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THE UNIVERSITY OF CHICAGO

“Let knowledge grow from more to more
and thus be human life enriched.”



Bolivia

Bolivia is a landlocked republic in central South America with an area of 424,165 square miles (1,098,581 square kilometres) and a population that in the early 1970s numbered about 5,000,000. The country has been landlocked since it lost its Pacific coast territory to Chile toward the end of the 19th century. It is bordered to the north and east by Brazil, to the southeast by Paraguay, to the south by Argentina, and to the southwest and west by Chile and Peru. Its constitutional capital is the city of Sucre (population about 70,000), where the Supreme Court is established, but the de facto capital is the city of La Paz (population more than 850,000), where the executive and legislative branches function.

Bolivia is also widely known by the name of República del Altiplano (Republic of the High Plateau) because the most developed and densely populated part of its territory is situated on a plateau between the two branches of the Andes mountain range. The country itself was once a part of the ancient Inca empire and later formed part of the Spanish viceroyalty of Peru. Spanish, though spoken by less than half of the population, remains the official language; in religion, the overwhelming majority of the people are Roman Catholic. Bolivia is still an underdeveloped country whose economic life is based principally upon the production of raw materials, notably tin. (For associated physical features see ANDES MOUNTAIN RANGES; GRAN CHACO; and TITICACA, LAKE; for historical aspects, see BOLIVIA, HISTORY OF.) (V.A.U.)

THE LANDSCAPE

Relief. Although three-fifths of Bolivia's area consists of vast low plains, the western part is one of the highest inhabited areas in the world and constitutes Bolivia's heartland. The Andes there attain the greatest breadth and are divided into two great parallel ranges—the Cordillera Oriental to the east and the Cordillera Real to the west—enclosing a plateau the surface of which lies only a few thousand feet below the summits of the mountains themselves. Between these ranges lies the monotonous, bleak Altiplano (High Plateau), bordered to the west by the Cordillera Occidental. The plateau is a relatively flat-floored depression about 500 miles long and 80 miles wide, lying at elevations of between 12,000 and 12,500 feet. The floor of this great depression, mostly composed of water-laid deposits from the bordering mountains and appearing quite level, slopes gently southward. Its evenness is broken by occasional hills and ridges. The margins of the basin are marked by numerous interlocking alluvial fans (accumulations of debris that have spread out in the shape of a fan), which have built up an almost continuous plain of fairly gentle grade lying at the foot of the mountains.

The northern and eastern sections of the country, called the Oriente (meaning east), cover three-fifths of Bolivia. They are composed of low alluvial plains, great swamps, flooded bottomlands, and gently undulating forest regions. In the extreme south is the Bolivian Chaco, which forms part of the Gran Chaco; it is a fairly level and low area that varies strikingly with the seasons of rain. It is a veritable swamp during the rainy season and a hot semidesert during the remaining eight or nine months of the year. Northward from the Chaco, but still a portion of the Oriente, is the Santa Cruz area. It is generally level, with a downward slope to the north. Drainage is not the problem there that it is in the Chaco, because several

small north-flowing streams interlace the area. The northernmost segment of the Oriente is the Upper Beni, a low, wet plain covered in large part by heavy tropical rain forest. Much of it is subject to heavy inundation during the rainy season—November to May inclusive.

Extremely high mountains (some exceeding 21,000 feet) rise northeast of the Titicaca Basin, which lies in the northwest and also extends into Peru; the descent from these mountains to the eastern plains is extremely precipitous. This rainy and heavily forested belt of rugged terrain (deep valleys and gorges separated by high ridges), known as the Yungas, is situated on the northeast slope of the Cordillera Oriental and extends southward as far as a line drawn from Santa Cruz to Cochabamba. The Yungas, a distinct natural division, is the southern part of an unbroken region that extends along the eastern Andes of Colombia, Ecuador, Peru, and Bolivia as far south as Santa Cruz.

Drainage. The rivers belong to three distinct systems—the Amazon system in the northeast, the Río de la Plata system in the extreme southeast, and the Lake Titicaca system in the west. The eastern lowlands of Bolivia have many lakes, most of them little known.

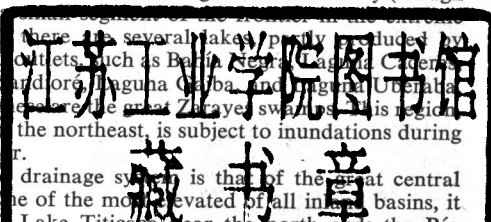
The great swampy plains along the Beni and Mamoré rivers, which are headwaters of the Amazon, contain several lakes and lagoons, some of them large, such as Lago Rogoaguado.

In the vicinity of the Río Paraguay, which is connected to the La Plata Basin and runs parallel to part of Bolivia's eastern border without entering national territory (though touching it in the northeast), there are several lakes, partly enclosed by obstructed outlets, such as Bahia Negra, Laguna Cienega, Laguna Maydore, Laguna Quiba, and Laguna Uteñaba. North of these are the great Zuyave swamps. This region, like that in the northeast, is subject to inundations during the summer.

The third drainage system is that of the great central plateau. One of the most elevated of all inland basins, it consists of Lake Titicaca near the north end; the Río Desaguadero to the south, which flows into the Poopó, into which the Río Desaguadero flows; the Salar de Coipasa (Salt Lake or Marsh of Coipasa) to the southwest of Lago de Poopó (connected with Poopó by the Río Lacajahuira, the small outlet of the latter); and the great Salar de Uyuni, independent of the rest of the system but receiving the waters of an extensive, though very arid area at the south end. Into this system enter many short streams from the neighbouring heights. Having no outlet to the sea, the water of this extensive basin is wholly absorbed by the dry soil and by excessive evaporation.

Lake Titicaca itself is the highest large navigable lake in the world. Situated on the Bolivian-Peruvian border at an elevation of 12,500 feet (3,810 metres), it is about 120 miles long and 50 miles wide; many islands dot its surface. Lago de Poopó is quite different in character from Lake Titicaca. Occupying a very shallow depression in the plateau, only a few feet below the general level of the surrounding land, it is nowhere more than 15 feet deep at its normal level. When its waters are low, it covers an area of 977 square miles; the surrounding land is so flat, however, that at high water the lake reaches sometimes almost to Oruro to the north, fully 30 miles from the low-water shore. The Río Lacajahuira, the only visible outlet of Lago de Poopó, moves underneath the sand and empties into the Salar de Coipasa, which, at high water, covers about the same area as Lago de

The
Altiplano



Lakes
Titicaca
and
Poopó

MAP INDEX

Political subdivisions

Chuquisaca	20-00s	64-20w
Cochabamba	17-30s	65-40w
El Beni	14-00s	65-30w
La Paz	15-30s	68-00w
Oruro	18-40s	67-30w
Pando	11-20s	67-40w
Potosí	20-40s	67-00w
Santa Cruz	17-30s	61-30w
Tarjia	21-30s	64-00w

Cities and towns

Achacachi	16-03s	68-43w
Aiquile	18-10s	65-10w
Amarete		
(Charazani)	15-14s	68-58w
Andamarca	18-49s	67-31w
Añez	17-19s	63-43w
Antequera	18-29s	66-53w
Anzaldo	17-50s	65-55w
Apolo	14-43s	68-31w
Arapampa	17-55s	66-04w
Arani	17-34s	65-46w
Arque	17-48s	66-23w
Atocha	20-56s	66-14w
Ayacucho	17-51s	63-20w
Ayaya	17-05s	68-00w
Azurduy	19-59s	64-29w
Baures	13-35s	63-35w
Bella Flor	11-09s	67-49w
Betanzos	19-34s	65-27w
Boyibibe	20-25s	63-40w
Buena Vista	17-27s	63-40w
Cabezas	18-46s	63-24w
Cachuela		
Espiranza	10-32s	65-38w
Caiza	20-02s	65-40w
Calamarca	16-55s	68-09w
Calcha	21-06s	67-31w
Camargo	20-39s	65-13w
Camiri	20-03s	63-31w
Campamento		
Chimoré	16-42s	64-49w
Capinota	17-43s	66-14w
Caquiaviri	17-03s	68-38w
Caracollo	17-39s	67-10w
Caranavi	15-46s	67-36w
Carandaiti	20-45s	63-04w
Carapari	21-49s	63-46w
Cataricahua	18-14s	66-49w
Cerdas	20-48s	66-29w
Chaguaya	21-49s	64-50w
Challapata	18-54s	66-47w
Chaqi	19-36s	65-32w
Charagua	19-48s	63-13w
Charañi	17-36s	69-28w
Charazani, see		
Amarete		
Chayanta	18-27s	66-30w
Chimore, see		
Campamento		
Chimoré		
Chulumani	16-24s	67-31w
Chuma	15-24s	68-56w
Cliza	17-36s	65-56w
Cobja	11-02s	68-44w
Cochabamba	17-24s	66-09w
Cohoni	16-44s	67-51w
Colcapirhua	17-25s	66-15w
Colquechaca	18-40s	66-01w
Colquenchaca	17-00s	68-17w
Colquiri	17-25s	67-08w
Comarapa	17-54s	64-29w
Concepción	11-29s	66-42w
Coripata	16-18s	67-36w
Corocoro	17-12s	68-29w
Corico	16-10s	67-44w
Corque	18-21s	67-42w
Cosapa	18-11s	68-40w
Cotagaita	20-50s	65-41w
Cotoca	17-49s	63-03w
Cuevo	20-27s	63-32w
Culpina	20-50s	64-58w
Curahuara	17-40s	68-02w
Desaguadero	16-34s	69-02w
El Carmen	18-49s	58-33w
El Cerro	17-31s	61-34w
El Palmer	21-54s	63-39w
Entre Ríos	21-32s	64-12w
Eucaliptus, see		
Tomás Barrón		
Exaltación	13-16s	65-15w
General		
Saavedra	17-15s	63-10w
Guadalupe	18-33s	64-05w
Guanay	15-28s	67-52w
Guacui	16-35s	68-51w
Guayaramerín		
(Puerto Sucre)	10-48s	65-23w
Gutiérrez	19-25s	63-34w
Huacaraje	13-33s	63-45w
Huachacalla	18-45s	68-17w
Huanchaca	20-20s	66-39w
Huanuni	18-16s	66-51w
Huari	19-00s	66-48w
Huarina	16-12s	68-38w
Ichoca	17-12s	67-17w

