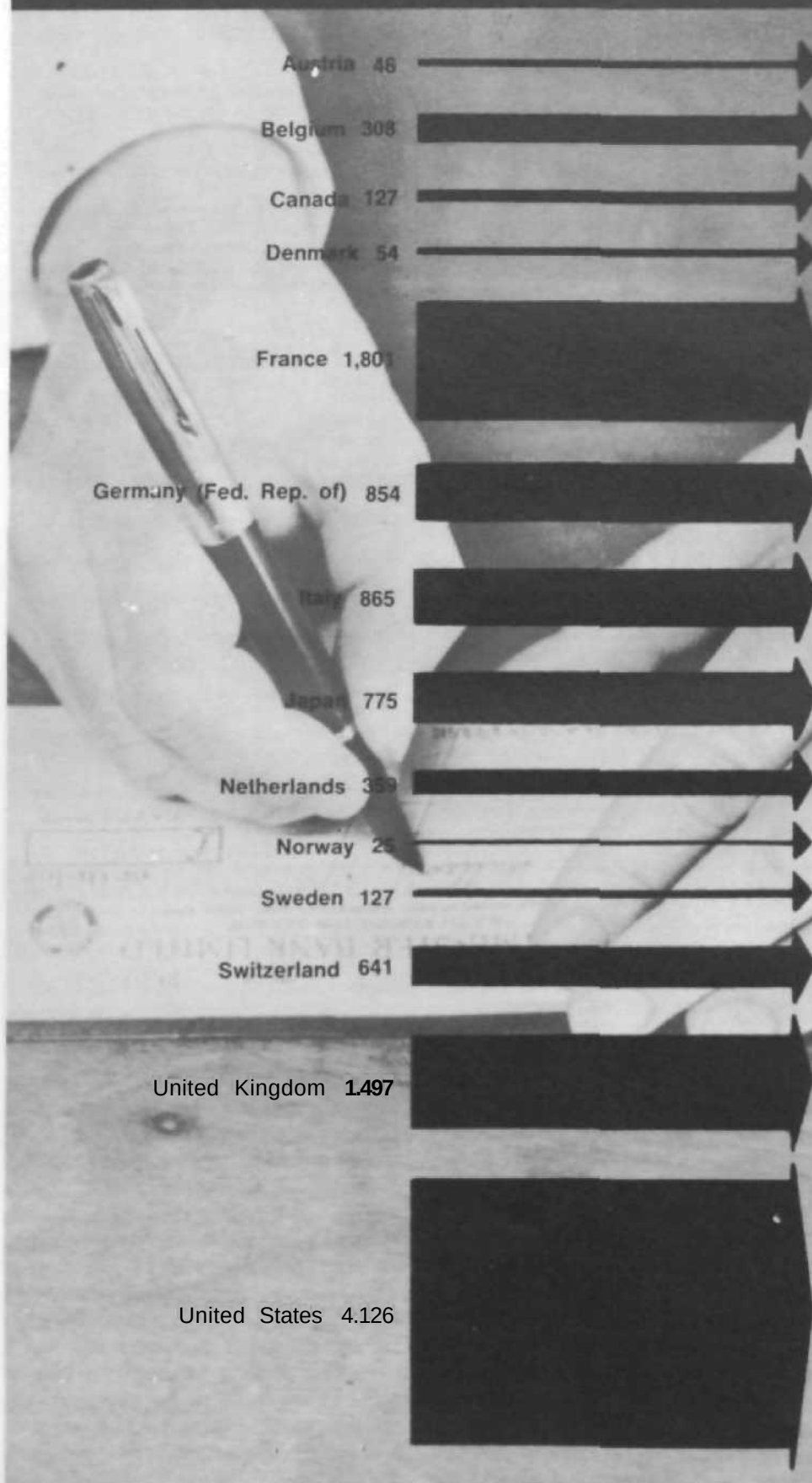
In the majority of countries influenced by the French and Belgian legal systems, the investment laws have established two regimes; of ordinary law and beneficiary enterprises. These regimes are sometimes further divided according to the industries or markets.

In the northern subregion, Egypt and Algeria rely heavily on the public sector, whereas such reliance is very small in Libya. In Egypt, laws and regulations affecting investment have been issued in the form of decrees beginning in 1953. A special committee examines and approves projects of economic development and no foreign capital may be invested without its authorization. Foreign capital, if invested in agriculture, may be transferred abroad up to 10% of the value of registered capital in the original currency.

The Algerian Investment Code defines "approved enterprises" (entreprises agréées) and "enterprises under a concession" (entreprises à concession) in its text without specifying industry or agriculture. They refer to enterprises which have a satisfactory plan, use modern or appropriate equipment and which by reason of their location or sector of activity contribute to the economic development of the country. The law gives a number of guarantees and economic benefits, and their terms and conditions

Flow of private capital from developed countries

Four-year cumulative total, 1961-64, shown to scale in millions of dollars



arc decided upon by the Minister of Finance.

In Libya, any project in which a minimum of 51% of capital is foreign is defined by the Foreign Capital Investment Law as "foreign capital." The only condition on which the Government reserves an industrial project for its own participation is that the private sector abstains from it. The investment legislation leaves it to the Minister of Finance to decide the conditions or the amount of capital or profits that can be remitted abroad. But if (he output of projects of foreign capital competes with local industry or domestic agriculture, it is taxed at higher rates.

In eastern and central Africa, the differences between the French-speaking countries and the English ones are illustrated by the investment codes of Rwanda and Burundi on the one hand, and of Uganda and Kenya on the other. (The legal systems of France and Belgium are quite close, which explains the similarity of legal measures adopted by their former colonies and both groups of African countries.)

Both the Investment Codes of Rwanda (1963) and Burundi (1964) provide for general guarantees with regard to vested rights, personal and real estate, right of residence and the "legal practice" of agricultural, industrial or commercial activity.

In Rwanda, the code has provided for a favoured status or "régime de faveur" for beneficiaries enterprises which have or will be investing with minimum of social capital amounting to 5 million Rwandan francs. Priority enterprises are those that include "industrial crops" or a stage of processing or conditioning or any other designated by the

Source: *World Development Assistance Committee. Joint meeting on the net flow of private capital to the developing countries and the multilateral institutions Australia and Portugal are not included as four-year totals are not available.*

Source: Right-hand table as reported by selected countries in the *International Monetary Fund (Balance of Payments Yearbook, Vols. 16 and 17)*. Totals represent the net flow of long-term private capital - direct and portfolio investment including reinvested earnings. Totals for Uruguay, Sudan and India exclude private investment only. Totals for Ethiopia, Mauritania and Jordan are not direct private investment only. Totals for Chile, Somalia, Indonesia and Malaysia do not include direct investment.

Ministerial Plan Council as prioriti}. " i The economic benefits are classified according to four different regimes depending on the size and duration of the investment project. A larger amount of capital contributing to the National Plan is entitled to benefit from a stabilized fiscal regime, while ordinary investments are exempted from duties on certain materials, or allowed reduced Tariff according to the contract of investment or the * opinion of the Minister of Finance. "

In Burundi, "priority rights" are granted *inter alia* to industrial cultivation and farming and those enterprises which are engaged in processing, preparation, treatment and transportation of produce of agricultural and animal origin. In contrast to Rwanda, which has four types, there are only two types of regimes: one grants exemptions from custom duties "over a certain period of time, " and the second for 15 years.

Kenya and Uganda in eastern Africa enacted their foreign investments protection acts in 1964. The Kenya legislation defines " agricultural investment " as those which are made to increase the agricultural potential of a farm or an estate, Uganda includes it under the general title of "approved enterprises." The latter is defined as *inter alia* an undertaking or business or property or an enlargement of any investment or loan.

In both countries a holder of 90% of the capital for approved enterprises is entitled to transfer out of the country the profits and approved professions of the net proceeds of the sale. In Kenya, where investment guarantees are not granted to effect a change of owner, the new investor will have to draw up a development programme to expand the agricultural scheme which he intends to purchase and this must be approved by the Minister of Agriculture.

The Investment Decree of Ethiopia covers agricultural, industrial, mining, transport and touristic enterprises which benefit from its operation. Among the many agricultural enterprises in Ethiopia, the coffee and grain plantations are the oldest and they are in the private sector. But the Government exercises a certain degree of control through the Coffee and the Grain Boards. The Investment decree stipulates the conditions on which the profits of foreign investor,



net proceeds of any sale, and payment of interest can be transferred. But it is the Ministry of Agriculture which determines the ¹¹ priority, " amount and type of exemptions. These may include duty free purchase of fuel and import of machinery and equipment for agricultural purposes.

In the western subregion, Liberia and Guinea provide extreme examples — the former relying heavily on the private sector while the latter relies on the public sector. The Investment Incentive Code of Liberia is applicable to " Approved New Investment Projects" including a substantial expansion of the existing one. Incentives under the Code are granted to enterprises which (a) process, fabricate, or assemble raw material and/or semi-finished products into commercial products, and (b) engage in other productive activities *inter alia* such as agriculture, logging, and investing money credit, machinery for (a) and {>).

Nationalization and guarantees

Economic inducements are granted in the form of exemptions from custom duties and taxes on income and profits: the exemptions from custom duties are granted on construction materials, machinery, equipment and raw materials, for five years from the first importation.

Exemption from income tax is granted for five to ten years from the first year of marketable production as determined by the Government. In the case of agricultural projects, special consideration is to be given to the length of the period required to begin production as well as to the size of the investment. Income exempted under the Code from taxation is not to exceed 150% of the capital investment of the project.

" Approved enterprises " in Guinea in both the public and the private sector have been defined as those which have " special importance for the development of the economy" and include those which are engaged in transferring through mechanical or chemical processes vegetable or animal products of local origin. These enterprises are entitled to favoured treatment, which is progressive according to the importance and size of the investments in relation to the development of the country. Materials equipment and raw materials need[^]d to establish such enterprises are totally or par-

tially exempted from import duties and the fiscal advantages are published in the Official Journal.

In other countries of west Africa, particularly Nigeria and Ghana, the original development plans have been either abandoned, or shelved due to changing political factors, but the Capital Investment Act in Ghana, which was passed to help implement the seven-year development plan, has been retained. The same is mainly true of Nigeria's diverse fiscal and other statutes. In Ghana, there have been recently some shifts in favour of the private sector. Private ownership and management have been recently approved for meat products and sugar, and there has been a simultaneous return to private cocoa buying.

Most countries in Africa have indicated their policy regarding nationalization in either the constitution or investment laws or economic policy statement. (Most investment codes use the expression " expropriations" which legally means the compulsory acquisition of private property by the State.) Those countries which provide for nationalization have also given a legal guarantee for fair or adequate or equitable compensation.

Ethiopia and Libya have incorporated provisions to protect private property in their constitutions, while the Investment Code of Dahomey stipulates that " equitable compensation " will be granted in case of expropriation. Liberia, on the other hand, has announced that it has no intention to nationalize any foreign investments. Both Uganda and Kenya have specifically enacted investment laws to " protect " private property. These reproduce the provisions in the constitution.

Tanzania's President Nyerere has recently assured investors regarding the payment of fair compensation in the event of nationalization. The total value of such compensation would amount to \$30-\$40 million partly in foreign exchange and partly from future dividends.

In 1967, Parliament approved the nationalization of six major companies and partial nationalization of thirty-three others in Tanzania. A number of major agricultural projects were brought under the National Agricultural Products Board. In some instances, however, notably the British American Tobacco factory, the Government accepted less

than a 50% share. At the same time, the Government recently announced that private investment was welcome outside the areas reserved for the public sector.

Agricultural development legislation in Africa is a very new subject. It is to be expected, therefore, that it reflects a lack of coordination between the economic and legal strategies of development. This remains true even for the French-speaking countries in Africa, which by and large, following the French tradition, have paid greater attention to precise codification of investment laws than the English-speaking countries.

The recognition by the policy-makers of the importance of bridging rapidly the gap between the actual and the potential agricultural output in African countries has come about only recently. There has not been sufficient time yet to translate this recognition into a coherent development strategy, aiming at mobilizing all resources — domestic and external supplies of capital and skills — for rapid agricultural advance. But it would strongly encourage the elaboration of complementary legal strategy for agricultural development.

More legal guideline* needed

The precise content of such agricultural development legislation would vary from country to country in Africa. Nonetheless, its provisions would have to deal with the advantages to be derived from public and private external aid for the needed requirements of investment and skills. Among the areas for which such provisions would have to be worked out in detail, the following would be particularly important: (1) plantation and export crops; (2) technical aid in raising productivity in other crops for domestic use and animal husbandry; (3) development of agro-industries, which would help process further available agricultural products; and (4) establishment of those industries upon which depends the progress of agriculture (e.g. fertilizers, insecticides, agricultural equipment, tractors, etc.).

Unless precise legal guidelines are P² down, it is difficult to see how th^{*} general recognition of the possibility of rapid agricultural advance in Africa¹¹ countries could soon be translated i¹⁰ concrete projects.



A giant in Malaysia

by BfttAH TA YIOR

**Who wins,
who loses,
when a worldwide
corporation
invests in a country
rich in raw materials**

Driving out on the highway from Kuala Lumpur toward Pctaling Jaya, the satellite industrial estate, is at first (like being in England: the same well-surfaced curving roads full of Jaguars and Morris Oxfords; the same cumulus clouds building up like giant bruises above the green trees.

But (the reality of southeast Asia asserts itself with the sight of a bearded Sikh on a bicycle, an ancient Chinese woman shuffling and swaying along with the stick across her shoulder supporting two enormous stoves, a trio of Malay child red being driven home from school in a rickshaw. One realizes that Japanese cars put number the British and that the trees are 80 feet high instead of the expected 18 feet.

