THE ANATOMY OF BOLIVIAN BROADCASTING

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ABSTRACT

THE ANATOMY OF BOLIVIAN BROADCASTING

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Broadcasting is relatively young in Bolivia. The radio stations, which are of a limited number and power, have existed only since the late 1930's. Recently, various educational groups have begun to use radio as an educational tool. Television is nonexistent.

Information from organizations familiar either with Bolivia or broadcasting, as well as personal interviews and library sources, have provided most of the information for this historical and descriptive study.

In the first part of the thesis, I deal generally with the history and culture of Bolivia, giving attention to such factors as location, types of people, general history, national government, economy, education and social welfare.

Other sections of the thesis are devoted to an analytical study and description of commercial and state-controlled radio, the use of radio as an educational tool, and the future role of television in Bolivia. A summary of the findings of the thesis is included.

THE ANATOMY OF BOLIVIAN BROADCASTING

By

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Dedicated to:

Miss Ruth Larkin

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INTRODUCTION

Two of the basic functions of the mass media are to keep the public informed, and to provide a supplement for formal education.[1] These functions are important in any society--highly developed or underdeveloped.

According to standards established by UNESCO, an economy is underdeveloped if the average per capita income is less than $300.00 per year. The media are considered underdeveloped if there are less than five radio receivers or two television receivers per 100 persons.[2] UNESCO claims there is an 86% correlation between underdevelopment in general (partially determined by per capita income) and underdevelopment of the media.[3]

UNESCO also points out the reciprocal relationship between the media and the economy. For example, a certain level of wealth must be reached by a country before it can afford services less essential than food or shelter. Yet the information media can stimulate the capacity to create further wealth by teaching skills and raising the level of education in an effort to improve economic development.[4]

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[1]UNESCO, Mass Media in the Developing Countries (Paris Workshops of UNESCO, 1961), p. 15.

[2]Ibid., p. 16.

[3]Ibid., p. 17.

[4]Ibid., p. 15.

In this study of Bolivian broadcasting, the relationship of media development and development level in general has been considered. Several factors hindering the development of the country have necessarily influenced the growth of its media as well.

First of all, Bolivia's history is one of rule by the aristocracy.[5] When the Spanish discovered South America, they found the advanced civilization of the Incas in the area now known as Bolivia: Pizzaro conquered this area in 1538. After Bolivia became independent in 1825, a few rich families ruled the people. Not until 1952 was there a true social revolution. Even today 80 percent of the population is not integrated into the national economy; a majority of these people are illiterate and concerned only with basic necessities of life. Radio has not been experimented with nor demanded by "the people," as it has been in many other countries.

Secondly, geographical factors deter transmission, including the height of the Andes and the great distances between Indian villages. Geologically, mineral deposits in the mountains deflect signals, even when powerful transmitters are used.[6]

Thirdly, Bolivia's state of economy, especially since the revolution, has been chaotic, and economic resources are sadly limited.[7]

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[5]Charles Arnade, The Emergence of the Bolivian Republic (Gainesville: University of Florida Press, 1957), p. 10.

[6]Personal letter from Florence Thomason, March, 1964.

[7]Personal interview, Mr. Gaston Canedo, Bolivian Mission to the United Nations, February 18, 1964.

Fourthly, there is a language barrier between the Indians and the Spaniards (white Bolivians). Many Indians are not only illiterate in their own languages (Quechua and Aymara) but they do not understand Spanish.[8]

Chapter I of this thesis is devoted to an analysis of these factors and other aspects of Bolivian culture as they relate to broadcasting.

Chapter II is an analytical study and description of the radio medium, including such facets as physical facilities, governmental regulations, programming policies, advertising procedures, penalties, and goals of various stations.

Chapter III examines radio as an educational tool. It is a description of various organizations and what they have done through radio to educate the highland Indian.

In Chapter IV the absence of television and the possibilities for future development are explained.

Chapter V contains a summary of the thesis.

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[8]Lecture on Bolivia, Dr. Ivan Alten, Urban Planning Department, Michigan State University, January, 1964.

CHAPTER I

A CULTURAL BACKGROUND OF BOLIVIA

History

The origin of man on the Bolivian Plateau has provoked a good deal of speculation. It is thought that the agricultural civilization of South America began on the Altiplano by men who migrated from the Tropical Yungas.[1] This area became part of the Incan empire before the Spanish invasion of South America. In 1532, the Spaniards conquered the Incas and shortly after this, Diego De Almagro (an associate of Pizzaro) led an expedition through the territory we now know as Bolivia.[2]

In the middle 1540's, silver deposits were discovered in the mountain of Potosi and immediately a settlement was founded. Other cities were rapidly developing. La Paz was founded in 1548 and Cochabamba (The Villa de Oropeza) was founded in 1570.[3] Bolivia's most prominent cities were all established before 1700.

During the eighteenth century, community interests and traditions became strong. A growing spirit of nationalism

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[1]Harold Osborne, Bolivia, A Land Divided (Great Britain: Broadwater Press Ltd., 1964), p. 49.

[2]Ibid., p. 50.

[3]Ibid., p. 51.

kindled the desire for independence from Spain. The Audiencia of Charcas, on May 25, 1809, issued a decree calling for freedom of the Americas from Spain. After an unsuccessful revolution in La Paz led by Pedro Domingo Murillo, Bolivia attained its freedom in the Battle of Ayucucho (Peru), in 1824. This victory, won by Mariscal (Marshall) Antonio Jose de Sucre, was the last of the battles for independence in South America.[4]

However, this was not the last of Bolivia's problems. As Charles Arnade writes, "On Saturday, August 6, 1825, Bolivia began her life as an independent nation; she was at the threshhold of a terrible and frightening history."[5]

Simon Bolivar was the first president of the new republic, but shortly after he took office he turned over the presidency to Marshall Sucre, who remained in power only a short time. Later came an invasion from Peru, led by Andres Santa Cruz. Santa Cruz proclaimed himself president of both Bolivia and Peru and ruled for 10 years. He was overthrown in 1839 by external forces.

The period between 1840 and 1900 was a chaotic time for Bolivia. Temporary stability was achieved by President Jose Ballivian in 1941. However, revolutions, international wars, and assassinations made stability impossible for more than a few years at a time.

During the War of the Pacific in 1879, Bolivia lost her

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[4]Pan American Union, Bolivia, 1955, p. 9.

[5]Charles Arnade, The Emergence of the Bolivian Republic (Gainsville: University of Florida Press, 1957), p. 205.

Pacific coastline to Chile, becoming landlocked. For twenty-five years, the country had no shipping access to a seaport. Finally in 1904 Bolivia received a railroad from La Paz to the Chilean port of Arica, as the result of a treaty made through the negotiations of President Aniceto Arce who served from 1888 to 1892.

The twentieth century has been one of many transitions for Bolivia. President Ismael Montes began the exploitation of many mineral resources, and economic development occurred rapidly. Montes built railroads, improved technical methods for industry and encouraged scientific training in agriculture. He also tried to reduce illiteracy.

The country seemed to be moving ahead peacefully when the Chaco War broke out in 1932. This dispute involved a section of the Chaco Boreal (which was rich in cattle and timber) and which was claimed by both Bolivia and Paraguay. In 1938, a treaty was signed giving Paraguay three-fourths of the disputed land, and Bolivia was granted port facilities on the Paraguay River.

This Chaco War made the 1952 Bolivian revolution inevitable.[6] First of all, it completely disorganized the economy; consequently, rebellion against the semi-feudal system of ownership in the tin mines began to grow. Secondly, it discredited the army. The deserters and cowards as well as the politicians who had used the army for personal gain discredited the government in the people's eyes. Thirdly, the

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[6]Robert J. Alexander, The Bolivian National Revolution (New Jersey: Rutger's University Press, 1958), p. 22.

workers and miners began to see that there were other and better ways to live. Fourthly, discontent was sowed among the intellegentsia. New parties with new platforms were organized, giving the government in power much competition.

To help remedy this situation, the government of Colonel German Busch (1937-1938) tried to bring about various reforms. One of these was to prevent the wealthy tin mine owners from transferring their profits to Europe. A long dispute between President Busch and the owners of the tin mines resulted in his suicide.

Finally, in 1942, violence erupted in the mining camps. An armed battle at the Patino mines at Catavi broke out. Many miners were killed and the conflict grew even deeper. It continued during the presidency of Major Gualberto Villarroel who was murdered after two and one-half years in office.

A great struggle for control of the national government followed until 1951 when the Movimiento Nacionalista Revolucionaria gained power and elected Victor Paz Estenssoro as the new president. The army, however, soon seized control of this government and set up a military junta which lasted until April 1952, when a three-day social revolution swept the country and Paz Estenssoro was reinstated. This revolution has been called the "most important indigenous revolutionary movement since Mexico."[7]

Victor Paz Estenssoro, currently president of Bolivia, served as head of the republic from 1952 to 1956. He was

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[7]Robert J. Alexander, "Bolivia," U.S. Policy in Latin America, XXXV, No. 1, 1963, 116.

succeeded by Senor Hernan Siles from 1956 to 1960, and was then re-elected in 1960 and 1964. Under his administrations some reforms have been achieved, although the country is still largely dependent upon one product, tin. Many of the people are still unable to read or write and are barely self-sufficient.

Bolivia's history records nearly a dozen constitutions, 60 revolts and six presidential assassinations.[8] It is understandable that while many countries have been experimenting with electronic communications media during the 20th century, Bolivia has fallen behind because of her explosive history.

Revolution

Although the Chaco War served as fuel for the revolution, various other factors are also important: the poverty of both the country itself and the majority of the people; the division of one country into two nations (the city people and the rural people); the four-century-old struggle over land; and inequality between the over-exploited tin market and the country's other underdeveloped resources. Such factors made the country ripe for revolt.[9]

In 1952, Bolivia was taken over by revolutionists who intended to incorporate the Indian of the rural areas into the life of the nation. According to Dr. Ivan Alten in a lecture on Bolivia, the majority of them had never bought or sold goods in the Bolivian markets.

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[8]Robert S. Kane, South America A to Z (Garden City: Double Day and Company, Inc., 1962), 205.

[9]Alexander, The Bolivian National Revolution, op. cit., p. 21.

The revolution involved an armed uprising of the city workers of La Paz, the tin miners and the national police force. The party which led the revolution, and which is still in power today, was the Movimiento Nacionalista Revolucionario or MNR.

After the revolution, various acts took place. One of these--the agrarian reform--claimed that all land was the property of the tenants. No longer could the rich landowners operate their semi-feudal system of organization. However, by 1963, only one-third of this land had been transferred to the workers. The slowness of this reform has been attributed to the shortage of persons trained to survey, divide and distribute the land properly.[10] Other parts of the agrarian reform act gave the right to vote to illiterates, and provided organization for peasant unions, militia groups and political units.

The MNR also nationalized the tin mines.[11] The three biggest tin companies, Patino, Aramay and Hochschild, were expropriated in 1952; this has been the most controversial act of the MNR. The mines have been operating at a loss because of the padding of mine workers' forces, and hiring and paying many more miners than necessary to do the job. Labor relations have been aggravated because of the closing of old, unproductive mines.

Recently, the Operacion Triangular (the Bolivian government, West German private firms, and the International Bank and United States Treasury) has tried to improve conditions. The

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[10]Alexander, op. cit., p. 110.

