

WORLD WITHOUT WANT

By PAUL G. HOFFMAN

DAVID OWEN

WILLIAM C. BAGGS



BOOK-LENGTH FEATURE REPRINTED FROM THE 1962 BRITANNICA BOOK OF THE YEAR

BEST AVAILABLE COPY

World Without Want

© 1962 BY ENCYCLOPÆDIA BRITANNICA, INC.

COPYRIGHT RESERVED • PRINTED IN U.S.A.

WORLD
WITHOUT
WANT



CONTENTS

Excerpt From an Address by President John F. Kennedy	4
About the Authors	4
Excerpt From an Address by President Dwight D. Eisenhower	5
Editor's Note and Introduction	5
PART I: <i>Bread Upon the Waters</i> : The Problems and Promises of Development, by Paul G. Hoffman	7
PART II: <i>First Steps</i> : Education in Emergent Africa, by David Owen	39
PART III: <i>Puerto Rico</i> : Showcase of Development, by William C. Baggs	57
List of Illustrations.	94



... the mysteries of outer space must not divert our eyes or our energies from the harsh realities that face our fellow men. Political sovereignty is but a mockery without the means of meeting poverty and illiteracy and disease. Self-determination is but a slogan if the future holds no hope.

That is why my nation, which has freely shared its capital and its technology to help others help themselves, now proposes officially designating this decade of the Nineteen Sixties as the United Nations Decade of Development. Under the framework of that resolution, the United Nations' existing efforts in promoting economic growth can be expanded and coordinated.

Regional surveys and training institutes can now pool the talents of many. New research, technical assistance and pilot projects can unlock the wealth of less-developed lands and untapped waters. And development can become a cooperative and not a competitive enterprise to enable all nations, however diverse in their systems and beliefs, to become in fact as well as in law free and equal nations.

—From an address by President John F. Kennedy to the United Nations General Assembly, Sept. 25, 1961.

ABOUT THE AUTHORS . . .



Paul G. Hoffman

David Owen



Paul G. Hoffman has, since his appointment in 1959 as director of the UN Special Fund, spent much of his time in on-the-spot studies of the problems of development in the world's underdeveloped countries. His interest in the subject began in 1942 when, while he was still president of the Studebaker corporation, he helped found the Committee for Economic Development. From 1948 to 1952 he directed the successful Marshall plan program for the reconstruction of the economy of western Europe.

David Owen attended the 1961 Conference on African Education at Addis Ababa, Eth., in his capacity as executive chairman of the UN Technical Assistance board, a post he has held since 1952. A distinguished sociologist and economist, he began his career in public service as personal assistant to Britain's Sir Stafford Cripps. He attended the UN founding conference at San Francisco in 1945 as a British representative and has held various UN posts since that time.

William C. Baggs, editor of the *Miami News* since 1957, gained his knowledge of Puerto Rico and the Caribbean area as a working newspaperman and correspondent in the region. He began his career in journalism in Latin America in 1941 and has been a close student of the region since that time. His intimate understanding of Caribbean affairs received special recognition in 1961 when Pres. John F. Kennedy named him United States observer for the newly established Caribbean organization and his personal representative at founding ceremonies in San Juan, P.R.

William C. Baggs





To remain secure and prosperous themselves, wealthy nations must extend the kind of cooperation to the less fortunate members that will inspire hope, confidence, and progress. A rich nation can for a time, without noticeable damage to itself, pursue a course of self-indulgence, making its single goal the material ease and comfort of its own citizens—thus repudiating its own spiritual and material stake in a peaceful and prosperous society of nations. But the enmities it will incur, the isolation into which it will descend, and the internal moral, spiritual, economic, and political softness that will be engendered will, in the long term, bring it to disaster.

America did not become great through softness and self-indulgence. Her miraculous progress and achievements flow from other qualities far more worthy and substantial—

Adherence to principles and methods consonant with our religious philosophy;

A satisfaction in hard work;

The readiness to sacrifice for worthwhile causes;

The courage to meet every challenge;

The intellectual honesty and capacity to recognize the true path of her own best interests.

To us and to every nation of the free world, rich or poor, these qualities are necessary today as never before if we are to march together to greater security, prosperity, and peace.

—From an address by President Dwight D. Eisenhower to the United States Congress, Jan. 7, 1960.

EDITORS' NOTE . . .

The problem of the maintenance of world peace dominated the events described in the first edition of the *Britannica Book of the Year*, published in 1938. The same problem haunts almost every page of this the 25th annual edition of the yearbook. The advent of nuclear warfare has made the problem infinitely more acute for mankind; the American of 1937 would have found incredible the prospects the American of 1961 soberly faced, as described in the special section, "The Problems of Survival," that appears with the article CIVIL DEFENSE in the 1962 *Britannica Book of the Year*.

Yet there was a difference, and an important one, between the way the problem of peace was viewed in 1937 and in 1961. Few observers in 1937 shared Neville Chamberlain's hope that "peace in our time" could be achieved. Most felt that war was inevitable before the evils of Nazism and its counterparts in other countries could be eradicated and before man could proceed with building a better society. In 1961, there were more optimists in the world. Few felt certain that limited war could be avoided or that the structure of lasting peace could be erected in this decade or even in this century. But they did have cautious hope that all-out war could be avoided, if, for no other reason, because it had to be avoided if the world was to survive.

Thus world leaders in 1961 were actively engaged in projects designed to make a world at peace a world fit for man to live in. For the first time in human history, a world truly without want was a visible, attainable goal, and much of mankind was engaged in striving to attain it. Because of that fact, the Editors of the *Britannica Book of the Year* decided to devote the entire feature section of this edition to a study-in-depth of this problem that engages so many of the world's people.

For an over-all view of "the problems and promises of development," the editors turned to the American who has over the past 15 or more years been as actively engaged in development projects as any of his fellow citizens—Paul G. Hoffman. As he points out in Part I of this study, the development of human resources is the vital first step in any development program and nowhere in the world are the problems in this field more acute than in the newly independent countries of Africa. Thus, in Part II David Owen examines the problems of education in the emergent African nations. Finally, to see how a development program functions in practice, the editors asked William C. Baggs to describe in detail the story of "Operation Bootstrap" in Puerto Rico, which because its program is the oldest of its kind in existence has become a showcase of development for all the world to study.

Because the authors of each part of this study are authorities in their respective fields, the Editors of the *Britannica Book of the Year* have asked them to feel free to express their personal opinions and conclusions. Their views are, of course, not necessarily those of the Editors.

WORLD
WITHOUT
WANT





The hope of a world that knows want, seen in the eyes of a child at a food distribution centre, Kasai province, Republic of the Congo, during the 1961 famine

PART I

Bread Upon the Waters:

The Problems and Promises of Development

BY PAUL G. HOFFMAN

THE people of the world today live in the most exciting, the most fearful, the most dangerous and yet the most hopeful time in history. Our tense world is filled with opportunities unimaginable to our grandparents. Only in the last few moments of time, as human history is recorded, has man known how to wipe out the poverty, hunger, illiteracy and chronic ill-health that have been his intimate companions on his journey to the present.

The real ferment that stirs the world today is not a struggle over ideology. Instead, what moves men's minds in much of the world is the fact that people today know they can have a better tomorrow. This is perhaps the most important fact of our time. Hundreds of millions whose forebears patiently accepted lives of misery are involved in what has aptly been called "the revolution of rising expectations." What has been a distant dream has now become a passionate demand.

This is a demand that we of the industrially developed nations can no longer ignore—in our own interests. For if the yearnings of these hundreds of millions of people for a better life are ignored, the future promises one explosive outbreak after another. Furthermore, if effective and adequate assistance helps these people achieve better lives, the world may become a safer and better place to live than anyone has ever hoped. More than any other single factor, the response to this demand for more decent living conditions will determine the political and social complexion of the future.

There is no simple answer to the problem of assisting underprivileged people to achieve better living standards. The huge dimensions of the problem assure this. More than 100 countries and territories associated with the United Nations are dreadfully poor. In them live more than 1,300,000,000 people. These people, plus the 650,000,000 in mainland China, total more than two-thirds of the world's population. Not only are the dimensions appallingly large, the processes by which improvement can be achieved are bewilderingly complex, fluid and ever evolving.

We call these processes economic development.

WHY BE CONCERNED?

Having achieved a high standard of living through our own technical and business talents applied to the exploitation of our natural resources, we people of the industrially advanced countries may be inclined to ask why we should be concerned about the peoples of the underdeveloped world. There is an answer to this question: our own moral, political and business interests are so inextricably intertwined with theirs that we cannot afford to ignore them.

For generations, profound moral beliefs have prompted charitable and educational activities by churches and private philanthropies. The doctrines of every major religion require the strong to help the weak, the rich to act compassionately toward the poor. And, if moral codes fail to command positive action, the negative whip of an uneasy and inescapable conscience compels our attention to the needs of stricken people and also our action to help them.

There are urgent political reasons, too. After World War II the long-smothered feelings of nationalism in the underdeveloped areas found expression as nation after nation demanded and achieved independence. There were 51 nations among the original signatories to the UN charter in 1945. In 1961 the UN had 104 members; of the new members, 32 attained their independence or were created after 1945. In some cases these countries, even after independence, looked to the former colonial powers for assistance and got it—and are still getting it. But many of the new nations, as well as many of the older underdeveloped countries, are sensitive to participation by the great powers in their internal affairs. The new nations often feel such participation is a threat to their precious new freedom; the older countries consider it an infringement on their sovereignty.

All these countries need help. Their citizens are determined to have a better life; their peoples will not settle for less than a visible beginning of improvement. The increasing pressures for improvement will find release in one way or another. Will this release come by peaceful means—by dynamic evolution? Or will the demands give birth to violent revolution—to blood and chaos and possibly even World War III? The question is not: Why be concerned? Rather it is: Can we afford not to be?

The moral and political reasons for assisting underdeveloped nations are compelling enough by themselves. But there are solid business reasons as well. In the long view, the 100 underdeveloped nations and territories are the great new economic frontier. Any well-run business allots a part of its resources to development work—in research, in the search for new products, in the expansion of markets. Business enterprises that are content with today soon disappear. It is a fact—as well known to the small merchant as to the president of the largest corporation—that for a business to succeed it must move forward.

If per capita incomes in the underdeveloped world were lifted by only 1% per year more in the 1960s than they rose in the 1950s, export markets for the entire industrially advanced world would expand by billions of dollars. For the United States—assuming it continues to retain its current share of the international trade flow—such an increase would amount to an estimated additional \$7,000,000,000 in U.S. exports per year by 1970.

In man-hours alone an equivalent of more than 4,500,000 jobs in the United States depend on foreign trade. Of these, more than 1,750,000 jobs depend on U.S. exports to the underdeveloped areas of the world. By 1970 this number may well double to the equivalent of more than 3,500,000 full-time jobs. Assuming a growth of an additional 1% per year in per capita incomes in the underdeveloped countries, the total exports for this ten-year period as a whole can reasonably be expected to reach \$320,000,000,000 from the developed to the underdeveloped

world. That is good business. Economic development is not charity; it is sound business management in exactly the same sense that product or market development is sound business management.

The bluntest and most accurate answer to why we should be concerned is that we must be. Morally we can't escape concern; politically we can't avoid it; economically, our own interests dictate it.

WHAT IS AN UNDERDEVELOPED COUNTRY?

An underdeveloped country is not simply a poverty-stricken version of a developed nation. It is a country lacking in factories of its own, without adequate supplies of power and light. It usually lacks roads and railroads, efficient government services, telephones and other communications. Even when large cities do have communications, outlying areas are terribly isolated. It has few hospitals and few institutions of higher learning. Most of its people cannot read or write. What wealth it has is concentrated in the hands of a few people who live in comparative opulence surrounded by overwhelming poverty. Its banking system is embryonic; small loans have to be obtained through moneylenders who are often little better than extortionists. Not only are there few savings from which investment could be made, the people who have wealth usually refuse to invest it productively in their own countries. The underdeveloped nation's exports typically consist almost entirely of raw materials, ores, fruits or some other staple product with perhaps a small admixture of handicrafts or luxury goods. Often extraction or production of these export commodities is wholly or partly under foreign control, with little of the profit being reinvested in the country.

The Statistics of Underdevelopment

But while it is easy to see that a country is underdeveloped, it is extremely difficult to set up an exact statistical definition of what constitutes underdevelopment. Over the last 50 years or so the industrial nations, such as the United States and many countries in western Europe, have been carefully watching and measuring their own economies with a variety of statistical yardsticks. For example, the U.S. knows with considerable precision how much money its banks loaned last month, how many freight cars were loaded, how much money was paid out in wages and at what rates and how many people were employed. The underdeveloped country, lacking both business and government statistics, cannot measure its own economy in this way. It has some figures and can guess at others, but by and large it lacks information about itself. In most parts of Africa, for instance, it is virtually impossible to get accurate figures on the population because there is no uniform system, if there is any system at all, for registering births and deaths in the jungles and villages.

International organizations have done a great deal to push back the fog of statistical darkness. One important United Nations task, for example, has been to help underdeveloped nations set up statistical services and to correlate and co-ordinate the available statistics for the whole world. Out of these efforts a general picture is beginning to emerge. Where detailed statistics are lacking, generalizations can be made based on samples and projections can be drawn based on known trends.

Using such statistics as are available, we can arrive at a rough general definition of an underdeveloped country and get some idea of the number of such countries and the extent of their economic problems, even though we must admit that any such generalizations are somewhat arbitrary. One of the simplest yardsticks for measuring a country's relative development is the average annual per capita income of its citizens. This index is reached by taking a country's total income, as revealed through



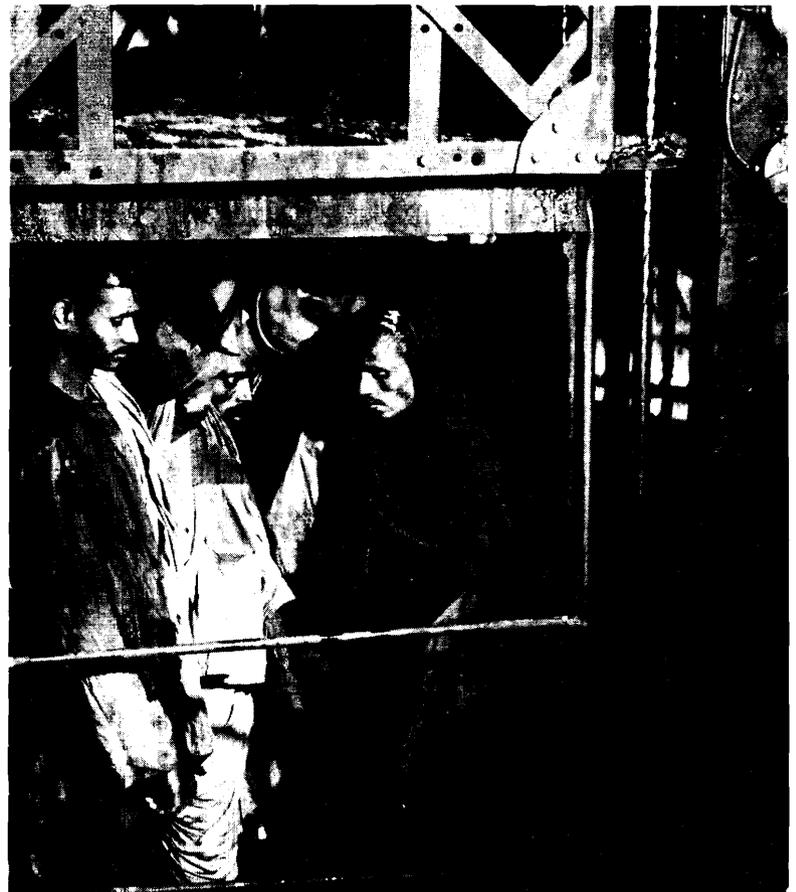
Beggars on a street of Quito, Ecuador. Lured to the cities by the hope of wealth—or driven to them by the rigours of peasant life—people of underdeveloped countries, hampered by a lack of education and labour skills, find only the lowest-paying, temporary jobs and often none at all

THE VICTIMS OF UNDERDEVELOPMENT

Indian miners descending into the coal pits. Productivity is often hampered by the attitude of the worker who, seeking only to satisfy his immediate needs, will leave his job and return to his village as soon as those needs are met



Flavio Da Silva, slum-dweller of Rio de Janeiro, Braz., whose story was told in Life magazine in 1961. Flavio was helped to a new life by the gifts of sympathetic Americans, but millions of others throughout the world remain in the deepest poverty



production figures and other data, and dividing it by the number of all the persons in the country of whatever age or condition. This average is then stated in terms of a common currency such as U.S. dollars. Admittedly, this index does not express the real income of people in any country and conversion into dollars is not always meaningful.

Moreover, averages tend to hide extremes, especially when the extremes are great. In a country where most citizens are very poor, the incomes of only a few millionaires will raise the average of the per capita income substantially. In addition, it should be remembered that the same per capita income may have a widely different significance in different countries. Where food is cheap, where because of climate needs for clothing and shelter are minimal, a low income is rather more tolerable than in a land where food is scarce and thus more costly or where cold winters make heavy clothing and warm houses required items for everyone.

National and per capita income figures for underdeveloped countries are, generally speaking, only informed guesses. Furthermore, such guesses or estimates tend to exaggerate the differences between the poorer and the richer countries. To state the income figures in dollars per year, it is necessary to convert local income statistics into dollars, and this is done at the official rate of exchange. The official dollar rate of exchange is often an inadequate way of measuring the local purchasing power of pesos or rupees or rials. One could probably buy a good deal more rice in Thailand for one baht than could be purchased at an American supermarket for five cents, which is the equivalent in U.S. currency at the official exchange rate. Moreover, this method of translating local per capita income into dollars understates the real income level of low-income countries because it cannot take into account the pattern of local life and the fact that many necessities are produced at home or bartered in the villages and do not enter into national income statistics.

But the indexes of the various countries considered together do give a rough picture of their relative status in terms of economic organization and activity. In most of the countries classed as underdeveloped the annual per capita income is well below \$300 although in a few it is as much as \$700. The table groups underdeveloped nations in terms of annual average per capita income using data as available in late 1961. The total population of the country is listed alongside.

The list excludes European countries with low annual per capita incomes such as Albania, Bulgaria, Greece, Hungary, Poland, Portugal, Rumania, Spain, Turkey and Yugoslavia, as well as certain low-income countries and territories with populations under 200,000. It also excludes mainland China, North Korea and North Vietnam because published and verified knowledge is not available on those countries and because they have not so far participated with other nations in a world-wide program of economic development. If the 674,000,000 peoples of those three nations are added to the approximately 1,300,000,000 included in the table, it is safe to say that some 2,000,000,000 people on this earth—about two-thirds of the human race—live in countries where dire poverty and deprivation are the facts of daily life.

The Human Realities of Poverty

What do these stark facts mean to the average man in the underdeveloped world?

They mean that he is engaged in a relentless struggle for mere existence. If he has land, it is a tiny plot. From it he must provide for himself and his family. When he is lucky, he can just about make it. But when the rain is late, or comes too soon, or the seed doesn't germinate fully, or he is sick during the harvest, or any of a host of other possible contingencies happens, he sim-

Per Capita Income in the Underdeveloped Countries

Country	Pop., mid-1960 (000)	Country	Pop., mid-1960 (000)
Less than \$100			
Afghanistan	13,800	Mauritania	740
Angola (Port.)	4,605	Mozambique	6,385
Basutoland (U.K.)	685	Nepal	9,180
Bechuanaland (U.K.)	340	Netherlands New Guinea	7,755
Bolivia	3,462	New Guinea (Austr. adm.)	1,402
Burma	20,662	Niger	2,870
Cambodia	4,952	Nigeria	34,091
Cameroon (Brit. adm.)	1,652	Pakistan	92,727
Central African Republic	1,227	Papua (Austr.)	570
Chad	2,660	Portuguese Guinea	303
China (Formosa)	10,613	Portuguese India	650
Congo, Republic of the	14,150	Portuguese Timor	502
Dahomey	1,934	Réunion (Fr.)	336
Ethiopia	20,000	Rio Muni and Fernando Po (Sp.)	244
Gambia (U.K.)	308	Ruanda-Urundi (Belg. adm.)	4,901
Guadeloupe and dependencies (Fr.)	270	Sierra Leone	2,450
Guinea	3,000	Somalia	2,010
Haiti	3,505	South-West Africa (S. Af.)	522
India	432,567	Sudan	11,770
Indonesia	92,600	Swaziland (U.K.)	259
Jordan	1,695	Tanganyika (Brit. adm.)	9,238
Kenya (U.K.)	7,131	Thailand	25,520
Laos	1,805	Togo	1,440
Liberia	1,290	Uganda (U.K.)	6,682
Mali	4,100	Upper Volta	3,635
Martinique	277	Yemen	5,000
\$100-\$199			
Brazil	65,743	Libya	1,195
Cameroon	3,240	Malagasy	5,393
Ceylon	9,870	Morocco	11,626
Congo, Republic of	820	Nicaragua	1,477
Ecuador	4,317	Paraguay	1,768
Egypt	25,929	Peru	10,857
El Salvador	2,612	Philippines	27,500
Gabon	440	Rhodesia and Nyasaland (U.K.)	8,330
Ghana	6,691	Ryukyu Islands	875
Guatemala	3,765	Saudi Arabia	6,640
Honduras	1,953	Senegal	2,973
Iran	20,182	Syria	4,560
Iraq	7,085	Tunisia	4,168
Ivory Coast	3,230	Vietnam (South)	14,100
Korea (South)	24,665	Zanzibar (U.K.)	307
\$200-\$299			
Algeria (Fr.)	11,020	Hong Kong (U.K.)	2,981
Bhutan	670	Malaya	6,909
British Borneo	1,199	Mauritius and dependencies (U.K.)	658
British Guiana	567	Mexico	34,626
Colombia	14,132	Surinam (Neth.)	270
Dominican Republic	2,994	West Indies (U.K.)	3,115
Fiji Islands (U.K.)	394		
\$300-\$699			
Argentina	20,956	Malta and Gozo (U.K.)	329
Chile	7,628	Panamá	1,055
Costa Rica	1,171	Puerto Rico (U.S.)	2,359
Cuba	6,797	Singapore (U.K.)	1,634
Cyprus	563	Uruguay	2,827
Israel	2,114	Venezuela	7,202
Lebanon	1,646		

ply does not get by.

The immediate expectations of the average man of the underdeveloped world seem simple enough to us. His demands are not excessive. They include such things as an opportunity for his children to learn to read and write, a source of pure water, a reliable plow, a sewing machine, shoes, two cooking pots instead of one, a doctor when he or his family needs one, enough food for tomorrow's meals as well as today's, seed with a slightly higher yield, perhaps a bicycle, certainly some protection for himself and his family when he is caught up in a natural disaster such as a drought or an insect plague or the failure of the monsoon.

This is not pie in the sky. In the developed nations many of these things are securely institutionalized and the others can be obtained through the income from a few hours of labour. But they and the institutions needed to create them are simply not yet within reach of the average man of the underdeveloped world. He stands alone. He wrings subsistence from his environment with his bare hands. The dangers to his precarious existence are so clear, so present and so far beyond his control that he knows of nothing to do except ward them off by whatever magic seems to work. When the magic fails, a minor breakdown speedily becomes a disaster he may or may not survive.

The lot of the Indian peasant is typical. He lives in a village of mud huts. He has few contacts beyond the next village; few roads exist and when they do they are usually nothing more than cart

BREAD UPON THE WATERS

tracks over difficult terrain and in poor condition. If he is lucky—and nearly 40% of India's 200,000,000 rural population are not—he has land. His three acres may be in two or three or perhaps six widely separated plots. They are among the most unproductive cultivated acres in the world. The peasant cannot afford fertilizer, better seed, power machinery or any but the most primitive farm tools. The annual income from the land for his family of six will be about \$200, of which a third will be owed to a moneylender. He will pour his energies into this land to get back from it barely enough for him and his family to eat.

If the economic outlines of his life are harsh, the other aspects are harsher still. For a bed he often uses a straw pallet or perhaps the raw earth. For fuel with which to cook his meagre meals, he uses dried cow dung. The water he drinks is carried by his wife or children from a village well of doubtful purity. All the clothes he owns, he wears. He can neither read nor write, and it is only recently that his children have been given the hope of learning. Malnutrition and illness are rife. If he gets sick, there is no doctor for him. He and his wife expect that half their children will be dead before they reach the age of six. Any member of his family could consider himself fortunate if he lived to be 40 years old. Seventy-five per cent of India's people share his lot. Gandhi described the Indian peasant's life as an "eternal compulsory fast." These Indian peasants constitute 20% of the agricultural and rural peoples of the entire world.

The urban dwellers of the underdeveloped world fare little better. On June 16, 1961, *Life* magazine published a photographic essay on a slum family of Rio de Janeiro, Braz. It was a revelation of unutterable squalor.

The Da Silva family existence—until the article appeared—

was not unusual. The father came to the city to escape the burdens of peasant life. "Now he sells kerosene and bleach in a tiny boxlike stall which he and Nair [his wife] built—as they did their tiny shack—from tin cans, broken orange crates and stolen pieces of lumber. The shop brings in about \$20 a month. To get \$5 more to buy food, Nair, about to have her ninth child, washes clothes in the only available water—from a spigot at the foot of the hill. The children, who range from 12 years to 17 months, are penned in the shack or roam the foul pathways of the *favela* where the filth of the inhabitants is tossed out to rot."

There was little evidence in the story that either parent cared much for or about the children, but it was hard to tell since both were unceasingly exhausted. None of the children had ever been as far as minutes away from their wretched hovel. They had no shoes, no sheets and no more hope. The brutal drudgery of their lives had pounded the entire family into a mold of defeat from which there was no prospect of escape.

The care of the younger children was in the hands of 12-year-old Flavio, the one bright spot in the otherwise unrelieved gloom. But Flavio was sick and it seemed unlikely that he would get treatment in time to save his life.

U.S. readers' reaction to the story was immediate and generous. Almost overnight, the lives of Flavio and the Da Silva family were transformed. The tragedy of the underdeveloped world is that the story is not an unusual story, except for its happy ending. The Da Silva family was typical. They were not especially poverty stricken by comparison with their neighbours. And their slum existence is not duplicated by only dozens or hundreds or thousands; with minor differences, it is duplicated by dozens of millions all over the underdeveloped world.

Typical peasant village of India: thatch-roofed earthen houses surrounded by bare ground and linked by mud roads or paths, water supplied from a source of doubtful purity, animals roaming freely



MYTHS ABOUT DEVELOPMENT

There are a number of myths about why the underdeveloped nations are underdeveloped, myths also about the conditions of life in these countries.

The most pernicious myth is that of the superiority of the white-skinned peoples. There are many who still believe, despite the evidence to the contrary, that the darker-skinned peoples are incapable of absorbing the education, of acquiring the skills and of exercising the judgment needed for economic development. With some of those who hold such views, there is no use presenting evidence or discussing the question; reason plays no part in their attitude. But with others, whose only guilt is an unthinking acceptance of inherited misconceptions, a simple look at the leaders of much of Asia, Africa and Latin America and at what the peoples of such areas as India, Mexico and Puerto Rico have already accomplished in an amazingly short time is enough to destroy the validity of these attitudes. And a closer look at the peoples of these nations will reveal the simple fact that the human race is made up of about the same cross section of types in every country. Intelligence, capacity, ability and even poverty know no colour line.

Allied to this idea of racial inferiority is another: the happy native myth. We are told by its proponents that the peasant cultivator lives an idyllic life close to the bosom of mother earth. His wants and needs are simple. He is happy. Indeed, we are told, it is we who are unhappy; our goal should be to emulate the simple grandeur and dignity of the man in the fields. Of course these people know the peasant cultivator only from the pages of a colourfully illustrated travel magazine or from a brief glimpse through the windows of an air-conditioned railroad car. Their noses have not been rubbed in the grime and misery of the peasant's daily life. And their dignity has not been challenged by the daily necessity of working to exhaustion for the equivalent of half a loaf of bread. No, the happy native exists almost solely in conversations at cocktail parties in well-appointed living rooms. A recent investigation disclosed that there are as many stomach ulcers (which are reputed to be induced partly by tension) per 1,000 persons in Indonesia as in New York.

The Myths About Colonialism

Another myth—or rather system of myths—concerns colonialism. On the one hand, many of the citizens of former colonial powers feel that their activities made substantial contributions to the welfare and development of their one-time colonies. On the other hand, deep-seated resentments in the former colonies blind their citizens to everything but the memory of exploitation. Both points of view are emotionally charged, and the peoples of both groups are extremely sensitive on the subject.

A purely objective look at colonialism shows that the truth is somewhere in between. Colonialism, in many of its forms, generally was exploitative and often ugly. But the colonial powers frequently made substantial contributions in health and education and in many instances injected the first industrial capital into the underdeveloped lands—the roads, docks, mining equipment, railroads and other appurtenances of industrialization. In some instances they brought another prerequisite of development: stable government. And they certainly brought to the peoples of the colonial areas an awareness of the possibilities of material improvement.

To assign colonialism the full blame for underdevelopment is unfair. True, in some cases it held development back, but in others it should be credited with the first few steps forward.

Parallel with the myth about colonialism is another myth: that independence, in and of itself, guarantees development. History



Sowing rice in Ceylon. Such simple improvements as better seed and fertilizer can change failure to success among subsistence farmers

contradicts this belief. Some long-independent countries are among the least developed, and independence can, at the beginning, add to the problems of development. On the other hand, when the initial handicaps are overcome, independence does provide an incentive for sharply accelerated development.

The Myths About Geography

There is a myth about climate. Many of the underdeveloped countries lie in tropical and semitropical areas. Can their poverty be traced simply to the heat?

Not very many years ago the climatic explanation of economic backwardness was widely accepted. The tropics, it was said, made men lazy; more charitably, it was stated that hard and sustained labour was "impossible" in the equatorial and near-equatorial zones. Or other reasons, such as diseases that are endemic in the tropics, were held responsible for the poverty there.

Today, however, one must be more chary of ascribing underdevelopment to the influence of climate. To be sure, there are parts of the world where the heat is debilitating, but such locales are the exception rather than the rule. Even when the heat is fierce, it normally occurs only during a few hours of the day or months of the year. In addition, some tropical locales, such as the Queensland region of Australia, have shown vigorous economic growth. And to clinch the point, by no means all underdeveloped countries are tropical. Korea has a temperate climate as does much of highland Africa, Argentina and Chile. As has been pointed out, there is no significant difference in attitudes or productivity between Indonesians living at sea level and those living in the invigorating climate 4,000 ft. up in the mountains.

Other investigators into the relationship between climate and economic backwardness have concerned themselves with rainfall. Much of the problem of the African continent revolves around its unevenly distributed precipitation and the inability of its inhabitants to control and utilize water. Along the great northern strip of Africa the Arab peoples have for centuries contended with a rainfall that is sporadic and insufficient, while large areas of tropical Africa alternately wash away under tor-

BREAD UPON THE WATERS

rential downpours or parch under none. Asians, too, have had to live with unfavourable distribution of annual rainfall: the great life-giving monsoons call the tune for all of south Asian agriculture, and when the monsoons are late, the crops die in the fields.

Yet South America as a whole has no such problem, and better tilled, irrigated and tended, north Africa was the granary of the ancient Roman empire. As with climate, the pattern of rainfall provides at best only a partial explanation for underdevelopment. What is even more important, neither heat nor rainfall seems to pose insuperable obstacles to future development. Air conditioning, water storage and irrigation can go a long way toward improving the physical environment in these respects—as witness the economic progress of both Australia and Israel or, for that matter, Kansas (once called the Great American desert) and California. The peoples of the tropics and the deserts will always have to reckon with and adapt to geographic liabilities, but these need not keep most such regions from eventually joining the ranks of the more prosperous nations of the world.

Then there is the myth about resources. The underdeveloped countries, some believe, cannot be developed because they do not have their fair share of the bounties of nature. The soil is purportedly no good. There are no fish in the oceans. The forest cover has been destroyed. There are few, if any, minerals. And it is a fact that the balance sheets of many underdeveloped countries do not show the navigable rivers, the promising hydroelectric sites, the deposits of iron ore, coal, tin, bauxite and the

Burmese girl carrying water from a village mudhole. Impure water supplies add to the health problems of underdeveloped countries



Aniak tribesmen of western Ethiopia threshing millet by beating it. Grain falls from the stalks onto the ground below. Lack of capital to buy machinery leads to waste of both labour and produce

thousand and one other raw materials of modern industry.

But the actual paucity of physical resources remains a question. United Nations investigations with modern equipment have turned up abundant resources in areas hitherto thought devoid of wealth.

The Myth About Costs

One of the most prevalent myths about development concerns its cost for the industrialized nations. Because budget makers and legislators find it convenient to describe these costs in terms solely of dollars or other currencies, we have come to think that these costs represent simply outpourings of cash which in turn are abstracted from the taxpayer's wallet. This is not true. What the underdeveloped nations want and need—and what we have given them and will give them—is goods and technical services. It is true that these things must be paid for with money, but far less money comes from the taxpayer's pocket than the figures would indicate. For goods sold to the underdeveloped countries mean new jobs for workers in the industrialized nations. They mean greater profits through increased trade. They mean absorption of surplus commodities with a consequent firming of prices. They mean that, because of economic expansion, more taxes can be collected without a corresponding rise in tax rates. In short, the betterment of business that aid to the underdeveloped countries brings serves to make the actual out-of-pocket cost of such a program substantially less than its book cost.

There are other myths about development. But mythology has no place in the conquest of poverty; only a cold hard look at the facts will provide the foundation needed for sensible strategy and effective tactics against this most prevalent of social malfunctions.

THE COMPLEXITIES OF THE PROBLEM

Even more staggering than the dimensions of the problem of development are its bewildering complexities. The societies with which the work must be done run the gamut from primitive to semimodern. The skills needed range from feeding a baby properly to the most sophisticated geopolitics. The effort is complicated further by the existence of firmly held beliefs which

interfere with unbiased judgments. Finally, the problem's complexities rise out of the widely varying situations in the countries involved.

The plain fact is that each country must have a hand-tailored development program, suited to its specific needs and conditions. Since there are 100 countries and territories, there must be 100 programs. And each program will consist of a variety of projects, each of which must be designed and carried forward with specific priority objectives in mind. Of course there may be experience gained in projects and programs in one country that can usefully be carried over to another. But by and large, development of each country is a unique combination of specific problems.

It is well to bear in mind that this development process takes place in a time dimension, too. Development is historically a long as well as an arduous task. But the pressure of demand today is so great that time is lacking for the slow development which was characteristic of most of the industrially advanced nations. The processes that took centuries for us must be compressed into decades for the underdeveloped world. The facts of modern communication make the times, and time itself, more pitiless today than ever before. The poverty-stricken peoples of the world are impatient; immediate, visible signs of improvement are urgently needed.

THE COMMON DENOMINATORS OF UNDERDEVELOPMENT

As the multitudinous problems are faced in the actual development of countries, differences among the countries must be taken into account. But the attack on poverty, hunger, illiteracy and chronic ill-health can be understood against the background of certain common denominators of underdevelopment: (1) shortage of capital; (2) inability to increase export earnings to pay for essential imports; (3) lack of productivity; (4) lack of knowledge of physical resources; (5) lack of trained people to bring resources, physical and human, into effective use; (6) lack of organized programming and planning for development; (7) social and psychological attitudes which hamper development; and (8) rapidly expanding populations.

Egyptian farmer preparing his fields with a wooden plow of a design seen in tomb paintings of 3,000 years ago



Shortage of Capital

All underdeveloped countries suffer from a paralyzing lack of capital. This lack is one of the basic blocks to development. It is capital which is the magic lever of production—capital in the shape of plows and tools, lathes, engines, cranes, factories, warehouses, dams. Without capital, productivity is limited to ingenuity and the strength of bare hands used with the most primitive equipment—stick plows, oxcarts, hand-dug irrigation ditches, hand-turned spinning wheels.

It is lack of capital which cripples the postage-stamp farmer. Peasants working on their tiny strips cannot possibly afford—nor could they efficiently utilize—mechanical sowers and reapers and binders. They cannot afford steel plows to replace their wooden ones. Chemical fertilizer is impossibly expensive for hand-to-mouth budgets, and even animal fertilizer is scarce. Nor is capital available in the form of draft animals.

One revealing index of the scarcity of capital is the availability of useful power in the underdeveloped lands. In India, in 1953, man and beast produced 65% of all the nation's economic energy, and of the remaining 35% of inanimately produced energy, about three-quarters was secured from the burning of dung. In the United States, in the same year, human and animal power together accounted for only 1% of the nation's economic energy, and the use of primitive animal fuels was practically zero. The total amount of power generated by India in 1953 would not have sufficed to light up New York city; despite a doubling of production, on a per capita basis India's electricity output is still less than 2% of that of the United States.

This deep-rooted and pervasive problem of the insufficiency of capital is one to which we shall return, for clearly here lies a vital element in any prescription for economic development.

Need for Export Earnings

As the pace of development increases in a country, its needs for imports of tools, vehicles and other transport equipment, industrial machinery, electrical plant and gear, iron and steel, textiles and other manufactures, as well as for technicians, ex-



With draft animals scarce, much hard physical labour must be done by human hands, even children's, as in the case of this Chinese girl

pands proportionately. For the most part the foreign exchange required to pay for these imports must come from export earnings. Hence, an intensive effort must be made on the part of all underdeveloped countries to diversify and expand their exports. In this difficult task they should have the co-operation of the industrialized countries. More will be said later on how this help can be given.

Lack of Productivity

One of the most heart-rending facts apparent to the visitor in the underdeveloped world is how pitifully little is produced by so much backbreaking labour.

This is particularly evident in agriculture. In the United States, a single farmer typically produces enough food for himself and for 23 nonfood-producing citizens. As recently as 1940 he produced enough for 11. But in different parts of Africa, it takes from two to ten men, women and children to produce enough for themselves and only one nonfood-producing adult.

Clearly, at the heart of economic development in most areas lies increase in agricultural productivity. Better seed, more land, better methods, better markets, all lead to higher agricultural output. As more food and other agricultural commodities are produced, some of these can and must be used for public benefit as well as for that of the family unit. The peasant cannot consume all of it. A portion must be diverted to feed the people who are working on the economic underpinnings of expansion and in the businesses which do not produce food. And a portion of it may be useful for export—to produce needed foreign exchange.

Increased agricultural productivity also makes possible the improvement of conditions of rural life, making it so attractive that the necessary numbers of young people will want to "stay on the farm" rather than migrate to crowded cities where opportunities for their useful employment do not yet exist. But as efficiency on the farm increases, more and more people will become available for other types of activity; occupations useful to them and their country must be developed. Some can be employed in public works, but most can be absorbed into their country's industry and commerce. The availability of this labour force, with its significant potentialities for development, underscores the need for the rapid expansion of economically productive work

opportunities, especially for a rapid expansion of industry—large and small—and of transportation and commerce.

Lack of Knowledge of Physical Resources

Many, even most, of the underdeveloped nations begin their development efforts in ignorance about their own capacities. They do not know the extent or nature of their resources. They do not have accurate surveys of the land. They may very well not even know the size of their populations. Hence they are apt to launch development projects based more on guesswork and hope than on sound blueprints for success. It is fair to say that hundreds of millions of precious development dollars—and rupees and cruzeiros and francs—have gone down the drain just for lack of adequate investigation and project preparation.

However, the losses caused by the failure of development schemes are tiny when compared with the losses the underdeveloped countries are suffering through underutilization of their resources. Indonesia, for example, is blessed with a fertile volcanic soil and has much underground wealth. South America has vast arable lands and great mineral potentials. Africa boasts huge reserves of subsoil treasure. And in many other nations what best describes the situation is that resources are not so much lacking as simply unknown. Typical is the case of Libya which, until a few years ago, would have been written off as a nation almost bereft of any of the gifts of nature but today is known to have substantial oil deposits. Underdeveloped countries, generally speaking, are not poor in resources. They are simply poor in knowledge of their resources.

There are literally dozens of rivers flowing through the low-income countries whose waters have never been used for irrigation or the generation of power. There are hundreds of millions of acres of land which could be made productive by the application of fertilizer. And there are other hundreds of millions of acres in semiarid countries which can be made productive if ways are found to conserve the waters that now flow into the sea unused. In the not too distant future low-cost desalinization of sea water promises an opportunity to make many deserts blossom.

Without doubt the uneven allocation of the gifts of nature will make development more difficult in some areas than in others. It will certainly influence the direction which development will



British Guianan hunters, wearing sunshades of leaves, watching Kaieteur falls. Exploitation of water and other physical resources is a key step in development

take, encouraging animal husbandry here and rice culture there, making coal a source of power in one area and oil in another. The pace and pattern of change must inevitably reflect the variety of natural habitats in which it takes place. Viewing the problem as a whole, however, there is every reason to believe that adequate resources to support a prosperous economy can be found or developed in every underdeveloped country.

Hence preinvestment surveys of resources have become a first requirement for effective growth. A developing country must start not with capital investment alone but with the preinvestment which makes substantial capital building possible and effective.

Lack of Trained People

Every low-income country is extremely short of trained government administrators, technicians and professional men, teachers, business leaders and skilled workers, people who can make effective use of physical resources. If the aid programs that got under way ten years ago had given the same attention to human resources that they gave to physical resources, the economies of many countries would be much further advanced than they are today. This problem is of such significance that it will be examined in detail later.

Lack of Organized Programing and Planning for Development

In most of the underdeveloped countries there is haphazard, if any, programing and planning for economic development. As a consequence, the slender resources of the countries themselves have too often been devoted to glamour projects such as ornate government buildings or wide boulevards in the capital rather

than to schoolhouses and farm-to-market roads.

In the development of a country, physical and human resources must be used with as little lost motion and waste as possible. It is virtually criminal to throw money and energy away when both are in such short supply. Avoidance of waste demands the establishment of an organized plan and the creation of programs to implement it. Someone must decide on the priorities. Should the dam come before the school and after the training institute, or should the order be otherwise?

Obviously many underdeveloped countries will need help in planning and programing, and the United Nations is doing a great deal of that work already. It is equally obvious that the national planning authorities of the various countries must be ably administered.

Psychological Attitudes That Hamper Development

In many countries as a first step in the development process certain psychological problems arising out of traditional social attitudes must be faced. There are deeply rooted reasons for these attitudes. They will not be changed easily. They represent a significant obstacle to development. What are they?

To begin with, the vast majority—as many as 70% or 80%—of the peoples of Africa, Asia and Latin America are peasants. “Peasant” is not another word for farmer. A successful farmer in industrialized countries is a businessman of the land. He is progressive and forward-looking. On the other hand the peasant is extremely conservative. He is fearful of change. This does not mean that he is immutably tied to the past. He is not just mulish, obstinate or stupid. Rather he is operating in a world in which there is no margin for error, no room for maneuvering. As opposed to modern agricultural science which he doesn't un-

BREAD UPON THE WATERS

derstand, he knows the practices of the past that have worked for his ancestors and for him. Yet he will change his ways once it has been demonstrated that by so doing his agricultural output can be increased. Thousands of agricultural experts who have worked with the peasants will testify to this.

The urban worker in the underdeveloped countries, like the peasant, is not easily transformed into a member of a modern economic system. He is generally unskilled and must be trained for even the simplest of tasks. Nor is he accustomed to the kind of discipline that must be enforced if a factory is to operate efficiently. Nevertheless, significant progress is being made in the development of efficient workers in many of the less developed countries.

The attitude of some of the wealthy people is a serious block to development. Some use their wealth constructively, for the benefit of the people of their country. But too many of them are callous to the distressing conditions in which the masses of the people live. Instead of investing their wealth within their nation, they invest it abroad or store it away in foreign banks. They evade taxes and flaunt their luxury in the faces of their underfed neighbours. In such situations tax reform is an essential ingredient of economic development. Such reforms must take cognizance of the fact that incentive for private risk is needed. The delicate balance between the needs of the government and the ambitions of individual citizens is difficult to achieve. Both elements must be weighed in tax reform.

The attitude toward physical labour held by people in certain of the low-income countries is also a serious handicap to development. In these countries the tradition persists that hunting, fishing, fighting and politicking are the only respectable occupations for men. Work in the home, around the home, in the fields, stores and markets is for women, and women only. This attitude is slowly changing. But until men get to work, until physical labour is accorded the dignity it should have, progress toward better living conditions will be slow.

The question of status also has a strong influence in the developmental process. In many countries the only groups that enjoy prestige are the government employees, the lawyers, the doctors and the priests. Men engaged in production and trade are looked upon as third-class citizens. Only when proper recognition is given to the significant contribution which entrepreneurs, industrialists, businessmen and efficient workers must make toward building a country will talent be attracted into these pursuits.

Of equal importance is the status of women. There is a close relationship between the status of women and the state of economic development in any given country. So long as countries regard women as chattels their development will be slow and painful.

