

INSTITUTE OF CURRENT WORLD AFFAIRS

WHM - 19
Transportation: I

Hotel Ferrocarril
Cuzco, Perú
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Dear Mr. Rogers:

One of Perú's greatest problems and the one which hinders most her economic development is her topography. The great barrens of the coastal deserts, the rocky tangles of the Andean chain, and the forested, spongy soil of the montaña have blocked efficient communication and transportation by land, so that for centuries community isolation has been a way of life in this country. In the last century, when the Central and the Southern Railways climbed from coastal ports into the sierra, towns along the right of way felt for the first time the impact of the outside world and slowly, under that impact, began to slough off their shells of isolationism. This was true of Arequipa and Cuzco; both cities were dying on their feet before the arrival of the Southern Railway (WHM - 2), and today, whatever prosperity these two towns enjoy is due in a large part to the existence of the Ferrocarriles del Sur. Comparatively speaking, however, the towns opened up by the railways are few in number. In 1953 there were some 4,400 kilometers of track in operation or near completion, a trifling figure when one considers Perú's 1,310,585 square kilometers of land area. 1 Nevertheless, the mere fact that there are railroads in this country bears testimony to the skill and tenacity of the engineers who planned and constructed them. Railroad construction in Perú means tunnels, switchbacks, bridges, and the constant fight against washouts, landslides and altitude. The Central Railway, for instance, reaches a height of 15,865 feet at one point near the mining center of Morococha - the highest elevation reached by any standard-gauge railroad in the world.

Faced with so many problems of land transportation, Perú turned to aviation at an early point in its development. The tales of those early days - of "Slim" Faucett's flights in rickety ships across the deserts and into the high mountain passes - sound like highly imaginative adventure fiction. In some thirty years, however, Peruvian aviation has progressed from monomotor planes and rocky landing strips to four-engined ships and Lima's swank Limatambo aerodrome. "Slim" Faucett's DC-4's fly from Lima to Arequipa, Cuzco and the larger cities of the north, while his smaller planes hop from one tiny landing strip to another in the sierra and on the coast. The two most important airlines - Faucett and Transportes Aereos Militares (TAM) - fly "the hump" into such jungle towns as Iquitos and Yurimaguas, bringing out rubber and other produce of the lowlands. Freight costs are high, at times prohibitive, but at least the airplane has formed a transportation link between the coast and the potentially rich lands to the east.

Riding in the comfortable cabin of a Faucett plane, it is easy to forget about the canyons and sharp ridges slipping away beneath you.

1. Total land area figure drawn from Geografía Económica del Perú, Emilio Romero, Lima 1953.

Faucett safety records are on a par with those of leading U.S. lines, and its pilots have logged thousands of hours of sierra flying. On October second, however, the odds caught up with Faucett. A DC-4 on the Lima-Cuzco run crashed into the foothills; twenty-two people were killed. Some of them died instantly, others lived for hours in the torturing sun before they perished. In the lurid stories in the Lima press, Peruvians were forcefully reminded of the rugged and primitive nature of their country. The plane had crashed about forty flying minutes out of Limatambo, yet it took over twenty-four hours to reach the wreckage, several of those hours by mule over narrow, twisting trails. By the time rescue teams had arrived on the scene, Indian scavengers from nearby villages had already completed their work. They had ransacked the plane, taking seats, food, luggage and mail. Then they had worked over the dead and wounded, stripping jewelry from the burned flesh of the victims and robbing the corpses of wallets and clothing. The Indians hid their loot close to the scene of the crash, then returned to offer to carry the wounded out to civilization - at \$60.00 a head.

In a way, the Faucett passengers were lucky. Those who survived the crash and the subsequent exposure eventually reached a hospital. The passengers in the TAM plane which crashed a year ago were not so fortunate. The plane hit high on one of the loftiest peaks in the Peruvian Andes. To date, all rescue attempts have failed.

