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The Land and the People of Brazil

WHEN ex-President Theodore Roosevelt in 1913 led an expedition to explore an unknown tributary of the Amazon river in Brazil, he called the attention of his countrymen to a land that was largely unknown to them. With an incomplete picture of the southern part of their hemisphere, of the nature of the land and the people, North Americans were then ready to believe fantastic stories about the tropical primitiveness of Brazil. And even today they are often likely to think of Brazil in terms of the jungles of the Amazon region rather than of a modern city like São Paulo—as large as Chicago and growing more rapidly, carefully designed around a central city where tall buildings reach through the mists of a July morning toward the blue sky with warm color and curving movement, making the stainless steel and glass of New York City seem cold and constrained by comparison. Bringing their gaze down from the skyscrapers of São Paulo to the Praça da República (Plaza of the Republic), North Americans would see Brazilians sunning themselves on the park benches, or busily shopping for crystal ware or leather goods in the modern shops, or buying airline tickets to Paris or New York on Air France, Varig, Lufthansa, Pan-American, or SAS, or lining up at lunch counters for their *cafézinho*.

North Americans might read in the London or New York newspapers about the Latin American common market, in which Brazil is the principal economic force, or about Brazil's leadership of Latin American nations in matters of international relations, yet the association of tropical forests blanketing the Amazon basin and of jungle tribes of savage Indians persists out of proportion. Actually both images, of the primitive tropical

and of the modern, are true of the real Brazil, whose size and complexity make it a country of which many contrasting statements may be true. It is the largest Latin American country, and larger than the United States, except for Alaska. It is the most powerful country in the western hemisphere, after the United States. Yet Brazil is also one of the poor countries of the world, in terms of per capita income, and much of the country's wealth of natural resources is unexploited and unexplored.

TABLE 1
Literacy of Children and Youth, 1950*

<i>Region and state</i>	<i>% Literate Age</i>	
	<i>9-10</i>	<i>16-17</i>
North		
Amazonas	19.4	43.6
Pará	27.0	54.2
Northeast		
Maranhão	13.1	28.6
Piauí	10.0	28.9
Ceará	13.4	34.9
Rio Grande do Norte	18.1	38.5
Paraíba	15.9	34.9
Pernambuco	15.7	35.7
Alagoas	12.1	27.2
East		
Sergipe	24.3	40.9
Bahia	16.7	33.7
Minas Gerais	29.6	47.1
Espírito Santo	31.1	50.8
Rio de Janeiro	37.1	60.7
Guanabara	79.2	89.0
South		
São Paulo	58.7	73.1
City of São Paulo	85.5	93.0
Paraná	38.1	57.6
Santa Catarina	58.1	73.8
Rio Grande do Sul	49.6	71.1
Central West		
Mato Grosso	32.2	56.9
Goiás	15.9	36.9

* The ability to read and write a simple letter.

Source: Giorgio Mortara, "Estudos Demográficos do Laboratório de Estatística de IBGE, 1956," *Revista Brasileira de Estudos Pedagógicos*, XXXVI (1956), 180-88.

A country of extremes of wealth and poverty, of humid jungles and of dry plains, with sizeable mountains and a long coast line, Brazil has produced a variegated society. Such a society demands a variegated educational system, for the educational system of a

country is a kind of mirror in which the major features of the society are reflected, and through which these features are reflected into the lives of the oncoming generation. The most modern schools and universities will be found in the most modern parts of this complex country. And likewise, the poorest schools and the greatest degree of illiteracy will be found in the poorest and least modern parts of the country. (Table 1 shows how illiteracy and school attendance are related to the various geographical regions of the country.)

Geography and Education in Brazil

Brazil is the largest Latin American country, occupying half of the total area of South America. It touches all of the South American countries except Chile and Ecuador, filling a perimeter of 14,373 miles of which 4,604 miles make up the Atlantic coastline. A modern airplane flying at a speed of 300–320 miles per hour would require 46–47 hours to fly completely around the country. To fly across the Brazilian territory from the extreme south to the extreme north, this plane would need approximately eight hours of continuous flight, and the same amount of time would be necessary for an east-west transit. This does not indicate, however, that the shape of Brazil is square. It is much larger in the north than in the south. Its outline on the map suggests a quarter of beef.