AN roads from Kuala Lumpur lie through square miles of rubber trees, each with its blind beggar's cup, marching in geometrical progression into the leafy distance. The marks of tin mining — vast dredges and crazy wooden scaffolding awash in pools of grey water — are everywhere. To the east, the high rain forests — haunt of the hornbill and the gibbon — are gradually giving way to the demand for land, and the tiger may soon be as rare as the rhinoceros. The oil palm estates, most recent of the country's four main resources, lie further south. Timber, fourth element in Malaysia's economy, is being extracted mainly from East Malaysia.

Otto of the first to invam

The factory belonging to Lever Brothers (a wholly-owned Unilever subsidiary), borders the highway on the fringe of Malaysia's capital city. It is a complex of manufacturing and office buildings built around a railway spur line which tanks in the raw materials — chemicals, oils and fats — and carries out the finished products: detergents, soaps, cooking oils and fats and margarine.

When it was built in 1952 there was no industrial estate and, in fact, no Malaysia. The country was still under what the British colonial rulers called 'The Emergency' and plantations and processing plants alike were subject to strikes and civil strife. The factory was opened at the end of 1952, five years before independence, by General Sir Gerald Templar.

All that is history now. The British are friends and allies, their idiosyncrasies tolerated, their tails sometimes tweaked, their advice often ignored. Malaysia is very much its own master with a host of young government planners trying to cement together a multiracial society in which the Malays just about equal the Chinese, Indians, Pakistanis and others in numbers, with Malays representing a low-income rural segment and the Chinese a commercial urban class.

Malaysia, today, occupies some 127,000 square miles of territory: West Malaysia being the lower half of the peninsula which dangles down from the mainland, at the extreme end of which sits Singapore; East Malaysia being Sarawak and Sabah, the northern portion of what used to be called Borneo.

But back in 1952 the geo-political situation was not so clear and it is a little surprising that Unilever took the decision to invest nearly \$3 million in its Malayan subsidiary until one remembers that it was part of the company's worldwide search for raw materials; in this case palm oil for soap manufacture.

Of course, the investment has paid off for Unilever: sales of detergent powders are twelve times the 1953 figure; toilet soaps are up four times the 1953 total as are the edible products, including margarine. Sales of edibles (shortening, *ghee*, cooking oils and margarine) are expanding at the rate of 15% per annum. Last year, the factory produced some 8,000 tons of edible products, half of this being margarine.

The smell of expansion is in the air: the development staff are working on new high-quality margarines and many of the management are helping to launch a new subsidiary in Singapore.

How was such progress achieved in the face of a shortage of skilled labour and specialized knowledge, the pressures of nationalism and an unsophisticated market by European standards?

Take margarine as an example: "into which business we drifted because of its close connection with oils and fats for the soap kettle," according to Lord Leverhulme in 1918. Margarine is an interesting child of modern technology which can now be made from a wide range of raw materials; with characteristics which can be altered to suit the market needs; and which can be manipulated to compete nutritionally with, and even to surpass at a price, its natural competitor — butter.

In Malaysia, margarine is made from locally-grown products: palm oil and coconut oil. Part of the palm oil is hardened and then the three constituents are refined, bleached, deodorized and blended together. Margarine is made from an oil/milk or an oil/water base. In Malaysia, the oil is mixed with ordinary water (largely because of storage problems in such a hot climate where refrigerators are not common), emulsifiers, colouring agents and vitamins are added and it is then poured into containers where it crystallizes into a compact mass.

In Malaysia, margarine is used either for baking or as a spread. Shortening is not used in the house and coconut

oil is traditionally used for frying. As a spread on bread, margarine competes with butter, jams and such local favourites as *kaya*, a sweet honey.

The increased use of bread throughout Asia is a rather strange postwar phenomenon brought about by shortages of rice, or of preferred rice, high rice prices, the influx of North American wheat in the form of aid, the communication explosion, possibly the influence of colonial taste, improved standards of living and the gradual infiltration of convenience foods.

In Malaysia, for instance, bread is now being used in most homes, particularly for school lunches. With the rise in bread-eating has come a rising consumption of margarine... a slow but steady progression which has meant that Malaysia's two margarine producers — Lever Brothers and Lam Soon — have gradually increased factory production.

"Our latest market survey shows that 83% of the Malaysian population eat bread frequently, 27% daily," the Lever Brothers marketing manager told me. "We are competing with slightly more expensive imported butter of course, but we have certainly not knocked out locally-made spreads; on the contrary, our sales programme has probably greatly increased the use of spreads in general. What is happening now, in fact, is the slowly increasing use of a double spread, margarine used in combination with jam or some other ingredient."

Of course, such a rise has not been entirely spontaneous; the selling mechanisms of a consumption-oriented society have been at work — radio, film and television commercials, ho use-to-ho use selling and cooking demonstrations — to take full advantage of higher wages and the desire for more leisure time.

Sixth largest in the world

Unilever — a giant even amongs' companies operating on a worldwide scale — has done well for itself in Malaysia, as it has in so many other countries. Product of a 1929 merger of British and Dutch interests, it encompasses over 500 businesses in more than 70 countries. Its turnover in 1965 was well over \$6,000 million — three times that of 1948. It ranks sixth in wealth among the world's leading companies, after General

eral Motors, Standard Oil, Ford. Royal Dutch Shell and General Electric, wealthier by far than many of the developing countries in which it operates.

Mike Cullen, tall and balding with a laugh like a cackling hen, has a mislead ingly weary and languid air. He is chairman of Lever Brothers in **Malaysia**, the epitome of the professional manager, the reason why Unilever dares to allow so much autonomy to their subsidiaries in the field.

I asked him, and many others in the country, whether Malaysia had benefitted from the Unilever presence. "First of all, we supply a dependable standardized product. Then there is the benefit of worldwide research and experience which has gone into the making of such products," he replied, citing the margarine research centre at Vlaardingen, in the Netherlands, which has helped to fit focal raw materials into production.

"We provide regular employment **Wen** during bad times, and medical services which have set standards for other companies," he went on. "We have incidentally helped to increase food supplies and to raise nutritional standards. We use Malaysian produce, (rain unskilled labour iind bring increased business to suppliers and retailers. Finally, through advertising and services on the one hand and reasonable wages and hours of work on the other, we have helped to raise the country's" living standards.

"We have more than 600 workers at d clerical staff here," Mr. Cullen told "K as we passed through the main factory gates surrounded by a crowd of w<Hcn packers in white overalls. "Also *aIn>osi 60 people whom we consider as managmcnl, including area sales managers, production managers, accounts and personnel officers. The staff is headed by myself as chairman¹ and four directors looking after the technical, ^kcting. commercial and personnel *Pects. "

Many of the management have been promoted from within the company and almost a third of the total staff have the traditional gold watch marking fifteen years' employment. An enviable record, probably due to the high rate of unemployment and scarcity of good jobs her than to undoubtedly satisfactory 8's. (He help which the company gives

in obtaining housing mortgages and the company contributions to workmen's compensation and the provident fund.

The wages at Lever Brothers are surprisingly high by Asian standards, even taking into account the fact that Malaysia has one of the highest per capita incomes in Asia, and that its dollar is an International Monetary Fund loan currency. A charge hand gets about \$100 a month and makes another \$40 on overtime; a foreman about \$300 a month (both by union agreement); while a department production manager gets from \$5,500 (o \$7,0(XJ a year from union) — comparable with European standards.

There is an old Malay proverb which says: "This world is a borrowed world." It reflects the country's social imbalance in which Malays dominate the rural sector and the Chinese the commercial class. Conflicts sometimes arise where the two classes impinge: many Malay smallholders are in debt to absentee landlords and to middlemen who supply agricultural materials — fertilizers, pesticides, farming implements — and the means of transporting and selling the harvested produce.

A special government agency — the Council of Trust for the Indigenous Peoples — better known as MABA, has



Rubber and charcoal is the principal raw material of Malaysia's first steel plant, sponsored and financed by the World Bank together with Japanese and Malaysian interests.

Signs of underemployment are evident throughout the country and one hears stories of Malaysian engineers who are still not working two years after graduation.

Unemployment may well be the number one problem for the developing countries within the next few decades until birth control programmes become effective. Certainly, in Malaysia it will exacerbate and inflame the already delicate racial problem.

been created to accelerate rural development and to increase Malay incomes, through investment surveys, agricultural advisory services, and training facilities. MARA is quite prepared to finance and carry out agricultural projects on behalf of smallholder groups. Sometimes MARA invites private interests to come in and help, contributing capital and expertise in return for a percentage of the profits. A Japanese tile plant was set up on this basis and MARA is now negotiating

with private Canadian timber interests.

"Cooperatives have a certain stigma here," Inche Osman Sham, director of MARA, told me, "largely because of failures in leadership at the village level. We call them farmer associations now and put all our resources into training the young men we need to organize and direct these groups."

It seems paradoxical in countries like Malaysia to place so much emphasis on training when there is considerable unemployment. But it is not really so strange for there is as big a gap between the pool of unskilled labour and the skilled worker as there is between

posts though, depending upon the mix of investment concerned and the degree of policy-making responsibilities exercised by the subsidiary company.

"We are almost completely Malaysian now at the factory," continued Mr. Cullen. "There are only two expatriates left — myself and the marketing manager — apart from an occasional consultant." And it is true that the company has extensively replaced expatriates, though the ethnic mix at management level seems somewhat disproportionate; Malaysians of Indian and Singalese origin hold down the top production jobs, reflecting a "brain-drain"

Unilever makes few concessions so far as automation and unemployment are concerned, "The cost of labour in Malaysia is steadily increasing," reports Mr. Cullen. "We need new equipment to improve standards and we feel that increased production is the way to employ more people rather than a deliberate go-slow on mechanization."

The company has freely taken profits out of Malaysia, though there has been considerable re-investment to pay for production expansion: the non-soapy detergent factory and the ice-cream production line were entirely self-financed. Growth of capital employed during the

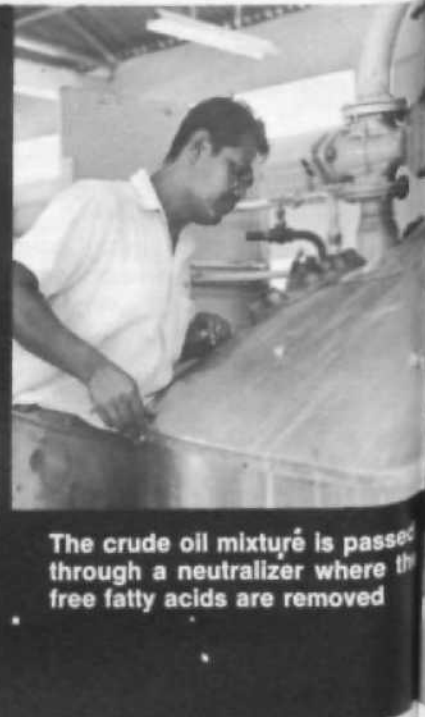


LTI-VJ - a hundred years ago Mege - Mouries, a French chemist, faced with the challenge of producing a cheap substitute for butter built a mechanical version of the cow's stomach which converted beel fat, milk and water to margarine.

1969 - today, margarine accounts for one seventh of the world consumption of edible oils and fats.



Palm oil and coconut oil, two major ingredients of margarine, are pumped from rail tank-cars into storage at the Malaysian factory



The crude oil mixture is passed through a neutralizer where the free fatty acids are removed

an inexperienced university graduate and a competent manager. These are the gaps which Malaysia is trying to fill with vocational training centres and postgraduate scholarships.

"We have had to depend on an extensive training programme in order to replace expatriates and upgrade nationals," said Mr. Cullen. "Virtually all our managers have spent time away from here taking courses in Australia, India or Europe."

Expatriates move to manufacturing

The government hopes that all non-professional and nontechnical posts in foreign-owned firms will be occupied by Malaysians by 1975. Expatriates can remain in a minimum number of key

posts of technologically-trained personnel within the third world; while most of the sales force are Malaysians of Chinese origin.

This wave of nationalization is not reflected at Unilever headquarters in London where few of the permanent headquarters staff — including the marketing staff servicing Asia, Africa and Latin America — come from the third world. In his study of the company, Professor Charles Wilson says that in the ten years, 1955-65, total Unilever manpower increased 10% and management nearly 50%. He puts this down to the increasingly sophisticated demands of the industry, but it might well be explained by a towering of the management curtain to include far more nationals in the operating companies.

fifteen-year period. 1953-67, in Malaysia was at a rate of 2.2% against a return of investment of 8.7% — the last two years being at an even larger profit figure. Unilever shares are rightly called the bluest of the blue chips for in the decade 1954-64 profits have averaged 8.8%, with peaks of 10% in 1954 and 1959.

"We will invest more money when a major opportunity arises," says Mr. Cullen. "But Malaysia must increase and diversify its produce and develop its own unique potential rather than making plastic cups like everyone else."

The Malaysian operation (consists of the factory and two oil palm estates) is wholly owned by Unilever. The Brothers are not listed on the national stock exchange and the only way of

getting a piece of the action is to buy Unilever shares wherever they are available. It has never been company policy to offer shares of subsidiary operations on the national stock exchange, though they have done so in a few cases, in India for instance.