When it comes to savings, the idea of postponing consumption today for a better tomorrow is presently beyond the comprehension of many people in low-income countries. Admittedly, it is difficult for someone whose belt is already at the last notch to tighten it further. Yet, as every farmer knows, out of even a small harvest sufficient grain must be saved for a new and larger planting.

There is also the question of material incentives. People will work hard if work helps them get what they want. As has already been noted, their demands are not excessive. But in too many countries the shops are nearly bare; the materials for building a better home are nonexistent; there are no teachers to teach the children; the badly needed household items and other goods are not available. Examples abound in the underdeveloped world of people intensifying their effort to earn money for attractive, reasonably priced consumer goods, to exploit newly discovered sources of water, to build their own schools when the government assists them in obtaining teachers.

Nor are material incentives enough by themselves. The sense of dedication which is also vital for successful development must be motivated by increasing opportunities, particularly for young people. In the underdeveloped world a feeling of inability to participate in improvement is pervasive. Optimism, as opposed to wishful thinking, is too rare. The real value of the effort for development is underrated. Yet there are many examples of successful leadership transforming wishful thinking into optimistic effort. Gandhi, personally, spun the thread and lived with the untouchables to prove that participation is important.

Many other psychological factors must be taken into account. In some countries rigid taboos have to be considered. In parts of Africa fetish priests retain a powerful hold on the economic, political and social lives of the people and sometimes do their wily best to frustrate necessary advances. But like all the other factors which hamper development these too are subject to change, change which can be brought about by dedicated leadership and by peoples willing to put their backs into the job.

Rapidly Expanding Populations

Now we must turn to the last—and in some respects the most difficult—of these endemic obstacles: the problem of population growth.

The political scientists and economists of the world are engaged in a great debate about how many people the resources of the earth can support. Considering known ways of producing food, arguments range from the promise that 10,000,000,000 people can be sufficiently nourished on our planet to the gloomy statement that there are already more people than can ever be fed adequately. That debate will go on for a long time. What we do know is that today about one-half of the world's people are inadequately fed and the earth's population is growing at a rapid rate.

Of course the question about population growth that concerns

The burden of physical labour borne by women of underdeveloped countries is typified by this peasant woman of Ecuador





Shoppers and merchants in an Indian village. Accessible markets, well stocked with needed and desirable goods, can provide an incentive for continued hard work

us is the effect it has on economic development, that lever to help meet human needs. This effect is obvious: population growth tends to cancel out economic growth. If the world's population increases by 10% during a period when its output of goods increases 10%, the net effect per person is zero. Many countries are going to have to run hard just to stand still.

A case in point is the Aswan high dam in Egypt—one of the most ambitious engineering undertakings in any underdeveloped nation. The predicted effects of its first phase will be to make available 2,000,000 ac. of new cropland. This is expected to raise agricultural production about 45%. It will take ten years to build the dam and install the irrigation canals. At that point, the Egyptian population will have increased enough to absorb almost all the additions the dam will make to the country's agriculture. Thus the net total effect of the agricultural aspect of the project will be that while it will have prevented a disastrous decline in living standards, it will have added little visible improvement to the lot of the average Egyptian. (The second phase of the project, to be completed 10 years later, will triple the present production of electric power in Egypt. This, of course, will greatly stimulate the economy, although to what extent cannot be accurately estimated.)

Why does this pattern of population growth continue despite its deterrent effect on development? There are many reasons. One is that family planning is not feasible or acceptable in some countries. In others, where childless old age can mean starvation, children are the only form of "social security." Boys are a standard of value in a world which has no other material wealth. Girls are not only sources of domestic labour for families without appliances, they can often bring comparatively rich dowries. Children are also often symbols of prestige—however poorly they may be provided for.

But the birth rate is not the only and perhaps not the most important factor in population growth. It can be argued that, except in certain industrially advanced nations, the birth rate today is about the same as it has always been. The declining death rate is more generally responsible for population growth. Concerted attacks on diseases such as malaria and yaws have kept people alive longer. The result? Indonesia, to take one example, has almost doubled its population in the last 27 years. India is increasing its population annually by as many people as live in New York city. Between 1960 and 1970 the total population of the underdeveloped world will have increased by more than 300,000,000.

This "population explosion" makes rapid progress in development doubly urgent as the numbers of people and their needs for food, shelter and employment increase. Pressures for improvement—already great—will only grow greater if their satisfaction is postponed. The countries faced with these problems must find ways of ensuring that their economic growth rate is higher than their population growth rate if they wish to improve the lot of their people.

Full-Scale Attack Can Succeed

Despite all the problems and difficulties involved in the development process, it is a solid fact that underdevelopment is the result of the underutilization of physical and human resources in the countries involved. A more effective use of these resources will break the vicious circle of underdevelopment. But to break the vicious circle the attack must be mounted against all the obstacles that stand in the way of development.

This attack must be mounted on all levels. It will require skill of the highest order in every one of the social sciences and in most of the physical and biological sciences as well. From agron-

omy and business administration, through the alphabet past geology, gynecology, meteorology and psychology to zoology, the whole range of human knowledge and human skill will have to be brought to bear on the problem. Ultimately, the societies of the underdeveloped countries must be transformed.

This transformation the peoples of these countries must bring about for themselves. No imposed foreign pattern would be acceptable. Nor would it work, for one of the most pervasive feelings of the underdeveloped world is a hatred of uninvited outside interference and everything that can be construed as "colonialism." The required changes must be motivated by, rise from, be accepted by and be shouldered as the burden of the people who are making the demand for improvement.

WHAT HAS BEEN DONE?

The concept of helping whole nations improve their lot through economic development, the idea of helping whole peoples help themselves to economic independence and self-sustained economic progress—of doing these things in enlightened self-interest—is a new one. It proceeds directly from changed attitudes toward poverty and exploitation at home in the technically and economically advanced countries.

Until fairly recently, for example, people in the United States were exploiting rivers and forests and "mining" land instead of developing these resources. Accepted as gospel was the old saying that "the poor are always with us." A relatively high percentage of people were expected to live in poverty; that was the way it had always been.

But these attitudes have changed markedly. Heedless exploitation of resources in the United States is now generally regarded as short-sighted and self-defeating. Widespread poverty—at least hopeless and "inevitable" poverty of the type that prevailed during the depression a quarter of a century ago—is no longer regarded as inevitable. It has virtually been wiped out.

These new attitudes on the part of the United States and other industrialized countries found an early expression in the establishment of the International Bank for Reconstruction and Development (the World bank) in 1944. They received vicariously a powerful stimulus in the spirit and method of the Marshall plan. They were given further impetus by the launching of the United Nations technical assistance program and the United States Point Four program in 1949. Thereafter programs of aid for the underdeveloped countries multiplied rapidly.

The 1950s saw this idea take hold most encouragingly. Assistance to the underdeveloped countries increased substantially, and today virtually all the industrially advanced nations not only contribute through the United Nations but have their own country-to-country development assistance programs. Many are participating in various regional programs.

In the United States both major political parties have supported such programs. When in office, Republican Pres. Dwight D. Eisenhower was an active supporter of foreign aid. Democratic Pres. John F. Kennedy has expanded U.S. support for foreign assistance programs and especially development aid. These programs have taken several forms and have been called by different names when differing goals were defined by particular acts of congress or when new agencies were formed. Some major types and goals of post-World War II U.S. bilateral foreign aid were:

Marshall plan (Economic Cooperation administration). A program for recovery from the effects of war, primarily in Europe. It was not directly aimed at economic development but at economic redevelopment—an entirely different process.

Mutual Security and related programs. These provide defense support funds, a part of which contribute to economic development, the Development Loan Fund and funds for technical co-operation and other programs. Since mid-1961, programs formerly directed by the International Cooperation administration, and including the Development Loan Fund, were placed under the direction of a new co-ordinating body, the Agency for International Development.

Agricultural Trade Development and Assistance act of 1954 (public law 480). While essentially a method of disposing of agricultural surpluses in the U.S. by authorizing the government to make supplies available to less developed nations on generous terms, this act has made significant contributions to development—by combating hunger and controlling inflation in certain low-income countries and through the use of payments for the products as loans or gifts toward development projects in those countries.

There were a number of other U.S. government programs in the field. Government foreign assistance, excluding military aid and investment in international financial institutions, amounted to approximately \$50,000,000,000 between 1945 and 1960. The portion of this assistance total which has gone to the underdeveloped areas has not been large although it has been increasing in recent years. There were also U.S. private agencies in the picture, such as CARE, the American Red Cross, the Asia, Carnegie, Ford and Rockefeller foundations, dozens of religious organizations and many other groups that made outright gifts, promoted and supported development work or purchased bonds of governments of low-income countries.

The U.S. was only one of several countries in the industrially advanced world which, besides contributing to UN programs, involved themselves in bilateral and regional aid plans. In the latter field, for example, Great Britain took the lead in organizing and launching in 1950–51 the Colombo plan for co-ordinated bilateral economic development assistance in south and southeast Asia. The six member states of the European Economic Community organized a European Development Fund for development assistance in overseas countries and territories with which they have special links. It began approving grants in 1958 and 1959. Great Britain and France greatly increased their direct assistance to their dependent overseas territories and former colonies, the former notably through its Colonial Development and Welfare acts, and France through its Economic and Social Investment Fund. During the 1950s the German Federal Republic, Japan, the Soviet Union and other countries established or enlarged bilateral programs of technical and financial assistance to underdeveloped countries.

In this same period, the 1950s, the activities of the United Nations and its specialized agencies in the developmental field increased manifold. A major element in relating and extending the operational work of the United Nations agencies was the establishment in 1950 of the Expanded Programme of Technical Assistance. Funds for this program are volunteered by governments at annual United Nations pledging conferences. They are spent for services of experts, fellowship awards and a limited amount of equipment for demonstration purposes. Projects are serviced by the United Nations or the related agency with particular competence in the fields of assistance, which include labour and manpower, food and agriculture, education and science, civil aviation, health, telecommunications, meteorology and atomic energy. During its first ten years, the program sent out about 9,000 experts and awarded 16,000 fellowships to train nationals of approximately 140 countries and territories.

Another major development in United Nations assistance during the 1950s was the creation of the UN Special Fund. It began operations in 1959. Using income derived from voluntary contributions of governments, the Special Fund, with the collaboration of the United Nations and its related agencies, assists in carrying out large-scale surveys of natural resources, in establishing urgently needed training institutions and in developing applied-research facilities. Its primary goal is to lay the foundation for national, intergovernmental and private investment for development.

On the side of investment itself, the lending capacity of the International Bank for Reconstruction and Development (the World bank) was increased as it moved from reconstruction loans to lending for development projects. Its resources come from governmental subscriptions of capital, bonds issued on the capital

market and sales of loans and participations to other investors. By the end of the decade it had made more than 250 loans to 52 countries and territories involving total commitments of more than \$5,000,000,000. Between 1956 and 1959 the bank provided underdeveloped countries \$930,000,000 net. At the end of 1959 there was an undisbursed balance of loans committed to these countries of \$855,000,000. Meanwhile, in 1956-57 another United Nations agency was created: the International Finance corporation (IFC). Its disbursements up to the end of the decade had been rather modest, amounting to \$14,200,000. It undertakes investment in private enterprises, mostly in the industrial sphere.

Shown in the list are, first, the agencies concerned with economic development through capital loans and investments; second, the organizations and programs providing technical and preinvestment assistance; third, the UN regional economic commissions, whose budgets are included in the amounts shown for UN economic, social and technical assistance.

What About Results?

The results of the increased aid in the 1950s were not impressive when measured in terms of improved living standards. Although precise figures are not available, indications are that the average 1950 per capita income in the 100 underdeveloped countries and territories associated with the UN was about \$90. In 1959 it had grown to a bit over \$100. Gross income grew at the rate of 3% a year, but the addition of 200,000,000 people in the underdeveloped world produced a net growth of only about 1%. That is the equivalent of saying that each person earned a raise of about \$1 a year during the decade—a dangerously slow improvement.

How can this record be improved during the 1960s?

One way is to avoid the mistakes that were made during the 1950s. No apologies are necessary for those mistakes; it was a decade of experimentation from which much can be learned. The unsound concepts that led to the mistakes of the 1950s must be replaced with concepts that we now know are sound.

Mistakes Must Not Be Repeated

The most serious and pervasive mistake made in connection with development assistance programs has been to think of them as charity or "giveaways." They are not. Development programs are investments in people and prosperity—and investments in peace and freedom as well.

If assistance to the less developed countries is considered charity, many nations will contribute nothing because the view is widely held that governments should not use tax money for philanthropic purposes. Further, support of the low-income countries on this basis would lack continuity; it would be spasmodic. Finally, if economic assistance were considered charity the effect on the countries accepting such charity would be devastating; it would sap the self-reliance of both the leaders and their people. Paternalism should have no place in relationships among sovereign nations.

Closely allied to the "charity" mistake has been the continuance of the "donor country-recipient country" point of view. These terms are perfectly acceptable when used to describe an international relief program. But they outlived their usefulness when attention shifted from relief to recovery and then to development. As this change occurred, the relationship between the nations involved should have changed into a partnership in an international joint venture to reduce human misery and expand the world economy. To be sure, the industrially advanced nations are contributing some of the capital to the venture, but the contributions of energy, dedication and social transformation as well as capital by the underdeveloped countries represent much more difficult sacrifices and are equally vital to its success. An

Agencies Related to the United Nations Which Provide Investment Capital or Other Financial Assistance

Agency or program	Resources	Activities
International Bank for Reconstruction and Development (World bank)	Authorized capital \$20,000,000,000	Loans to governments or with government guarantee for development projects
International Monetary Fund (IMF)	Members' quotas \$15,000,000,000	Assists member governments through a pool of currencies available for short-term borrowing; promotes monetary stability; works against trade discrimination through monetary policy
International Finance corporation (IFC)	Capital \$94,000,000	Invests in private enterprise, mostly industrial, in association with private capital and management
International Development association (IDA)	Authorized capitalization \$1,000,000,000	Provides long-period loans to governments for development purposes, repayable on easier conditions than conventional loans

Agencies of the United Nations Which Provide Technical and Other Preinvestment Assistance

Agency or program	Funds available in 1961	Activities for Development
UN Special Fund	\$48,000,000	Makes grants to governments for large-scale surveys of natural resources, for vocational and technical training and for applied research institutes
Expanded Programme of Technical Assistance (EPTA)	(\$42,000,000, included in global resources of UN and other agencies below)	Provides experts and scientific fellowships and equipment for demonstration for projects handled by the UN and certain of its related agencies
United Nations Children's Fund (UNICEF)	\$30,000,000	Aids development of national services in child health, nutrition and maternal and child welfare; trains local personnel; provides equipment and materials needed from outside the country, including vaccines, insecticides, emergency food for children
UN Department of Economic and Social Affairs	\$37,100,000	Helps in critical areas of economic development; e.g., industry and natural resources, public administration, social welfare, fiscal and financial services. Funds cover economic and social research and work on behalf of human rights, narcotics control, etc., as well as activities of regional economic commissions listed below. Also included is \$850,000 for UN Operational, Executive and Administrative Personnel (OPEX), to provide governments, on request, with senior officers to direct services or departments until national personnel can be trained adequately to take over
International Atomic Energy agency (IAEA)	\$ 6,937,000	Furnishes advisory services; surveys of future nuclear power needs; provision of equipment; fellowships in the field of peaceful uses of atomic energy
International Labour organization (ILO)	\$14,714,000	Provides advisers or instructors on labour problems and projects; training program included exchanges of workers between countries
Food and Agriculture organization (FAO)	\$21,472,000	Supplies technical and scientific skills, some equipment; advisory services in agriculture, forestry, fisheries and nutrition; training and fellowships
United Nations Educational, Scientific and Cultural organization (UNESCO)	\$21,695,000	Supplies skills and advisory services in educational and scientific fields; fellowships and teaching personnel
World Health organization (WHO)	\$25,875,000	Makes available advisory services, skills and some equipment on medical and public-health programs including antimalaria campaign; fellowships and training
International Civil Aviation organization (ICAO)	\$ 6,380,000	Supplies technicians, experts and advisory services in the field of civil aviation; training of personnel
International Telecommunication union (ITU)	\$ 3,720,000	Provides advisers and technical skills on projects in the communications field
World Meteorological organization (WMO)	\$ 1,271,000	Provides advisers and scientific skills on projects in meteorological field; training through fellowships

Arms of the United Nations Integrated With Technical Assistance Activities

Agency or program	Activities
Regional economic commissions for Europe (ECE); headquarters, Geneva, Switz. Latin America (ECLA); headquarters, Santiago, Chile Asia and the Far East (ECAFE); headquarters, Bangkok, Thailand Africa (ECA); headquarters, Addis Ababa, Eth.	All maintain secretariats and assist governments on economic development plans and programs, with advisory services; preparation of statistical data and reports on the regional economy, or that of individual countries; and with conferences and seminars

BREAD UPON THE WATERS

expanding world economy is perhaps more critically needed by an industrially advanced nation than by an underdeveloped one. We are as dependent for our future well-being on the underdeveloped countries—for market, materials and an orderly world—as they are upon us. What happens in the underdeveloped world will have a tremendous influence on us. In this titanic effort, all nations are donors and all nations are recipients.

Another serious mistake has been the failure of the industrialized nations to accept the task of speeding development of the low-income countries as an objective worthy of achievement for its own sake. Instead, foreign aid has been considered a tactical weapon in the cold war—a system of buying allies, winning friends and influencing peoples. As a result, many programs have been hastily conceived and badly executed. Much of the money has gone into projects that have little effect on economic development. Some countries have received too much of the wrong kind of aid at the wrong time; others have received too little aid of any kind. The principals in the cold war have found themselves in the position of being virtually blackmailed into offering aid by being played off against one another. The net result has been the waste of hundreds of millions of dollars.

The fact is that a program for development of the underdeveloped areas would be necessary whether or not there was a cold war. Hunger is just as disturbing in an amicable world as it is in a world of political turmoil. The demands of the ill-fed, ill-housed and illiterate peoples of the world would be as great, and our obligations and self-interest to assist in meeting those demands as real, if political tranquillity were the international rule.

What is needed is a recognition that speeding the development of the less developed countries will help achieve the objectives which both the east and the west profess to be their aims: the creation of economically self-sustaining nations independent of domination by the United States, the Soviet Union or any other external power.

Using the UN

Greatly expanded use should be made of the services of the United Nations and its specialized agencies operating in the development field. The needs of the developing nations for pre-investment assistance are so immense that the field should, of course, be open for any country or organization or group to help in any way it chooses. But the advantages—political, economic and technical—which repose in the United Nations and its related agencies should be more widely recognized.

Representatives of countries receiving assistance repeatedly declare their general preference for help given through the United Nations because aid from this source is not politically motivated. Further, United Nations assistance is a completely co-operative endeavour, with a voice given to all countries regardless of their size or wealth and with all countries contributing to the costs. On the other hand, the United Nations can be firm with the underdeveloped countries without being accused of seeking any political or commercial advantage. Better results can be obtained through United Nations machinery at substantial savings in money. In the United Nations and its specialized agencies reposes the richest experience in virtually every field of development activity that can be found anywhere. The United Nations draws on the whole world for its technicians.

A Long-Term Task

A further mistake has been to regard assistance to the less developed nations as something temporary in nature, as an unpleasant task for which annual appropriations must reluctantly be made. The fact is that development programs must be thought of not in terms of years but of decades. The year-by-year ap-

proach has been frightfully wasteful and inefficient.

The leaders of the low-income countries, for their part, have in too many cases failed to recognize that no matter how much technical assistance, preinvestment help and investment their countries receive from the outside, they and their people must bear the overwhelming share of responsibility for their own economic and social progress. External aid has only a limited, though vital, role. Theirs is the greater task; theirs is the greater sacrifice; theirs is the greater hope of gain. The people of these countries must clearly understand that only they can bring about the better life they seek.

It is apparent that in future administration of economic development programs there must be clear recognition that such programs are not charity; that all participating nations are both donors and recipients; that economic development is a goal worthy of being pursued for its own sake; that it can frequently be assisted more efficiently and less expensively through the United Nations; that it will take a long time; that it can only succeed with those who help themselves. Once these underlying ideas are understood attention can be turned to the mechanics of economic development.

THE MECHANICS OF DEVELOPMENT

When the U.S. programs for assisting the low-income countries first got under way, many people in the U.S. assumed that they

Boy of Ecuador watching happily as clear water flows from a new village pump into his family's jar





Young mother and child of Mexico

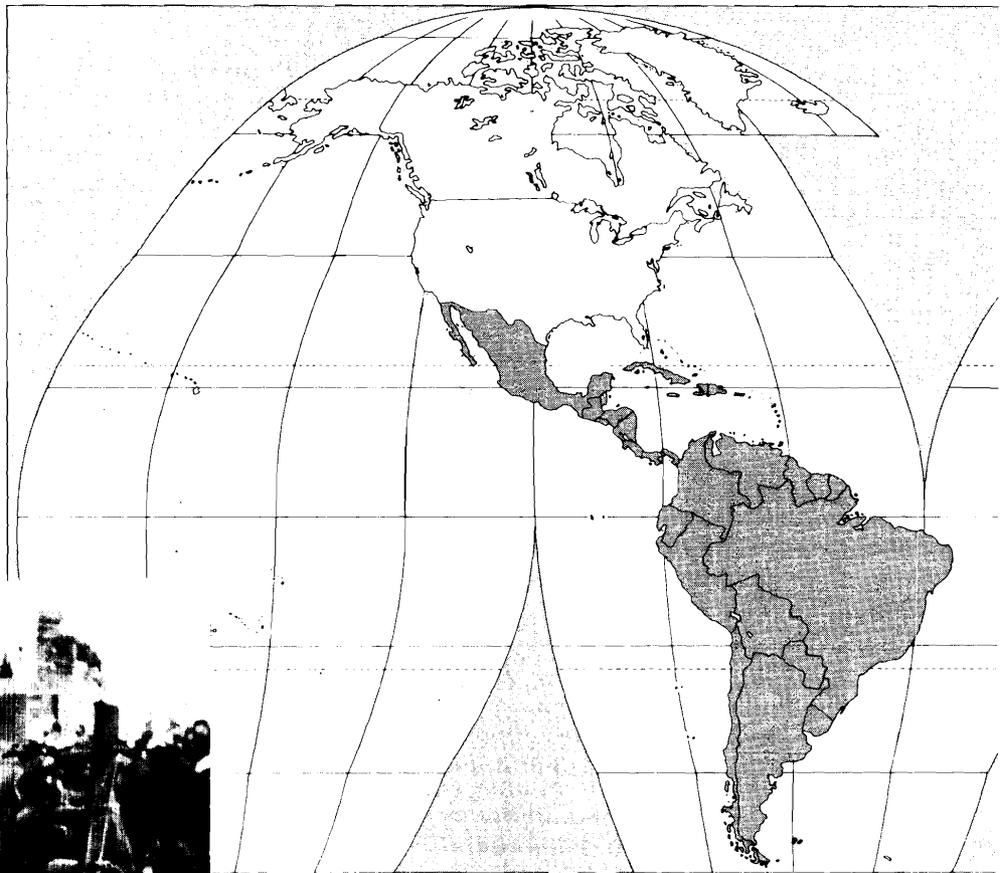


Chulupí Indian from Paraguay

UNDERDEVELOPED
AREAS
OF THE
WORLD

Shown by the shaded areas of the map: China and other known low-income countries are included together with those nations which are participating in UN and other international economic development programs

Bordering the map is a gallery of peoples from some of the underdeveloped countries



Chinese musician, Peking

Indian of the Mato Grosso region, Brazil

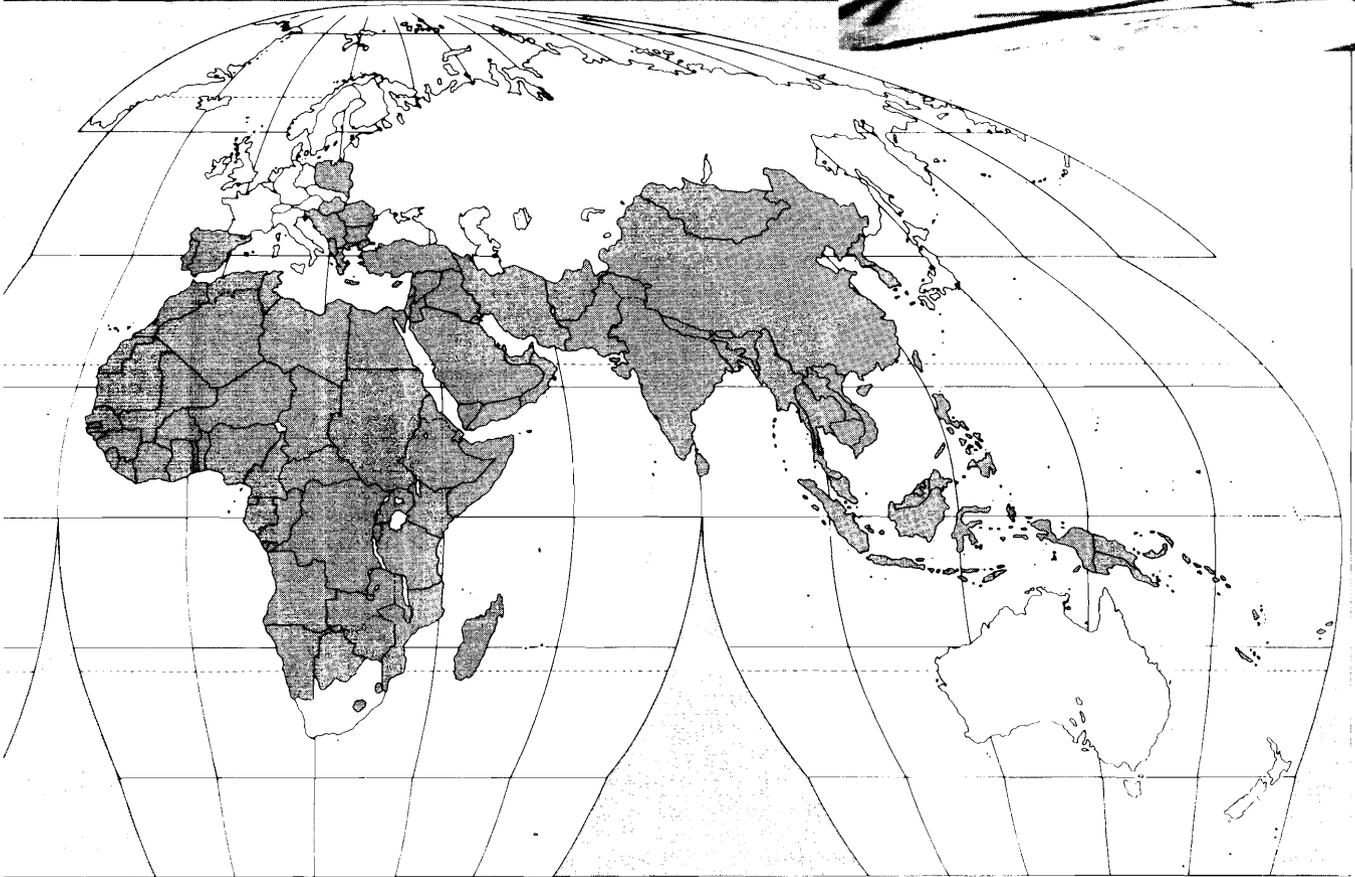




Father and son of Afghanistan



Aged Hindu holy man of India



Two girls of Ghana



Nationalist Chinese soldiers

might produce the same dramatic results as the Marshall plan. Forgotten was the vast difference between a recovery and a development program. It is not easy for a shattered economy to get on the road to recovery, but at least the skills, the experience, the managers, workers, distributors, the trained farmers are all available. The foundation for recovery exists; capital is the major requirement.

A development program requires an entirely different approach. In practically all cases, a new social and economic structure must be built. The strains and transformations of the Industrial Revolution are important elements of a development program and their effects are magnified because they are compressed into a few years.

How does an expert go about the business of assisting a country to work out a development program? He must, of course, take into account the fact that each developing nation requires a different approach because in each the problems are different. Furthermore, within any particular country different sectors of the economy and different regions of the country are at different stages of development. As a first step he must get the answers to some basic general questions:

What data are available for policy formulation and project selection? What knowledge is there of resources, both physical and human? What is accurately known about production, markets, transport costs? What information is available on the size, composition, skills and employment of the population? Is such information published and readily available for planners and organizers?

What has been the recent economic experience: depression? famine? inflation? deflation? juggling of the currency? increasing economic tempo? What are the areas of progress and stagnation?

What educational and communication facilities are available? Are there adequate schools and teachers? Are there means of adult education and of communicating directly to the populace through radio or television, through a free press, through books? Is enough of the population literate for an effective system of communications to be set up?

What, if any, are the specific development goals of the country? How rational are they? How seriously are they being pursued? What are the relative roles of government and private enterprise? How efficiently are resources mobilized?

What is the institutional framework of the country—economic, social, legal and political? Is the government stable? respected? honest? efficient? Is the population willing to work hard and make voluntary sacrifices?

Next come questions even more specific in nature. The country's economic-policy decision making procedures, its technical departments, its fiscal policies and affairs and its foreign-aid history must all be studied in exhaustive detail. Only when the basic questions have been answered and all the detailed information has been gathered is it reasonable to ask: How can immediate improvements be made? How can the kinds of decisions which these improvements require best be assured? How can realistic longer range objectives be achieved?

When questions such as these have been carefully studied, then recommendations for appropriate and properly balanced development programs can be made. Often—though not always—these recommendations can be grouped in terms of the stage of economic development of the country. It was Walt W. Rostow who performed the valuable service of drawing attention to the particular characteristics and needs of countries falling into different categories of economic development (*The Stages of Economic Growth*, Cambridge University Press, London, 1960). Use of that general idea can help to clarify the requisites of countries with traditional societies, those in the phase of establishing the preconditions for modern economies and those in the position of

“take-off” toward maturity. It must, of course, not be forgotten that the wide variations in the levels of development in different regions of a country and other factors preclude any rigid classification of the country.

The Traditional Society

The traditional society has the furthest to go. Such a nation, technologically very backward and broadly primitive in its organization, retains or has just escaped from a considerable degree of tribal or feudal rule. Basic information is lacking, there is a grave shortage of nationals trained for administration and other vital activities and institutions within the government are inadequate to stimulate effective use of human and physical resources. Under these circumstances, outside preinvestment assistance should consist primarily of seven contributions:

1. To supply international civil servants for temporary strengthening of government.
2. To establish local institutes to train nationals in public administration and for technical and economic departments.
3. To strengthen the educational system with prospects for broad general education, but with sufficient funds set aside for rapid teacher, technical, administrative and business training.
4. To strengthen the system of communications, in broadcasting, the press and general publishing.
5. To arrange for a broad assessment of physical resources—land, water, mineral and power potentials.
6. To supply experts in agriculture to advise on crop rotation, seed selection, rural co-operatives, community development, rural extension services, the beginnings of diversification and on starting new land-tenure systems where needed.
7. To supply experts in the industrial field to advise on the development of small-scale industries based on local arts and crafts and to lay the foundations for market expansion.
8. To encourage increased exports of cash crops, minerals and other local products that will earn foreign exchange, and the laying of foundations for an effective taxation system.

These basic steps are among those that should be taken concurrently; development—even at this relatively early stage—has interdependent arms.

Togo, on the west African coast, is a newly independent nation and a new member of the United Nations. At the time of its independence in 1960 it could have been used as a typical example of a nation with primitive economic conditions. While many of the people along the coast had had contacts with people and ideas from foreign lands, most of the country to the north was outside of a market economy and retained much in the way of tribal and traditional social institutions which resisted centralized policy direction. There was, for instance, no system of modern taxation worthy of the name. The principal export crops were coffee and cocoa. The annual per capita income of its nearly 1,500,000 people was well below \$100. There was inadequate food production, inadequate education, inadequate knowledge of resources, inadequate government service, inadequate trade. In fact, the perfect word to describe almost every aspect of Togo's economic structure was, and to some extent still is, “inadequate.”

Sylvanus Olympio, the president of Togo, has started the ball rolling toward economic and social development at perhaps the fastest rate feasible under the circumstances. Togo still has a very long way to go. But today there is greater acceptance of the need to modernize institutions, and skilful leadership has begun to weld the people into a national unit bent on working for a better life for tomorrow. Of course, the country has been and is receiving aid from outside sources, particularly from France, the former administrative power in Togo under the United Nations trusteeship system.

Another source of aid is the United Nations family of or-



Typical isolated rural village of eastern Togo, a nation in the first stages of development, still dependent in many ways upon traditional tribal organization and institutions

ganizations. Even before Togo's independence the UN was brought in to help produce an urgently needed preliminary inventory of the country's problems and needs. Subsequent UN projects completed or under way indicate the kinds of activities which are needed at early stages of development. They aim at helping to adapt local institutions to new needs, making available the experience gained by UN experts in other underdeveloped countries confronted with similar problems and assisting the government to fit development projects within the framework of other external assistance.

Thus the UN made available to Togo a director of the treasury, as well as a director of the National School of Administration and an expert to assist the government in improving the efficiency of government services and in adapting them to present requirements. Another UN expert helped to start work on the setting up of a central statistical bureau. Other experts have been provided in such fields as rural housing, road building and maintenance and the transformation of the agricultural loan bank into a bank catering to various development needs. One underground resources expert found good prospects of water in an area which

had been previously surveyed without result. He also reported sufficiently important traces of minerals to recommend further investigation. The UN Special Fund is assisting, through the Food and Agriculture organization, in a comprehensive study of land and water use to raise farm output. Meanwhile, problems of electricity supply are being studied; the rates for power and energy in Togo are among the highest in the world and additional and cheaper supplies must be found to meet development needs. Other projects range from research on coconut-tree diseases to helping in establishing the country's first regularly published newspaper. Further advisers are assisting the minister of health, while still others are assisting the minister of finance, economic affairs and planning in establishing development programs. Training Togolese counterpart personnel and junior staff constitutes an important part of the assignment of each expert. In addition to training local personnel on the spot, experts will help the government in the selection of suitable candidates for fellowships abroad. UN assistance is co-ordinated through the office of its resident representative which opened in Aug. 1960. Particular attention is given to helping formulate projects requiring outside financing, leaving the selection of financial sources to the government.

In addition to aid from France and the United Nations, the Federal Republic of Germany, the United States and other countries have bilateral agreements with Togo covering harbour development, the establishment of a secondary school, the electrification of wharf cranes and similar projects.

The Preconditions Stage

The groundwork for a country's development may be considered solidly laid when it has succeeded in building institutions capable of organizing further advance, has produced reasonable notions of general development needs and possibilities, has begun to change people's attitudes in the direction of feeling that man's environment can be shaped by human action and human thought, has made marked advances in education, particularly teacher training, and has achieved modest improvements in agriculture. With such accomplishments a country may be said to have entered the preconditions stage of economic growth. A country at this stage still requires many of the steps needed in a more primitively organized society, but other changes must be made as well. They include:

1. The international civil servants needed by the traditional society should gradually be replaced with the developing country's nationals.

More schools are an urgent requirement in first-stage countries such as Togo. In this picture U.S. college students are helping Togolese to crush rocks to be used as fill in building a new school



2. Measures to build an effective taxation system should be reinforced. Government expenditures will increase markedly for development of the institutions, facilities, transportation and communication requirements of an expanding economy.

3. A strong bureau for programing and planning should be established. This bureau should be outside the daily political arena but responsible directly to the chief executive officer of the nation. It should correlate sectional and regional development programs with the goals and objectives of the national development effort and be the central coordinating agency for all outside assistance.

4. Surveys for specific resources in promising areas should be undertaken, along with feasibility studies for industrial projects.

5. Emphasis should be given in the training field to establishment of secondary, vocational and technical schools. Technicians and skilled workers will be needed in agriculture, transport, power and health services. Vocational training should include a study of business methods for the purpose of supplying skilled clerks and accountants for both public and private enterprise.

6. In agriculture, it should be possible to give consideration to projects involving heavy capital expenditure such as irrigation, drainage and creation of farm-to-market road systems.

7. In industry, there will be a necessity for continued strengthening of in-service training. Legislation can be used at this stage to encourage private investment, from both domestic and foreign sources.

8. Exports must be increased, for more and more capital equipment from outside sources will be needed.

Colombia is at this stage of economic development—or a bit past it. It has been blessed with exceptionally able leadership since 1958. It is a country of more than 14,000,000 people, with an annual per capita income of about \$250. It is still largely agricultural, but diversified industrialization is under way.

Colombia has an excellent planning board, of which the country's president acts as chairman. The country now boasts a first-class institute of public administration. Most of the bilateral aid to Colombia has been supplied by the United States. In the field of programing and planning the UN Economic Commission for Latin America has been helpful.

A listing of the experts furnished by the UN and its specialized agencies, and of the projects of the UN Special Fund, illustrates the kinds of things needed at this stage in development—and also serves to point out the progress Colombia has made:

Colombian students at a government-sponsored agricultural program listen to a lecture on the effects of climate upon wheat growth. Vocational training is especially significant in the second stage of development

A committee of international experts advises the Economic Planning board on various fields of economic development programing. In connection with this work, a three-month course in development planning has been given to 80 Colombian economists.

The entire executive branch of the government was reorganized with the assistance of UN experts.

A course was given on supplies and warehouse management, a demonstration project was organized and manuals in English and Spanish on purchasing, warehouse management, standard bid and contract conditions and similar subjects were prepared by the UN expert.

A study was undertaken of social security programs in Colombia, and recommendations were made. UN experts assisted in formulating a civil service law for the country.

A school of public administration was planned and began operation early in 1961.

Assistance to vocational training programs continued in Bogotá, Medellín, Barranquilla and Cartagena.

Advice was given on land reform and colonization programs, and help was provided in the writing of bills to be submitted to the legislature for proper management and distribution of public lands. An over-all policy on land distribution was worked out with UN assistance. Training of technicians in soil surveys using stereoscopic photointerpretation followed by field sampling was carried on.

An inland fisheries training centre was planned, established and operated in Buga. A marine biology station was set up in Buenaventura. Both of these projects were advised by UN experts.

A training program was established in the national statistics department, and a census of livestock and agriculture was begun.

Experts were supplied for strengthening teacher-training programs and training school inspectors and supervisors. School budget techniques were also worked out with UN expert help.

An expert in the teaching of physics and mathematics was made available to the minister of education.

A specialist in rural sociology taught that subject and social anthropology at the National university and participated in the preparation of a textbook on the subject for the use of Colombian students.

Short courses in leprosy control were given to members of the Colombian public health services and a leprosy-control program was assisted by a UN World Health organization expert.





Colombian farmers roofing a new house in a colonial resettlement area. Land reform and the opening of new agricultural regions have been significant factors in the Colombian development plan

WHO experts advise the School of Public Health on training of doctors, nurses and sanitary inspectors.

In addition, the UN Special Fund is assisting in carrying out: a survey of the soil of the northern part of the eastern lowlands in order to determine soils capability and land-use possibilities of the area; a project to assist in the training of vocational instructors by providing experts and equipment; a project to expand the facilities of the Institute for Technological Research at Bogotá to enable it to give more effective assistance to the country's small- and medium-size industries; a project to enlarge the training and research facilities of the engineering faculties of the Industrial University of Santander; and a project to assist in training and research in land use and area development in the Cauca valley.

The Readiness for Take-off

Colombia is rapidly changing into an industrially advanced country, but it has not yet reached the stage of take-off to self-sustaining growth. However, the time is approaching when Colombia will be ready to enter that next phase of development. At that stage:

1. Attention should be given to the creation or expansion of banks and savings institutions and capital markets, and policies should be developed for the encouragement of the higher levels of domestic and foreign public and private investment that are required. Assuming that appropriate and adequate preinvestment activities have been carried on in the preceding stages, the return on investment should rise vigorously during this stage.

2. The emphasis in training should fall on supplying highly skilled and highly sophisticated government administrators, school superintendents, professional people, business managers—the top-level people of an industrialized society. At the same time, the economy should be producing enough to support raising general education levels at least to universal primary-school and probably to universal secondary-school standards.

3. Consideration should be given to the establishment of advanced training in crop cultivation, animal husbandry and other phases of modern agriculture. By this time, the adjustment of land/man ratios should be well under way and the end of economically inefficient farms should be in sight.

4. In the industrial field, attention should be given to the establishment of applied research institutions, productivity centres and industrial pilot demonstration projects.

India is an example of a nation at this third stage of economic development, a fact which may surprise a great many people. It is hampered by primitive agricultural patterns: poor tools, postage-stamp-sized farms and rural inertia. Like any other developing nation, India has moved faster in some sectors than in others. Its industrialization program is now quite advanced; on the other hand, while famine has been avoided, agriculture has lagged and the average caloric intake of its rising number of people has hardly improved. The reason is that India's second five-year plan did not give agriculture the emphasis it required. The third five-year plan is correcting this imbalance, notably by encouraging the production and use of fertilizers, by efforts to improve water conservation and use and by facilitating the planting of better seeds. The particular problems of a particular developing nation naturally must dictate the course of its development. India's leaders now seek to move rapidly ahead in agriculture as well as in industry.

India has many of the ingredients required for economic advance. It has a stable government under strong and dedicated leadership. Its people are committed to the idea of industrialization. The civil service is honest and quite efficient. There are able and experienced leaders in all sectors of the economy—commerce, industry, agriculture.

Its resources—in coal, iron ore, manganese, titanium and mica, plus an energetic, hard-working populace—include the elements needed not only for basic industries but also for chemical, atomic energy and other of the more advanced technologies.

India also has a plan and a program. The first two five-year plans were successful, by and large, and if the third plan, begun in 1961, succeeds, India will have achieved the breakthrough which will permit it to continue toward self-sustaining economic growth without significant amounts of intergovernmental aid. In the meantime, India's new plan requires \$1,000,000,000 per year of investment and assistance from outside sources. India's own people—who exist on an average of 18 cents in income per day—are putting up the remaining \$3,400,000,000 a year needed to carry out the plan.

If the outside investment is forthcoming and if the plan succeeds (as there is every indication that it will), India will be well on the way to joining the family of free industrial nations and will in turn be capable of making more significant contributions to the conquest of poverty in other parts of the world. And the end of the "eternal compulsory fast" will be in sight for the Indian peasant.

When a nation achieves a self-sustaining economy, it has reached economic maturity. Virtually all of its foreign assistance can be on a hard-payment basis. Specific bottlenecks and trouble spots may require international assistance but only on a very small scale and with large potential results in direct opportunities for heavy investment. There may also be need for highly specialized research and technology calling for the services of outside experts. Even the United States recently received some of this kind of aid through the United Nations. A Chinese expert advised Louisiana rice farmers on techniques for producing fish crops in their rice fields, thereby increasing the economic benefits derived from their farms.

GOAL FOR THE 1960s

The crucial decade of the 1960s is now under way. It has been called the development decade by Pres. John F. Kennedy and other world statesmen, with President Kennedy further specifying it, in his address to the UN general assembly on Sept. 25, 1961, as the United Nations decade of development. And, happily,



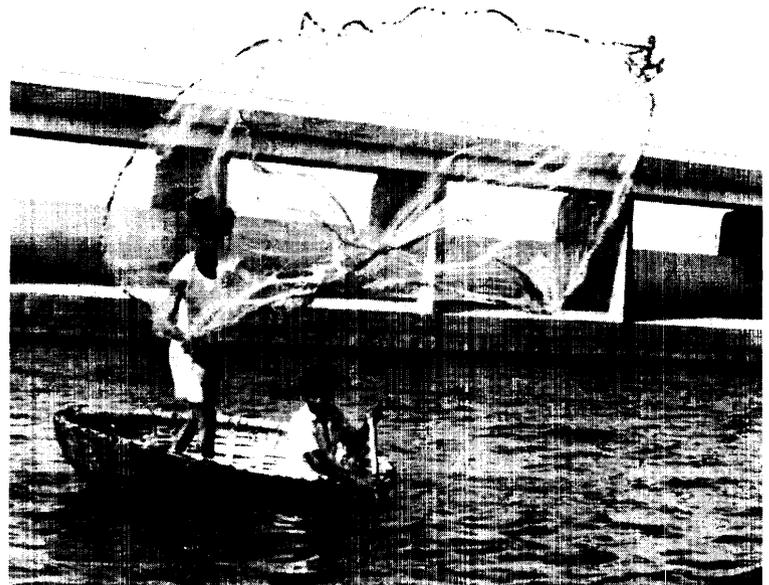
Workers leaving steel mill recently constructed with aid from the Soviet Union. Industrialization is providing employment for many of India's jobless, landless people

INDIA—READY FOR ECONOMIC TAKE-OFF

Despite almost primitive living conditions in some agricultural districts, India, aided by a stable government and a practical program for development, is rapidly approaching attainment of a self-sustaining economy. Some aspects of this development are suggested pictorially on this and the opposite page



Prize cattle at a fair in New Delhi. Increased emphasis has been placed upon agricultural improvement in India's third five-year plan



Fisherman casting net in a reservoir created by Tilaiya dam, part of the Damodar river project which will provide flood control, power, irrigation and improved navigation



Indian freighter unloading manganese ore in Mobile, Ala. Discovery and exploitation of natural resources have increased India's export trade



Women at a new well in Faridabad, a village in a rural development "block," a unit in a government-sponsored program of community improvement. This block consists of 102 villages in an area of 148 sq.mi.