[11]Ibid., p. 111.

Corporacion Minera de Bolivia, has been formed with new capital and supposedly has been given the power to lay off surplus workers and enforce labor discipline.

The third act of the MNR has been an attempt to develop a more diversified economy.[12] The petroleum industry has developed so that Bolivia now produces enough to meet her own needs. In 1956, legislation was passed which enabled foreign firms to invest in Bolivian oil fields. Gulf Oil has recently discovered petroleum in Bolivia.

Another important act of the MNR was to begin development of the eastern part of the country--the so-called Oriente. Two-thirds of the land of Bolivia lies in the Oriente which is low, tropical and hot, and capable of growing a great variety of agricultural products. A road from Cochabamba to Santa Cruz has helped to encourage migration. Colonies of foreigners--Japanese, Okinawans and German Mennonites--have had considerable agricultural success, and highland Indians are beginning to move east and farm there.

The political outlook since the revolution has been one of change and controversy. One authority claims that "it is one of the most stable governments in the history of Bolivia,"[13] while another says, "It is progress built on a shaky foundation, and anything can happen."[14]

One result, however, is impressive. It is the first

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[12] Ibid., p. 113.

[13] Ibid., p. 114.

[14] "A New Success Story in Latin America," U. S. News and World Report, June 15, 1964, p. 62.

time in history that the leader of Bolivia has not been pressured by the decisions of the military leaders. The Army, rather than being "on alert" for a counter-revolution, has been put to work building roads and other projects. It is working with the government in trying to raise the living standard of the people.

While President Paz Estenssoro has tried to allow freedom of speech, some violent opposition parties have forced him to limit the degree of this freedom. Generally, these parties have had the support in the cities while Paz Estenssoro is supported in the countryside. One dissident political party, the Partido Revolucionario Autentico, was formed as loyal opposition in 1960.

The revolutionary government has run into various economic difficulties. It has tried to spend beyond its resources and, with the decline in tin production, inflation has resulted. For example, in 1952, 200 bolivianos were worth one American dollar. In 1956, it took 15,000 bolivianos to equal a dollar. During the last few years the exchange rate has been about 12,000 to the dollar.[15] Another problem has arisen because manufacturers have not taken advantage of the opportunity to expand markets among the Indians, while at the same time their previous markets have shrunk, due to stabilization measures.

As the economy has become more diversified, the MNR has turned more to radio as a means of communication. Three new state-owned-and-operated transmitters are being built this

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[15]Alexander, op. cit., p. 116.

year. They will be discussed in Chapter II of this thesis.

For the most part, the revolutionary aims and acts have only begun to take effect, yet two points are important to remember. First of all, this revolution of 1952 is the only indigenous social revolution in South America since the Mexican revolution of 1911. Secondly, the Indian has finally been given attention and an attempt is being made to improve his condition.[16]

National Government

The present constitution of Bolivia is its twelfth. It was adopted in 1938, and amended in 1945 and 1947. The constitution provides for a republican form of government similar to that in the United States, divided into legislative, executive and judicial branches.[17]

Voting is compulsory, and all married persons over 18 years of age and single persons over 21 years of age have the right and responsibility to vote.

The president possesses the executive power and serves as the chief executive of the unitarian government for four years. The government is described as unitarian because the states do not have separate governing facilities, as in a federal system. Until this year the president was not allowed to run for reelection; through the influence of President Paz Estenssoro, the constitution was changed and Paz Estenssoro is presently serving his second consecutive term. In case of

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[16]Alexander, "Bolivia," U. S. Policy in Latin America, XXXV, No. 1, 1963, 118.

[17]Pan American Union, op. cit., p. 12.

death or disability, the vice-president assumes the office of president. A cabinet of twelve ministers assists the Chief Executive.

The legislative branch of the Bolivian government is similar to that in the United States. The Congress is made up of two houses; the Senate and the Chamber of Deputies. The members of the Senate are elected for six years (three from each of 27 districts). One-third of them retire every two years. The 120 members of the Chamber are elected every four years, one-half retiring every two years.

The judicial branch of the government includes the Supreme Court, the superior district courts and the local courts of justice. Justices are chosen by a two-thirds vote of Congress and serve for ten years.

Perhaps it is because of the similar forms of government that the Bolivian broadcasting regulations are like those of the United States' FCC. These regulations will be discussed in the next chapter.

Departments and Cities

There are nine departments (comparable to our states) in Bolivia. These departments and their capitols are as follows:[18]

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[18] Ibid., p. 15.

Department	Capitol
La Paz	La Paz
Cochabamba	Cochabamba
Potosi	Potosi
Santa Cruz	Santa Cruz
Chuquisaca	Sucre
Oruro	Oruro
Tarija	Tarija
El Beni	Trinidad
Pando	Cobija

Each department is divided into several provinces (counties) which in turn are divided into sections. There are also 4,500 Indian communities headed by chiefs which are recognized by law. They are governed according to tribal procedures.

La Paz - "Overwhelmed, speechless, stupefied, blinded by too much light, the traveller arriving for the first time in La Paz experiences a sense of awakening, of coming from the vast desolate desert, as if out of a nightmare, into the Garden of Eden."[19] This description is of the functioning capitol of Bolivia, "La Paz, Our Lady of Peace, La Paz of the peaceful sky, of the peaceful air, La Paz of Illimani lit by the snows."[20] The legal capital of Bolivia is Sucre. However, all of the executive and legislative offices are located in La Paz, a city of more than 325,000 people. Situated more than two and one-quarter miles above sea level, La Paz is the highest capitol in the world and one of Bolivia's highest cities.[21] The oxygen

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[19]Jean Manzon, Miguel-Angel Asturias, and Diez de Medina, Bolivia, An Undiscovered Land (Switzerland: George G. Harrap & Company, Ltd., 1961), 55.

[20]Ibid., p. 55.

[21]Pan American Union, op. cit., p. 12.

supply is very limited, and it is especially difficult for tourists to adjust to the atmosphere. The Bolivians who are born in La Paz develop very large lungs to compensate for the thin air.

La Paz serves as a meeting place for both the Quechua and Aymara Indians; other tribes are also found in the market places. There are Urus from Lake Poopo, Atacamas from Desaguaders, and the Changos.[22]

Some of the more beautiful and outstanding buildings of the city are the Capitol, the Cathedral, the Church of Santo Domingo and the Diez de Medina Palace.

Sucre - Sucre is located at an altitude of 8,900 feet and is the official or legal capitol of Bolivia, although the Supreme Court is the only branch of the government which meets here. Sucre is the country's cultural center, partially because it is the location of the University of San Francisco Xavier (an institution which has been called the cradle of South American independence).[23]

Sucre is situated in the center of an agricultural region and serves as a distribution area. It has some small industries.

Cochabamba - Cochabamba is the second largest city in Bolivia, with a population of about 90,000. It is the capitol of the department of Cochabamba. Located on the east west transportation route, it is in the richest agricultural region of Bolivia.

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[22]Manzon, op. cit., p. 58.

[23]Pan American Union, op. cit., p. 13.

Some of the products of Cochabamba are wheat and corn flour, wine and beer, leather and woolen goods, preserves, soap, and earthenware.[24]

Spanish colonial architectural design gives many of the homes in the city of Cochabamba a distinctive appearance.

Potosi - Potosi is Bolivia's fourth largest city. It is one of the principal mining centers, and the town of the famous silver hill, Cerro Rico. Potosi is the highest city in the world, more than 13,600 feet above sea level, and it has an average temperature of only 48 degrees Farenheit.

The Cerro Rico has produced some two billion dollars in silver since it was discovered by the Spanish, but today it produces mainly tin, tungsten and bismuth.[25]

Oruro - Oruro is one of the best known mining cities. Located north of Lake Poopo, Oruro is the railroad center of Bolivia, and is famous for the "Devil Dancers" who perform during the pre-Lenten carnival season.

Santa Cruz - Santa Cruz is the capitol of the department of Santa Cruz. It is the largest city in the tropics. It is the center of commerce for tropical products because of railway connections with Argentina and Brazil and a highway to Cochabamba.

Tarija, Trinidad, and Cobija are the other capitol cities. They are small, having only those buildings necessary for the governmental work done there. Their populations are less than

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[24]Ibid., p. 13.

[25]Kane, op. cit., p. 216.

40,000.

The cities of Bolivia are full of contrast. In any one city, the old world and the new stand side by side. The mining towns of Oruro and Potosi differ from the cultural center of Sucre, the Spanish colonial Cochabamba, and the modern capitol of La Paz. This is one reason why a uniform system of communications has been difficult to establish.

People

Comparing the wealthy mine owner family, Patino, and the typical Indian of the highlands, Robert S. Kane claims that the only characteristic which these two groups have in common is "that they belong to the same country."[26]

With the lowest living standard in Latin America, $61 to $100 a year, the majority of the people live at a subsistence level. The average life expectancy is 50 years. Seventy percent of the people live on the Altiplano and thirty percent live in the valleys and lowlands.[27]

The Bolivian population can be divided into three different groups. The largest comprises the peasants or the highland Indians. The Indian men are of medium stature, thickset with a large trunk and hands and small feet. Their faces are broad with prominent cheekbones, and their almond-shaped eyes suggest oriental characteristics. The women have even fuller faces and

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[26]Kane, op. cit., p. 216.

[27]Department of State, Fact Sheet - Aid in Action, U.S. Government Printing Office, December, 1961, 5.

their eye folds are more pronounced.[28]

Both the Quechua and the Aymara Indians are basically agricultural. They know little if anything about any other way of life. Most of their houses are simple, single-room structures, approximately 12 x 8 feet, with thatched roofs and one door. A llama pelt (perhaps with a sheepskin cover) is the most common type of bed.[29]

The Indian woman is easily recognized by her costume. The Aymara woman wears multi-colored skirts. "She sleeps, makes love, gives birth in them, and when you see one of them crouching on the streets in some village, you know exactly what she is doing."[30] A derby hat adds the finishing touch to the woman's typical costume.

The Quechua woman wears only one skirt (long and not belled), with a mantle (like a man's poncho). Usually she wears a white straw hat which looks like a stovepipe with a brim.

The Indians constantly chew coca, but they drink "chicha" made from fermented maize only on occasion. Their morals are usually high. However, those Indians who have been brought into the mines find their traditions are challenged. They do not know how to react to such a different atmosphere and way of life. Generally, they lose their pride and their morals

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[28]Harold Osborne, Indians of the Andes (London: Routledge and Kegan Paul Ltd., 1952), 207.

[29]Peter Schmid, Beggars on Golden Stools (New York: Praeger, 1956), 231.

[30]Ibid.

degenerate.[31]

Most of the Indians have no interest in money as such, but rather prefer to barter; there is a fair or a market in every town or village.

The Indians still are suspicious of the white Bolivians. The following conversation between an Indian and a government (white Bolivian) investigator illustrates this.[32]

Indian: I am so old that I don't remember my name. Please (with a gesture carrying something of impatience and supplication) do not bother me, because I don't remember anything.

Invest: We are not going to harm you in any way. What is the name of your oldest child?

Indian: I have forgotten his name, too.

Invest: Where is your son now? Perhaps we can talk with him.

Indian: Working in the field. A long way from here, a very long way. I don't know exactly where.