The equator passes through the north of Brazil a little above the Amazon river, and the Tropic of Capricorn crosses the country close to the city of São Paulo. Thus Brazil is a tropical country. Of all of its territorial extent only 8 to 9 per cent lies below the Tropic of Capricorn.

It would be a mistake, however, to suppose that more than 90 per cent of the Brazilian territory has a typically tropical climate: warm and humid or hot and dry. There are such regions. There is Amazonia, which has heat and humidity during practically all of the year; and there is the Northeast, which is characterized generally by dry heat throughout the year. In both of these regions the mean maximum daily temperature varies through the year from 75° F. to a little more than 100° F. Whereas in Amazonia it rains almost daily, in the Northeast it seldom rains, and there is a large area, called the Polygon of Drought, where there is rain during only three months of the year. Sometimes rain does not come at all in the Polygon of Drought and twelve months or more may pass without any, as was the case in 1958.

FIGURE 1
REGIONS



In a number of states, however, including Goiás, Minas Gerais, Espírito Santo, Rio de Janeiro, and the larger part of São Paulo, there are extensive areas of moderate climate, neither dry nor humid, with a temperature which varies during the year between 50° and 90° F. The region in which Brasília, the new capital of Brazil, is situated has a most agreeable climate, with regular rains during four months of the year and a low humidity during the rest of the year. The temperature there varies between 60° F. and 80° F., giving the city spring and autumn only, never winter or summer.

Only three states in the South—Paraná, Santa Catarina and Rio Grande do Sul—and a part of São Paulo have the four seasons distinguished as such. These states have an area equivalent to a little more than 8 per cent of the total area of Brazil. Spring comes there from September to December, and the fields and the forests flourish during those months. Summer is the season of fruits, commencing in December and continuing until March, followed by autumn, from March until June, and winter, from June to September. At that time, the temperature can descend quite low, reaching 25° F. in some places. During June and July there are almost daily frosts, and some of the higher places are acquainted with snow.

This general sketch of the Brazilian climate indicates only its salient characteristics. Naturally, in this large tropical area there are mountainous regions in which the climate is agreeable. For example, in the region of Rio de Janeiro, where it is never cold and may be unusually warm in the months of December, January, and February, it is possible to find, only 70 or 80 kilometers away in Petropolis, Nova Friburgo, and Teresópolis a springlike climate during the summer, and a winter which the *Cariocas* (the native inhabitants of Rio) consider to be very cold (48° to 60° F.). Even in the Northeast, close to the equator, there are areas of pleasant climate, such as the Plateau of Borborema.

Constantly warm and humid, typically tropical, in the sense that North Americans understand a tropical climate, is the Amazon region, or more specifically the basin of the Amazon river, with 4,788,374 square kilometers, which makes up more than 53 per cent of the Brazilian territory.

The topography of Brazil shows some striking resemblance to that of the United States, if one keeps in mind the fact that the boundary of Brazil stops in the forest east of the Andes, whereas the United States reaches across the Rocky Mountains to the

Pacific Ocean. There is a range of fairly low mountains in the east of Brazil, rising up from the seacoast in the Serra do Mar, with the highest peaks reaching almost 9,000 feet and sloping down gradually to the river valleys of central Brazil—the Paraná and the Amazon. These valleys get rain all or most of the year. Thus Brazil is mostly a low, well-watered land, with 57 per cent of its area between 700 and 3,000 feet above sea level, and only 3 per cent above 3,000 feet.

One of the educational consequences of the geography of Brazil is that the traditional system of centralized educational administration, with centers of power in the national capital and the state capitals, must contend with a widely extended population, with far-flung lines of communication and very weak systems of control and coordination. Thus the mails may take weeks to deliver a letter from the national capital to a municipal center a thousand miles away, and rural villages may be days or even weeks away by mail from a state capital.

