Disciplinary Conquest
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Disciplinary Conquest: U.S. Scholars in South America, 1900–1945.

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The great epic of America is the conquest of the land. From the outset geography has participated in this conquest, leading the way at some junctures, profiting greatly from following leadership at others. Geographical science thus has had at its disposal a laboratory of continental dimensions. Out of it have come our techniques, our methods of analysis and synthesis, and our great contributions to geographic science and philosophy. There never was a time, however, when that laboratory invited our scientific attention more than it does today. Contemporary society, in trying to plan for the future, is taking stock of its human and its natural resources. In this stock-taking and in certain aspects of the planning, geography has a part. —Isaiah Bowman, quoted in Charles C. Colby, “Changing Currents of Geographic Thought in America” (emphasis added)

In his 1935 presidential address to the Society of American Geographers, Charles C. Colby acknowledged the mutual interaction between building the field of geography and the expansion of the U.S. nation. He presented the U.S. West and, by extension, the American continent as a great laboratory for geographic research. A practical science, geography had participated in the “conquest of the land,” contributing a continental inventory of resources for economic growth. In the mid-nineteenth century, through surveys and reconnaissance work, geographers had assisted the construction of the trans-
continental railroad, mediated disputes around the U.S.-Mexico border, and facilitated the settlement of the Mississippi basin. Between 1900 and 1930, U.S. geographic inquiry extended to the whole hemisphere. U.S. geographers pioneered expeditions to the polar regions, explored the Amazon basin and the central Andes, and took inventory of the morphology, flora, fauna, and climate of South America.

In his address Colby paid tribute to pioneer geographer Isaiah Bowman, pointing to his interest in “the conquest of the land” as a critical topic of collaborative research (Colby 1936). The tribute was appropriate. Bowman was, without doubt, the pioneer U.S. geographer in South America. He contributed three books and numerous articles to the understanding of the region’s geographic problems. Generations of geographers took as a model for regional geography his reconnaissance work in the Central Andes (1907–1913). Later on, his professional career exploded, as he became director of the American Geographic Society (AGS), president of Johns Hopkins University, science advisor for President Franklin D. Roosevelt, president of the National Research Council, and international expert in frontier settlements and land planning. By 1935, Bowman had become a geographer of international renown who transformed “American geography” into an almost indispensable resource for U.S. foreign policy. Initially a promoter of “regional geography,” with a strong emphasis on geology and morphology, he turned in the 1920s toward “political geography” as the appropriate platform for disciplinary interventions in the field of international affairs.

Bowman’s participation in the 1919 peace negotiations at Versailles and in the remapping of postwar Europe made him the most influential U.S. geographer of his period. The historian Neil Smith (2003) has underscored the centrality of Bowman’s ideas and undertakings to the shaping of U.S. hegemony in the modern world. My aim here is more modest. I concentrate on Bowman’s travels and investigations on South America in order to recuperate his chief discoveries about the region: namely, regional fragmentation, failure of nationhood, racial and social oppression, and arrested development. I try to understand how geography was able to apprehend and better represent the regional diversity of South America. As director of the AGS, Bowman carried out the single most important cartographic effort of the whole subcontinent: the Millionth Map of Hispanic America (1922–1945). This contribution enhanced the U.S. visibility of Spanish America.

As Smith has convincingly argued, Bowman’s participation in the inquiry and the peace negotiations in Paris (1918–1919) transformed his view from a deterministic environmentalism to political geography. Bowman’s book The
New World (1921) claimed that the era of territorial empires was ending—the world had been completely “parceled out” and hence could not support political territorial expansionism—and envisioned a world dominated by economic and technological supremacy. Earlier than Henry Luce, Bowman anticipated the American Century as one dominated by U.S. industrial production reaching all corners of the global economy. In the “new world” Bowman envisioned for the postwar era, geography had to engage with the problems raised by international politics. Bowman thought that the United States had to assume greater responsibility in the managing of world affairs and that geography could be of great help in this endeavor (Martin 1986).