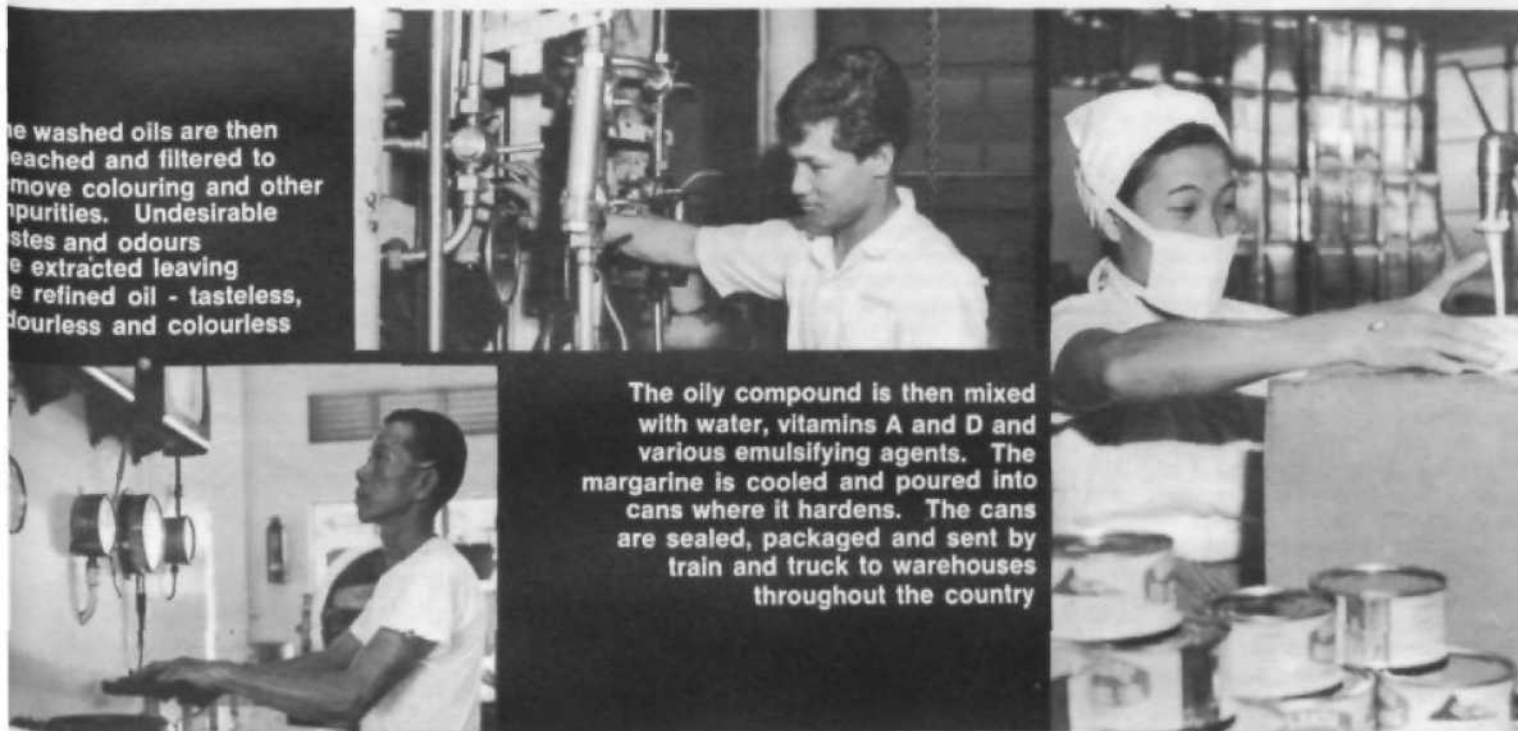
"We have had to be flexible in our approach to the developing countries," says MT. R.B.A. Cantopher, a member of the Unilever's powerful Overseas Committee which supervises the activities in 30 countries, including Malaysia. "We try to retain a majority interest, though of course the pattern differs depending upon political circumstances, which often

not necessarily by government interests. There certainly seems to be plenty of Local capital available, unlike the situation in many other developing countries. There has been little difficulty in obtaining public participation 2nd it is not unusual for likely ventures to be ten or even twenty times oversubscribed.

"The government has no intention of nationalizing business," said Tan Sri Dr. Lim Swee Aun, Minister of Commerce and Industry, recently. "Economic development is tied in with the private sector and the government has adopted, and will continue to adopt, a free market economy." This policy has

The first category includes the so-called ¹ pioneer status * — which gives varying tax relief for the first two to eight years, depending upon the amount of capital and what it is being used for, as well as various other tax exemptions — and investment (fix credit which provides for lax deductions for those companies which do not come under the * pioneer status'.

The second category, which aims at increasing manufactured exports, includes; tax deductions for promotional purposes; an accelerated rate of depreciation on capital expenditure; and tax deductions for the use of Malaysian raw materials.



change during our tenure in these countries.

"In Ghana, for instance, we were established as a 100% subsidiary, although later the government accepted a minority shareholding," he continued. "In Turkey we were established on a 40% basis (with 20% being held by 3 Turkish bank). So far, Japan is the only country where we have deliberately gone in on a minority basis (45%), though we have since obtained a majority interest."

The Malaysian government, on the other hand, would like to see foreign investment coming in as a joint venture, with a majority of shares held within the country. One of the requirements of the 'pioneer status' tax incentive scheme is that at least 50% equity be held locally (10% by Malays), though

been backed up by agreements which Malaysia has signed with the United States and the Federal Republic of Germany that assets of national of these two countries will not be nationalized. The country is prepared to sign similar agreements with any other country and is also a signatory to the Convention on the Settlement of Investment Disputes.

Offering incentives to investors*

A major step in attracting foreign capital is the Investment Incentive Act, which came into force at the beginning of last year. Broadly speaking, this provides for two categories of incentives: (1) covering the establishment of manufacturing plants; and (2) covering the export of manufactured goods.

Tariff protection in various industries, including foreign-owned industries. "We have weekly sessions to consider import application*", says Tuan Haji Sujak, chairman of the Tariff Advisory Board set up to advise the government on tariff protection. "We go into the smallest details of each application," he said. "You should read the transcript of our inquiry last week inui cheap bicycles being dumped here from the Chinese mainland — very revealing and very funny."

"Until recently we also considered applications for 'pioneer status'," he continued, "and you can see how this has grown by the figures: from 3 in 1966, to 16 in the following year and 62 in the first few months of last year. Only

a* it comes from (he sawmill. We need veneer plants and hurdboard factories to upgrade the finished product. "

The Malaysian economy has tradition-ally been dependent upon rubber, tin, limber and, lately, palm oil. Tin prices have been falling from the 1975 peak intl rubber js in cut-throat competition with its synthetic cousin. Timber ex-ports have been steadily increasing in volume and value, but palm oil prices have wavered against competition from soybean oil from the United States and sunfijw^j^sced oil from the Soviet Union. Rubber accounted for nearly a third of Malaysia's exports by value in 1967, with I'm and limber together accounting for a further third.

Future prospects will depend upon rubber prices, which have risen again over (he past half year, the success of new measures lo attract foreign investors and of the government plans to diversify the" economy: 10 million acres of un-cultivated land are destined for develop-ment — for industrial estates, oil palm and food crops.

Rational though the government's pol-icy may he toward foreign investors, it looks as though the country has little other alternative. !l cannot afford lo narrow the open door, to insist on more policy control., to restrict free outflow of prof-its. Its next-door neighbour is living prwl of what happens if such a course is followed.

Malaysia has a small population and is dependent upon overseas markets for its raw materials: it desperately needs in vestment and the skills which come *i*h it, panicularly industrial investment *hich can substitute for imports or help •" raise the value of exports. For some •ime lo come it will be at the mercy of Bal market, following the ebb and flow 01 world prices for rubber, tin and palm Oil.

It is faced with the peculiar dikmma ttf ihi' ihird world, of the group of 77, Politically free but economically tied to •he apron strings of Europe and North Airterica by the need to sell its produce at whatever price it can get, in open competition with other producers in Afri-ca. Asia and Latin America, because of 'Ae threat of technological substitution and of hesitancies over commodity aprec-ments,

REUTER: WE WANT TO IHVLST BUT...

By and large I he fiitnl industry has noi yel brought ik food marketing, such an important aspeel of develop-ment, more than a small part of in very considerable resources — product research, marketing techniques and production know-bow.

What are the deterrents?

BwuitiaUy, business is business. Its purpose is profit. The largest single deterrent, in my judgmerit, is the unlikely short term profit potential in the leu developed countries. There his been greater profit attractiveness fur an equal ^ffitn in the so-called developed countries.

Market studies, feasibility studies, and other tools of persuasion for business- decisions arc difficult in coun-tries without the infrastructure for creating Them. Mana-gement it used to reliable statistic* for foretasting and ID sophisticated tool* fur evaluating relative profitability.

T>p management may, in all good faith, agree that a company should expand into developing countries, But, in fact, in setting priorities it continues almost in-line-lively to torn to the things that need doing in already-established operations first.

Ai we look m this baste question of profitability in the countries afTeetil by food shortage, we find there arc a teriei at iprciftt

1. The relative inability of ment PoBoy< increases the risk factor ami too often i* in he untugoniMic lo the of profit* and original investment the bureaucracy often is tortuously slow true than just a few years ago. many niaism and support nationalist-oriented mtnetion* thai are no matter how well motivated he may be, to enmurafz

2. The free movement of products betaana countnev enwi within an economic region, is HI restricted a» to limn ihe me of tnaaa>rni>« economic i4tinu|t m making mtriable lot* COM tmtnuvt product, tt would be atetut. tar Jaataaoe, if onidtors could move to neighbour*** CBmUfn ottttwv awmM bong Md that ara«ld ranc the price above the purchaaig ton*! of ihe vary people the armraawafi of thutc countries are anxious lo reach. Fjcdjuct raawot be Knit in etch country darini this development stage, yet the free |k>» of products acacntty a rertncml The i mini Antncw CONFUOTI Market is a particularly bnght tpot in thn rcfan) Yet. it a dntrcaaaaj to tee the pattern emerging tn Ljlai Amerka of prondibg total Bnpon mtntcioB *o " protect • the new industry. The coaaaaaaam lack of rnan^tmoa and aimwin. can leap pnee* too high for the jieople

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5. Less •gnificant as an actual deterrent, but still the element probably most discis«d. b the myriad of shortages in the countries of proposed operation. Tangibles like skilled *nd dependable manpower. matttial. equipment and parts; and intangibles •aj standards, tnd concept* nf producl micpiiv. otti good will and an understanding of the profit lyilBK. Alone. ihe kwg hat of missing resources would still constitute an irritant and continuing fru^traUoa. bat m the hfft of frequently encountered coolness to foreign inestmem and private enterprise, they do take on added significance.

1 have dealt at 1e*ujth with the deterrents because I believe these must be realistically faced. Some of thev (kluiiMi art «fcl«M>M> rvnt in the more developed countries. I'jrh prtKlUier mutt Luwaidir. in tint COMext of hi* o>> country, 10 ahar degree we really encourage a partnrcJup with the pmraic todor. Some, haw been fMrucalarly «wcewf_u| with huvinevi intcniive programmes.

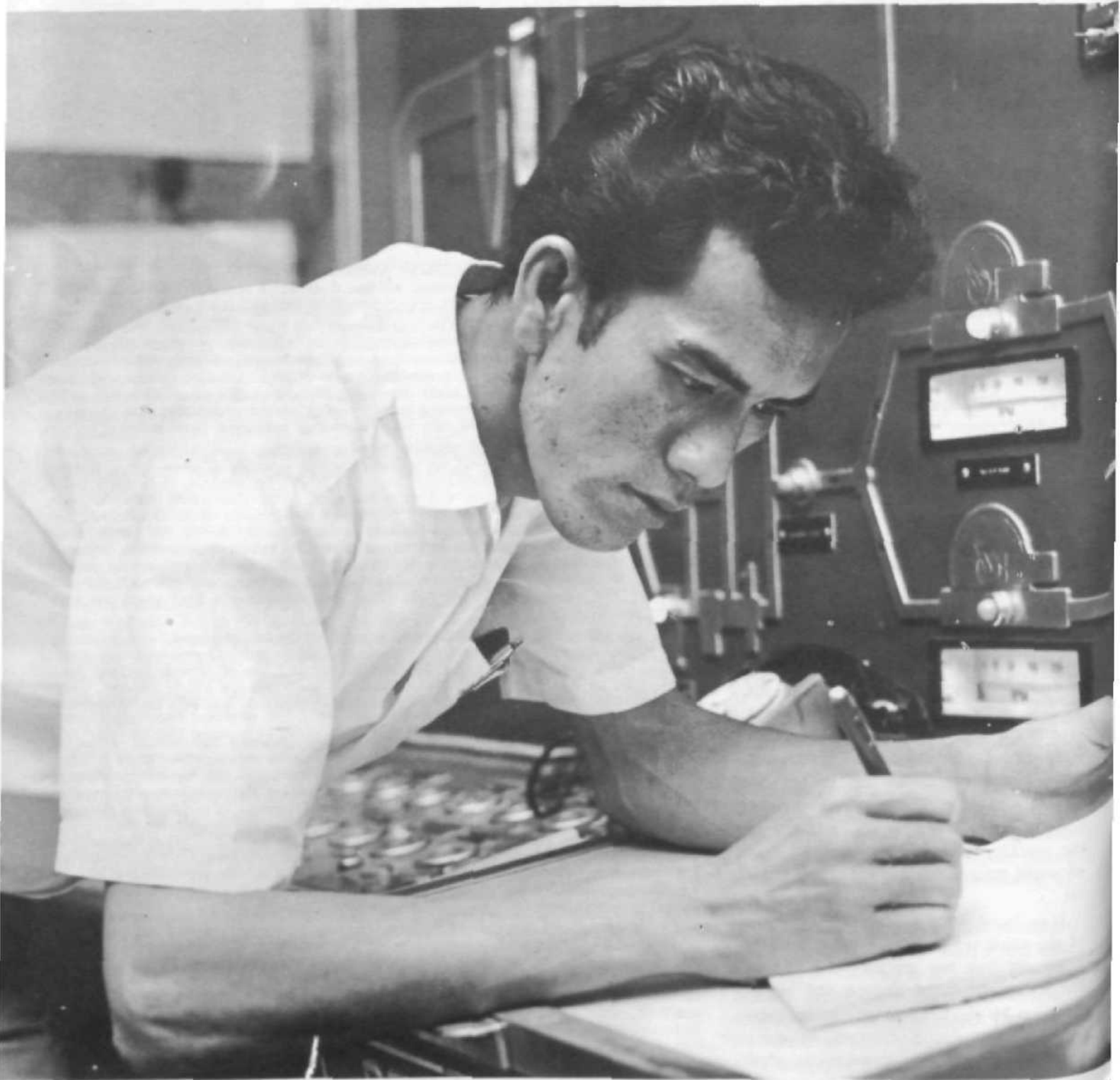


"Richard W. Renter, Director of Art-a O^telofmant. Kratt Foods, (USA)

deterrents:

government, and particularly the instability of govern- inhibits long term projections. The tendency requirements of the foreign investor. Repatriation are frequently circumscribed. Even with goodwill, much Jew in decision-making. Although this is developing countries still fear an economic tolo- too unattractive to ihe investor. indigenous development.