Politically, Brazil has adopted a solution similar to that of the United States, being organized into a federation of twenty-two semi-autonomous states and four territories. In education, this might be expected to result in decentralization, but that is not entirely the case. Although the primary schools and the institutions for the training of primary school teachers are controlled by the states, the secondary schools and higher institutions are subject to federal law and are under the control of the Ministry of Education and Culture, which is a part of the Executive Branch of the Federal Government. The Basic Education Law of 1961 aims toward greater decentralization, giving the states more autonomy.

A brief look at the climatic situation of Brazil indicates that only a decentralized system of educational administration could make the schools sensitive to the needs and adapted to the conditions of the various regions. In the northern region, which includes the states of Amazonas, Acre, and Pará and the territories of Rondônia, Rio Branco, and Amapá, it is difficult for the schools to function from January to May, when the rains are intense and the monthly precipitation always exceeds 250 millimeters (10 inches). In the rural and lightly populated areas, during this season it is practically impossible for a child to go to school if he has to go farther than one kilometer. Even in the urban areas, school attendance is considerably reduced during this season. In addition, in the months of November and Decem-

ber the heat is intense, the mean daily maximum temperature reaching 95° F., which makes school work inefficient because of the physiologic effects of the high temperature.

Consequently, in all of this region school achievement is very low because out of the entire year only five months have climatic conditions favorable for good work in the school room. Hence, the school year should be organized in such a way as to permit the most intensive school activities during these five months, and making the long vacations coincide with the warmer months, while the school day or even the school week might be reduced in the months of heavy rain.

Only in the south of Brazil and in certain parts of the Eastern and midwestern regions is it possible to have a school year similar to that of the United States and of the European countries, because only in these regions are the four seasons well defined and equally distributed over the year.

In the Northeast, where there are long periods without rain, between September and January the rural areas fall into a phase of stagnation, when productive activity ceases almost completely, food is scarce, and water disappears. If it were possible to install schools in places where water can be stored for the dry period, and if adequate food could be provided for school children during this period as well as adequate health service, the dry months would be good for school activities, since nothing else could interfere with them. However, without nutritional assistance and health services pupils can accomplish very little in school during this season.

Besides determining the time of the year when it is best to hold school, the climatic conditions of Brazil also impose a great variety upon school architecture. It would be impossible to expect a standardization of school buildings. Some of the Brazilian architects who have been studying the problem have reached the conclusion that the building materials employed in a given region for the construction of houses generally suggest the best solutions for the building of schools which are suitable to climatic conditions.

Physiography

Brazil is a country of physiographic contrasts. Grand wide rivers cut the country. Best known is the Amazon with its great tributaries; but there are also the Tocantins, the São Francisco, and the Paraná. As we have pointed out, the Northeast suffers

from a lack of water. There the rivers, though quite extensive during a part of the year, dry up for a long period of five or more months. This Polygon of Drought has an area of 950,000 square kilometers, which is sufficient to include the area of several European countries.

The Amazon and its tributaries water and nourish more than half of Brazil, forming an area covered with tropical forest almost impenetrable because the great trees with their interlacing branches and climbing vines maintain a moist and muddy forest floor. In this region, the means of communication are the rivers, which are navigable by large ships. Transatlantic cargo vessels can go to the heart of the continent, as far as Manaus, 1,500 miles from the ocean. Tabatinga, where the Amazon enters Brazil from the Andean forest, is only 250 feet above sea level, and the sea is 1,700 miles distant. Manaus is the capital of the state of Amazonas and the principal city of the Amazonian interior, with some 200,000 inhabitants. In addition to river navigation, the other means of travel is the airplane, which places the entire Amazonian area some six to ten hours distant from any other part of Brazil.