Street scene in Bombay, India's second largest city. New buildings and automobiles are obvious signs of increasing prosperity



it is off to a fairly good start despite timidities resulting from three factors: a concern over aid expenditures because of international payments problems; heavy demands for defense because of east-west tensions; and, more basically, an inadequate appreciation that, "come hell or high water," economic development must be promoted on an adequate scale.

The first two years of our present decade have seen bilateral, regional and UN programs of technical and capital assistance both expanded and improved. One of the most dramatic and hopeful developments is the U.S.-proposed Alliance for Progress in Latin America. It launches for the first time a major development program in which social reform in the underdeveloped areas is a condition for continued U.S. assistance. The U.S. has pledged to contribute a major part of the required \$2,000,000,000 per year. No one can tell what the program's ultimate effects will be, but it does avoid many of the mistakes of the 1950s and it promises—if the countries put forward the effort required—enormous benefits to the entire western hemisphere.

The year 1961 also marked another "first" in U.S. aid with the inclusion of new concepts in the bill for the fiscal year 1962. That bill appropriated for foreign assistance \$3,914,600,000, of which slightly more than \$2,000,000,000 is for economic assistance to underdeveloped countries. (President Kennedy had originally asked for \$4,755,500,000.) Though the point was obscured by the debate over techniques for borrowing to make development loans, the U.S. congress, while denying the advance treasury financing requested by the president, did for the first time formally recognize that the U.S. will be in the business of assistance for a long time, and that long-term commitments for development lending are necessary and good. The fact that congress authorized development loans up to \$7,600,000,000 through 1966 is one welcome evidence of the maturing of U.S. thought on the nature and urgency of the task of speeding economic and social advancement.

Western European countries in the first two years of the decade expanded substantially their bilateral and regional development programs, including assistance granted through the European Economic Community. The western European countries, together with the United States and Canada, also undertook the transformation of the Organization for European Economic Cooperation (O.E.E.C.) into the Organization for Economic Cooperation and Development (O.E.C.D.), one of whose purposes is to expand and harmonize the development assistance activities of those countries. A further effort in this direction, one designed to include another donor country, Japan, was the establishment of the Development Assistance group, which was changed in 1961 to become the Development Assistance committee of the O.E.C.D.

Meanwhile, there were also important developments in United Nations programs, which were stepped up in all directions. The resources for UN technical and preinvestment assistance in 1961 represented a threefold increase over the 1958 level as Special Fund operations got under way and other programs were extended to help meet, for instance, the increasing needs for United Nations assistance to newly independent countries in Africa and to nations about to become independent. Resources for the UN program to supply low-income countries with operational and executive personnel (OPEX) were also increased and the program was put on a permanent basis as needs of low-income countries for such assistance became more apparent. At the same time it became possible for the UN to recruit for its programs increasing numbers of experts from countries receiving assistance to serve in other countries requiring their knowledge and skill.

In addition, multilateral financing institutions intensified their activities as the decade began. The International Development association was created to help meet a particularly urgent need

of the underdeveloped countries. IDA, an affiliate of the World bank and the 14th UN specialized agency, came into being in Sept. 1960 to promote economic development with credits bearing less heavily than conventional loans on the balance of payments of its member countries. Its projects, like those of the World bank, are carefully selected and prepared, but it provides capital on much more liberal terms and is able to help finance a wider range of projects than the bank. Thus it has already made interest-free loans—for municipal water supply, highways and irrigation—repayable over a 50-year period with the starting date of repayment delayed for ten years and involving a service charge of only $\frac{3}{4}$ of 1%.

But most of the 1960s still lie ahead. Though all agree that economic growth must be accelerated, much remains to be done.

The first task of each nation is to set its own goal and carry out its own program for achievement. Many of the low-income countries have already begun to do so. While these goals may be expressed in various mixtures of increased educational facilities, road building, communications, land reform, agricultural diversification, industrialization and the other ingredients of development, it is simpler to think about the total desired improvement in terms of net increases in annual per capita income. In these terms, several countries have set their standards very high and are expecting to double their annual per capita income in the decade. But taking the underdeveloped countries associated with the UN as a whole, *we—all of us together—should fix it as our goal to double, in the 1960s, the annual per capita rate of economic growth in the 100 countries and territories containing 1,300,000,000 of the world's people.* If we achieve this goal it will mean increasing the per capita economic growth rate of the less developed countries from an average of 1% a year in the 1950s to an average of 2% in the 1960s. To do this it will be necessary, because of population growth, for the less developed countries to sustain an annual rate of economic growth of 4% or over the ten years a total increase of about 40% and a per capita increase of nearly 25%. This would bring per capita income from the estimated present figure of around \$100 to around \$125 in 1970, an increase in income over the 1960s of about 25% per person or an average of about \$2.50 per person per year.

This minimum goal of a 25% increase in per capita income over the decade is modest and certainly attainable. However, to achieve it requires greater effort and greater understanding on the part of everyone. This in turn will lead to more adequate and effective preinvestment work, more liberal trade policies and substantially increased investment.

PREINVESTMENT

Preinvestment, as the word implies, is that group of activities which prepares the way for investment. Included are technical assistance, surveys of natural resources, the establishment of product-, technique- and market-research institutes and the education and training of people in the low-income countries.

A common public investment in the industrially advanced world is a highway system. We have learned, often at great cost to the taxpayer, that such a project must be planned with the greatest of care if it is to be carried out efficiently. Planning involves study of terrain, calculation of traffic flow, consideration of durability of materials, of availability of labour, of weather records and many other factors. Such preliminary planning costs money, but in the long run it saves many times as much money as it costs.

The engineering of national development is far more complicated than the engineering of a highway system. For that reason, it is far more important that some investment be made at the beginning to determine what kind of further investment can most beneficially be made. Such preinvestment is not only neces-

BREAD UPON THE WATERS

sary to hold waste to the minimum. It is even more essential as a means of encouraging large-scale investment. Money will not venture into the unknown, but it comes forth readily when opportunities for its productive use are clear.

And just as the cost of planning a highway system is tiny in comparison with the cost of building it, so is preinvestment a vital—but low-cost—prerequisite for efficient economic development. Moreover, it is an extremely high-return expenditure. Dramatic evidence of its potentials is a preinvestment project in Argentina assisted by the UN Special Fund through the World bank. It was a survey of electrical-energy potential completed in 1960 at a cost to the UN of under \$300,000. In this survey, a team of British and U.S. engineers and economists showed that prospective revenues would fully support an investment of \$735,000,000 over ten years in facilities to provide urgently needed electricity for industrial and home use. Each dollar of UN preinvestment money spent on this project in Argentina produced a sound investment opportunity for 245 other dollars. That is a truly high-return investment in demonstrating economically and technically feasible development possibilities.

Finding Physical Resources

Many of the low-income countries, as has already been stressed, do not know what they have in the way of mineral resources or the potentialities of their fields, forests and rivers. They just do not know the possibilities of putting larger areas of their land into agricultural production, through irrigation for instance; of harnessing their rivers to produce electricity; of opening up mineral deposits or developing large-scale fishing or other industries for home consumption or export. Some hint of the untapped agricultural potential lies in the fact that farm output in metric tons per person on the North American continent is 10 times higher than the average in Asia and 20 times higher than in Africa. And the underdeveloped countries have virtually no knowledge of their industrial possibilities or of the market that may be available for goods they can produce with local materials and manpower.

A specific example of a rich but little-used resource is the Niger river in western Africa. A study for the multipurpose development of a section of that river in Nigeria was completed in Sept. 1961 with UN Special Fund help through the World bank. The intensive investigations by the British and Dutch firms employed to perform the survey revealed that the site earlier selected as best for a dam was unsuitable. An excellent new site was found at Kainji and the report of the study recommends that work begin immediately so that Nigeria can obtain the electricity it will need in 1966. The scheme would permit hydroelectric production at an installed capacity of 860 megawatts, more than that of any dam in western Europe and more than all the hydro-power capacity available in Africa ten years ago. It would satisfy the anticipated power requirements of Nigeria until 1982. Building the dam would produce other benefits as well. It would provide an alternative crossing of the Niger, thereby reducing the traffic delays at the inadequate single-track railway bridge at Jebba which is also used by road vehicles and cattle. The huge lake formed by the reservoir would provide a much-needed increase of protein from fishery production. National and international navigation would be improved—upstream into neighbouring Niger and downstream to the sea.

At the same time, prospects for agricultural production would be changed fundamentally through the control of floods. On large areas of the flood plain intensive agriculture would become possible, particularly with a pump irrigation system that would use Niger waters stored up during the wet season to enable the cultivation of crops during the dry season. Net returns on the crops would be increased by cheap transportation on the river. The

cumulative capital requirements for the dam and generating and distribution installations by 1966 are estimated at about \$22,000,000, part of which would come from domestic sources. All initial capital from external sources could be repaid over a period of 20 years from earnings on the sale of electricity alone. The margin between returns and costs would also be sufficient to meet capital requirements for the planned extension of generating capacity in later years while permitting present tariff rates to be reduced substantially.

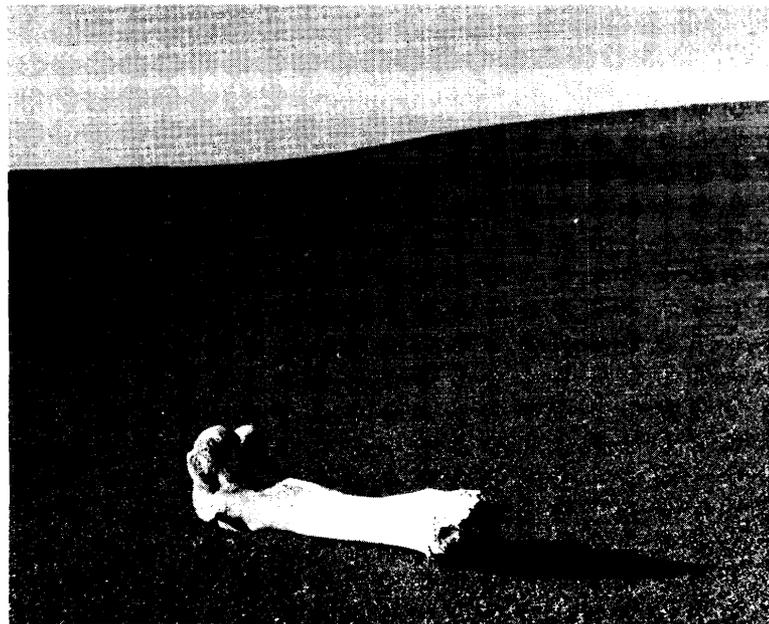
Here is another example of the potentialities of studies of natural-resource development possibilities, this one specifically directed toward increasing agricultural output. One of Ethiopia's principal rivers is the Awash. Its waters have been little used. Yet preliminary studies indicate that, with control and profitable use of the waters of the river, the Awash valley can become one of the most fertile in all Africa. Prospects are so bright that a British syndicate signed an agreement with the Ethiopian government to supply \$35,000,000 of capital for a development project in a part of the valley, provided the intensive soil and water-use survey, now under way with United Nations assistance, measures up to the preliminary findings.

The investigation and evaluation of the physical resources of a country are very important but not too difficult. Whether it is soil, water, minerals, petroleum, fisheries or timber that is to be investigated, good techniques are available and constantly improving. Mineral exploration illustrates this. Today, with low-flying airplanes and modern equipment, it is possible to prospect 100 sq.mi. in less time—and more thoroughly—than it took to prospect a single square mile by traditional methods. Similar advanced techniques are available in other areas. The great need is for adequate financial support of such surveys.

Preinvestment in Research for Development

Another area of low-cost-high-return preinvestment work is that of research and advisory services. Institutes, laboratories and organized dissemination of knowledge are the gold mines here. They can find new uses for local material and products and improve commodities and techniques, thereby promoting economic diversification and increased output, efficiency, employment and investment.

The desert of Tumbes, along the coast of Peru. Many such areas, previously thought to be barren, have proved to contain rich resources or have responded to land management and thus provided an economic advancement



The gains to human well-being from investment in producing and applying new useful knowledge are rarely recognized. One reason is that the beneficial effects are so difficult to calculate. In an article in *The Humanist*, Theodore Schultz of The University of Chicago reported on an attempt, with which he was associated, to identify particular pieces of new knowledge that have moved into the economy and to see what they cost the society and what return they made to the society. One such piece of new knowledge that it was possible to isolate and treat in this way was the development of hybrid corn:

The history of hybrid corn development in this country goes back to 1910, with relatively few people involved at first, but with pyramiding of effort in the later stages. A colleague of mine has just published the results of some very ingenious research; he has found that if we count all of the private and public costs of hybrid corn, everything that has gone into its development—and the records on this are quite complete—a total of 130 million dollars has been invested since 1910. . . . Then if we measure all of the product that can be identified and attributed to this particular new piece of useful knowledge, we find that its contribution to the consumer surplus, which is what made the analysis so difficult and required so much ingenuity—turns out to be no less than 910 million dollars. That is, the return on the 130 million dollars invested is running at 700% per year. ("Human Wealth and Economic Growth," *The Humanist*, vol. 19, no. 2, pp. 71-81, March-April 1959.)

This example can be used to illustrate another fact: that the cumulative effects of new discoveries often extend far beyond the land of their birth. United Nations technicians, seeking to assist Yugoslavia in raising its farm output, turned to hybrid-corn seed to maximize production. From 1951 through 1955 the corn harvest averaged 3,350,000 tons. The 1957 production exceeded 5,500,000 tons and in 1959 production broke through to establish a new peak of 6,670,000 tons. As the yields increased, acreages planted in corn could be transferred to other crops, including forage types which would enrich the soil and provide feedstuffs required to increase livestock.

Applying available knowledge and adapting it to local needs can make an enormous contribution to economic progress in the low-income countries of Africa, Asia and Latin America. On all of these continents the UN Special Fund is helping to finance institutions for applied research which define industrial potentialities, develop improved manufacturing techniques, design new equipment and products, promote better use of local materials, expand markets, raise productivity, improve management.

One example is the Central Mechanical Engineering Research institute in India. This new institute is designed to serve India's growing mechanical-engineering industry through applied research, design development and testing facilities. It will provide pilot plants and prototypes, investigate materials for manufacturing tools and machinery and promote standardization of materials and finished components of machinery. Further, it will train research workers, designers and specialists in different branches of mechanical engineering, collaborate with industry on day-to-day problems and act as a clearinghouse for the dissemination of technical information in its field. Besides providing international experts and fellowships for Indian engineers to study abroad, the Special Fund will furnish equipment including high-precision machine tools, testing machines, measuring instruments and furnaces. The three-year project will cost \$1,666,000, of which the Special Fund will provide \$725,000 and the government of India the equivalent of \$941,000. UNESCO is serving as executing agency.

In another part of the world the Central American Research Institute for Industry, thanks to United Nations assistance, has provided valuable services to governments and business in seven countries. Its technicians and laboratories have completed scores of projects in food processing and conservation, in the utilization of wastes of coffee and rice, in testing products and raw materials, in advising on standards and norms, in services to chemical, mining and other industries. Such preinvestment assistance to the underdeveloped countries should be greatly stepped up.

Preinvestment in Human Resources

The task of making more effective use of the human resources of the low-income countries is infinitely more difficult, more time consuming and more costly than is the surveying of natural resources and the extension of technology. Yet it is at least as critical because if development is to succeed at all it will require a host of trained and educated people. Schultz, in his article in *The Humanist*, also graphically stressed the necessity for a substantial investment in humanity. He stated in part:

. . . looking at our own economic growth from 1929 to 1953, or at the rapid growth of Japan or Germany or other countries, one observes what I shall call an under-specification of resources. We have omitted a part of the wealth, and my thesis is that this omission is represented by additions that have been made in the stock of human wealth. This human wealth consists of improvement in human effectiveness arising from the fact that man has developed capacities that result from investments in man. We may feel a bit touchy at having this concept of 'capital' taken over from the realm of reproducible, material things, and applied to ourselves as humans. And yet perhaps the greatest capital formation that has been going on in our society is our investment in ourselves. It may be that these investments in ourselves—in our abilities, our talents and capacities, in our stamina, our health, the way we live and what we eat—are the very kinds of capital that make the greatest returns in terms of reward for our efforts. . . .

Frederick Harbison of Princeton university brought this question of human capital directly to the development field in a publication of the Inter-University Study of Labor Problems in Economic Development called *The Strategy of Human Resource Development in Modernizing Economies*. In the publication he says:

A country's capacity to utilize effectively physical capital is dependent upon the availability of human capital, and vice versa. And it is essential for politicians and planners to understand that any development plan which does not give high priority to human capital formation is simply unrealistic and almost certainly destined to fail, for experience has shown repeatedly that high-level manpower does not appear automatically or magically as dams, roads, factories, hospitals, radio stations, and airports come into existence.

By high-level manpower, Harbison means the highly trained and highly educated professional people. He points out that these people are relatively immobile—preferring to live in big cities—and underutilized since they must frequently perform not only the aspects of their jobs for which their education is essential, but also supporting functions. For instance, medical doctors in many underdeveloped lands spend a great deal of time making laboratory tests which technicians perform in industrially advanced countries. Such technicians do not exist in many areas. So the advanced education of the doctor is wasted a significant portion of the time. The same is true of engineers in relation to draftsmen and of other professionals.

Harbison points out that the education and training needed can come from three sources: import from abroad; development in employment; and formal education. He states that strategic human capital formation must occur at a rate greatly in excess of the growth rate of the labour force as a whole. Scientific and engineering personnel must increase at a rate three times that of the labour force as a whole and subprofessional personnel six to nine times as fast.

Harbison then outlines: "A strategy of human resource development has three essential components: the building of appropriate incentives, the promotion of effective training of employed manpower, and the rational development of formal education."

Of course the implementation of this strategy is as varied as the countries in which it must occur. But the general outline must be followed in every country that is going to succeed in economic development.

The educational and training task that lies ahead is appalling in its magnitude. Of the 1,300,000,000 people in the 100 underdeveloped countries and territories associated with the United Nations, around 750,000,000 of those at or over school age still cannot read and write. Even the achievement of literacy alone



Ancient Inca road still in use in Peru. Despite reluctance of private investors to put their capital into projects such as road building and harbour improvement, which do not provide direct profits, they are essential to economic improvement

will not help enough. Scores of millions must be given secondary education as well. There are immense needs for vocational training. Finally, as an overriding factor in economic development, vast numbers of people must be trained for highly skilled occupations. At a conservative estimate for the immediate future, the 100 underdeveloped countries and territories need to train 1,000,000 people as top-level administrators, professional personnel, management and business executives and middle-level technicians for building and industrial programs, health services, education and supervisory positions in government and industry.

Educationally speaking, Africa is a very special problem. In tropical Africa alone, UNESCO estimates that about 17,000,000 children are without classroom space; between 80% and 85% of the adult population is illiterate; fewer than 5% of the children who do attend primary school go on to secondary school; fewer than 1% of those attending school are enrolled in vocational training institutes. A five-year program has been adopted by the education ministers of this area which calls for a 77% increase in primary-school enrollment, a doubling of secondary-school and university enrollment. To achieve even this modest goal at least 450,000 teachers must be trained.

The United Nations and many national governments have stepped up their assistance to raise the capacities of people in the underdeveloped world. But a much greater effort is required than is presently contemplated. And there is no time to lose in

getting on with this all-important task, for much more education and technical training is indispensable to achieve really significant economic advance.

MORE ENLIGHTENED TRADE POLICIES

It has always been true and it is no less true today that a country develops economically largely through its own efforts. It produces what it can, consumes what it must and exchanges the remainder in world markets for commodities which it needs but cannot or does not produce. By and large, underdeveloped countries produce mostly raw materials (fibres and minerals) and "luxury" foodstuffs (coffee, cocoa, tea, sugar, meat and tropical fruits) to sell in world markets. With the proceeds they buy, for the most part, manufactures which they need for consumption or capital equipment with which to increase their own production. Investment and aid from the outside can speed up the development process by providing an extra margin for buying development goods abroad, but it is only an extra margin. The core of the development process remains production and trade.

This being true, the following factors exert a powerful if not controlling influence upon the rate at which the underdeveloped countries can make progress: (1) the level of economic activity and the rate of economic growth maintained in the industrialized countries—for these in large part determine what and how much they buy from the less developed countries and the prices paid

for these goods; (2) the relationship between the prices of raw materials and other products which the less developed countries sell and the prices of the manufactured goods they must buy; and (3) the trade policies of the industrialized countries—for tariffs, quantitative restrictions and taxes imposed upon imports affect both the price and the volume of the commodities imported from the less developed countries.

The Widening Circles of Recession

The economic recession that began in the United States, spread to western Europe in the fall of 1957 and extended through 1958 was not severe enough to cause a marked decline in the volume of imports of primary commodities into the industrial countries, but the sensitivity of commodity markets to the changing economic climate in the major buying countries was such as to drive down commodity prices and reduce the export earnings of the underdeveloped countries by 7% to 8% from mid-1957 to mid-1958. During the same period the prices of manufactured goods, even in an industrial recession, continued to increase, with the result that the underdeveloped countries lost about \$2,000,000,000 in import capacity. This was about as much as all the outside governmental and international economic assistance they received in the period, and was approximately equivalent to six years' lending by the World bank to the underdeveloped countries at 1956-57 rates. To meet this deficit in their earnings, the countries had to run down their foreign exchange reserves to dangerous levels, turn to overseas borrowing, increase their short-term liabilities and, in many cases, put into effect measures to reduce imports severely. Where foreign credits were not available this often involved a cut in the rate of growth of investment.

In effect, the underdeveloped countries were making a subsidy or contribution to the industrialized countries, at a time when those "advanced" countries were trying to aid development of the low-income countries through grants and loans. Such a situation obviously makes no sense.

One of the chief reasons why so many Latin Americans grew so hostile to the United States in 1958 and 1959 was that the volume and prices of their countries' exports to the U.S. decreased while the prices of their imports from the U.S. rose.

Problems arising from fickle markets in the industrialized countries persisted on into mid-1961 when Dag Hammarskjöld, then UN secretary-general, pointed to the paradox that the industrial nations' "progressive expansion of aid has not been matched by equal progress in the reduction in obstacles to the growth of trade."

For more than a decade the United Nations has been concerned with the persistent problems of trade development and market stabilization. It has made many studies of trade policies and the commodity price problem as they affect the underdeveloped areas; in broad outline, these studies concluded: (1) that international price stabilization schemes for primary commodities are extremely hard to arrange and difficult to administer to achieve the desired results; (2) that national and international price stabilization programs can and do mitigate price fluctuations in a few commodities (e.g., sugar, wheat and tin), and efforts to arrive at such programs with respect to other commodities should be actively pursued; (3) that industrial growth and economic diversification in the less developed countries can help greatly to mitigate the effects upon their economies of fluctuations in the price of the one or several raw products upon whose export they depend; (4) but that recession or depression in the industrially advanced countries can undo all the good of price stabilization schemes and diversification. This imposes upon the industrially advanced nations, particularly the United States, a burden of increased awareness of the value of a steady and rapid growth of their own and the world economy.

Robbing Peter to Pay Paul

Policies which retard growth create a double load on the industrially advanced nations. It is clearly folly to pour in aid and investment at the top of the barrel while pursuing policies that allow the low-income countries' own substance to drain out at the bottom. For instance:

Coffee, tea, cocoa, tropical fruits and other "luxury" commodities produced in vast quantities in low-income countries are taxed so heavily in many industrialized countries as to reduce their consumption sharply.

Many industrialized nations limit imports of agricultural prod-



Manufacture of consumer goods in Ghana. Left, packaging cartons at a cigarette factory; below, worker tightening bolts at a truck assembly plant. Increases in income through development will open markets for locally produced goods, thus encouraging further industrialization



BREAD UPON THE WATERS

ucts so as to maintain artificially high domestic prices or otherwise protect their own agriculture.

Many industrialized countries impose tariffs, excise taxes or quantitative limitations upon imports of some industrial raw materials which are the mainstays of the economies of certain underdeveloped countries (e.g., U.S. restrictions upon imports of lead and zinc despite fears concerning U.S. dependence in emergency situations on foreign supplies).

Many industrialized countries, although admitting raw materials free, impose restrictive duties upon imports of those same commodities in even slightly processed forms.

Manufactured consumer goods produced in low-income countries climbing the ladder of industrialization frequently find the markets of the industrialized countries closed to them, wholly or partially, on the grounds that they are produced with cheap labour. There seems to be some progress in opening markets to certain textiles from less developed countries. One must hope for similar progress with respect to other products.

Clearly, trade restrictions of these kinds not only penalize consumers in the industrialized countries but also curtail the ability of low-income countries to improve their lot and make economic progress through their own enterprise. In these circumstances, extraordinary aid to and investment in the low-income countries may only serve to compensate wholly, and more often but partially, for denied opportunities for self-improvement. To restrict trade while extending development aid is thus to beat a man with one hand while dressing his wounds with the other.

An industrialized country which finds economic progress in the low-income countries to its advantage (and which country should not?) will consider trade policy and development-aid policy as two sides of the same coin. Otherwise its economic activities may be both costly and self-defeating. The developed countries themselves cannot fail to realize that the prospects of expanding their own exports to the developing countries depend very largely on their contribution to the latter's capacity to import. This will require adjustments in the pattern of production in the advanced countries over the next 20 years, but that problem is manageable if tackled soon enough.

Helping the One-Product Economy

In the meantime those countries can and must, in their own interest, join seriously in United Nations attempts to establish schemes for creating greater short-run stability in commodity markets. The need is underscored by the fact that the export receipts of the underdeveloped countries have been subjected to an average annual variation of 9% to 12% (allowance being made for trend) during the postwar years.

Two major international approaches are to be considered at the request of the UN general assembly. One is a limited version of an all-commodity approach, a method generally favoured by the underdeveloped nations, while the other is the commodity-by-commodity approach, preferred by the industrial nations. The former approach, outlined by an expert committee, advocates the creation of a development insurance fund which would provide special multilateral assistance to less developed nations whose export proceeds depend on one or very few commodities. A number of safeguards are proposed to avoid permanent subsidization of a country with steadily declining export receipts. Serious attention will probably be given for some time to the concept of an insurance fund.

In line with the second United Nations approach to the problem, agreements for particular commodities will also receive attention. International commodity agreements have the advantage over national buffer funds and stocks in that more countries share the burdens involved, and the chances of countries working at

cross-purposes are considerably diminished. In addition, the post-war practice of having both importing and exporting nations participate in commodity agreements has the salutary effect of making sure that the interests of all are taken into account. In this way the danger of having an agreement turn into a producers' monopoly is avoided.

But in addition to the development of such schemes, trade policies must be liberalized. And above all the leading industrial countries should adopt measures assuring their own sustained and vigorous economic growth. This would make easier the acceptance of more liberal trade policies, benefit their own people directly and help immeasurably to stimulate economic progress abroad. A dynamic and expanding world economy, with trade moving freely through every port, with investment capital flowing in adequate volume, is a key to progress in the low-income countries and to growing prosperity in the industrialized nations.

THE NEED FOR INCREASED INVESTMENT

According to experts, if the 1960s are going to conclude with a 25% increase over the decade as a whole in the per capita incomes of the 1,600,000,000 people who will live in the underdeveloped countries in 1970, a total ten-year investment in the neighbourhood of \$210,000,000,000 is required. The major part of this must come from the invested savings of the peoples and governments in the underdeveloped world. The remainder must come from outside sources—principally from the highly industrial countries.

The question that may well be asked is how the low-income countries, 80% of whose people are undernourished, can save to invest in their economic progress. They can because they must; it is the price they must pay to get ahead.

Domestic Savings in the Underdeveloped Countries

India is an example of a low-income country which is squarely facing this hard reality. Its leaders have told their people that in order to achieve the country's current (third) five-year plan, domestic savings have to increase from about 8.5% at present to about 11.5% five years from now. Further increases are also foreseen so that by the end of the fifth plan, in 1976, "the economy should become strong enough to develop at a satisfactory pace without being dependent on external assistance outside of the normal inflow of foreign capital" (Government of India Planning Commission, *Third Five Year Plan, Summary*, p. 13).

Major reliance for investment capital must rest on the government of the low-income country. Its principal sources of income from which investment can be made are duties on its exports and imports, income and property taxes and borrowing from other countries.

Another source of domestic investment capital is the private savings of householders and businesses—the share of their income which they put directly into raising the productive capacities of their farms and companies or which they contribute indirectly, for instance by putting those savings into banks or bonds.

It must be admitted that most of the low-income countries have not done too well in mobilizing their own resources for financing productive investment. Both in the governmental and in the private sectors savings have not increased as much as they should have and could have. Thus, during the 1950s, when ever increasing importance was being attached to accelerating economic growth, domestic savings in relation to gross domestic product did not rise in more than one-third of the underdeveloped countries. And even among these countries, the increase was usually modest. In about half the countries, in fact, over-all levels of domestic savings have declined. (*World Economic Survey 1960*, UN Document E/3501/Rev. 1.) In certain countries trends

in export markets have exercised a profound influence on sources of domestic savings. Also important has been the pressure on the governments to step up their current expenditures to meet the needs of growing populations—in education, health and other services.

It is therefore essential that these governments, despite the enormous difficulties, take urgent measures to increase local savings and channel them into productive projects. There is also a need for appropriately revised land and agricultural taxes and taxes on certain segments of the population where luxury consumption and extensive nonproductive use of private savings and wealth suggest that government revenue could be increased without retarding private investment.

Dedicated leadership, heroic effort and great sacrifice are required in the underdeveloped countries to raise their levels of domestic capital formation. But the required increases in domestic savings can be reached.

Investment From Outside Sources

While in the final analysis economic development must rest on the cornerstone of domestic savings, there remains a great need for international private and public funds to fill the gap in the savings of the low-income countries and to pay for the larger volume of imported machinery and other essential goods and services they require from the outside.

As has been stated, \$210,000,000,000 of new development investment will be required during the 1960s to achieve the goal of doubling the rate of per capita income growth in the 100 countries and territories. What portion of this capital must come from the underdeveloped countries themselves, and what portion is needed from the outside?

The author's own guess is that \$140,000,000,000 will have to be supplied from domestic savings in the underdeveloped countries. And he is convinced that, despite the difficulties of mobilizing such a sum, the people in the low-income countries can do so.

This leaves about \$70,000,000,000 to be supplied by all the rest of the world over the decade, or \$7,000,000,000 a year. And that, too, the author believes, is thoroughly manageable. The best estimate of the flow of genuine development capital from the outside to the less-developed countries during the 1950s is about \$30,000,000,000. There was during the decade a reasonably steady annual increase, and by the end of the decade development capital flow, public and private, had reached an annual rate of about \$4,000,000,000. (In all probability there was some further increase in 1960, but full figures to establish this were not yet available in late 1961.) These figures mean that in the 1960s the flow of development capital to the underdeveloped areas must be increased by about \$3,000,000,000 a year.

How much of this additional capital might properly be supplied directly by private investors of the industrialized countries and how much through governments of these countries? It is impossible to give precise answers to these questions, but the relative levels of outside assistance in 1959 might give a clue. An informed guess is that \$1,500,000,000 of the \$4,000,000,000 in development capital supplied during 1959 came from private banks and investors, and that the remaining \$2,500,000,000 was provided by governments in the form of loans and grants, either directly to the low-income countries or through such multilateral agencies as the World bank. It seems probable that the proportions of private to public investment would need to be changed, that of the \$7,000,000,000 annually required, about \$2,000,000,000 must come from private sources and the remaining \$5,000,000,000 from the governments of the higher-income countries. In other words, private investment during the 1960s needs to be increased by about one-third over the 1959 rate, while public

investment must be doubled to meet the deficit between what the countries need from external sources and what they may reasonably be expected to earn from their exports.

The explanation for this change in proportion of investment is simple and sound. In the majority of the underdeveloped countries, the essential need of the 1960s is the construction of what is called the infrastructure of development. This includes transportation and communications facilities—roads, docks, dredged river channels, telephone systems; the development of water resources for power and irrigation; school systems to supply the administrators, technicians and skilled labour that further development requires. These facilities and institutions in almost all instances have traditionally been developed through the use of public funds; it would be foolish to expect private capital to be attracted to the establishment of such facilities in the underdeveloped areas today. Yet the establishment of this infrastructure is a prerequisite to the creation of a situation in the low-income areas of the world that will attract future investment. While the trend is not yet marked, as countries do get on with the building of the infrastructure of development, there is evidence of an increased acceptance and reliance on private investment which this infrastructure has made feasible.

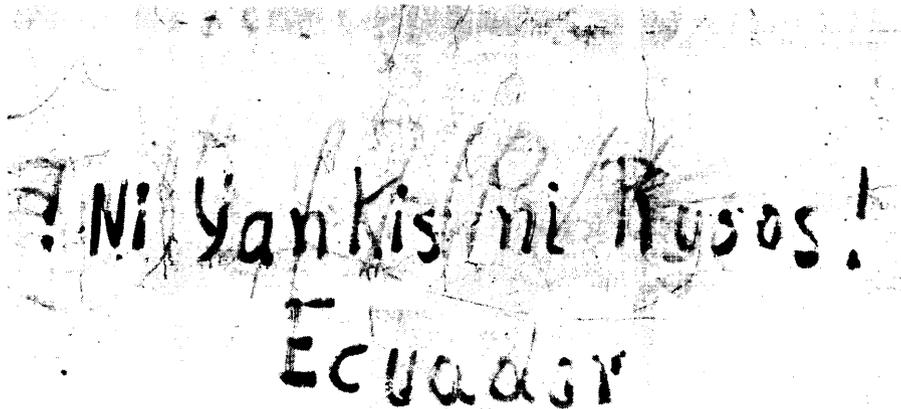
Thus, possibly 70% of the additional investment capital required from the outside during the 1960s will have to come principally from the governments of the industrialized nations. Some of it will have to be in the nature of grants for preinvestment activities and similar purposes. Some will be in the form of loans that are sound and bankable—suitable for financing by such inter-governmental agencies as the World bank, often with private participation as well. But much of this capital will be needed for purposes of establishment of the infrastructure—transport and communications, irrigation, housing, education—which, because they are not directly profit producing or because they involve risks concerning the receiving countries' ability to repay in a normal period of time and in convertible currencies, must be financed through "soft" loans. But these are soft loans only in banker's terms; the necessities that require them are hard. Moreover, the possibilities that they will eventually be repaid are good, not on terms or in periods of time that cautious bankers would call sound, perhaps, but they may well be repaid, and with great indirect returns, if development is continued on logical and persistent bases after the infrastructure they will finance has been completed.

Fortunately, the 1960s find the world more aware of the need for this new kind of financing—loans on easier terms and conditions, with little or no interest and abnormally long periods of repayment. Such loans are already being supplied through the International Development association and certain bilateral lending programs. Perhaps \$2,000,000,000 a year will be required during the 1960s from the advanced countries for such soft but clearly worthwhile loans.

It is therefore in two particular sectors that assistance by the advanced countries will have to be stepped up: the provision of funds for preinvestment work and for loans for sound development projects on easier than commercial terms.

As was mentioned in discussing myths about development, capital supplied to the low-income countries for development investment goes to pay for goods and services to be supplied from the industrialized countries. These countries have the capacity to meet easily these requirements from their own surpluses (such as agricultural commodities) and from unused industrial capacity and manpower resources.

Raising the level of capital for development assistance from all the advanced countries to the 100 countries and territories from the slightly more than \$4,000,000,000-a-year current rate to one of \$7,000,000,000 is necessary and an investment which



"Neither Yankees nor Russians," sign written on a wall in Riobamba, Ecuador, in 1961 expressing the feeling of many citizens of underdeveloped countries who resent aid given as a weapon in the cold war

the advanced countries cannot afford not to make. This would mean raising the per capita contribution of people in the advanced countries for this purpose from \$4.75 to a new annual rate of \$8.25. With only eight years of the decade remaining before us, the attainment of that level becomes all the more urgent.

THE PROMISES OF ECONOMIC DEVELOPMENT

Though the decade of the 1960s has been called the UN development decade, it would probably be more accurate to speak of it as the first of the UN development decades, for surely the 1970s, 1980s and 1990s will see the struggle continuing. But this is the critical period. During the next eight years, the patterns and structures of development will be molded. If there is to be a practical realization of the concepts and ideals of man's innate dignity, of his right to determine his own political and social destiny, of the responsibilities and privileges of freedom, the remainder of this decade is the time to accomplish this.

The potentialities for a major forward thrust in economic development are present. Science and technology are taking vast leaps. Less than a quarter of a century ago space travel was a Sunday comic strip affair. Now the Soviet Union and the United States are racing to put a man on the moon. In large parts of the world UN teams are erasing the malaria that has been endemic during the entire memory of man. In the summer of 1961 Danish scientists first demonstrated the possibility of controlled fusion of hydrogen; tomorrow the supply of cheap usable power may be unlimited.

The fact that the frontiers of knowledge are being pushed further up, further down and further out does not, of itself, assure a better world. If this new knowledge is used destructively, it means annihilation; if used constructively, no one can predict accurately, but the future is bright with promise.

Progress will not be smooth and even; some setbacks—some unfortunate turnings—are certain to happen. One thing that economic development will bring initially is growing dissatisfaction among the peoples of the underdeveloped world. As the first visible signs of improvement appear, the hopes and demands which today are quite generalized will become specific. No matter what progress is made, it will not be enough in the view of the people experiencing it. They—like all the rest of us—are prone to expect too much too soon.

Development will surge forward in one nation, lag in another and go into reverse in still another. Jealousy and international

hostility may increase in some regions. Even within a single country, various sectors of the economy will progress at uneven rates. This in turn can lead to political upheaval—perhaps to the rise of what some will characterize as "strong-man" rule.

Politically distasteful arrangements within a few underdeveloped lands will be only one discouraging effect of the strains of progress. As development proceeds, certain manufacturers in the industrially advanced nations will have to meet new and stiffer competition. The "great powers" will lose the control over poorer countries that they once exercised through the purse strings. They may find themselves outnumbered in the world forums. They will have to learn to survive distressing moments without modifying their essential principles and without panic.

There will be the waste. Fortunately, the experience of the late 1940s and the 1950s will stand us in good stead. We now know how to reduce waste or stop it before it becomes aggravated. An effort on the scale of world-wide economic development cannot be made without the absolute certainty that some dollars, cruzeiros, rupees and rials will go down the drain. To withhold participation in the most exciting and heartening commitment of mankind in history simply because part of it might be wasted is like never starting a fire because some of the heat goes up the chimney. Yes, there will be waste, but the waste will certainly be insignificant when compared with the benefits.

There will be violence—perhaps much violence. Some may result from wars for independence, some from the struggles for power among rival leaders, some from deliberate incitement of the masses by those who see in turmoil, unrest and desperation an opportunity to impose totalitarian rule.

The Role of the Human Spirit

Despite all the difficulties and frustrations that might result, this decade can be the decade in which momentum for a more prosperous, orderly and creative world community is achieved. In addition to sound programs, adequate preinvestment activities and investment, three imperatives must be recognized and acted upon. All have to do with the human spirit.

First there is the spirit in which the leaders of the underdeveloped nations go about their difficult task. Fortunately, most of the leaders are dedicated to the welfare of their people. They recognize that they must battle not only against poverty but against tyranny and privilege as well. They know that the level and intensity of effort required to speed development suggest that it is only freedom that can inspire the necessary determination and willingness to sacrifice. They know that the human

spirit is a vital factor in the transition from dependence to a self-sustaining economy.

Without confusing development and recovery, we can still learn from the Marshall plan the significance of mobilized human spirit. When the plan was originated to produce recovery of western Europe to 1938 industrial and agricultural production levels, it was authoritatively estimated that the cost would be more than \$25,000,000,000. Further study reduced the figure to \$17,000,000,000. In fact, the Marshall plan cost \$13,000,000,000—of which about \$2,000,000,000 is in the process of being repaid. Net total cost: \$11,000,000,000. The factor which was not taken into account in the original predictions was the human spirit. The people of Europe went to work with will, with determination and with hope. In two years the European economy had not merely reached its prewar levels; agricultural production was 20% higher and industrial production was 40% higher than in 1938.

Second is the spirit which the people of the industrially advanced countries manifest toward the less developed countries. As Lady Barbara Ward Jackson puts it:

... the need is to remove the work of world development from the subsidiary attention of the wealthy nations and to make it a central theme of their diplomacy, their international relationships, their philosophy of world order, their hopes for a future in which not only groups and nations but the human race itself can hope to make this small planet into a habitable home. (Barbara Ward Jackson, "New Perspectives in Economic Development," background paper, Oxford Conference on Tensions in Development, p. 8.)

Practically, this means that foreign aid, instead of being the last item to go into national budgets and the first to come out, must be given high priority—second only to defense. Compared to the \$125,000,000,000 scheduled for defense expenditure in 1962 by the member countries of the United Nations, the \$7,000,000,000 required to finance development adequately is not large. It will, in the long run, mitigate the need for future defense expenditures. It is past time that the national budget planners of the industrially advanced nations, and the politicians upon whom rests the responsibility for approving budgets in the democratic societies, recognize that the best and least expensive long-run defense of their national interests lies in the creation of a world in which poverty, hunger, illiteracy and chronic ill-health are

not constant provocations to violent and destructive upheaval.

Third, we must recognize that the world is indeed smaller. In 1961 Gherman Titov went around it 17½ times in just about one day. To make it habitable, the people of the world must get rid of the limitations which their own narrow horizons impose on their view of the planet and its problems. As the underdeveloped nations emerge from industrial and material backwardness, their people and the people of the industrially advanced nations must jointly develop a new way of looking at themselves—a new vision, clearly focused on the interests of all humanity. To reiterate that all men are brothers may seem out of place in a sober economic paper, but the economic facts of today's world point unflinchingly at man's total interdependence. The social, spiritual and political facts of life add emphasis which directs us—for our own safety—to act as though all men are brothers whether we are willing to admit it or not. In this respect, the people of all nations are underdeveloped; they must struggle together to emerge to shared respect and a common dedication to a common constructive goal.

If those of the industrially advanced nations to whom human dignity and freedom are underlying beliefs commit themselves as wholeheartedly to the effort for economic development as the peoples of the underdeveloped world are doing, the decade of the 1960s can provide two gigantic lasting benefits.

First, by 1970 perhaps 20 nations will have achieved self-sustaining economies. India, Mexico and Argentina are probably three of them. Each time an underdeveloped nation transforms itself into an industrially self-sustaining nation under free institutions, the cause of freedom achieves an incalculable victory. For, given the choice, people will always elect freedom. And there is no substitute for example. The struggling peoples of the entire world will look to their own future with new hope if they can see clearly that their efforts, sacrifice and dedication are going to pay off in spiraling spiritual, social and material improvement.

Second, by 1970 the impetus for world-wide achievement of development can have been built up. The succeeding decades of development can follow the road maps created in these next eight years. By the year 2000, we can be living in a world without want. What a magnificent achievement for our century!

*"Cast thy
bread upon
the waters:
for thou shalt
find it after
many days"*
Ecclesiastes 11:i



WORLD
WITHOUT
WANT



PART II

First Steps:

Education in Emergent Africa

PART II First Steps:

Education in Emergent Africa

By DAVID OWEN

THE tidal wave of political independence which broke upon tropical Africa in the 1960s, leaving behind within two years 19 new sovereign states with the promise of more to follow, was the climax of a memorable decade during the course of which revolutionary changes have taken place in the daily lives of the African people. In one country after another local political leaders progressively took over the reins of government from colonial administrators, and the aspirations of millions of politically conscious Africans found triumphant expression in the formation of national governments sending delegations to the United Nations and other international organizations. In other territories important steps had been taken to resolve or at least come to grips with difficulties that impeded the achievement of political independence, and it is virtually certain that most of the African territories that still remain subject to foreign administrative authority will become responsible for their own affairs before 1970.

These changes, kaleidoscopic in their effects on political maps of the once "dark" continent, have been the outcome of a process of social awakening which is far from completed and which is being accelerated by the energetic endeavours of the new national governments which have come into being. It is, indeed, one of the most remarkable and encouraging features of the African scene today that the new national governments are moving with such determination to reinforce the framework of political independence with the solid support of a developing economy and a body of citizens well equipped to shoulder the responsibilities of 20th-century nationhood.