Invest: How many sheep do you have?

Indian: Just 10. They are very thin. There is no pasture here on which to grave them. Yes, I have hardly any sheep at all.

Invest: (The herd happens to be near and a rapid count is made. The result is 35.) You are not telling us the truth. We have counted them and there are 35. Why don't you tell us the truth?

Indian: You are right. There are 35, just as you say.

This resistance to giving accurate information is a carryover from the days when the Indians were merely tillers of the soil for semi-feudal landlords. Prior to the revolution they learned to underestimate their belongings in order to keep

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[31]Osborne, op. cit., p. 219.

[32]Olen E. Leonard, Bolivia, Land, People and Institutions (Washington, D.C., The Scarecrow Press, 1952), 161.

as much as possible for themselves. Today, when they understand that investigators have no desire to take their property, they become more cooperative, and with the passing of the years, the job of making surveys of Indian possessions becomes easier.

The second important group of Bolivians are the Cholos, or Mestizos. These are people of mixed Spanish and Indian ancestry. The Cholos, although they are looked down upon by the Spanish Bolivians, are allowed to hold some offices and acquire some prestige. A story which was told to me by a Bolivian-American woman will better illustrate this relationship. A Spanish Bolivian boy, who was a student in the United States, was asked to go to visit another Bolivian student in Michigan. He tried in various ways to avoid going, and finally admitted he did not want to meet the boy because "he was a Cholo."[33]

The third group of Bolivians who make up a significant part of the population are those of predominantly Spanish descent. They account for approximately 15 percent of the population and hold most of the important commercial and professional positions. The language of these people is Spanish. Most members of this group will admit that they are not of pure Spanish descent. When the conquerors first arrived from Spain they often married the native Indian women. This practice was ended nearly 400 years ago, and the mixing of Spanish and Indian blood since has been very limited. Yet many Bolivians, even of the upper class, have some Indian ancestry.

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[33]Statement by Majory Aseltine, personal interview.

Land and Location

No where else in the world does a nation possessing cities, railways and modern industry exist at such a high altitude.

Bolivia is the fifth largest country in Latin America--about the size of Texas and California combined.[34] The peaks of the Andes reach as high as 24,000 feet with the lowest mountains 12,000-14,000 feet above sea level. Lake Titicaca, located between Bolivia and Peru, is 138 miles long and 69 miles wide. It has a maximum depth of 900 feet and is situated at an altitude of 12,000 feet, making it the world's highest inland lake. Lake Titicaca's fresh water drains into Lake Poopo which has no outlet.[35]

Most of Bolivia has great extremes in temperature between day and night. Because La Paz is in a sheltered canyon, it is more comfortable, one reason why people have insisted on making it the functioning capitol.

A Bolivian authority has estimated that in all of highland Bolivia, there are about 10 million acres of land suited to agriculture. Less than one-half of this land is under cultivation--less than a quarter of the land cultivated in a state like Ohio.[36]

The land of Bolivia is divided into three distinct

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[34]Department of State, op. cit., p. 1.

[35]Ibid.

[36]R. H. Whitbeck, Economic Geography of South America (New York: McGraw Hill Book Co., Inc., 1926), 142.

sections: the Altiplano (high plateau), the Valles and Yungas (valleys and deep slopes) and the LLanos (Amazon-Chaco lowlands.)[37]

The Altiplano on the Peru-Chilean border is the site of the ancient Incan civilization. It is a broad, rolling plateau at an average altitude of 12,000 feet. Some of the peaks which surround this area are Illimani (21,277 ft.), Illampu (23,320 ft.) and Sajama (21,492 ft.).[38] The mountain ranges which make up the Bolivian Andes are the "Cordillera Occidental," western range; the "Cordillera Real," royal range; and the "Cordillera Oriental," eastern range.

Yungas is an Aymara word which applies to the semi-tropical mountain valleys on the eastern slopes of the Cordillera Real.[39] The Yungas include about one-tenth of the total area of the country and about one-third of the population. Here humidity is very high, and the climate is subtropical. The slopes and valleys are covered with lush vegetation.

These mountain jungles are filled with a variety of plant life. The timber includes cedar, mahogany, walnut laurel, jacaranda, ceiba, caucho, cinchona (the source of quinine bark) and various palms. There are also many medicinal and aromatic trees and dyewoods. Fruit and vegetables grow everywhere and it is next to impossible to keep a clearing for agricultural purposes. For example, in the highest regions, grapes, peaches, figs and apples are found. Below 6,000 feet, there is an

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[37]Pan American Union, op. cit., p. 3.

[38]Ibid., p. 3.

[39]Osborne, A Land Divided, op. cit., p. 19.

unlimited variety of semitropical fruits. Oranges, limes, grapefruit, lemons, tangerines, six varieties of bananas, pineapples, avocados, chirimoyas, papayas, pomegranates, melons, cantaloupes, quinces, mangos, persimmons, Indian figs, and many others with only local names grow wild.[40] Sugar cane, tobacco, cacao, and coffee also grow readily, but the only crop which is seriously cultivated is coca. It is thought, however, that with proper irrigation and cultivation methods, the Yungas could supply the main agricultural requirements of Bolivia.

The lowlands, called the Oriente, encompass approximately 70 percent of the land in Bolivia. This is contrary to the belief that Bolivia is mostly highland. The climate is hot, and the amount of rainfall is generally high.

According to one authority, the Oriente consists of dense tropical forests of the Amazon basin, vast natural pasture lands and open forests. It is underdeveloped, underpopulated and deficient in communication with the rest of the country.[41] This is the section of Bolivia in which the government has tried to encourage migration and settlement of the highland Indians. The soil is fertile and is suitable for the cultivation of citrus and tropical fruits, coffee, sugar cane, cacao, coca, rice, cotton and rubber.[42]

In summary, Bolivia is a landlocked country, bordered by Chile, Argentina, Paraguay, Brazil and Peru. Its land

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[40] Ibid., p. 21.

[41] Ibid., p. 21.

[42] Pan American Union, op. cit., p. 5.

can be divided into three distinct areas; the Altiplano, the Yungas and the Oriente. It is suitable for the growth of a great variety of agricultural products--yet, so far, full advantage of the resources has not been taken.

Economy

Since the revolution, the tin mines that provide 90 percent of Bolivia's exports have been nationalized. However, under state management, payrolls have become featherbeds and wornout machinery has not been replaced. The mines now lose an average of $8,500,000 a year.[43]

The Indians who work in the mines are a significant threat to Bolivia's economy and peace. Most of them carry their own weapons, despise officials in La Paz, and live "as if there was no tomorrow."[44] They are able to toil underground for only four or five years, and their average life span is 30 years. This is due to various lung diseases caused by the fumes of the mines.

Although the economy has been plagued by inflation and instability ever since 1952, conditions supposedly have taken a turn for the better in the past two years. Last year (1963) Bolivia had the highest economic growth rate in Latin America--6.5 percent--and since 1961, per capita income has jumped 5.8 percent.[45]

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[43]"The Hemisphere-Bolivia," Time Magazine, Nov. 1, 1963, p. 41.

[44]"Why the Outlook Brightens in Bolivia," The National Observer, June 15, 1964, p. 8.

[45]U. S. News and World Report, op. cit., p. 62.

Foreign exchange reserves have advanced from almost nothing to 15 million dollars. Indians for the first time have titles to their own land and are able to buy shoes, put window glass in their huts, and buy radios and bicycles.

Although the Bolivian economy still is dependent mainly on tin, some tungsten, antimony, silver, copper, zinc and lead are also produced. The mining area of Corocoro is one of the world's two sources of native copper--copper in pure form instead of an ore. A large iron ore deposit was discovered in 1954 near the Brazilian border in eastern Santa Cruz.

Bolivia has several oil fields in the eastern foothills of the Andes and it is hoped that their production will eventually reach the point where its refineries can operate at full capacity without using imported crude oil.

Although most of the population is employed on the land, agriculture and stock raising is of secondary importance to mining. Livestock includes cattle, sheep, pigs, goats, horses, mules, donkeys, llamas, and alpacas.

Rubber and cinchona are Bolivia's principal forest products. Industry is very limited. There are some textile mills, flour mills and breweries as well as a sugar refinery.

Thus, while the majority of the Bolivian population is employed in agriculture, the majority of Bolivian exports are those of the mines.

Labor and Social Welfare

Information about labor and social welfare is relatively new and limited. Therefore, unless noted otherwise, the

information in this section is taken from the Pan American Union publication cited in the bibliography.

Before the revolution, peasants who worked on semi-feudal estates were supposed to work on the employer's land certain days of the week. Since the land is now being put in possession of the tenants, this is not nearly so common. The government has passed the Agrarian Reform Program of 1953 whereby the peasant must pay for land he receives within 25 years.

The United Nations' Technical Assistance program in Bolivia makes provision for an appropriation of 59,791,875 bolivianos to help the agricultural workers of the Altiplano.

The mining and railway workers have formed unions which have become quite strong. Office workers now have various syndicates.

A General Labor Act provides for collective bargaining, fixes maximum hours of work, minimum pay and overtime pay. There is also a National Social Insurance Fund and a Bolivian Social Security Institute.

Bolivia has a program in health education. Various occupational training programs are also conducted by the government. Thirty percent of the National Lottery profits go to private welfare organizations: Bolivia has 18 orphanages, a veteran's welfare department, three institutes for the blind and two rehabilitation centers for blind adults. There is an active Bolivian Red Cross.

Some public housing programs have been attempted but these are not on nearly a large enough scale. Besides sponsoring

housing, the government provides health centers, maternity hospitals, sewage disposal, slaughterhouse sanitation and garbage disposal.

Education

Between the time Bolivia gained her independence from Spain in 1825, and the early 1900's, a limited number of schools were established. Only the upper class children were able to attend the private schools. In the later part of the 1800's a missionary group from Belgium attempted to improve the situation, but not much of lasting effect was accomplished.

The situation today is somewhat improved. Kindergartens are of two kinds in Bolivia. The first level is for children one to four years and is operated mainly as a nursery for children with working mothers. The second level is for children four to six years of age and is similar to the American kindergarten.

Elementary school education is free, and compulsory for all children between the ages of seven and thirteen. However, it is estimated that only about 24% actually attend school.[46] Equipment and facilities are meager in the urban schools, and the rural schools have even less with which to work. Lacking light and ventilation, many of the buildings are only mud huts constructed by the Indians. One immediate problem is the inability of most Indian children to speak Spanish, the official language of the schools.

Because supplies are limited, radio has not been used

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[46] Olen E. Leonard, op. cit., p. 161.

at all as a formal educational tool in the cities. In rural areas some private organizations have begun to use radio in their religious schools. Chapter III will be devoted to an examination of the radio schools.

In the secondary schools, boys generally attend one school and girls another. The high school course takes six years to complete, but after four years a certificate is given and the student is eligible to enter a vocational or special school. If he completes all six years, he can then enter a university.[47]

There are seven universities in Bolivia. The oldest is the University of San Francisco Xavier, established in 1624. It has departments of law, political and social sciences, medicine and economics, languages and agriculture, fine arts and music.[48] Other universities are the University of San Andres, the University of Cochabamba (San Simon), the University of Gabriel Rene Moreno, the University of Tomas Frias, and the University of Misae Saracho.