Independencia	17-07s	66-53w
Ipitá	19-20s	63-32w
Irupana	16-28s	67-28w
Itapaya	17-34s	66-21w
Ivo	20-27s	63-26w
Ixiamas	13-45s	68-09w
La Estrella	16-30s	63-45w
La Guardia	17-54s	63-20w
Lagunillas	19-38s	63-43w
La Paz	16-30s	68-09w
Las Piedras	11-06s	66-10w
Liallagua	18-25s	66-38w
Llanquera	18-06s	67-47w
Llica	19-52s	68-16w
Loreto	15-13s	64-40w
Los Chacos	14-33s	62-11w
Luribay	17-06s	67-39w
Macha	18-49s	66-05w
Machacamarca	18-10s	67-02w
Magdalena	13-20s	64-08w
Manoa	9-40s	65-27w
Mapi	15-15s	68-10w
Mizque	17-56s	65-19w
Mocomoco	15-22s	68-59w
Monteagudo	19-49s	63-59w
Monte Cristo	14-43s	61-14w
Montero	17-20s	63-15w
Moraya	21-45s	65-32w
Morococala	18-10s	66-44w
Ocuri	18-50s	65-50w
Oruro	17-59s	67-09w
Padcaya	21-52s	64-48w
Padilla	19-19s	64-20w
Palca	16-34s	67-59w
Pampa Grande	18-05s	64-06w
Panacachi	18-23s	66-21w
Pasorapa	18-16s	64-37w
Patacamaya	17-14s	67-55w
Pañña	18-36s	66-55w
Pelechuco	14-48s	69-04w
Perotó	14-50s	64-31w
Perseverancia	14-44s	62-48w
Pocoata	18-41s	66-11w
Pocoana	17-39s	65-24w
Pojó	17-45s	64-49w
Poopó	18-23s	66-59w
Porco	19-50s	65-59w
Poroma	18-29s	65-30w
Portachuelo	17-21s	63-24w
Postrevalle	18-29s	63-51w
Potosí	19-35s	65-45w
Presto	18-55s	64-56w
Pucará	18-43s	64-11w
Pucarani	16-23s	68-30w
Puerto Acosta	15-32s	69-15w
Puerto Alegre	13-53s	61-36w
Puerto Heath	12-30s	68-40w
Puerto Rico	11-05s	67-38w
Puerto Siles	12-48s	65-05w
Puerto Suárez	18-57s	57-51w
Puerto Sucre, see		
Guayaramerín		
Pulacayo	20-25s	66-41w
Puna	19-46s	65-28w
Punata	17-32s	65-50w
Quetena	22-10s	67-25w
Quibabaya	15-37s	68-46w
Quillacas	19-14s	66-58w
Quillacollo	17-26s	66-17w
Quime	17-02s	67-15w
Ravelo	18-48s	65-32w
Reyes	14-19s	67-23w
Riberaña	10-59s	66-06w
Rio Mulatos	19-42s	66-47w
Roboré	18-20s	59-45w
Rurrenabaque	14-28s	67-34w
Sabaya	19-01s	68-23w
Sacaca	18-05s	66-25w
Sajama	18-07s	69-00w
Salinas de Garci		
Mendoza	19-38s	67-43w
Samaipata	18-09s	63-52w
Sanandita	21-40s	63-35w
San Benito	17-31s	65-55w
San Borja	14-49s	66-51w
San Buena		
Ventura	14-28s	67-35w
San Ignacio	14-53s	65-36w
San Ignacio	16-23s	60-59w
San Javier	14-34s	64-42w
San Javier	16-20s	62-38w
San Joaquín	13-04s	64-49w
San José de		
Chiquitos	17-51s	60-47w
San José de		
Chupiamonas	14-13s	68-05w
San Juan del		
Piray	20-16s	64-09w
San Lorenzo	21-26s	64-47w
San Lucas	20-06s	65-07w
San Miguel	16-42s	61-01w
San Pedro	14-20s	64-50w
San Pedro de		
Buena Vista	18-13s	65-59w
San Ramón	13-17s	64-43w
Santa Ana	13-45s	65-35w
Santa Ana	15-31s	67-30w
Santa Ana	18-43s	58-44w
Santa Cruz	17-48s	63-10w

Santa Rosa	14-10s	66-53w
Santa Rosa	10-36s	67-25w
Santa Rosa	17-07s	63-35w
Santa Rosa de la		
Roca	16-04s	61-32w
Santa Rosa del		
Palmar	16-54s	62-24w
Santiago	18-19s	59-34w
Santiago de		
Machaca	17-05s	69-16w
Santo Corazón	17-59s	58-51w
Sena	11-32s	67-11w
Sicasica	17-22s	67-45w
Sopachuy	19-29s	64-31w
Sorata	15-47s	68-40w
Sotomayor	19-18s	65-03w
Sucre	19-02s	65-17w
Tapacoma	15-35s	68-43w
Tapacari	17-31s	66-36w
Taperas	17-45s	6-23w
Tarabuco	19-10s	64-57w
Tarata	17-37s	66-01w
Tarjia	21-31s	64-45w
Tiahuanaco	16-33s	68-42w
Tingupaya	19-11s	65-51w
Tiraque	17-25s	65-43w
Todos Santos	16-48s	65-08w
Toledo	18-10s	67-25w
Tomás Barrón		
(Eucaliptus)	17-35s	67-31w
Tomave	20-06s	66-35w
Torotoro	18-07s	65-46w
Totora	17-42s	65-09w
Totora	17-49s	68-07w
Totora Palca	19-55s	65-26w
Trigal	18-17s	64-08w
Trinidad	14-47s	64-47w
Tumupasa	14-09s	67-55w
Tupiza	21-27s	65-43w
Uncia	18-27s	66-37w
Uyuni	20-28s	66-50w
Vaca Guzmán	19-54s	63-48w
Vallegrande	18-29s	64-06w
Viacha	16-39s	68-18w
Villa Abecia	21-00s	65-23w
Villa Bella	10-23s	65-24w
Villa Eufonio		
Viscarra	17-59s	65-36w
Villa Martín	20-46s	67-47w
Villa Montes	21-15s	63-30w
Villa Rivero	17-37s	65-48w
Villa Serrano	19-06s	64-22w
Villa Tunari	16-55s	65-25w
Vitichi	20-13s	65-29w
Warnes	17-30s	63-10w
Yaco	17-09s	67-24w
Yacuiba	22-02s	63-45w
Yamparéz	19-10s	65-10w
Yanacachi	16-23s	67-43w
Yata	13-20s	66-35w
Yotala	19-10s	65-17w
Yotái	16-03s	63-03w
Zudañez	19-06s	64-44w

Physical features and points of interest

Abuná, river	9-41s	65-23w
Acre, river	11-00s	68-45w
Aguaragüe		
Cordillera de		
mountains	21-30s	63-40w
Altamachi, river	16-08s	66-50w
Altiplano, upland	18-00s	68-00w
Andes		
mountains	18-30s	67-30w
Apere, river	13-44s	65-18w
Bala, Cerros de		
mountains	14-20s	67-50w
Beni, river	10-23s	65-24w
Benicito, river	11-32s	65-47w
Bermejo, river	22-53s	64-21w
Blanco, river	12-30s	64-18w
Boopi, river	15-41s	67-15w
Bravo, Cerro		
mountain	17-40s	64-35w
Cáceres, Laguna		
lake	18-56s	57-48w
Cambiaya, river	20-57s	64-45w
Caine, river	18-23s	65-21w
Camata, river	15-09s	68-26w
Central		
Cordillera		
mountains	18-30s	64-55w
Chacaltaya		
Nevado		
mountain	16-20s	68-08w
Challiviri, Salar		
de, salt flat	22-32s	67-34w
Chaparé, river	15-58s	64-42w
Chichas		
Cordillera de		
mountains	20-30s	66-30w
Chiquitos, Llanos		
de, plain	18-00s	61-30w
Chochis, Cerro		
mountain	18-10s	59-53w
Choro, river	16-25s	64-35w
Chorloque, Cerro		
mountain	20-56s	66-01w

Cirque, Cerro		
mountain	17-22s	69-22w
Coipasa, Lago de		
lake	19-12s	68-07w
Coipasa, Salar		
de, salt flat	19-26s	68-09w
Concepción		
Laguna, lake	17-29s	61-25w
Cotacajes, river	16-00s	67-01w
Cotagaita, river	21-01s	65-23w
Cololo, Nevado		
mountain	14-53s	69-06w
Cuevas, Cerro		
mountain	22-00s	65-12w
Desaguadero		
river	18-24s	67-05w
Emero, river	13-19s	67-17w
Gaiba, Laguna		
lake	17-45s	57-43w
Grande, river	15-51s	64-39w
Grande de Lipez		
river	20-47s	67-14w
Gran Pampa		
Salada, plain	20-35s	67-15w
High Plateau		
see Altiplano		
Huachi, Lago		
lake	14-11s	63-30w
Huanchaca		
Serranía de		
mountains	14-30s	60-39w
Huatunas		
Laguna, lakes	13-06s	66-15w
Huayna Potosí		
Nevado		
mountain	16-16s	68-11w
Ichilo, river	15-57s	64-42w
Illampu, Nevado		
mountain	15-50s	68-34w
Illimani, Nevado		
mountain	16-39s	67-48w
Isiboro, river	15-28s	65-05w
Iténez, river	11-55s	65-04w
Itomas, river	12-28s	64-24w
Ivón, river	11-06s	66-08w
Izozog, Bañados		
de, marsh	18-48s	62-10w
Lacajahuira		
river	19-21s	67-54w
La Cal, river	17-27s	58-15w
La Fortuna, Rio		



Elevations in metres

BOLIVIA—

MAP INDEX (continued)

Puna, see			
Altiplano			
Rápulo, river	13-43s	65-32w	
Real, Cordillera, mountains	17-00s	67-10w	
Rogagua, Lago, lake	13-43s	66-54w	
Rogoaguado, Lago, lake	12-52s	65-43w	
Sairecábur, Cerro, mountain	22-43s	67-54w	
Sajama, Nevado, mountain	18-06s	68-54w	
Salluyo, Nevado, mountain	14-38s	69-14w	
San Joaquín, river	13-08s	63-41w	
San José, Serranía de, hills	17-25s	60-49w	
San Juan, river	21-02s	65-19w	
San Luis, Lago de, lake	13-45s	64-00w	
San Martín, river	13-08s	63-43w	
San Miguel, river	13-52s	63-56w	
San Miguel, river	19-15s	59-45w	
San Simón, river	13-13s	63-31w	
Santa Bárbara, river	16-58s	61-39w	
Santiago, Serranía de, mountains	18-25s	59-25w	
Sécure, river	15-10s	64-52w	
Serkhe, Cerro, mountain	17-22s	69-22w	
Sunsas, Serranía de, mountains	17-57s	59-35w	
Tahuamanu, river	11-06s	67-36w	
Tijamuchi, river	14-10s	64-58w	
Titicaca, Lake	15-50s	69-20w	
Toroni, Cerro, mountain	19-43s	68-41w	
Tucavaca, river	18-37s	58-59w	
Tuichi, river	14-36s	67-35w	
Tunari, Cerro, mountain	17-18s	66-22w	
Turvo, river	14-47s	61-03w	
Uberaba, Laguna, lake	17-30s	57-50w	
Uyuni, Salar de, salt flat	20-20s	67-42w	
Verde, Arroyo, river	11-25s	66-20w	
Xipamanu, river	10-43s	67-50w	
Yacuma, river	13-38s	65-23w	
Yapacani, river	16-00s	64-25w	
Yata, river	10-29s	65-26w	
Yungas, physical region	16-20s	66-45w	
Yura, river	20-22s	65-45w	
Yusala, Lago, lake	14-05s	67-12w	

Poopó at low water; it usually consists, however, only of wide, marshy, salt-encrusted wastes, with a small permanent body of water in the lowest part. There is no outlet. The Salar de Uyuni, to the south of the Salar de Coipasa, is similar but much larger. Covering about 3,500 square miles, it consists of a great, totally arid, windswept salt flat.