Boys of southern Sudan learning to read in an outdoor class

It has to be acknowledged that the early accomplishment of this dual task is likely to prove extremely difficult for most of the new African states. Almost all of them are abysmally poor; judged by the measuring rods of contemporary economics, their present capacity for self-sustained economic growth is weak; and vast numbers of their people have barely emerged from a primitive stage of human existence. Yet the outlook is far from unpromising. For there is a real sense in which the late developers in the modern world inherit the results of technical progress wherever it has been achieved and they can, with the help of their friends all over the world, draw upon resources of human co-operation which were not available to previous generations.

The key to the use of these resources is education, and it is the obsession with education characteristic of so many of the emergent countries of Africa today which encourages the belief that they will in the end achieve their objectives in spite of the appalling difficulties in their path.

Education in Africa Today

There can be no doubt about the intensity of the concern which the leaders and people of the emergent countries of Africa feel for education. To describe it as an obsession is certainly no exaggeration. For many it is white man's magic, the key to everything imaginable from the energies of the internal-combustion engine to the control of disease and the more abundant yield of traditional crops. For others it opens the door to urban life and to prospects of social advancement through new forms of hierarchical employment in government service or private business. Economists, businessmen and politicians alike look to it for the cohorts of skilled workers, supervisors, managers and administrators on which a developing economy and a modern state depend. Social philosophers and statesmen, and humbler men too, in search of the elusive realities of national identity in a fast-changing world look to it for the answers to contradictory problems of cultural revival and adjustment to contemporary trends. In any case the hunger for education is there—widespread and insatiable—to a degree that never fails to astonish every new observer of the African scene.

From 1950 on, this hunger has produced a response from the governments concerned which has in itself been truly remarkable. Responding to the growing desire of their people for more and better education and the need to provide the manpower essential for accelerating economic development, African governments of every degree of local responsibility have strained their national budgets in efforts to provide more schools at every level, more teachers to staff these schools and more materials and services to illustrate the effectiveness of the teachers' work. With the desire to make up for time lost (during earlier years of relative indifference and later years disrupted by war and depression), the metropolitan governments responsible for the administration of dependent territories in Africa have made notable efforts to direct and assist the educational developments that have taken place since 1950, and in some territories (but not all) they may take pride in the remarkable progress that has been made. It cannot be said, however, that more than a beginning has been made in most African countries to satisfy the great hunger for education of which every traveler speaks.

Education Under Colonial Administration

As late as the 1860s the European penetration of tropical Africa beyond the coastal fringe had hardly begun and the instruction of young Africans was for the most part a matter of tribal custom. Each tribe had its own methods of education in the form of character training and instruction in crafts or, in the case of girls, in domestic responsibilities. The main emphasis was laid on social obligation, and the preparation of youth for

tribal responsibility usually culminated in initiation ceremonies of various kinds. For many years it was normal for Europeans to undervalue, if not to despise, indigenous forms of education in Africa, but in recent times a more understanding attitude has led some educationalists to consider whether lessons might not be learned from traditional practices and whether some elements in the indigenous tradition might not be adapted to the more formal methods of modern instruction. The new generations of African intellectual leaders have an ambivalent attitude toward this subject, but it may be taken for granted that it will be the subject of much debate and experiment as the new African governments take firm hold on the direction of educational processes.

Whatever the virtues of indigenous training in its tribal setting, it clearly left much to be desired in the eyes of the Christian missionaries who were the pioneers of European education in Africa during the latter part of the 19th century. It is possible to criticize some of the educational aims and practices of the Christian missions—Catholic and Protestant—but it is to their devoted efforts and the support which they received from their home churches that the foundations of modern education in Africa are largely due. In the British, Belgian and Portuguese dependent territories the missionary effort in education has been dominant until recent times (in 1945, 96.4% of the pupils attending schools in British tropical Africa were attending mission schools). In the French dependent territories missionary enterprise in the educational field has a long and honourable record but it has played a less important role compared with government-sponsored lay education than in other parts of tropical Africa.

The intervention of colonial governments in educational affairs was for many years mainly limited to the encouragement of missionary endeavour, but grants-in-aid on a small scale were made to particular enterprises and some measure of government direction of educational activities was generally established early in the 20th century. In the French West African dependencies government intervention took a more positive form at an earlier stage than in most British territories. Lay schools were established, particularly for Muslim children whose parents objected to their entering mission schools, and in conformity with the French philosophy of centralized educational administration, a more or less uniform system of instruction was introduced throughout the French West African colonies as early as 1903. But progress in the provision of schools was very gradual in both British and French colonial territories, and other areas lagged still further behind. The rate of advance was speeded up in the interwar years, but the depression of the 1930s was a serious setback, and in 1939 enrollments accounted for less than 8% of the children aged 5–14 years in all the territories taken together. For higher age groups educational provision was very small indeed.

In some respects the situation was better than the relative size of the African school population would seem to imply. In most countries central education departments had been established, and fairly comprehensive policies of educational development had been formulated. There had been a great deal of earnest thought devoted to the specific problems of African education, and many experiments, some of them highly promising, had been made. The way was open for a new wave of progress and, although World War II was a temporary setback to expansion, it was the inspiration of much forward-looking policy formation in which the improvement of the education, health and general well-being of colonial people had a prominent place.

After World War II the tempo of educational progress in Africa gained new momentum. The principal colonial powers, partly inspired by postwar idealism and partly in response to insistent pressures from the colonial territories themselves (to

FIRST STEPS

which expatriate educationalists and administrators as well as indigenous forces gave their weight), adopted liberal policies of colonial development. Education began to claim a larger share in local African budgets and the system of grants-in-aid for colonial education from the metropolitan countries was greatly extended. Moreover, as an increasing degree of responsibility for local administration devolved on Africans themselves (especially in the British West African territories) the rate of educational development took on a new burst of speed.

Since 1950 school enrollments in many African countries have doubled and in some they have trebled or more. Primary-school enrollments in Ghana increased from 114,000 in 1947 to 455,053 at the date of independence in 1957. In the combined Eastern and Western regions of Nigeria accelerated programs of expansion brought primary enrollments from 280,000 pupils in 1945 to more than 2,000,000 in 1960. The number of students enrolled in primary schools in French tropical Africa rose from less than 500,000 in 1946 to more than 1,000,000 in 1957. In the Republic of the Congo (former Belgian Congo) enrollments in primary (and preprimary) schools increased from 943,000 to more than 1,460,000 between 1952 and 1960.

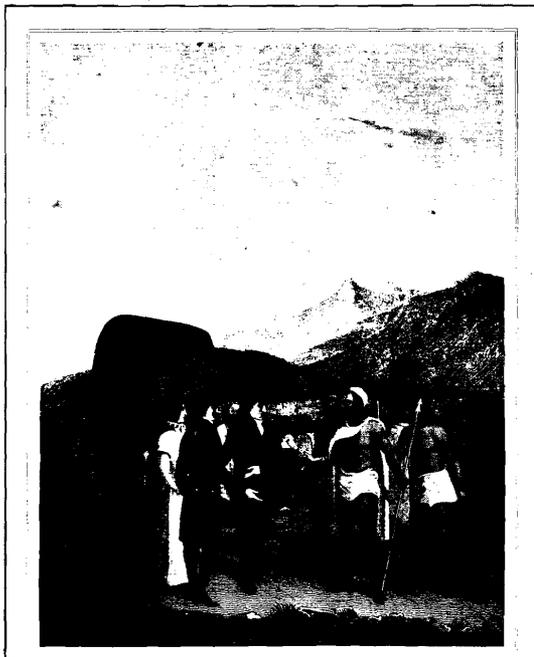
Developments in secondary education proceeded more slowly, especially in the Belgian and Portuguese territories, but scores of new schools at this level were established throughout Africa. Technical and vocational education was given the greatest weight of attention in the Belgian Congo and Ruanda-Urundi and in the Portuguese territories, but it was far from being neglected elsewhere. The training of teachers was everywhere expanding to meet growing needs (although many expatriate teachers were also introduced) and many new institutions were established for this purpose. Adult education in many different forms, including community development projects of various kinds, was extended widely, especially in the French and British dependent territories.

At the level of university education and other forms of higher studies, important developments took place in several countries.

Shortly after the end of World War II the government of the United Kingdom voted funds for setting up four African university colleges: two in west Africa, at Legon near Accra, Ghana, and at Ibadan, Nigeria; one in east Africa, at Kampala, Uganda (Makerere college); and one in what is now the Republic of the Sudan, at Khartoum. In 1957 at Salisbury, Southern Rhodesia, a fifth university college, the University College of Rhodesia and Nyasaland, opened its doors; and at Freetown, Sierra Leone, Fourah Bay college, which was already offering some courses at university level, was in 1960 granted university college status. In French Africa the Institute of Higher Studies at Dakar was raised to the status of the University of Dakar in 1957, incorporating the National School of Medicine and Pharmacy on the same site. In the Belgian Congo a private university—Lovanium—was established in 1954 near Léopoldville, and a state university was established one year later, with its headquarters at Elisabethville and branches in other Congo and Ruanda-Urundi centres.

The Measure of Achievement

Despite the educational progress that has taken place in Africa during the 1950s, it cannot be said that it has kept pace either with political events or with the economic development of the continent. The rate of achievement has been overtaken by the expansion of need and by the growing awareness of the scale of outstanding deficiencies. According to the latest available figures, compiled by the United Nations Educational, Scientific and Cultural organization (UNESCO), only 16% of children of school age are enrolled in school in tropical African states as a whole. The proportion varies from country to country—ranging from about 60% in former British west African countries to less than 2% in some others. The figures respectively for primary, secondary and higher education also show wide variations from one country to another and it is not easy to make generalizations concerning the comparative rates of educational development



Christian missionaries were the principal instruments of education in colonial Africa in the late 19th century. At left an engraver of the times romanticized the meeting of an English missionary and a Hottentot chieftain of south Africa. Below, a French priest and his students in an early mission school in the Cameroons, west Africa

taking all the different elements in the picture into account. From Table I, however, it is possible to obtain a rough idea of the relative position of all the countries covered by this article insofar as this can be measured by the most recent available figures for primary- and secondary-school enrollments. So far as primary-school enrollments are concerned, it will be seen that the Western region of Nigeria (which introduced a program of primary-school development in 1955) claimed 100% in 1958, and that this record was approached in Basutoland, the Eastern region of Nigeria, Southern Rhodesia and Ghana, followed by Kenya, Northern Rhodesia, Nyasaland, Swaziland and Uganda in British Africa. In former French Africa, Cameroun, the Republic of Congo and Gabon claimed more than 50% enrollment with the Malagasy Republic following closely behind. The Republic of the Congo, with 71.5% enrollment on the eve of independence, was high on the comparative scale. At the other end of the scale, however, the crude figures for the Northern region of Nigeria (with 7.4% enrollment in primary schools), in British Africa, and for Mali (7.7%), Mauritania (7%), Upper Volta (6.8%) and Niger (3.3%), in French Africa, give an indication of how much remains to be done in these now-independent countries. The record of two traditionally independent countries of Africa—Ethiopia and Liberia—cannot yet be said to exhibit a standard of emulation for those now emerging from colonial status. Only 3.8% of Ethiopian children of primary-school age were enrolled in school in 1959, and in Liberia the corresponding proportion was a modest 22.4%. [Here and below, post-independence names are used for the emergent countries of Africa. Ed.]

At the secondary-school level the lack of adequate provision is even more striking. Ghana (29.4% enrolled) heads the list by a wide margin, the next in order of percentage enrollment being

the Western region of Nigeria (8.8%), Sudan (6.5%), Zanzibar (5%), Basutoland and Swaziland (4.5%) and Uganda (4.4%). In many countries the corresponding proportion is less than 1%.

These figures are quoted to illustrate orders of magnitude of quantitative achievement and deficiency, and they should not be used as a basis for exact comparisons between any two countries without taking into account a whole range of qualitative considerations that cannot be reduced to statistical measurement. Nor can they be taken at their face value as a true measure of achievement or need. School enrollment does not exactly measure school attendance, especially in parts of Africa where seasonal requirements and other demands for child labour still have priority over regular schooling. Moreover, it takes no account of the adequacy of school buildings and equipment, the proportion of teachers to pupils or the professional standards of the teachers themselves. The rapid expansion in primary-school enrollments which has taken place in some countries (for example, in Ghana and in the Eastern and Western regions of Nigeria) has not been without its penalties. It has certainly imposed a heavy strain on the budgets of these countries, and it has been accompanied by no little uneasiness over the quality of education being imparted by untrained teachers.

WHAT NEEDS TO BE DONE

Despite the progress which has been made under colonial administrations, it is evident that a gigantic program of development will be needed to bring the educational services of tropical Africa into line with generally accepted standards. As we have seen, the situation varies in different parts of the region and much more needs to be done in some countries than in others. But the basic elements of the task are common to most African

Table 1.—Educational Situation in Emergent Africa Today

Country	Status	Year	Enrollment by level		Ratio of enrollment to school-age population by level			
			Primary level	Secondary level	Primary level	Secondary level	Primary level	Secondary level
			No. of students	No. of students	Estimated pop. 5-14 years (000)	Ratio of enrollment adjusted to pop. 5-14 for duration of school	Estimated pop. 15-19 years (000)	Ratio of enrollment adjusted to pop. 15-19 for duration of school
Basutoland	British colony (High Commission Territory)	1958	119,478	3,042	165	90.5	67	4.5
Bechuanaland	British protectorate (High Commission Territory)	1958	31,193	485	84	46.4	34	1.4
Cameroun	Former British trust territory; absorbed into Nigeria and Cameroun, 1961	1958	54,844	1,404	391	20.0	164	0.8
		1959-60	371,421	13,808	795	77.8	332	3.0
Cameroun	Former French trust territory; independent 1960	1957-58	45,774	1,480	280	27.2	117	0.9
Central African Republic	Former French overseas territory (Ubangi Shari); independent 1960	1959-60	53,973	1,473	647	13.8	271	0.4
Chad	Former French overseas territory; independent 1960	1959-60	45,774	1,480	280	27.2	117	0.9
Congo, Republic of	Former French overseas territory (Middle Congo); independent 1960	1957-58	78,962	3,259	187	70.3	78	3.0
		1959-60	1,460,753	51,671	3,405	71.5	1,426	3.0
Congo, Republic of the	Former Belgian colony; independent 1960	1959-60	81,107	3,618	431	31.3	180	1.4
Dahomey	Former French overseas territory; independent 1960	1958-59	158,005	8,144	5,338	3.8	2,235	0.5
Ethiopia	Independent constitutional monarchy	1957-58	39,763	1,156	101	65.7	41	2.0
Gabon	Former French overseas territory; independent 1960	1958	4,595	794	72	10.7	30	2.2
Gambia	British colony and protectorate	1959	483,425	178,581	1,208	66.7	506	29.4
Ghana	Former British colony (Gold Coast); independent 1957	1959-60	79,373	4,563	671	19.7	281	1.1
Guinea	Former French overseas territory; independent 1958	1957-58	125,727	5,104	641	32.7	269	1.4
Ivory Coast	Former French overseas territory; independent 1960	1958	651,758	20,291	1,562	52.1	654	3.9
Kenya	British colony and protectorate	1959-60	55,026	3,397	308	22.4	129	3.3
Liberia	Independent republic							
Malagasy Republic	Former French overseas territory (Madagascar); independent 1960	1959-60	364,217	25,290	1,299	46.7	544	1.4
Mali	Former French overseas territory (Sudan); independent 1960	1957-58	42,053	2,749	918	7.7	384	0.5
		1957-58	6,493	291	155	7.0	65	0.3
Mauritania	Former French overseas territory; independent 1960	1958	109,370	16,243	153	100.0	64	18.1
Mauritius	British colony	1957-58	11,811	395	603	3.3	252	0.1
Niger	Former French overseas territory; independent 1960	1958	2,545,336	117,414	8,129	42.9	3,403	2.9
Nigeria	Former British colony and protectorate; independent 1960	1958	56,688	6,376	83	85.4	35	15.2
Lagos		1958	230,000	8,098	4,439	7.4	1,858	0.3
N. region		1958	1,037,377	73,282	1,657	100.0	694	8.8
W. region		1958	1,221,271	29,658	1,950	78.3	816	3.0
E. region								
Rhodesia and Nyasaland	British self-governing colony and two protectorates	1958-59	243,926	4,948	566	53.9	237	2.6
N. Rhodesia		1958	269,693	3,042	667	50.5	279	1.4
Nyasaland		1958	433,459	6,485	649	83.5	272	3.0
S. Rhodesia		1958	246,149	5,480	1,156	35.5	484	0.9
Ruanda-Urundi	Belgian trust territory	1957-58	80,473	6,102	561	23.8	235	1.9
Senegal	Former French overseas territory; independent 1960	1959	74,481	8,277	590	21.0	247	2.8
Sierra Leone	Former British colony and protectorate; independent 1961	1958-59	16,485	1,828	325	10.2	136	0.8
Somali Republic	Former Italian trust territory and British protectorate; independent 1960	1959-60	288,395	60,941	2,819	12.8	1,180	6.5
Sudan	Former Anglo-Egyptian condominium; independent 1956	1958	29,934	1,066	67	55.9	27	4.5
Swaziland	British protectorate (High Commission Territory)	1958	422,832	15,315	2,193	24.1	918	2.1
Tanganyika	Former British trust territory; independent 1961	1959	78,689	2,373	411	31.8	172	1.0
Togo	Former French trust territory; independent 1960	1959	501,699	41,633	1,603	52.2	671	4.4
Uganda	British protectorate	1959-60	40,543	2,447	991	6.8	415	0.4
Upper Volta	Former French overseas territory; independent 1960	1958	14,982	1,232	75	25.0	31	5.0
Zanzibar	British protected state							

Source: Statistics of population and pupils taken by the UNESCO statistics division from official publications and country replies to questionnaires.

FIRST STEPS

states and the principal needs described in the following paragraphs would (with occasional exceptions) be generally acknowledged. They were the subject of detailed discussion (and recommendations for action) at the Conference on African Education, held under the auspices of UNESCO and the UN Economic Commission for Africa at Addis Ababa, Eth., in May 1961.

School Building and Equipment

In order to provide for the enormous increase in school population expected by 1980, a large-scale program of school building will be needed in every country. At the primary level there is an extreme shortage of classrooms and many existing buildings do not meet modern requirements. Thousands of children are now taught beneath the shade of trees or under the cover of a grass roof supported by poles, and many more substantial "classrooms" are grossly overcrowded. There have been some remarkable contributions of voluntary labour to build classrooms and rural schools, and there are prospects of many more, but even in these cases some building materials and equipment are usually required. In secondary schools and in higher educational institutions there is the added need for student dormitories, housing for teachers, laboratories and other facilities.

These needs are a challenge to school architects and builders to develop quick and economical methods of construction on the basis of simple designs most suited to African conditions. The need for research on building materials and methods (in which international co-operation might play an increasingly useful part) was specially emphasized at the Addis Ababa conference.

The existing provision of equipment and textbooks in most African schools is pathetically inadequate. There is an urgent need for laboratory equipment, audio-visual and other teaching aids. The problem of producing sufficient numbers of textbooks adapted to new curriculum requirements and African conditions is critical. It calls for the solution of many difficult production problems—including the provision of material facilities, printing presses and distributive processes—to meet expanding African demand. Moreover, enough capable textbook writers sufficiently

U.S. college students helping to build a school in Dahomey in 1961. Such voluntary labour has been important in classroom construction desperately needed by many of the new African nations



Students eagerly responding to a question in a classroom at Kano, in the Northern region of Nigeria where only an estimated 7.4% of the primary-age population is enrolled in school

in tune with African cultural needs have yet to be trained.

The Supply of Teachers

The number of trained teachers needed by African states to complete the staffing of existing schools is formidable. Far too many schools are now staffed by completely untrained teachers. If the needs of school expansion, according to existing plans, are added, the problem reaches vast proportions. There can be little doubt that hundreds of thousands of additional teachers will be needed in African schools by 1980 and that this will call for a massive expansion of middle and secondary schools, as well as teacher-training institutions. As things stand today in most African countries, the shortage of trained teachers is the major bottleneck to educational progress and the problem which calls for most urgent attention.

At the secondary- and technical-school level it is acknowledged that the supply of African teachers cannot be expected to meet expanding needs for many years to come and that an increased supply of expatriate teachers is urgently needed to bridge the gap. The shortage is especially acute in the technical and agricultural instruction included in the new secondary-school curriculums.

The Content of Education

There is a general agreement among those who are familiar with the present educational situation in Africa that more than a mere expansion in numbers—whether of classrooms or teachers—will be needed if the schools of the future are to provide the skilled manpower essential for economic development. Thus it was emphasized at Addis Ababa that new directions in educational programs were needed to respond to changing patterns of African economic and social life. Many innovations in curriculums and methods of teaching have been introduced in African schools, but it is felt that more radical changes are needed to give greater meaning and actuality to schoolwork in the fast-

changing African scene. Above all, more technical and vocational education is needed, within the school systems themselves and in association with productive activities. As most African countries are still predominantly agricultural, the needs of rural life require special attention, and agricultural education should be given its proper status. Curriculums and instructional techniques should be adapted to rural needs and interests, and emphasis should be placed on the necessity of modernizing agriculture.

In the industrial and commercial sectors the progress of vocational education has been closely tied to the changing pattern of employment prospects. Some large business enterprises, for example, the United Africa company, Union Minière du Haut Katanga, the Firestone Plantations company and East African Railways and Harbours, have for many years founded vocational schools for their own employees, special attention being devoted to in-service training and apprenticeship to such trades as cabinetmaking, metallurgy, automobile maintenance, draftsmanship and electronics. Some governments established trade schools but their expansion was retarded by the lack of demand for craftsmen in the interwar years. Generally speaking, clerical employment was most popular and more readily available than craft and technical work. However, the economic expansion in most African territories after World War II resulted in an enormous demand for craftsmen and technical workers, and a great expansion of technical-training facilities followed. The success of the ambitious economic development plans which have been adopted (or are being proposed) by the new governments of Africa will in no small measure depend on a still further expansion of these training facilities on a realistic basis. The use of manpower surveys to establish indications of future labour and professional requirements of various kinds and, consequently, the need for different types of technical instruction has already been found helpful by some African governments and might well be adopted more extensively.

The Education of Girls

The educational progress which has taken place in Africa up to the present has not been shared equally by boys and girls. The education of girls developed much more slowly than that of boys in most parts of the continent, and the latest available figures reveal that girls account for less than 30% of African primary-school enrollment and only 22% of the enrollment in

secondary schools. These figures cover a wide range of variations from Basutoland, where more girls are educated than boys (and where in fact nearly all the female population is said to be literate), to the Muslim areas of Nigeria and other parts of west Africa where girls account for a very small fraction of the school population. In most African countries there is a progressive decrease in the number of girls attending from one class to the next throughout schooling up to the end of the primary course and beyond. Very few girls are enrolled in courses at the university level.

It has long been recognized that this backwardness in the education of girls is socially wasteful, depriving the community of urgently needed professional skills in nursing, teaching and the social services and hindering the emergence of a more enlightened concept of the role of women in African society. Considerable improvement has taken place in recent years, but in some parts of Africa progress is likely to be delayed by conservative religious and social forces. Special efforts will be needed to overcome these difficulties, but a wider recognition of the prestige value, not to speak of the improved earning power, of a girl who has had some schooling is certain to play its part. Progress in many countries will be assisted by special arrangements for the education of girls, the growth in the number of women teachers and changes in curriculums designed to meet the needs and interests of future homemakers.

Higher Education

Even in countries where significant progress has been made in recent years, the capacity of African educational institutions of university level falls far short of what is required to train the growing numbers of technicians, administrators and business and professional workers without whose services no modern state can hope to survive. Only 0.2% of university-age youth are enrolled in higher institutions and a large expansion of capacity is everywhere needed.

Ambitious plans for the extension and development of universities and other higher educational institutions have already been adopted by several African countries. Thus the government of Nigeria has decided to aim at the target of 10,000 student enrollments in all Nigerian universities by 1970 (compared with a total of 1,000 today and the figure of 7,500 recommended by the commission which was set up to investigate higher education

Czechoslovakian physical education instructor teaching high school girls of Guinea to dance. Education of girls in African countries has been largely neglected until recently





Biology laboratory, University college, Ghana, one of several universities established in Africa by the United Kingdom after World War II

needs over the next 20 years). Already established are the university college at Ibadan and the University of Nigeria at Nsukka. A start has also been made with a university for the Northern region, while the Western regional government has authorized the establishment of the University of Ife. The federal government also plans to establish by 1962 the University of Lagos, and a number of existing colleges of arts, science, technology and agriculture will be assimilated to or associated with the regional universities.

In Ghana the College of Technology at Kumasi has been raised to university status and, as in the case of the existing university at Legon, it is to be greatly expanded in size. In Kenya the Royal Technical college in Nairobi is also to be raised to university status and, together with Makerere college in Uganda and a new university college in Tanganyika, it will form part of the "federal" University of East Africa serving the four countries of that extensive region. Similar developments are taking place in former French Africa. The University of Dakar is to be enlarged. In the Malagasy Republic the Higher Education centre at Antananarivo became a university providing a full course on Nov. 1, 1961. It is planned that the Abidjan Higher Studies centre will be the University of the Ivory Coast. Meanwhile the Brazzaville University centre in the Republic of Congo has already become the hub of higher educational activity in former French Equatorial Africa.

While these far-reaching developments are taking shape it will of course be necessary to increase the existing facilities for providing university training in foreign countries, especially in those fields of study not available at home. The expansion of higher education in Africa will require not only costly new, as well as enlarged, institutions, but also hundreds of professors and instructors from overseas to fill teaching appointments until qualified African scholars become available in adequate numbers. This is a field in which educationally more advanced countries have already played an important part in helping African institutions and scholars. Even greater efforts are likely to be called for during the next 20 years.

Adult Education

The expansion of adult education programs is an essential complement to the advancement of formal education in a region where it is estimated that 100,000,000 people are unable to read

or write. Literacy campaigns have already had considerable success in some African countries and these should be extended and developed. Adult education is also essential for spreading an understanding of the great social and technical changes facing the African community and to give an opportunity to thousands of men and women who have had some schooling to continue their studies. The university colleges of Ghana, Nigeria and East Africa (Makerere) have for several years offered hundreds of extension courses in a wide range of subjects which are eagerly attended by thousands of adult students each year. Similar courses have been provided in some of the former French territories and in the Republic of the Congo. But the demand is nowhere satisfied and there are many parts of Africa where little or no work of this kind has so far been accomplished.

Adult education of a more vocational or practical type is in many African countries provided by government or private agencies through continuation schools, such as the Jeanes school in Kiambu, Kenya, where the emphasis is laid on community development including training in village management, home crafts, child care, better business methods, literacy and health campaigns and so on. Community development work has spread throughout many parts of east and west Africa, but it covers only a small proportion of the local communities in which it might perform a useful service. In this field an extension of library services—still meagre throughout Africa—and the increased use of mass communications media have an important role to play.

The Cultural Factor in African Education

It is evident that African educational needs are formidable, but the foregoing account of them, conventionally expressed in terms of categories applicable to almost any developing society, by no means does justice to all the elements in the African yearning for more and better education. Complex—indeed contradictory—tendencies seek satisfaction in educational terms: the desire to give expression to an indigenous cultural identity, at once to express forgotten riches of African history, art and music and to assert the characteristic features of contemporary African nationalism, while at the same time coming to terms with the technological needs of modern society. The debate on these issues rages widely and furiously wherever politically conscious Africans (and their well-wishers) are gathered together,

and there is no consensus concerning the precise measures that should be taken. The outcome will vary from country to country, reflecting differences in contemporary attitudes and political timetables as well as basic economic needs and cultural influences, but in its varying forms it will surely find its expression in the changing content of education and, to some extent, good or ill, in its institutional arrangements and practices.

These matters are such that they will best be left in the hands of Africans themselves. There will, however, be plenty of room for international intellectual co-operation on two broad fronts—cultural and scientific. In the first place there will be increasing scope for scholarly as well as financial assistance from overseas friends in support of research and the training of specialists in African archaeology, history, languages, culture and art. Universities and other learned institutions in the United States, the United Kingdom, France, Belgium and many other countries have for some time been engaged in work of this kind, but the field is wide and relatively unexplored.

On the scientific side the need for intensified research and experiment in fields of crucial practical importance for Africa—such as tropical diseases, arid-zone cultivation, the use of solar energy, resource conservation and animal biology—is likely to present endless opportunities for scientific collaboration across national frontiers.

THE FINANCIAL BURDEN

Where there is so much to be done and where there are so few resources to do it with, hard choices have to be made. This is a painful truth where African education is concerned, but one which African governments are beginning to face with more realism than was expected by many observers. Most African education budgets are already high in relation to other charges on national budgets as a whole. Several governments are now spending between one-tenth and one-fifth of their income on it. The three regional governments of Nigeria have recently been spending more than one-fifth of their capital budgets on educational projects. These proportions compare favourably with the corresponding proportions in many advanced countries, and they are an indication of the importance which the governments concerned attach to educational progress. But the sums yielded, despite fairly high levels of taxation in many African countries, are not large, and in the absence of considerable financial assistance from outside sources it is difficult to see how much progress can be made.

In any case, it will be necessary to plan carefully and to decide what weight should be given to different elements in the picture. What importance should be attached, for example, to primary, secondary, technical and higher education respectively, and what share of total resources should be allocated to each? The appeal of universal primary education is powerful but some countries have found that it imposes tremendous financial burdens which make it difficult for them to pay proper attention to secondary and technical education. Some balance is needed, varying from country to country and changing within each country as time goes by, to ensure not only that the most important immediate requirements are not sacrificed to long-term ideals, but also that phased progress is made toward comprehensive goals.

One of the most valuable features of the Conference on African Education was that these considerations were borne in mind. The conference was attended not only by departments of education but also by representatives of departments of finance and a group of distinguished economists who were specially concerned with the financial aspects of the policies under consideration. Thus the recommendations that were adopted, far-reaching though they were, do not ignore the practical exigencies of mak-

ing ends meet in one way or another. In fact a serious attempt was made to estimate the costs (on clearly explained principles) of everything that was proposed. The results of the exercise are distinctly sobering, but they are nonetheless valuable.

Two sets of proposals were presented—the first in the form of an ambitious 20-year plan covering the years 1961–80; the second, a more modest 5-year plan covering the years 1961–66. The targets for the long-term plan were: (1) primary education to be universal, compulsory and free; (2) education at the secondary level to be provided to 30% of the children who complete primary schools; (3) higher education to be provided, mostly in Africa itself, to 20% of those who complete secondary education; (4) the improvement of the quality of African schools and universities to be a constant aim. The fulfillment of this plan would bring enrollments at the primary level from 11,187,000 in 1961–62 to 32,808,000 in 1980—nearly a threefold increase. At the secondary level, enrollment would increase from 816,000 to 5,905,400—more than sevenfold. Higher education would become available for 328,000 students, 13 times more than the 25,000 receiving various forms of higher education today. It will be seen that it would call for a gigantic program of expansion.

The short-term plan was designed to increase total enrollments from the present figure of somewhat more than 12,000,000 to somewhat more than 17,000,000 by 1966. But its main emphasis is on secondary-level education which produces the specialized manpower for economic development, the cadres for higher education which will in turn provide the high-level manpower on which the modern world depends and the teachers to instruct the new millions of primary-school students foreshadowed in the long-term plan. The specific targets of the short-term plan were defined as: (1) an annual increase at the primary level of an additional 5% of the beginning age group, which will increase enrollment from the present 40% to 51%; (2) secondary-level education to increase from the present 3% of the age group to 9%; (3) special attention to be paid to the training of teachers at all levels and to adult education programs.

If this program were realized in full it would, according to the conference estimates, increase primary-school enrollments by a third and double the number of secondary-level places. It would increase the capacity of higher educational institutions by 20%.

The financial estimates are based on fairly conservative capital and recurrent-cost assumptions at different levels, and take into account requirements for equipment, student residence, teacher housing and the improvement of existing school buildings. An arbitrary 5% of total estimates is added to cover the cost of adult education, including research, equipment and training. The figures may be summarized as follows: the annual cost of the long-term plan is expected to reach \$1,882,000,000 by 1970–71 and \$2,593,000,000 in 1980–81; the cost of the short-term plan is estimated to rise from \$584,000,000 in 1961–62 to \$1,154,000,000 in 1965–66.

These figures are large (and might well prove to be underestimates) and it may be questioned whether it is likely to be within the capacity of most African states, especially those whose educational need is greatest, to carry such a heavy burden within the foreseeable future. It was noted that even the base-year estimate of \$584,000,000 will be met only with the help of \$140,000,000 in various forms of external aid. For later years a much larger deficit is envisaged even after assuming a steady increase in local financial contributions, based somewhat speculatively on an assumed willingness of the states concerned to raise the percentage of their national income devoted to financing education from the present 3% to 4% by 1965 and to 6% by 1980. It may be doubted whether the long-term estimates should in any case be taken as more than very broad indications, subject



Women of Ghana learning to read, part of a stepped-up literacy campaign by the government of Kwame Nkrumah

to wide margins of possible error. The financial implications of the short-term plan are sufficiently onerous. They would call for heroic efforts and heavy but not impossible sacrifices on the part of the people of Africa, and more than a threefold increase (from \$140,000,000 in 1961-62 to \$450,000,000 in 1965-66) in the volume of help from abroad.

The Possibilities of Economy

The estimated cost of educational development in Africa is so heavy that it raises the question whether it can in fact be supported by African finances, even if the volume of external financial aid is increased on the scale suggested at the conference. The assumed increase in the share of the extremely modest national incomes of African countries to be devoted to education would have budgetary consequences far more burdensome than the same proportionate increases would have in more developed societies. Yet if these burdens cannot be supported, the newly emergent states will face the cruel dilemma of having to choose between limiting their objectives—retarding the pace of educational development at least in some sectors—and seeking a greater degree of financial dependence upon the outside world (if indeed this possibility remains open to them) than might be thought compatible with their newly won political freedom. If the pace of educational expansion is retarded unduly, it will almost certainly have the effect of retarding economic development and, in a vicious circular way, limiting further the possibility of educational advance. On the other hand, it would be unwise for African states to count on a volume of foreign aid so large as to be highly problematical. It follows that serious effort should be devoted to discovering ways of achieving the objectives of educational progress in Africa at the smallest possible cost. This will require careful and farsighted planning so that the best use is made of available resources. It will also require vigorous economies in school buildings and equipment. More than this it will almost certainly call for imaginative technological innovation in the business of providing education and a willingness to

engage in new forms of regional and international co-operation.

The Need for Educational Planning

The scale of educational development now generally envisaged by African states will have such important implications for national budgets and for the economies of countries as a whole that the planning of education is bound to be an essential element in the planning of economic and social development in general. If education is to play its proper role in producing the manpower needed for economic development it must be carefully geared to the requirements of national development plans. Rich countries may be able to afford mistakes in the use of their resources, but no African country can afford to do so. It is important, therefore, that departments of education should be represented on central planning institutions, that manpower development bodies should be established in association with those institutions and that, within departments of education themselves, planning groups should be created to undertake such tasks as collecting educational statistics, making long-range forecasts of educational needs, estimating the costs of educational programs, revising curriculums, planning teacher training and recruitment, conducting research in new educational technology such as programmed learning, radio, television and visual aids, and formulating plans for the financing of education, including the co-ordinating of external aid for this purpose.

It is of considerable interest and encouragement that proposals along these lines were adopted unanimously at the Conference on African Education and that some countries, notably Nigeria, have already been able to demonstrate the usefulness of relating long-range educational planning to broad economic development needs, including future manpower requirements.

Economies in Building and Equipment

Foreign visitors to African schools and colleges are often struck by the thought that the physical standards of many of these institutions would be regarded as extravagant in many richer

communities, and that there has sometimes been a tendency to reproduce, with little modification, styles of architecture, layout and accommodation, not to speak of pedagogical equipment, organization and method, appropriate to an entirely different climatic and cultural environment. Several postwar developments indicate that new approaches are now being made to this subject, and some valuable experience has been gained, particularly in low-cost school construction. The need for more appropriate, efficient and economical school design and construction is now generally recognized, although the politically seductive appeal of "prestige" building has still to be reckoned with.

This subject received considerable attention at the Conference on African Education, and an important decision was announced by UNESCO to establish "a Central Planning Group, consisting of a team of administrators, architects, engineers and education experts who would prepare costed plans and standard elements embracing secondary school administration, including residential accommodation for staff and pupils." The group (which would also act as a training unit) would begin its work in Khartoum but would maintain contact with local specialists throughout Africa and with bodies already working on school construction problems, such as the Committee for Technical Co-operation in Africa South of the Sahara, the National Institute of Pedagogy in France and the Technical Bureau for the Rationalization of School Building in the Congo at Léopoldville.

At the suggestion of the United Kingdom (which offered to supply the necessary professional leadership), it was decided also to establish a mobile development group which would be responsible for actually carrying out low-cost development projects in collaboration with national educational building organizations. The group would also concern itself with the design of school furniture and equipment and with problems of economical school maintenance. A proposal to establish an advisory centre for education building was also accepted.

The Possibilities of Technological Innovation

Careful planning and skilful economies will help a great deal in limiting the enormous increase in costs which the African development programs are bound to entail, but it is worthy of consideration whether a more radical approach to the whole question might not produce even more significant results. It appears to be a basic assumption of most educational planning that no fundamental changes are to be expected in the process of learning itself, nor consequently in the organization and timetable of this process. Thus it is generally assumed that a traditional period of pedagogical time is inevitably needed for teaching boys and girls to read, to write, to perform arithmetical operations and to understand and use a strange language, and that the number of pupils for whom a single teacher is responsible cannot go beyond a traditionally accepted limit without loss of teaching efficiency. Yet there is a growing body of evidence from experiments now being conducted in the United States and elsewhere which suggests that the learning practices in certain fields can be significantly shortened by the use of special programed learning devices and other aids.

Much more research and experimentation have yet to be done before any final judgment can be given concerning the usefulness of these new methods, but enough appears to be known to justify the most serious consideration of their applicability to African conditions. Programed learning methods are such that they have to be adapted to particular circumstances and it would be necessary to train a number of African teachers (or others working in African schools) to produce special kinds of programs to meet specific needs. The Conference on African Education devoted some time to the consideration of these possibilities, and it was decided to establish in Africa one or more development and re-

search institutes concerned with the technology of teaching and learning. It was felt that the prospective demand for teachers in African schools was such that any development which would economize their use without a lowering of educational standards might have a decisive effect on the timely accomplishment of the ambitious programs that were being planned.

Important services might also be realized if newly independent states were prepared to co-operate on a regional or even broader basis in the joint financing and common use of research and teaching institutions specializing in particular fields, such as medicine and technology, which require expensive capital equipment. Unfortunately some constructive developments in this direction during the last phase of colonial administration, notably in west Africa, have been reversed as a result of political fragmentation. It is certainly to be hoped that this is no more than a temporary phase and that new forms of intra-African co-operation will be established wherever technical and practical considerations point to their usefulness.

Methods of Finance

However carefully the new states of Africa plan their educational development, however rigorous their economies, however successful their technological innovation, the cost of an adequate program of expansion is bound to be enormous, and the part which falls on national budgets is certain to be a heavy burden, especially in the poorest countries. For this reason African governments are giving earnest consideration to possible changes in methods of educational financing which will relieve the load falling on the individual taxpayer each year. African poverty is such that the payment of tuition fees is not likely to make a significant contribution to the financing of African education, and in some African countries the meagreness of taxable resources and the political difficulties of increasing the poll tax, often the principal form of direct tax, seem to limit severely the possibility of raising additional direct taxation. As general economic development takes place, however, the yield of existing taxes may be expected to rise and it would certainly be appropriate for a large part of the increased yield to be invested in education.

The Conference on African Education looked wistfully in the direction of loan finance, but it was acknowledged that the savings capacity of many African states was still low and that any sums that could be borrowed from bank deposits, savings banks

The use of programed learning techniques, such as the course in mathematics shown in the photograph, is expected to play an important role in the educational planning of the new African nations



FIRST STEPS

or postal check accounts should be earmarked primarily for rapidly self-amortizing investments, leaving only international loans as a possible method of financing long-term capital expenditures on buildings and expensive foreign equipment not covered by international grant aid. The International Development association (affiliated to the International Bank for Reconstruction and Development) in fact decided in 1961 to make 50-year loans, repayable by installments, to finance technical schools, and UNESCO has recommended that secondary and higher education should be financed in that way in Africa, on the grounds that it is a legitimate element in long-term investment in economic development. This is indeed true, and some expansion of loan financing for educational purposes may be expected, but most loans have to be repaid sooner or later and there is a limit to the burden of loan services that any state can safely assume. The problem is not likely to be solved easily or soon, and much will depend upon the help which is forthcoming from overseas.

INTERNATIONAL CO-OPERATION IN AFRICAN EDUCATIONAL DEVELOPMENT

From the earliest days of European association with the people of tropical Africa, missionary teachers, supported by funds voluntarily contributed by their co-religionists at home, have made their contribution to African education. Financial administrative direction and assistance came later and very slowly, although it is interesting to recall that the first grants-in-aid for education in Africa were made by the British parliament in 1808 (included in the establishment vote for Sierra Leone), more than 20 years before it accepted any responsibility for spending money for education in Britain itself. Apart from voluntarily contributed funds from abroad the development of African education, even when fostered and directed by colonial administrations, was for the most part financed out of local resources until after World War II. However, the value of this fostering and direction should not be underestimated. Whatever its faults and limitations, it laid the foundations of modern education in Africa. It introduced a concept of education as a social institution basic to healthy political, social and economic growth, and it created an administrative framework without which no orderly educational advance would have been possible. Moreover, a long series of reports on policies and problems in African education, prepared with the help of distinguished educators in the home countries of the colonial administrations, bears witness to the high seriousness and intellectual competence with which this work was regarded. The missionary teaching contribution of the United States dates back to the early 19th century, and the work of two commissions sponsored by the Phelps-Stokes Fund which made studies in the colonial territories in the 1920s is acknowledged to have been of inestimable value in the preparatory work on the educational needs of Africa.

Financial assistance from overseas, which was meagre and slow to increase in most African territories before World War II, began to be contributed on a much larger scale when the war came to an end. A series of Colonial Development and Welfare acts (starting in 1940) in the United Kingdom provided for considerable sums in support of education in the African colonies, and in the French territories the Fonds d'Investissements pour le Développement Économique et Social (F.I.D.E.S., established in 1946) began to allocate financial resources for education on a considerable scale. In the Belgian and Portuguese territories greater reliance was placed on local public resources for educational purposes, but some grants-in-aid, low-interest loans and voluntary contributions were received in particular instances from the metropolitan countries. Meanwhile increasing numbers of teachers and instructors began to go out from Britain, France, Belgium and Portugal to teach in African schools and colleges.



U.S. foreign aid administrator setting up a program of scholarships in U.S. universities for students of the Republic of the Congo. In 1961 the International Cooperation administration designated \$21,000,000 for African educational projects

And the small trickle of African students studying in Europe before the war grew to a flood in the case of the British and French territories, though for policy reasons this development was discouraged in Belgian and Portuguese Africa for several years more.

According to British official estimates, United Kingdom aid to African education in 1959-60 amounted to more than \$16,000,000. This included the following allocations from the Colonial Development and Welfare Fund:

Higher education	\$3,169,572
Technical and vocational education	692,784
Primary and secondary education	2,756,824
Miscellaneous	1,409,724
Total	\$8,028,904

In addition, grants for general educational purposes totaling \$572,504 were made, mainly for the benefit of African territories. The educational activities of the British council were expected to account for \$1,218,000 in the commonwealth countries (and \$572,600 in the noncommonwealth countries) of Africa in 1961-62. The cost of certain types of "hidden" assistance from British government and private sources is difficult to measure, but it is estimated that in the case of African students studying in British universities, technical colleges and training colleges the element of hidden assistance amounted to approximately \$5,600,000 a year. In addition, considerable sums have been allocated to assist African education by private institutions such as the Nuffield foundation and the Leverhulme trust.

The number of African students in United Kingdom universities and technical colleges exceeded 11,500 (including nearly 6,000 from Nigeria) in the academic year 1959-60. Many of them paid their own tuition fees. Others were financed by their own governments, by business firms and private endowments. Several hundred received scholarships or training bursaries financed from public funds.