The Bolivian educational system is in need of buildings, money, supplies, teachers and an awareness on the part of the population of the need for education. Looking toward the future, the code of education now states, "Education should no longer be a monopoly of a minority, but the right of all Bolivians."[49] Perhaps radio will have a role in realizing this

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[47] Ibid., p. 155.

[48] Pan American Union, op. cit., p. 29.

[49] Servicio Cooperativo Interamericano de Educacion, Educacion Boliviana, Vol. VII, No. 3-4, p. 110.

goal.

Communication and Transportation

I had the opportunity of discussing his country's problems with Mr. Gaston Canedo, a member of the Bolivian mission to the United Nations. He mentioned that one of the biggest and most urgent problems today is the lack of communications and transportation in Bolivia. Because of poor transportation, many commodities must be imported even though other sections of Bolivia have the same products available. Such a system creates the unpleasant feeling that each section of the country is struggling for its own existence, at other sections' expense.

Two international airlines, Braniff and Pan American Grace Airways, connect La Paz with other South American cities. A Bolivian National line, Lloyd Areo Boliviano (LAB), serves the larger towns of Bolivia. This airline flies DC 6's and 3's and has an amazing record for safety in spite of the rugged terrain.

In October, 1963, North Central Airlines of the United States was awarded a contract by AID to provide managerial and technical assistance to LAB. North Central was to reorganize the airline, expand the flight schedule, improve schedule completion, develop a favorable image, establish an effective accounting system and acquire additional working capital.[50] Because aviation is so necessary to the growth of Bolivia, it is hoped that the LAB-North Central project will be successful.

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[50]"The Bolivian Project," North Central Airlines Annual Report, 1963, p. 7.

Presently, railroads are the most important form of transportation. La Paz is connected with the Pacific Coast by three single-track lines which serve only the Altiplano and highland valleys. In use since 1954 is a 422-mile railway from Corumba (bordering Brazil) to Santa Cruz. Altogether Bolivia has approximately 2,000 miles of railroads.[51]

Bolivian highways are inadequate. According to the Director of Highways, Bolivia has 22,370 miles of roads, of which about 6,000 miles are "main roads."[52] This compares to a total mileage in Great Britain of 183,658 miles.

These Bolivian roads are generally very dangerous. Almost every road is damaged by a flood or landslide on occasion, and little maintenance work is done. While this is partially the fault of the government, it is also due to physical characteristics of the country. The mountains and jungles make the task of maintaining a good road system at the present time impossible. The poor transportation system has definitely had an effect on the growth of broadcasting. As Mr. Canedo told me, the government thinks it is necessary to develop a safe and efficient transportation system before developing a radio network.[53]

Summary of Cultural Background

Bolivia is not an easy country to describe. It is

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[51]Pan American Union, op. cit., p. 38.

[52]Osborne, A Land Divided, op. cit., p. 43.

[53]Canedo, Bolivian mission to the U.N. in personal interview, New York City, February 18, 1964.

characterized by variety, from the people to the land and the cities.

The history has been one of violence, chaos and confusion--especially before the 1952 revolution. There has always been a distinct class system which has subjected the majority to the will of the minority. The present government, which desires to change this situation, is made up of three branches similar to the United States Government.

The cities of Bolivia reflect the varied culture, tradition, and climate. Class groups include the Indians, Cholos and Spanish Bolivians. The Indians don't trust the white Bolivians and the white Bolivians don't like the Cholos. This makes it difficult to bring about national unity and improvement.

The Bolivian economy hinges mainly on tin, and the tin mines are losing over eight million dollars annually. Some unions have been formed for the workers' protection, but they hinder mineral production.

Although education is compulsory, only a small percentage of the children actually attend school and then often in inadequate, poorly furnished buildings.

Airlines provide the most efficient transportation, although railways are the most important. The highways are inadequate and dangerous.

Bolivia has been plagued by unstable governments, political opportunists, a chaotic economy, physical barriers, and divisions among the people. For the most part, radio has been thought of as a luxury which could not be afforded under such circumstances.

however, the country has experienced a general improvement in living standards, and growing stability, since the 1952 revolution. Consequently, radio has begun to play a larger role.

The present status of radio will be discussed next in this thesis.

CHAPTER II

ANALYTICAL STUDY AND DESCRIPTION OF BOLIVIAN BROADCASTING

Physical Facilities

According to the official list of Bolivian radio stations published by the Director-General of Radiocommunications, 67 stations exist at the present time. The frequencies of these stations are between 580 Kc/s (Radio Huayna Potosi in Milluni) and 104 Mc/s (Radio Mendez in La Paz). Three of the stations are FM, one in Cochabamba and two in La Paz.[1]

Almost all stations are low-power, urban facilities. Located in clusters, the stations are divided as follows: Sucre, 4; La Paz, 27; Milluni, 1; Oruro, 4; Santa Cruz, 7; Cochabamba, 8; Potosi, 4; Tarija, 2; Camargo, 1; Llallagua Siglo XX 1; Telemayu, 1; Cobija, 2; Camiri, 2; and Montero, 1.[2]

The government station, Illimani, has licenses for one 20 Kw transmitter and five 10 Kw transmitters. The largest private stations have 10 Kw power, and 30 of the 67 stations have 0.25 Kw power.[3] Since a large number of Bolivians do not live in the cities, radio is inaccessible to the many of the

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[1]Direcion General de Radiocommunicacions, Lista Official de Estaciones Bolivianas de Radiodifusion, La Paz, p. 1-4.

[2]Ibid.

[3]Ibid.

people because the stations are so low-powered.

The United States Information Service (USIS) estimates that there are 1,200,000 radio receiving sets in Bolivia with a normal audience of some 2,500,000 people.[4] UNESCO has given an estimate of 250,000 receivers, from a survey taken in 1957.[5]

The USIS has record of 87 stations operating throughout Bolivia and claims that some of these stations are not in the official list (see appendix) because they are clandestine or illegal--operating against the government regulations. The majority are spotted throughout the interior and are Union-owned and -operated. In the mining towns these stations may be very antagonistic to the government.

The equipment is usually the least expensive. In most cases, Marconi aerials are used for medium-wave transmission and dipole aerials are used for short-wave transmission. These aerials are set up on the roofs of buildings where the studios and transmitters are located.

The studios are moderately constructed. Radio Illimani, the government-owned and -operated station, consists of a small studio 3 x 2 meters for announcers, a medium studio 5 x 3 meters, an auditorium, 10 x 4 meters, and a joint control room for the three studios. Most of the private stations are built with studios and transmitters together. Some of them have rooms

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[4]Personal letter from Miss Barbara Hutchinson, USIA assistance officer, March, 1964.

[5]UNESCO, Statistics on Radio and Television, 1950-1960 (Paris: Workshops of UNESCO, 1963), p. 52.

which will seat 5-100 persons.[6]

Bolivian stations do not have the mobile units which are so common in North America. Their recording equipment is generally poor. Some is available for 33 1/3 and 78 rpm records, but it is used very seldom. Record libraries were set up in 1945 and today 2,500 records are available. Most of them are in satisfactory condition.

The private stations in 1949 had two machines for recording which could be temporarily leased. Since then additional facilities have been made available.

There is no manufacture of radio equipment in Bolivia. All facilities must be imported. Receivers are bought mainly from the United States, England, Argentina, Sweden and Switzerland. Records are imported from the United States, Argentina, Chile, England and Uruguay.[7]

Government Regulations

Radio is regulated through the "Reglamento General de Servicios Radioelectricos." These regulations, approved by the government of the Bolivian Republic on November 11, 1960, are known as Decree #05632.[8]

The executive power (president) has the authority to enforce the regulations, through the Director-General of Telecommunications who is presently Arturo Salces Arce. The

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[6] Ibid., p. 14.

[7] Ibid., p. 238.

[8] Personal letter from Arturo Salces Arce, Director General of Radiocommunications, La Paz, Bolivia, June, 1964.

Director-General also controls all international communications through the department "Administracion Boliviana."

These regulations have been published in a 40-page booklet and include rules on every aspect of broadcasting, including the granting of licenses, the assignment of frequencies, radio programming policies, technical standards, advertising, requirements for personnel, future television development and other general legislation.

All Bolivian stations, public and private, are subject to the General Regulations of Radioelectric Services. These regulations give power to the state to make grants, issue and renew licenses, and revoke licenses. The government is also given regulatory jurisdiction over installation and operation of all radio services including transmission, reception and network operations.[9] The state may preempt the use of installations for various reasons such as public disorder, national defense, emergencies, and legal or technical transgressions.

In order for an organization to receive permission to build a station, a written document must be presented to the Director-General of Grants, Licenses, and Permits. This document should include all the information which is needed to decide whether or not the application is approved. It should state the type of station proposed, the kinds of programs which will be offered, the suggested location and equipment needed, the goals of the station, a declaration of financial ability

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[9]Ministry of Communications, Reglamento General de Servicios Radioelectricos, (La Paz: La Editorial del Estado, 1962), p. 5.

and any other information the applicant feels will help his cause.[10]

The Director-General transmits this document to the Ministry of Communications along with other information. The Ministry in turn decides if the application is approved or disapproved.

A license becomes void immediately if the station does not begin construction within the time agreed upon. It also becomes void at the date of expiration if there is any discrepancy in following the technical terms of the permit, or if the individual or corporation becomes bankrupt.[11]

Licenses are not given to foreigners or to public dependents, except in the case of an international organization trying to help Bolivia. In special cases, such as scientific experimentation, provisional or temporary licenses are granted. If new equipment is to be tested, a provisional license is granted. A temporary license may be granted in the case of national disaster or emergency caused by "an act of God" such as an earthquake or epidemic. Such a license may also be granted for special activities such as sports contests, or scientific events like the launching of a satellite.

According to a UNESCO report, the Director-General's power is limited to technical operations.[12] However, because

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[10] Ibid., p. 5.

[11] Ibid., p. 6.

[12] UNESCO, World Communications: Press, Radio, Television, Film (Netherlands: Norton & Company, 1964), p. 180.

the application must include the station's goals and the types of programs offered, and because the government can revoke a license immediately, the control is broader than the word "technical" implies.

Permits are given to partnerships, corporations or individuals. No organization is able to acquire a monopoly.[13] Organizations may own more than one station, but a concentration of power is not allowed. The Ministry of Communications decides in each case if the application threatens the non-monopoly principle.

The government divides Bolivian stations into two groups--private and public. The public stations are all located in La Paz and are charged with operating for the state. There are presently three state stations, and three more are being built. Six licenses altogether are held by the state.

These stations are known as Radio Illimani. They program recorded music and occasionally present live drama. Daily news is prepared by the State Information Department. The Radio Illimani stations are generally on the air in the morning from 8-10 a.m., in the afternoon from 12-2 p.m., and in the evening from 4 or 6 p.m. until midnight. When it is economically feasible, they may broadcast from 6 a.m. until 12 midnight.

The private stations--those not operated by the state--are in the majority and their only source of revenue is advertising. The licenses for the stations are valid for three years and can be renewed for the same period. Some stations are

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[13] UNESCO, Statistics on Radio and Television, 1950-1960, op. cit., p. 236.

licensed for the maximum of five years.[14]

The private stations broadcast approximately two hours in the morning, two hours in the afternoon and five or six hours in the evening. Most of them have at least one-half hour of daily drama. They receive news information from the press or from a bulletin of the State Department of Information.