In this chapter I critically read Bowman’s works to test this notion of “geographic conquest,” that is, the proposition that geographic science helped incorporate South America into the sphere of scientific visibility and knowledge of the emerging U.S. empire. By framing a multiplicity of observations in homogeneous spatial constructs called regions, geographers were able to provide simplified vistas of the subcontinent and to point out the obstacles facing further economic colonization in each region. Geography’s regionalization made possible a more nuanced absorption of the subcontinent into the U.S. imperial imagination. By “regionalizing,” the geographer sought to delimit the problems posed by each particular region and to evaluate the possibilities for the development of natural resources. Bowman’s pioneer work presented South America as a mosaic of natural-economic regions, some of them quite impervious to the penetration of U.S. modernity and capital.

Geographic simplifications can be instrumental in rendering a region more understandable to outsiders. By marking blanks spots on a map (deserts, unconnected areas, dispersed settlements), geographers can pinpoint the weakness of a peripheral nation-state, question its actual sovereignty over natural resources, and imagine alternative policies geared toward frontier settlement. In this way, geographers contribute to the incorporation of peripheral frontiers into the scheme of capital accumulation and market integration designed by the core economy. As Bowman’s works show, more integral and environmentally rooted geographic vistas could correct preexisting views of the subcontinent as a collection of nations. His regional perspective on human settlements cast doubt not only on the existence of well-integrated nations in Andean South America, but also on U.S. Americans’ belief that the region’s elites cherished U.S. ideals of democratic governance, social equality, and common welfare. In Bowman’s view, environmental constraints and population patterns produced political effects.
Geography provided U.S. Americans a harvest of knowledge about a region until recently relatively unknown: South America. The crafting of maps at detailed scale, the reports of explorations, and the comparative study of agrarian settlements, high plateaus, and river basins composed an informed assessment of the regions’ resources and its possibilities for development. Regionalization helped U.S. scholars, diplomats, and businessmen understand the great diversity of South American landscapes and populations in ways that were instrumental to the formulation of U.S. policies. Geographic simplifications underscored the challenges of natural accidents—big rivers, high mountains, large deserts—posed for economic and political hemispheric integration. To an extent, the close reading of topographies and population settlements facilitated the political work of empire, granting scientific validity to prior indictments about the region’s incapacity for economic and social change.

True knowledge of a region requires a full understanding of its problems and limitations, its social actors, and the way those actors relate to the natural environment. Bowman’s generalizations and words of caution probably influenced contemporary U.S. discussions about the incorporation of different areas of South America into U.S. mass-consumer modernity. His geographic discourse was particularly pessimistic about neocolonial conquest. He thought the Andes, the Atacama Desert, and the Amazon would resist the transformations envisioned by representatives of U.S. economic and technological power. Bowman was among the first to caution U.S. policy makers against extravagant expectations about economic opportunities in South America. He pointed out the true geographic barriers that confronted further economic progress through foreign investment. By emphasizing the efficiency of self-contained economic subregions, he dismissed the possibility of further economic penetration in the Andes. In the Atacama Desert, in particular, he found a delicate equilibrium between populations and the environment, crafted over centuries, that was unwise to tinker with. A cultural relativist and environmental determinist, Bowman predicted that after the end of commodity-export booms, each region would return to its previous way of life.

Bowman was also one of the first U.S. scholars to observe and denounce contemporary labor and racial oppression in South America. Against the grain of conventional wisdom, he wrote about Indian oppression in the Andes, about rubber-tappers who reduced Amazonian peoples into slavery, and about the racism of Peruvian planters. In the 1930s, as U.S. geography sought to incorporate South America as a reservoir of natural resources and as a potential frontier for the settlement of white men, Bowman became a key voice in support
of geography as a “science of settlement” concerned with new agricultural frontiers in the global landscape. While optimistic about new fringes in Siberia, Manchuria, and western Canada, Bowman remained pessimistic about transforming and incorporating key regions of South America. The Andean highlands, the Atacama Desert, and the Amazon basin would remain in the margins of global markets and modernity for the foreseeable future.