Climate. Bolivia lies wholly within the tropics but possesses every gradation of temperature from that of the equatorial lowlands to Arctic cold. The Yungas climatic zone comprises all the lowlands and the mountain valleys up to an elevation of approximately 6,000 feet. The atmosphere is humid, and the mean temperature is about 77° F (25° C), with no great departures from this figure; the rainfall, occurring throughout the year, is heavy, amounting to between 30 and 50 inches or more.

The valley zone, which includes the deep valleys lying at heights of from 6,000 to 9,500 feet, has a warm climate with moderate variations in temperature and no cold weather; it is semitropical in character.

The zone that includes the heads of the deep valleys, above the valley zone, with elevations ranging from 9,500 to 11,000 feet, is temperate, though subject to an occasional frost in winter. Both in the valleys and in the heads of the deep valleys there is likely to be a scarcity of rain, though there is usually an abundant supply of water for irrigation.

The Puna (or Altiplano) zone, which lies mostly between 11,000 and 14,000 feet, includes the great central plateau. Always cool, it varies little from summer to winter, except for rainfall; summer brings rain, but occasional snow falls in winter. The mean temperature is estimated at 50° F (10° C) at La Paz.

The Puna Brava zone extends from about 13,000 feet up to the snow line, which is about 18,000 feet, and covers a bleak inhospitable territory, inhabited only by shepherds and miners. Above this is an Arctic zone within the tropics.

Precipitation is as varied as temperature. East of the Cordillera Oriental, rains fall throughout the year. On the west side of this cordillera, the elevated plateaus have a limited rainfall in the north (23 inches at La Paz), which occurs only during the summer months and diminishes toward the south until the surface becomes absolutely barren. Brief and furious thunderstorms sometimes sweep the northern plateau and Lake Titicaca in summer. (G.McC.McB./Ed.)

Vegetation. On the Altiplano, where the amount of rainfall is relatively small, vegetation is scarce. In the higher valleys (at mean altitudes of about 8,500 feet) the typical vegetation consists of small trees and bushes, such

as the molle (pepper tree), the chanar (a thorny shrub with sweet edible berries), and the paca (a leguminous tree used as shade for coffee plants). The heights of the Yunga region are covered with great forests; among the trees represented are green pine, black walnut, aliso (a shrublike tree), laurel, cedar, *tarco* (a shade tree producing masses of yellow-white flowers), *saúco* (which yields fruit used to make medicinal syrups), and quina (an evergreen tree yielding quinine).

The tropical area constituted by the great plains of the east is divided into the Amazon and La Plata River Basins, which are separated by a vast forested area, densely covered with tall trees, many of which are valuable hardwoods. The principal species of commercial value include rubber, Brazil nut, and two types of South American mahogany; there are altogether more than 100 types of trees suited to the wood industry, while there are at least 14 kinds of palm trees, many of which have fruits suited to the extraction of oils, as well as 11 varieties of resinous trees.

The plains of the La Plata Basin are characterized by low brush consisting of such resinous plants as quebracho (the bark of which is used for tanning and dyeing) and *palo santo* (a shrublike tree with blue or purple flowers, also called the soap bush), while the lower lying areas are covered with *mistol* (a bush that produces a nutritive seed); the algarrobo (carob) tree, which has a beanlike pod, is also found. In some areas there are forests of very tall palm trees. The vegetation of the Amazon Basin within Bolivia is more tropical than that of the La Plata Basin, having taller trees and thicker jungles. (V.A.U.)

Animal life. Animal life closely resembles that in the neighbouring areas of Argentina, Brazil, and Peru. In the rain forest of the northeast there is a wide range of species, all of which are kept in balance by competition. Among the snakes are the anaconda, the water boa, and the bushmaster (a kind of viper); caymans (members of the crocodile family) are common, as are lizards. The forest, with its constantly saturated warm air, provides a favourable habitat for salamanders, frogs, and toads. There are large numbers of birds, among which are fruit pigeons, parakeets, toucans, hornbills, and touracos (brightly coloured birds with helmet-like crests). Seen high in the sky, gliding in search of carrion, are king and black vultures. Conspicuous among mammals are the sloth, monkey, jaguar (largest of the American cats), ocelot, opossum, tapir, capybara (so-called water pig, largest of the rodents), peccary, armadillo, and anteater. Insects are particularly abundant because there is no winter and they can breed throughout the year. Among those of the greatest concern to man are mosquitoes, flies, leaf-cutting ants, and termites.

In the grasslands and scrub forest to the south of the rain forest are found jaguar, puma, and deer (among the mammals), the cayman, and some snakes (including the bushmaster and the fer-de-lance, which is a large kind of viper). Conspicuous among the birds are the rhea (a large flightless South American ostrich), a species of large stork, and the common vulture. Waterfowl are abundant, and there are myriad forms of insect life. Since much of the country is swampy for an extended period, mosquitoes of all kinds are present in enormous numbers. Flies, gnats, and ants are also abundant and are a major source of discomfort to man.

In the flat valley bottoms, where the thick tropical forest occurs, mammals are more abundant on the lower slopes and in the valleys than higher up. Here are found deer, armadillo, various opossums, the spectacled bear, peccary, jaguar, capybara, and the tayra—a huge weasel, described as ugly and vicious.

The animals of the highlands are most distinctive, differing markedly from the animals of the adjacent rain forest. On the Puna the most striking animals are the guanaco (a wild ruminant, of which the llama and the alpaca are believed to be the domesticated varieties) and the vicuña (which is related to the guanaco but smaller, yielding a soft, delicate wool). These animals live at altitudes of between about 8,200 and 18,000 feet. Highland rodents include the chinchilla (a small animal with

Tree
species

Bird
life

soft, silvery-gray fur), viscacha (a burrowing rodent), mara (a long-legged, long-eared rodent), and cavy, or guinea pig; the cavy inhabits the more deserted parts of the Altiplano.

Bird life is abundant in the highlands, particularly on Lakes Poopó and Titicaca, and includes geese, ducks, grebes, coots, cormorants, and gulls. In the swamps there are curlews, plovers, and snipes. The condor (a large New World vulture, which is the largest flying bird in the Western Hemisphere) roosts and breeds at heights between 10,000 and 16,000 feet but descends to sea level in search of food on the west side of the Andes, but not to low altitudes on the east side of the mountains. Insect life is largely absent above 10,000 feet.

Among domesticated animals indigenous to Bolivia are the llama, alpaca, cavy, and muscovy duck. The llama is the beast of burden in the bleak and barren wastes of the Puna but is seldom to be seen below heights of 7,500 feet; in addition to being a beast of burden, it also yields meat, wool, leather, tallow, hair, and fuel (dung). The alpaca is best adapted to high altitudes and thrives in the wet, marshy ground at high elevations; it is not a pack animal but is reared for wool. The cavy is raised by almost every Indian family in the highlands as a source of meat and as a pet, from 5 to 15 being kept in the average household. The muscovy duck is raised for food and is the only bird that has been domesticated in the central Andes.

Traditional regions. The three principal regions are the Altiplano, the Valleys (Valles, or Montañas), and the Oriente.

The Altiplano, which comprises about one-seventh of the total land area of Bolivia, is high, windswept, bleak, cold, and barren. Strangely enough, this hostile region, one of the highest inhabited areas on Earth, is Bolivia's most densely populated region; about 55 percent of the total population lives there. In this region are located most of the important cities, including La Paz and Oruro, many of the small towns, and most of the mines. The most important crop is the potato, which is dehydrated and frozen to form *chuño*, which keeps indefinitely. Other crops include barley, *quinoa* (a widely-used grain, grown at very high elevations), broad beans, wheat, alfalfa, and *oca* (an edible tuber). These crops are rotated in a three-year cycle, after which a plot of land is not cultivated but is pastured by llamas, alpaca, and sheep for about 12 years. Unfortunately, the Altiplano does not produce enough food for its population, and much has to be imported.

Farming is still largely of the subsistence type, and most of the farm work is performed by Indians. Until the early 1950s, most of the land was held in the form of large estates, most of which dated back to the days of the Spanish conquistadores; the rest of the land was held communally by the Indians. In 1952 the large estates were broken up and plots of land given to the Indians to be paid for within 25 years. As a result, the number of landowners in Bolivia increased 16 times over. By the mid-1960s, however, there was much confusion, and the land of the once productive large estates had become little more than kitchen gardens for the new owners.

The Altiplano is a difficult land for raising crops and most livestock, and fuel for cooking or for comfort is scarce. Clothing and blankets are made from the wool of sheep and llamas. Most Indians chew coca, primarily because it numbs their senses to the cold and deadens the appetite. A cud of dried coca leaves bulges from the cheek of almost every Altiplano Indian. Life is an endless struggle to wrest from a stubborn nature enough food, fuel, and wool to live by. The Altiplano has been Indian for centuries and promises to remain so. Centuries of bitter experience have taught the Indians to have as little as possible to do with white men if they are to protect their tiny plots of land or their harvests.

The Valles, or Montañas, consists of a complex area of deep valleys and high mountain spurs. The most important part of the region is the Yungas. Because of poor transport facilities, the area must produce such subsistence crops as *ají* (a widely used chili pepper), alfalfa,

barley, cacao, coffee, corn, rice, yuca (cassava, or manioc), wheat, and fruits. Such cash crops as coca, sugarcane, and coffee, which have high value per unit of weight or bulk and thus can pay the costly transportation to the Altiplano, are raised wherever climatic conditions permit. Only by exploiting the Indian, however, is it possible to make a profit on these crops. Most important of the three is coca, which is restricted to the lower Yungas, north and east of La Paz, where it is grown by Indians on terraces of steep slopes of valley walls. Since coca is one of the principal items of family expenditure in the highlands, coca production provides the principal source of cash income in the Yungas, which has become Bolivia's richest subregion. The Yungas is one of the most densely populated areas in the country; it is reported to have 30 percent of the total population and about 40 percent of all the country's cultivated land.