Jumping the income gap:



When Phang Ouan Km was 14, he left school to help his father, a woodcutter in the high rain forest of central Malaysia. Ten years ago Kin came to Kuala Lumpur and found work as a labourer at the Lever Brothers factory. In that time Kin has been promoted from machine operator to charge hand. He has acquired new skills, tripled his income and managed to save some in his pocket.

woodcutter to factory worker



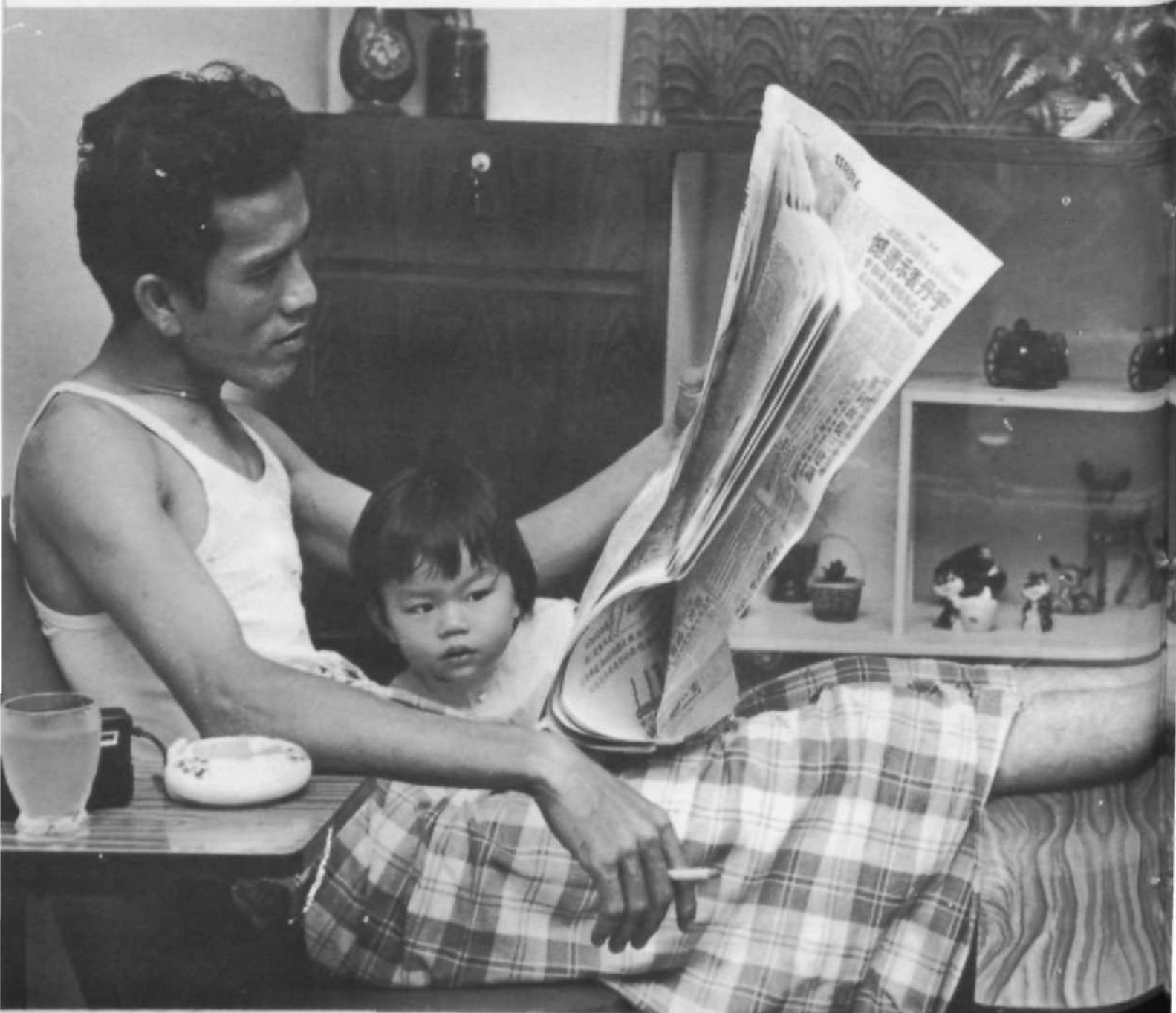
Three years ago he married Joon Kwee Thye, a seamstress, and they now have two little daughters, Ling and Chong. It sounds like an Asian fairy story — a poor woodcutter goes to the big city to find his fortune and ends up marrying the princess — modified by the harsh reality of life in the Third World. In Asia, work begins at an early age and life expectancy is low.



Kin arrives home to be greeted by little Ling. He earns the equivalent of about \$140 a month, including over-time. His living expenses are pared to the minimum as he is paying for his \$7,000 house: a semi-detached five-room bungalow outside the city,

The only luxuries that the Phangs have bought are a ceiling fan, a small electric refrigerator and a tiny transistor radio. Anything leftover is put aside for the children's education.

Kim is very satisfied with his life in Kuala Lumpur. He would like to be a foreman but knows that he will be lucky if he makes it because preference is usually given to long service,





The parents eat with the children in the evening. Mrs. Phang cooks traditional Malaysian meals of boiled rice with side dishes of beans, peppers, chicken and prawns. Sometimes Kin's mother, who lives with another brother, comes over to look after the children.



Neither fish nor fowl

by ALI AT* AMI* MAZRUI

Eastern Africa does indeed pose the question "When is investment foreign?" A large sector of the economy is in the hands or has been in the hands of people whose attachment to an external country is little more than formal. Pre-eminent among such people are the Asians of East Africa.

The Asians are people of Indian and Pakistani origin who established towns in East Africa during the British colonial period and, in a few cases, before that. During the colonial period they were effectively excluded from agriculture and land ownership in the rural areas by the regulations affecting most parts of East Africa.

In Kenya they were excluded partly in order to safeguard the monopoly of white settlers in the Highlands, the most productive area of the country. In Uganda the Asians were excluded from agriculture in order to safeguard African interests against militant Asian speculation and commercialism. And in Tanganyika too there were some regulations which did militate against Asian participation in agriculture. Nevertheless, both in Uganda and in Tanganyika, one or two wealthy Asians did make significant inroads into agriculture and participated in the production of cash crops.

But the main area of operation for Asians in East Africa was the commercial sector, encompassing distribution, exchange and the clerical infrastructure. The Asians did penetrate the rural market as shopkeepers and dominated much of the subsidiary trade in the big towns.

When independence came the Asians were clearly conspicuous as an intermediate

class. African business was still very much at its infancy, and it was all too noticeable that many of the shops and commercial houses in East Africa, and especially in Kenya and Uganda, were effectively in Asian hands. Some of these Asians did become citizens of the East African countries concerned. But most of them, when given the option between local citizenship and British citizenship on the basis of the former colonial status under Britain, chose the latter alternative. A large number of Asians were still Indian or Pakistani citizens, but the majority of those who had the choice to opt for Britain did so.

And yet many of these people had never been to Britain. In fact, when public opinion in Britain started being concerned about the influx of people of Indian origin from East Africa going to settle in the British Isles, the British government chose as its method of differentiating that only those British citizens with "a substantial connection with Britain" were to be entitled to unrestricted entry. British citizens of Indian extraction, who evidently had in many cases not even been to Britain at all, were now made subject to a quota system of entry into the British Isles.

The situation then was that these Asians were in many ways much less foreign in Kenya than they would be in Britain, though they had elected to be British rather than Kenyan. The question arose whether their investment was really to be counted as a distinctive part of a British investment into the Kenyan or Ugandan economy.

Technically a case could be made for the proposition that since the investors were British, what they put into the East African economies could legitimately be categorized as British investment. And yet the money that was

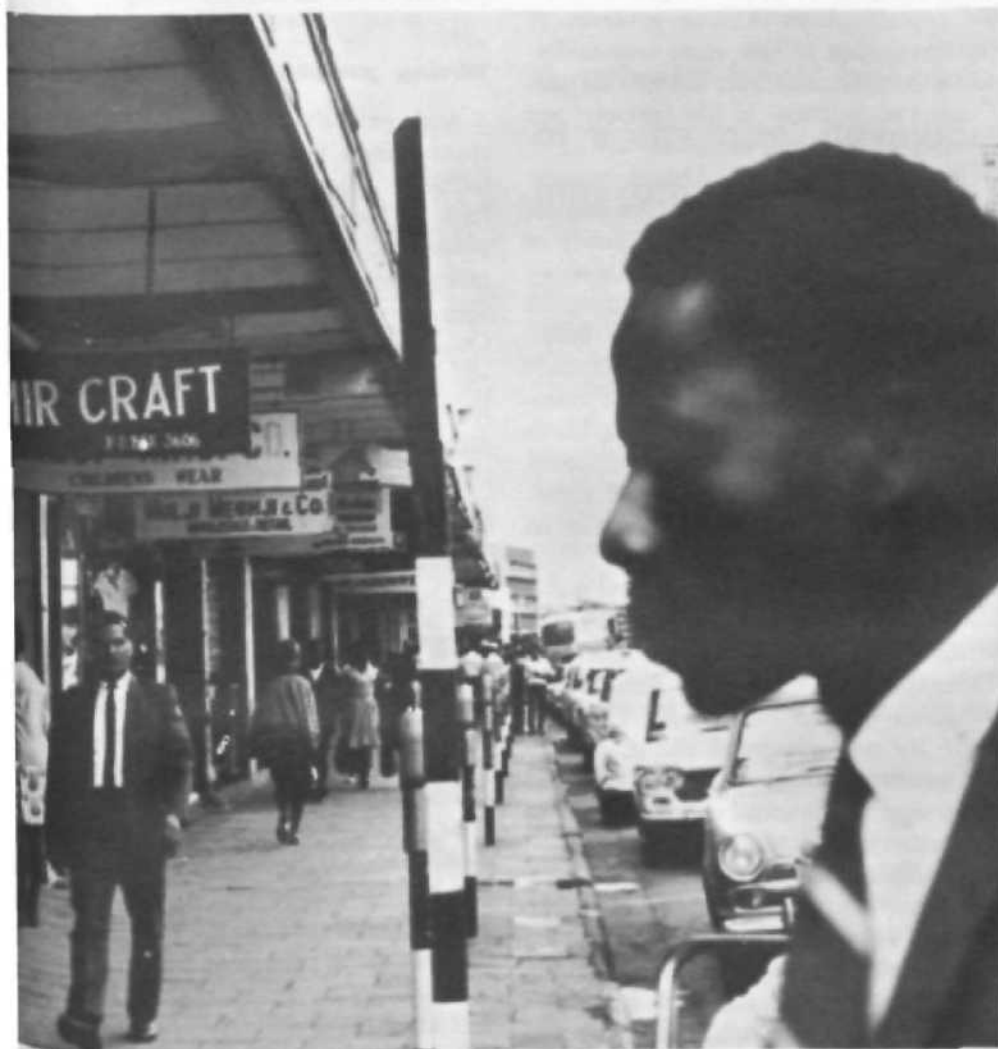


used for the investment had in many cases nothing whatsoever to do with Britain in its origins. Very often it was money made from the outset from the local resources, and had never really been an outgrowth of the British economy. It was certainly not a case of importing private enterprise from the British Isles to East Africa.

On the other hand the whole rationale for Asian adoption of British citizenship

Ali Ahmed Murui, a Kenyan, is a student of the Department of Social Science at Makerere University in Kampala, Uganda. His writings include 'Towards a New African Commonwealth'.

A good deal of Asian investment in East Africa comes from non-national settlers - this case study reflects a situation which is not unique



Many of the shops and commercial houses in East Africa were in Asian hands.

lay substantially in its safeguarding potentialities. There was a feeling, at least before the new Commonwealth Immigration Act was passed, that the British passport provided ideal security for those who had to brave unstable conditions in foreign lands.

As an adoption of British citizenship in East Africa was partly motivated by the desire for commercial as well as personal security. It was hoped on in-

dependence that Asian capital in East Africa especially might perhaps enjoy a Hitler extra security if it fell under the protective umbrella of Anglo-African economic cordiality. Of course foreign enterprises could be put under state ownership. But then so could the enterprises of local citizens.

It was assumed that if Asians were East African citizens, and had their enterprises put under state ownership, there

would be little protection. But the nationalization of British enterprises in East Africa could cause economic complications for the East African government. At any rate, in the latter case there was at least the semi-safeguard of diplomatic considerations which might deter local governments from nationalizing without adequate compensation. Local citizens could however be deprived of their investments with no fear of diplomatic repercussions. So the argument went.

It would therefore seem that part of the motivation behind Asian adoption of British citizenship on attainment of independence was the aspiration to give their own capital investment in East Africa the identity and stamp of "British investment," with all the diplomatic protection which that stamp implied.