According to French official estimates, aid to African education financed out of French government funds amounted to approximately \$35,000,000 in 1960. Help was given in the form of educational planning and policy missions (of which there were six in 1960-61); collaboration in adapting curriculums to changing needs; the provision of school equipment and teaching materials; the supply of teaching staff and administrative personnel; and the financing of school building and enlargement. Early in



1961 about 3,200 French teachers were employed in African schools, technical-training institutions and higher educational establishments (not counting the 1,500 French teachers in Catholic, Protestant or other private schools). Total expenditure from French government funds toward the cost of providing these teachers amounted to \$22,000,000 in 1960. In addition, the Fonds d'Aide et des Co-opération (F.A.C.) contributed \$6,000,000 toward the building or enlargement of public schools, and \$1,200,000 to finance 50% of the cost of building new or enlarging existing private schools. Another part of the cost is borne by the Development Fund for Overseas Countries and Territories of the European Economic Community, to which France contributes 40%. Help in training teachers and support for higher educational institutions include large contributions toward the cost of primary teacher-training courses and schools and pedagogic training centres for secondary teachers. In addition, the French budget pays all the costs of building and operation of higher educational centres in most former French African territories. To this should be added the cost of almost all the university scholarships granted to students attending these establishments (approximately 2,000 in 1960). Large numbers of African students benefit from attendance at higher educational institutions in France. Approximately 3,000 are the holders of scholarships toward the cost of which France makes an important contribution.



AFRICAN EDUCATION PROGRAMS IN 1961

Meeting of women's league, Nyasaland, a group studying home economics and assisting each other co-operatively in household management

Course in bricklaying at the Technical institute of Khartoum, Sudan

Class learning to operate stenotype machines at the Institute of Administration, Zaria, Nigeria

Bilateral Assistance

Foreign aid from countries which had no colonial responsibilities in Africa was for long limited to the support of mission schools, the benefactions of bodies such as the Phelps-Stokes Fund, the Carnegie Corporation of New York and the Rockefeller foundation and the support of small numbers of African students in schools and colleges in Europe and North America. Government aid (outside of colonial arrangements) for African education did not begin until after World War II, and even then it was on a very small scale.

For some time United States government aid to African education was given mainly in support of projects in the two traditionally independent countries, Ethiopia and Liberia, which have had Point Four programs since the early 1950s. Some indirect support, however, was given to developments in the African dependencies as part of the United States contribution to the European Recovery program, and in the late 1950s the International Cooperation administration began to show increased interest in educational developments throughout tropical Africa. The amount to be spent for the year 1960-61 was approximately \$25,000,000, covering extensive education programs in Ethiopia, Liberia, Sudan, the Somali Republic and Nigeria and some important developments in other countries.

A number of regional centres were also established for the preparation of educational materials, assistance has been provided to school building and about 200 training fellowships have been awarded. In 1961 the International Cooperation administration launched a special program for tropical Africa (SPTA) which concentrated on "upgrading or establishing formal education institutions and systems, vocational education and teacher-training activities, and scholarship grants." A total of more than \$21,000,000 was designated for 23 educational projects in 11 African countries and a variety of co-operative regional projects. New ground was broken in east Africa with the inauguration of a teacher-supply plan under which 150 U.S. teachers will serve in schools in Uganda, Kenya, Zanzibar and Tanganyika after a period of training at Makerere college.

A number of U.S. education advisers were also sent to help east African governments explore new ways of speeding up the provision of African secondary-school teachers. In another important SPTA contribution toward reducing the critical shortage



FIRST STEPS

of educated Africans, the U.S. government joined with 150 U.S. colleges and universities to provide four-year undergraduate instruction for 300 African students in the United States. Plans for 1961-62 envisaged a considerable expansion of these programs, and the Peace Corps is to be used to support educational developments in several African countries.

U.S. help for African education is by no means confined to government-assisted schemes. The educational work of the Christian missions continues to be supported on a generous scale. Moreover, the great foundations, particularly the Carnegie Corporation of New York and the Ford and Rockefeller foundations, have played a valuable role not only by assisting particular projects but also by stimulating and providing an advantageous setting for the discussion of African educational problems. The Ford foundation has greatly increased its help to African education. Grants have been made to the education departments of universities and to regional institutions, such as the West African Languages council. The foundation has made preliminary manpower surveys in Uganda, Ghana and Tanganyika and it has embarked on comprehensive training programs in public administration in each of the three regions of Nigeria. Together with the Rockefeller foundation it provided funds to keep open Lovanium university during the post-independence crisis in the Republic of the Congo.

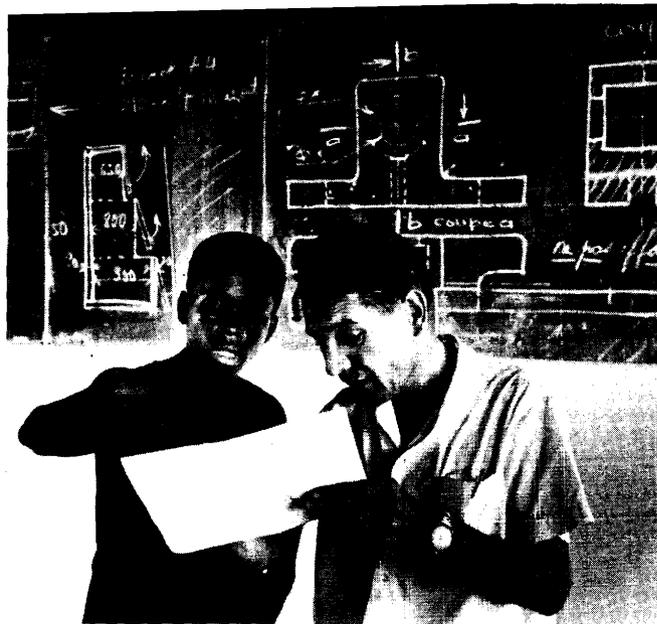
The total number of Africans coming to the United States for education and training has increased greatly. In 1960, 1,578 students coming from the countries covered here attended U.S. academic institutions, compared with 1,165 in 1959. The distribution of these students by country of origin, academic status and the type of financial support which they were receiving is set out in Table II. All the indications suggested that the cor-

Table II—African Students in the United States

Countries of origin (Tropical Africa only):	1959	1960
Angola	1	2
Basutoland	3	3
Cameroon	2	1
Cameroons (British)	7	7
Congo, Republic of	—	11
Congo, Republic of the	2	4
Dahomey	1	1
Ethiopia	170	171
Federation of Rhodesia and Nyasaland	27	61
Ghana	167	160
Guinea	—	13
Ivory Coast	1	1
Kenya	156	332
Liberia	170	166
Malagasy Republic	1	2
Mauritius	10	8
Mozambique	2	—
Nigeria	258	343
Senegal	1	1
Sierra Leone	39	60
Somalia	11	8
South-West Africa	14	5
Sudan	53	109
Swaziland	—	2
Tanganyika	36	62
Togo	2	3
Uganda	29	40
Zanzibar	2	2
	1,165	1,578
Academic status:		
Undergraduate	658	971
Graduate	331	434
Special student	120	128
No information	56	45
	1,165	1,578
Types of financial support:		
U.S. government	146	235
Foreign government	250	273
Self	149	213
Private	340	604
U.S. government and private	19	36
Foreign government and private	20	26
No information	241	191
	1,165	1,578

Source: Institute of International Education.

responding figures for the 1961-62 academic year would show a substantial further increase. Generally speaking, this is an encouraging trend. Considerable anxiety, however, is felt by some educators concerning the results of too hastily arranged African student enrollments in academic institutions of widely varying degrees of suitability.



Soviet instructor and pupil in physics class at classical school, Conakry, Guinea



On-the-job training: surveyor at construction site, Ghana

Three Dahomey exchange students listening intently as a U.S. college student briefs them on what to expect after their arrival in the U.S.



The Soviet Union has also shown considerable interest in African education. Following a cultural agreement with Guinea in Aug. 1961, the responsibility for building and staffing a poly-technic, with the capacity for training 1,500 engineers, has been undertaken. In Ethiopia the Soviet Union is establishing a technical school with a planned capacity of 1,000 trainees. A similar institution is to be established in Mali. Scholarships for technical and higher education in the Soviet Union have been made available for students in many African countries.

The Federal Republic of Germany has given considerable weight to education in the planning of its external aid. From 1956, 45% of Federal German aid throughout the world has been devoted to education and training, and this proportion has probably been exceeded in tropical Africa where programs have already been started in Ethiopia, Tanganyika and Ghana. The main emphasis in these programs (and in others still under discussion) is the provision of training for technicians, foremen and middle-level administrative personnel for government departments.

Other countries which have already made some financial or technical contribution to African education include Sweden (notably the Ethio-Swedish Institute of Building Technology in Ethiopia), Italy and the United Arab Republic (especially in the Somali Republic), Switzerland (in east Africa), Czechoslovakia (in Guinea and Mali) and Canada (especially in Nigeria). The above list is not complete and it is still growing. Bilateral discussions are now taking place between many would-be donor and recipient governments and it is certain that a large increase in bilateral assistance to African education is in prospect.

Multilateral Assistance

International organizations, notably UNESCO, have provided technical assistance and some other forms of help for African educational development on a modestly increasing scale from about 1950. In the early years aid was mainly concentrated on Ethiopia and Liberia, the only two states of tropical Africa that were at the time members of international organizations in their own sovereign right. In Ethiopia professional and technical training centres in public administration, telecommunications and civil aviation have been organized and assisted by the United Nations, the International Telecommunication union and the International Civil Aviation organization, respectively, and UNESCO has had a Community Development Workers' Training centre there since 1958. In Liberia UNESCO has assisted the teacher-training program and the development of the university.

As the years went by, however, requests for international technical assistance began to be received from the metropolitan powers on behalf of the African territories for which they were responsible, and the volume of aid, especially in the form of training fellowships, has steadily increased. With the coming of political independence, African countries have looked to the United Nations agencies for help on a much greater scale.

United Nations.—The contribution of the United Nations to African education and training is made through the activities of the Economic Commission for Africa (established in 1958), the operations of the specialized agencies, notably UNESCO, and the work of its own headquarters departments. The larger volume of assistance has been financed partly by increased regular budgets, but mainly as a result of greatly increased financial allocations by the Expanded Programme of Technical Assistance, the Special Fund and the United Nations Children's Fund. The work program of the Economic Commission for Africa includes training projects in statistics, public administration, physical planning and community development, and it contemplates a wide range of training projects for personnel required for economic development and programing. Much of this work is to be under-

taken in close co-operation with the United Nations headquarters department of economic and social affairs, which for several years has carried out training programs for Africans in New York as well as in Africa itself. The United Nations has given special attention to training for public administration and, to this end, several technical assistance and Special Fund projects have been initiated.

UNESCO.—In the field of African education and training the UNESCO program for 1960 and 1961 includes projects financed under its own regular budget; technical assistance and training projects financed by the Expanded Programme of Technical Assistance and the Special Fund; and assistance financed by the voluntary contributions of its member states to an emergency program of financial aid for African education. The total amount available from these sources in 1960-61 was approximately \$9,000,000, but substantially increased amounts were expected over the years 1961-63. Technical assistance rendered by UNESCO to African countries includes the provision of expert advice, sometimes accompanied by the purchase abroad of equipment, and the awarding of fellowships for study abroad. Special emphasis is given to assisting governments in preparing educational plans and in establishing and improving educational administrative machinery. Help has also been given in the revision of curriculums and teaching methods, establishment of library and documentation services, the use of audio-visual aids in education, improved teacher training and the training of administrators. Anti-illiteracy campaigns and various forms of adult education (including some community development projects) have also received assistance. With the help of the Special Fund, secondary-school teacher training institutions are being established in Nigeria, Cameroun, Ivory Coast and Sudan, and consideration is also being given to the establishment of similar institutions in the Republic of Congo and Senegal.

UNESCO has also established an emergency program for African education under which the following types of action were being undertaken in 1961:

	Provisional allocations
Basic surveys of educational needs (starting in Cameroun, Liberia and the Somali Republic)	\$ 300,000
Aid in the construction of school buildings	125,000
Textbook production centre	250,000
Supply of overseas teachers and professors	500,000
	\$1,175,000

Additional activities within these categories have been planned against a target figure of \$4,000,000 for the emergency program. Even more important in some respects is the initiative which UNESCO has taken in the general assessment of African educational needs, the foundation and discussion of educational development plans and the co-ordination of effort between donors and recipients under bilateral as well as multilateral programs.

The International Labour organization (ILO) has for many years provided opportunities for the discussion of problems of vocational and technical training in Africa. In 1955 technical assistance was provided in the field of training within industry in Ghana and Gambia. Help has also been given to an accelerated upgrading training program for public employees engaged in technical trades in Sudan. In Liberia a survey is being made of vocational training problems in general, while preliminary studies leading to specific vocational training projects have been made in a number of African countries. The ILO is working closely with UNESCO in the development of African training programs based on manpower surveys and with the Food and Agriculture organization in schemes designed to improve the vocational level of small farmers and agricultural workers (including training for

FIRST STEPS

subsidiary industrial occupations) in a number of African countries.

The Food and Agriculture Organization of the United Nations (FAO) has already made a useful contribution to the discussion of problems and policies affecting African education and training in agriculture, veterinary science, fisheries, forestry, nutrition and home economics. Some technical assistance in these fields has been provided to African states and more extensive programs are under consideration. A department of educational extension work has been established at the University of Liberia with the help of the Special Fund. In co-operation with the ILO, the FAO has undertaken the management of three rural-life training projects which are to be financed by the Special Fund.

United Nations Children's Fund.—From about 1956 UNICEF has devoted some attention to the basic subject of training in child care and home economics in Kenya, and this work is to be extended to Sierra Leone, Nyasaland and Ivory Coast. The training of teachers and extension workers in nutrition is to be assisted in Basutoland and Ivory Coast and, in co-operation with the Food and Agriculture organization, a regional scheme is to be inaugurated, covering several countries in former French and former British Africa, including support for training facilities in African universities and the award of 118 fellowships for the training of African extension workers in the general field of nutrition. Support is also to be given to the teaching of pediatrics in east Africa by strengthening the facilities of Makerere college for the training of doctors, nurses, midwives and subsidiary categories of health personnel, a project shared by WHO and the Rockefeller foundation.

The World Health organization (WHO) has laid great emphasis on medical training activities at all levels, from fully qualified doctors to nurses and para-medical personnel. Support has been given to local training institutions and courses for nurses and midwives in many African countries. Particular attention has been given to maternity and child-health training projects and the award of training fellowships. In east Africa support is being given to the new pediatric centre at Makerere college.

Other International Activities.—Other specialized agencies in the United Nations system have expanded their work in support of African education and training in their own special fields. Thus, the International Civil Aviation organization, the International Telecommunication union, the World Meteorological organization and the International Atomic Energy agency have provided training fellowships for Africans. Outside the United Nations system, the Commission for Technical Co-operation in Africa South of the Sahara has concerned itself with educational and training questions and has provided training facilities and equipment to African governments.

The Co-ordination of Assistance

The number of agencies—bilateral, multilateral and private—now engaged in assisting (or preparing to assist) African educational development is such that it might be supposed that the means to provide all the help which is needed was ample. However, the estimates considered by the Conference on African Education show that an enormous increase in volume of financial aid will be required to bridge the gap between the cost of adequate development plans and what African states might be expected to afford. Moreover, the multiplicity of donor agencies is such that there is a danger that great waste may result from badly directed effort and unhealthy competition. The sums needed are so large that their allocation to one purpose, however important, will call for major decisions of high policy on the part of the principal donors. And it must be recognized that the detachment of personnel on an extensive scale (especially to fill teaching positions in the early years of expansion) and administrative help will be

needed, as well as money, if the task is to be accomplished within the next 25 years.

Above all, much more careful planning and co-ordination of effort is required on the part of donor agencies and receiving governments alike. UNESCO has made what seems to have been a promising start by bringing together so many interested governments and agencies at the Conference on African Education and by achieving so large a measure of agreement among them concerning the nature of the task and the next steps required for carrying it out. An important responsibility now rests with UNESCO to follow up this conference to ensure the greatest possible harmony of effort among bilateral, multilateral and private agencies seeking to help the development of African education, and to assist African governments in the preparation and implementation of their own educational development programs.

LIONS IN THE PATH

When there is so much eagerness to do what is necessary and so much willingness to help, the task of providing the emergent nations of Africa with an adequate system of education for all their peoples, within a generation, should not be impossible of accomplishment. There are, however, a number of formidable lions in the path. Two of them are local African lions—poverty of resources and the subordination of educational standards to political considerations. Three of them are of European and North American domicile—inadequate financial help; failure to provide personnel; and national rivalries among the donor countries.

All the plans which have been made for African education are based on the assumption that it will be financed substantially from African resources, and that these resources will increase year by year as African economic development programs produce their results. Any serious failure to increase African productivity and the low level of African national incomes will destroy any possibility of providing the necessary local finance to support educational developments on the scale which is now envisaged. The vital importance of substantial economic development, within a framework of orderly government and wise economic policy, hardly needs to be emphasized.

The prospects of balanced educational development are likely to be endangered whenever the political approval of any one branch of education is allowed to influence unduly the general distribution of available resources. Ambitious attempts to live up to exaggerated electioneering slogans may lead to a grave dilution of standards and educational retrogression. Regional insistence on locally specialized institutions may produce wasteful duplication and intensify staffing problems. It is a healthy sign that the danger of all these developments is now familiar enough in other parts of the world to be widely recognized in educational, if not always in political, circles in most parts of Africa.

There is no question that financial help for African education will be forthcoming from many quarters. The only doubt is whether it will be anything like adequate. The estimates of the Conference on African Education called for an expansion of foreign financial aid from the current level of approximately \$140,000,000 to \$450,000,000 in 1965-66, rising beyond that to \$1,010,000,000 in 1970. To produce such sums will call for an exceptional effort on the part of governments already committed to many other foreign aid projects in Africa and elsewhere throughout the less developed world. Compared with current expenditures on armaments, however, the sums required are relatively small, while their contribution, in the form of African education, to the peaceful progress and ordering of this planet is no less important.

Money alone will not be sufficient to help African governments to do what needs to be done. For many years to come it will

not be possible for most African countries to train sufficient local teachers, especially at the secondary, technical and university levels, to satisfy expected requirements. In some countries administrative help will also be needed for several years while local men and women are being trained. Existing methods of recruitment will not be good enough to produce the numbers of well-qualified and dedicated men and women required for long periods of foreign service under exacting conditions, especially at a time when the educational expansion in Europe and North America is likely to create a serious shortage of teachers at home. Special inducements and safeguards for future security and advancement will almost certainly be needed, and even a willingness to make temporary sacrifices, in terms of educational progress, in the more advanced countries themselves.

Even if all the dangers and difficulties described in the foregoing paragraphs are overcome the progress of African education may be frustrated by national rivalries among the countries which are eager to help. The dangers of the cold war in its African setting are obvious enough, and may for this reason be less serious in practice than some political observers might suppose. Less obvious, because they are often overlaid by sincerely intended co-operative arrangements or understandings, are difficulties which arise between institutions and professional educators conditioned by different cultural, linguistic and even political traditions. Even in English-speaking Africa differing backgrounds and outlooks have sometimes shown themselves to be a hindrance to the most productive co-operative endeavours of British and U.S. educators and administrators. There is no need to sacrifice the rich variety of cultural experience which international educational assistance has to offer to emergent Africa, but it is certainly desirable that a real effort of imagination and understanding should be made by all who seek to help this great cause to avoid intellectual parochialism and to ensure that the interests of Africa are most abundantly served.

Boys of the Sudan running to school:

"... the hunger for education is there—widespread and insatiable—to a degree that never fails to astonish every new observer of the African scene."

Conclusion

The assumption on which this study has been written is that a large-scale program of educational development in Africa is a major concern of all mankind. Rapid political change unaccompanied by social and educational progress in wide areas of retarded development may well lead to the breakdown of society, the eruption of tyrannical forms of government and deeply disturbing social conflict, with dangerous international repercussions. The only effective bulwark against these dangers will be the emergence of a numerous African elite, sufficiently well trained and experienced to conduct the affairs of a modern community, serving and supported by politically alert, well-informed bodies of free citizens in the various African states.

The precondition of such a development is the spread of education throughout the African continent at an unprecedented pace. This will not be possible without imaginative planning, energetic leadership and great exertions on the part of the African peoples themselves. It will also call for a tremendous effort by all friends of African development wherever they may be. Already much has been done, especially in recent years, to prepare the way for the great leap forward which is still needed. There is evidence of a willingness on the part of newly independent and far-from-well-endowed African states to make sacrifices for the sake of education which many richer countries might well envy. Moreover, there are encouraging indications of a rising ground swell of foreign assistance, especially in North America and western Europe, which could make a decisive contribution to the achievement of the ends which are sought. The task is tremendous, but it is an exhilarating challenge to the practical idealism of our time. Its successful accomplishment would add immeasurably to the quality of human life in a great continent and strengthen the fabric of civilization throughout the world.



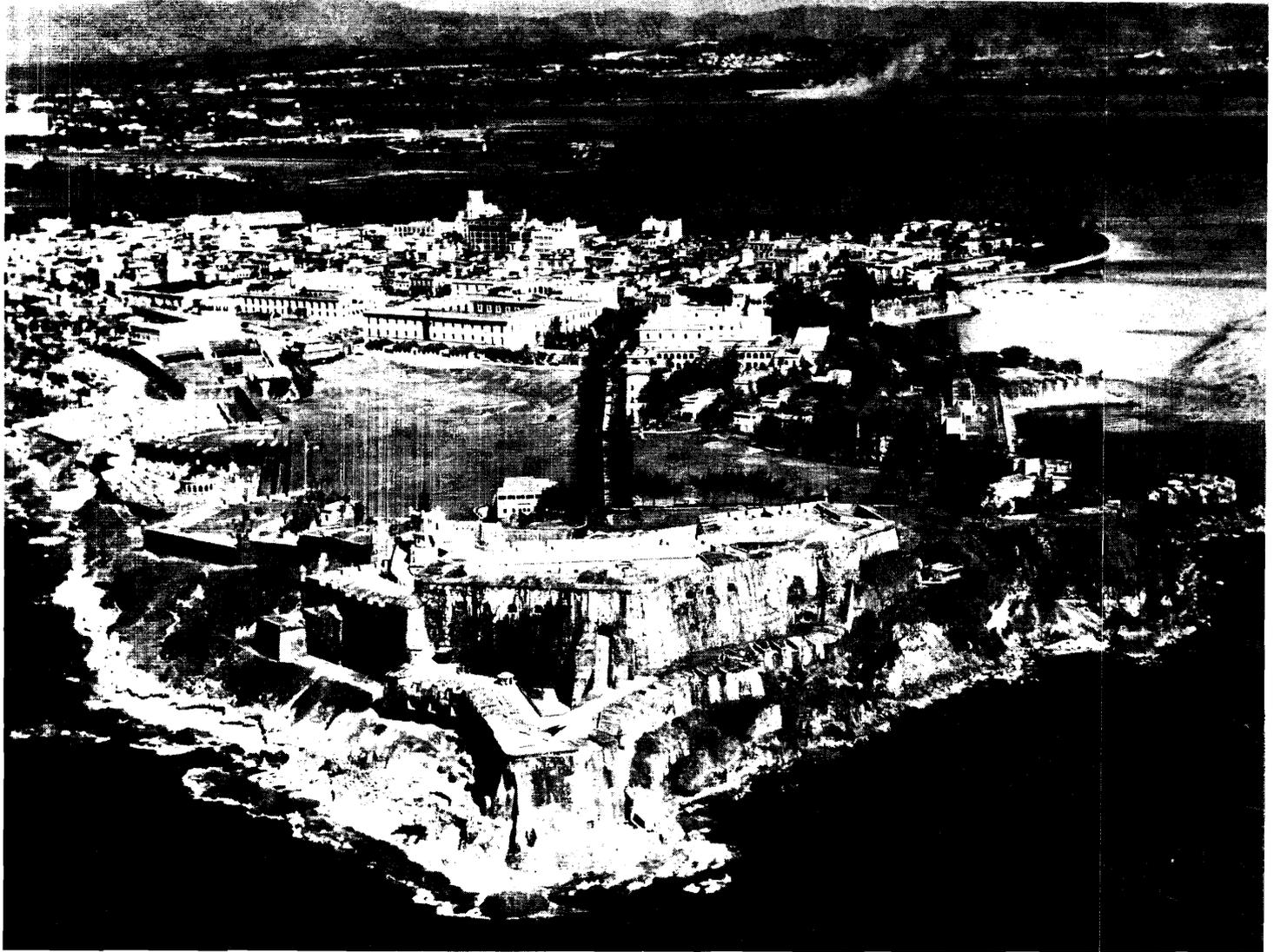
WORLD
WITHOUT
WANT



PART III

Puerto Rico:

Showcase of Development



San Juan harbour and El Morro fortress

PART III

PUERTO RICO: Showcase of Development

by **WILLIAM C. BAGGS**

A British sailor, reputed to be one John George, a native of Suffolk, was captured in Feb. 1748 by a Spanish privateer and taken to Puerto Rico. After George was freed, he wrote an account of his experiences under the impressive title *Journal of a Captive. Remarkable Occurrences from the year 1745 to 1748, during the far greater part of which times I was a prisoner in the hands of the French and Spaniards; transcribed from my private notes in Rhode Island. Anno 1748*. In a single passage, John George described the island and the people on it. The sailor wrote:

It [Puerto Rico] is one of the finest islands I ever saw, and I verily believe not any one island in the West Indies is more capable of improvement than this; but through the pride and slouth of the inhabitants it is the far greater part of it still a wilderness. It abounds in oranges, lemons, citrous, limes, etc., in such plenty that they are not worth the gathering. There are prodigious quantities of bananas, plantens, coco nuts, pine apples, mountain cabbage; with a great many other fruits and vegetables . . . In short, there is not any thing for the support of human nature but may here be found or cultivated. It might in the hands of the English or Dutch be rendered a paradise on earth, but the present inhabitants are mere devils.

The island sailor George involuntarily visited more than 200 years ago is still fertile, but the devils have gone. There are no

more slaves or colonists in Puerto Rico. The inhabitants of the island today cannot be described as Spaniards, nor are they altogether Latin. Many of them are somewhat Yankee, and all of them are citizens of the United States.

There are only 3,500,000 Puerto Ricans. Although almost 1,000,000 of them reside in mainland United States, many of their fellow citizens in Kansas and Mississippi and Montana have never seen a real, live Puerto Rican, and the popular image of the islander among mainland citizens is blurred. Many people seem to regard him either as an indolent creature, snoozing beneath a coconut palm on a Caribbean island, or as a "foreign" tough, living in the slums of the mainland cities, often involved in crime. The mainland citizen appears more conscious of and informed about the Philippines and Hawaii, far out in the Pacific, than he is of Puerto Rico although each of the three island groups came under the U.S. flag at about the same time.

Probably this perspective of the people of the continental U.S. can be traced to the fact that their government has had distinct policies toward the Philippines and Hawaii, while its relationship with Puerto Rico has been poorly defined. The Philip-

piners sought total independence and eventually secured it. Hawaii wished to become a state and did. Puerto Rico has desired neither status and does not today. No foreign power has tried to attack, invade or occupy Puerto Rico since it became a U.S. possession. In a sense, the island has been taken for granted by many mainlanders, although they do not exactly know what they are taking for granted. There simply has not been a clear national understanding of the Puerto Rican, who he is and what he is doing in the world today.

This is regrettable, because the Puerto Rican in 1962 is demonstrating on his small island the most hopeful example in the Americas of how to develop an underdeveloped community in the clean atmosphere of freedom. Puerto Rico has become a sort of senior member among developing societies. The islanders began to shake off their historic poverty more than 20 years ago, and this was a decade before such impoverished countries as India, by inaugurating massive reforms, began to reach up and seek the more pleasant life of the industrially developed countries. In 1940 Puerto Rico began the development plans which the new African states are only now beginning to test.

In the last 14 years the people of the island have become self-governing. During the same period, beginning with hardly any industry, they have created more than 100,000 jobs on the island by a remarkable program of industrial development. To turn the wheels of the new industry, Puerto Rico is producing electric energy at a per capita rate higher than any country in Latin America. A generation ago, the island was described as a place where the people were "illiterate in two languages," Spanish and English. Today, the literacy rate is 87%. Every third Puerto Rican attends some form of school. No Latin republic builds houses at a per capita rate rivaling that of Puerto Rico. Political campaigns are boisterous and thoroughly democratic. Since 1950, per capita income has more than doubled. So has the dollar value of the island's gross annual product. The birth rate, which had created a serious problem of overpopulation, has begun to decline. In less than a generation, 22 years have been added to the life expectancy of a Puerto Rican, and a child born in 1961 can reasonably hope to live 68 years, almost as long as a child born on the mainland.

All this, happening on an island smaller than the state of Massachusetts, has lured more than 13,000 curious observers from 126 countries. These are mostly people from underdeveloped lands. Teachers come to find out how adults are taught to read and write. Technicians observe how unskilled Puerto Ricans acquire the abilities necessary for industrial work. And economists study the record of how a stagnant agricultural society was made into a booming community, now speedily becoming a candidate for membership in the industrially developed world.

Surely what these people come to scrutinize is not the work of the Latin of caricature. Yet it sometimes appears that the story of modern, vigorous Puerto Rico is better known among the educated people of Nigeria and Bolivia and Thailand than among the Puerto Rican's fellow U.S. citizens on the mainland.

Even less understood is the role of the United States in the development of Puerto Rico. The people on the island conceived and are managing their adventure in development, but without the assistance and understanding of the federal government in Washington, the Puerto Rican effort would not have been so successful. The technicians and economists and educators who have come to the island from the poorer countries would not have found there encouragement and hope for a better life for their own homelands.

Some have argued that the dramatic climb of the Puerto Rican has been made up steps paved with U.S. gold. Roberto Sánchez Vilella, the Puerto Rican secretary of state, estimated the in-

vestment of U.S. tax dollars on the island, excluding military costs, at \$25,000,000 in 1961. In 1951 it was half that amount. But these figures are misleading. The \$25,000,000 was spent on roads, hospitals and vocational education—with the Puerto Rican government matching the federal dollars—and according to Sánchez Vilella a large percentage of this money was invested in machinery to build the roads and equipment for the hospitals, all purchased in the United States.

Moreover, the \$25,000,000 represents only about 8% of the total investment in the island's economy during the year. Not much of an argument can be made that U.S. tax dollars are the mainstay of Puerto Rican development.

Certainly the private investment of dollars in the last two decades has helped. However, though these dollars could have been invested at any time since the flag of the United States was planted on the island in 1898, 40 years later Puerto Rico was still described by sociologists and tourists as "the poorhouse of the Caribbean."

What evolved later cannot be explained simply by the new investment of U.S. capital. Rather, it came about largely as a result of a better understanding by the politician in Washington of his somewhat-Latin fellow citizens in Puerto Rico. Without this understanding, laws and relations could not have been worked out with an island that was neither a state nor a territory but something new in the U.S. experience—a commonwealth, in which the people were vested with citizenship, subject to all U.S. laws applicable and not in conflict with the Puerto Rican Federal Relations act, elected their own public officials, indulged freely in commerce with the mainland states, but had no votes in the federal congress and paid no federal income tax.

THE ISLAND

On a Mercator projection of the world, the island of Puerto Rico appears as an outpost of the Americas. It is the most easterly of the Greater Antilles, and its location at the entrance to the Caribbean sea has been compared to Gibraltar in strategic importance.

Navigators place the island between latitude 17° 50' and 18° 30' N. and longitude 65° 30' and 67° 15' W., 1,050 mi. S.E. of Miami. Tourist interests depict it as closer to the mainland—a tropical pleasure spot only two hours and ten minutes from Miami by jet. The most influential feature of Puerto Rican geography, however, is not the location. It is the size of the island.

Puerto Rico is only 100 mi. long and varies in width from 35 to 40 mi. The land mass of the Hawaiian Islands is almost twice as large. Yet the smallness of Puerto Rico would not in itself have caused so many troubles if the island had been populated at a density rate similar, say, to that of the mainland. If every human on earth, except those in India and Pakistan, left his home and moved to the continental United States, the U.S. population would be approximately 2,350,000,000 instead of 185,000,000, and the population density would match the ratio of 650 persons per square mile that exists today in Puerto Rico.

West Germany and Belgium have comparable population densities and find them tolerable, but Puerto Rico lacked Germany's natural resources and, unlike Belgium, the little island was not a colonial power and did not have a Congo to exploit. Instead, it was exploited. Moreover, in the mountainous interior much of the land is unusable. Almost half of the island's 2,103,000 ac. are not easily adaptable to permanent agriculture.

In a market where the supply of people far exceeds the supply of land, land naturally is at a premium. The shortage of land and its economic consequences were recognized by congress when Puerto Rico was "annexed" after the Spanish-American War. A law passed in 1900 prohibited any agricultural corporation from



Statue of Columbus in Mayagüez. The Italian explorer discovered Puerto Rico on his second voyage to the new world, 1493

to tropical orchids and the aptly named flamboyant trees.

The topography of Puerto Rico follows the theme of variation. The island is the crest of a submerged mountain, probably volcanic in origin. It rises from the sea in lovely plains, guarded by green limestone hills where coffee and tobacco are grown. The mountains, footed in immoderately handsome valleys, extend east and west in the interior and are not high as mountains go. The tallest, La Puntita, south of Jayuya in the rainy west central mountains, is only 4,389 ft. above sea level. All in all, the geography of Puerto Rico comprises what a citizen of the temperate zone would regard as a lush, tropical island. Small, yes. But a fertile, warm land.

"Outlying Puerto Rico" is the name given to three small nearby islands, Vieques and Culebra to the east of the main island and Mona to the west. Vieques, with 52 sq.mi. of land, is the largest. All three have surfaces characterized by low hills. Their rainfall of less than 50 in. annually, light for the tropics, is a result of this low elevation plus their reduced area in trade-wind climate. Agriculture and grazing are practised on the islands, but the bases maintained by the U.S. navy on Vieques and in the splendid harbour of Puerto Grande on Culebra are important factors in those islands' economies.

THE SPANISH ERA

Christopher Columbus discovered the lovely island which the Arawak Indians called Borinquén on his second visit to the new world, in 1493.

The Arawak Indians there were at peace with everyone in their world except for a few marauding Caribs. The Caribs had chased the more civilized Arawak tribes from all the Lesser Antilles and were beginning to raid the Greater Antilles, including Borinquén, but the 30,000 Arawaks on the island were not yet in any great danger. A nonmilitant people, they were gifted as weavers and workers in gold and stone. Tobacco, corn and ginger were native crops, and the practice of polygamy conveniently permitted the men to send their often five or six wives out into the fields to farm while they hunted. They were governed by a paramount chief under whom were territorial and village chieftains. Their villages on the virgin green land were

laid out around "plazas."

These Indians probably were part of the great Arawak civilization which at one time extended from Brazil and Bolivia north to the Bahamas, but beyond that the historian is guessing. In any event, none of the Arawaks could have had a more comfortable life than those on Borinquén. Food was easily obtainable from the generous earth, and there was no need to farm the steep foothills of the south or the deep gorges on the north side of the island. Borinquén was more than large enough for its inhabitants.

Columbus had left 40 of his men on the north shore of Hispaniola on his first journey to the Americas, promising to return for them the following year. He was sailing to make good his promise in mid-November of 1493 when he came upon Borinquén. With Columbus, now an admiral and a hero of Spain, were 17 vessels and 1,500 men, many of them adventurers intent on finding gold. On the 19th of the month Columbus and a picked group put ashore on Borinquén to take on fresh water. There is no authoritative record of where they landed. Quite a few towns claim the honour. At any rate, three days later Columbus sailed on to Hispaniola and to colonize the islands for the glory of Spain. Not many of the natives on Borinquén could have been aware of the celebrated visitor from another world. One young Spanish officer with Columbus, however, was impressed by the pleasant island and he was to return there to introduce western civilization. His name was Juan Ponce de León.

Little Borinquén was noticed but not disturbed by the first waves of Spanish adventurers who followed Columbus. Some livestock was released on the island, but nothing much was done about colonization until Ponce de León, being rewarded for loyal services by the governor of Hispaniola, was given permission to explore San Juan Bautista, as Columbus had named the place. (The harbour town became known as Puerto Rico or "Rich Port." Slowly, however, the port took on the name of San Juan because people traveling to the island were permitted to land only at the port. Thus the port and the island became confused in reference, and the names, San Juan and Puerto Rico, were used interchangeably, until the former became common to identify the port and the latter the island. British and U.S. interests added to the confusion by mispronouncing the name as "Porto Rico.")

Ponce de León sailed with 50 men in 1508. He built a small stone house for his wife and son in a place which was to be called Caparra, the second oldest European city in the Americas, across the bay from what is now San Juan. A native chief, Aguabana or Guaybaná, greeted Ponce and his men as friends, and the Spaniards found the first of what they imagined to be a great reservoir of gold. Ponce was rewarded, in 1509, by appointment as temporary governor of Borinquén. The rumour of gold encouraged more settlement by the Spanish but they were soon to be disappointed, for the amount of gold on the island was actually small. Court politics back in Spain ended Ponce's stay. King Ferdinand restored the privileges of Christopher Columbus, now dead, to his son Diego. The younger man removed Ponce as governor and Ponce sailed on westward to explore the coast of Florida.

On the island a *repartimiento*, a distribution of Indians for labouring purposes, had led to rebellion by the Arawaks and their old enemies, the Caribs, and for a while they threatened to eliminate their new masters. They were soon subdued, however, and four times as many Indians as before were distributed in a second *repartimiento*. Some of the Indians managed to escape to the south and east sectors of Borinquén, but the inexorable exploration and settlement by the newcomers brought them under Spanish authority once again. A few fled to Vieques and used it as a base for raids on the main island. Eventually, however, time and diseases brought by the Spaniards reduced the

PUERTO RICO

Indians until they were no longer discernible as a separate ethnic group.

The Spanish Proprietors

The soldiers who settled Caparra did not care for the low, damp, insect-infested ground which Ponce had selected. In 1519 the crown authorized the people to move across the bay, to a rocky island at the entrance of the harbour. The move also made the port more accessible to Spanish shipping, and it was hoped that this fact would promote trade.

The Spaniards now had been on the island long enough to assess its value. Strategically, it was comparable to Gibraltar and Rhodes. It was obvious that the British and other European powers would soon come sailing to these waters in search of treasure and would learn the geographic advantages of controlling the island. Pirates were also a threat and rightly so, for Puerto Rico was the place where gold from Mexico was transhipped to Spain. To protect the island from the anticipated raids, La Fortaleza was started in 1533 and a second fortress, El Morro, was begun in 1539.

The Spaniards had also learned that their island had good land but little gold and not much silver. Furthermore, the Indians had practically vanished, so the Spaniards turned toward Africa for a supply of labour. From 1511 to 1530 more than 1,500 Negroes had been imported. Ten times that many, more than 15,000, arrived in the following quarter century.

The Spanish settlers were beginning to enjoy one of the first plantation societies in the new world. They took on some of the Indians' habits, smoking the "vicious weed," which was for a time illegal, and lounging in hammocks. Their greatest danger was from occasional raids, as when the French corsairs plundered San Germán in 1526. (In 1552 the town, demolished by another raid, was relocated and rebuilt.) The plains along the north coast were cultivated, summer homes were built in the cool mountains and the Spanish society developed at its own leisure and in good style. If there was no great wealth, as in Mexico, the island was so vital to Spanish interests because of its location that the home government was willing to pay for its fortification with Mexican revenues.

The Raids

Sir Francis Drake ignored the island on his plundering voyages along the Spanish Main in 1585–86. There is no record that John Hawkins called on Puerto Rico in his earlier clandestine trade. But English ships were beginning to roll through the Caribbean in greater and greater numbers and the Spaniards on the island feared the British soon would attack. The historian Arturo Morales Carrión describes the intrigue of the time in his book *Puerto Rico and the Non-Hispanic Caribbean*:

Spain's fears were certainly justified, for on February 7, 1587, Drake and Hawkins furnished the Queen with a remarkable document to undertake a voyage to the Indies "entirely to ruin the Spaniards." The project envisaged a raid on the African coast to capture all Spanish ships. From there, the English were to go to the West Indies for an attack on the main fortifications and ports. A careful schedule was drafted, with due consideration to the weather conditions and other climatic factors, and a detailed description was made of the various islands and towns, with their defenses, population and resources. Both men seemed to have good knowledge of the island of Puerto Rico. . . . (Arturo Morales Carrión, *Puerto Rico and the Non-Hispanic Caribbean*, p. 20, University of Puerto Rico Press, Río Piedras, P.R., 1952.)

Drake and Hawkins sailed for the Spanish Main, although Hawkins died as the fleet arrived off Puerto Rico. Usually Drake depended on the element of surprise, but the Spanish were expecting him. Shot from a fort ripped into his cabin and "stroke the stoole from under him," killing two associates and convincing Drake of the gunners' accuracy. After various maneuvers, he attempted to force the harbour and burn the Spanish vessels there. However, the first burning ship lighted the area and Spanish

cannon bore down on the English. Drake withdrew. The British raid, long anticipated, had been repulsed.

Three years later, as the 16th century was drawing to a close, the British came again. The earl of Cumberland did not imitate Drake. Ignoring the harbour, he and his men came ashore east of the town and marched on the poorest defense lines. The Spanish retreated to El Morro, but the fort could not withstand the earl's siege. What Drake had failed to do, the earl of Cumberland did. He now controlled the port. He had a temporary ally in the form of an epidemic (probably dysentery) which had weakened the defenders. But soon the disease was infecting the British soldiers, and within five months the earl, unable to dominate the interior and thus complete his control of the island, gathered his men and sailed away.

After the earl's withdrawal, the island returned to trade, both legal and otherwise. The first sugar mill had been constructed in 1523, in the west of the island near what is now Añasco. Cattle imported by Ponce de León and other early settlers were multi-

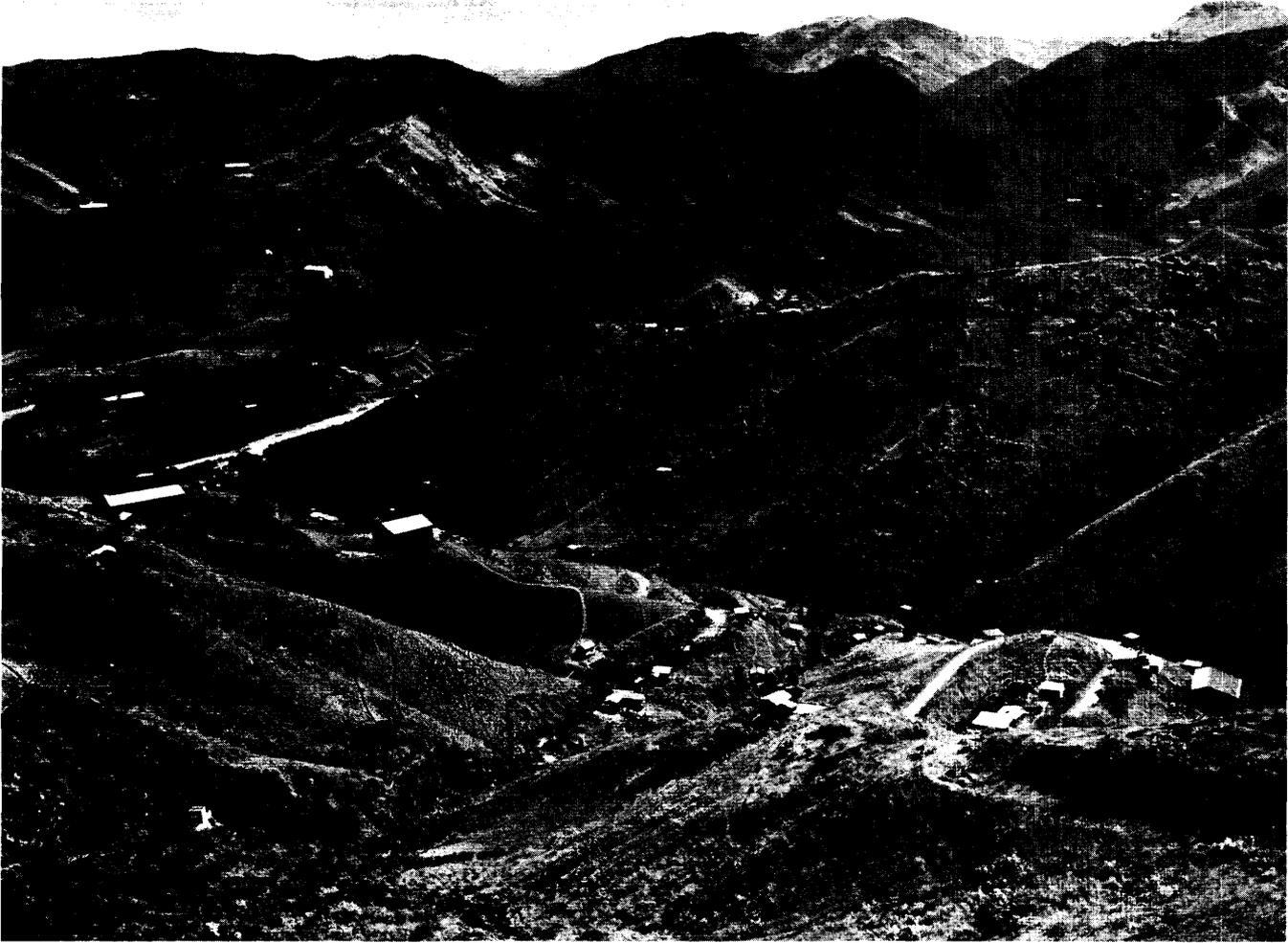


Tropical vegetation at Point Caracoles, one of the beaches on the north coast of the island

plying satisfactorily. Tobacco, once illegal, was recognized as an official export early in the 17th century. Caribbean pirates found havens in the sheltering bays of the island and some became "traders," married native women and in time became a part of the emerging island society.