Programming

The programs which are offered on a regular monthly basis must be submitted for approval to the Department of Programs at least fifteen days before they are scheduled to be broadcast. Once a program is approved, it cannot be modified unless the content becomes inaccurate, or a special event occurs which preempts it.

The text of each program must be submitted in duplicate to the government programming department for the district of the radio station. By special authority, the director of this department may amend or correct the text. If a program is approved, it is stamped with an official seal, and signed. Any changes are made with red ink written over the original text.

Any subjects which relate to medicine, hygiene, epidemics or diabetics require the additional approval of the Ministry of Public Health.

For certain types of programs, this requirement is waived. Some examples are sports and operas or cultural programs, which have not been previously scheduled.

The programming supervisors of the official department

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[14] Ibid., p. 237.

are supposed to judge the programs without prejudice. One of their functions is to encourage artistic liberty and try to develop esthetic orientation in all presentations.

According to article 100 of Section 1, Chapter 5, regular programs are subject to the following proportions.[15]

Musical 65-75%

Oral 25-35%

In defining what is meant by "musical," the regulations state that this category includes all classical and light music as well as popular and folk music. The records are quite evenly divided among bands, orchestras, vocal groups and soloists. A 10 percent minimum is suggested for classical music and twenty percent for "light" music. The other seventy percent is to be determined by the individual station.[16]

The music played is to be carefully chosen. Songs which are obscene or vulgar are forbidden. No words of the songs can refer to Bolivian persons or institutions satirically.

Persons often call the stations by telephone to request a particular record. However, the voice of the person calling may not be broadcast over the radio. The announcer is free to give the name of the person who made the request, but he cannot transmit the actual request.

In actuality, somewhere between 75-85% of programs consists of recorded dance music.[17] This is not too different

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[15] Ministry of Communication, op. cit., p. 18.

[16] Ibid.

[17] UNESCO, World Communications, op. cit., p. 237.

from many American AM radio stations.

Programs other than musical may include radio drama, commentaries, editorials, commercials, public notices and any other materials containing ideas or concepts designed to provide information and to promote cultural and educational growth.

Radio theatre is the most common type of oral program, and each theatre presentation is divided into three parts. A summary of the play is presented first. The audience can then better understand the action of the play, which is the second part. The musical conclusion is carefully chosen to impress the mood of the play upon the listeners. Some radio theatre dramas are merely stage plays adapted for radio (or even left unchanged). Others are written specifically for radio. Stations must pay royalties to authors holding copyrights for plays or musical compositions which are broadcast.

Political commentaries must always be granted previous written approval by the Department of Programming before they are broadcast. When international topics including Bolivia are discussed, national sentiments are to be presented positively and actions of the government are to be defended.

Advertising

The state-owned stations of Radio Illimani are maintained both through advertising and public funds. However, the only source of income for the private stations is advertising.[18]

Advertising is classified as "commercial propaganda." It includes all announcements concerning commerce and industry,

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[18]Ibid., p. 180.

banking, exchange of professional services, movie and theatre functions, the buying and selling of goods and services, offers to rent, and agricultural transactions.[19] Each station is limited to 100 words of commercial copy for each 30 minutes of programming. The commercial messages are scheduled between musical and/or oral selections.

The advertising of medical products which are not registered with the Ministry of Public Health is forbidden. Also prohibited is the advertising of black magic. According to Article 145 of Chapter 5 of the General Regulations of the Administration, it is illegal to announce that a specific client has not paid his bill.

The government may suppress or change at any time an advertisement which it does not think is fit for radio transmission.

Upon request, a Bolivian friend gave me several examples of typical commercials. They sounded very much like American commercials concerning clothing or food, except that they were in Spanish.[20]

Personnel

Bolivia has no facilities for the professional training of radio workers. Some schools have been planned for announcers, and some institutions have developed electrical-technical centers where engineers are able to receive training and

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[19]Ministry of Communications, op. cit., p. 23.

[20]Roberto Ardaya, foreign student [illegible], Cochabamba Bolivia, June, 1964.

experience.

The personnel is divided into two categories; the speakers and the technicians. The first classification includes any employee who speaks to the public over a microphone. Generally, announcers specialize in one area. Therefore, the government has set up the following areas of specialization; (1) commercial announcers, (2) narrators, (3) news or information reporters, (4) sportscasters, (5) sports analysts, and (6) religious speakers.[21]

To be an announcer, the person must be a Bolivian citizen familiar with the country's culture. He must speak Spanish correctly, have good diction, and know the national idioms. He should also be able to pronounce the names of persons and common words of other languages easily.

Announcers are classified in three ways.[22] Those in the first category must have had a minimum of six years' experience in radio and have completed the six-year high school course or its equivalent. Those in the second category must have had at least three years of radio experience and have completed four years of high school or its equivalent. To be in the third category the announcer must show that he has basic announcing ability and sufficient preparation by passing a general examination on broadcasting and the Bolivian culture.

Persons who are able to meet first-class requirements may broadcast at local, regional, national and international

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[21]Ministry of Communications, op. cit., p. 24.

[22]Ibid., p. 25.

levels. Those in the second category are limited to local and regional work. Those in the third category may speak only through local stations.

The second large staff group is the operators, who must also be Bolivian citizens and have the necessary technical knowledge to maintain radio equipment. There are two classes of operators. The first class consists of those who are licensed for five years of continuous work. In the second class are those who are licensed for one year of work. The Director-General of Operators determines how long each license is valid. This is decided by the degree of skill of the applicant.

Penalties

If any of the above rules or regulations are disobeyed, one or more of several measures may be taken by the Department of the Director-General of Telecommunications. The Department may call attention informally to the infraction. It may also issue a warning or impose a fine. In some cases the operation of the station may be suspended from ten to fifteen days. For the most severe infractions, the license may be revoked.[23] In all cases, the degree of the severity of the punishment depends upon the gravity of the offense.

Goals

According to the General Regulations of the government, the goal of radio is to provide direct transmission of an information service to the public.[24] Therefore, the ideal of each

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[23] Ibid., p. 39.

[24] Ibid., p. 12.

station is to disseminate culture, art, education, information, science, sports, and/or entertainment. No program should offend the mores, good manners and customs of the community and the public at large.

The Ministry of Education has authority to change the content of radio programs which it believes would present an erroneous or distorted image of Bolivian life and culture and militate against the national spirit.

Both commercial and non-commercial stations are licensed to operate, but the latter are required to be non-profit in character.

Summary

President Victor Paz Estenssoro wrote in a foreword to the General Regulations of Radio Communications, "that the activity of radio constitutes a public service of major dimensions, correlated with the defense of the country, with commercial activities, with the industrial arts, morals, culture and education, and other important aspects of the national life, and therefore should be subjected to various regulations."[25]

These regulations have been written in a document, "Reglamento General de Servicios Radioelectricos," which was accepted by the Bolivian Congress in 1960. These rules cover almost every possible area of broadcasting--even television, though it does not yet exist.

Present conditions of the Bolivian economy, and government instability, work against full compliance with regulations.

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[25]Ibid., p. 3.

Since the regulations are general in nature, confusion in interpretation has often resulted. Because the government has the power to withdraw a grant or license immediately, many stations avoid broadcasting anything controversial and limit programs to music and drama.

Many people are not able to receive radio programs. The costs of receivers are high and all too often prohibitive. As is brought out by UNESCO, "a large scale increase in the production of low cost receivers is necessary."[26] The Bolivian population should provide a lucrative market for inexpensive receivers. Many Bolivians have told me how popular dancing is, even among Cholos and Indians. Those people who can afford transistor radios often attach them to their bicycles for constant use. If receivers cost less, many willing persons could reap the benefits of mass communications.

Secondly, more powerful transmitters and a wide-coverage area are needed to reach persons living outside cities.

Today equipment is being modernized, but because of limited capital and lack of motivation and interest, the government's help is essential if real growth is to be achieved. A first step has been taken with the acceptance and publication of the Regulations. The regulations supply broadcasters with a goal to strive for in the future.

Programming consists of both musical and oral content, and standards for evaluation have been established. Radio theatre is common and is being transmitted regularly. Sports,

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[26]UNESCO, Mass Media in the Developing Countries, op. cit., p. 41.

musicals, operas, cultural and scientific events are also broadcast. Regulations for advertising have been established.

Personnel is classified in two groups; the announcers and the technicians. These groups are divided into subgroups in terms of education and professional experience.

Penalties ranging from the issuance of fines to the immediate withdrawal of the license may be imposed--depending on the seriousness and nature of the offense.

The purpose of radio transmission, as provided by law and regulations, is to serve the public interest. All types of programming are allowed, with some restriction on those which would do injury to persons, institutions or values. What serves the people is generally decided by the government agencies which control radio licenses.

Bolivia is an underdeveloped, rapidly changing nation. While the radio industry exists in the cities, it by no means compares in size with that in the United States. Yet with the government's help since 1960, progress is being made.

CHAPTER III

RADIO AS AN EDUCATIONAL TOOL

As has already been pointed out in this thesis, many Bolivians really take no part in the nation's economy. This is especially true of the highland Indians who make their living through mining and agriculture. Many of them live in the Andes mountains and never journey outside of their home villages. They speak one of the Indian languages, Quechua or Aymara, or some other dialect. The Spanish language, the official language of Bolivia, is unintelligible to them.

These Indians live with only the basic necessities. Having been subjected to semi-feudal rule for the past four centuries, they have learned that the best way to endure life is to be--or at least act--stupid. The values of education and thinking have never been encouraged. Until the last few years the schools have been attended by only the upper-class white Bolivians.

However, since the 1952 Revolution, stress has been placed upon bettering the conditions of the Indian. Radio as a means of education and information has been introduced and, after initial success, is being increased. It is this function of radio--education of the highland Indian--that Chapter III of this thesis examines.

Background

Several studies have been made in the past few years to determine the effectiveness of radio as an educational tool in Latin America. Some of the results have been stated as follows.[1]

> One of the most efficient and practical means to bring knowledge to the greatest number of people in the developing areas is through radio. No other media can reach so many people and overcome the barriers of illiteracy, distance and geographical obstructions. Radio, supplemented by other media, as their channels and facilities become available, can bring additional strength to the sustained impact of communicating knowledge. We need only to be willing to tackle the relatively simple problems which are presently deterring the wide use of radio in technical cooperation programs.

One of the problems deterring the efficient use of radio for education is the lack of trained people and the great number of people in need of being reached.

Another is the debate concerning which is the most important medium--press, film, or radio. As Mr. Louis Beltran, an information specialist and native Bolivian, says, "The most important advantage of radio is that it can fulfill its task of informing and educating the public whether listeners are literate or illiterate."[2] But as UNESCO has pointed out, "The countries which are poor in information media are also those where the incident of illiteracy is greatest."[3]

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[1]Florence S. Thomason and Roger A. Wolcott, Breaking the Illiteracy Barrier Through Radio, a Research Paper, 1960, p. 2.

[2]Ibid., p. 4.

[3]George Codding, Broadcasting Without Barriers (Netherlands: Monton and Co., The Hague, 1959), p. 49.

Bolivia does not use radio as a formal in-school educational aid. Neither the government nor the private stations are powerful enough to "reach over the next hill."[4] Therefore, only special organizations, usually foreign and religious, have been broadcasting to the highland Indians.