The Oriente is the largest, least productive, and most sparsely populated region; it contains probably less than 15 percent of Bolivia's population. Comprising the vast semicircular territory to the north and east of the Valles, it is also probably the least known area. There is sufficient diversity to justify division into subregions: the northern rain forest; the humid subtropical central zone (comprising the northern and southern parts, respectively, of the departments of Santa Cruz and El Beni); and the semiarid Chaco. Through the centuries this region has been effectively separated from the Yungas and the Altiplano by poor communications.

The Oriente is thus an enormous region, the central portion of which is believed to have promising possibilities for crops and cattle. It is handicapped by poor transport facilities, though they have improved with the completion of the Cochabamba to Santa Cruz highway; arteries connecting with this highway were completed by 1956. Cut off by the mountain barrier, except for this highway, the low-lying Oriente has had little to do with the rest of Bolivia. Its few agricultural and livestock products have trickled into Brazil and Argentina rather than to the Altiplano.

Urban settlements. The city of La Paz including metropolitan area (population estimated at 850,000 in 1971) is the largest and most important of Bolivia. It can be considered a highland city, though a great part of it is in a large canyon, 3,000 feet deep, produced by glacier erosion. The canyon is now drained by the Río Choqueyapu, one of the sources of the Río Beni, which is in turn one of the great tributaries of the Amazonian system. This city has spectacular mountain scenery. It is unique in that one part of it is at an altitude of 13,500 feet and the other at 10,500 feet. This difference of about 3,000 feet between the areas of the city results in peculiar differences in temperature, vegetation, and economic and social activities. The industrial and lower income areas of the city are in the heights, while the residential areas are at the lower levels.

The other cities of the Altiplano—Oruro (with a population of about 95,000), Potosí (64,000), Uyuni (15,000), Tupiza (17,000), and others of lesser importance—are generally connected with the mining industry. The aspect they present is influenced by the scenery of the steppes (extensive treeless plains) and the activities of the mines. Potosí merits special attention as the oldest large city of Bolivia. It was established in 1545 on the slopes of the mountain of Potosí, which was the richest silver mine found by the Spaniards. Potosí had nearly 200,000 inhabitants at the beginning of the 17th century, when it was the largest city in the Americas. It is one of the few cities of America to retain its architectural personality through the years: the large government and religious buildings of the silver mining era remain almost intact.

The most important cities in the valleys are: Cochabamba (180,000), Sucre (70,000), and Tarija (28,000). All of these cities are surrounded by fruit orchards and dairying country. Life is pleasant because of the mildness of the climate, and the inhabitants are inclined to the pursuit of literature; the most important writers and men of politics in the history of Bolivia have been born in these regions.

The
Oriente

The most important of the cities of the eastern plains is Santa Cruz. In 1950 this city had a population of 40,000; by the early 1970s, with the growth of several industries and the opening of the road to the west, its population had risen to 135,000 inhabitants.

PEOPLE AND POPULATION

The three ethnic groups

Ethnic and linguistic groups. The population of Bolivia consists of three groups—the Indians, the mestizos (of mixed Indian and Spanish descent), and the descendants of the Spaniards. After four centuries of intermixing it is, however, virtually impossible to measure accurately the percentage of each.

The Indians are the descendants of the Aymaras, Quechua, and forest tribes, the great majority being farmers, mine workers, or factory and construction workers. About 90 percent of this group speak Spanish, but for traditional and cultural reasons the Indian languages, especially Aymara and Quechua, are still widely used.

The mestizos have traditionally devoted themselves to handicrafts, trades, or small business in the cities. Since the initiation of the great social reforms in 1952, a considerable proportion of this group has had access to schools, colleges, and universities; in the early 1970s, about 60 percent of those graduated in the liberal professions in Bolivian universities, a great percentage of whom are women, belong to this group.

Among the descendants of the Spaniards, the Indian element is less apparent, and the outward characteristics of the Spaniards are predominant. Traditionally, this group has formed the local aristocracy. Since the 1940s this group has increasingly intermarried with the mestizos. The division between these groups is rapidly becoming less defined, and total integration is foreseeable. Attached to this group are recent European immigrants, who occupy a lesser position; families and last names are of particular importance, as in Spanish tradition.

Religious groups. The Roman Catholic religion has the adherence of more than 90 percent of the population. Its hierarchy consists of one primate cardinalship, two archbishoprics, and five bishoprics.

The churches and cathedrals, most of which were built during colonial times, constitute a national architectural treasure. They are generally in the extravagantly ornamented baroque style, although some are in Renaissance (e.g., the cathedral of La Paz) or in later styles.

Pre-Columbian religious revivals

In the Indian communities of the Altiplano, some of the characteristics of pantheistic pre-Columbian religion have survived. Its deities were the sun god Pachacama and his spouse Pachamama, the earth goddess. The Catholic religion has been forced through the centuries to accept some of these practices by assimilating them into the cult of these communities.

Protestant denominations that are active include the Methodist Episcopal church, the Baptists, and the Jehovah's Witnesses. The congregations of these denominations, plus Christian non-Catholic immigrants, make up approximately 10 percent of the total population. Other religions, such as Judaism and Islam, claim the adherence of small groups. Freedom of religion is guaranteed by the Constitution. The comparatively few atheists and agnostics are found principally in university circles and among labour leaders.

Since the 1940s the Catholic church, reflecting the new social dynamism of the church, has ventured from an almost exclusively ceremonial role into the fields of social aid and guidance.

Demography. In 1971 the total population of Bolivia was just under 5,000,000. The index of population growth was 2.6 percent; yet, paradoxically, Bolivia remained almost stationary in its population. The primary reason for this was the great volume of emigration, especially of the working population, to the labour markets of neighbouring countries. In Argentina, for example, it is estimated that there are more than 600,000 Bolivian immigrants. Most of them were hired for temporary work in the sugarcane fields, but many later moved to Buenos Aires and its outskirts. Professional unemployment constitutes a serious problem in Bolivia. It is conservatively

Bolivia, Area and Population

	area		population	
	sq mi	sq km	1950 census*	1971 estimate
Departments (departamentos)				
Chuquisaca	19,984	51,524	282,980	474,000
Cochabamba	21,479	55,631	490,475	822,000
El Beni	82,458	213,564	119,770	200,900
La Paz	51,732	133,985	948,446	1,590,000
Oruro	20,690	53,588	210,260	352,600
Pando	24,644	63,827	19,804	33,200
Potosí	45,644	118,218	534,399	896,000
Santa Cruz	143,098	370,621	286,145	479,800
Tarija	14,526	37,623	126,752	212,600
Total Bolivia	424,165	1,098,581	3,019,031	5,062,500†

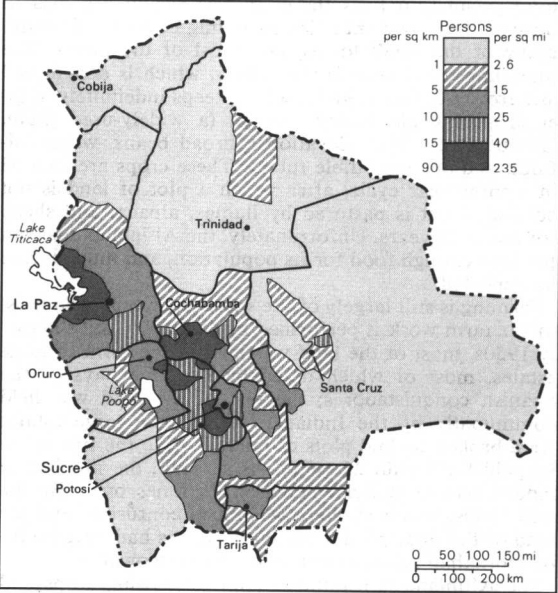
*Figures adjusted to account for an estimated 8.4 percent underenumeration; population actually enumerated was 2,704,165.

†Figures do not add to total given because of rounding.

Source: Official government figures.

estimated that there are at least 100,000 Bolivians, more than half of whom are university graduates, in the United States. A factor in this trend is said to be that nationalization and centralization of industry have resulted in an undue emphasis on political influence rather than professional efficiency.

Traditionally, the great majority of the population has been concentrated in the Altiplano and in the high valleys, mainly because of the conjunction of a healthy climate with exploitable natural resources. Health programs, launched in cooperation with the United States, have nearly eradicated diseases such as malaria, yellow fever, bubonic plague, and yaws, that once afflicted the lowlands, and the construction of roads has made access easier. In consequence, these regions, in the 1950s and 1960s, experienced a migratory influx.



Population density of Bolivia.

THE NATIONAL ECONOMY

Until the 1940s, the economy of Bolivia was based mainly upon the production of minerals for export and the meagre consumption of goods by a population that remained separated from the outside world, not only by the high mountains but also by cultural barriers. The rural workers, who made up 80 percent of the population, were both culturally and economically isolated from the rest of the world. They made their own houses with local mud bricks and thatched roofs, their own clothing with sheep or alpaca wool; and they cultivated their own foods, including corn, potatoes, and quinoa. Contact with urban centres was negligible, resulting mainly from obligations imposed by landlords.

Economic trends

The export of minerals was used to finance life in the

cities, which required the importation of foodstuffs, furniture, construction materials, textiles, and clothing. Taxes on mineral exports and imports of consumer goods served to pay governmental expenses. Thus, the country lived within its limited horizons, without expectations of economic progress, except from occasional windfalls that might result from exceptionally good market conditions for minerals.

By the early 1970s, this situation had begun to change fundamentally. While minerals still represented over 80 percent of all exports, they no longer represented the decisive economic factor, for the population had become less dependent upon export earnings. An accelerated production of domestic foodstuffs had begun, internal commercial activity had increased tenfold within a quarter of a century, and the consumer indexes for the majority of the population had increased. Rural inhabitants had begun to consume such articles as beef, sugar, shortening, and textiles; to these were also added such totally new articles as transistor radios and bicycles.

Minerals. The strategic importance of Bolivian minerals, especially tin, and of Bolivia's oil and natural-gas reserves, in the very heart of South America, have remained unaltered. Bolivia remains the only secure source of tin in the Western Hemisphere, a factor of immense importance in the event of a worldwide conflict. Such strategic considerations also apply to the oil and natural-gas deposits in the area of Santa Cruz.

In 1971, minerals produced included tin, lead, zinc, copper, antimony, tungsten, bismuth, gold, and silver.