The São Francisco is called the "River of Brazilian Unity," for it traverses the interior of Brazil from south to north linking the Northeast with the area near Rio de Janeiro and São Paulo. When the droughts make life uncertain, this river has long been a highway of migration for the excess population of the Northeast to the better watered lands of the South and the area of greatest economic development. Not far from the mouth of the São Francisco river, in the Northeast, lie the falls of Paulo Afonso, which are among the greatest in the world in terms of volume and hydro-electric potential. These falls are gradually being harnessed for the generation of electrical energy, and they represent a great hope for the people who live in the Polygon of Drought. All of this area is economically poor because the land produces little. Industrialization and the extraction and transformation of the mineral riches of the region, which will be permitted by the energy of Paulo Afonso, may help to cure the poverty of the people of the Northeast.

The Tocantins river also flows from south to north, for the most part parallel and to the west of the São Francisco river, and enters the Atlantic Ocean close to the mouth of the Amazon. However, in contrast to the São Francisco which is almost entirely navigable, the Tocantins has many falls and rapids and

therefore fails to serve as a means of communication with the interior of Brazil. Its hydro-electric potential, however, is very great and leads to the expectation that with the growth of the new capital, Brasília, and with the economic development of the Central West of Brazil, this hydroelectric potential will be put to use.

The other great Brazilian river, the Paraná, flows in the opposite direction from the São Francisco and the Tocantins, from north to south. The Paraná joins with the Paraguay and the Uruguay rivers to form the great Rio de la Plata which bathes the shores of Uruguay and Argentina and serves the great cities and ports of Montevideo and Buenos Aires. The sources of the Paraná are close to those of the São Francisco and the Tocantins. It was because of this that the Paulistas (pioneers from the state of São Paulo) were able to penetrate into the interior of Brazil during the eighteenth century. By traveling on tributaries of the Paraná, which rise very close to the sea in the state of São Paulo and flow to the west, the Paulistas were able to reach the Paraná and to travel both to the north and to the south, exploring the land of the Central Southwest, which is today highly productive. Later traversing the inland plateau and traveling by means of the São Francisco and the Tocantins, the Paulistas continued the conquest of the still underdeveloped Central West of Brazil.

In their travels, the Paulistas met on the São Francisco river the backwoodsmen from Bahia, to the northeast, who were bent on the same work of conquest and exploration. Thus, the rivers permitted the Brazilians of the seventeenth and eighteenth centuries to take possession of a vast area of land, abundant in vegetable and mineral riches—land which is only now beginning to be definitively explored and occupied. The same rivers in the present century promise to provide electrical energy sufficient for the total industrialization of the country, even when it comes to possess a population of two or three hundred millions. Naturally this will not come to pass very rapidly. The Brazilians are just beginning to develop this hydroelectric potential. However, the great hydroelectric plants at Tres Marias and Furnas in the state of Minas Gerais are already producing energy.

The picture of Brazil as a land entirely covered with immense tropical forests is far from the truth. With the exception of the Amazon basin, which is about half of the country, Brazil does not possess much primeval forest. Man has been able to work a large

FIGURE 2
MAJOR RIVERS



part of the Brazilian territory, although perhaps not in the wisest manner. Consequently, one finds today large desolate areas denuded of ancient forest, as, for example, the so-called Forest Zone of Minas Gerais, where the low second growth forest, much less rich and exuberant, grows on land which because of primitive methods of cultivation has lost its fertility and has been abandoned. In the South a great region of gently undulating plains is covered with a nutritive grass, excellent for the feeding of cattle. There live the Brazilian Gauchos or cowboys, quite similar to their Argentine brothers, although descended from the Paulistas, who came south from the state of São Paulo to develop this territory in the nineteenth century.

Characteristic of the Northeast are the dry lands, where the rains fall only during three or four months of the year and sometimes fail completely. The vegetation, wise as a man, has adapted itself to a condition of scarcity of water. It does not die during the drought but enters into a state of latency, much as the North American vegetation during the winter when the snow and frost give the impression of a grey desert. The vegetation which in the Brazilian Northeast has a dominantly yellow tinge, bears fruit and seeds enveloped in thick starchy hulls, which enable them to survive and facilitate their germination when the rains come. The dried-out trees, some gnarled and twisted, some straight and bare, are brought to life by the rains, and within a few days cover themselves with green, and soon thereafter come into flower. Beneath the trees, which are arranged sparsely and almost regularly over the land, the rains bring into life tufts of grass interlaced with thorny creepers. Above the creeping vegetation and among the larger trees are small shrub-like palms. As soon as the rains stop and the water disappears, everything commences to die once more, and after about two months gives the impression of a devastated land. Nevertheless, man lives there, unprovided with technology and the resources of modern civilization. He lives and thus proves that nature is not completely hostile to him, in spite of the many hardships it imposes.