In an interview with Mr. Gaston Canedo of the Bolivian Mission to the United Nations, and in a personal letter from one of the Maryknoll Fathers, both of them questioned the idea of the government helping to educate the Indian . . . especially through radio. Supposedly, this is because the government has been unstable and the economy has been chaotic. Finances have not been available except for the most essential government projects. Therefore, the most worthwhile educational radio stations are those which have been established by Catholic religious missions. Two of these, operated by the Maryknoll Fathers, are Radio San Rafael in Cochabamba, and Radio San Gabriel in Penas. Another, operated by the Brothers Oblate of Mary Immaculate, is Emisoras Pio XII at Siglo XX, Potosi.

Maryknoll Radio Stations

History

The Maryknoll Fathers' literacy program, conducted by educational radio, was started in 1957 within the area of Penas (near La Paz) with one small transmitter and only a few radio receivers.[5] In 1957-58 a two-year course of instruction was

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[4]Florence S. Thomason, op. cit., p. 1-B.

[5]Maryknoll Fathers, Radio Schools in Bolivia #1: Brief History and Explanation of System, report 1960, p. 1.

made available to 18 villages in the Penas area. First of all, peoples' interest and attention had to be captured. Father Bernard Ryan, who had lived with the Andean Indians for two years, was able to gain their confidence and explain the program to them.

The people in this area were the Aymara Indians who spoke only Aymara (mixed with a few Spanish words). This made the problem of illiteracy more complex. The objectives of the Maryknoll Fathers were to teach the Aymara people to read and write in Spanish.

Since 1957, the organization CARE has supplied the Maryknoll Fathers with 100 transistor radios which were distributed to the Indian villages throughout the Antiplano.[6]

The Maryknoll Fathers now operate a one kilowatt transmitter on 620 kc/s at Penas. This transmitter is only a short distance away from Lake Titicaca which makes transmitting conditions excellent for reaching the people of the Altiplano. A second transmitter is located in Cochabamba which is in the Quechua-speaking area.

Organization of Schools

Teachers for the Maryknoll schools are selected by the authorities of each community who recommend a young person for the teaching program. The future teachers are sent to a training center in Penas for teaching instruction. Generally these persons are men between the ages of 20 and 30 who have had

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[6]Maryknoll Fathers, Radio Schools: #2: Bolivia, South America, report 1961, p. 5.

some primary school and some training in reading and writing. In Penas they receive instruction on the care of radio equipment, the use of charts, blackboards, control of attendance, grading students and other essentials.[7] When they have completed their course they are called "auxiliaries" or radio professors and it is their job to listen to the class instructions over the radio and guide the students during class hours. They also conduct examinations and hold meetings and discussions with other auxiliaries. These teachers are volunteers and receive no salary.

Besides the "auxiliary," the community authorities are supposed to appoint two older professors who take care of any unexpected occurrences or emergencies in the classroom. An older man, respected in the community, watches the behavior of both the professors and students and calls the students to class.

The authorities, the professors, and the auxiliaries must sign a guarantee for the radio. This is to impress upon them the responsibility they are assuming. If the radio is damaged, they must pay for repairs.[8]

Classes

The classes are conducted at 7:30 in the morning and 5:00 in the afternoon. These hours have been chosen because it is the most convenient time for the student.[9] Each class

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[7]Maryknoll Fathers, #1, op. cit., p. 1.

[8]Ibid., p. 2.

[9]Ibid.

contains no more than ten to fifteen students, because it is much easier to work with a small number. The classes are limited to adults who have not had an opportunity for education, and to children 15 or 16 who have been raised in locations where schools have only recently been established.

Lessons are dictated from the Maryknoll studio at Penas by a professor who knows both the Aymara and Spanish languages. Everything in the entire broadcast is said first in Spanish and repeated in Aymara. Health and agricultural hints prepared by organizations like UNESCO are given throughout the classes.[10]

Each student has his own notebook and pencil and the professor stands in front of the blackboard with a piece of chalk. The announcer first tells the class which page the lesson is on. As they find it, classical music is played. Then the announcer describes the picture on the page in both Spanish and Aymara, and the students follow his description in their books. Next the announcer reads the sentence written at the bottom of the picture, word by word, and talks about the letters which make up that word. As the auxiliary writes the letters on the blackboard, the students copy them in their notebooks. The professor then checks and corrects any mistakes. After the broadcast has been completed, the students draw the figures which represent the various words in their notebooks. This helps them to associate words and objects. Each class lasts about an hour. Spanish language is the first course of instruction. The second, arithmetic, takes a little longer.[11]

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[10] Ibid., p. 3.

[11] Ibid., p. 34.

The Spanish class would sound like this:[12]

"Vamos a pronunciar estas oraciones en buena forma y con todo cuidado." (Let's repeat these sentences carefully.) The voice then continues, "Maria prepara la comida" (Maria is getting dinner). The class then repeats this sentence and others and the teacher interjects comments such as "Muy bien" for encouragement.

The classes are conducted after regular school hours in schoolrooms, if one is available. Sometimes a small room is provided by the community authorities. A radio receiver, a blackboard, an alarm clock, the radio school flag and teaching charts are the only equipment used.

Some schools hold classes out-of-doors if no room is available elsewhere. In such cases only the desk of the teacher and a transistor radio are needed.

After the special classes in literacy, the whole community is invited to listen to music programs. Information of a cultural and educational nature is broadcast. At this time a large number of people are reached and instructions are given on agriculture, health, the nature and dangers of communism and "other important and valuable information."[13]

Religion, agriculture, hygiene, history, and geography classes are available in the Aymara language. The courses are put on tape and may be played back by the teacher.[14]

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[12] "Radio San Gabriel," Maryknoll, July, 1959, p. 9.

[13] Maryknoll Fathers #2, op. cit., p. 6.

[14] "School of the Airwaves," Maryknoll, November, 1958, p. 50.

Teaching Materials

Because of the unique combination of language barriers, illiteracy, and lack of interest, special teaching materials have had to be developed.

Marcelino Ramos, a Bolivian teacher interested in the problem, developed a textbook and Mario Bejar drew illustrations to match the written words. The pages were multilithed and stapled into books. Alberto Tardio, a Bolivian visual aids technician, used a silk screen to make large wall charts to supplement the texts.[15]

The teaching materials prepared by these three men have been praised by many educators as ideal for the job to be done. They have been advertised around the world by a publication of the International Cooperation Administration, Multiplier.[16]

Interestingly enough, aside from the radio receiver, the most essential piece of equipment is the alarm clock. This is important because it is necessary to let the timeless villages know that school is about to be in session.

Radio San Rafael

The above information also applies to the second station of the Maryknoll Fathers, Radio San Rafael (RSR), which began broadcasting in January 1961 under the direction of Father Leo Sommer of Massachusetts.

There are some 250,000 Indians living in the Cochabamba Valley, 65 percent of whom are Quechuas. Therefore, RSR offers

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[15]"Radio San Gabriel," op. cit., p. 8.

[16]Ibid.

a daily program in Quechua aimed at teaching Spanish and improving socio-economic conditions.

In a letter, Father Sommer (after expressing his surprise at a study being made on Bolivian broadcasting) referred to plans for the expansion of Maryknoll stations, including two in other parts of Bolivia.[17]

Economic Problems

Most of the financial support for the Maryknoll radio stations has been supplied by the Maryknoll Fathers. Additional support has included equipment, educational material and information from the organizations of USIS, CARE, SCIDE, SAI, and UNESCO. These sources and personal contributions pay all current expenses, but they are inadequate.

It is expensive to keep the two schools operating. Radio San Gabriel on the Altiplano requires approximately $10,000.00 a year for operating expenses (including salaries, fuel, repairs, training, etc.). There is an equipment investment of $55,000.00 for this Altiplano School.[18] Thus a total budget of $65,000.00 has been estimated for the San Gabriel station.

The budget for the Cochabamba station includes $83,500.00 for equipment and $10,000.00 a year for operating expenses. Therefore, the costs for the two stations total $159,000.00.[19] The Maryknoll Fathers are looking for contributions in order to

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[17]Personal letter, Father Leo Sommer, Founder Radio San Rafael, March 1964.

[18]Maryknoll Fathers #2, op. cit., p. 8.

[19]Ibid., p. 9.

continue and expand operations.

Results

"Radio San Gabriel now has a grip on the Aymara Altiplano area. The Maryknoll radio is moving into Cochabamba to capture the Quechua regions. They are suffering from a great dearth of material, and beg us to help them with useful programs of any sort."[20]

Maryknoll teachers state that many persons in the area of Penas can now read and write Spanish as a result of the Maryknoll programs.

Father Ryan, the founder of the schools, says he has had several signs that the broadcasts are making an impact. For example, when a delegation came to Las Penas, they complained that the lessons were being repeated, and children have been caught trying to "sneak in" to the adult classes.[21] "When 500 people change their routine and work either earlier or later in order to attend classes, we can forget about the difficulties that confront us. To hear the once cold, aloof Aymaras chat in Spanish, and joke about the lessons, makes this work a pleasure," says Father Ryan.[22]

Because of poor roads,[23] radio is one of the few ways to communicate with many places in the Andes; it can make progress in education and integration of the Indians.

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[20]Florence S. Thomason, op. cit., p. 23.

[21]"Radio San Gabriel," op. cit., p. 8.

[22]"School of the Airwaves," op. cit., p. 50.

[23]Personal letter from Alberto Ciuzada, May, 1964.

Other Stations

Another religious group which broadcasts educational material is the Brothers of the congregation, Oblate of Mary Immaculate. This group broadcasts to the miners in the communist stronghold of Sigle XX in the department of Potosi. Their station is called "Radio de la Familia Boliviana" or Radio of the Bolivian Family.

The Brothers begin their classes by teaching the A.B.C.'s. They use books called "cartillas" which are similar to American first grade readers.[24]

Each mining center is divided into "campamentos" of about 3,000 persons each, with a leader or teacher in each campamento. The leader gathers his people into a home or room at a given hour and they "attend" class via transistor radio. The classes are very similar to those of the Maryknoll Fathers.

The government does a small amount of broadcasting in the Quechua and Aymara languages. The foremost series of radio news produced by the government stations offers three 15-minute news commentaries each week in both languages. Cronica Quechua is broadcast by sixteen stations throughout the country and Cronica Aymara is broadcast by about seven stations.[25]

Some of the private stations broadcast educational programs in physical education and English, but these do not reach the highland Indians.

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[24]Personal letter from Brother Leo Le Butte, July, 1964.

[25]Personal letter from Barbara Hutchison, USIS information officer, March, 1964.

The World Radio Missionary Fellowship (WRMF), known as HCJB, broadcasts into the Andes Mountains from Equador, but only in Spanish. These programs are almost entirely cultural and religious.[26] The HCJB workers estimate a very small audience in the Bolivian Andes.

Radio Loyola in Sucre programs mainly for the working class of that city and a very little to the Indians.

Two stations are being planned in the Oriente at this time--one in the Vallegrande and the other in the northern part of Santa Cruz.[27]

Summary

Radio is one of the most efficient means of reaching the highland Indians, because of the lack of transportation facilities. However, the government has not had the time or money to develop radio as a means of education; the task has been left to private organizations.