Nor did this appear to be an unreasonable kind of expectation for a British citizen at the time we have. After all, English or Scottish businessmen working in Kenya did legitimately look to the British High Commission to protect their commercial interests should these be illegitimately compromised. And their investment is indeed normally included within that category popularly referred to as "British investment in East Africa." But the investment of British citizens of Asian extraction had at best remained on the borderline.

The fluidity of this situation probably justified a tripartite categorization of investment in East Africa. One category might indeed be called, unambiguously, foreign investment. In this case it is obvious that the investment has a substantial connection with a foreign firm or foreign economy overseas.

The second category of investments might be designated as local non-national investment. In this case the investment might be substantially locally owned

and the investors be fully resident in the region of their operation. But the nationality of the investors is non-local and the capital might therefore, at least theoretically, be transferable to their home countries in such circumstances.

The third category of investment might be designated as local national investment. This of course would be not only locally generated, but also effectively in the hands of the countries' nationals.

But what does nationalization mean in such circumstances? In February 1967 the government of Tanzania put under state ownership banks and other industries in the country. When these takeovers in Tanzania were juxtaposed with economic policy declarations in Kenya and Uganda, interesting differences emerged. Two senses of "nationalization" were already becoming effectively operative in East Africa. One sense — that of Tanzania — was the usual western meaning. Nationalization meant putting economic resources under the control of the state.

But there was another sense of "nationalization". This other sense meant putting economic resources under the control of nationals. In the latter sense, the resources might indeed be transferred from foreign hands to the hands of nationals — but not necessarily to the hands of the state.

A new African commercial class

President Kenyatta made a speech at the state opening of Kenya's Parliament in the same month in which Tanzania took over the banks. Mzee Kenyatta's speech was essentially a re-affirmation of a different sense of nationalization. Kenyatta's sense was that of increasing indigenous participation in the economy. The policy was designed to create an effective African commercial class which would gradually outbalance in importance the role played by non-nationals.

The first target was inevitably the gradual displacement of Asians in some of the more modest sectors of the economy. The utilization of work permits and stricter immigration controls in Kenya hit the Asian community hardest, and was one of the factors which precipitated the attempted exodus to Britain by those Asians who had relied on the presumed security of the British passport.

Uganda also set up a commission to

investigate methods of increasing the African participation in the distributive and commercial sectors of the Ugandan economy. Trends in Uganda seem to be, in some respects, going in the same direction as Kenya in those economic policies affecting commercial activity.

If we relate our two senses of nationalization to the three categories of investment certain generalizations can be made. Outright foreign investment, nationalized, is likely to be nationalized in the sense of a state takeover. The resources pass from a foreign firm into the control of an African government. Nationalization in this sense was undertaken by Tanzania, the former Belgian Congo in relation to the mines, and Zambia in the same direction.

But the policies of African governments on local non-national investment have so far tended to invite a policy of nationalization in the Kenyan sense — that is to say, a policy of increasing the participation of private African enterprise in those very sectors currently controlled by non-nationals in the country. The sectors remain in private hands but the balance of control is supposed to shift from non-national local entrepreneurs to a new indigenous commercial class.

Both policies do of course have some relevance for the general climate for investment in the countries concerned. Tanzania's state takeover of some major industries in the country in February 1967 led to widespread reappraisal by foreign investors about the wisdom of continuing commercial participation in the country.

On the other hand, Kenya's policy of displacing Asians did at the time lead to a little more critical reappraisal by outright foreign investors. Outside investors sometimes regarded Tanzania's political stability as sufficiently secure to outweigh the economic risks of the socialization of private enterprise. There was a feeling that property was physically safe, and a state takeover did in any case imply compensation. But private investors outside were sometimes worried about the apparent political instability of Tanzania's neighbours. Losses incurred in political upheavals are less likely to yield compensation than a loss incurred when the state takes over an industry.

The policy of displacing the Asians in Kenya was sometimes interpreted as a

sign of the government's acute worry about the effects of unemployment in the country. The government was deemed to be trying to cope with the unemployment problem by the twin process of replacing Asians in certain clerical and semi-skilled positions and creating a rival indigenous commercial class to them at the same time. There seemed to have been also a fear among foreign investors that these very same policies, in their precipitate implication, might cause sufficient economic dislocation to provoke even further instability.

Wrong prophets, toft and right

And yet all the worst predictions about Kenya have so far remained unfulfilled. Many investors retained great faith in Kenya. An upheaval was expected in the country on the eve of independence as rival ethnic groups seemed to be about to engage in a neo-Congolese tribal combat. And yet, Kenyatta's leadership has so far succeeded in averting such a disintegration. The Lwo/Kikuyu confrontation was predicted by many as imminent. Again the predictions have yet to be fulfilled. Then the country's inclination toward private enterprise as against radical socialism, coupled with a higher rate of urbanization than is evident among her neighbours, led to a different form of speculation — that a leftwing challenge to authority of a major kind was about to break loose. Again so far Kenya has continued to frustrate all alarmist prophecies. But in a different sense, so has Tanzania in her socialist commitment and her reduced reliance on external aid. The alarmist predictions from the right in Tanzania's case have also remained unfulfilled.

The experiments in economic organization which are going on in Kenya, Tanzania and Uganda have all the potential of imaginative interaction. In this specific area of investment there is the perilous and yet promising interplay between outright foreign investment, local non-national investment, and the newly emergent indigenous enterprise. And the two senses of nationalization operating in the realm of economic politics succeed in adding a new dimension to the interplay between ideology and economic activity in eastern Africa.

A private bank believes that financing of agricultural development may bring the highest returns

Av FREDERtO SEEBOHM

For many years we have been interested in the urademic or non-materialist sense of the word) in the problems of

Traditionally the emphasis in financing the agricultural sector from commercial banks has been on seasonal financing. Banks depend heavily for their funds on their depositors who can withdraw their balances on demand or at short notice; prudence demands that the greater part of such funds should be employed only in financing of a short-term nature. In the developed countries seasonal financing is often largely provided direct to the farmer but in many of the countries in which we operate this is comparatively

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and consists of Barclays Bank Limited, Lloyds
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world.

rare. In some countries, particularly in the Caribbean area, there are large estates usually owned by companies, and in one or two countries there are a few large-scale, relatively wealthy farmers. Those in this category produce proper accounts and perhaps financial projections and usually are able to provide some of their own financing; furthermore, they have proper titles to their land and other valuable assets so that they can offer tangible security. In most developing countries, however, there is no proper system of land tenure and the typical farmer has only 3 or 4 acres, half or more of which is devoted to subsistence crops not sold for cash: he usually has no experience of accounting and virtually no resources of his own. Direct seasonal financing would involve sums usually not exceeding \$125 — and with no proper security. For the bank's administrative costs are high and the risks great so that, even at high rates of interest, such advances become completely unremunerative. Our bank very much hopes that improved systems of land tenure and the emergence of larger scale and better trained farmers will make it possible gradually to enter this field in new areas, but it is likely to be a slow process.

Indirect loan*

Seasonal financing of agriculture, particularly in Africa, has therefore been provided mainly indirectly, that is to say not to the actual producer. Indirect financing comes under one of the following headings — there are many variations in detail but the different categories are usually recognizable.

Financing through cooperatives

The bank has welcomed the growth of agricultural marketing cooperatives and cooperative banks and was first assisting with the financing of cooperatives over thirty years ago. We feel that this is, potentially, the most valuable form of assistance to the small farmer and will encourage the spirit of self-help which is so necessary to get basic agricultural development on the move. But progress with this method has been disappointing: this is most of all due to the grave shortage at all levels of trained officers in the cooperative movement. In the absence of competent management a cooperative is not a good risk and

the bank must seek security which is often not available.

However, in some places the cooperatives have thrived and built up financial reserves and fixed assets. In others the government has been willing to offer its guarantee to encourage the movement. Finally, where the produce is sold at a fixed price solely through a marketing board it may be possible for the bank to obtain crop hypothecation and irrevocable instructions for all sales proceeds to be paid to the bank.

Financing through marketing boards

With their statutory monopoly these boards have enormous, though usually short lived, seasonal peak demands to enable them to purchase the crops at harvest time. The banks have often worked on a consortium basis owing to the sheer size of the operation; even so local resources may often need to be supplemented from London and now, more frequently, by the Central Bank arranging rediscounting facilities. Important though this financing is, we feel that a detailed account of the procedure, which sometimes involves several stages of financing as crops are harvested, bought by agents, re-sold to the Board and sold to exporters or local and foreign purchasers, is not required here.

Financing of commercial buyers

These are either large expatriate companies or produce merchants, both expatriate and indigenous. Where marketing boards do not exist, these are still important. In prewar times large companies performed to a large extent the work now done by marketing boards, but they have now largely withdrawn. The indigenous produce buyer of the lesser crops has emerged, particularly in Nigeria; the bank is keen to finance this category but the buyer is often inexperienced in overseas markets and unable to provide security. There is little doubt that this category will grow in importance, particularly where the government or parastatal body gives encouragement in the shape of a guarantee to the bank.

Financing of processors

Where processing is done locally, as with cotton, sugar, coffee and tea, there is likely to be an individual, a company or a cooperative with tangible assets. These are often substantial recipients of

bank finance to enable them to purchase the crops from the farmer. Provided that there is good management, this seems a particularly suitable field for the cooperative formed by producers. A centrally situated cotton ginnery, for instance, can supervise the planting, harvesting and marketing of the crops of several hundred small farmers in the area and assist them in financing through all the stages; the financial strain can often be alleviated by a system of part payment on delivery to the ginnery, with the balance paid to the farmer only when the ginned cotton has been sold. The bank can obtain security for its advances and keep administrative costs down to a reasonable level.

Longer term financing

The bank, in common with other commercial banks, until a few years ago regarded longer term lending as outside its normal business.

The establishment of the Barclays subsidiary, Barclays Overseas Development Corporation, in 1946 was the first organized attempt to break into this field. B.O.D.C. as a commercial financial corporation requires to revolve its funds over a period of a few years. It is therefore limited to medium rather than long-term financing and, as a guide, would regard about 15 years as a maximum, normally with regular payments of instalments over the period. It expects a properly drawn up project to be presented for consideration, security to be offered and a high degree of certainty of repayment on due dates to be present. These conditions, are of course more easily met by the industrial and commercial sectors of the economy than the agricultural — but attempts have been made to rectify this position. One of the main tasks of our agricultural officers is to assist with the proper presentation of projects in conjunction with branch managers of the bank. B.O.D.C. keeps its administrative costs low by the use of the bank's network of branches and by assisting in the finance of larger projects in partnership with other lending institutions, indigenous, national or international. Projects of \$12,500 or even less have also been financed and particularly for agriculture, this has been one of the Corporation's most valuable contributions to the development of the poorer countries, as there are few other

sources of financing for smaller scale projects.

B.O.D.C.'s loans to agriculture have, however, been small in relation to the total for the reasons mentioned. The amount outstanding in recent years has averaged over S5 million out of a total of about S37 million. We hope to see a gradual increase in the figure now that our Agricultural Department is getting into full stride, but this will probably

should be preserved in these advances, by taking realizable security or by having the agreement of governments or other institutions to take over the advances in need or provide rediscounting facilities of some kind.

Private enterprise

Once again the fact has to be faced that there are special difficulties in applying this policy to agriculture. As shown above in respect of seasonal financing,

Lending to institutions

Where the commercial farmer has not emerged, institutions are required to initiate agricultural development. These are usually parastatal bodies either for general development or to administer specific projects. The bank has assisted in the formation and financing of a number of these institutions of both types. A typical instance is a fairly substantial eight-year loan, with a four-year grace period, to the Agricultural Development Corporation of Kenya for the production of improved dairy in-calf heifers for sale. An important aspect is that disbursement and repayment is in local currency. This is in many cases easier for the bank to provide, while from the recipient's point of view it is useful as it solves the problem of meeting local costs where aid has provided only the foreign exchange cost (as seems unfortunately to be the universal rule).

The refinancing process

A second promising field is participation in World Bank projects, with the similar aim of meeting local costs. The commercial bank can act as principal lender, but they are able to refinance a portion of their lendings with the local Central Bank which in its turn is able to do so by drawing on a World Bank loan. The rate of refinance charged to the banks varies upward according to the proportion of the risk off-loaded by the banks, thus resulting in greater profits to them as their own contribution increases. On the other hand the banks are more willing to take on longer term finance in this way since they can readily convert it into liquid assets in case of need. Existing schemes in Latin America have indicated the pattern, but much patience, negotiation and hard work is still required before schemes of this nature can come to fruition. However, the way now seems clear for a livestock development project in Uganda on this basis.

The bank has thus played an important role in the seasonal financing of agriculture for many years, but the financing of longer term agricultural development must still be regarded as largely in the experimental or pioneer stage. We are convinced, however, that there will be a steady increase in the part which the bank plays in this task.



"...we must first convince the people that the banks are assisting their economic development..."

only be in step with parallel increases in financing from the bank,

Bank

We have been able to enter into longer term lending in recent years, not just to meet increased international competition, but because the growing size and diversification of the bank have brought this within the limits of prudence. Not only have we greatly increased our reserves but we have also been part of a growing group of banks. We still feel that two limitations must be placed on the longer term financing we provide: (a) it should not become too heavy a proportion of the total; (b) it should still be well spread in type and area of the business; (c) some degree of liquidity

the number of suitable individual borrowers is very small. We have been able to increase the numbers eligible in some areas and we hope gradually to extend this to all other areas. With proper supervision the medium-sized farmer, with as little as 100 acres, can become an eligible borrower under favourable conditions. Much though we may wish to tackle directly the problem of finance for the peasant farmer, it is still a question of helping those who have already helped themselves. Countries whose social and political policies do not permit the emergence of farming entrepreneurs, with good titles to their land, will find commercial banking less effectively and dynamically involved.