The Faucett crash revealed how completely dependent some areas of the country are on air travel. In Cuzco, for example, the manager of the Hotel Turistas had a double grievance: many of his personal friends had been killed or wounded in the crash, and he knew what effects the accident would have on the tourist business. The next day's flight bore him out; four tourists stepped down from the Lima plane at the Cuzco airfield - four instead of the usual twenty or thirty. Business men checked their files and sent telegrams to check on the possible disappearance of important papers in the crash. And all through the city there was a feeling of being cut off from the outside world, and with it the realization that the airline was the vital artery between this provincial city and the Capital. The orange-trimmed Faucett planes are taken for granted until flights are interrupted for one reason or another. Then, when the cuzqueño finds his mail box empty and the city devoid of Lima newspapers, a bit of that old feeling of isolation creeps in. In the winter season of rain and hail, there are weeks when even the most skilled of the line's pilots must circle the Cuzco field and head back to Lima, unable to land in the dripping overcast which covers the dirt field. With most roads put out of commission by the winter rains, Cuzco listens to the radio to keep up the feeling of belonging to the outside world and waits for the skies to clear.

Although dirt and paved landing strips throughout the country now number over thirty, the majority of them are located along the coast and in the northern area. Some of the most heavily populated areas - such as the lake region in the Department of Puno - still lack air service. The aviation industry is growing, but it is doubtful if it will ever expand into the scarcely populated, unexploited country which constitutes so much of Perú's land area. The airplane has given Peruvians the opportunity to travel rapidly to regions which are impossible to reach by any other modern means of transportation as of now. But

aviation lacks one factor necessary to truly "open up" a country: proximity to the peoples who live in the remote areas. A plane travels over the land, not on it. Only at the landing fields can actual contact be made with the local people. For this reason, although aviation has pioneered in this country in the field of transportation, it will be up to the highway and railroad men to really exploit the areas that the airplane has "discovered".

During the last century, the heart and soul of Peruvian transportation was the sea. Steamships came to the country in 1840, and the Peruvian coast blossomed out into a long line of small ports. Each coastal valley had its seaport which connected it with other coastal cities and with the principal port of Callao. The fingers of desert separating the valleys were as yet impenetrable, so that produce - either the produce of the sierra shipped to the coast by mule train, or that of the valleys themselves - was funneled to the sea and loaded, however haphazardly, into the holds of small coastal vessels. The principal problem then as today was the lack of sheltered harbors of any description. The continental shelf off Perú slopes very gently into the ocean basin, so that ships cannot approach to close to the shore. Except at the Maritime Terminal of Callao and the newly completed port of Matarani, vessels are forced to anchor some distance from the ports and discharge their cargoes into lighters. In any kind of rough sea, the job of discharging freight and passengers becomes an extremely dangerous one. When the prevailing southerly winds blow a gale and send waves crashing over moles and piers, unloading is impossible. At Mollendo, sea terminal for the Ferrocarriles del Sur, the sea bottom is littered with freight that missed the lighters or was dumped when the small craft turned turtle in the heavy seas.

The construction of trails and, later, asphalt roads across the coastal desert partially destroyed the monopoly which maritime commerce and communications had enjoyed for so long. As more and more merchandise was hauled by truck between the important coastal cities, those ports which were too far removed from the main highway (the Pan-American Highway), or those which were not made self-sufficient by the presence of fishing industries or mining operations, dwindled and died. Today the Peruvian shoreline is dotted with mouldering towns most of which have outlived their usefulness. Commerce by sea is still a vital element in this country's economic development, but emphasis is now placed on international rather than local trade. Again, in terms of "opening up" Perú, the steamship's influence was limited quite naturally to the coast, except in those instances when it offered an impetus to the construction of roads and railroads from seaport to sierra.