The Maryknoll Fathers have established two educational radio stations; Radio San Gabriel at Penas and Radio San Rafael at Cochabamba.

The Brothers Oblate of Mary Immaculate broadcast to the miners near Potosi.

Radio Loyola's programming is directed to the working class in Sucre, and two new stations are planned for the Oriente--the eastern part of Bolivia which the government is

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[26]Personal letter from Mr. Leonard Booker, English Language Department, HCJB, April, 1964.

[27]Guizada, op. cit., p. 1.

trying to develop and settle.

Finances, lack of equipment and language barriers have hindered radio education ever since its beginning, but the successful service of a few stations illustrates the possibility for future development.

CHAPTER IV

TELEVISION

At the present time there are no television stations in Bolivia. However, in May, 1961, the government authorized the Television Boliviana (Televibol), a company licensed to install and operate stations in La Paz. Televibol is also authorized to move into other sections of the country and to sell and service equipment once television is established.[1]

The reasons for the absence of television are basically those which have limited radio. Money is not available, nor is trained personnel or adequate equipment. The language barrier between the Indians and Spaniards hinders any national communications. Many people could not afford a receiver even if programs were available. Physical barriers hinder transmission. In the near future, however, these problems may be overcome and television broadcasting may begin in Bolivia.

In the Reglamento General provisions were included to regulate the development of television. The regulations define television as the highest degree of mass communications, and state that it should provide informative, cultural, educational,

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[1]UNESCO, World Communications: Press, Radio, Television, Film (Netherlands: Monroy & Co., 1964), p. 180.

artistic and recreational material.[2]

Foreign and Bolivian organizations may both own television stations as long as they abide by Bolivian laws and regulations, and if both the stations and transmitters are located in Bolivia. However, a few basic rules are to be observed.

First of all, no monopolies are allowed in ownership, importing, distribution or the selling of equipment. This rule does not mean that an organization can own only one station or business. However, it grants the government the authority to interfere with ownership practices if it has reason to think unfair control in any market has been gained.

Secondly, the stations (channels) are licensed for ten years with licenses renewable for five years.

Thirdly, there are to be no restrictions on any make, model or type of receiving equipment.

Fourthly, the programs are to be approved, before they are broadcast, by the National Council of Art. This is to assure that they do not offend the morals or culture of the public.[3]

The Bolivian government reserves the right to occupy one-fifth of all program time of the stations for the purpose of public education. While it is hoped that private organizations will develop educational programs, the state has claimed

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[2]Munisterio de Communicacions, Reglamento General de Servicios Radioelectricos, (La Paz: Editorial del Estado, 1962), p. 27.

[3]Ibid., p. 28.

this authority for itself as a precaution against the use of television for entertainment only. This time is available to the state without payment.

Even though there is no television in Bolivia at the present time, the government has adopted regulations to guide its development when it does appear.

CHAPTER V

SUMMARY

> The close relationship between development of the media and general economic and social development may be demonstrated statistically. A study initiated by UNESCO as part of a survey shows that in all of the underdeveloped countries of Africa, Asia and Latin America, development of the media correlated very highly with other factors in the national growth, such as average per capita income, and level of literacy, urbanization and industrialization.[1]

The first chapter of this thesis has shown that Bolivia is economically and socially underdeveloped at the present time.

For example, since the 1952 revolution, the value of the monetary unit of Bolivia, the boliviano, has greatly decreased. While at one time 200 bolivianos equaled an American dollar, the present exchange rate is 12,000 bolivianos to the American dollar. The income of many persons has not increased accordingly; thus, Bolivia has the lowest per capita income in South America. Products which are the slightest bit luxurious cannot be afforded.

There are physical and geographical barriers in Bolivia which have prevented the growth of national unity and the strong desire for improvement of conditions. Poor highway facilities greatly limit the transportation of domestic products from one

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[1]UNESCO, Mass Media in the Developing Countries (Paris: Workshops of UNESCO, 1961), p. 35.

part of the country to another. The mountainous terrain and frequency of landslides make the upkeep of roads prohibitively expensive. Before the 1952 revolution, the government had little interest in providing transportation to the mountainous Indian communities. Only a few cities were considered essential to the national economy, and only the most necessary highways were constructed.

Bolivia has been thwarted by political instability. As pointed out earlier in this thesis, sixty revolts and six presidential assassinations have severely limited the effectiveness of the national government. Many of the presidents have been opportunists who sought power and turned to conservatism in order to keep the backing of the rich, semi-feudal land owners who controlled the economy.

The people of Bolivia have been divided into various groups on the basis of race. Resulting inequality of rights and privileges has gradually weakened the spirit of the once progressive Incan Indian to that of the submissive Aymara Indian, of the twentieth century. During the Spanish colonial era, the Aymara were forced to work in the mines. It has been estimated that eight million natives died at this time.[2] They rebelled repeatedly, with little success, and finally submitted to their subordinate position. At the present time they are widely addicted to the chewing of coca, from which the narcotic cocaine is made. While coca helps the Aymaras to forget the circumstances in which they live, "it presents emotional dullness or

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[2]Victor Barnouw, Culture and Personality (Illinois: The Dorsey Press, Inc., 1963), p. 16.

apathy, indifference, lack of will power or low capacity for attention."[3] Bringing about motivation for economic and social development of these people is one of the greatest problems facing the Bolivian government today.

The Aymara Indians as well as the Quechua Indians do not speak the Spanish language but rather communicate in their native vernacular. The problem of illiteracy, therefore, is complicated by the fact that the majority of Bolivians do not even speak, much less read or write, the official language of the country.

The high degree of inflation, geographical and physical barriers, political instability, division of the people by race, and illiteracy, are some of the causes of the present economic and social underdevelopment in Bolivia. Education is one means of overcoming these problems, "but when one is attempting to accomplish in a matter of years a task which it has taken centuries to complete in the advanced countries, the traditional means of education alone prove inadequate."[4] It is in the underdeveloped countries that the speed and efficiency of the mass media can contribute a great deal.

The mass media can create the desire to raise the living standards by "enlisting human factors, such as improved skills and better education, more directly in efforts for economic aid and social expansion."[5] It can help to win public support

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[3] Ibid., p. 15.

[4] UNESCO, op. cit., p. 15.

[5] Ibid., p. 35.

and participation which in turn facilitates planning by the government and other agencies, thus playing a key role in industrialization.[6]

By the advertising of various goods and services, the media are able to bring attention to a variety of products and ideas not otherwise known.

The rugged terrain which prevents communication between villages and cities may be overcome by radio. While landslides make highways impractical, dangerous, and expensive in many cases, they do not hinder radio.

Radio can reach a great number of people for a small investment in a receiver. This is important in the case of education. While a teacher might be able to hold classes in one or two communities, he can reach many more persons by means of radio. When educational programs are broadcast from the cities, there is an added advantage of having the required facilities and equipment nearby.

Radio and television can serve as an industry which employs persons in all parts of the country, creating jobs and teaching skills. It can help raise the industrial status of the country to a small extent.

Yet, broadcasting in any underdeveloped country finds itself faced by numerous problems.

First of all, there is a great lack of accurate data which may be used as background for media development. Except for a few governmental and United Nations studies, the problem

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[6]Ibid., p. 35.

has been ignored. In Bolivia, for example, someone wishing to develop a programming policy has to start at the beginning and "feel his way." There is no record of anyone else's mistakes through which he might learn.

Secondly, the high cost of equipment and materials, and the inadequacy of what is available, hinder most experimentation or idealistic planning. Those radio programs of dance music and drama which appeal to the mass audience, and which will sell the advertisers' products, are the only type which can be afforded at the present time. No broadcasting equipment is manufactured in Bolivia. This results in tariffs and other fiscal barriers of importation and expense.

Another problem which Bolivia faces in developing the media is that of language. While the majority of Bolivians do not speak Spanish, the majority of the radio programs are presented in Spanish. Those persons who are formulating policies and writing programs do not speak the Indian tongues, and so far the government has not realized the importance of Aymara and Quechua language programs. This may be because lack of funds prevents the development of radio services in more than one language.

While the mountains do not present as many problems to radio communication as they do to the construction of highways, they are a hindrance. Mineral deposits which are spread throughout the Andes interfere with transmission and deflect radio signals. While this may be overcome, it takes skill and determination to do so. The moist tropical climate and heavy vegetation limit the power of the transmitters.

Legislation which has been developed and approved by the Bolivian government has somewhat stifled the initiative of individual broadcasters. Because the government has the power to withdraw a license immediately, many broadcasters hesitate to program anything controversial or questionable. There are also citizenship and technical requirements which limit the number of skilled personnel to a select few.

One of the greatest problems is the lack of capital for investment. In most underdeveloped countries, UNESCO has found that less than one percent of public development expenditure is devoted to broadcasting.[7] This is barely enough to maintain existing facilities, let alone build additional ones. Before any advancement can be made in radio and/or television, some funds must be made available. At the present time, private organizations are bearing almost the entire burden of mass communications, and they are not strong enough to handle this responsibility alone.

In a study on mass media in the underdeveloped countries, UNESCO made various recommendations. Some of these are applicable to Bolivia.

The government of Bolivia might consider formulating a national progras for broadcasting as a part of its program for economic development. Since the revolution, the government has developed policies concerning the growth of industry, agriculture, construction, transportation, education, and literacy, but broadcasting has not been included. In order to develop

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[7] Ibid.

such a policy, an inventory of the existing facilities would be needed. On the basis of this inventory, plans for media development could be coordinated with general economic plans, and goals could be established.

National committees could be formulated to assist in developing and carrying out plans for broadcasting. These committees would include experts in various aspects of Bolivian development such as transportation, education, information and the economy.

National training programs could be established. These could be either formal institutions or a practical agreement with another country. For example, the German radio stations send technicians to various African countries which in turn send trainees to Germany.

Media research could be encouraged; very little is being done in Bolivia with it. In a study of various South American countries including Bolivia, it was found that there is a shortage of people with academic training in the social sciences, as well as a shortage of physical facilities, which limits research in the social sciences and the mass media.[8]

Professional societies might be established which could help determine professional standards, promote the free flow of information and advise individuals and organizations who are in the field of broadcasting.

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[8]Programa Interamericano de Informacion Popular, A Study of the Human and Institutional Resources in the Social Sciences and Communications Research in Selected Countries in Latin America (Costa Rica: PIIP, 1961), p. 45.

In dealing specifically with the radio medium, UNESCO suggests turning to FM radio to improve transmission and eliminate the tropical difficulties.[9]

A large-scale increase in low-cost receivers, encouragement in the domestic production of equipment, and bilateral agreements between countries would also be beneficial to Bolivia.

Some specific UNESCO recommendations might also be applied to Bolivian television as it develops. First of all, television should not be introduced until the country is economically and technically ready for it. Secondly, high priority should be given to educational television from the start.[10]

With the acceptance and publication of the General Regulations for broadcasting in Bolivia, a strong foundation has been laid for the future.

If the recommendations cited above are carefully considered, they should provide direction for development of the mass media.

Hopefully, then, the government will use the power it has claimed for itself with care so that imagination and diversity will be encouraged. The broadcasters should respond by remembering their responsibility to peoples of all languages and in all parts of the country, as they plan stations and programming. The people, in turn, should take an interest in all types of programming--not only dance music--and realize the unique advantages radio and television can offer them, in spite of the

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[9]UNESCO, op. cit., p. 41.