The oil industry

Oil prospecting first began in 1927, when the Standard Oil Company (New Jersey) located some oil fields with relatively low yields in southeastern Bolivia. From 1937 to 1956, oil production was the responsibility of a Bolivian state agency, but, after that, United States companies continued prospecting, and the Gulf Oil Corporation located oil fields near the city of Santa Cruz. In 1969, when the production of Gulf Oil Corporation amounted to 40,000 barrels daily, the Bolivian government cancelled the Gulf Oil Corporation concessions and made the state agency, Yacimientos Petrolíferos Fiscales Bolivianos (YPFB), responsible for production. This action affected the external credit of Bolivia, so that the government experienced temporary difficulty in selling the exportable surplus of oil on the international market. Oil production, which amounted to about 8,800,000 barrels in 1970, rose to 13,200,000 barrels in 1971.

Agricultural resources. Bolivia's most significant agricultural resources consist of its cattle-raising areas and its great forests. Livestock includes cattle, horses, mules, asses, sheep, pigs, goats, llamas, and alpacas.

About 43 percent of the total surface area of the country, amounting to about 180,000 square miles, is covered by natural tropical and subtropical forests, with excellent species of hardwoods. Limited means of access and long distances to the nearest seaports have, however, delayed the development of these riches.

Power resources. There has been a considerable increase in the production of electricity, although consumption is still relatively low. The installed capacity of thermal power, for example, rose from about 17,000 kilowatts (kw) in 1940 to 95,000 kilowatts in 1970, while hydroelectric capacity rose from 31,000 kilowatts in 1940 to 172,000 kilowatts in 1970.

The great differences in altitude between the snow-capped peaks, which rise to 21,000 feet, and the plains, which are nearly at sea level, offer a great potential for the future development of hydroelectric power. Two projects are worthy of notice for the future development not only of Bolivia but also of South America. The first is concerned with the utilization of the waters of Lake Titicaca, which constitutes the highest reservoir in the world with a potential not yet calculated. Because the lake is jointly owned by Peru and Bolivia, the project would have to be jointly financed and implemented. The second project concerns the construction of a dam on the Río Beni, which has a volume of water comparable to that of the Nile. Near the eastern plains, the river passes through a narrow canyon with walls of solid rock, a

scant 600 feet apart, rising to about 2,000 feet. The projected dam would form a lake nearly as large as Lake Titicaca, with possibilities for transportation, fishing, and settlement. The power output of this dam would, it is calculated, be similar to that of the Aswān Dam in Egypt. These two projects, if realized, would exert a decisive influence upon the industrialization of Bolivia, Peru, northern Chile, and western Brazil.

Trade and industrial production. More than 80 percent of Bolivia's exports are minerals. In the early 1970s the balance of payments was consistently favourable. The economic situation of the country was not flourishing, however, because of the lack of internal savings and the scarcity of foreign investment. The state agencies, which have taken over most of the means of production, function with permanent deficits because of a mushrooming bureaucracy and poor individual production. Private enterprise has been restricted to small industry and to medium and small-sized mining operations. In manufacturing, the principal private activities are concerned with textiles and drinks; food production is scattered among many small farmers or small primary industries. Sugar production, for the most part, is in the hands of the state.

There are four principal state corporations, all of which were operating at a deficit in the early 1970s. The Corporación Minera de Bolivia (Bolivian Mining Corporation) is responsible for the administration of the large mines nationalized in 1952; Yacimientos Petrolíferos Fiscales Bolivianos (Bolivian National Oilfields) is concerned with the production and exportation of oil and natural gas; the Empresa Nacional de Ferrocarriles (National Railroad Corporation) operates with a government subsidy; Lloyd Aéreo Boliviano, the national airline, is mostly state-controlled.

The state corporations

In general, it appeared that the policy of nationalization and state control of industry resulted in losses.

Transportation. Because of its landlocked situation, Bolivia depends on railroads, highways, and airlines for both internal and external transportation. River navigation is still not developed, partly because the navigable rivers are in the least populated areas, and partly because of geographic problems posed by the other rivers into which they flow.

Bolivia is connected with foreign seaports on the Atlantic and the Pacific by five railways, which have a total length of 2,310 miles. These railways are: La Paz to Arica (Chile); La Paz to Antofagasta (Chile); La Paz to Buenos Aires via La Quiaca (Argentina); Santa Cruz to Buenos Aires via Yacuiba, in southern Bolivia; and Santa Cruz to São Paulo (Brazil) on the Atlantic coast via Corumbá, in southeast Brazil.

The railways to the Atlantic ports are used for the export of agricultural products, and the Pacific railways are used mainly for the export of minerals. Road construction intensified during the late 1960s and early 1970s, with credits being advanced by the United States. In the early 1970s there were about 16,000 miles of roads of which about 600 miles were paved first-class highways; 7,200 miles were crushed stone, 1,600 miles graded earth, and the rest unimproved. The most important paved highways are from La Paz to Oruro, from Cochabamba to Santa Cruz, from Santa Cruz to the north, and from Cochabamba to Chimoré. Studies are being made for the construction of highways toward Chilean and Peruvian seaports.

A permanent bus service runs to Peru over the La Paz-Desaguadero-Puno roads. Throughout Bolivia, bus lines connect the principal cities.

Internal air transport is primarily in the hands of a mixed corporation—Lloyd Aéreo Boliviano—of which 74 percent is owned by the state and the rest by private individuals. This airline connects the principal Bolivian cities with international airports in Buenos Aires, Santiago (Chile), Lima (Peru), and São Paulo (Brazil). In its domestic service, it operates regular flights to most Bolivian cities. Airport administration is in the hands of AASANA (the National Council of Aeronautics), a fiscal entity that operates about 30 airports.

Air transport

The geographic situation of Bolivia poses particularly

difficult transportation problems. The double Andes mountain range, which has only a few mountain passes lower than 15,000 feet, has made road and railway construction particularly expensive. Thus, while mountain roads offer incomparable scenic views for tourists, they also present the difficulties and dangers that attend winding roads, while steep inclines preclude accelerated travel.

ADMINISTRATION AND SOCIAL CONDITIONS

The structure of government. *The constitutional framework.* The executive, legislative, and judicial branches of government are theoretically independent. Since the founding of the Republic in 1825, Bolivia has had a republican and unitary system of government. The central government appoints lesser political authorities, such as the prefects, who govern the nine departments; the subprefects, who govern the provinces into which the departments are divided; and the corregidores, who are the highest authorities in still smaller units called cantons.

According to the constitution, the central government must be elected every four years by popular elections, in which a president and vice president are chosen. The president appoints a 16-member ministerial cabinet; these ministers are heads of the executive branches of government.

The legislative branch consists of a Chamber of Deputies, with approximately 102 members, and a Senate, with a total of 27 (three senators per department). Deputies remain in office four years and senators for six.

The constitution can be changed only by two legislatures, and then only if the second one has been returned after an election in which the issue of the constitutional amendment forms part of the electoral platform. Laws must be sanctioned by the legislative branch and promulgated by the president, who has the power of veto, which can be overridden by a two-thirds majority vote in the legislature. The existing tradition of violent changes of government in Latin America has, however, frequently resulted in these constitutional norms being set aside. Most of the time the country has been governed by de facto regimes headed by members of the armed forces. Between 1900 and 1971 there were 28 presidents, of whom only 14 were elected by popular vote in accordance with the constitution. In addition, during the administration of the de facto regimes, the legislature is not convened, and the central government assumes its functions, promulgating decrees that have the force of law. In the same way, these governments frequently declare judicial offices to be vacant and name new judges to the Supreme Court, which in turn makes appointments to the lesser judicial posts.

The administrative process has generally been inspired by the presidential mode of government in the United States, with certain Anglo-French parliamentary overtones. A vote of no confidence, if approved, can result in the automatic resignation of a Cabinet or of an individual minister.

Constitutionally, municipal governments should be organized through the election of mayors and municipal counsellors. The last municipal elections were, however, held in 1928; since then, centralist tendencies have prevailed, and the central government appoints the mayors.

The political process. Until 1956, only a small minority of the inhabitants of the Republic voted in general elections. Women were not allowed to vote, and literacy requirements disenfranchised more than 70 percent of the men. There were also property and income restrictions, which further diminished the numbers of the electorate. Thus, out of a population of about 5,000,000, a president could be elected with only 80,000 votes. In 1956, however, an electoral reform law eliminated sex and literacy requirements, establishing the voting age at 21 years for men, and 19 for women; as a result, 1,400,000 voters participated in the 1956 elections.

A political party of substantial influence in the early 1970s was the Movimiento Nacionalista Revolucionario, which governed the country from 1952 to 1964. Its pro-

gram, based on three fundamental points—a universal vote, agrarian reform, and the nationalization of the mines—gained unprecedented popular support. The personal ambitions of its principal leaders, however, resulted in schisms that its adversaries in the armed forces were able to exploit, and the party was ousted from office in 1964.

Another important party has been Falange Socialista Boliviana, a group inspired by the Falangista Party of Spain. The influence of this party reached its peak when totalitarian movements controlled most of central Europe, but—like similar parties throughout South America—it changed direction after the defeat of the Axis forces in World War II. It then took the name Partido Social Cristiano (Christian Social Party).

The parties of the extreme left have become aggressive as a result of the influence of Castroism (the doctrines of Fidel Castro of Cuba) in South America. These parties have had difficulty, however, in following a central authority and are divided into such factions as Moscovite Communists, Maoists, Trotskyites, Castroites, etc. As a result of the opportunities given them by two leftist military governments—that of Alfredo Ovando Candía from 1969 to 1970 and that of Juan José Torres from 1970 to 1971—these groups became active in the Bolivian universities and labour unions. Bolivia seemed capable of becoming one of the first South American countries to have a Communist government until the armed forces ousted the Torres government. A nationalist government was organized in 1971 under the presidency of Col. Hugo Banzer Suárez, with the cooperation of a segment of the Movimiento Nacionalista Revolucionario and the Falange Socialista Boliviana.

The armed forces. The armed forces, in order of importance, consist of the forces of the land army, the air force, and the naval force. There is a commander general for the three combined forces, as well as a commander for each. Since 1904, there has been a one-year military obligation for all male Bolivians who reach the age of 19. The standing army numbers about 20,000 men, and the air force—organized with United States assistance—is a small one. The Bolivian navy is small; it operates on the navigable rivers, as well as on Lake Titicaca, to prevent smuggling and to assist river transport.

Education, health and welfare. Civil education is divided in three categories—elementary, secondary, and university. Most education is state-supported, but private institutions are not forbidden. The Catholic, Protestant, and Jewish churches are active in primary and secondary education. One of the country's eight universities is Catholic. The Bureau of Indian and Rural Education maintains regional schools for teaching trades and crafts. The national illiteracy rate is estimated to be about 60 percent.