Comprehensive Visibility

In 1915 Bowman published *South America: A Geography Reader*, a textbook intended for geography courses on world regions. The book was a compendium of available geographical knowledge on the subcontinent addressed to public school teachers. Written in direct style and plain language, this manual presented readers with the most salient features of the relationship between humans and the environment in South America. Clearly, the compendium sought comprehensive visibility. The text was illustrated with 179 photographs and twelve maps. As if looking from above, the geography reader promised a synthetic description of the subcontinent, organized by natural regions: Patagonia, the central valley of Chile, the Gran Chaco, the highlands of Bolivia and Peru, Amazonia, and so on.

Organized in the form of a travel narrative, *South America* did not follow the usual travel routes. The description started in the “southernmost part” of the continent—the Strait of Magellan and the port of Punta Arenas—and moved north, first to Patagonia, then to the Argentine Pampas and to the central valley of Chile. From there, the reader was taken to the deserts of northern Chile and southern Peru, to the highlands of Peru and Bolivia, then east to the plains of the Gran Chaco, and from there to Uruguay and Brazil. Next came discussions of Amazonia, Ecuador, Colombia, the Venezuelan llanos, and the Guyanas. Bowman dealt with the whole continent, leaving no region unexamined. His south-to-north arrangement of regions produced a leveling effect: in principle all regions were equally interesting. Yet the book informed readers which regions were more accessible or presented greater economic potential. Regional divisions themselves were governed by natural accidents related in turn to geological formations. Within the descriptions of these natural regions, the geographer inserted important questions about human settlements and economic activities. The South American territory appeared as fragmented by great mountain ranges, salt lakes, deserts, and great rivers.

The book inventoried existing productive activities and potential areas of colonization. In Brazil, the largest country in South America, a multiplicity of
climates and production provided the bases for a diverse political union. In the northeast Bowman encountered extremely dry lands with little productive potential, where droughts caused people to migrate to other states. In southern Brazil, near São Paulo and Santos, there were excellent lands for coffee cultivation located near the sea. In Minas Gerais rich mines produced gold, silver, copper, and iron. In the Mato Grosso there were vast unexploited timber resources and grasslands for cattle-raising. This was not the case with the Amazon basin, where economic exploitation of forests seemed unviable. Conditionally, Brazil might even develop into an industrial power:

If large quantities of coal are ever found in Brazil, or if electric smelting becomes effective, there is no reason why Brazil should not have a great iron and steel manufacturing industry and make its own steel rails, locomotives, bridges, steel buildings, sewing machines, and ships as well as those of the Argentine and other parts of South America. (Bowman 1915, 226)

This was a compliment that no other country of the region received. Each nation had already established a comparative advantage in one or several export staples, also producing various commodities for internal markets. Paraguay had vast yerbales, abundant orange groves, good tobacco, and plenty of cattle. Uruguay exported meat, ox hides, and wool. In the Bolivian Chaco there was an active trade in rubber, sent to the Atlantic through the Mamoré River. In northern Patagonia European settlers owned large sheep herds that produced wool for global markets. Argentina was already on the road to becoming one of the primary granaries of the world, together with Russia, the United States, and India. Central Chile produced an assortment of foodstuffs (wheat, meat, and wine) to supply the mining districts of the north. Two U.S. mining conglomerates exploited the country’s large deposits of copper. In the northern desert there was nitrate and borax.

Despite the success of export economies, the possibilities of further colonization and settlement in South America appeared limited. While identifying a few territories that farmers and settlers could incorporate into production through investments in transportation and irrigation (among them, the grasslands of Paraguay and Bolivia near the upper Pilcomayo River), Bowman noted that most of the economically viable land was already under exploitation. South America was not that land of unlimited opportunities that promoters of Pan-Americanism had imagined (Salvatore 2005c). The theme of “settlement” dominated Bowman’s geographic compendium. Different types of settlers had populated the subcontinent, including both
indigenous peoples and Europeans. Bowman asserted that native farmers and herdsmen were the “true conquerors of South America.” By this he meant that pre-Columbian indigenous farmers and shepherds—not the Spanish conquerors—had effected the real colonization of the subcontinent. Nonetheless, the presence of European settlers created favorable expectations of further colonization and production for export. The destructive effect of white settlements on indigenous cultures was barely mentioned. In southern Chile, English and Scottish shepherds were imprinting the environment with the character typical of pioneer ranchers in Wyoming and Texas. Bowman found a similar situation in southern Argentina. In Chubut Province, Scottish, Welsh, and German settlers had carried their trade skills and energy into an inhospitable environment (Bowman 1915, 28). Though the land was barren, foreign settlers had established a successful set of colonies. Again and again, the U.S. geographer compared the successful U.S. westward movement with the movements of European immigrants in South America. But the comparison held only for a limited number of cases: the Central Valley of Chile, the Argentine Pampas, and the southern lowlands of Brazil. In the rest of the subcontinent indigenous and mestizo settlers had incorporated “fringe areas” into production following different patterns of settlement than Europeans.