Improving the climate

A four-point prescription for resolving the conflicts of interest between foreign investors and third world countries

by PAUL STREETEN

The role of private investment in the process of development needs rethinking in the light of fundamental changes in the world economy. Much of our present thinking, and many of our institutions, are still dominated by the experience and the doctrines of the 19th century, and are therefore ill-adapted to the altogether different circumstances and needs of the second half of the twentieth.

Foreign private enterprise has an important part to play in assisting the progress of the developing countries. At the same time, a number of obstacles stand in the way of greater participation of overseas private investment in the development process. New thinking and new institutions can contribute to overcoming these obstacles.

Obstacles which are partly economic — arising from the difficulties of operating in countries with shortages of skilled manpower, foreign exchange and basic utilities — and partly political. The latter include the sometimes-ambivalent attitudes of the governments of developing countries and the resulting political risks faced by private enterprise.

There are a number of features which distinguish modern private foreign investment from that in the last century.

Firstly, in the 19th century 70% of long-term world foreign investment took the form of bonds and only 30% that of equity: today bond investment is very small and over 90% is in equity, largely direct investments.

Secondly, this implies that the rates of return and the services rendered have changed. Whereas equity investment carries a yield of 15 to 25% before tax, and 10 to 15% after tax, fixed interest investment yields only 6 to 1%, although rates have been rising. The higher returns on equity investment reflect partly remuneration for technical and managerial know-how, partly a premium on various kinds of risk and partly monopoly power. In so far as the rate of return includes a remuneration for acquiring know-how, this would have to be added to the costs of fixed interest investment if such know-how is not available at home. Returns

due to political risks and monopoly power do not reflect payments for services received by the borrowing country.

The third difference is that equity investment in the 19th century carried the risks of cyclical fluctuations; in bad years no dividends would be paid out. Such fluctuations are less important today, in spite of continued fluctuations in export earnings, and there is, therefore, less justification for a reward for this kind of risk-bearing. Fixed interest borrowing is therefore often a cheaper way of achieving the same purpose.

Fourthly, in the 19th century, the transfer of capital was accompanied by the migration of skilled people in whom aptitudes and attitudes geared to development were incorporated. Today, traditional attitudes have to be transformed and skills have to be created.

Finally, as a result of the more rapid spread of knowledge, certain, although by no means all, types of technological knowledge are nowadays more widespread and standardized than they were in the 19th century. It is sometimes cheaper to hire foreign engineers and to borrow capital at fixed interest rates than to encourage equity investment. In those areas where hired skills, plus fixed interest borrowing, can achieve the same results more cheaply than foreign equity investment, the latter puts an excess burden on the host country. There are other industries in which technical and managerial know-how is not so readily available and where high returns are justified. In particular, the most difficult problem frequently is to sniff out profitable opportunities rather than, having selected projects, to execute and run them. This sniffing-out can be done by foreign capital which acquires in return the right to exploit fully these opportunities. But there are many other arrangements which may serve the same purpose, some of which impose a smaller burden on the host country. It would, for instance, be possible to offer a management contract to a foreign investor who may also be permitted to hold a substantial minority of shares. The foreign investor would construct and manage the plant and would receive a management fee. This fee can take the form of a percentage both of profits and of foreign exchange savings realized. At the same time, the managing firm may be expected to offer a credit at a fixed rate of interest to the local firm¹.

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This credit should cover either the foreign exchange costs or a certain proportion of the total investment costs of the project. The duration of the loan is the same as the duration of the management contract.

Private overseas investment since about 1950 has played a considerably smaller part in the transfer of resources to underdeveloped countries than *official aid*. Between 1956 and 1966 the net flow of private (including portfolio) investment and private export credits to poor countries fluctuated round an annual rate of about \$3,000 million, while private investment by rich countries in rich countries was considerably larger and increased substantially.

Private investment in poor countries reached a peak of \$4,329 million in 1967 to which it rose from a trough of \$3,544 million in 1963. The average annual flow is about half that of official net Development Assistance Commission (OECD) disbursements, but it is obviously less easily controlled or predictable. The British contribution to this fluctuated between \$310 million in 1963 and \$726 million in 1957; in 1966 it was \$470 million.

Private overseas investment, with all its merits, has never achieved a large and sustained transfer of resources to developing countries. Yet this is the need today. Only if the percentage rate of growth of foreign capital is higher than the rate of return on old capital is there a current net addition to the foreign exchange resources available for development.

It is sometimes said that additional new investment and the retention of current profits in the host country can indefinitely offset, and more than offset, the return flow of profits; and dividends on old capital and of capital repatriation. But if the rate of return on foreign capital exceeds the rate of growth of national income — a quite realistic assumption, because the former is likely to be at least 10% and the latter at most 5% — the rate of growth of foreign capital must be higher than that of national income.

This implies, assuming a constant ratio between capital and output for foreign and for domestic capital, that foreign capital ownership grows at a faster rate than domestic capital ownership, therefore, an ever-increasing proportion of the domestic capital stock will be owned by foreigners.

This is particularly serious if, initially, little locally owned capital exists, as in many African countries. Even if such alienation of the capital stock were politically acceptable, the process must come to an end when all capital is owned by foreigners, beyond which further postponement of repatriation and remittances will not be possible.

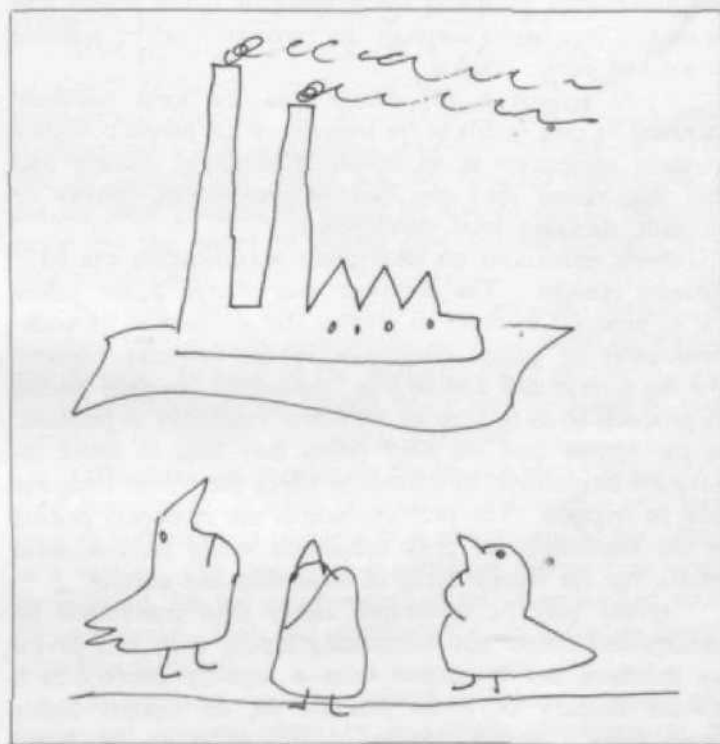
It also follows that remittances are, sooner or later, likely to grow faster than export earnings since these are not likely to grow much faster than income, and to absorb a growing proportion of foreign exchange earnings. Even with rising investments (here is going to be a growing burden on the balance of payments of the host country).

Furthermore, we must make allowance for the fact that, with population growth of 2 to 3% per annum, income per head rises less rapidly than total income. If the rate of return on foreign capital exceeds the rate of growth of income per head, capital service charges per head of the population must rise and the surplus extracted to meet these

charges will increase. For these reasons, private investment is not likely to make a sustained and substantial net contribution to the transfer of foreign exchange resources.

But even during the period when a net inflow of foreign exchange is possible, because the rate of growth of foreign capital exceeds the rate of return on foreign capital, less developed countries are faced with a dilemma: either they permit or even encourage this growth of foreign capital, in which case they will be faced with growing foreign ownership of their capital stock. Or else they limit this process of alienation, in which case a growing proportion of their export earnings will be mortgaged to remitting profits and repatriating capital.

Whereas growth in the more advanced countries stimulated expansion in underdeveloped countries in the 19th century, today such growth has either very much smaller effects or is actually detrimental to development. In addition, what is regarded as an acceptable rate of growth in underdeveloped



"There has been a growing disparity between development aspirations and trade opportunities."

countries was previously substantially less than it is today. As a result of this, there has been a growing disparity between development aspirations and trade opportunities. These changes have reduced the attraction of foreign investment to the host country, particularly if its domestic market is small, slowly growing and uncertain, and have increased the difficulty of remitting profits out of export earnings.

Some of these reasons for the reduced benefits to be derived from international trade are economic, others political. Thus, higher protection in advanced countries is clearly a political obstacle. Equally, the discrimination which many underdeveloped countries practise against agricultural products and exports (taxation and other restrictions) increases the high agricultural costs to which their industrial protection leads, reduce both means and incentives to innovate in their agricultural and manufactured exports.

Inability to earn profits and repay debts has, in the past, led to bankruptcies which relieve debtor countries of the need to repay capital or remit profits: the effective rate of return has therefore always been much smaller than would appear on paper. Today, bankruptcies are much rarer and default is considered a much more serious matter. This implies that softer terms should be recognized in the terms of agreements.

What's wrong with foreign companies

Foreign companies are sometimes accused of sacrificing the national development of the country to their desire for profits. It would be both unreasonable and possibly undesirable to expect foreign companies to act altruistically in promoting local development. Within the constraints set by competition, legislation, morality and public opinion, there is a presumption that they are best employed in seeking profits, as long as they take a long-term view, not giving excessive weight to quick profits at the expense of future profits and as long as they assess correctly the constraints set by political action and public opinion.

More serious is the charge that the local company sacrifices its own profits to the interests of the parent company or sister companies in an advanced industrial country and that this, rather than any lack of nationalism, charity or altruism, damages local development.

Such restrictions on local profit maximization can have different reasons. The company may charge higher prices for its products in order to prevent the elimination of inefficient sister or parent companies in the investing country. But the reverse may also be true: the parent company pricing its products so as to keep an inefficient subsidiary in business. In the former case the high prices may lead to faster innovation in synthetic substitutes in which the parent company may be engaged. The problem here is not monopoly pricing by the subsidiary, for price reductions would increase local profits, but the foreign locus of ownership and control.

Profits may be minimized rather than maximized by underpricing output and overpricing inputs, if by this device tax liabilities can be shifted from a high-tax country to a low-tax country or losses can be set off against highly taxed gains. Another cause of trouble is to be found in the high wages and fringe benefits which the foreign company can offer to local workers and which do not reflect the costs of alternative uses of the labour forgone. While this policy ensures that some of the profits of foreign enterprise are retained by citizens of the host country, it can play havoc with the wage structure in the rest of the economy, aggravate social inequality, perpetuate unemployment and encourage the wasteful use of capital.

These considerations, quite apart from political fears of domination or foreign influence, suggest that a framework should be created which would reduce the costs of foreign investment to the host country without reducing its benefits.

A high share of equity investment imposes two kinds of burden on the host country. Firstly, a high share of the increase in production which the investment makes possible must return to the foreign investor in the form of profits. Secondly, these resources must be transferred through additional foreign exchange earnings. In view of the above-

mentioned limitations of contemporary international trade, this secondary transfer burden, superimposed on the first, is bound to be heavy.

Political risks, such as expropriation without adequate compensation, restrictions on repatriation of profits and capital, or devaluation, are often cited as factors which make it necessary to earn high rates of profit to compensate for these risks. The high rates earned then cause suspicion and hostility in the host country, which feels that the firm is taking out much more than it puts in, and tend to lead to those dreaded events, which the high profits seek to compensate for. This leads to the demand for even higher profits and the vicious spiral is given another twist. High profits, required because of risks, also impose a heavy balance of payments burden, tending to lead to restrictions on remittances and repatriation, and once again strengthen the demand for higher profits to compensate for the risk of such restrictions.

Mutual gains could be derived from measures which lower these risks, lighten the balance of payments burden, reduce the rate of profits required by the company, and dispel fear and suspicion. Private investment in uncertain conditions is not a zero-sum game and both investor and host country can gain from such mutually agreed 'disarmament.'

Advantage* of private investment

Private investment is frequently lumped together with official aid as a quantum with which to fill the 'resource gap',¹ and with official aid and receipts from visible and invisible trade, as a quantum with which to fill the * foreign exchange gap. '

It has been argued above that private investment cannot be expected to make a substantial contribution over a sustained period of time to filling the foreign exchange gap. But while the additions to the *volume* of total available foreign exchange may not be substantial, private investment may provide capital in a particularly productive form, so that the *efficiency* of the resources transferred is high.

The particular contribution of private investment may lie not in the transfer of foreign exchange so much as in helping to lay the foundations for further growth in the economy and in strengthening the base from which domestic savings and foreign exchange are generated. In particular, private overseas investment can bestow substantial and unique benefits on the host country where domestic management skills and entrepreneurship are embryonic and there is no other way of organizing large-scale manufacturing industry.

Its merit then lies not so much in contributing to filling the foreign exchange gap, or even the savings gap, as in the following: •,

First, it helps in the transfer of technology;

Second, it provides management and training of local managers;

Third, it can help in the training of workers and the creation of skills in administration, marketing and other business techniques;

Fourth, in appropriate forms and with appropriate safeguards, it can contribute to the growth of local entrepreneurship;

Fifth, it helps in establishing contacts with overseas banks.

capital markets, markets for products, sales organizations and other institutions and it opens a previously closed society to worldwide influences;

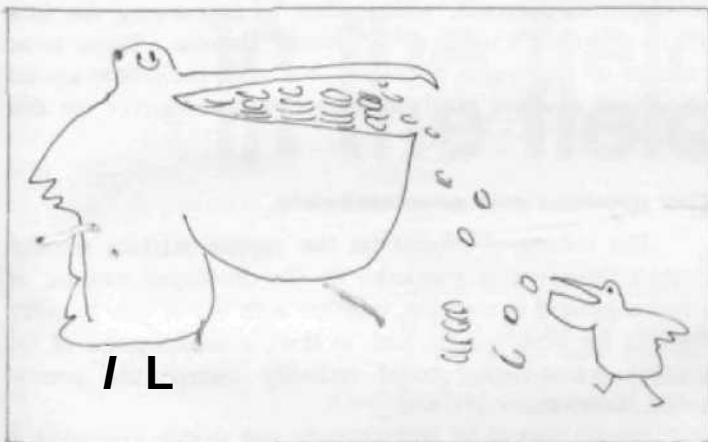
Sixth, it may also contribute indirectly to filling the savings and the foreign exchange gaps by contributing to tax revenue;

Seventh, it may contribute to creating, directly and indirectly, employment opportunities.