There are three kinds of health services—those supported by the state through the Ministry of Health, those provided by the social security system for its affiliates, and private clinics. In general, the medical services and the hospitals in the cities are adequate. This is not so in rural areas, however; both doctors and nurses are lacking. Nationally, there is approximately one doctor to care for every 2,700 people. The most serious health problems confronting the country are malnutrition, tuberculosis, prenatal and birth attention, and the tropical diseases that break out regularly in the warmer areas.

Cultural life and institutions. Bolivian culture consists of a combination of Indian culture with the Mediterranean cultures brought by the Spaniards. On religious feast days, for example, pagan pre-Columbian rites are still practiced, and the Indians express themselves through dances and songs that blend the two cultures. In such festivities, some symbolic dress presents the Indian interpretation of European attitudes: the dance of the *palla-palla* or *loco palla-palla* caricatures the European invaders; the dance of the *waka-tokoris* satirizes bullfights; and the *morenada* mocks white men, who are represented leading imported African slaves. Indian musical instruments are used to accompany these dances. In the

Health
services

The
electoral
system

music itself, the mixture of cultures is also evident, since many of the tunes are based on Spanish dances. The more commonly used instruments are: *el sicu* (pan pipes), and *la tarka*, *la kena*, and *el pinquillo* (vertical flutes). Percussion instruments of various sizes are used. The costumes, highly embroidered and colourful, imitate the dress of the pre-Columbian natives or the dress of 16th-century Spaniards.

Daily dress in the rural regions of Bolivia still reflects the Spanish colonial influence. The men wear short jackets and wide trousers, and the women wear wide pleated skirts and colourful shawls. The hats the women wear vary according to the different regions.

Since the 1940s, Indian culture has experienced a blossoming. Previously, Indians attempted to imitate Europeans, in custom as well as in dress. By the early 1970s, however, Indian values had been re-established; Indian music rose to a higher standard, painters abandoned the imitation of European fashions, and some of the characteristics of Indian culture re-emerged in the general life-style.

The National Academy of Fine Arts in La Paz offers courses in music, painting, sculpture, and ceramics. There are two galleries of pictorial arts, and a permanent collection in the National Museum of Art. Jewelry in silver and gold, with pre-Columbian decorations and styles, has been made since colonial times. The local markets offer a profusion of colourful handicrafts and fine wood-carvings.

In the city of Potosí the building of the Mint (Casa de Moneda), erected in the 17th century, has been restored, and its great halls are used to house a collection of fine colonial paintings. Various old temples have been restored, and folk festivals are held periodically. The most important is the one held in Oruro during the carnival holidays; many Indian music and dance groups compete, providing a magnificent display of costumes and decorations. In La Paz there is the National Symphony Orchestra, and at the University of San Andrés (also known as the University of La Paz) a choral group specializes in Indian musical themes.

There are five newspapers published daily in La Paz—three in the morning and two in the evening—and there are 17 radio stations and one television channel. In the other large cities there are also local newspapers, and each department capital has at least three radio stations. Some radio stations broadcast in Quechua or Aymara. There is an Academy of the Aymara Language in La Paz; its avowed purpose is the preservation of the purity of this language.

Prospects for the future. Bolivia faces serious problems that hinder its progress. Among them are its lack of access to the ocean and its difficult terrain. It nevertheless constitutes one of the world's reserves: it is capable of supporting a larger population because the extent of its arable lands is great and the density of its population very low. The areas of land without adequate rainfall for human habitation are relatively small, and the energy sources, mineral reserves, and biological possibilities are promising. The fundamental human problem lies in the difficulty of establishing a form of government and social structure stable enough to permit the development of potential resources.

The migratory currents from other continents, which have had so much influence elsewhere in the Americas, have had a minimal influence in Bolivia. The great majority of the population are still either of Indian or of mixed Indian and Spanish blood.

In Bolivia, a great desire to emerge from backwardness can be perceived; in this desire, however, the political tendencies of the modern world play a dramatic role. In the universities, many lean toward the adoption of Socialist methods as a solution to Bolivia's problems, but many of those in the professions and many technicians are inclined toward free enterprise and private initiative. The result of this difference has been a division in a national community that—perhaps more than any other—needs common objectives in order to overcome its enormous problems.

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(V.A.U.)

Bolivia, History of

Bolivian society traces its origins to the advanced pre-Columbian civilizations of South America. The high Bolivian plateau known as the *altiplano* was already densely populated several centuries before the Spanish conquest in the 16th century.

The Bolivia region, to 1825. From the 7th century, the Tiahuanaco empire, the first of the great Andean empires to extend over both the Peruvian coast and highlands, had its centre in the *altiplano* region. By the 11th century it had reached its apogee and was replaced by more simple regional states.

In the centuries that followed the collapse of Tiahuanaco, the Bolivian highland region maintained its dense populations and technological civilizations with irrigation agriculture. By the 15th century the region was mostly controlled by some 12 nations of Aymara-speaking Indians. Competitors to the Quechuan-speaking nation at Cuzco in what is now Peru, these Aymara tribes fought with the latter for control of the central Andean highland region. Though the Aymara nations were eventually dominated by Cuzco, they nevertheless remained the most important non-Quechuan group within the expanding Incan empire; because of their importance they were

Cultural
institutions

Pre-
Columbian
civiliza-
tions

the only conquered coastal or highland peoples able to retain their language and cultural identity to such an extent that their Aymara language survived the Spanish conquest. But the Aymara were forced to accept a large body of Quechuan-speaking immigrants within their midst as part of a deliberate Incan policy of colonization. It was this early pattern of colonization and nonassimilation that gave Bolivia its current linguistic and cultural identity (the two major Indian languages in Bolivia today are Quechua, spoken by over a third, and Aymara, spoken by a fourth of the population).

Part of the
Spanish
Empire

The southern Andean valleys and central plateau of Bolivia, with their dense Indian populations, became a core population area within the Spanish empire after the conquest. To the wealth represented by Indian labour there was added the mineral wealth from newly discovered silver deposits of Potosí (1545)—the largest silver mines then known in the Western world. The arid, high altitude mines of Potosí, along with others discovered near the town of Oruro (founded in 1606), were supplied with food and other basic necessities by such supportive towns as Chuquisaca (founded in 1538), La Paz (1548), and Cochabamba (1571). From the 16th to well into the 18th centuries, this southern Andean area, known then as Charcas, or Upper Peru, was one of the wealthiest and most densely populated centres of Spain's American empire. Its mines were supplied with forced drafts (*mita*) of Indian labourers from all over the Andes; and by the middle of the 17th century, its central mining city of Potosí was the largest city in the Americas, with a population estimated at 150,000. But by the last quarter of the 18th century this famous mining zone was in decay. The exhaustion of the richest and most accessible veins, the poverty of the miners and their ignorance of advanced technology, and the absorption of colonial capital into the thriving international commerce of the late 18th century all contributed to its decline. Though a reduced Potosí continued to be Upper Peru's most important economic centre, the intellectual and political centre of the area was Chuquisaca (also known in the colonial period as Charcas and La Plata and, since independence, as Sucre). With its academies and University, Chuquisaca was the major educational centre for the entire Rio de la Plata region, it also served as the seat of Upper Peru's government, which was known from its foundation in 1559 as the Audiencia of Charcas. The Audiencia was first placed under the Viceroyalty of Peru at Lima; but in 1776 it was finally shifted to a new viceroyalty established at Buenos Aires.

Independence
movement

In 1809 revolts first at Chuquisaca and then at La Paz gave rise to the Wars of Independence in South America. But, despite several invasions by patriot armies and constant guerilla warfare, Upper Peru was the last major area in South America to be freed from Spanish rule. It was only with Antonio José de Sucre's victory over the Spanish armies in Lower Peru (1824) that Upper Peru's elite groups finally supported a full independence movement. Though the South American liberator Simón Bolívar was pressing for multiregional confederations, he permitted an Upper Peruvian congress to declare itself an independent republic on Aug. 6, 1825.

Bolivia from 1825 to c. 1930. In recognition of Bolívar's support, the leaders of the congress named the new republic Bolivia after the liberator and invited Sucre, his chief aide, to be the first president.

Foundation and early national history. But the new republic was not as viable as its leaders fervently hoped it would be. It was economically retarded, despite the legendary colonial wealth and prominence of the region. The late-18th-century mining decline had given way to severe depression as a result of the Independence wars. Between 1803 and 1825 silver production at Potosí declined by over 80 percent; and by the time of the first national census in 1846, the republic listed more than 10,000 abandoned mines.

Incapable of exporting its silver at the levels of colonial production, Bolivia rapidly lost its previously advanced economic standing within Spanish America. Already by the end of the colonial period, such marginal areas as the

Rio de la Plata and Chile were forging ahead on the basis of meat and cereal production. Bolivia, on the other hand, was a net importer of basic foods, even those exclusively consumed by its Indian population. And none of its mineral resources was of sufficient value to overcome the high transportation costs involved in getting the minerals to the coast. The Bolivian republic, with little trade to tax and with few resources to export beyond its very modest precious metals production, was forced to rely on direct taxation of its Indian peasant masses, who made up over two-thirds of the estimated 1,100,000 population in 1825. Until well into the last quarter of the 19th century, this regressive Indian taxation was the largest source of national government revenue. With the more progressive South American states relying almost exclusively on import and export taxes of a constantly expanding international commerce, the Bolivian state rapidly lost its prominent position within the continent and became known as one of the most backward of the new republics.

Economic
decline and
political
stagnation

This economic decline was mirrored by political stagnation. Bolivia emerged initially with a series of military strongmen (*caudillos*), among whom was Marshal Andrés de Santa Cruz, president from 1829 to 1839. Temporarily reorganizing the war-torn Bolivian economy and state finances, Santa Cruz in the 1830s was able to unite Bolivia with Peru, through the successful overthrow of the Lima regime of Gen. Agustín Gamarra, into a government known as the Confederation (1836–39). But Chilean military intervention destroyed the Confederation attempt; Bolivia quickly turned in upon itself and thenceforth abandoned all attempts at international expansion.

Bolivia's efforts for the next half-century were primarily to integrate its far-flung regions into a coherent relationship between the core of the republic, the *altiplano*, and the eastern Andean valleys. This attempt was doomed to failure, however, because Bolivia lacked the population and resources to exploit either its Amazonian or its Pacific frontiers. Despite the enormous wealth in nitrates and guano available on the Bolivian Pacific coast, the nation was incapable of exploiting them even with the help of foreign capital. What little capital was available within Bolivia's upper class was totally committed to *altiplano* mining. It was Peruvians, Chileans, North Americans, and Englishmen who exploited these resources. Between the Chilean War of the Confederation (1838–39) and the outbreak of the Pacific War (1879), Chile constantly and successfully expanded its claims, both by diplomatic pressure and, finally, by war, against Bolivian sovereignty in the enormous Bolivian Pacific coastal territories.