[10]Ibid., p. 43.

physical barriers of their country.

A solid framework has been developed as the basis for radio and television in Bolivia. If the government, the broadcasters, and the people make good use of the present broadcasting facilities and work with dedication and ingenuity for the future, they should some day see a far-reaching network of communications able to play a large role in uniting this country.

APPENDIX

OFFICIAL LIST OF BOLIVIAN RADIO STATIONS

Name of the Station	Frequency Kc/s.	Power in Kw.	Call Letters	Location
LOYOLA	1300	.25	CP-51	SUCRE
LOYOLA	5995	1.	CP-41	SUCRE
LA PLATA	1250	.25	CP-54	SUCRE
LA PLATA	9715	1.	CP-21	SUCRE
SAN GABRIEL	620	1.	CP-63	LA PAZ
ALTIPLANO	820	.25	CP-35	LA PAZ
ALTIPLANO	9505	5.	CP-38	LA PAZ
AMAUTA	960	.25	CP-11	LA PAZ
AMAUTA	6185	1.	CP-9	LA PAZ
ILLIMANI	1020	20.	CP-4	LA PAZ
ILLIMANI	9555	10.	CP-6	LA PAZ
ILLIMANI	11775	10.	CP-7	LA PAZ
ILLIMANI	15300	10.	CP-	LA PAZ
ILLIMANI	17865	10.	CP-	LA PAZ
ILLIMANI	25700	10.	CP-	LA PAZ
SPLENDID	1200	1.	CP-67	LA PAZ
EMISORAS UNIDAS	1250	.25	CP-14	LA PAZ
NACIONAL	1390	1.	CP-3	LA PAZ
NUEVA AMERICA	1470	1.	CP-8	LA PAZ
NUEVA AMERICA	4795	1.	CP-73	LA PAZ

Name of the Station	Frequency Kc/s.	Power in Kw.	Call Letters	Location
EL CONDOR	900	.25	CP-20	LA PAZ
EL CONDOR	6125	1.	CP-15	LA PAZ
LA CRUZ DEL SUR	730	5.	CP-27	LA PAZ
LA CRUZ DEL SUR	4985	5.	CP-75	LA PAZ
LA CRUZ DEL SUR	95Mc.	.050	CP-3-FM	LA PAZ
CHUQUISACA	1510	.25	CP-1	LA PAZ
MENDEZ	680	5.	CP-34	LA PAZ
MENDEZ	104Mc.	.050	CP-4-FM	LA PAZ
FIDES	1300	.25	CP-29	LA PAZ
FIDES	6155	1.	CP-12	LA PAZ
MINISTERIO DE COMUNICACIONES	15155	10.	CP-40	LA PAZ
HUAYNA POTOSI	580	.5	CP-33	MILLUNI
UNIVERSIDAD	1200	.25	CP-55	ORURO
ORURO	1250	.25	CP-65	ORURO
MERCURIO	1330	.25	CP-36	ORURO
EL CONDOR	6055	1.	CP-18	ORURO
GRIGOTA	1340	.25	CP-24	SANTA CRUZ
GRIGOTA	4825	1.	CP-70	SANTA CRUZ
SANTA CRUZ	960	.25	CP-32	SANTA CRUZ

Name of the Station	Frequency Kc/s.	Power in Kw.	Call Letters	Location
AMBORO	1250	.25	CP-26	SANTA CRUZ
CENTENARIO	1180	.25	CP-25	SANTA CRUZ
CENTENARIO	4845	1.	CP-66	SANTA CRUZ
PREFECTURA	6135	.5	CP-30	SANTA CRUZ
SAN RAFAEL	1300	1.-	CP-68	COCHABAMBA
NACIONAL LAB	1250	.25	CP-69	COCHABAMBA
NACIONAL LAB	5975	1.	CP-44	COCHABAMBA
NACIONAL LAB	90Mc.	.25	CP-5-FM	COCHABAMBA
CULTURA	1330	.25	CP-45	COCHABAMBA
COCHABAMBA	1350	.25	CP-28	COCHABAMBA
TUNARI	1160	.25	CP-78	COCHABAMBA
LITORAL	1510	.25	CP-80	COCHABAMBA
INDOAMERICA	1250	.25	CP-53	POTOSI
INDOAMERICA	4785	1.	CP-74	POTOSI
POTOSI	780	.25	CP-52	POTOSI
PREFECTURA	9605	5.	CP-22	POTOSI
LOS ANDES	1250	.25	CP-16	TARIJA
LA VOZ NACIONAL	1510	.25	CP-79	TARIJA

Name of the Station	Frequency Kc/s.	Power in Kw.	Call Letters	Location
LA VOZ CATOLICA	1510	.1	CP-78	CAMARGO
PIO XII	1550	1.	CP-50	LLAllagua
PIO XII	5955	.5	CP-5	Siglo XX.
LA VOZ MINERA	780	.25	CP-56	TELEMAYU
COBIJA	1250	.25	CP-47	COBIJA
COBIJA	4855	1.	CP-59	COBIJA
9 DE ABRIL	1250	.25	CP-57	PULACAYO
SARARENDA	1250	.25	CP-17	CAMIRI
SARARENDA	4885	1.	CP-77	CAMIRI
NORTE	1550	.25	CP-83	MONTERO (Santa)

La Paz, 4 de abril

obr.

Example of

SPANISH FORM LETTER

145 Haslett Street
Apartment 41
East Lansing, Michigan

Name
Address
Country

De mi mayor consideracion:

Talvez usted podria ser valuable ayuda en recolectar informacion que requiero para mi thesis de Masters Degree en Michigan State Universidad; a continuacion le describo el porque.

Yo estoy haciendo un estudio de radio emisoras de Bolivia. Yo estoy interesada en las programas, en los regulaciones del gobierno, en el facilidades fisicas, en la organizacion de su emisora, y los objectivos.

Si usted sabe o supiera de alguna informacion en radioemisores en general, le agradeceria infinitamente por tan valuables informaciones que usted podria enviarme.

Y finalmente si no es molestarlo demaciado, pedirle me sugiera usted los nombres de otras radioemisoras a las cuales estaria muy interesado de escribir.

A la espera de recibir vuestra informacion, y vuestra carta de contestacion me es trato despedirme.

Atentamente,

Mary R. Jackson

THESIS FORM LETTER

342 North Harrison
East Lansing, Michigan
Date

Name
Address
Country

Dear Sir:

Dr. Ivan Alten, Michigan State University, has suggested that you might be able to help me in the collection of information for my master's thesis.

I am making a study of Bolivian broadcasting, and I am especially interested in (what has been done by radio to bring the Indians into the national economy since the physical 1952 revolution) or (in the history, facilities, sociological aims and programming policies of your station).* Do you have any information on radio broadcasting or on how radio is informing and educating the Indian?

If you could suggest the names of others I might write to, or send any information you might have, it would be greatly appreciated.

Sincerely,

Mary R. Jackson

*One or the other of these phrases was used.

The following persons are those who were the most helpful in suggesting information which might be of use to me. The addresses are included as an aid to anyone who might want further information on Bolivian broadcasting or some related subject.

Address

Cultural Officer
U.S. Embasy
La Paz, Bolivia

The H. W. Wilson Company
950/972 University Avenue
New York, New York
(S.A. Handbook Publishers)

Mr. Philip Huber
OAS
Department of Soc. and Econ. Affairs
1725 I Street
Washington, D. C.

Mr. Joseph A. Tosi, Jr.
Direcion General
Inter-American Institute of Ag. Sciences
Apartado 4359
San Jose, Costa Rica
(ecologist)

Mrs. Carla Quijano, Librarian
Maryknoll Fathers
Maryknoll, New York 10545

Mr. R. P. Leo Conners MM
Casa Rural
Huancani Puno
(Maryknoll Fathers)

Mr. Roger Wolcott, Chief
Inter-American Institute of Agricultural Sciences
Turrialba, Costa Rica

Mr. Arturo Salces Arce
Direccion General de Radiocomunicaciones
Departamento de Radiofusion
La Paz, Bolivia

Mr. Luis Ramiro Beltran
Information Specialist
Instituto Interamericano de Ciencias Agricolas de la OEA
Zona Andina
Apartado 479
Lima, Peru

Mrs. Florence Thomason
Office of Institutional Development
Agency for International Development
New State Department Building
Washington, D. C.

Sr. Jacobo Libermann Z.
Subsecretario de Informacion
Direccion Nacional de Informaciones
Presidencia de la Republica
Palacio de Gobierno
La Paz, Bolivia

Padres de Maryknoll
Father Joseph Michenfelder
Apartado 2352
Lima, Peru

UNESCO
New York Office
New York, New York

Padres de Maryknoll
R. P. Leo Sommers
Casilla 546
Cochabamba, Bolivia

Sr. John R. Smithies
460 East 79th Street
New York 21, New York

R. P. Alberto Cuizade
Casilla 731
Cochabamba, Bolivia

Msg. Jose J. Salcedo, A.C.P.O.
Calle 20 #9-45
Bogota, Colombia

Mass Communications Division
UNESCO Place de Fontency
Paris 73, France

The following quotes are those I thought most interesting from the many letters I received:

> Broadcasting in Quechua and Aymara, the two common Indian languages, is sadly limited. Cronica, the foremost nationally-produced series of radio news programs, produces three 15-minute news commentaries weekly in each language: Cronica Quechua is broadcast by sixteen stations throughout the country, and Cronica Aymara by approximately seven stations. Deducing from second-hand observation, the rest of the Indian-language broadcasting is done mainly in the interior by missionary-financed stations and by the clandestine stations (with some doubt as to the ideological and educational content)--both categories motivated by the desire to communicate with their respective local flocks.
>
> Barbara Hutchison
> Assistant Information Officer
> USIA
> La Paz, Bolivia
> March 3, 1964

> It is important to take into consideration the geological factors which deter transmission in a country like Bolivia. The mineral deposits in the Andean Mountains deflect signals, and even with powerful transmitters, reception is difficult, unless a study is made to determine design of receiver for the place where the receiver is located.
>
> Florence Thomason
> U.S. Department of State
> Washington, D. C.
> March 26, 1964

> WHAT HAS THE BOLIVIAN GOVERNMENT DONE TO BRING THE INDIANS INTO THE NATIONAL ECONOMY - ESPECIALLY THRU RADIO? It would be so unusual for the Gov't of a South American country to help the poor people that even the question is a bit shocking.
>
> Father Leo Conners
> Maryknoll Father
> Lima, Peru
> March 19, 1964

The quality of the programs, and the general programming is on about a par with the technical quality (far from A-1). Many people who work in broadcast radio - as announcers, operators, actors, etc., - work at it without any formal training, and many times as a part-time job. I would say off-hand (without any statistics to back me up) that the minority of those now in broadcast radio want to make it their career.

Father Leo Sommer
Radio San Rafael
La Paz, Bolivia
April 15, 1964

I must express my complacency for the interestingly chosen subject for your thesis. I think that it truly makes me proud as a Bolivian and I hope in the future it will contribute to the prestige of my country and increase the relations between your great country and other Latin American countries.

Arturo Salces Arce
Director General of Communications
La Paz, Bolivia
June 9, 1964

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