The next interruption of this peaceful development came in the form of a Dutch fleet which appeared off Puerto Rico in Sept. 1625. The commander, Boudewijn Hendrikszoon, sailed into San Juan harbour and quickly took control of the town. The Spaniards retreated to a fortress. Hendrikszoon was unable either to convince the Spaniards to surrender or to take the fortress and finally he burned the town and retired.

Grave financial troubles plagued the islanders in the 17th century. Spain allowed them to produce agricultural crops and what minerals there were to be had, but nothing more. They could trade only with the mother country. Moreover, the island was still short of labour and this depressed the sugar industry. Spanish ships had found other routes and traffic at the port of San Juan declined. The islanders turned increasingly to illegal trade—with privateers and filibusters and merchantmen flying the flags of several European powers. British, French, Danes,



Typical valley of rolling hills near Comerio in the interior of the island. Tobacco is the chief product of the farms shown

Portuguese and Dutch sailed to Puerto Rican settlements other than San Juan, trading slaves and cloth goods for island cattle, hides, ginger, pigs, tobacco, fruits and other food. The Dutch, in particular, were eager to trade slaves for the island's goods. Puerto Rico became divided into two parts: the town of San Juan, whose population had reached 1,800 by 1673, and everything outside San Juan. In the interior valleys and along the coasts the illegal trade became, as one historical account put it, "so generalized [that] it developed into a kind of free trade, forbidden by law but sanctioned by the pressure of daily needs."

The smuggling naturally infected official morality and in 1688 both the governor, Gaspar Martínez de Andino, and his son Baltasar were participating in illicit trade with Curaçao, where the Dutch maintained a supply base of Negroes and cloth goods. The following year the bishop of Puerto Rico, Fray Francisco de Padilla, exposed the whole unlawful business in a letter. The bishop was especially incensed by the lack of food in San Juan, inasmuch as the food, raised on outlying farms, was being traded to smugglers of other nations. His letter and the incipient scandal finally provoked the crown to remove Martínez. The new governor, Gaspar de Arredondo, found his predecessor guilty of smuggling and imprisoned him. The sweet smell of riches, however, was hypnotic. Governor Arredondo was later to play the game, and records of the period indicate that soldiers, *regidores*, *alcaldes*, priests, friars and royal officials were all happily engaged in the pursuit of illegal wealth.

In addition to the smuggling, which robbed Spain of revenue and San Juan of food, piracy grew worse as the 17th century grew older. In four years, from 1637 to 1641, freebooters based on

Tortuga overtook vessels from New Spain and retired to their lairs with booty worth 400,000 pesos. To defend its interests, the crown began in 1674 to issue letters of marque. As might have been expected, the "Spanish interests" were defended by privateers who hauled in any non-Spanish vessel they could find. Sailors from the Bay of Biscay were especially active in this regard, and the privateers came to be known among the British as Biscayners. As tensions between the Spanish and the British rose, so did strange rules. An Englishman on board a British ship was fair game, but a British smuggler putting ashore to trade in contraband was a welcome guest.

The 18th Century

As Puerto Rico entered the new century, a new factor was emerging in the life of the island. Sugar was becoming the principal crop of the Caribbean. The old, diversified agriculture of the islands was now being reorganized to produce the giant bunch grass that brought such excellent prices on the world market.

The possibility of profits from sugar reawakened English interest in Puerto Rico. On Aug. 28, 1706, Daniel Parke, the British governor of the Leeward Islands, wrote to British diplomatic authorities: "If we had Porto Rico, the land is soe good, the island soe large, timber enough for building and caske, in 7 years we could make sugar soe cheap as to be able to undersell the French: we could doe it for half the charge we are at here." However, the British planters on Barbados feared that such a move would drive their sugar prices down and ruin them. They opposed it, and nothing was done.

Another source of friction with Britain was the Spanish crown's

PUERTO RICO

attitude toward runaway Negro slaves. The crown practically invited slaves to slip away from their British masters and sail to Puerto Rico, where they were usually assured of becoming freemen if they accepted the Catholic faith and professed allegiance to Spain.

A revealing look at the island in the 18th century was taken by a gentleman with the improbable name of Marshal Alejandro O'Reilly or O'Reilly, an Irishman in the service of Charles III. The king was startled to learn from a report of trade that Spanish Antillean commerce with the British alone, all of it forbidden, amounted to 6,000,000 pesos a year. He dispatched O'Reilly to the Caribbean and the Irishman, arriving in 1765, took the island's first responsible census and conducted interesting sociological work among the people. He reported a population of 44,883 people, of whom only 5,037 were slaves. The northern coast seemed to be the most densely populated.

O'Reilly confirmed the nature and magnitude of the illicit trading. Seemingly intrigued, he said the people of Puerto Rico were quite loyal to the king, but were people with a "natural innocence." Some were soldiers who frowned on farm work and sailors who had deserted their ships and sought refuge in the mountains. The life there was easy for them. Cattle, descended from the original Spanish herds, were plentiful, as was fruit, and the climate demanded few clothes. O'Reilly suggested that "this illicit trade" was useful to the people and to the crown, apparently as an alternative to the same trade on a legal footing.

The one meaningful response by the crown was to open several Spanish ports to trade with the West Indies and to permit merchants to carry on intercolonial trade with the islands. Trade between Spain and Puerto Rico increased, but not significantly. This was little more than a gesture. Spain's exclusivist trade policies continued to inspire the contraband industry and such limitations as permitting only one port, that at San Juan, and forbidding coastwise shipping prevented the development of the interior.

An interesting gesture of friendship to the United States—or perhaps it was a gesture of disdain for the British—occurred during the American Revolutionary War. Two American ships, sent to the Caribbean to harass British vessels, were sighted by an English warship, which sailed after them. The chase ended at Mayagüez, where the American ships took refuge. Citizens of the town climbed aboard the ships and raised the Spanish flag over them.

The British commander protested to municipal authorities and to the governor at San Juan, but to no avail. Meanwhile, the Americans slipped out of Mayagüez harbour and continued their mission. This was about as close as the Revolutionary War got to Puerto Rico.

The last British raid on Puerto Rico came at the end of the 18th century. Spain had joined revolutionary France in its war against England, and a British expedition was readied and sent to the Caribbean to capture Trinidad and Puerto Rico. Lieut. Gen. Sir Ralph Abercromby took Trinidad easily, and for that reason he did not anticipate strong resistance in Puerto Rico. But he underestimated the defenses, so long in building and many times tested, of San Juan Bautista. Furthermore, the city and the hinterland joined forces for the first time, approximately 20,000 rural people coming down to defend San Juan. After a month of fighting, Abercromby withdrew.

In the course of the 18th century the number of towns on the island had risen from 4 to 34 and the population had increased to 155,426. Much of this growth came from runaway slaves and from non-Spanish traders. More could be attributed to a rising birth rate and immigration from the Iberian peninsula. Before the new century was many years old the mother country would be forced to reconsider its exclusivist trade policies.

Nonviolent Reform

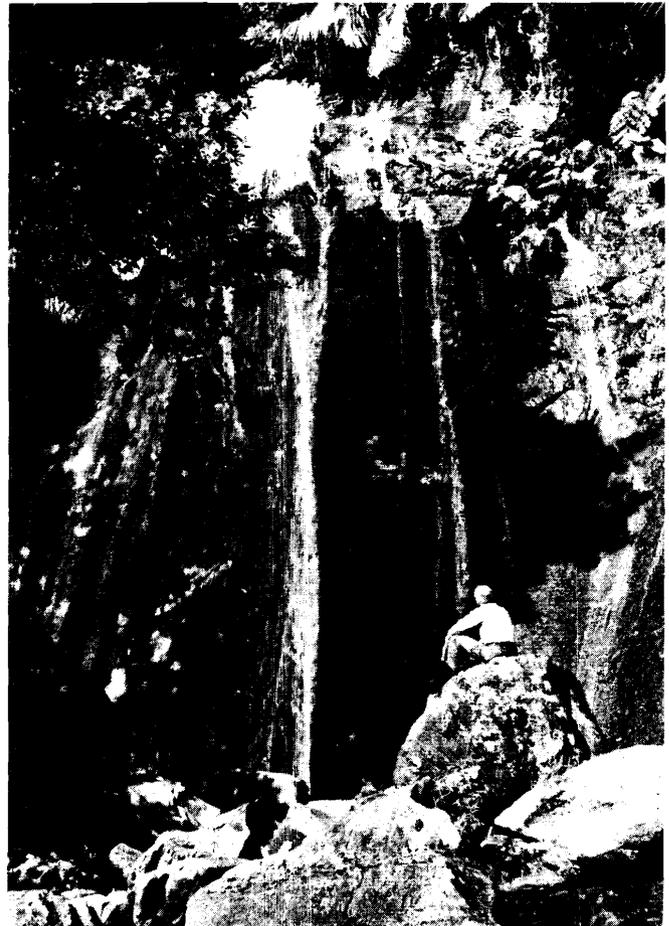
Antonio Colorado, a professor at the University of Puerto Rico, told a visitor in 1961 that a pertinent index to the islander's character was moderate ways. "If you examine our history carefully," he said, "you discover that the Puerto Rican has preferred to talk things out rather than fight them out." This inclination for reform by nonviolent means was obvious throughout the 19th century.

As the century began, most of Latin America was headed toward revolution. Encouraged by the success of the United States in throwing off British rule, an independence movement in Mexico, sparked by the priest Miguel Hidalgo, began in 1810. By the 1820s José de San Martín and Simón Bolívar had led Spanish South America to freedom and in Brazil independence was declared from the Portuguese house of Braganza. Through it all, Puerto Rico followed its own way, and the way was not violent.

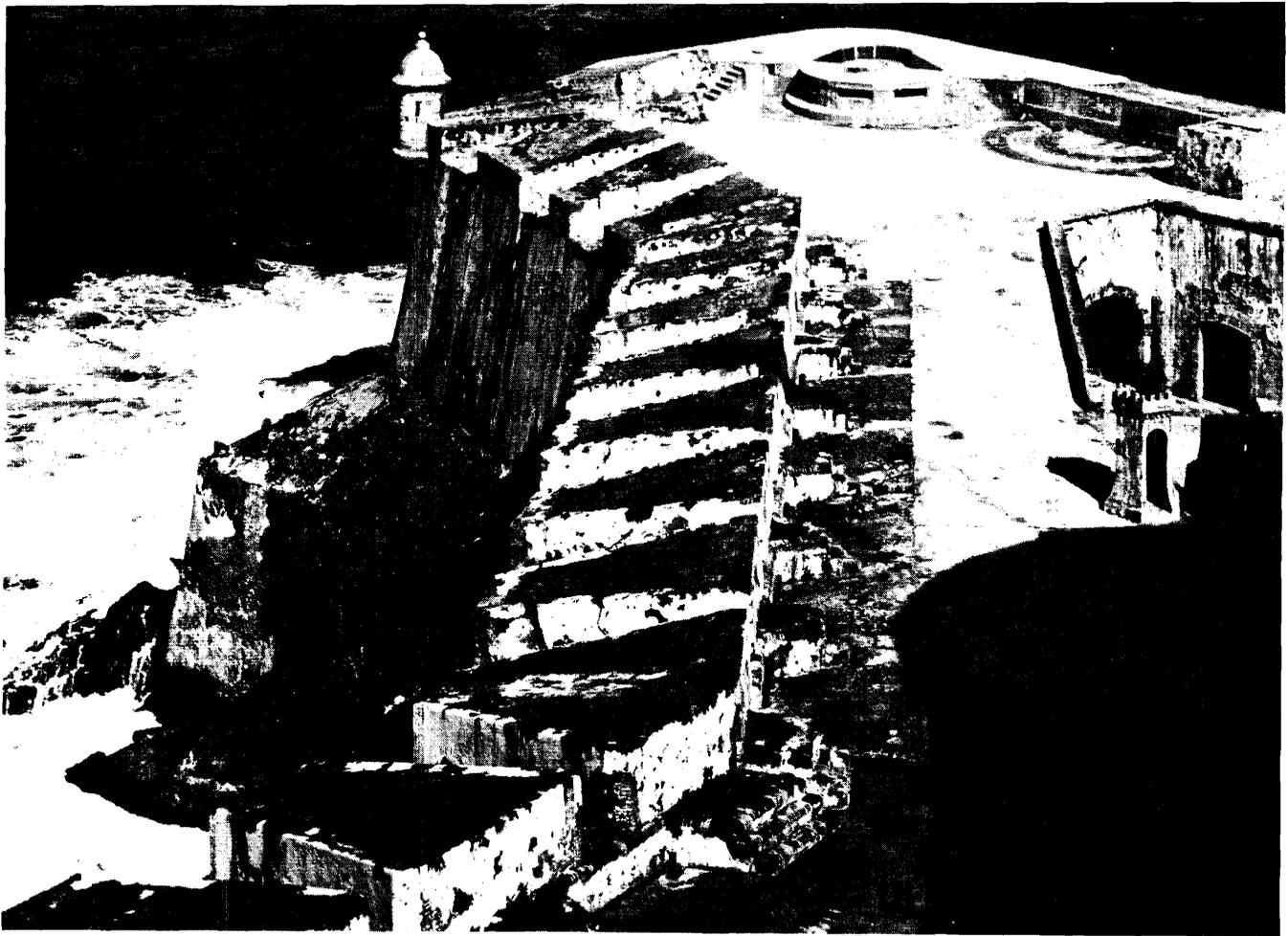
The first native statesman of any consequence was Don Ramón Power y Giralt. In 1809 the Spanish parliament, or *Cortes*, decided that the loyal island across the sea should be represented by one delegate. Power was chosen by the islanders. He was an educated man, schooled in Spain, and a naval hero in the service of the mother country. He was not a revolutionary but he certainly was a reformer.

Almost as soon as Power was seated in the *Cortes*, he delivered a powerful attack on Spanish exclusivism. Elected vice-president of the *Cortes* the following year, Power's influence was so extensive by 1811 that he was able to obtain annulment of a royal order giving the Spanish governor of Puerto Rico new and vast powers. Encouraged, he began to attack the entire philosophy of Spanish colonialism, and with some success. Among the new laws was one permitting the sale of cattle to non-Spanish traders and the free sale of flour, needed badly on the island.

A waterfall at El Yunque in the rain forest of eastern Puerto Rico



59



Close-up view of El Morro fortress showing the cannon ports and lookout tower. Begun in 1539, El Morro defended San Juan from British and other raiders until the end of the 18th century

Partly because of Power and partly because of the South American revolution, an *intendencia* was established in Puerto Rico to promote trade and agriculture and handle royal funds. The *intendente* was the diplomat Alejandro Ramírez, and within two years of his arrival in 1813 he had proclaimed easier trade regulations and organized a system of legal trade to replace the traditional contraband. Spanish exclusivism ended with the *cedula de gracias* in 1815, which opened trade with foreign ports.

Settlement on the island was encouraged by a sort of homestead act, offering 170 ac. to each white immigrant and one-half this acreage to free mulattoes and Negroes provided they accepted the Catholic faith and pledged allegiance to the Spanish crown. Within six months the legal trade doubled. Population began to rise rapidly. Immigrants came not only from Spain but also from the United States, Puerto Rico's chief partner in the last years of the illegal commerce, and from Denmark, Ireland, Portugal, France, Great Britain and the Netherlands. In this period much of modern Puerto Rico was born. Morales Carrión wrote of it:

The long experiment in artificial isolation was at last over. The exclusivist system had proved to be a narrow, unworkable policy, quite remote in its outlook and implications from the peculiar social realities of Puerto Rico. It failed to realize the exposed location of the island in a sensitive area of international rivalries, as well as its geographical proximity to the flourishing trade of the maritime empires. By strait-jacketing colonial commerce, it had forced the inhabitants to engage in clandestine practices and had stimulated their contacts with the foreign establishments. Thus there grew a strong economic attachment to the rest of the West Indies, and in later years to the United States, far more enduring than the hatreds and feelings of repulsion which the colonials had inherited from the struggles of their respective mother countries in Europe.

On the other hand, Spanish neglect in developing Puerto Rico into a tropical colony of exploitation, as the French and English had done in their Caribbean islands, contributed to the evolution of a society with less racial tensions and a more homogenous population than in the neighboring establishments. The levelling force of poverty had given rise to a rustic equality, unmatched by the sugar colonies of the capitalistic empires. This legacy persisted as an influential factor in the new period when urban development and economic productivity began to bridge the gap between the walled city and the rural interior. (Morales Carrión, p. 143.)

Miguel de la Torre, governor of the island until 1834, did not tolerate native liberalism, which sought additional reforms and even autonomy, but he did give some encouragement to education. The ranks of liberalism were to grow in the following years. Meanwhile, the economy of the island remained agricultural. Coffee, introduced in the mid-1750s, was becoming the principal money crop, surpassing sugar.

The turbulent politics of 19th-century Spain had their effect on the little island. The revolution of 1868, which overthrew Isabella II, promised political parties, the right to public assembly, a free press and an end to slavery. At almost the same time a few hundred peasants, contrary to the nonviolent tradition, captured the town hall of Lares in the western mountains and announced the birth of the Republic of Puerto Rico. They were defeated in three days by the Spanish rulers.

Puerto Rico prospered under the short-lived Spanish republic. Slavery was abolished in 1873 and provincial deputation became a fact. But the return of the monarchy under Alfonso XII also represented the return of stern political rule, and it was not until 1897 that Spain granted the island a charter of autonomy. By 1897 it was too late. The Spanish-American War was about to begin. The charter of autonomy turned out to be a kind of political ambulance that arrived just as the patient was expiring.

Typical of the island's 19th-century reformer-patriots, but more prominent than the rest, was Luis Muñoz Rivera, father of Gov. Luis Muñoz Marín. Muñoz Rivera negotiated skilfully for ten years for the charter of autonomy, only to see it rendered worthless when the island passed from Spain to the semipaternal rule of the U.S. He was, however, to renew his diplomatic entreaties on behalf of the Puerto Rican people. He became resident commissioner for the island in Washington, and his persistent arguments hastened reforms under the new ownership.

The island changed hands quickly. The United States went to

PUERTO RICO

war against Spain for the avowed purpose of liberating Cuba. After a period of growing hostility between the two countries, the fuze was finally lit when the battleship "Maine," sent to Havana for the declared purpose of protecting U.S. citizens and their property, was sunk 21 days after its arrival in Havana harbour. Spain declared war first, on April 24, 1898, and congress replied that war had existed since April 21.

Secretary of State John Hay, in a letter to Theodore Roosevelt, described the action later as "a splendid little war." It was certainly a fast one. Barely two months after the declaration the Spanish fleet at Santiago, Cuba, was reduced to inactivity. By mid-July the city of Santiago surrendered. The war, for all practical purposes, was over and Puerto Rico had not been troubled in the least. Nevertheless, Gen. Nelson A. Miles sailed to Puerto Rico with about 3,500 men. The U.S. fleet made a demonstration before San Juan and General Miles landed his troops on the southern side of the island, at Guánica, about 15 mi. W. of Ponce. Seventeen days later the U.S. forces had occupied much of the island and were advancing within 20 mi. of the north coast when the armistice was signed. The Spanish surrendered the next day, Aug. 13.

The Spaniards had withdrawn almost all their forces by November, or 405 years to the month after Columbus, sailing for Hispaniola, had discovered the small, green island. In December the treaty of Paris was signed, and Puerto Rico was ceded to the United States.

PUERTO RICO IN 1898

In only one sense could Puerto Rico be regarded in 1898 as a worthwhile asset. Its location still made it strategically valuable. Otherwise, the United States appeared to have received as a prize of war a place that was actually a burden.

Illiteracy was widespread. More than 80% of the population could not read or write, and nothing much was being done to raise a generation of islanders who could. There were approximately 900,000 Puerto Ricans, but only a little more than 2% of them were attending school. In the Spanish colonial tradition, most of these were the children of wealthier families and most of them were boys.

Under the relaxed, vaguely directed administration of the

Spanish, the island had developed only a poor transport system and no public health service worthy of the name. What economy there was had been shattered by a U.S. tariff imposed on Puerto Rican sugar before the war. Indeed, this tariff had led to the first considerable emigration of islanders. They had traveled halfway around the world, to the sugar fields of Hawaii.

Six of every ten working people were engaged in agriculture—sugar in the lowlands, tobacco on the lower mountain slopes and coffee in the uplands. The 39,000 farms were small, averaging 15 ac. of cultivated land, and highly inefficient. The annual sugar production was 70,000 tons. This was to change in short order as U.S. interests moved in. Farms were to become large and within three decades sugar production was to reach 1,000,000 tons.

Interior Puerto Rico had been neglected by the Spanish. The one little railroad chugged along the coast line, and the 160 mi. of wagon roads in the mountains and valleys were frequently a challenge even to the bullocks and mules. Another problem was the *bohio*, the native thatch house, fragile and lacking any sanitation.

The measure of self-government granted by the charter of autonomy had never had a chance to become operative, although the native political leaders had begun to concern themselves with how to use this new freedom to build a better economy. Now the U.S. soldiers arrived, and a military government was established. With it came the beginning of road construction, the establishment of a public-school system and public-health measures against malaria and tuberculosis, both of which were endemic.

Within a year of the war, an awesome hurricane rolled over the island, killing approximately 3,500 people. Damage was estimated at 36,000,000 pesos and the thriving coffee crop, which had become the principal export, was devastated.

THE PEOPLE

Gustavo Agrait, professor of literature at the University of Puerto Rico, has said that the Puerto Rican is the nearest thing there is to a human alloy of the two dominant cultures of the Americas, and the professor of literature may have defined better than anyone else the unusual status of the Puerto Rican in the western hemisphere.

By pedigree, the islander is in large measure Latin. Yet his

U.S. troops in Puerto Rico during the Spanish-American War, 1898. A painting made from an on-the-spot sketch



J.P. ...

favourite sports are basketball and baseball. Often, his groceries are purchased at a supermarket. One of the songs most fondly embraced by the teen-agers in Puerto Rico in 1960 was a desultory ballad named "Surrender" and sung by Elvis Presley. *Arsenic and Old Lace* played to full houses. The same Puerto Rican celebrates a happy occasion over the traditional *lechón asado* (roast pig) and enjoys the gentle throbs of the merengue. The office worker in the city is likely to be at his desk at 8 A.M., but he is unlikely to pause at noon for a siesta. The island he lives on is nearer South America than the northern continent, but he is a citizen of the United States.

The mixing of the Puerto Rican bloodlines started, of course, with the Spanish. When King Ferdinand rewarded his soldiers by parceling out the native Arawak Indians among them, some of the Arawak women became concubines and some became wives of Spaniards. A mixed bag of European nationals came to fight or to trade, saw the good soil and pleasant aspect of the island and returned later to live. Pirates hiding on the island married native women. In 1511 the African slave traffic began. Much later, in the first year of the 19th century, the revolution in Haiti drove French families to Puerto Rico. Many Catholics from Louisiana preferred the Spanish culture of Puerto Rico to their own territory after the Louisiana Purchase of 1803. And, of course, thousands of mainland citizens moved to the island in the 20th century.

Physically, the product of all this mixing is a generally rather short, usually thin, wiry person. In *Puerto Rico: Island of Promise*, Ruth Gruber describes the child of these diverse ancestors:

The bloodstreams of all these migrants fused to make the Puerto Rican of today. He is not a Negro, although 20 percent of the population is Negro. He is not an Indian yet the golden skin, the high cheek-bones, the aquiline nose, the gentleness and hospitality of the Indians are a common trait all over the island. He is not a Spaniard yet he may have the blond hair of Northern Spain or the pure white skin of Barcelona. (From *Puerto Rico: Island of Promise* by Ruth Gruber. Copyright © 1960 by Ruth Gruber. By permission of Hill and Wang, Inc.)

The figure of 20% for Negroes may be an exaggeration. There is tolerant debate on the island as to what percentage of the Puerto Rican population actually is Negro and there is no appropriately scientific method of determining it. Puerto Rico is a land of splendid phraseology, in which complex issues are reduced (and often oversimplified) to a single sentence. One of these phrases has to do with the racial mixture: "One drop of 'white' blood makes a Puerto Rican a white man." Antonio Colorado has said: "We are a mixed people. We are mixed much more than the statistics will admit. People 'pass' easily here."

Probably the nearest thing to a reliable index of Puerto Rican lineage was reported in *Social Class and Social Change in Puerto Rico*, by Melvin M. Tumin of Princeton university and Arnold Feldman of the University of Delaware. Tumin and Feldman administered a field study of 1,000 "heads of households" in Puerto Rico, chosen from all classes of society on a scientific selection basis. Trained interviewers were asked to classify the respondents and their findings were 608 white, 307 mulatto and 80 black.

Curiously, when the respondents were asked by the interviewers to classify themselves, the answers of those who were willing to respond were 537 white, 397 mulatto and 55 black. The difference between what the interviewers thought and what the respondents thought introduces two interesting suggestions about the Puerto Rican and his culture. One is that the word mulatto implies nothing objectionable to the islanders. Indeed, 90 more persons called themselves mulatto than were so identified by the interviewers, and 71 fewer persons called themselves white. The second suggestion is that many persons prefer an identification other than Negro.

The Puerto Rican likes to say that the pigmentation of a man's skin is not important on his island. This is largely but not

absolutely true. The findings of Tumin and Feldman, after exhaustive studies, were:

The evidence urges upon us the conclusion that skin color is considerably less important in Puerto Rico than in the United States; that it is virtually of no significance whatsoever in many important areas of life; that the majority feel that people of darker color are not blocked from major opportunities by their color; that only on job opportunity is there any serious question. (Melvin M. Tumin and Arnold Feldman, *Social Class and Social Change in Puerto Rico*, p. 239, Princeton University Press, Princeton, N.J., 1961.)

In other words, the two sociologists found no discrimination in education and only a negligible amount in social life. But they did point out—albeit gently—the existence of discrimination in employment. They wrote:

Since only a small minority, just over 12 percent, talk of job discrimination, and the vast majority do not, it is fair to say that color discrimination in Puerto Rico is a subtle and minor theme in Puerto Rican life. Yet it is an insistent theme: its presence cannot be denied, however muted are the responses to it. (Tumin and Feldman, p. 239.)

Negroes may be found at all economic levels, but the fact that the majority are at the bottom level must be taken as some evidence of colour discrimination in job opportunities.

Education

In almost every Puerto Rican town a visitor can find four establishments, a church, a plaza, a city hall and a school. Usually the school is the newest.

The Spaniards did not have a reputation for fostering public education at home or abroad. In 1898 only 1 Puerto Rican in 41 attended school. The illiteracy rate was more than 80%. There were fewer than 600 teachers.

There is a saying that when the Spaniards came to a new territory they built a church and a fort, and when the North Americans came they built a school. The saying has a considerable degree of truth so far as Puerto Rico is concerned. Every year of U.S. proprietorship saw more schools built. The University of Puerto Rico was founded less than five years after the island changed hands. Within 42 years, while the population almost doubled, the number of children going to school increased more than 1,000% and the literacy rate rose to more than 68%.

There were not enough schoolrooms by 1940, and many of the schoolhouses were dilapidated. There were not enough teachers. But 286,113 islanders were day students in the poorly equipped educational system. Today, after a 21-year campaign to promote education, more than 700,000 persons are attending some kind of school. There are 14,600 teachers. In many ways, education is the largest work of the commonwealth government. In cost, it obviously is. Almost one-third of the commonwealth budget was spent on education in 1961.

One of the persistent problems in Puerto Rican education has been language. At one time there was a strong movement in favour of making English the language of instruction, inasmuch as the island's association with the U.S. appeared destined to last. For more than 30 years Spanish and English were alternated, and the result was confusion. Finally, in 1948, the island's department of education made Spanish the language of instruction with English taught throughout the educational system. Today the teaching of English begins in the first grade and is intensified from the fourth grade.

The Puerto Rican public-school system offers six years of elementary school, three of junior high and three of senior high. Exceptional children who, for good reason, need financial help to stay in school can obtain assistance from a special fund. More than 8,000 students in the public schools and the university receive such help each year.

A promising feature of the educational system is the Metropolitan Vocational school in San Juan, where as many as 15,000 students can study one of 150 trades. The school and its ways



Administration building of University of Puerto Rico, Río Piedras. Established in 1903, the university and its two branches in Mayagüez and San Juan had an enrollment of more than 18,000 students in 1960

are especially attractive to educators who come from underdeveloped countries to observe the teaching techniques used on the island. Educational radio and television—WIPR and WIPR-TV—are also vehicles for learning. In several plazas television sets have been installed for the benefit of persons who cannot afford to buy a set but wish to attend the educational TV classes. Special courses are conducted for adults who cannot read and write. Education is thus reaching all age groups.

The largest institution of higher learning on the island is the University of Puerto Rico, established in 1903 and now composed of a campus at Río Piedras, another in Mayagüez and a medical school in San Juan. In 1960 enrollment at the university was 18,223, an increase of more than 400% over 1940. The growth has been orderly. Several of the schools of the university have acquired fine reputations for scholarship and its chancellor, Jaime Benítez, is widely respected as an educator in the continental United States. The university offers the degree of M.A., but not the Ph.D. Its schools include education, business administration, social sciences, law, humanities, natural sciences, pharmacy, a college of agriculture and mechanical arts at the Mayagüez campus and the medical school. Tuition is \$72 per semester.

There are three other seats of higher learning in Puerto Rico. The University of Santa María in Ponce is a private, Catholic, coeducational establishment. The Inter-American University of Puerto Rico in San Germán is a liberal arts school, founded by Presbyterian missionaries. The College of the Sacred Heart at Santurce is a Catholic institution for girls.

The Island Culture

The Arawak name of Borinquén is still fondly applied by the islanders to describe their land and themselves. The anthem of modern Puerto Rico is entitled "La Borinquéna." Near the city of Utuado, in the western interior, are the descendants of Irish immigrants from Philadelphia. Some of them have red hair. A traveler in the mountains is struck by the high cheekbones and narrow faces of the people. These are Indian features. A popular form of music, the *plena*, is born of Spanish melody and the insistent rhythms of Africa, imported along with Negro slaves centuries ago. Not far from the frayed elegance of Old San Juan, whose streets are paved with the glazed brick that served as ballast in the sailing ships of Spain, is the modern community of Dos Pinos, looking much like a suburb of Los Angeles or Miami. Its homes are built in a modified ranch-house style, frequently with a decoration of Spanish grillwork. Throughout the island are drive-in theatres and supermarkets or *supermercados*.

All these things are indications of the little island's ability to absorb invading cultures and put its own peculiar stamp on them. To understand the islander, it is first of all necessary to know that he is not by instinct either a Spaniard or a Norteamericano, although the cultures of both have left their fingerprints on his island. He is by instinct a Puerto Rican, and so is his culture.

There are many stories of how the various cultures have affected the island. The coming of the Yankee, for instance, was greeted with fervour by some of the islanders, and they swiftly took on the Yankee's ways. When citizenship was granted, they became superpatriotic. A well-known story tells of a superpatriot who was introduced to a salesman from Illinois. He asked the salesman which part of Illinois was his home.

"Springfield," replied the salesman.

"Ah," was the misty-eyed comment by the superpatriot. "You must indeed be proud. Very proud. Springfield, Illinois, the home of blessed Abraham Lincoln, 'the Emancipator,' undoubtedly the greatest man who ever lived. Doesn't it fill you

with pride to have come from the same land made sacred by Lincoln?"

The salesman turned to a friend and asked: "What's the matter with him? Is he nuts?"

The superpatriots have declined now. The U.S. culture has been absorbed, as were the ways of the Indian, the Spaniard and the Negro. The mantle of citizenship is worn quietly, though no one can question the patriotism of the citizen. In the Korean war 43,434 Puerto Ricans joined the U.S. armed forces and, although Puerto Ricans are subject to Selective Service, 91% of them volunteered. The casualties, incidentally, were high. More than 8% were killed, wounded or listed as missing in action.

The cultures of Spain and the United States do not clash in Puerto Rico. They blend, and over them lies a patina of the Indian culture as well. Up in the hills, the favourite sport of the *jibaro* or countryman is baseball, but he is equally fond of poetry that tells of the rugged green mountainsides and the smell of the cool air after a rain and which contains many passages of Indian lore. The movie house—and there is one in practically every settlement—shows a Hollywood movie, but the music being played outside the theatre may be the bolero. There are Puerto Rican versions of hamburger stands in the city, but the islander is apt to want *arroz y habichuelas* for lunch or dinner. The debates in the legislature are carried on in Spanish, and the laws are printed in Spanish and English.

The more formal manifestations of culture—art and literature—appeared late in Puerto Rico. The first books came from Spain and the first printing press did not arrive until the 19th century. The early colonial society produced only one outstanding artist, José Campeche, who never left the island. He is considered by some critics as the finest of Puerto Rican artists, and his paintings of the Immaculate Conception and the Madonna and Child, at the bishop's residence in San Juan, are greatly admired. But there were no other painters, poets, novelists or composers of merit as Puerto Rico entered the 19th century. José Campeche was alone.

The first important native literary work, published in 1849, was *El jibaro*, an account of the countryman, the mountain peasant, by Manuel Alonso. The style does not seem to have been influenced by literary trends in contemporary Spain. Even then, Puerto Rican literature had its own distinctive flavour.

Several fine artists appeared in the mid-19th century. Eugenio María de Hostos (1839–1903), writer of novels, plays, essays and educational treatises, became known throughout the Americas. Manuel Zeno Gandía, born in 1855, was the island's first novelist. Francisco Oller became a painter of international reputation and one of his paintings, "L'Etudiant," hangs in the Louvre. Juan Morell Campos composed sentimental *danzas* that were to be appreciated in many foreign countries.

Literature in the late 19th and early 20th centuries was guided by the criticism of Manuel Fernández Juncos. Later, in the 1930s, the teachers and critics, some of them splendid writers themselves, at the department of Hispanic studies of the University of Puerto Rico had considerable influence on the modern literature of the island. Among them were Tomás Blanco, José A. Balseiro and Concha Meléndez. Enrique A. Laguerre is in many ways typical of today's writers of fiction. Most of his works represent an attempt to find a central theme for his writings in Puerto Rican life.

The *décima* is a folk poetry form, basically Spanish but again with Puerto Rican variations. There are few places on earth where poetry—often extemporaneous—is as popular as in Puerto Rico. The poems of Luis Palés Matos, who came into prominence in the 1920s, are highly regarded by many critics.

Like its writers, the island's artists are struggling to find a



Luis A. Ferré, leading political figure and industrialist of Puerto Rico, shown in a gallery of the museum of art he founded at Ponce

genuinely Puerto Rican mode of expression. The *jibaro*, dressed in near rags, his lean, dignified face somehow detaching him from the surrounding poverty, is a frequent subject. Many young artists have been encouraged by wealthy sponsors such as Luis Ferré. A distinguished industrialist and leader of the Statehood Republican party, Ferré opened the Museum of Art at Ponce and gave it "to the people of Puerto Rico." In addition to Ferré's private collection of European and U.S. paintings, the museum contains a special room designed for the permanent showing of Puerto Rican art. Hundreds of people from all over the island visit the museum each week.

Another new opportunity for Puerto Rican artists was created by Guillermo Rodríguez, a San Juan businessman. In Sept. 1960 Rodríguez opened the House of Art in a restored Spanish colonial house in Old San Juan. There contemporary work by islanders is displayed, and mature artists such as the painter Julio Rosado and the sculptor Lindsey Daen are represented, together with promising young artists such as Francisco Rodón.

Painting, music, literature and other expressions of the arts are the concern of the Institute of Culture, a vigorous establishment supported by the commonwealth government.

The decision of Pablo Casals to live in Puerto Rico, where his mother was born, led to the establishment of the Casals festival. Each spring many of the world's most celebrated musicians journey to the island to join the famous cellist and conductor in the performance of great music. The Puerto Rico Symphony orchestra is prominent in the musical life of the island.

There are five daily newspapers in Puerto Rico. *El Mundo*, *El Imparcial* and the English-language *San Juan Star* are published in San Juan, *El Regionalista* is published in Arecibo and *El Día* in Ponce. There is also an excellent English-language weekly, the *Island Times*, in San Juan. English programs may be heard on some of the island's 29 radio stations.

Television first appeared in Puerto Rico in 1954. There are eight TV stations. In 1958 the island had 170,000 television sets, or one for every three households. Today the figure is closer to one set for every two households, and television was definitely

a factor in the 1960 political campaign.

The U.S. defense establishment in Puerto Rico is not so important in the island's life and economy as is the case in the Hawaiian Islands, where military and naval spending amounts to approximately \$400,000,000 each year. Less than one-fourth of this amount is spent by the defense forces in Puerto Rico. There are six army establishments, none of them large. The navy maintains an important base at Roosevelt Roads and the air force has a major installation at Ramey air force base. The department of defense does not report the numbers of military and civilian personnel in Puerto Rico, but its total payroll on the island in 1960 came to \$58,000,000. The Commonwealth of Puerto Rico, incidentally, does not have an army, navy or air force. Its national guard has 7,800 members and the island's police force numbers 3,926.

The cost of living has risen steadily for the Puerto Rican in recent years, but family income has far outdistanced the increased cost of pork, vegetables and clothes. A survey in 1956 indicated that the real purchasing power of the family, allowing for the increased cost of living, had advanced 80.2% from 1940. This, of course, has brought changes in the Puerto Rican's way of life—a television set, more animal proteins in the diet, perhaps an automobile and a child of 14 who goes to school instead of into the sugar fields to help supplement the family income.

Some Puerto Ricans fear that the increasing investment of U.S. capital, bringing with it mainland ways, threatens to eradicate the island's old customs, its Spanish-flavoured poetry and literature, its music and the gentle manners of the people. These fears may be based on a misunderstanding of the United States itself—an image hastily drawn from a Hollywood movie or from the unpleasant stories of Puerto Ricans living in the New York slums. They do not take into account the rooted strength of the Puerto Rican culture.

The most exciting feature of the island's culture is new. It is called *serenidad* or "serenity." The 1960 platform of the Popular Democratic party, sponsoring *serenidad*, described it as a proposal to teach the people that "the production of wealth is a technique, the use of wealth is an art." It is an attempt to create an understanding that material goods, new jobs and new homes are not the ultimate goals of human life. Its author is Luis Muñoz Marín, although others have contributed to the idea. "A people cannot be fully civilized," said Muñoz, "until the economy is the servant of the people's culture and not the master."

Pablo Casals, Spanish-born cellist, a resident of Puerto Rico, conducting a rehearsal of the orchestra of the Casals festival, an international musical event held annually on the island





Priest in a mountain village teaching a class to make the sign of the cross. About 80% of the Puerto Ricans are at least nominally Roman Catholics

Serenidad thus attempts to provide a spiritual ingredient in democratic society. Its aim is to convince the Puerto Ricans that economic development means more than material wealth. An example of *serenidad* in practice is provided by a 35-year-old woman who works as a maid at the governor's mansion in San Juan. In her youth she worked to send her brothers to school. Now she is going to school. She is in the eighth grade and she intends to be graduated from the university. Her purpose is to learn more in order to appreciate the culture of her island and, perhaps, to contribute to that culture. In a world accused of emphasizing materialism to the extent of making it a philosophy of life, *serenidad* is a fascinating proposal. It will be interesting to observe how the islanders react to it.

Religion

Christianity came to Puerto Rico with Columbus, who named the island for St. John the Baptist. The early Spanish settlers brought Roman Catholicism with them, and many of the Arawaks were taken into the church.

Catholicism was more than a formal religion in colonial Puerto Rico. Often, in a town, the city hall stood on one side of the plaza and the church on the other, symbolizing the strong association between church and state.

For four centuries there were only two forms of religion of any consequence—Catholicism and a variety of spiritualism which apparently combined the beliefs of the Indians and the Negroes. After the U.S. acquired Puerto Rico there was an influx of Protestants, notably Presbyterian missionaries, and many islanders embraced the Protestant faith as a protest against the stern colonial rule of the Spanish, whose government had been so intimate with the Catholic hierarchy.

Today, between 78% and 80% of the people are at least nominally Catholic, but far fewer actively practise their religion. In their survey of social change in Puerto Rico, Tumin and Feldman studied the religious habits of the Puerto Ricans, both urban and rural. They found that 36% of the people of all religions never went to church and that 34.5% attended church less than once a week. Church attendance was higher in urban than in rural districts, presumably because the church was more accessible in the cities.

The Tumin-Feldman survey also indicated that more than

10% of the population belonged to some form of Protestantism, that about 5% were "spiritualist" and more than 3% professed no religious beliefs.

The spiritualists are everywhere on the island, and there are many sects. The leaders, some of whom are illiterate, are often worshiped personally, and the ceremonies involve superstitions and fears. In some spiritualist rites seances are conducted, the faithful listen to voices and the experience leads to a sort of religious frenzy. But there is none of the ritual violence found in the voodoo of Haiti.

The Migrants

The Puerto Rican who travels to the mainland states to live is undoubtedly the most misunderstood citizen in the U.S. Commonly identified as a "migrant," he appears to have acquired an unfavourable image in the eyes of other U.S. citizens. In many communities he is not accepted socially by the white people as a white person, while the Negroes often regard him as an unwelcome foreigner, competing for jobs and low-cost housing. There are approximately 1,000,000 Puerto Ricans residing in the continental United States. It is estimated that about 700,000 of them are migrants; the rest were born on the mainland.

The Puerto Rican journeys from his warm climate and familiar home to get a better job than he can find on his island. There is a personal chain reaction in the migration pattern. An islander who makes \$25 weekly as a farm labourer gets a letter from his cousin in New York telling of jobs in the states that pay \$100 or more. Or he hears a similar tale of the industrial El Dorado from a friend who has returned from the mainland. There are no legal restrictions on travel to the United States. The Puerto Rican is a citizen, and all he needs is the fare for the trip.

There are two kinds of migrants. One goes to the mainland to live permanently. Between 1950 and 1960 an average of 45,000 persons went to the mainland each year with the intention of staying. The other migrant is the farm worker. He travels to the U.S. in the late spring, works the crops through the summer and returns to Puerto Rico—a convenient arrangement for the sugar-cane worker inasmuch as sugar is a winter crop. This back-and-forth migration of farm labourers involves approximately 30,000 persons each year.

PUERTO RICO

Officially, the commonwealth government neither encourages nor discourages the permanent migration of islanders to the states. Because of the constant stream of islanders to the mainland, however, the government established in 1948 an employment security bureau, which attends to the migrants' problems. The policies of the migration office, an agency of the bureau, have developed into one of the most uncommon treatments of large-scale migration in history.

The migrant is not usually illiterate—the literacy rate for migrants is 92%—but in most cases his language is Spanish. Moreover, most of the migrants have had previous employment in Puerto Rico qualifying them as white collar, skilled or semi-skilled workers. Only 26% are unskilled workers when they arrive in the United States.

The migrant has no idea what winter means. The lowest temperature ever officially recorded on his island was 39° and it is still a subject of conversation. There are stories of Puerto Ricans coming into Idlewild airport in the middle of winter dressed in thin cotton clothes. Once in the air terminal, the Puerto Rican can become confused. He does not know how to secure his luggage from a distant room in the terminal; he does not know which bus to catch and his English is poor. To assist him, the migration office conducts a voluntary orientation program in Puerto Rico.

The word "migrant" is offensive to many Puerto Rican ears, and the orientation program is described by its government sponsors as "information for those who intend to travel." A film is shown in various towns and villages of Puerto Rico teaching the prospective travelers what the winter season is and how to dress for it. Other films and pamphlets explain that the traveler cannot take a basket of mangoes to the airport and expect to carry them to New York. He must prepare the fruit for transport and secure the approval of plant quarantine officials. The islander must pay a federal tax on rum carried to the U.S. The indoctrination includes directions for finding Travelers Aid at the airport if an expected relative fails to appear.

While the government does not officially discourage migration, its indoctrination program probably has that effect. The Puerto Rican is taught that hospitality in the states is not the same as the kind he knows. On the island, one family may move into a house or apartment with another, and perhaps a third family will move in later. The landlord is not likely to object, and the other tenants do not. Life in a New York city brownstone is quite different. Furthermore, some advance preparation should be made for housing before the family leaves.