The soil of the Northeast is not poor, for during the rainy periods the man of the interior contrives to grow all kinds of cereals and vegetables. The wild fruits are also abundant and rich in nutritional value, but underneath the cover of fertile soil at no more than fifty centimeters (half a yard) of depth lies an impermeable layer, which does not allow the soil to conserve moisture for any length of time. All of the Northeast is cut by

chains of low mountains, which form plateaus, with natural reservoirs where moisture is conserved and creates oases of constant vegetation.

Brazil is not a land of high mountains. In the North, in the South, and in the center, chains and ranges of low mountains vary in height from a few hundred to twenty-five hundred meters. The highest points are in the South near Rio de Janeiro, and in the extreme North in the ranges which separate Brazil from Venezuela and from the Guianas. But these mountains never reach the grandeur or the height of an Aconcagua or an Ilimani in the Cordillera of the Andes. There are no active volcanoes in any part of the country and no earthquakes. In spite of the fact that the chains of mountains are not high in Brazil, they presented great difficulties to the conquest of the interior. One range, which runs from the South in the state of Santa Catarina almost to the Northeast in the state of Bahia, a few kilometers inland from the coast, was a major obstacle to the exploration and settlement of the interior.

Covered with aggressive forests, inhabited by snakes and wild animals, abounding in steep rises and deep canyons with wet vertical walls, these mountains were conquered by man at great cost. Nevertheless, the mountains were crossed by the men of São Paulo, the Northeast, and Bahia with no tools other than primitive muskets, machetes, and courage. Although the interior was thus conquered, it could not be occupied by a numerous population. Consequently, a demographic map of Brazil, even at the present time, shows a black ribbon of dense population along the coastline from the mouth of the Amazon to the extreme south, with some 50 to 100 kilometers of width and a population density of more than 60 inhabitants per square kilometer. Behind this a broader band reaches a thousand kilometers of width in the South, the Center, and the Northeast, where the population density is 15 to 60 inhabitants per square kilometer. Farther west is a more sparsely populated area, as yet not very large, with a density of 2 to 15 inhabitants per square kilometer, and finally, farther inland to the northwest and the central west, lies the great Amazon region with more than 4 million square kilometers, and with a population density of less than 2 persons per square kilometer. The difficulties placed in the way of the construction of highways by the mountains and tropical forests and the great swamps explain the slow and gradual process of occupation of the interior of the country.

TABLE 2
Regional Differences in Income, School Enrollment, and Literacy

Region	Per capita income, 1958 Cr\$ *	US\$ 1957	Value of factory production per worker, 1955 (1,000 Cr\$)	Primary school en- rollment, % of pop. aged 6-10, 1958	Literacy % of pop. aged 5+, 1950	Total school en- rollment, % of pop., 1958
Northeast	6,595	95	139	48	25	6.5
North	10,583	136	137	69	40	10.2
Central						
West	11,974	150	199	80	33	11.2
East	17,028	274	240	72	42	11.3
South	24,500	321	242	96	57	14.6

* Cruzeiros

The uneven distribution of population has educational consequences. About 96 per cent of the people live in large and small demographic concentrations distributed all over the country, but occupying no more than one-eighth of its area. This might be called the social space of Brazil. The other 4 per cent are dispersed over the remaining seven-eighths of the country. The children of these 4 per cent cannot attend the ordinary school. Either they receive no instruction, or they must go to a boarding school, or they must have an itinerant teacher, or they must be taught by radio.