While all these contributions are possibilities rather than certainties — since under each heading negative as well as positive results can be listed — they point the way to solutions which will maximize the net gains.

The organizational structure and motivation of the international corporation — with subsidiaries and branches in many countries, which can, as we have seen, militate against the interests of development in a particular country — are, for the same reason, capable of responding more effectively to technological, political and economic changes in switching to new products, closing down inefficient lines, cutting costs by shifting to new sources of supply, etc.

The pressure for greater local participation in ownership and control may impede or prevent these operations in much the same way in which nationalism and autarchy prevent the most efficient international specialization. Adam Smith's invisible hand has a strong cosmopolitan bias. It ignores nationalistic aims and, in seeking profits wherever they



• It would be both unreasonable and possibly undesirable to expect foreign companies to act altruistically in promoting local development. ~

can be made, transcends national boundaries. Whatever may be true of the national corporation, what is good for General Motors is not always good for America. It is this dilemma between, on the one hand, international allocation in the service of efficiency and, on the other, greater local participation and commitment which must be resolved.

Even in sectors and in industries in which foreign equity investment is the best form of promoting development, political considerations suggest that partnerships and joint ventures — in which local capital and know-how participate — are often preferable. A pirate firm could establish a joint enterprise with a local government or a government agency, such as a local development corporation. The foreign firm should put up not more than 49% of the capital, but enough to benefit if the enterprise succeeds and suffer if it fails, it should have a substantial minority interest, while the local government or agency has the dominant interest.

Such a holding would often be sufficient to secure a decisive role in management. But it might be possible to arrange in special circumstances that in the initial phase, the foreign investor should hold a higher percentage of the equity, as long as the arrangement for eventual transfer to local ownership is clearly stated. The foreign firm might also provide some of the money on a fixed interest basis, or in the form of preference shares.

The equity interest of the foreign firm would be bought out by the local government at the end of a pre-arranged period. This period could be ten years, with provision each year after, say, seven years to extend for a further five years up to, say, 15 years — or longer in the case of plantation enterprises. Other forms of rolling extensions could be devised, such as periodic reviews with stated periods of extension. Alternatively, the period might be longer, but there could be options at fixed points when either the local government can buy out or the firm can sell out; an evaluation procedure to determine the price would have to be agreed.

Managerial and technical staff would, initially, be provided almost exclusively by the foreign firm, perhaps under a management contract, but with the obligation to train local replacements within a specified period before buy-out. The rate of replacement could not be specified contractually, but the local government would be able to use its representation on the board to ensure that it went forward at a satisfactory pace.

Housing and other community services should be provided by the local government statutory body set up for the purpose. In view of the relatively short period of ownership participation, the foreign firm's capital should be concentrated on directly productive activities.

Official aid may provide for the finance participation of the local government. It might be possible to provide a long-term loan on soft terms to enable a host government to participate in a venture. No subsidy to a particular private firm would be involved, for (the government's) investment in lending could be commercial. Only the secondary foreign exchange burden would be lightened.

Governments can also support such joint ventures with buying-out options, either by investment guarantees or by including a clause in the contract of the loan that, in case of expropriation without proper compensation, the whole outstanding loan would fall due for repayment immediately. The force of such a clause would lie in the fear of loss of credit standing if default occurred.

Arguments against such proposals are based partly on the need to repatriate capital paid to buy out a firm and the consequential strain on the host country's balance of payments, and partly on the fear that limited participation is bound to reduce the involvement of the foreign firm in the host country and to reinforce its enclave nature. The reply to both points is that companies should be encouraged to reinvest their funds in new ventures in the same country. Where this is impossible, the costs of repatriation and short-term involvement would have to be compared with the benefits of increased local participation.

Arrangements of this kind should attract foreign capital and know-how to the activities where

they are most useful, but would release them, when the host government buys out the firm, for new ventures elsewhere. Thus, good use would be made of the finance and experience of foreign companies by keeping them in a revolving fund. Teams could be kept working together and political friction and transfer burdens would be minimized.

The climate for international investment, and for new forms of joint ventures, would be greatly improved if a set of rules for the remittance of profits, capital and capital gains could be agreed upon and obeyed. It is important that profits earned by foreign capital should be allowed to be remitted home. Restrictions, except those imposed temporarily in emergencies, would only discourage the future flow of investment, and are as much against the interests of the investor as they are against those of the host country.

But if the foreign firm borrows local capital, which it can often do very cheaply in view of its good credit standing, profits earned on this local capital need not enjoy the same freedom. The same rules should apply to these profits as those which apply to local firms.

While it may be sensible to aim at a certain proportion of equity to fixed interest investment for foreign capital in an underdeveloped economy as a whole, the proportions of specific sectors and firms may, of course, vary widely from the countrywide average. Some sectors, like transport and power, can be wholly financed on a fixed interest basis. Others, where entrepreneurial initiative is important, may be financed wholly by direct equity investment, while others, again, may show a variety of gearing ratios of equity to bond capital. Again, a variety of arrangements can be made for the transfer and adaptation of know-how. Individuals can be hired, management contracts can be concluded and participation in profits can be arranged. It is the purpose of such arrangements to minimize both the cost to the host country of the transfer of capital and know-how, and political frictions, while safeguarding the interests of those who are willing to conduct this transfer.

If our main concern is the social and economic development of less developed countries, the contribution of private overseas investment must be assessed in the light of a variety of methods of mobilizing resources, skills and know-how. Our task is to explore the most effective and the cheapest way of attracting foreign resources, skills and knowledge and the best way of combining them, and to examine new institutions, arrangements, and forms of contract.

The objectives of the new arrangements are:

First, to reduce the political tensions that arise from large foreign-owned enclaves in less developed countries and the fears of expropriation which deter foreign enterprise;

Second, to establish a framework which would change the policies of foreign companies so that they do not necessarily subordinate the policies of the local companies to the interests of the parent companies;

Third, to induce spread effects, so that the beneficial activities of the foreign companies spill over into the less dynamic sectors of the rest of the economy;

Fourth, to set free, after a period, the scarce foreign capital and skills so that these can be re-employed in pioneering new ventures rather than continuing to be employed in existing activities.

... Zero hour

(Continued from P. 23)

of capital for the developing nations. This is becoming one more shibboleth based on rigid prejudice, with little justification in the realities of the situation. It is possible to insist, though not without difficulty, that no special reserves should be deliberately created for the purpose of development, albeit even this is a doubtful proposition. But it is less easy to understand why, if reserves are created by a consensus that there is need for more international liquidity, some modest part of these reserves could not be used for development purposes.

Is it the fear of world inflation by allocation of a few hundreds of million dollars a year, in a world in which the GNP of the developed nations exceeds \$1,650 thousand million, and the anticipated 3% growth rate in reserves, due to special drawing rights, should aggregate about \$2 thousand million of new reserves a year? That would be a thesis hard to uphold. Is it because the new liquidity has to be added to where there are already big reserves, to supplement them? The dogma of complete separation of development from the creation of new financial liquidity cannot be rationally explained.

A group of experts appointed by UNCTAD in 1965 on the highest possible level rejected the thesis and strongly recommended allocation of a part of this new liquidity for development purposes, with a view to augmenting the flow of development finance to developing nations. There is no rational or reasonable argument, but only prejudice, against using part of these newly created liquidity reserves for this purpose.

The choice* are unmistakable

The raising of capital on the capital markets through interest subsidy and guarantee by the developed nations, as I had suggested in my plan, together with use of new liquidity reserves for development and, at least, a maintenance of the present grants-in-aid, could radically change the present world situation.

Wealth cannot be spectacularly and swiftly expanded in the highly developed nations, where full employment is already maintained and further increment of the GNP is predicated on technological development. But there is a colossal reserve of unemployed and underemployed manpower in the developing nations, with low productivity and an excessive proportion of agricultural labour yielding a relatively low output.

Added capacity there, through adequate import of capital, would make available new forces constituting an economic revolution, with the ensuing wealth seeping through every part of the world's population and markedly enriching even the developed nations.

Such a vision requires a statesmanlike and economically sound approach. The choices are unmistakable: on the one hand, famine, political instability, and perhaps war; on the other, eradication of poverty, unparalleled affluence and prosperity for humanity as a whole.

What is needed is imagination and a political will to respond to the challenge inspired by the spirit which fired the world after the second world war.

*

NIGERIA

• *Kainji dam officially opened*

The newly completed Kainji dam across the Niger river will provide power for agricultural and industrial development, as well as controlled river navigation, the opening up of irrigated agriculture and the possibility of commercial fisheries.

The dam — which cost some \$250 million to build and which will generate some 960 megawatts — was officially opened in mid-February. Financing came from Canada, Netherlands, United Kingdom, United States, the World Bank and Nigeria itself.

in the field
in the field
in the field
in the field

SENEGAL

• *Groundnuts and millet*

Groundnuts are Senegal's one important cash crop and the main source of foreign exchange, accounting for nearly two thirds of all exports.

A long-term programme to increase groundnut production — and also production of millet, one of the country's staple crops — is being continued through a loan of \$95 million from the World Bank and its affiliate, the International Development Association (IDA).

This programme was started five years ago with financial assistance from the European Economic Community as partial compensation for the progressive elimination of preferential arrangements for marketing Senegal's groundnut crop in France.

The World Bank loan and IDA loans will account for nearly 39% of the total cost of the programme with 16% coming from the farmers and the rest from government funds.

MADAGASCAR

• *Compiling on grassland and beef*

The first stage of a long-term livestock development programme has been launched



Less than 2% of Madagascar's most important resource — cattle — is processed for market.

in Madagascar with the help of a \$28 million loan from the World Bank, with a further \$4 million coming from government funds.

Grassland covers nearly two thirds of the land area

40% of the land area. However, until now there has been little attempt to launch a modern beef cattle industry.

This 11% of the country consists of six 62,000-acre beef cattle ranches, four to be established in a thinly populated area close to Tananarive.

TANZANIA

• *How many of controlling the Quolea bird*

Nearly 1,000 million Quolea birds are destroyed each year

in Africa by the poisoning and poison-spraying of their nightly roosting sites. However, this costly and hazardous operation often brings about only temporary, local reductions in the numbers of this pest which causes such enormous grain losses.

A team of three scientists from the U.K. Anti-Locust Research Centre have started a three-year study of the biology and movements of the Quolea population in Kenya, Tanzania and Uganda with

the hope of developing more economic and effective control methods. The team is working from the Tropical Pesticides Research Institute 30 Arusha.

ETHIOPIA

• *Most of the fish*

During the last two years 12 million fish were caught in the Red Sea accounted for 35% of the total eaten coming from some 160 dhow fishing the area.

The popularity of the motorized version has spurred interest in a two-year FFHC project which is providing engines, spare parts and fishing gear for dhow fishermen. Financing is being met by the Ethiopian Government and by Christian Aid, a private

philanthropic organization. Some 25 dhows have already been fitted with 10-64 HP engines.

TUNISIA

• **Change from suhmit-tanoe farming**

A large project to reclaim some 4 million acres of arid land in Tunisia is being supported by \$26.8 million worth of food aid from the World Food Programme (WFP).

Some 40,000 members of 300 cooperatives in central and southern Tunisia are to plant fruit trees, establish grazing areas and help to improve animal husbandry in an attempt to break out of subsistence (arming into commercial agricu[[ure.

ROMANIA

• **Irrigation scheme mot* am arrowhead**

A pilot irrigation scheme covering some 9.0QQ acres along the Danube, 40 miles south of Bucharest, is to serve as a guide to large-scale irrigation of some 2.5 million acres of the Danube plains over the next ten years.

The irrigation scheme, being carried out as a UNDP project, has a (so attracted interest in Bulgaria, Hungary and Yugoslavia. The experience gained so far has already been put into practice in a land reclamation and development project in Yugoslavia's Sana river basin.

INDIA

• **s 128 mil/ton for dmval-npmnnt**

India's development programme is being helped by a credit of \$125 million from the International Development Association (IDA). This credit will provide foreign exchange to cover imported production materials including agricultural tractors, machine tools, fertilizers, pesticides and similar products. The credit is for 50 years with 10 years of grace.

GABON

• **Logging road* needed**

The greater part of Gabon's land area is covered with tropical forest and the forest industry accounts for 40% of the country's export earnings. Timber production has dropped off in recent years, however, partly because of transportation problems: the coastal zone has been logged out



Two thirds of Gabon's foreign earnings come from forestry. The World Bank has recently granted a loan for two new logging roads

and logging companies are now moving away from the coast into areas which have few roads.

A new World Bank loan of \$6 million will pay for two roads which will open up an area of more than a million acres for logging operations.

ISRAEL

• **There** no irlmev lika homo**

Fish like to congregate around solid objects, according to Dr. O.H. Oren of the 5ka Fisheries Research Station, in Haifa. Japanese fishermen take advantage of this hypnotic allure — known as Wgmotfoplsm — by using j... unken boats and con-

crete blocks to create successful fish colonies. Another method consists of blasting underwater reefs to provide nooks and crannies for algae, sponges and other underwater life, thus attracting lobsters and other valuable invertebrates.