Jobs are different, too, and the man who is a good carpenter but cannot speak English is informed of the perils ahead. The language difficulty encountered by such people is one of the chief reasons that English is now being taught in the public schools of the island. Although reliable statistics are not available, it is estimated that more than half the islanders speak some English.

The Puerto Rican does not know much about racial discrimination. On the island, a Puerto Rican who can afford it can and does buy a rum drink at the Caribe Hilton bar just like any Yankee tourist. Schools and public transportation are integrated and so is housing. But housing in the states is difficult to find for the Puerto Rican whose skin is not white. The migration office has branches in New York, Illinois, Ohio, Connecticut, New Jersey, Massachusetts, Pennsylvania and California to assist qualified islanders to get into federally financed housing developments. Petroamérica Pagán de Colon, director of the employment bureau, described her agency's methods: "We contact the appropriate authorities in the states' housing agency, and usually there is prompt action. But where two families get into the housing projects, there are 50 more Puerto Rican

families waiting." Indications are that the lighter-skinned Puerto Rican has less trouble getting into such housing projects.

There are Puerto Ricans in all 50 states, but they are concentrated in New York city. Between 1940 and 1947, 95% of all Puerto Rican migrants settled there, principally because it was the largest labour market in the country. This concentration appears to be thinning somewhat. Only 60% of today's migrants settle in New York city, and Florida, Connecticut, New Jersey, Illinois and Pennsylvania are becoming the homes for more and more Puerto Ricans. The estimated population of Puerto Ricans in the Chicago area in 1957 was 25,000. In south Florida, it was larger.

The Puerto Rican is not an unwelcome person to employers on the mainland. The garment industry of New York city would be crippled without the quick and skilful fingers of Puerto Ricans. It might be added that many employers would have to pay higher wages to anyone else—too frequently the Puerto Rican migrant has been exploited. The islanders also find work in the service industries, particularly in hotels. Outside of the garment industry, the service industries and agriculture, there is really no specific trade or work which Puerto Ricans favour. They have entered into every type of profession and trade.

Many references have been made to the relationship between crime and the Puerto Rican in the mainland cities, particularly New York. Young Puerto Ricans have organized into gangs in the Harlem area, and murders and other major crimes have been committed by the gang members. They have battled one another and they have battled Negro youths and whites. All this has received wide publicity. Actually there are no reliable statistics on the crime rate among Puerto Ricans. Depending on the colour of his skin, a Puerto Rican under arrest may be

Puerto Rican migrants in a garment factory in New York city. Women of the island are highly skilled needleworkers and have little difficulty finding jobs but are sometimes exploited by low wages





New York city police investigating deaths in the Puerto Rican section of Harlem. In an effort to combat the U.S. public image of Puerto Rican migrants associated with violence, the Puerto Rican Self-Help committee was organized in New York city in 1959. It consists of 160 different Puerto Rican organizations of the city

described by the desk sergeant as Negro or white. Then, too, the arresting officer rarely speaks Spanish and he is often inclined to rather automatically identify any Spanish-speaking person, arrested for a crime, as a Puerto Rican.

Concerned islanders living on the mainland have organized many social groups to combat juvenile crime among Puerto Ricans, and in some interesting instances the youths themselves have volunteered assistance. In 1959, at a time when bloody gang wars were causing near panic in Harlem, 20 gangs of young Puerto Ricans combined into the East Harlem Youth council and agreed to do away with knives and guns. A particularly helpful group, joined by 160 Puerto Rican organizations in New York city, is the Puerto Rican Self-Help committee, also organized in 1959 to combat delinquency.

The magnitude of migration plainly is influenced by the economic climate on the mainland. In the prosperous years of 1951-53 the islanders left their homes in record numbers. In the recession year of 1954 the migration declined by two-thirds, to 21,531. There are hopeful estimates that migration will decline steadily in the future, and probably it will, but it should continue to be large. Too many Puerto Ricans cannot find good jobs at home; the island is too small to support its present population and the wages on the mainland dazzle the Puerto Rican who hears an exaggerated version of the pay envelope in Chicago or New York.

THE SEARCH FOR STATUS

In Dec. 1898 the treaty of Paris laid upon the United States the responsibility for determining "the civil rights and political status" of the people of Puerto Rico. But the young republic was better equipped to win the island in a war than to govern it afterward. The question of status was to be the most controversial political issue in Puerto Rico for the next half century.

No one took a poll to find out what the people on the island wanted for themselves in the way of political status, but it was evident that many Puerto Ricans, after more than four centuries of authoritarian and often cruel Spanish domination, were not dismayed to see the old proprietors sail away. Many, however, harboured strong feelings that the island should be independent and self-governing. The United States did not appear to know what it thought, and the problem was solved temporarily by a military government, which functioned until the late spring of 1900.

The first attempt by the U.S. to determine the status of its new island was the Foraker act of 1900, under which a civil government was established in May of that year. But the Foraker act only confused the issue. The Puerto Rican, standing on his

WORLD WITHOUT WANT:

island with a U.S. flag flying overhead, was not given U.S. citizenship. His country was not incorporated as a territory. Instead, he belonged to something the federal congress identified as "The People of Puerto Rico," a body politic with the right to send a nonvoting commissioner to sit in the house of representatives at Washington and defend and promote the Puerto Rican's rights, whatever they were. The islander was not subject to federal taxes. Federal excise taxes collected on Puerto Rican goods sold in the U.S. were returned to the island's treasury. A temporary tariff on shipments of goods between the U.S. and Puerto Rico was imposed in order to raise revenues for the empty Puerto Rican treasury.

In its economic aspects the Foraker act was fair and even imaginative. Politically, the island was not given much opportunity to govern itself. The executive authority was vested in a governor, appointed by the president. The governor's cabinet was appointed by the president. Members of the executive council, a sort of senate, were appointed by the president, and so were justices of the island's supreme court. Only in the house of delegates, the lower house of the legislature, were the people permitted to have a voice. Delegates were to be elected by the islanders.

Thus, the United States adopted a political system strikingly similar to the one by which England governed its colonies and probably less democratic than what Spain had promised in the 1897 charter of autonomy. There was nothing to suggest that the American people were against either citizenship or self-government for the Puerto Ricans. An inexperienced U.S. had suddenly inherited an island a thousand miles away, inhabited by almost 1,000,000 people who spoke Spanish and lived in awful poverty, and it did not know how to proceed.

Both Pres. Theodore Roosevelt and his successor, William Howard Taft, urged the congress to pass a law making the Puerto Ricans U.S. citizens. Secretary of War Henry Stimson, testifying before the senate in 1912, said he saw no inconsistency between U.S. citizenship for the Puerto Ricans "and the ultimate ideal that Porto Rico shall have practically an independent government. I think that is what most of the people of the United States would prefer. . . ."

It remained for the administration of Woodrow Wilson, and his appointee as governor of the island, Arthur Yager, to actually goad congress into reform. In 1916 congress passed the Jones act, which gave the islanders U.S. citizenship more than 18 years after their island had become the responsibility of the

Applicants lined up at the Latin American employment centre opened in New York city by the state employment service in 1961. It serves all Spanish-speaking people of the city



PUERTO RICO

U.S. There were critics of this almost two-decade delay. On the other hand, the Spanish crown had been much slower in granting such elementary liberties in its four centuries of rule.

The Jones act also did away with the executive council, replacing it with a legislature composed of a house and senate, both elected by the islanders. The other vital positions, however, including the governor and supreme court justices, continued to be appointed by the U.S. president.

The economy of Puerto Rico had expanded rapidly after 1900, but too frequently the fruits of expansion were enjoyed by too few people. Sugar became the staple of the export trade after the hurricane of 1899 had reduced the coffee crop to rubble. U.S. technical know-how quickly increased sugar output and within 22 years—by 1920—annual production had jumped 700%. At the same time, fewer and fewer people in Puerto Rico owned any sugar lands. The Foraker act provided that no corporation or person could own or lease more than 500 ac., but the provision was not enforced until the political reforms of the 1940s. Until then four sugar companies, owned largely by mainland citizens and corporations, controlled almost 170,000 ac. or about 20% of all farmland on the island suitable for permanent agriculture. One company alone controlled more than 50,000 ac.

Poverty remained the lot of the many, and it was only because the islander did not need many clothes and could grow his own food that he survived in the bleak economic environment.

The Era of Poverty

One word describes life in Puerto Rico during the years following World War I, and that word is poverty.

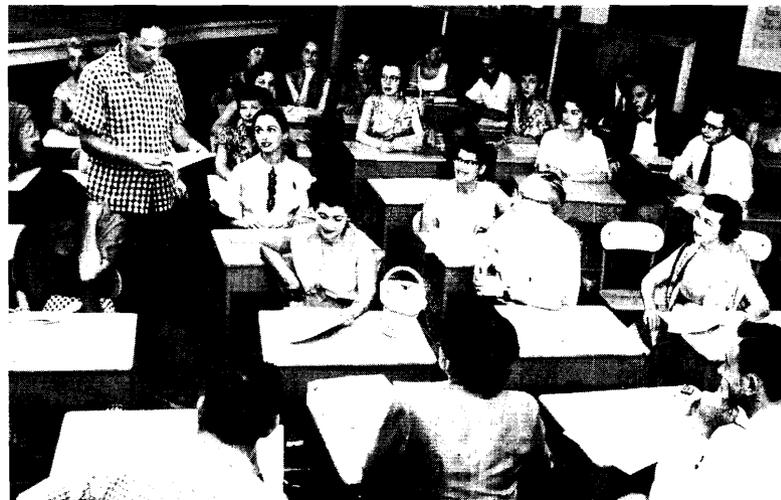
The semipaternal policies of the United States had not yet really clarified the status of the islanders. There was no economic policy for the island. The almost-1,000,000 population of 1900 had increased by nearly 50%, but the economy had not expanded correspondingly. The only sector of the economy which had grown was sugar, and sugar was at least as much a curse as it was a blessing. In his study of Puerto Rico's reform in the mid-20th century, Earl Parker Hanson wrote:

By 1930 the island's social, economic and political system was geared almost exclusively to sugar. Transportation by highway or railroad was constructed to serve sugar; agricultural credit—the first essential for growth and development—was available only in sugar; with the exception of needlework—a sweatshop industry dominated by New York jobbers and based on the cheap labor of a stricken society—nearly all existing industries served sugar; business depended largely on sugar for its well-being; politics was dominated almost completely by the absentee-controlled sugar industry. (Earl Parker Hanson, *Puerto Rico: Land of Wonders*, p. 54, Alfred A. Knopf, Inc., New York, 1960.)

Theodore Roosevelt, Jr., who served from 1929 to 1932, was one of the few governors appointed by the president to make a continuing, personal investigation of conditions on the island. In 1929, in an article published in the *New York Herald Tribune*, Roosevelt wrote: "Riding through the hills, I have stopped at farm after farm where lean, under-fed women and sickly men repeated again and again the same story—little food and no opportunity to get more."

The sugar industry, of course, was the principal employer on the island. More than 90,000 persons had "sugar" jobs, but most of them were farm labourers who worked only five months each year, the time required to harvest the crop. Then came the "dead time" and unemployment. There were some reports of starvation on the island and stories of near starvation were commonplace.

Contrasted to this massive poverty, the attempts by the U.S. to help the island seemed paltry. Education was the primary project, and hundreds of U.S. teachers had gone to Puerto Rico to teach the people how to read and write. Public health, sponsored by such gifted and earnest physicians as Bailey Ashford, was promoted within limited budgets.



Evening class in English for adults in a Puerto Rican school. Many of the students are prospective migrants to the U.S.

Adding to the misery, in 1928 a hurricane named "San Felipe" tore across the island. Like a similar storm of 1899, it left much of the agriculture in ruins. The 1929 coffee crop was only a tenth as large as before the hurricane, and many growing seasons were needed before full production was restored.

All in all, Puerto Rico deserved its nickname of the "poorhouse of the Caribbean." A study by the Brookings institution in 1929 reported that the average weekly wage of a Puerto Rican working-class family was 85 cents per person, or 12 cents a day. In a later survey, Estéban Bird, a Puerto Rican economist, discovered that 94% of these weekly earnings were spent on food, mostly polished rice.

It was strange, indeed, that people with empty stomachs continued to debate political status with so much fervour. They seemed to assign a higher priority to this political item than to economic reform. But economics were influencing political thought. The poverty inspired a popular sentiment for independence among the islanders, who reasoned that they could not be worse off than they were under the U.S. flag.

It is possible that the Puerto Ricans would have abandoned their historic nonviolent ways had not reform come with the election of Franklin Roosevelt in 1932. The new president quickly established the Puerto Rico Emergency Relief administration, which was to spend \$1,000,000 a month, mostly to provide food for people not far removed from starvation. Another one of the alphabetical agencies, the Puerto Rico Reconstruction administration, was organized to aid the island's economy and financed with an appropriation of \$40,000,000. Responsibility for the island was moved from the war department, where it had been since the Olmstead act of 1909, to the department of the interior, where President Roosevelt reasoned that economic assistance could more appropriately be administered. PRRA created some jobs and it did assist the island's economy, but it did not really ignite economic reform. It merely kept things from getting worse.

About the same time, President Roosevelt ordered one more change for Puerto Rico, and it was symbolic. Since taking over the island, the U.S. had referred to it as "Porto Rico" and the name "Porto," neither Spanish nor English, had acquired official use. Roosevelt restored "Puerto" in an executive order.

Reform

Out of the leaden poverty on the island and the new liberalism in Washington came the opportunity for political reformers in Puerto Rico. The leader of these reformers was Luis Muñoz Marín, son of the patriot Muñoz Rivera. After a somewhat Bohemian life as a poet, writer and editor in the states, Muñoz Marín

returned to Puerto Rico in 1926 and assumed management of his father's crusading newspaper, *La Democracia*. He argued for independence, and his argument was as popular as it was simple: Puerto Rico couldn't be much worse off, and Puerto Ricans had to determine their own affairs if their affairs were to improve.

Muñoz Marín had been attracted by formal socialism, but he abandoned that philosophy when he joined the Liberal party on his native island. In 1932 he ran and was elected senator on the Liberal ticket. What with his newspaper, his political position and his influential friends in the New Deal at Washington, Muñoz became the most effective agitator for reform. In 1936 Sen. Millard Tydings, Democrat of Maryland, introduced a bill for Puerto Rican independence, but his proposal would have given the island almost no time for adjusting its economy to the new status. Muñoz traveled to Washington, authored a more reasonable independence bill which was introduced in congress but failed to get much support.

In 1936 Muñoz pressed for a boycott of the election, arguing that the Tydings bill had confused the issue of independence. The Liberal party leaders thought otherwise and the young reformer was expelled the following year. Many observers imagined that Muñoz Marín, only 39 years old, was just about through as a political influence on the island. He had been denounced by his fellow reformers and he had no party.

The next year, 1938, he formed his own political party, the Popular Democratic movement, and he rode the fragile vehicle against the established political powers in the fateful election of 1940. This election can fairly be said to mark the beginning of reform in Puerto Rico.

Muñoz had fallen away from his zeal for independence. He made status a secondary issue. Instead, the Popular Democrats campaigned on the issue of domestic economic reform. Economic recovery was the first plank in the platform, and the islanders were promised that the long-ignored 500-ac. limitation on land ownership would be enforced. In surprising returns, the Popular Democratic party won control of the senate and lacked only two members of having a majority of the house. Three members of the house, elected on a Republican reform ticket, joined the Democrats, and Muñoz Marín had established himself as the first political personage of Puerto Rico.

In 1941 President Roosevelt appointed Rexford Guy Tugwell

as governor of the island, and this was to hurry the reforms urged by Muñoz and his Popular Democrats. Tugwell brought much experience to the governor's office. He was a political economist who had been a professor in mainland universities. He had served as chairman of the New York City Planning commission and had held various offices under the New Deal, among them that of undersecretary of agriculture. Moreover, Tugwell was sympathetic to reform. Severely criticized by conservatives on the mainland, it is likely that of all the governors appointed by presidents he was the one most respected by the majority of Puerto Ricans.

Tugwell's attitude toward change was quickly revealed. Other governors had never encouraged, and some had used their power to kill, any attempts to enforce the 500-ac. limitation. Governor Tugwell championed the Popular Democrats' proposals for land reform. A Land authority had been established, and it was joined, in 1942, by other of the public corporations which Tugwell seemed to favour as instruments of public administration for development purposes. Tugwell was also largely responsible for creating the Puerto Rican Planning board in 1942, and giving it the job of preparing the capital budget and conducting over-all economic planning work.

All during Tugwell's administration, from 1941 to 1946, the economic interests adversely affected by the reforms carried on a persistent campaign of criticism to the effect that socialism was being planted under the U.S. flag. There is considerable evidence that political groups allied with the disturbed economic interests tried to slow and even detour the reforms. In retrospect, Tugwell is seen as a gifted administrator who, along with Muñoz Marín, guided the economic development of an island that had been impoverished for centuries.

Self-Government

During World War II the alcohol which had formerly gone into whisky was needed for the war effort by the Allies. But Puerto Rican rum was available in the United States, and it sold in great quantities. Rum became a sort of financier for the various reform plans on the island. Between 1941 and 1946, federal excise taxes collected on the sale of Puerto Rican rum in the U.S. and remitted to the Puerto Rican treasury amounted to more than \$160,000,000 above normal revenues.

Luis Muñoz Marín (left), first and only elected governor of Puerto Rico, entered public life in 1926 as manager of La Democracia, leading newspaper of the island which at that time advocated independence. As a political reformer, Muñoz Marín used such devices as the newspaper advertisement below which urged the people to vote for "self-respect instead of money," a reference to the common practice of selling votes



VERGUENZA

Esta es la UNICA insignia del
Partido Popular Democrático



CONTRA

VOTE X ASI

DINERO

PUERTO RICO

German submarines worked the waters between the states and the island. Puerto Ricans went to war too. Approximately 65,000 of them, mostly volunteers, served in the U.S. armed forces. Land reform could be managed during the war years, but the development of new industry had to wait until the seas were safe and until mainland investors could retire from war-goods production and take up peacetime manufacturing.

Tugwell resigned as governor in the first postwar year, 1946, and it was no secret that he quit because of hostile sentiments in congress. He appeared to believe that hostility toward him would injure Puerto Rico. In his place, Pres. Harry S. Truman appointed Jesús T. Piñero, a founder of the Popular Democratic party and the first islander to be named governor.

The first political personality in Puerto Rico, however, was still Muñoz Marín. When the Jones act was amended in 1947, giving Puerto Ricans the right to elect their own governor (and permitting the governor to name his own cabinet, with the consent of the island senate), Muñoz was a natural candidate for the office. His Democratic party received 392,000 votes. The Statehood Republicans got 88,000 and the Independence party ran third. In 1949 the new governor journeyed to Washington to meet with President Truman. He recommended that Puerto Rico participate in the Point Four program as a partner, inviting persons from underdeveloped countries to the island to observe what the association of the United States and the Puerto Ricans was achieving.

In reality, the achievements at that time were promising but hardly staggering. More than 25% of the annual budget was being spent on education and literacy had been raised to 75%. The self-help approach in housing, by which families worked together to build their own homes, was just beginning. So was the industrial development program. It was clear, however, that the economy of the island was improving and continued economic growth seemed certain. The reformers now turned to the issue which had been postponed until economic recovery had begun. New debates started on political status.

The relatively small vote for either statehood or independence made a third alternative an obvious possibility. In 1950 Antonio Fernós Isern, the resident commissioner in Washington, introduced a bill which would afford Puerto Ricans a chance to vote on whether they wanted to write their own constitution under a compact with the United States. The bill passed and became known as public law 600. The Puerto Ricans, in referendum, voted their approval by a large majority.

The following year a constitutional convention, representing various shades of political opinion, drafted a constitution which was submitted to the Puerto Ricans in March 1952. Again the islanders approved, this time by a vote of more than four to one. On July 25, 1952, the commonwealth was proclaimed. Puerto Ricans were U.S. citizens in an "associated free state." Federal laws wherever applicable (except for tax laws) were in effect and the compact could be amended at any time by the mutual consent of the two parties. For the first time since the treaty of Paris the islanders had status. Their oldest political problem had been solved.

Commonwealth

The Puerto Rican lives on a special civic plateau which many of his fellow citizens in the continental United States surely would regard as a near paradise. He is a citizen of the country, he enjoys most of the benefits of the mainland citizen, but he pays no federal income tax.

The commonwealth has been described as "a new kind of state" and it is obviously that. There is nothing quite like the Commonwealth of Puerto Rico in the world. A citizen, paying no federal income tax, the Puerto Rican does not vote for U.S.

president. He is represented in the congress by a resident commissioner, who does not have a vote. Most federal agencies, such as the Federal Housing administration, have offices on the island. The court of last resort for a Puerto Rican is the supreme court of the United States. The high court, however, declines to hear local matters not involving constitutional questions unless, in the opinion of the court, a situation exists which is "inescapably wrong." The currency of the island is the U.S. dollar. Puerto Ricans, by their own choice, pay into the social security fund in the same manner as mainland citizens. The islander is subject to the draft.

In domestic affairs, Puerto Rico is organized very much like any state. The government is composed of executive, legislative and judicial branches. The executive of Puerto Rico is more powerful than in the mainland states, but it owes its influential role largely to the personality of Muñoz Marín. Probably the power of the legislature will increase and that of the executive will diminish after Muñoz leaves office. Members of the legislature, both the house and the senate, are elected by popular vote. Members of the supreme court are appointed by the governor with the consent of the senate.

Politically, the commonwealth scheme is a compromise between the desire of a majority of the islanders for a close association with the United States and their equally strong desire for enough independence to protect Puerto Rican culture. A strong economic argument against statehood was sounded in the debate preceding the 1951 referendum: if Puerto Rico selected statehood, where would the island, relatively poor in 1951, acquire the almost \$200,000,000 estimated as necessary to pay the federal taxes? A majority of Puerto Ricans seemed to share this fear.

The first formal suggestion of something between statehood and independence had appeared in a bill for self-government submitted to congress in 1922. The bill was drafted by a Puerto Rican lawyer, Miguel Guerra Mondragón, and the name for the proposed government, translated into English, was associated free state, precisely the name adopted 30 years later. But this early bill died in congress.

Shortly after World War II, Muñoz Marín had thought aloud of statehood and independence in a series of articles published in the newspaper *El Mundo*. He favoured neither of the two traditional proposals. There must, he said, be a philosophical search along new roads to find the best status for Puerto Rico. The year Muñoz was elected governor, 1948, his party nailed into its platform the appropriate plank: a larger degree of self-government was needed for Puerto Rico, but close relations with the United States should not be sacrificed. The commonwealth was the obvious answer.

The most interesting features of the commonwealth are that it is a permanent arrangement between the two parties, Puerto Rico and the U.S., as long as both parties are agreeable, and that the scheme may be refined by mutual consent. Muñoz, in his 14th year as governor, advocates refining the agreement. "I believe in a permanent association with the United States and I think the advisable road is to further develop the Commonwealth concept."

One development the governor believed necessary was to repeal the U.S.-imposed debt limitation and permit the islanders to decide what the debt limit should be. This suggestion was passed into law by the 87th congress in the summer of 1961. Another, somewhat unusual, suggestion made by the islanders to the 87th congress was that Puerto Rico be permitted to contribute to the national treasury in Washington. The idea of asking to contribute dollars to the federal government, thereby establishing a quasi-tax precedent, possibly stemmed from Puerto Rican fears that a federal court might one day interpret the common-



Troops of the 65th infantry regiment of Puerto Rico marching at Camp Tortuguero in 1951. Puerto Ricans fought in both World War II and in Korea

wealth compact so that the islanders would have to pay taxes according to a formula they had no voice in deciding.

Taxation is only one of the reservations Puerto Ricans have about the commonwealth concept. "It is vital to give clear interpretation to the compact made between Puerto Rico and the United States," said Muñoz. "If it is someday interpreted as a compact whereby the United States can change the economic agreements, the taxes, the free trade, then it is the worst possible concept, and the courts could one day in the future give the wrong interpretation to the agreement between Puerto Rico and the United States."

The governor admits he and his fellow islanders "did not foresee many things" in drafting the original proposal. Such matters as the debt limitation and the possibility of erratic court interpretations only came to attention later. "We cannot remedy the faults in the compact one by one," he has said. "We should sit down, the United States and Puerto Rico, and spell out what changes are needed, and, of course, give a clear interpretation to the compact."

The Puerto Ricans realize that someday they may be asked to make substantial contributions to the national treasury, and they appear as reconciled to this as the man on the mainland is reconciled to paying income taxes now. But there is the problem of timing. Puerto Rico is a developing country, not a developed one, and the political leaders of the island do not want any form of federal tax—or any radical change in the economic association—imposed on the people until the per capita income is sufficient to carry the load. An indication of what time might be right is contained in sec. 16, as amended, of the Fernós bill. This section provides that the present economic agreement continue until the per capita income in Puerto Rico reaches the level of the mainland state with the lowest per capita income. Estimates of when this will be vary from 1975 to near the end of the century.

"At that time," says Muñoz, "many things may have changed. Perhaps then the people of Puerto Rico and the United States may wish to change the relationship of the two parties. Perhaps there might be a vote on statehood. Or continued Commonwealth."

The admission to statehood of Hawaii, on the other side of the mainland, prompted new interest in statehood for Puerto Rico. The metropolitan area of San Juan is speckled by signs, large and small, reading "51." They appear on buildings, on gates and on the bumpers of automobiles. One of the men whose words are most influential on the island is Luis Ferré, twice a candidate for governor and twice defeated by Muñoz Marín. He believes that the signs in San Juan are prophetic and that Puerto Rico will become the 51st state. "The Commonwealth is but a step towards statehood."

Ferré, a leading industrialist on the island, does not believe that statehood would cost the island anything approaching the almost \$200,000,000 which is popularly quoted, and to prove it he invited the economist Arthur Burns to Puerto Rico to determine what the cost would be. Burns included in his calculations the benefits Puerto Rico would gain as a result of statehood. For example, under the U.S. Sugar acts the island is permitted to refine a limited amount of its own sugar. As a state it could refine all its sugar, and Burns estimated that this would provide an annual income of \$51,000,000. Other revenues, such as certain federal assistance given to states, could reduce the cost to approximately \$18,000,000. Ferré believes this is a small cost for statehood, and even this would be converted into a profit as new industries and more tourists were attracted to the nation's newest state.

One other argument for statehood is that Puerto Rico, as a state, would be more secure from any future designs by a hostile Caribbean government. The presence of what is regarded as an unfriendly government in Cuba gives point to the argument, but it is obvious that the United States would rush to defend Puerto Rico from any foreign aggression.

Supporters of Ferré and statehood contend that recent elections imply a changing sentiment away from commonwealth status and toward statehood. They point out that Ferré's vote in 1960 represented a slightly larger percentage gain than the vote for Muñoz and the commonwealth. This is true. In 1956 Ferré, running on the statehood ticket, received 172,000 votes, and Muñoz got 433,000. In 1960 Ferré was given 253,242 votes and

PUERTO RICO

Muñoz 459,759. The 1960 election, however, was carried on in the midst of a furious controversy between Muñoz and the Catholic Church, and the religious issue was at least as important as statehood.

The independence movement, which rejects both the commonwealth and statehood, is on the decline. A considerable majority of the islanders appear committed to some sort of close association with the United States.

The commonwealth scheme is not well understood. Critics in other parts of Latin America, to the political left and right, seem to regard it as a new-fangled and subtle way for the U.S. to dominate Puerto Rico at a time when colonialism is becoming a dirty word. It is often said that the commonwealth is "colonial semantics" and that Puerto Rico is nothing more than a *yankilandia* set out in the sea and held by the U.S. on a bowline called "commonwealth." These accusations are not fair. The people of Puerto Rico voted freely for their association with the U.S. Moreover, they are running their own affairs as much as the people of any mainland state—perhaps more, because Puerto Rico is separated from the mainland by both geography and culture.

Some fair-minded persons are still suspicious of the commonwealth as a truly "associated free state." David Ben-Gurion, the prime minister of Israel, asked Secretary of State Sánchez Vilella just what the United States got out of this unusual association.

"Not as much as the people of Puerto Rico," said Sánchez.

"Then the Commonwealth is truly a tribute to the political system of the United States," said Ben-Gurion.

And this, indeed, it seems to be.

Politics

In the autumn of 1960, Puerto Rican politics became a warm conversational topic in every one of the 50 states.

John F. Kennedy was campaigning as the Democratic party's nominee for president, and if he won, he would become the first Catholic to serve as chief executive. Some of his less responsible opponents were saying that a Catholic would be subservient to the interests of his church whether or not they conflicted with the interests of the nation. Much the same thing had been said of another Catholic, Alfred E. Smith, the Democratic candidate for the presidency in 1928. Now, again, the issue of separation of church and state was being raised.

In October an unexpected incident brought the religious issue to the forefront of the campaign. Archbishop James P. Davis of San Juan, Bishop James E. McManus of Ponce and Bishop Luis Aponte Martínez, titular bishop of Lares, issued a pastoral letter prohibiting the Catholics of Puerto Rico from voting for Muñoz Marín and the Popular Democratic party. The bishops said: "It is our obligation to prohibit Catholics from giving their votes to a party that accepts as its own the morality of 'the regime of liberty' negating Christian principles." A new party, Christian Action, was formed which took the bishops' position as its platform.

The reaction to the pastoral letter and the new political party came quickly. Kennedy issued a statement expressing his view that the bishops' action was "wholly improper." On the island professors from the University of Puerto Rico picketed the cathedral in San Juan. The *San Juan Star* accused the bishops of having "grievously transgressed against the people of Puerto Rico, against the country and against the Catholic church" and urged the pope to withdraw the three bishops from the island and replace them with "representatives of Catholicism who recognize the indispensability of the principle of separation of Church and State." (The *Star* was awarded a Pulitzer prize for its editorials.) Muñoz, the target of the pastoral letter, announced: "The simple and basic principle involved in all this

is that no Puerto Rican should obey political orders, even by the clergy."

The Puerto Ricans did not. Muñoz was re-elected by almost a 2:1 ratio. The Christian Action candidate, Salvador Perea, ran far behind.

Apparently, the bishops opposed Muñoz largely on the grounds of their opposition to laws allowing dissemination of birth-control information and making sterilization legal. These laws had been passed in 1936 by a legislature dominated by the old, and now defunct, Republican party, but they had not been enforced until the Popular Democratic party came to power. Under the Popular Democrats, public health stations had been established throughout the island and contraceptives could be had there for the asking.

Ferré was accused of sponsoring the bishops' action, but there is nothing to indicate that this allegation was anything more than the outgrowth of passionate politics. Ferré said the bishops were wrong to suggest that it would be a sin to vote for Muñoz, but he did argue that the bishops had a right "to protect their views against" him. It was not known at the time, but Ferré had tried to persuade one bishop not to sponsor a new political party. "I knew," he said, "that such a party would hurt my own candidacy, would hurt Puerto Rico and would hurt the church."

Even with the advantage of hindsight, it is difficult to say how much the intervention of the bishops played in the re-election of Muñoz. Before the bishops spoke, the central issue had been statehood, espoused by Ferré and the Republicans, versus a continued commonwealth, supported by Muñoz and the Popular Democrats.

The Statehood Republican and Popular Democratic parties dominate the politics of the island. The Independence party appears to be a declining factor. Splinter blocs have abandoned it and preached independence with varying degrees of enthusiasm. Another political party, the Nationalists, has not registered for an election since 1932 and it is generally believed there are only about 100 members remaining. Essentially, it is a terrorist organization, and twice its members have attempted assassination on the mainland. In 1950 the Nationalists tried to shoot their way into Blair house, where President Truman was residing, and in 1954 a small band of Puerto Ricans thought to be Nationalists shot and wounded five U.S. congressmen from the public gallery of the house. The Nationalists appear to be motivated chiefly by hatred of the United States and their other purposes, if any, are vague. Pedro Albizu Campos, their hero, is hopelessly ill and is being treated while in custody of the commonwealth government. Fellow Nationalists sometimes accuse the government of holding Albizu Campos a prisoner, but there is no evidence that the government is doing anything more than attending to the medical needs of the sick man while keeping him from being used by fanatics.

Castro agents have investigated the possibilities of using the Albizu Campos case for propaganda purposes. The Castro government is not popular in Puerto Rico. According to the best intelligence sources, Communism in Puerto Rico has only about 25 adherents.

Most Puerto Ricans are enthusiastic about their politics. In addition to using radio and television, candidates canvass the interior with sound trucks. In the 1960 election, more than 83% of the registered 937,531 voters went to the polls.

One of the interesting developments of party politics is the tax-supported common fund, from which the major parties draw \$75,000 a year, and \$150,000 in a general election year, to finance their activities. The fund was authorized by a 1957 law, proposed by the Popular Democrats in their platform a year earlier.

Politics takes on a personal tone in Puerto Rico. Many of the people, especially in the rural interior, vote for personalities

rather than philosophy. Muñoz probably could be elected on a Free Soiler ticket. Similarly, Ferré would be popular no matter what party he represented.

Muñoz is an affable, humorous man, a splendid phrase maker. He is also an intellectual, whose appetite for reading is enormous. He entered Georgetown University at the age of 14, later became a writer and a poet and published two books. His successful campaign of 1940 was highly moralistic in tone. One of his most vigorous appeals was to the poor citizens, urging them not to sell their votes (two dollars was the going price for votes at the time).

Ferré, a member of a wealthy family of Ponce, is an alumnus of the Massachusetts Institute of Technology. After graduation, he joined his family's industrial enterprises. In 1940 he campaigned for the office of mayor of Ponce on the ticket of the Unification party, a reform group that had broken away from the Republicans over the issue of corruption within the party. Ferré lost the mayoralty race, but the new party did carry three seats in the island's legislature and these three representatives voted with Muñoz' Popular Democrats to give Muñoz' party control of the house. "Muñoz started out with our votes," said Ferré. "You might say we made it possible for him to initiate reform."

Later, in 1952, Ferré served in the legislature. In 1956 he opposed Muñoz for governor as the candidate of the Statehood Republican party, a new, reform-minded party which had replaced the old Republicans. Ferré attracted 173,000 votes, but Muñoz got more than twice that number.

Ferré's influence extends beyond the island. The Republicans in Puerto Rico, unlike the Popular Democrats, are formally associated with the mainland party. The Statehood Republicans send delegates to the Republican national convention, and in 1952 millions of mainland TV viewers were amused when the Puerto Rican delegates stalled the entire convention by demanding that their delegation be polled. Not all the Puerto Rican delegates were present to answer the roll call, there was controversy within the delegation and the convention rostrum was manned by a gentleman with a hearty Irish accent, who could no better understand the Puerto Ricans at times than the islanders could understand him.

OPERATION "BOOTSTRAP"

Puerto Rico has been a land of flattering statistics and miserable realities. The statistics are still flattering, but the realities are getting better.

—Luis Muñoz Marín, 1961

Two of the most frequently heard words in Puerto Rico are Operation "Bootstrap." They are used, even by Puerto Ricans who speak hardly any English, to describe the economic drama which began in the early 1940s, when their island was pauperized, its population exploding and its economy stagnant. At that time Puerto Rico had a one-crop economy. Sugar accounted for more than two-thirds of the income earned by exports. Production had increased spectacularly from 1897, when the harvest amounted to 70,000 tons, to the middle 1930s, when more than 1,000,000 tons were produced annually. However, four mainland sugar companies controlled approximately 20% of the land suitable for permanent agriculture, and of the 166,100 ac. they managed, only 75,900 ac. were actually used. The remainder served as pasture, "buffer lands" and reserve. Hundreds of thousands of rural Puerto Ricans were landless. Reports of near starvation were common.

After the reformers won control of the legislature in 1940, they initiated the economic programs that in time were to become known collectively as Operation "Bootstrap." The success of these programs can be measured in the growth of Puerto Rico's annual net income, from \$225,000,000 when the reforms began

to more than \$1,500,000,000 in 1961, or 700% in two decades. In the same period per capita income rose from \$121 to \$571. This was largely the result of new industry. In fiscal 1949 there were 52 manufacturing plants on the island. By the end of fiscal 1962 it was estimated that the number of factories in operation would exceed 660.

Operation "Bootstrap" is not a formal doctrine. It is a general effort to promote all sectors of the economy, involving every agency of the commonwealth government and private interests as well. Eight public corporations participate in "Bootstrap" by attracting new industries, providing financial assistance for them, producing electric power, constructing public housing, operating ports, airports and the San Juan bus system, running the water supply and sewage disposal systems, administering a small telephone and telegraph system and managing farming operations on a limited, co-operative basis.

The policies of these corporations are determined by the commonwealth inasmuch as government officials of cabinet rank sit on their boards of directors. The device of the public corporation, a distinguishing feature of public administration in Puerto Rico, has several advantages. As a public corporation establishes a record of earnings, it can borrow from private sources on its own credit without diminishing the government's borrowing power.

The degree of government participation in Operation "Bootstrap" has changed considerably over the years. The gross new fixed investment on the island during 1949 was \$116,000,000, of which the government provided \$55,000,000 or nearly half. A decade later investment had risen to \$300,000,000 yearly, but the government's share was \$100,000,000 or about one-third.

Asked to describe the philosophy of Operation "Bootstrap," Rafael Picó, a geographer who became president of the Government Development bank, answered that its basic meaning was to increase the self-reliance of the islanders.

"Puerto Ricans," he said, "relied too much in past years on what came from Washington. We are trying to use the latent energy of the people on our island. Uncle Sam helped Puerto Rico for 40 years and nothing much happened. We believe that financial and other help is needed for a developing society, but we also believe that the greater part of the work must be done by the people who live in the developing society."

Picó acknowledged that many critics of the development schemes believed there was more socialism than capitalism in the programs. "There are people who disagree with the ways things have been done. But the government has no desire to operate any factories. It is true we have built and we have managed factories, but the difference is that we built and managed factories like Socialists and then sold the factories to private interests like Capitalists. Every factory building owned by the government is for sale and we will finance the purchase from us. A 60 percent loan, based on appraised value, is available from the development bank and another 20 percent can be obtained from the development corporation."

Whether it is more capitalist or more socialist, "Bootstrap" is the economic theme in Puerto Rico today, and it influences the lives of the islanders as much as the New Deal ever influenced the people on the mainland.

Fomento

It is said that rum is the "genuine spirit" that made Operation "Bootstrap" a success. Certainly the revenue from rum helped to trigger economic development. When other kinds of hard liquor became scarce during World War II, rum factories on the island were busy 24 hours a day filling mainland orders. By agreement, excise taxes on Puerto Rican rum sold on the mainland are returned to the Puerto Rican treasury and, as related earlier, from 1941 to 1946, revenues from this source amounted



Cutting cane in a Puerto Rican sugar field. Sugar represented the great bulk of the country's income until Operation "Bootstrap" was established to free the island from a one-crop economy

to approximately \$160,000,000 more than "normal" anticipation, and this money was used for the initial investments in the public corporations.

Also contributing to the upsurge in the island's economy during the war years was the coming of the U.S. armed forces. The "war dollar" was not as important in Puerto Rico as in Hawaii, but its effect was still considerable.

In 1942 the Economic Development administration was established. Known in the island as Fomento, a Spanish word for development, the new public corporation was given the task of creating new jobs by building up Puerto Rican industry.

Fomento was given an appropriation of \$500,000 and a \$2,000,000 cement plant which had been built by a federal government agency to provide employment. The appropriation was raised shortly to \$20,000,000 when the proportions of Fomento's task became apparent. With these funds, Fomento began by building a glass-container plant. The government had been unable to encourage bottling manufacturers on the mainland to locate in Puerto Rico, and millions of new bottles were needed for the increased production of rum. A plant to manufacture paper cartons for the filled bottles was the second Fomento enterprise. Within five years Fomento had five plants in operation: the original cement plant, the bottle factory, the carton plant, a shoe factory and a plant manufacturing structural clay products. Funds were committed for a \$7,000,000 resort hotel and a \$4,000,000 cotton-textile plant.

By that time almost all of the original \$20,000,000 appropria-

Cases of rum being readied for export to the U.S. in the 1940s. Income from rum during World War II, when other liquors were scarce in the U.S., provided a boost in the developing economy of the island



tion was gone and, with the return of peace, scotch and bourbon, the prosperous rum days were over. Only 2,000 jobs had been created by the Fomento industries and 100,000 were needed. Furthermore, the extent of government participation in the island's economy had aroused fears on the mainland, particularly in congress, that Puerto Rico was becoming socialist.

Then, in 1947, Fomento sold the glass plant, the clay factory, the paper-container factory and the cement plant to the Ferré Industries for \$10,500,000, following public bidding. According to the administrators of Fomento, they had come to realize that the island government could not possibly provide sufficient investment capital to create 100,000 new jobs, the goal of the program. At the rate Fomento spent its capital in proportion to jobs created, \$2,000,000,000 would have been required to provide 100,000 new jobs.

Fomento thus changed itself into an agency for attracting industry rather than building it. It offered factory space to investors, assisted in financing new enterprises, answered inquiries, helped in selecting factory sites and, above all, tried to convince potential investors that Puerto Rico was a good place to locate. A ten-year exemption from corporate income taxes was given to new enterprises. (As an incentive to disperse industries in the distressed areas of the island, the tax-free period was extended to 13 years in 1961 on condition that Fomento select the site for the new factory.) Another attraction was the relatively lower wage scale. Fomento rented offices in New York, Chicago, Miami and Los Angeles to carry on its program of selling Puerto Rico.

Ferré feels that Fomento was nothing more than a "socialistic experience which failed. The glass plant, the clay factory and the carton plant all were losing money when we purchased them from the government. Only the cement plant was in the black. The role of 'Fomento' was changed because 'Fomento' was losing too much money and also because American investors were shy of this kind of government ownership and operation. A year after we acquired the holdings all the factories were making money, wages had been increased and we were paying taxes. The economic development program then started gathering steam."

He suggested that he, not Muñoz Marín, actually launched Operation "Bootstrap." "The government took the \$10,500,000 we paid for the factories and this freed 'Fomento's' hands from running the factories and paying an annual deficit for the privilege. It gave 'Fomento' time as well as money to promote new investments in Puerto Rico. It changed the complexion of the economy from state Capitalism to private enterprise and the success of the four plants we purchased proved dramatically that industry could succeed in Puerto Rico."

Whatever the merits of this argument, official credit for the success of Fomento must go to the Muñoz administration and especially to Teodoro Moscoso, who directed Fomento until his appointment as U.S. ambassador to Venezuela in 1961. The results of Fomento's work are spectacular. Factories promoted and assisted by Fomento employ 54,000 people and almost 50,000 other jobs have been created indirectly. Fomento's annual budget, spent primarily on attracting and keeping new factories, is about \$5,000,000.

At first there seemed to be an emphasis on manufacturing apparel, but the factories established later were more diversified. Chemicals, machinery, scientific instruments and consumer goods other than apparel are all represented. Many of the new factories are branches of mainland corporations, but a manufacturing plant cannot close in a mainland state to re-establish in Puerto Rico and still enjoy the ten-year tax immunity. Tax benefits and any other financial aid are denied in such cases.

Not all of the new enterprises have been successful. Almost 200 factories have become inoperative, some temporarily, some permanently. The principal reasons given are inadequate financ-



The original industries of Operation "Bootstrap" seen in a 1948 aerial view after they had been sold by the government to Ferré Industries. Included were paper and glass factories and a cement plant with a limestone quarry, all near Guaynabo

ing, shifting markets on the mainland, rising labour costs and labour trouble. Yet the failure rate compares favourably with that in the states; more than 600 new factories are operating and Puerto Rico's sugar economy is being converted into a developing industrial society. In the middle 1950s industrial earnings pulled ahead of agriculture, and the lead has been increased in every succeeding year.

Tourism

Puerto Rico is a land of warm beaches and cool mountains, and each year an increasing number of tourists come to enjoy them. Tourism began to develop into a big business in the late 1940s. Now more than 400,000 people, most of them from the mainland, visit the island annually, and they add \$58,000,000 to the income of the commonwealth.

This traffic is seven times larger than in 1949, when the Caribe Hilton was opened and an intensive campaign to promote tourism was initiated. Fomento had invested \$7,200,000 to construct the hotel, which was then leased to the Hilton chain. Its immediate success encouraged new hotel construction by private interests, and tourism began to show promise of making a substantial contribution to the general economic development of the island.

The growth of the tourist industry surprised its sponsors. When the new international airport at San Juan was built in the mid-1950s, it was estimated that no expansion would be needed for at least a decade. In 1961 a \$7,000,000 construction program was started to double the airport's passenger facilities. Part of this can be attributed to the jet airliner, which brings Puerto Rico within three hours and 30 minutes of New York city.