Regional Variations

Geographers generally divide the country into physiographic regions which have substantially different social and economic characteristics. (Table 2 summarizes some of these regional differences.) These physiographic regions are the following:

1. The North, which includes the states of Amazonas, Acre, and Pará, and the federal territories of Rondônia, Rio Branco, and Amapá. This is the largest of the regions, formed mainly by the basin of the Amazon river, covered with tropical forest, almost flooded by the great tributaries and subtributaries of the river-sea, as the Brazilians call the Amazon. The region also includes some pasture land in the territory of Rio Branco and in the east of Pará, principally in the great island of Marajó. It is rich in minerals, and these are just beginning to be exploited. Amapá obtains considerable revenue from the

FIGURE 3
DEMOGRAPHIC DENSITY



Inhabitants per Square Kilometer

less than 1 ○

1 to 10 ▨

10 to 50 ●

more than 50 ●

exportation of manganese. Recent explorations indicate that the region possesses one of the major oil-bearing strata of the world, which is already being successfully opened up by a few pioneer drillings. This area is very sparsely populated with hardly 2 inhabitants per square kilometer, which means that extensive areas of thousands of square kilometers are entirely unpopulated. The dense forest, swampy terrain, vicious insects, dangerous tropical diseases present enormous difficulties to a rapid human occupation of this territory.

2. The Northeast, which includes seven states: Maranhão, Piauí, Ceará; Rio Grande do Norte, Paraíba, Pernambuco, and Alagoas. Although the largest part of the so-called Polygon of Drought is found in this region, it has large subareas that are fertile and well watered. The principal commercial resources, important in the export trade, are sugar cane which is locally processed, cotton and vegetable fibers, waxes, and oils.

The population of the Northeast is not excessive; its demographic density is approximately 15 inhabitants per square kilometer. This density would be much greater were it not for the great semiarid northeastern wilderness, subject to periodic droughts which force a mass exodus of the population to the coast, and from there to the South or to the Amazon region.

Included in the Northeast Region is the Atlantic island of Fernando de Noronha, of great strategic value, where by agreement with the Brazilian government the United States maintains a post for observation and control of intercontinental missiles. The Brazilian government maintains on this island, in addition to an army batallion, a meteorological observatory and an organization for oceanographic study. In the recent past the island served as a prison for the country's worse criminals.

3. The East, a large region which includes the states of Sergipe, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, and Guanabara, the former Federal District, is a complex region which contains not only a part of the Polygon of Drought, but an interior section cut by the São Francisco. It contains large areas of pasture land, where the typical cattle of Brazil are raised—the zebu, a breed which does not produce much meat or milk, but is resistant to the difficulties of a tropical climate. The area is extraordinarily rich in iron and manganese ore, which are exported and are also being used in domestic industries. In the state of Bahia a substantial petro-

leum industry produced 100,000 barrels per day in 1961. Bahia also produces a large part of the cocoa consumed in the United States and in Europe.

The state of Minas Gerais, the traditional source of mineral wealth, is the great producer of Brazilian steel. In addition, it is a major producer of cattle, dairy products, and cereals.

The states of Espírito Santo and Rio de Janeiro are predominantly agricultural, but are being industrialized. Moreover, their agriculture is being rationalized by means of modern machinery. On the Bay of Guanabara lies the beautiful city of Rio de Janeiro, great industrial center and sea port, and until 1960 the seat of the Brazilian government.

Over practically all of the eastern region the valuable timber land of colonial times has been replaced by pasture land, farm land, and wooded areas of small economic value. The demographic density of about 18 persons per square kilometer can be very considerably increased through economic development.

4. The South is the most highly developed region, with a present demographic density of 26 inhabitants per square kilometer. This region includes the states of São Paulo, Paraná, Santa Catarina, and Rio Grande do Sul. The city of São Paulo, which is also the capital of the state, is a great industrial metropolis, containing some 5 million people within its metropolitan area, which is 47 per cent of the population of the entire state, and almost a fifth of the population of the entire southern region.

The states of São Paulo and Paraná are the coffee raising regions of Brazil, and they contribute about 50 per cent of the value of the export trade of the entire country.