Taking into consideration the nature of Perú's topography, the country's road net is a miracle in itself. Coastal highways were difficult enough to construct, but the carreteras de penetración - those northeast-southwest roads which climb into the sierra and, in some instances, dip down into the montaña to some navigable point on one of the rivers of the Amazon drainage system (WHM - 18) - posed problems which equalled those of the railroad engineers. Drifting sands on the coast, landslides and ice in the high country, and the shifting, slippery soil of the montaña - these were just a few of the problems. Differential weathering in the sierra cracked pavements, and rains dredged chuckholes in the roadbed big enough to break an axle as though it were a twig. Despite these difficulties, however,

engineers have succeeded in driving several transverse roads across the mountains to get at the sorely needed products of the isolated areas and to bring them back at a cost and in a quantity which air freight, by its very nature, cannot rival. As the highways are pushed up from the coast to join already existing longitudinal roads, secondary roads and trails are being built to link haciendas and villages to the road system. In the areas where roadbuilding is being either planned or executed, community isolation is fast disappearing. A great deal of credit for that disappearance can be taken by the truck, a vehicle which is on a par with or perhaps even surpasses the airplane as Perú's potentially most valuable conveyance.

Of the 64,331 vehicles in operation in Perú in 1951 (according to the figures of the Official Statistical Extract for that year), 34,427 were automobiles, 3,231 were omnibuses, and 26,191 were trucks. U.S. figures for 1954 show that approximately one-sixth of registered vehicles were trucks. According to Perú's 1951 figures, trucks made up about one-third of the total number of vehicles registered in this country. The dependence on heavy vehicles in Perú is easily explained. Of the well over 35,000 kilometers of Peruvian roads, only about 3,000 kilometers are paved or asphalted; the remainder varies from hard surface dirt roads to rocky trails. Trucks and pickups are the only vehicles which can survive the pounding dished out by these roads for any length of time.

The coming of truck roads to isolated Indian communities brought about a drastic change in the social life of many of the villages. Until recently, one of the controlling themes of life of the Indians living in regions such as Cuzco was love of the land, the belief that a man was bound by spiritual ties to his property. Travel was limited to occasional trips to neighboring villages. The big cargo trucks changed all that. Indians began to beg rides to distant towns, then to accept the truck as a normal and basic form of transportation. In a way, the camiones are a big factor in the growing movement of populations within the country in which the country is moving to the city. The Indians of the Puno altiplano, for instance, have always followed a semi-nomadic existence, travelling from town to town to buy and sell and making the long trip to the valleys of the Cuzco area to purchase maíz (WHM - 17). But it was not until the advent of the truck that they were able to extend the range of their wanderings to Arequipa and the coast. Indeed, the current invasion of Arequipa, Lima and other large cities by serrano populations can largely be attributed to the growth of the national highway system.

Roadbuilding of necessity had to wait until recently to begin its upsurge, for the technical knowledge of the past was not sufficient to deal with the immense problems of cutting roadbeds out of cliffs and constructing highways in the snow and ice of the altitude. But in terms of stripping the country of its isolationism and regionalism, the highways have far surpassed the railroad, the airplane and the steamship. The cost of road construction is, of course, staggering, and foreign capital is needed to keep the program's head above water. In one instance, a foreign company (LeTourneau) contracted with the Peruvian government to construct a road which will eventually link the northern coast with the great Marañon River. This Olmos-Borja road will mean another important carretera de penetración - another advance in the opening up of the jungle area and the stimulation of trade between western Perú and the whole Amazon basin.

The roadbuilding fever has produced some dreamlike plans in Lima's Ministry of Public Works. So keen has the Gobierno been on increasing the extent of the road net that national economic capabilities have often been left far behind in the race to build bigger and better highways. In an article published in the August 19th edition of the Peruvian Times, A.J. Van Dyke, Highway Engineer of the International Cooperation Administration, speaks of the almost total disregard for proper road maintenance in the past; the operation was presumably overlooked in the rush to build new roads. According to Van Dyke, only 5% of the total 1952 annual highway budget was spent on maintenance. He compliments the Bureau of Highways on raising maintenance funds to a reported 20% this year but adds, "Because of the slighting of this work in the past, it is doubtful if even this is sufficient money to provide proper attention; but the increase is an excellent move."

It is doubtful if Perú will solve her problems of regionalism and isolationism by highway, airstrip, railroad and seaport construction alone, just as it is doubtful if she will arrive at an adequate point in such a construction program in years or even decades. The battle against social inertia is as continuous as that against desert, sierra and jungle. Still, the record made on both fronts is an impressive one - a record which is looked upon by neighboring countries with envy.

Sincerely,

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