WFP aiata drought-tftokmt* oountria*

Emergency food supplies are being sent by the World Food Programme (WFP) to several countries suffering from severe drought.

.. **Mauritania has lost ong** half of this year's cereal crop through drought. Some 500,000 worth of food is being sent to help feed some 300,000 persons.

.. Nearly half of the Gambia's rice crop has also been lost through drought. The WFP is sending emergency shipments of sorghum to help tide over this area of the

country until the new crop comes in.

.. Food for 78,000 persons for three months is being sent to drought victims in Botswana, **iasl Mafch \$1 million** worth of food was sent to Botswana because of drought conditions.

.. A further \$1.6 million in food aid has been sent to drought victims in the Dominican Republic following a report that heavy rains had followed a prolonged drought, washing away recently planted crops.

Other countries are following suit and creating artificial reefs to promote conservation and improve fishing.

SYRIA

• **Reclaiming tho Bhab**

Th& Ghab Valley is being reclaimed with the help of a huge \$38,000 Dutch drainage machine which can dig a 6-foot trench in seconds and lays drains at the rate of 12 feet a minute: the only one of its type in the Near East.

The Ghab's 180,000 acres are being reclaimed and the area changed from a desolate stagnant marshy lake into a fertile highly productive plain. In 1957 a natural barrage of earth and rocks was blown up allowing flooding from the Orontes river to subside. Drainage work was started and two big dams were constructed upstream.

Drainage and irrigation work — carried out by a joint FAO/Syrian team as part of a UNDP project — has already made excellent progress. The 'lake' has disappeared and some 50,000 resettled farmers are now growing cotton, wheat, maize and barley. Tractors and other cultural machinery are at work in the fields and experimental crop trials are being carried out in pilot areas.

CEYLON

• **Malaria on the rim**

The global strategy of malaria eradication suffered several reverses over the past year, according to WHO.

In Ceylon there were extensive epidemics with over a million cases in 1968. While in India it became necessary to recommence spraying operations in the northern and central parts of the country. These reverses were attributed by members of the WHO Executive Board to financial and administrative problems, in part, and to the inadequacies of the general health services in fulfilling their role in malaria eradication.

Indian Tangle

A study by
R. O. Whyte

The author has an impressive background of knowledge and experience in problems of scientific management of land in its widest ecological context. Having worked for a long period with FAO, this experience is global, but a considerable part of it has been concentrated in Asia, particularly India. Consequently, he is uniquely qualified to undertake an analysis of the inter-relationships between land, livestock and the demands of human nutrition in India.

The inter-relationships are complex, in many ways and everywhere. In India the tangle is worse than anywhere else. Since land has continued to be exploited since the age-old past with little change in methods of requirements of a steadily increasing number of people and cattle. As he pointed out, India's current task is to maintain no less than one sixth of the world's human population and one fourth of the world's cattle population. The economic facet of this tangle is the progressive diminution and scattering of farming units, low income returns and the lack of scope for savings and investment in improvements. Heavy encrustations of obsolete social taboos and attitudes make the problem more intractable. The powers that be certainly know better; but the fear of alienating the politically enfranchised mass of peasantry inhibits bold action.

Thus the crisis deepens and there is every reason to share the author's scepticism about reassuring forecasts of agricultural plenty from official quarters. In these circumstances, objective presentations of the problem by experts of Whyte's eminence and reputation

have a salutary function to perform. Specialists in land management and animal husbandry may discover no startling revelation in this publication, but will find in it a ready and handy assemblage of much up-to-date information and references. Its greater use will be to politicians and administrators engaged in the shaping of public policy in this sphere.

Whyte's analysis puts the problem in a wide perspective. It is necessary to view it in this light, because the situation has deteriorated too far to yield to short-term and piece-meal solutions. People in responsible positions need to be made clearly aware of all factors entering into the problem, not only the immediate, but also the relatively more remote, which lightening constraints have brought absolutely closer. Even the few policy makers who know may find it more politic to attribute needed unpopular courses to the findings of eminent foreigners rather than themselves.

Resources for development are only too scarce and if their further waste is to be avoided, some of Whyte's well-founded observations should be immediately taken into account in future planning. It is argued, for instance, that the scope for dairy development is limited in many parts of India and it would be better in such areas to stress poultry production as an alternative source of animal protein. There may be need to give clearer recognition to the buffalo as a source of milk: "India will never be able to feed enough cows to produce enough low-fat milk to meet the national demand" (page 222).

This reviewer found the author weakest in his treatment of what he calls the international politics of nutrition. It is not only Utopian to envisage the introduction for a global system of rationing of dairy products and similar foods (page 257): such assurance, even if feasible, would spell a serious threat to the incentive of self-help in countries which are presently deficient. It is unrealistic to expect that an international community can either establish the means of providing all needed supplies of skim milk powder on a regular basis for an indefinite period of time (page 183), or that an international food authority will have the power to ordain that the food supplies in excess of

nutritional needs in developed countries shall be exported to specified places at prices that the receiving countries can afford (page 225).

The rational course for such an authority would be to apply such excess potential for production, not for simple consumer use in needy countries, but to increase their own productive powers for good: and such application can be only by consent and not by fiat. Indeed, this is precisely the logic that informs the operations of the World Food Programme, the multilateral authority which has been administering food aid for the last six years. It is a pity that the author should be insufficiently aware of this particular significance of WFP's work. His comments on FAO's Indicative World Plan are also unkind (page 357).

Stefshi K. Dey

Land, Livestock, and Human Nutrition in India by R.O. Whyte

Frederick A. Prieger (Special Studies in International Economics and Development). New York. Wiley (p. 309k Mfi.M)

Theory and policies of development

by Celso Furtado

Celso Furtado is a Brazilian economist who teaches at the Paris University. His latest book, "Teoria y Políica del Desarrollo Económico," is intended as a text book on economic development for the student of underdeveloped countries, and includes parts of an earlier work on the subject.

Now, development is a historical process wherein location in time occupies a fundamental place. Simultaneously, the study of this process should be directed toward investigation of certain basic, historically determined laws which govern the evolution of an economic system, which cannot be confined to a mere description and accumulation of statistical precedents. The historical and analytical methods must therefore combine to provide a global vision — and one sustained by certain principles of reality.

This is the methodological approach used by the author, embodied in the work's five parts. The first analyses (the theory of development in economic science, starting with the ideas of the classic economists to conclude with the most recent, post-Keynesian and neo-classic theories. The second part approaches the development process from an analytic viewpoint, establishing with great acumen the relations between the theory of growth and that of development. In the third part the development process is examined in historical terms, stressing the role played by business in the evolution of the economic system which are in an advanced stage. In the fourth part the problematics of underdevelopment are considered on the basis of an analytical-historical approach, distinguishing the phenomenon of dualism

as a basic characteristic of underdeveloped economies. The fifth part is concerned with development policies, and emphasizes the need for planning and organizing out structural reforms without which backwardness must be overcome.

For the author, these of greatest importance in relation to his subject. Nevertheless, any attempt to cover such a broad field in a book of only 318 pages is fraught with serious dangers: without adding anything new in relation to the present situation, which, we should not forget, this economist has made significant contribution. We must say that despite some very successful passages and remarkably shrewd observations — for example those criticizing the policy recommended by the International Monetary Fund in Chapter 20 — Furtado has been unable to avoid these risks. Therefore, the discussion will be confined to some general remarks referring to aspects where the weaknesses seem most apparent. The first is in connection with the use of the historical method in the analysis of development, and the second with the concept of dualism which, according to the author, constitutes the basic feature of underdevelopment.

In the third part (see Chapter 11) the development of the industrialized countries is presented from a historical standpoint. Due to the general nature of the treatment, it appears as a homogeneous process in which the most important characteristics must have been present equally in all of these countries. In methodological terms we feel this approach is faulty. If the aim of the chapter had been of an informative nature, we would have no objections: but they become necessary when history is treated with a view to a comparative analysis, i.e., when there is an attempt to draw from it certain conclusions having relevance to the backward countries' viewpoint, which seems to be the purpose of the exposition.

It is a known fact that the evolution varied significantly from one country to another, and Furtado is undoubtedly aware of it. And, what is more, those variations may be generalized by observing the date when the economic development of the various

countries began. Therefore we feel it would have been far more interesting to examine the outstanding differences among the countries where the expansion of capitalism started — e.g., England — and those where the take-off was somewhat delayed — e.g., Japan, Russia — (without, of course, falling into case studies). An emphasis on these aspects would have made it possible to discern the conditions which existed in these comparatively backward economies (which, however, were able to develop), directly leading us to consider the probability that those conditions may also occur now in the present underdeveloped countries.

In the fourth part the author uses the concept of dualism as a defining feature of underdeveloped economies. If by dualism we mean the simple difference in the degree of modernization of the techniques employed by different sectors — or regions — of the economy, which seems to be Furtado's intention in certain paragraphs (for example, on page 207), there need be no argument. But if it is meant to show that "...the underdeveloped structures are dualistic systems because they are composed of sectors or departments governed by different economic criteria" (page 208), then it falls into an error which we feel serves only to obscure, since it implies there must be a kind of economy among those sectors or departments.

Yet the historical process which gave rise to the structures is a single one, and one only: it does not differ for each sector. The economy as a whole is set within the worldwide structure of capitalism even when the channels through which this connection is reached become more widespread and difficult to describe as we move from the more "modern" to the more "backward" sectors. Therefore the prevailing form of production is capitalist, even (though there are sectors or regions where the social relations are of a pre-capitalistic type). It is precisely this form of production which, because it is dependent in relation to a world economy dominated by a few large powers and because it contains features corresponding to more backward social relationships, acquires specific characteristics that distinguish it from developed capitalism which determines the laws of operation in

dynamics for the economy as a whole. So that, ratter than giving a definition stressing a supposed dualism we feel it would be more appropriate to offer one incorporating the concepts of dependency and hcterogeneous-ness taken both in its technological aspects and in terms of ihe prevailing social relationships.

Despite those weaknesses we have noted, the clarity of the exposition and particularly the undeniable importance of the subjects discussed make this a book lo be recommended. Complement- ed by a suitable bibliography, which docfl mil appear in the text, it can be useful tu iill those who wish to lenow ihi: problems of economic development,

telsti Furlado, one of Latin America's niosi distinguished economists, is a **tonaei** member of the Economic Com- miv.ion for La I in America and headed, for a number of years, Brazil's depart- ment , of Northeastern Development [Superiniendcacifi para el Desarmlo del Noreste). An associate member of the Insiiiuto de Esludios Internationales de la Universidad de Chile, Santiago, he has written many books, including " Forma- cao Economica do Brasil. " " Dcscnvol- vimienio L- Subdcscnvolvimitnto" and " Dtulcttica de Dcscnvolvimicnto " which were translated in many languages.

Julio Ldpcz GaUardo

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Africa's growing pains

an exposé by
Stanislav Andreski

The worst is not always inevitable. To prevent it, one must denounce it. The merit of Mr. Andreski's book lies in its exposure of the most perturbing sociological aspects of the young African nations.

The book's insistent leitmotiv is corruption. Corruption of the leaders who, having seized power, grab public funds, honours and jobs for themselves and their followers. Corruption of officials,

to whom delegated authority is synonymous with right of plunder. Corruption of big foreign companies, ready to use any means to increase their profits. Corruption of the great powers looking, in their relations with poorer countries, economic and strategic advantages. Corruption, active and passive. Corruption, everywhere.

The author's deep knowledge of Africa, especially western, blends with his experience of Latin America and a political insight into Europe devoid of partisan sympathy.

The growing pains of young nations, he writes, their lack of civic sense, and their poverty make it impossible to establish democratic regimes, so that those who hold power cannot afford to give it up. Racial-tribal ties remain much stronger than national ones.

The author examines the impact of abrupt urbanisation in its economic context and its social consequences. Contrary to the slow growth of Europe's cities, those of Africa — or Latin America and perhaps Asia — are a direct result of population increase, which occurs before

agriculture has a chance to raise its productivity. The towns, compulsory shelters, can hardly supply the needs, jobs. They become human — or inhuman — jungles, where the struggle for survival supersedes the law. Millions flock to the cities, driven by poverty and drawn by visions of jobs and an easier life. The balance and survival patterns of tribal life are destroyed. Destitution, prostitution and often crime are the uneasy price of urban growth.

Technical assistance, whether bilateral or international, is not spared in this sweeping indictment which leaves little room for hope.

The task of developing, or even governing poor countries is a difficult one. Harsh criticism is useful, and even essential but when it is too negative it defeats its own purpose and may be interpreted by a jaundiced reader as an expression of nostalgia for a more optimistic era outdistanced by history.

R. Alibrah

The African Predicament by Stanislaw Andreski
Michael Joseph, London, 1968 (277 p.) £1.50



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Early in 1967 the FAO Legislation Branch produced a preliminary report on the *Promotion and Protection of Foreign Private investment in Agriculture in the Developing Countries*.

Since then the Legislation Branch has been preparing a series of 15-25 page reports on legislative and administrative measures taken in individual countries to attract and regulate foreign private investment in agriculture, forestry, fisheries and related industries.

It was decided to produce an initial series of 20 reports in collaboration with the FAO/Industry Cooperative Programme by the end of 1969, covering seven countries in Africa, seven in Asia and six in Latin America. In addition to the country reports, a full-length comparative study of investment legislation in selected countries in Africa, Asia and Latin America is in the course of preparation and should be completed in 1969.

The table below shows progress to date.

Completed reports: U, Afghanistan, Chile, Ghana, Guatemala, Indonesia, Kenya, Morocco and Turkey	
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Remaining to be prepared:	Brazil, Mexico, Philippines and Thailand

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