Loss of the coastal region. The War of the Pacific (1879–84) had its origins in heavy Anglo-Chilean investments in Bolivia, beginning in the 1840s with those in the guano deposits on Bolivia's Atacama coastal province. With the discovery of nitrate deposits in the 1860s, Chilean aggressive expansion along the coast increased even further. By a series of treaties Chile expanded its territorial claims and obtained commercial concessions within Bolivian territory. As a response to this pressure, Bolivia signed an alliance treaty with Peru in 1873; but this did not intimidate the Chileans. When the Bolivian government attempted to increase taxation on Chilean nitrate companies working in Bolivia, Chile unilaterally invaded Bolivian territory in 1879 and forced a war with both Bolivia and Peru. In May 1880, at the Battle of Tacna, Chile defeated a combined Bolivian–Peruvian army, ending effective Bolivian resistance. Rather than attack the Andean core of Bolivia, the Chileans ignored Bolivia for the rest of the war and proceeded on a massive invasion of Peru, which resulted in their eventual capture of Lima.

War with
Chile

The fall of the Pacific littoral to Chile may, in many ways, have been a blessing for Bolivia. The War of the Pacific marked a major turning point in national history. From the fall of the Confederation to the War of the Pacific, Bolivia had gone through one of the worst periods of caudillo rule in all Latin America during the 19th century. The decades of the 1860s and 1870s, however, were those in which Andean silver mining had revived under

Era of
civilian
govern-
ment

the impact of new capital inputs from Chile and Great Britain. By the time of the War of the Pacific, international market conditions for silver and the introduction of new technology and capital had greatly revived the national mining industry. The War of the Pacific enabled the new mining entrepreneurs to capture political control of the nation and to break the hold of the by then discredited barracks officers on national political life.

Formation of Liberal and Conservative parties. Starting in 1880, under the presidency (1880–84) of Narciso Campero, Bolivia moved into an era of civilian governments with the national upper class dividing into Liberal and Conservative parties, which then proceeded to share power. This intraclass political party system finally brought Bolivia the stability it needed for economic development. Though the parties split on personality and anticlerical issues, they were identical in their desire to promote economic growth. From 1880 to 1899 the nation was ruled by the Conservatives, whose principal function was to encourage the mining industry through the development of an international rail network.

It was thus an economically expanding nation that the Liberals inherited when they seized power from the Conservatives in the so-called Federal Revolution of 1899. Supposedly fought over the permanent placing of national institutions in the cities of Sucre or La Paz, the federal revolt was primarily a power struggle between the Conservative and Liberal parties. Unfortunately for the Conservatives, their strength was too closely tied to the traditional Chuquisaca elite, much of which was coterminous with the silver-mining class. The Liberals, however, had the bulk of their strength in La Paz, which by this period was three times the size of Sucre and had the largest urban concentration (some 72,000 persons) in the national population, which was estimated at 1,700,000 persons in 1900.

Increase in tin mining. The Liberal victory was also closely associated with a basic shift in the mining economy. As the world silver market began to collapse in the 1880s and early 1890s, a major shift to tin mining began on the Bolivian *altiplano*. Found in association with silver, tin did not become an important product until the end of the 19th century, when demand suddenly soared in all the major industrialized countries. Thus by 1900 tin had completely superseded silver as Bolivia's primary export, accounting for over 50 percent of national exports.

The shift to tin mining not only occurred at the same time as the Liberal revolt and was closely associated with the new party but it also brought about a basic change within the capitalist class in Bolivia. Whereas the silver mining elite had been almost exclusively Bolivian, the new tin miners were far more cosmopolitan, including, in the early years, foreigners of all nationalities as well as some new Bolivian entrepreneurs. Tin mining itself absorbed far more capital and produced far more wealth than had the old silver-mining industry, and the new companies that emerged became complex international ventures directed by professional managers.

Given this new economic complexity and the political stability already achieved by the Conservatives and perpetuated by the Liberals, the tin-mining elite found it profitable to withdraw from direct involvement in national political life. Whereas Bolivian presidents under Conservative rule in the 19th century had either been silver magnates themselves (Gregorio Pacheco, 1884–88; Aniceto Arce, 1888–92), or closely associated with such magnates as partners or representatives (Mariano Baptista, 1892–96; Severo Fernández Alonso, 1896–99), the Liberals and subsequent 20th-century presidents were largely outside the mining elite. No tin magnate actively participated in leadership positions within the political system. Rather, they came to rely on a more effective system of pressure group politics.

Liberal rule (1899–1920). The primary task of the Liberal politicians, who ruled Bolivia from 1899 to 1920 under the leadership of Ismael Montes (twice president: in 1904–08 and 1913–17), was to settle Bolivia's chronic border problems and to continue and expand the communications network initiated by the Conservatives. A de-

finitive peace treaty was signed with Chile (1904), accepting the loss of all Bolivia's former coastal territories. Also, the Acre problem was resolved: this involved an unsuccessful attempt by the central government to crush an autonomist rebellion (1889–1903) in the rubber boom territory of Acre on the Brazilian border. Brazil's covert support of the rebels and the defeat of Bolivian forces finally convinced the Liberals to sell the territory to Brazil in the Treaty of Petrópolis (1903). As a result of the financial indemnities provided by both treaties, Bolivia was able to finance a great railroad construction era—by 1920 most of the major cities were tied together by rails and La Paz was connected to the two Chilean Pacific ports of Antofagasta and Arica; new lines had begun or had been built to Lake Titicaca and thus the Peruvian border, and to Tarija and the Argentine frontier.

The period of Liberal rule was also the most calm in Bolivian political history. Dominated by the figure of Montes, the Liberal Party easily destroyed the federalists, who had supported the party during the revolution, and Liberal success led to the total collapse of the Conservative Party. Not until 1914 was an effective two party system again established, when many of the political "outs," along with a large number of new and younger elements, finally organized the Republican Party. Like its predecessors, the Republican Party was a white, upper and middle class grouping, with a fundamental belief in liberal and positivist ideologies.

The Republican Party. The abrasive quality of the strong-willed Montes and the disintegration of the ruling Liberal Party finally permitted the Republicans to stage a successful coup d'état, in 1920, and become the ruling party. Upon achieving political power, however, the new party immediately split into two warring sections based on a conflict of personalities and led by two Montes-style politicians—Juan Bautista Saavedra, a La Paz lawyer who captured control of the Republican Party and was national president from 1930–34, and Daniel Salamanca, a Cochabamba landowner who took his following into a separate party, the so-called Partido Republicano Genuino (or Genuine Republican Party). The rivalry between these two men became the dominant theme in Bolivian politics for the next decade, until the Salamanca forces captured the presidency.

Below the surface of this political battle of personalities, the national economy in the 1920s was undergoing serious change. The early years of the decade had witnessed a brilliant post-World War I recovery of the Bolivian tin-mining industry, which led to the achievement by 1929 of its highest production figures. This enormous output occurred, however, in a period of steady price decline (a trend that continued long after the Great Depression of the 1930s). By 1930 the international tin market was in a serious crisis, and Bolivian production suffered. The year 1930 marked the end of major new capital investment in tin mining; thereafter the industry in Bolivia would become an ever higher cost producer of lower grade ores for the international market.

Bolivia since 1930. The installation of Salamanca in the presidency after the revolt of 1930 seemingly involved little change in traditional Bolivian government. But the Great Depression cut brutally into national income and forced the closing of a large part of the vital mining industry. Salamanca was thus forced to take new measures. Attempting a policy of inflation and money manipulation, he ran into bitter hostility from the Liberal Party, his key partner in the 1930 overthrow of the regular Republican Party. The opposition of these two forces in the central government led to a tense political climate, the result of which was to force Salamanca to accept a Liberal veto over internal economic decisions. He refused, however, to permit the Liberals to join his cabinet; rather, he sought to overcome Liberal congressional control and to destroy growing strike movements by turning national attention to other themes. Salamanca had the traditional recourse to patriotism and foreign war open to him in a long-standing border conflict with Paraguay.

Already in the mid-1920s, Bolivia and Paraguay both had begun a major program of fort construction in the

Railroad-
building
era

Conflict
with
Paraguay

largely uninhabited and poorly demarcated Chaco Boreal territory, on the southeastern Bolivian frontier. At the height of the Depression, Salamanca had advocated an even heavier armament and fortification program and had contracted for major European loans. In June 1932 a border incident developed between the two states, and Salamanca deliberately provoked a full-scale Bolivian reprisal, which inevitably led into open war between the two nations.

The Chaco War (1932–35). The Chaco War was a long and costly disaster for Bolivia. In the three years of bitter fighting on its southeastern frontiers, Bolivia lost 100,000 men dead, wounded, deserted, or captured; it also lost far more territory than Paraguay had claimed even in its most extreme prewar demands. The fact that Bolivia had entered the war with a better equipped and supposedly far better trained army only aggravated the sense of frustration among the younger literate veterans—the so-called Chaco generation—at the total failure of Bolivian arms. Charging that the traditional politicians and the international oil companies had led Bolivia into its disastrous war, the returning veterans set up rival Socialist and radical parties and challenged the traditional political system.

Return to military rule. The initial result of this challenge was the overthrow of the civilian government and the first advent of military rule in Bolivia since 1880. In 1936 the younger army officers seized the government, and under two leaders, Col. David Toro in 1936–37 and Maj. Germán Busch in 1937–39, they tried to reform Bolivian society. Little was accomplished during this so-called era of military socialism except for the confiscation of the Standard Oil Company holdings, the creation of an important labour code, and the writing in 1938 of an advanced, socially oriented constitution.

Political
chaos

Rise of new political groups. Beginning in the 1940s, civilian dissident groups finally began to organize themselves into powerful national opposition parties. The two most important of these were the middle class and initially fascist-oriented Movimiento Nacionalista Revolucionario (MNR) and the Marxist and largely pro-Russian Partido de la Izquierda Revolucionaria (PIR). Both groups established important factions in the national congress of 1940–44. In 1943 the civilian president Gen. Enrique Peñaranda was overthrown by a secret military group, Razón de Patria (Radepa), which allied itself with the MNR and tried to create a new-style government. Under Col. Gualberto Villaroel (1943–46) little was accomplished, except for an initial political mobilization of the Indian peasants by the MNR. Opposed as fascist-oriented by the right and left, the Villaroel government was overthrown in 1946, in a bloody revolution in which Villaroel was hanged before the presidential palace by revolutionary crowds.