In the Bolivian highlands the lives of indigenous peoples were shaped by the extreme scarcity of resources. In an environment almost devoid of trees, it was difficult to find firewood or lumber. Indigenous peoples used cactus wood for their door frames, and burned tola brushes and llama dung for cooking. Unable to afford imported coal or kerosene, peasants spent the winter without heating. Bowman praised indigenous highlanders for their efficient farming and irrigation techniques. In conditions of scarcity, they had transformed barren lands into orchard gardens and green fields. Ingenuity and poverty constituted the two sides of the native economy. Due to the harsh climate, altitude, and vegetation, people lived with the bare minimum. For building, fuel, and irrigation, they made the most of what nature offered them.

To Bowman, there was probably no farmer more efficient and economical than the Bolivian highlander. The U.S. geographer pioneered the “efficient but poor” argument later associated with the work of anthropologist Sol Tax and economist Theodore Schultz. Here was a limit to the expansion of U.S. commercial hegemony. Limited in their income and wants, indigenous Bolivians could not possibly adopt U.S. modernity. Hydroelectric power—and even electricity—was out of their reach. Highland markets, abundant in homemade blankets, shawls and ponchos, fruits and potatoes, lacked imported goods: to Bolivian peasants these commodities were unaffordable.
Yet the geography reader did more than identify regions with unexploited natural resources and locate the process of settlement in its historical and spatial context; it supplied readers with an explanation of political underdevelopment in the Andean nations. Some countries were so regionally fragmented as to resist all projects of national unity. Peru was not a nation but a composite of different regions, each one with its own dominant production and way of life. In refusing to look at the continent as a loose union of nations, Bowman presented an alternative to official U.S. Pan-Americanism. South America was still a mosaic of economic and human settlements that did not coincide with national borders. So U.S. policy makers could engage directly with the representatives of regions, rather than interact with national governments. Also, the incompleteness of nationhood in many South American countries presented U.S. policy makers with the challenge to intervene and support the development of Andean nations.

In chapter 8 of the reader Bowman discusses Inca civilization, drawing useful insights for modern empires. His praise for the Incas as paternalistic civilizers reminds us of the Inca Garcilaso’s *Comentarios Reales*. The Inca rulers taught their people to build canals and to choose the appropriate crops for each altitude. They stimulated interregional trade and wisely collected taxes in kind, providing food security to the governed (Bowman 1915, 164–65). Bowman imagined the Twantinsuyo as a network of communities working for the common good. The Incas’ greatest wisdom was their capacity to adapt their way of life to the environment. Their civilization developed in the intermediate highlands, where they encountered spacious fields, wide pastures, and dense populations (ibid., 163). The Incas established a sort of transactional empire, similar to the hegemony Bowman imagined for the United States in South America, a benevolent empire committed to the provision of public goods. Indigenous peoples obeyed Inca rulers because they received from them good roads, wise laws, irrigation canals, food security, low taxes, and relative peace (ibid., 174).