Another factor has been construction of splendid hotels. Be-

sides the Caribe Hilton, the major beach-front hotels in the San Juan area are the Condado Beach, La Concha and El San Juan Intercontinental, all built after the end of World War II. Between the beaches and the commercial districts of the city is the new Miramar Charterhouse. Outside San Juan is the Dorado Beach, built by Laurance Rockefeller. Across the island in Ponce, on the southern coast, is El Ponce Intercontinental, situated on a hill overlooking the city and the Caribbean. The Villa La Parguera is a resort on the southwestern coast of Puerto Rico and up in the mountains, not two hours by auto from San Juan, is El Barranquitas.

In all, Puerto Rico has more than 3,000 rooms for tourists and more luxury hotels are being constructed. The first tourist hotel in Old San Juan, to be known as El Covento, is being built on the site of a 300-year-old convent. Along the San Juan beach front a 427-room hotel is scheduled for completion by the end of 1962. Another hotel is rising on the northeast coast, above the fishing village of Las Croabas. On the island of Vieques a \$16,000,000 resort, including a hotel, golf course and marina, is in the planning stage. These new facilities are expected to make tourism a \$100,000,000 industry by 1965.

Tourists who stay close to their hotels can find many attractions. There are gambling casinos and the customer gets an honest turn of the roulette wheel. Here again, the public corporation makes an appearance—Fomento regulates the casinos. The croupiers and other employees in the casinos are trained by a government agency. The casinos are leased by the hotel operator, who pays two-thirds of the net profit to the commonwealth.

Fashionable shops and quaint old Spanish streets are close to the tourist hotels in San Juan. Also nearby is the House of the

Book, where exhibits are dedicated to various historical personalities and visitors may view rare books and other works pertaining to them. There are festivals of music, ballet and drama.

There is much more for the tourist who ventures into other parts of the island. One of the few virgin forests still conveniently accessible to man is on the northeastern coast of Puerto Rico. Its popular name is taken from a mountain peak, El Yunque ("the anvil"). There the umbrella of hardwood foliage forms a natural hothouse where tree ferns from another geologic age, orchids, wild begonias, candle plants and mallows grow luxuriantly. Native wild parrots fly from tree to tree and hummingbirds flit among the branches.

In the southwestern corner of the island is the phosphorescent Parguera bay. On a moonless night, the backwash from a launch in the bay becomes a luminous wake, spreading in ever widening waves of light until it reaches the shore. The phenomenon is caused by the phosphorescent plankton which are found in the almost landlocked bay in huge numbers. On the north and west coasts, coral reefs are submarine theatres for sea horses, starfish, sea porcupines and brilliantly coloured tropical fish.

San Germán, in western Puerto Rico, is favoured by many exploring tourists. It is the second oldest settlement on the island and the Spanish influence on architecture and customs is plainly evident. This is true also of Mayagüez on the western coast, Puerto Rico's third largest city.

Roads are good in Puerto Rico, although some of the turns and climbs in the mountains snatch the tourist's breath away. In 1961 the government authorized construction and improvement for 176 mi. of highway. Travel is not at all dangerous. Tourists fresh from the mainland sometimes think that wild animals will pounce on them if they wander into the interior, but the truth is that Puerto Rico has hardly any wildlife. The iguana and the lizard, along with the mongoose, imported many years ago, make up most of the wild fauna on the island.

Puerto Rico is an island of little cities, or big towns. The principal cities are San Juan, which includes Río Piedras and had a population (municipality) of 451,658 in the 1960 census, Ponce (145,586), Mayagüez (83,850), Bayamón (72,221), Arecibo (69,879) and Caguas (65,098). There are 76 municipalities and all of them offer the tourist something of interest—museums, ancient plazas and churches, some of the most colourful and varied vegetation in the world.

The growth of tourism has been accompanied by rising costs. The prices for hotel accommodations, meals and entertainment, on a seasonal basis, are similar to those in Florida. As tourism has grown, so has transportation. Three airlines connect the island to Chicago, New York, Baltimore, Washington, Jacksonville and Miami, and four steamship companies carry passengers from New York, Baltimore, New Orleans, San Francisco, Los Angeles, Seattle and Galveston.

Electricity

All the electrical energy in Puerto Rico is produced by a public corporation, the Water Resources authority, and rates for power are comparable to those charged in the New England states. Both steam and hydroelectric systems are used, and an experimental atomic power plant is scheduled for completion in 1963.

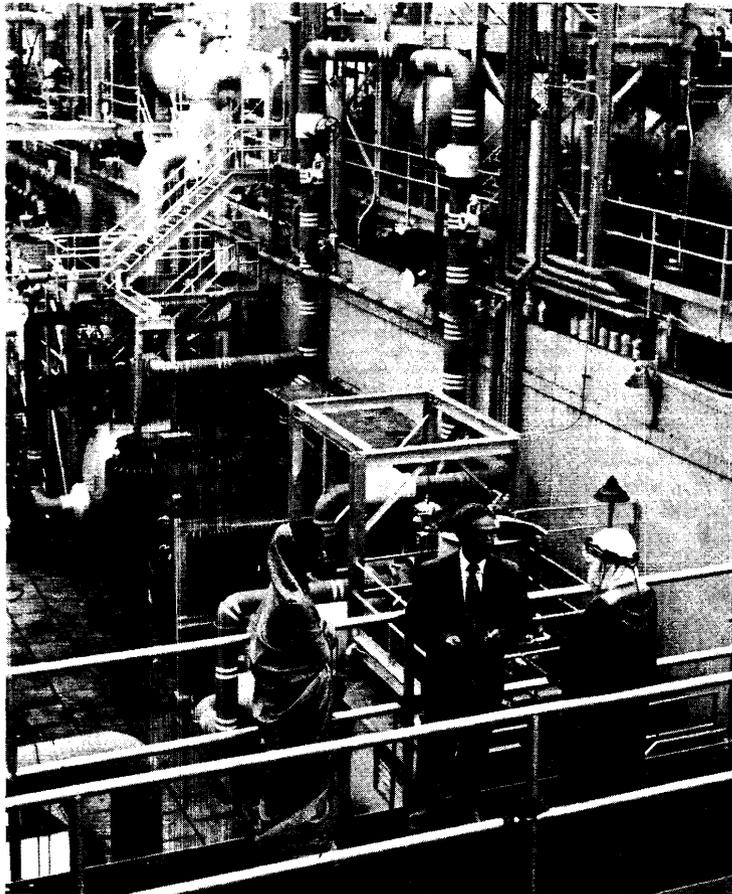
Puerto Rico produces electrical energy at an annual per capita rate of 870 kw.hr. This is higher than the rate of any Latin-American country and compares favourably with most of the industrially developed nations. It is all the more remarkable when the mountainous topography of the island is considered. Dams must be tall and the small valleys provide little room for water storage. Caonillas dam, for instance, is 235 ft. high, but the storage area accommodates only 49,000 ac.ft. of water, about half the storage that a similar dam complex would accommodate in the western states of the U.S. By 1960 all sites which could be developed economically for hydroelectric power had been used, and future

The building of the Caribe Hilton (foreground) and other resort hotels along the "gold coast" of San Juan strengthened the island's tourist income in the 1950s





Development of electrical energy has greatly assisted in the economic growth of the island. Above, a helicopter is used to place poles for power lines in the mountainous areas. Right, visitors from the middle east inspecting the power plant at San Juan



electrical energy will have to be produced by steam or, possibly, nuclear power.

When the Water Resources authority was established in 1941, electricity was available only in the cities and towns and current was often inadequate. Alleging that the private interests owning the utilities were reluctant to provide electricity in the interior because of the large investment cost, the reform government set up the authority which, in turn, purchased the utilities at a fair market price.

The vital role of electric power in economic development is obvious. The authority was given considerable latitude in developing new dams and steam plants. In the process, it made a good earnings record and was able to borrow funds from private sources on the mainland with little trouble. In 1960 the total long-term indebtedness of the authority was \$227,241,000, but the net value of its power system amounted to more than \$260,000,000.

The amount of electrical energy produced has increased 1,600% since the authority took over. In 1961, 525 mi. of power distribution lines were finished in the more inaccessible parts of the island and 9,593 families got power for the first time. Electricity is now available almost everywhere on the island, except in a few remote sections of the mountainous interior. The power plants are fairly evenly spaced from Mayagüez on the west coast to Naguabo on the east coast.

The rated capacity of the steam systems is 450,000 kw., although they have carried peak loads as high as 541,000 kw. Hydroelectric plants have a capacity of 108,000 kw. Yet, even this is not enough for the developing island. By July 1966 four new steam plants are scheduled to go into operation, and they will raise present capacity by 360,000 kw. or more than 50%.

The atomic power plant under construction at Rincón, on the west coast north of Mayagüez, which is expected to begin operations in 1963, is a co-operative venture of the U.S. Atomic Energy

commission and the Water authority. The AEC is spending \$12,250,000 to build and install a boiling-water nuclear reactor with integral nuclear superheat to provide the steam for a conventional power plant. The Water authority is investing \$3,750,000 to build the power plant and to provide land and access roads. Besides producing needed energy, the plant will also be used in nuclear engineering studies being conducted on the Mayagüez campus of the University of Puerto Rico. Students from several Latin republics attend this course.

The Water Resources authority also is responsible for the irrigation programs on the island. The semidesert area of the Lajas valley in southwestern Puerto Rico is being reclaimed for agricultural purposes by the authority's irrigation project there. By a system of dams, power plants and tunnels, water is trapped on the slopes of the western mountains and guided down into the valley. In fiscal 1960 it was reported that 12,300 ac. had been put under irrigation and less than 8,000 ac. of land suitable for agriculture still awaited development.

Housing and Other Construction

Housing in modern Puerto Rico has two striking features: according to a 1959 report by the department of agriculture and commerce, one-half of the population lived in shacks which should be torn down; and all over the island families are helping one another build new, modest homes.

The slums of Puerto Rico are among the most miserable in the world. Often the shacks sit uncertainly on planks stuck in mud. Streams of raw sewage run between them. Garbage is tossed from the open windows and rats scavenge fearlessly. Inside running water is almost unknown. The urban slums are continually fed by people coming to the cities from the interior to seek higher wages. Once there, they give descriptive names to their gloomy communities. One of the most famous slums in the San Juan area is called El Fanguito, "the little mudhole." A

family in an urban slum may pay \$10 or \$12 monthly rent.

In rural Puerto Rico the *bohio*, a shanty with straw walls and a straw roof, is disappearing, but its place is being taken by small wooden shacks leaning uneasily against the slopes of hills. Usually, they contain three rooms, a kitchen, a bedroom and a living-dining room, all tiny. Inasmuch as the average Puerto Rican family includes 5.6 persons, the result is overcrowding exceeding that in most mainland slums.

As inadequate as housing is in Puerto Rico today, it is far better than it was before the commonwealth government began its program of mutual aid in 1949. The program was suggested after a study of housing by the Planning board, the central planning agency for the government. The board recommended bringing the scattered rural families together into settlements where they could work together to build new homes. This would also facilitate the provision of roads, schools, electric energy, water and health services.

Resettlement was accepted as a policy and the Social Programs administration, an agency of the department of agriculture and commerce, was assigned to direct the operation. Large tracts of land were selected and the people drew lots for their portions. They paid nothing for the plots of ground, which varied from one-fourth of an acre to three acres, depending on the topography and fertility of the soil. The principle was to provide enough land for a new house, some domestic animals and family crops. The program has been successful. Today more than 54,000 families live in more than 300 of these new rural communities.

The most intriguing aspect of the program, however, is not the creation of planned communities where schools, churches, electricity, water and roads are making life more pleasant. It is the system of mutual aid among families in raising new homes. This sizable do-it-yourself project is the feature that has attracted so many observers from underdeveloped countries. Perhaps more than any other phase of economic development in Puerto Rico, it is exportable.

At the start of one of these projects, as many as 100 families are assembled for orientation. In four meetings they learn something about construction, the care of equipment and how payment can be made for the finished house. The cost of each home is an incredibly low \$350. The government provides some technical assistance and also makes a loan not to exceed \$350 per

house to finance the purchase of construction materials, rental of equipment and salary to a foreman, the only person who is paid. The families provide the labour.

Work begins at a concrete-blockmaking machine. No home is started until all the necessary blocks are made. A reinforced-concrete slab is poured by the amateur construction crews, using a concrete mixer. Then they lay the blocks. Windows or doors from their old homes are frequently placed in the new houses to keep costs down.

Various members of the family are designated to work during the week, and practically everyone works on Saturday and Sunday. The average time for construction of a new house is eight months, but the department of agriculture and commerce believes it can be reduced to six months by improved planning.

When finished, the \$350 house is usually a two-bedroom dwelling with a kitchen, a combination living-dining room and a porch. An aluminum outhouse with a concrete foundation is provided by the department of health. Families can expand their houses later if they wish. There is no interest on the \$350 loaned by the government and the loan can be repaid, over a ten-year period, at \$2.71 a month. Almost 10,000 families live in these homes. Each family is ceded its own plot for its perpetual use, and each family owns the house as soon as the mortgage has been paid.

Public housing has been used to meet the needs of other people in Puerto Rico, particularly the people of the urban slums. More than 25,000 public-housing units have been constructed since 1941. Rent is determined by income and the size of the family. Private interests have also been active in housing. Prior to 1950 the Government Development bank arranged financing for considerable private housing development, but since then commercial banks have assumed a larger role and they now provide most of the short-term private-home financing. Mortgages insured by the Federal Housing administration are as routine in Puerto Rico as on the mainland, and the foreclosure rate is .05%. An interesting innovation is the condominium building, which differs from a co-operative in that the occupant has full title to his apartment or office.

A search of building permits indicates the over-all trend of building construction in Puerto Rico. In 1940 all construction was valued at \$7,800,000. In 1960 the figure had risen to \$212,000,-



Slum housing in the cities of Puerto Rico has been a blight on the island. At left is El Fanguito ("the little mudhole"), San Juan, as it appeared in 1948. Much has since been cleared, and an increasing number of Puerto Ricans can now afford houses such as that shown above, built under the self-help program. The government provides long-term, interest-free loans for materials, and the families, assisted by their neighbours, do their own construction

PUERTO RICO

000, including \$83,000,000 for residential homes and apartments, \$18,000,000 for public housing and \$92,000,000 for industrial and commercial construction. The government participated in industrial and commercial construction to the extent of \$50,000,000, but more than 90% of this went for electric power plants and water facilities. Private investment obviously is becoming more of a factor in the island's building construction industry.

Agriculture

The Puerto Rican today consumes twice as much animal protein as he did in 1940, and his newly acquired status as a meat eater is a result of one of the significant changes in the island's agriculture. Livestock is becoming almost as important as sugar.

In 1940 sugar dominated the Puerto Rican economy. Almost half of the island's income consisted of "sugar dollars." In 1961 income from manufacturing exceeded that from agriculture, and of the \$250,000,000 estimated gross income of agriculture, sugar accounted for only \$96,000,000. It was believed that the growing livestock industry, measured in gross income, would approximate \$85,000,000 in the near future. Dairy products and tobacco are also important in the island's agriculture, and cotton, pineapples, bananas, coconuts and vegetables are raised in considerable quantities. Coffee is on the decline.

When the reform government broke up the great sugar estates and divided much of the land among the *agregados*, the importance of sugar began to diminish. Much of the land had been marginal for sugar, and the *agregado* preferred to use it for livestock and garden crops.

The program for helping the *agregado* has been of great interest to foreign observers. It is not difficult to distribute pieces of earth to the landless. It is more difficult to keep most of these people in business as farmers once they have received their land. This is what Puerto Rico has done. The *agregado* is usually penniless. Under title VI of the land-reform law, he does not have to pay for his land immediately. He pays over a period of 40 years at an interest rate of 4%. The land costs him \$200 an acre. The weather, as in all countries, can be the farmer's friend or his enemy. Coffee, for instance, is a sensitive crop and can be ruined if, at the time near harvest, there is too much or too little rain. A clause in the agreement with the government agency permits the farmer three years of nonpayment, on good excuse, before becoming delinquent. However, if he is found to be lazy or not working his land, the government can reclaim his farm promptly. For various reasons, between 10% and 11% of the new farmers were not making payment in 1961.

The relative importance of livestock raising has grown, as has been true in other countries, with the improvement of the breed of cattle. The local cattle of Puerto Rico were especially susceptible to tuberculosis, and the milch cows were low producers. The government purchased bulls and established demonstration farms, encouraging the crossing of the native cattle with Jerseys, Guernseys and Holsteins.

An overriding problem of Puerto Rican agriculture is, of course, the small amount of land as compared with the large number of people. Not only is the island itself small, much of it is not suitable for agriculture. Reports of exact acreage vary. Of the total land area of 2,103,000 ac., approximately 50,000 ac. are required for urban areas, roads, resorts, factories, military facilities and other nonagricultural purposes. The U.S. soil conservation service reported that only 845,000 of the remaining acres were well adapted for permanent agriculture. Another estimate is that more than 1,300,000 ac. are growing some food or grazing some livestock. A third estimate is that 1,075,000 ac. are being used for crops and livestock, while the steeper hills and mountains are kept under cover crops and forests. One report indicates that only 14% of all Puerto Rican soil has remained undamaged



Opening of a supermarket in San Juan. Although their establishment has been resisted by small grocers, the new markets are generally favoured by farmers as a steady outlet for their produce

by erosion.

The shortage of land and the continuing—if lessening—importance of sugar point to the need for mechanization. This is where sugar becomes a dilemma. Hawaii produces the same amount of sugar as Puerto Rico using 13,000 persons. Puerto Rico needs approximately 80,000, the figure rising and falling from year to year. But the replacement of machetes by machines in the sugar harvest would mean tremendous unemployment among the agricultural workers. Naturally they fear mechanization and resist it through their agricultural unions.

Hydroponic farming—growing plants in water and various minerals without the use of soil—is a potential source of increased crop yield. Impressive amounts of lettuce, cucumbers, melons, tomatoes, cabbage and beans are raised by this method.

The appearance of supermarkets has influenced Puerto Rican agriculture. The first supermarket appeared in the mid-1950s and they have been multiplying rapidly. Their advantages and disadvantages have even been debated in the legislature. Some of the members believe that the supermarket chains, buying in quantity and selling at low prices, will drive the traditional small grocer out of business. For one, Ernesto Ramos Antonini, speaker of the house, has resisted their spread. The farmers appear to favour them, chiefly because they provide a dependable market for produce. Some farmers, however, argue that the supermarkets purchase too much of their goods from the mainland and not enough from the farmers on the island.

Marketing generally is a largely unsolved problem in Puerto Rican agriculture. More good roads are needed in the mountain districts if the farmer is to deliver his crops. Furthermore, there is lack of competition among buyers. For example, only four or five firms buy tobacco in substantial amounts, and one of these firms buys approximately half the total crop. This firm sets the tobacco price and if the farmer is unwilling to sell at that price he can do nothing, except possibly smoke his crop.

Agriculture, while improving, has lagged behind industry and tourism in its development. Mechanization is an obvious way of increasing agricultural production and the chances are that farming will become more intensified.

Trade

There are only seven countries whose trade with the United States exceeds \$1,000,000,000 each year: Canada, West Germany, Mexico, Japan, Brazil, Venezuela and the United Kingdom. The

Commonwealth of Puerto Rico also belongs to this elite group. If trade is calculated on a per capita basis, Puerto Rico is the United States' best customer. Trade between the mainland and Puerto Rico amounted to \$1,511,000,000 in fiscal 1960.

The development of industry has raised Puerto Rican trade with the U.S. above that of Brazil and Mexico. Ironically, it has also resulted in an adverse trade balance. During the great depression, the island's trade balance was favourable. In fiscal 1960 Puerto Rico imported goods valued at \$930,999,000, almost all from the United States. Exports, 96% of which went to the mainland, amounted to \$646,000,000.

This adverse balance taken alone is somewhat misleading because it does not include the millions of dollars that enter Puerto Rico each year from sources other than trade. Tourism added \$58,000,000 to the Puerto Rican economy in 1961. Other millions come from Puerto Ricans on the mainland who send money to their kin on the island, from the U.S. military and from projects such as highway building in which the federal government participates. Moreover, a large percentage of Puerto Rican imports are capital goods for expanding the productive capacity of the island's new industry. More than 40% of the dollar value of imports during fiscal 1960 represented raw materials and semi-fabricated products.

The list of exports shows how the island's economy has changed. In 1950 exports of manufactured products amounted to \$33,000,000 while sugar represented an annual export value of \$134,000,000. Ten years later manufactured products were accounting for \$391,000,000 and sugar exports had declined to \$123,000,000. The largest single category of exports is textiles and clothing. Chemicals, nonmetallic minerals, electric goods, machinery, metal products, leather, coffee, tobacco and cigars are also exported in substantial amounts. The island is obviously optimistic about its trade future, for it has invested \$40,000,000 to improve its busy ports.

Transportation and Communication

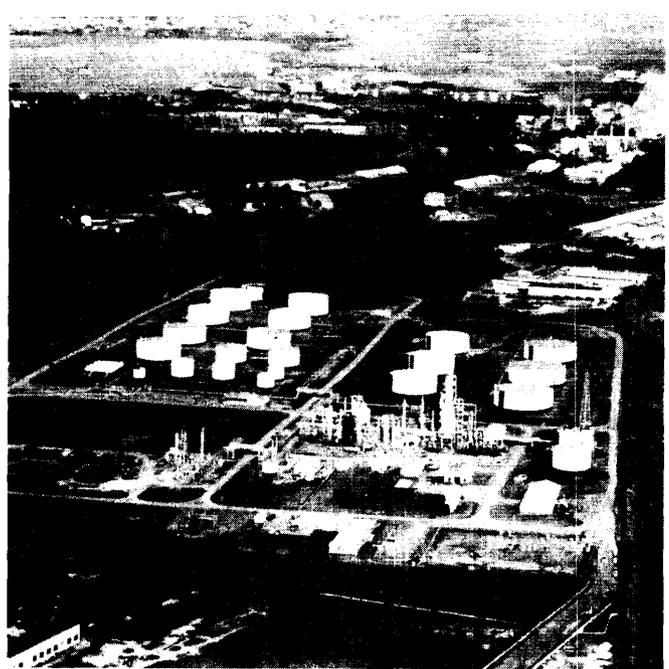
In 1950 Puerto Rico imported 5,142 passenger automobiles. A decade later the figure had risen to 26,050. In 1960 there were 179,657 registered motor vehicles on the island. Puerto Rico is becoming a country on wheels.

The island's small size discourages the development of a large domestic air transport system, although San Juan, Ponce and Mayagüez are connected by Caribair, with 16 flights daily in 1961. The railroad went into bankruptcy and ceased operation a few years ago. But the roads encircling and crossing the island are often very good. A splendid expressway carries traffic from the International airport to San Juan and other expressways are appearing. In all, there are 3,000 mi. of roads, one mile of road for every square mile of land.

There is, however, room for improvement. Probably Puerto Rico had a better road system, for its needs, in 1940 than it does today. The new industry, the new housing developments and the new schools have all made increased travel necessary and road building has not kept up with the growing need. In *Puerto Rico: Land of Wonders*, Earl Parker Hanson writes:

Where is the money to come from? Through another boost in taxes? Through bond issues, which will put the burden of payment on future generations while also demanding current tax monies for amortization and interest? Through a combination of the two? A relatively small increase in the tax on gasoline, the price of which is kept down through government control, might permit such a combination, but it would raise the island's transportation costs and might create a number of new political enemies for the Popular Democratic party—among the drivers of taxis and other public vehicles. (Hanson, p. 205.)

Puerto Rico got a late start in road building. World War II had already broken out when the reformers came to power and for six years the government could not obtain either construction materials or the maritime transport to bring them to the island.



Oil refinery at Cataño, near San Juan. In addition to providing fuels for local consumption, the refinery yields petroleum products for export

ASPECTS OF THE DEVELOPMENT AND DIVERSIFICATION OF PUERTO RICAN AGRICULTURE AND INDUSTRY

Opposite page:

Top: Dairy cows on a farm near San Juan. Livestock and dairying have become second only to sugar in the island's agriculture

Centre: Grading oranges at a frozen fruit cannery. Production has risen significantly in recent years

Bottom: A diversified farm near Cidra where fruit and flowers are grown in addition to sugar

Spreading coffee beans at a plantation near Jayuya. New production methods and government credits to growers have helped to stabilize the industry





Even when the emergency was over, however, not enough money was spent for roads. The obvious need will probably force large public expenditures in the near future.

The telephone has not yet become a reliable instrument in Puerto Rico. There are interminable delays and wrong numbers, and the sometimes difficult job of getting a telephone call through successfully is a fertile source of jokes. Currently, \$52,000,000 is being invested to improve the facilities. Telephone service with the mainland progressed in 1960 when 48 additional lines between the island and the continental U.S. went into operation. The new cable, financed by the American Telephone and Telegraph company and the International Telephone and Telegraph company, descends five miles into the sea to make it the deepest underwater cable in the world.

Labour

Despite the success of industrial development, unemployment remains one of the most pressing problems of the Puerto Rican economy. In a single decade more than 600 new factories were located on the island and more than 100,000 jobs were created. Meanwhile, unemployment declined only slightly and the total labour force declined slightly, also. The shift from an agricultural to an industrial economy partially explains these phenomena. There has been some mechanization in agriculture and more on the loading docks of the seaports. Industry generally offers a higher wage and this has encouraged more people to leave agriculture and move into the cities than there are jobs to absorb them. When the breadwinner does find factory work, family income rises dramatically. There is no longer a compelling need for the wife and children to work. Thus in the 1950s the number of students 14 years of age or older increased by 19,000 and the number of nonjobholding housewives rose by 121,000.

Indications are that substantial unemployment will continue for some time. Frank Zorrilla, the secretary of labour, described it as "technological":

The industrialization program has created thousands of new employment opportunities. The new industries which are being established on the island usually start out with most of the technological improvements known at the moment. On the other hand, the industries which were already in operation were agricultural or service industries and they tend to become modernized in order to obtain a greater productivity, lower production costs, higher salaries and reasonable prices to the consumer. But this mechanization will inevitably cause technological unemployment.

By mainland standards the unemployment figures are startling. The lowest rate in recent years was 8.3% in April 1960, and the rate generally fluctuates between 11% and 13%. To assist people out of work, the government has increased its maximum unemployment benefits to \$16 weekly for 12 weeks, and in another direction it has extended the ten-year period of tax exemption for new factories to 13 years if the new plants are situated in areas of greatest unemployment. It is estimated that 43 of the commonwealth's 76 cities have untapped industrial potential and practically every one of them needs more job opportunities.

Every fourth working person is engaged in agriculture and the sugar crop still demands more workers than any other activity. The Government Development bank estimated that the sugar industry employed 80,000 persons during 1961, although other reports suggest that the figure is nearer 70,000. A sugar worker may earn \$4 a day, which is better than the \$2.25 a tobacco hand gets, but he is unemployed for several months each year. One of the great attractions of factory work is that it lasts the year around.

In April 1961 the average weekly wage in manufacturing industry was \$36.91. Factories employed 84,000 persons in 1961 and if factory employment continues to grow at the present rate it will approach the commonwealth goal of more than 250,000 jobs by 1975. More than 10% of the working force is employed by the government, although the number of public employees

declined in 1960 for the first time since 1953.

Unions are developing rapidly in Puerto Rico. The bureau of labour unions accounting reported dealings with 150 unions in 1960. Many of them are associated with the A.F.L.-C.I.O., and generally they support the Popular Democratic party. Labour disputes are also increasing. The island's conciliation and arbitration service in 1960 intervened in 779 cases of which 500 involved strikes, strike threats or issues that needed arbitration. The U.S. minimum wage standards apply for industries engaged in interstate commerce. Otherwise, minimum wages are set by the island government.

A troublesome sector of the economy is home needlework, fostered by New York jobbers as a sort of tropical sweat-shop operation. Approximately 10,000 persons continue to do needlework in their homes, and their pay is pitifully low. The average in 1960 was \$3.90 a week. There are arguments in favour of it. If the worker's husband has a job and she has time on her hands at home, why not use it to get a little extra income? The needlework is lovely and it brings a high price in the tourist shops and mainland stores, but the home worker gets only an infinitesimal percentage of the money paid for her creation.

Finance

Public money, which started Puerto Rico on the road to development, is still important in the island's economy, but commercial banks, savings and loan institutions and insurance companies are assuming larger roles each year. Frequently public and private institutions work together to finance new investments. The association of public corporations (the Development company and the Government Development bank) and private in-

Unloading cargo on the docks at San Juan. To accommodate the great increase in the island's foreign trade, \$40,000,000 has recently been invested in the improvement of Puerto Rican ports



vestors was described in a paper delivered by H. C. Barton, Jr., a commonwealth government economist, at the Center for International Affairs of Harvard university in 1959. He said:

A local firm had about \$2,000,000 available for investment in an ammonia plant originally estimated to cost about \$12,000,000. Private bankers as well as the Government Bank regarded this equity as too thin. The Company (Government Development) subscribed to some common and preferred stock as well as bonds and the Bank (government) took mortgage bonds, the total amounting to roughly \$5,000,000. The balance of the financing was done by a Canadian and a U.S. bank and by U.S. insurance companies. In this way, \$5,000,000 of government investment attracted \$7,000,000 of private funds for a locally-owned project of basic importance to the economy.

Barton reported that the new factories assisted by the Development company in 1959 represented an investment of \$465,000,000 and that the public corporation had invested \$45,000,000, or not quite 10%, of that amount.

Loans by the commercial banks on the island indicate their growing role in the economy. Commercial bank loans rose from \$128,000,000 in 1950 to \$450,000,000 a decade later. Bank assets in 1960 were reported at \$687,000,000. Government monies in private banks accounted for 23% of total deposits. Personal savings in private savings accounts reported by banks amounted to \$152,000,000 in 1960 as compared with \$17,000,000 in 1940.

The increasing importance of private investment is revealed in the financing of housing. Prior to 1950-51 the Government Development bank did extensive short-term financing for private housing. Today the commercial banks are dominant in the field. In 1959 three commercial banks in Puerto Rico signed an agreement with the Urban Renewal and Housing corporation to provide the financing for the first low-cost housing development to be built under a plan of mutual aid, with the mortgage insured by the Federal Housing administration. More arrangements of this sort seemed likely.

Fixed investment capital is vital in a developing economy, and the investment in Puerto Rico comes largely from the mainland states. Of the more than 600 new factories, all but 113 are owned largely by mainland interests. The factories owned by Puerto Ricans, moreover, are for the most part modest enterprises, employing fewer people and requiring less capital investment. As the economy of Puerto Rico becomes stronger it is expected that local investment will increase substantially.

The economy today produces more than \$250,000,000 annually in revenues for the commonwealth government. Of this, more than 50% is derived from excise and income taxes.

COMMENT

Puerto Rico is a developing society and it can no longer be regarded as one of the world's pauper communities. However, it has not yet joined the company of developed countries. By the usual indices of comparison—per capita income, employment and unemployment, literacy and diet—even the poorest mainland state is better off than the Commonwealth of Puerto Rico. In its journey toward development, Puerto Rico has several problems to solve.

Present methods of sugar production are wasteful. Possibly the corrugated topography of the island makes many hands necessary, but not as many as are now used. Other sectors of agriculture are also destined for mechanization, and this means fewer and fewer jobs. New employment must be created for the thousands who will be displaced.

Meanwhile, much of the new industry, enticed to the island by generous tax benefits, is approaching the time when its taxless period will end. A few executives have said that they intend to leave. But how many are going to abandon their factories, their capital investment already repaid during the ten "free" years and a good profit now in the bank? Two factors that may encourage industry to remain are the depreciation that will have accrued by the time the first tax bills become due and the fact



Future problems of employment will be created when modernization of sugar production methods eliminates the need for large gangs of cutters such as shown here

that corporate taxes in Puerto Rico are no more than 37%, compared with 52% in the United States.

There is a gap in Puerto Rico between the economic and political leaders and the general public. The reforms were debated and managed by a relatively small number of men and women. Indeed, there is an occasional aura of paternalism about the earnest government, and this is especially evident in the equipping of migrants for the journey to the mainland. The people are "mothered," clearly with affection, by a government which advises them on everything from what kind of clothes to wear to where they can find the Puerto Rican migration office.

Paternalism is apparent in the city hall of San Juan where the mayor, Doña Felisa Rinçon de Gautier, presides with energy, practical knowledge and a parental attitude. One of the sights of San Juan is the Señora signing her name on a small piece of paper which authorizes the impoverished recipient to receive some form of government aid. Yet the people of San Juan appear to have no objections. Doña Felisa is exceedingly popular.

The most perplexing problem looming in the near future has to do with the remarkable person of Luis Muñoz Marín. He is

quite possibly the most original political thinker in the Americas today. The greatest credit for the economic and political improvement of Puerto Rico must go to him. He is far more than just the governor. Although he has not cultivated the role, to many of the people he is a personal "father." The association between Muñoz and the people is intense.

No one has questioned Muñoz' honesty and few have doubted his ability, although they may have disagreed with the philosophy of his reforms. When Ferré was asked if he thought Muñoz had performed a good job for Puerto Rico, the opposition leader seemed surprised. "Certainly he has done a good job," he replied. Ferré is critical of Muñoz on specific issues. On the controversial matter of birth control, for instance, Ferré said, "Muñoz wanted to make it as easy to get sterilized as to eat an ice cream." He also criticizes what he regards as a trend within the Popular Democratic party, now in power for more than two decades. "There is excessive power in the budget and government expenditures are used to influence people. The government, operated by the Popular Democrats, sells the Popular Democrats. I worry very much about this. But Muñoz? No, looking over 20 years



Muñoz Marín in his office at the governor's mansion, San Juan. Looking forward to the future when he steps down from public office, Muñoz began in 1961 a program of modernizing his political party

of what has happened in Puerto Rico, I think what happened could have been managed better, less wasted, but I must say Muñoz has been good for Puerto Rico."

Muñoz is conscious that his status is unusual in a democratic society, and Puerto Rico is certainly that. The press is free and quick to criticize Muñoz and the government in precise terms. "Press freedom is as complete as it could be anywhere on earth," said William J. Dorvillier, editor of the *San Juan Star*. The elections are free and hotly contested. Government employees complain of government practices without restraint. Still, Muñoz could probably have the power of a dictator if he wanted it. He does not.

Why, one might ask, does the presence of such a gifted and popular man suggest trouble? The problem is: what happens when Muñoz retires or dies? Muñoz himself appears to be aware of the "Muñoz problem." He was a moving force in "modernizing" the Popular Democrats in 1961. Authority for making party policy was given to a larger number of people, and their tenure of office was shortened so that more persons could gain decision-making experience. Whether this new power will be exercised remains to be seen. As governor of Puerto Rico, Muñoz is more powerful than the chief executive of any mainland state. Almost certainly, when he is gone, the government will become less personal and the institutions of self-government will become more prominent.

The "Muñoz problem" is only part of a larger one. The reformers of 1940 are growing older and a concentrated program to develop younger leadership may become necessary.

Despite all these difficulties, the story of what has occurred in Puerto Rico is one of hope for people in underdeveloped societies everywhere. There are many lessons to be learned there.

If there was one difference more prominent than any other between Puerto Rico and other destitute societies 20 years ago, it was that more than half the Puerto Ricans could read and write. The one great success of U.S. rule was in education. Time and again during the reform movement the advantage of having a largely literate population in a developing society has been manifest. The purposes of the peaceful revolution could be explained to the people, and their enthusiasm and their willing co-operation could be enlisted.

Another lesson to be learned from Puerto Rico is that the development of a society must be managed largely by its own people. Muñoz explained this factor: "For more than 40 years, Puerto Rico had access to U.S. investment. The U.S. flag flew over the island. There were no barriers to trade. But not a great deal happened to make Puerto Rico a better and healthier place until after 1940, when the people of Puerto Rico themselves decided to do something. The United States federal government provided much assistance, but we did most of the work."

And possibly the most unusual aspect of Puerto Rico's saga of development, and one which provides an answer to those leaders of underdeveloped countries who both desire material benefits and fear materialism, is *serenidad*. For here an effort is being made to teach the people that the economy should be the servant of the culture and not the master.

Sentiment for statehood seems to be rising among the people of Puerto Rico. The pro-commonwealth element is still in the majority, but an increasing number of people seem to favour at least one more examination of the possibility of statehood. It is obvious, however, that the U.S. should not attempt to influence Puerto Rico to become the 51st state. The choice should be left to the islanders. Every time more self-determination has been given to the Puerto Ricans, they have come closer into the U.S. family. This happened when Puerto Ricans became U.S. citizens, when the first islander was appointed governor, when the islanders were permitted to elect their own governor and when

PUERTO RICO

Puerto Rico became a commonwealth. Each concession seemed to weaken the once militant movement for independence. Any attempt by political interests in Washington to force statehood on the island would run counter to the advice of history.

Much had been written and spoken about the Puerto Ricans as bridgemakers of the Americas, catalysts of the two dominant cultures in the western hemisphere. And it is true that a bicultural society has been developing on the island. Whether the bridge-maker concept becomes an actuality depends to some extent on the performance of men such as Morales Carrión and Moscoso, now serving in policy positions with the U.S. department of state, and to a larger extent on the continuing development of the island itself.

But whether or not the Puerto Rican becomes a bridgemaker, he already has established his place in modern history by the dramatic reclamation of his island. It had been as impoverished as almost any place in Spanish America, it had remained in colonial status longer than most of the Latin countries, first under Spain and then under the United States. It had meagre natural resources. It was one of the most overpopulated places in the world.

But in 1962 the Puerto Rican was acquiring a reputation as

one of the wealthier citizens of the Americas, enjoying political freedom and an economic growth that, within two decades, had more than quintupled per capita income and had increased the annual gross product 700%. The economy had been diversified. Life expectancy had risen almost 50%. Malaria, a scourge in many underdeveloped societies, had been eradicated. This is the story which has lured to Puerto Rico thousands of students and technicians and other observers from the underdeveloped societies in other parts of the world. They have come to learn how it can be done.

So while it is true that Puerto Rico is not today a developed country, it is also true that Puerto Rico has risen from a slough of misery, poverty and spiritual despondency in less than a generation. And it is to the credit of the U.S. that the people did this as citizens of the United States, with the understanding and help of fellow citizens on the mainland. In this sense, the Puerto Rican story is a tribute to the free political and economic systems of the United States.

Perhaps this is the most important meaning of what has happened on the little island, floating out on the edge of the Atlantic ocean, that is an associated free state of the United States of America.

LIST OF ILLUSTRATIONS . . . *World Without Want*

<i>Page</i>	<i>Description</i>	<i>Credit</i>
4	Portrait of President Kennedy	United Press International
4	Portrait of Paul Hoffman	Courtesy, Paul Hoffman
4	Portrait of David Owen	© Encyclopædia Britannica, Inc.; photo by Mickey Pallas
4	Portrait of William Baggs	Courtesy, William Baggs
5	Portrait of Dwight Eisenhower	United Press International
6-7	Boy with bowl, Congo	Marc Riboud—Magnum
9	Beggars, Ecuador	Constantine Manos—Magnum
9	Flavio	Gordon Parks—LIFE
9	Indian coal miners	Authenticated News
11	Village in India	Marilyn Silverstone—Nancy Palmer Agency
12	Sowing rice, Ceylon	Courtesy, United Nations
13	Carrying water, Burma	Courtesy, United Nations
13	Threshing grain, Ethiopia	Courtesy, United Nations
14	Ancient plow design, Egypt	Elliott Erwitt—Magnum
15	Child labour, China	Henri Cartier-Bresson—Magnum
16	Guiana tribesmen, Kaieteur falls	William LaVarre from Gendreau
17	Woman and load, Ecuador	Constantine Manos—Magnum
18	Women at marketplace, India	Courtesy, United Nations
21	Boy at water pump, Ecuador	Constantine Manos—Magnum
22-23	World map	
22	Mother and child, Mexico	Anton Bruehl
22	Chulupi Indian, Paraguay	Hans Mann
22	Chinese musician	Peter Schmid—Pix from Publix
22	Indian of Mato Grosso, Brazil	René Burri—Magnum
23	Father and son, Afghanistan	Courtesy, United Nations
23	Old Hindu, India	United Press International
23	Young girls of Ghana	Marc Riboud—Magnum
23	Chinese soldiers, Formosa	Horace Bristol—Photo Representatives
25	Togo village	Clinton A. Rehling
25	Building a school, Togo	Thecla—Operations Crossroads Africa
26	Agricultural training, Colombia	Courtesy, United Nations
27	Thatching a roof, Colombia	Courtesy, Standard Oil Co. (N.J.)
28	New steel plant, India	Brian Brake—Magnum
28	Agricultural fair, India	Marilyn Silverstone—Nancy Palmer Agency
28	Fishing, Tilaiya dam, India	Courtesy, United Nations
29	Unloading manganese ore	Authenticated News
29	Women at village well, India	Courtesy, United Nations
29	Street scene, Bombay	Authenticated News
31	Desert of Tumbes, Peru	Hans Mann
33	Ancient Inca road, Peru	Sergio Larrain—Magnum
34	Cigarette factory, Ghana	Marc Riboud—Magnum
34	Truck assembly plant, Ghana	Marc Riboud—Magnum
37	Sign in Ecuador	Constantine Manos—Magnum
38	Boy with cup of milk, Ecuador	Constantine Manos—Magnum
41	Schoolboys, Sudan	George Rodger—Magnum
43	Early missionaries	Culver Pictures, Inc.
43	Mission school, Cameroons	Bettmann Archive, Inc.
45	Building a school, Dahomey	Thecla—Operations Crossroads Africa
45	Primary school, Nigeria	Marilyn Silverstone—Nancy Palmer Agency
46	Teaching dance, Guinea	Marc Riboud—Magnum
47	University biology laboratory, Ghana	Courtesy, UNESCO; photo by Marc Riboud
49	Women learning to read, Ghana	Marc Riboud—Magnum
50	Programmed learning method	Courtesy, Encyclopedia Britannica Films, Inc.
51	Scholarships for Congolese	Marc Riboud—Magnum
52	Women's league, Nyasaland	Marilyn Silverstone—Nancy Palmer Agency
52	Bricklaying course, Sudan	Marilyn Silverstone—Nancy Palmer Agency
52	Business school, Nigeria	Marilyn Silverstone—Nancy Palmer Agency
53	Physics class, Guinea	Marc Riboud—Magnum
53	Surveyor, Ghana	Courtesy, UNESCO; photo by Marc Riboud
53	American and Dahomey students	Thecla—Operations Crossroads Africa
56	Boys running to school, Sudan	George Rodger—Magnum
59	El Morro and San Juan	Courtesy, Puerto Rico News Service
61	Map of Caribbean area	
61	Map of Puerto Rico	
62	Statue of Columbus, Mayagüez	Herbert Lanks from Black Star
63	Point Caracoles beach	Courtesy, Puerto Rico News Service
64	Valley near Comerio	Charles E. Rotkin—P.F.I.
65	Waterfall, El Yunque	Courtesy, Puerto Rico News Service
66	Old fortress of El Morro	Charles E. Rotkin—P.F.I.
67	Spanish-American War painting	Culver Pictures, Inc.
69	University of Puerto Rico	Charles E. Rotkin—P.F.I.
71	Luis Ferré and museum	Courtesy, Puerto Rico News Service
71	Pablo Casals and festival orchestra	Courtesy, Puerto Rico News Service
72	Mountain priest	Marilyn Silverstone—Nancy Palmer Agency
73	Puerto Rican worker in New York	Courtesy, Puerto Rico News Service
74	Tragedy scene, New York city	United Press International
74	Placement centre, New York city	United Press International
75	Adult English class	Courtesy, Puerto Rico News Service
76	Portrait of Muñoz Marín	Courtesy, Puerto Rico News Service
76	Campaign poster	Culver Pictures, Inc.
78	Puerto Rican soldiers	United Press International
81	Cutting sugar cane	Charles E. Rotkin—P.F.I.
82	Rum for export	Charles E. Rotkin—P.F.I.
83	"Fomento" factories	Charles E. Rotkin—P.F.I.
84	"Gold Coast" hotels	Courtesy, Puerto Rico News Service
85	Installing power poles	United Press International
85	San Juan power plant	Courtesy, Puerto Rico News Service
86	Old slums, San Juan	Charles E. Rotkin—P.F.I.
86	Self-help house	Courtesy, Puerto Rico News Service
87	Supermarket opening	Courtesy, Puerto Rico News Service
88	Oil refinery	Courtesy, Puerto Rico News Service
88	Spreading coffee beans	Courtesy, Puerto Rico News Service
89	Dairy cattle	Courtesy, Puerto Rico News Service
89	Frozen fruit cannery	Charles E. Rotkin—P.F.I.
89	Diversified farm	Courtesy, Puerto Rico News Service
90	Unloading cargo	Herbert Lanks from Black Star
91	Field of cane cutters	Courtesy, Puerto Rico News Service
92	Muñoz Marín in his office	Courtesy, Puerto Rico News Service



A BOOK-LENGTH FEATURE REPRINTED FROM THE 1962 BRITANNICA BOOK OF THE YEAR