During the next six years the PIR tried to rule in alliance with many of the older, traditional parties. But this effort failed, and the PIR was eventually dissolved and replaced in early 1950 by the more radical Bolivian Communist Party. The Conservative parties proved unable to control the situation; and after the MNR won a plurality victory in the presidential elections of 1951, the military intervened directly and formed a military junta government. As for the MNR, its disaster under Villaroel led it to disassociate itself from its fascist wing and to seek an alliance with a small Trotskyite party, which had important mine-union support. The resulting alliance brought the labour leader Juan Lechín into the MNR. After several unsuccessful revolts, each more violent than the preceding one, the MNR, in several days of fighting, finally overthrew the military regime in April 1952. During this struggle, workers, civilians, and peasants were armed and the army was almost totally destroyed.

The Bolivian National Revolution (1952). Thus in April 1952 began the so-called Bolivian National Revolution, which became one of Latin America's most important social revolutions. The MNR and its mine-worker and peasant supporters were pledged to a fundamental attack on the tin-mining industry and its allied political supporters. In October 1952 the three biggest tin-mine companies

were nationalized. In August 1953 came one of the most far-reaching land-reform decrees ever enacted in the Western Hemisphere. Universal suffrage was granted with the abolition of literacy requirements. Not only were Indians granted land, freed from servile labour obligations, and given the vote, but they were also given large supplies of arms. From that point on, the Indian peasants of Bolivia became a powerful, if largely passive, political force, upon which all subsequent governments based their strength.

Post-1952 regimes. The most important leader of the MNR, Víctor Paz Estenssoro, was president of Bolivia in 1952–56 and instituted the most revolutionary part of the party's program. In 1956 he was replaced by the more conservative Hernando Siles Zuazo, whose primary concern was to stop an inflation that had followed the 1952 revolution. That inflation had in many ways completed the revolutionary process by virtually destroying the older middle class supporters of the MNR. With massive financial support from the United States, the inflation was stopped; but most of the advanced social programs of the revolution were suspended as well. The government ended worker co-administration of the nationalized mine companies and cut back on expanded social services and other such measures. It also invited U.S. petroleum companies back into Bolivia for the first time since 1937, when Standard Oil of Bolivia had been confiscated by the Toro government.

The return of Paz Estenssoro to the presidency in 1960 did not bring a new movement toward social reform. Rather, the consolidation achieved by Siles Zuazo was further developed, with the power of the army being revived under U.S. support. The attempt of Paz Estenssoro to renew his presidential term for another four years, in 1964, led to the splintering and temporary destruction of the MNR and to the overthrow of his government by the military.

With the support of many conservative elements and the peasant masses, the vice president, Gen. René Barrientos, seized the government and proceeded to dissolve most of the organized labour opposition. From 1964 until his death in 1969, Barrientos continued with the process of conservative economic reform and political retrenchment, with a deliberate attempt to demobilize all popular groups except the peasants, who had risen to some power as a result of the National Revolution. It was during Barrientos' period in office that a poorly organized antigovernment campaign, led by the Argentinian-born revolutionary Ernesto (Che) Guevara, was destroyed in 1967, largely because of its failure to mobilize the peasants.

The death of Barrientos brought the vice president, Luis Adolfo Siles Salinas, into office; he was forcibly replaced in mid-1969 by Gen. Alfredo Ovando Candía, who in turn was forced out of office, after he had nationalized Gulf Oil Company holdings, by the more radical Gen. Juan José Torres in October 1970. Of the several military regimes that governed between 1964 and 1979, that led by Torres was the most radical; for a time the Torres government replaced Congress with a workers' soviet. In 1971, Torres was replaced by Col. Hugo Banzer Suárez, and the most repressive regime of the period came to power. During the next seven years, the labour movement was suppressed, the mines were occupied by troops, all civil rights were suspended, and the peasant syndicates were prohibited. Nevertheless, this was also an era of unprecedented growth in the Bolivian economy, fuelled by the sudden increase in world mineral prices and the completion of some of the basic changes in the social and economic infrastructure begun with the Revolution of 1952. These long-term economic changes involved the relative decline of the importance of tin and the emergence of commercial agricultural exports for the first time in republican history. It was also a period of extraordinarily rapid increase in the national population, which between 1950 and 1976 achieved an annual net growth rate of 2.1 percent. Finally, the Banzer regime was unique in contemporary Bolivian affairs because it provided the new commercial agricultural interests of the Santa Cruz region with national representation.

In 1978, the old MNR re-emerged and a complex set of

Social
reforms

The
Barrientos
regime

new political parties and movements developed. In the national elections of 1978 and 1979, these new groups gained wide support and the electorate showed an even balance between conservative and radical positions. Moreover, peasants for the first time no longer voted in block, but were as equally divided as the urban populace.

These democratic changes were fragile, however. The results of the elections of July 9, 1978, were voided in the wake of charges of mismanagement and fraud. Banzer Suárez resigned on July 21 under threat of a coup led by Gen. Juan Pereda Asbún, the government's presidential candidate in the voided elections. Pereda Asbún was overthrown in November and was replaced by a three-man military junta. An attempt was made to return to constitutional democracy with the elections of July 1, 1979. None of the three presidential candidates—Paz Estenssoro, Siles Zuazo, or Banzer Suárez—gained a majority, however. Walter Guevara Arze, then president-elect of the Senate, was chosen as interim president until elections could be held in 1980. He was deposed on November 1 by Col. Alberto Natusch Busch, who held power until November 16, when Lydia Gueiler Tejada was chosen by military, political, and union leaders to serve for one year as Bolivia's first woman president.

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(H.S.K.)

Bombay

Bombay, the capital of Mahārāshtra state, India, is the country's financial and commercial centre and the principal port on the Arabian Sea. It is the seventh largest city in the world, with an estimated population in 1978 of more than 7,000,000. It is also one of the most densely populated cities, its inhabitants crowded within an area of 233 square miles (603 square kilometres). Located on a site of ancient settlement, the city took its name from the local goddess Mumba—a form of Pārvati, the consort of Śiva (Shiva), one of the principal gods of Hinduism—whose temple stood in the southeast of contemporary Bombay.

Long the centre of India's cotton-textile industry, its manufactures are now well diversified and its commercial and financial institutions strong and vigorous. Bombay suffers, however, from the chronic ills of most large, expanding industrial cities—air and water pollution, slums, and overcrowding. Confined by its island location, Bombay seems ready to burst at its seams. A regional planning board, the City Industrial Development Corporation (CIDCO), is developing a new urban centre or "twin city" on the mainland opposite Bombay, taking advantage of the Thāna Creek Bridge built in the early 1970s, to relieve congestion in Bombay. With an area of 140 square miles (350 square kilometres) including Panvel, and stretching down to Uran, almost opposite Bombay's Gateway of India, the twin city to be completed by 1991 will be an autonomous economic and cultural urban centre, with a population of 2,000,000 and its own industries, schools, university, airport, and rapid transit system. A second bridge linking the twin city at Uran to Bombay across the creek is planned. Simultaneously, a second port at Nava-Sheva is being built. CIDCO is also planning to convert 450 square miles of marshland in the Bāndra-Kurla area into a business-cum-downtown complex, relieving congestion in South Bombay.

History. The Kolis, an aboriginal tribe of fishermen, were the earliest known inhabitants, though Paleolithic stone implements found at Kandivli, in Greater Bombay, indicate human occupation during the Stone Age. Known as Heptanesia to the ancient Greek astronomer and geog-

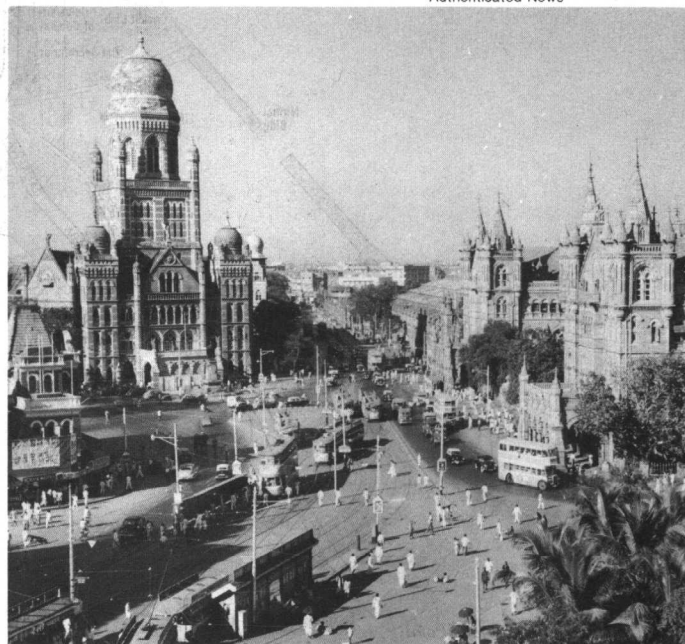
rapher Ptolemy, the area was a centre of maritime trade with Persia and Egypt in 1000 bc. It was part of Aśoka's empire in the 3rd century bc and was ruled in the 6th to 8th centuries ad by the Cālukyas, who left their mark on Elephanta Island (Ghārāpuri). The Walkeswar temple at Malabar Point was probably built during the rule of Silāhāra chiefs from the Konkan Coast (9th-13th centuries). Under the Yadāvas of Devagiri (1187-1312) the settlement of Mahikavati (Māhim) on Bombay Island was founded in response to raids by the Khālji dynasty of Hindustān in 1294. Descendants of these settlers are found in contemporary Bombay, and most of the place-names on the island date from this era. In 1348 Bombay was conquered by invading Muslim forces and became part of the kingdom of Gujarāt.

In 1507 a Portuguese attempt to conquer Māhim failed. Twenty-seven years later, Sultan Bahādur Shāh, the ruler of Gujarāt, ceded the islands to the Portuguese who divided them into manors and fiefs and gave them to individuals or religious orders in return for military service or rent.

The British and Dutch partially sacked the islands and burned portions of the city in 1626, though they failed to establish control. In 1661 the island was ceded to Britain under the terms of the marriage treaty between the English king Charles II and Catherine of Braganza, sister of the King of Portugal; it was not until 1664 that formal possession was taken in the name of the British crown. In 1668 the crown ceded Bombay to the British East India Company, and the company headquarters were shifted to the island four years later. The company settled problems of land revenue, established law courts, strengthened defenses, and secured the freedom of trade and worship to all. The population increased to 50,000, and the modern city was founded.

The city grew steadily during the 18th century, and services and communications to mainland India and Europe were extended. In 1857 the first spinning-and-weaving mill was established, and by 1860 Bombay had become the great cotton market of western and central India. The United States Civil War from 1861 to 1865 and its resultant cutoff of cotton supplies to Britain caused a great trade boom in which financial empires sprouted. When the commercial delirium was at its height, the Civil War ended; the price of cotton fell, and the bubble burst. The city's commercial stability suffered no lasting damage, however, and much construction was carried out in the late 1800s.

Authenticated News



Downtown Bombay, with the Municipal Corporation of Greater Bombay at left.

The
British
period