**Fragmented Territory, Limited Revolutions**

Bowman’s book *The Andes of Southern Peru* (1916) explored some key connections between physical geography and politics. Fragmented national territories led to dispersed, isolated settlements, and these in turn affirmed sentiments of localism that ran against nation-building. In this context, local “revolutions,” though frequent, had limited impact on national politics. They themselves, argued Bowman, were the product of the environment.
To Bowman, Peru was a nation divided into four regions—the forests, the highlands, the eastern valleys, and the coastal desert—each one inhabited by a distinctive population. The book started with a fiction in which four informants summarized each region’s problems: a former missionary with experience in a rubber establishment; a mestizo muleteer from Cotahuasi who described “plateau Indians”; the owner of a sugar plantation in the eastern valleys; and a great cotton planter in the coastal desert. The presumption that Peru was not a unified nation but a mosaic of quite different regions, each presenting peculiar problems, was the organizing principle of the book.

In the lowland forests Bowman encountered something unexpected: stories about the enslavement of forest Indians by rubber tappers. In the highlands the U.S. geographer found shepherds and farmers who lived in ways little different from colonial times (Bowman 1916a). The highlands exhibited wide climatic and soil variation and high population density. Bowman pondered the adaptation of “plateau Indians” to the natural environment: they took advantage of green pastures at high elevations, used ancient irrigation canals, and planted different crops according to altitude. The dry eastern valleys presented the geographer with the problem of scattered settlements: the population was so dispersed that it was difficult to imagine the region’s integration to coastal markets. People lived “walled in” their own geography. Indians inhabited the piedmont or the mountains, while mestizo and white sugar planters lived in the valleys. The system of “peonage” was the basic social relationship connecting the two groups. With promises of money and food, planters recruited “plateau Indians” as laborers, then kept them tied to plantations by bonds of debt and alcohol dependence.

In the coastal deserts a few permanent settlements and nomadic shepherds defied harsh weather conditions. Though energetic and hospitable, these desert peoples had exploited water and land resources to their limits, and could not extend the area of cultivation further. Coastal deserts presented enough humidity to allow nomadic shepherds to survive. In this relatively unknown region, every piece of information on climate, soil, and human settlements was valuable. So Bowman described in detail this peculiar environment, with its garden oases and its nomadic shepherds. Here, in the least inhabited of territories, Bowman encountered the most beautiful landscapes and the most romantic changes of light and color. To the south, in the nitrate districts, foreign firms fought a quotidian battle against nature.

Isolation and territorial fragmentation presented obstacles to national and social integration. Because the country was “broken” by mountain spurs, the population lived in settlements scattered in valleys distant from each other.
In addition, great climatic differences kept forest Indians separated from plateau Indians. They differed in clothing, eating habits, dwellings, and economic activities (ibid., 45). Altitude added another dimension to racial territorial fragmentation: on the elevated plateaus, he said, lived communities of “pure Indians,” whereas in the valleys resided the mixed-race population. Geographic fragmentation created political factionalism, another hindrance to nation-building. The villages of the plateau lived isolated from each other and separated from the people of the coast (ibid., 69). In Peru great geographical features impeded the formation of a national market and a national political community. To this extent, railways connecting the plateau, the middle valleys, and the coast were crucial to the political development of the republic.

Through physiographic work, or the systematic classification and description of physical patterns of the Earth, the U.S. geographer was able to understand Peru’s political underdevelopment. Though apparently a united republic, Peru was only a mosaic of regions, made up of distinct populations, imbued with local traditions and sentiments. The country had failed to replicate the experience of the United States, a successful political federation united by modern transportation. Bowman’s view of fragmented settlements laid the foundation for what would become a theme of development literature in the 1960s: the lack of national market integration perpetuated underdevelopment. A nation fragmented by geography offered little prospects for economic development and, to this extent, resisted neocolonial engagement. Even a strong investment in railways would not suffice to defeat geographic fragmentation and scattered settlements. Populations that lived isolated from each other tended to generate enduring “regional social types” that conspired against the formation of national belonging.

Like many of his contemporaries, Bowman was intrigued with recurrent “revolutions” in South America. A small incident in a provincial town, the 1911 revolt of Abancay, confronted the geographer with a typical “South American revolution” (Bowman 1916a, 89). A group of elite young men had taken control of the city of Andahuayllas, capturing the police quarters. The rebels complained about excessive taxes, government abuse, and limited economic opportunities. The next day, the subprefect recruited a force made up of Indians and mestizos, stormed the police station, and arrested the rebels. Men of Abancay’s best families were killed. This “revolution,” Bowman concluded, was the work of idle and bored young men looking for adventure (ibid., 91).