Santa Catarina and Rio Grande do Sul have been favorite immigration centers for German people, and all four states have received substantial immigration from all of the European countries and from the Near East. Agriculture is highly developed through great cooperatives and through small and medium-sized individual holdings. The area is being rapidly industrialized. Railroads and highways traverse the entire region. Still there are areas of the west of Santa Catarina and Paraná with fertile land and productive forests which have not yet been adequately explored.

5. The Central West is the new land of promise, the locus of occupation and economic exploitation in the second half

FIGURE 4
STATES AND TERRITORIES



of the twentieth century by native Brazilians and immigrants from Europe. In this region lies the new capital of the country, Brasília, inaugurated in 1960. The region consists of two states, Goiás and Mato Grosso, with a demographic density of only 2.4 persons per square kilometer. The land is fertile and rich in forest products and pastoral wealth. Highways are being constructed rapidly to provide for the transportation of the produce of the region. The Central West is thought to have extraordinary mineral wealth which, allied with its hydroelectric potential, allows a vision of future industrial greatness.

Educational Consequences of the Physiography

As the rivers were the web of communication which permitted the conquest of the immense Brazilian interior, it was along their margins that the occupation of the territory took place. Sailboats, steamboats, rowboats, and canoes were the vehicles of civilization in Brazil. Primitive highways appeared slowly after the middle of the nineteenth century, but the railways and modern highways which now give access to the interior and link the regions have been built since 1930. Scarcity of highways has particular importance in education, because of the problem of school transportation for the population distributed over the vast interior. Distance is one reason for the low scholastic efficiency in the interior of Brazil. Perhaps 20 per cent of the population is so widely dispersed that if schools were built for them, none would be attended by more than thirty pupils. Distance also makes teacher recruitment for interior schools difficult, because a young teacher with a secondary education hesitates to subject himself to the isolated and lonely life of a school lost in the interior.

The only solution is the creation of a school transportation system and the location of the schools in population centers to which the pupils could be brought and where the teachers could live comfortably. In regions such as the Amazon basin and the valley of the São Francisco, this transportation system could operate with motor boats which would collect children on the shores of the river. Even so, the success of this solution would be endangered because in Brazil the occupation of the river shores is not continuous. In the Amazon region, one can journey for hours before seeing two or three isolated homes of backwoodsmen who live by fishing and by the gathering of forest products. Moreover, the rivers, although they permit the occupation of the

territory, do not always favor the rapid introduction of civilization. Because they permit men to go farther in search of a better place for a home and a livelihood, they tend to make the population distribute itself sparsely and irregularly—an extraordinary difficulty for the development of educational institutions.

In the South and a part of the eastern region, where the development of railways and highways is more advanced, the education of the population of the interior has proceeded much more rapidly. The major educational problem of Brazil exists in the Northeast, where the rivers are not navigable and where the system of communication and land transportation is still precarious. There the population is fairly dense, but the school system is deficient in quantity and quality. The situation in the Northeast results primarily from economic backwardness caused partly by the climatic situation already described and partly by the process of colonization and agricultural exploitation in colonial and imperial times which will be described later.

The great tropical forests and the mountain chains of Brazil made occupation of the inland territory difficult; on the other hand, although the river system facilitated the conquest of the immense interior area, this particular form of conquest led to a distribution of the population so sparse and intermittent that the work of education was made extremely difficult. Consequently, even today the Brazilian educational system from higher education to the primary school is mainly urban.

Demographic Aspects and Problems

Brazil is outstanding among the Latin American countries of South and Central America for the numerical size of its population. At present it is the largest Latin country in the world. At the beginning of this century, Brazil had a population of 17.5 million which rose by 1920 to 30.5 million. According to the 1940 census the population had increased to more than 41.2 million, in 1950 to approximately 52 million, and in 1960 to almost 71 million. (Basic facts about the population are given in Table 3.)

None of the populous nations of the world maintains today an expansion of population as rapid as that of Brazil or as regularly maintained during the current century. Jacques Lambert, a professor in the University of Lyon, France, who has studied the demography and the social institutions of Brazil, says that, "It is not the present number of inhabitants, large as this number is,