Bowman searched in geography for the reasons for this failed “revolution.” The deep canyons near the town afforded refuge to rebels and bandits. Once fugitives reached the eastern slope of the canyon, they had the whole Cordillera of
Vilcapampa to hide. The police would not bother to pursue them. Geographic isolation, Bowman concluded, created incentives for local “revolutions” (ibid., 92–93). From this particular observation, he generalized. Revolutions in the Andes were small, local events, usually involving just a few armed men. These local revolts were facilitated by geography: mountains and forests offered rebels easy refuge from the police.

**Why Humboldt Was Wrong:**

*Limits to Colonization in the Amazon*

Bowman kept mapping the possibilities of further economic colonization in the southern Andes in his writing. *The Andes of Southern Peru* (1916) warned U.S. readers against holding too optimistic expectations for development in the region. Geographic determinants—soil, climate, water availability, elevation, plant life, and human settlements—imposed severe limits on the expansion of the agricultural frontier. In addition, social and racial stratification prevented the introduction of modern transportation and farming methods. These views were complemented with an “efficient-but-poor” argument. Native inhabitants used the available resources efficiently, but they remained poor because the enormous dispersal of population limited the development of national markets.

Bowman used the term *conditional conquest* to name the limited changes that outside forces of progress could bring to these areas. In part, it was the natural environment that limited human life, transportation, and communications by fragmenting territories and dispersing settlements. It was difficult to foresee how modern transportation technologies and export booms could radically transform Andean peoples’ way of life.

For, even if railroads are run across the mountains, the desert reclaimed by scientific methods of irrigation, and rubber in enormous quantities gathered on all the highways and byways of a once impenetrable forest, all these are done by such methods and at such expense of human energy and capital, even of life, as to make them examples not of sheer human conquest, but of a conditional conquest. (Bowman 1916a, 144; emphasis added)

*Conditional conquest* was thus a form of progress imposed from the outside that could only proceed at a very high price in human energy and capital investment. Its continuity depended on the extraordinary profits derived from copper, nitrates, or rubber, activities in which local inhabitants were only tangentially involved. Anticipating a proposition central to dependency theory,
Bowman saw mining in the desert as an unsustainable activity that would not disseminate welfare among the local population. In spite of the “stir” produced by the mining boom, the farming and pastoral communities of Atacama would continue to live in their ancestral ways (ibid., 208).

In the early 1800s Alexander von Humboldt had predicted that hundreds of cities could emerge in the Amazon during the following century, but by 1913 no cities had materialized.

It was the dream of Humboldt that great cities should arise in the midst of the tropical forests of the Amazon and that the whole lowland plain of that river basin should become the home of happy millions. Humboldt’s vision may have been correct, though a hundred years have brought us but little nearer its realization. Now, as in the past four centuries, man finds his hands too feeble to control the great elemental forces which have shaped history. The most he can hope for in the next hundred years at least is the ability to dodge Nature a little more successfully. (ibid., 33)

Even with the help of tropical medicine and railroads, white men seemed incapable of conquering the tropics, much less of transforming the Amazon into a network of cities and burgeoning markets. Bowman's discussion of the utopian nature of Humboldt’s prediction constitutes a salient assertion of “conditional conquest,” if not of the failure of conquest. The apparent failure of the Madeira-Mamoré Railroad, which at first created great expectations for progress, presented Bowman with a pessimistic conclusion: U.S. Americans could not replicate in the Amazonian jungles the engineering marvels and managerial organization they had displayed in Panama (Bowman 1913b).

Labor scarcity constituted a most severe restriction. Even if white colonization would multiply by twenty, argued Bowman, it would be still impossible to transform the Amazon into a productive region connected to world markets. Like Francisco López de Gómara in the sixteenth century, the U.S. geographer could not foresee civilization taking root in this inhospitable environment.

Where Humboldt saw thriving cities, the population is still less than one to the square mile in an area as large as fifteen of our Mississippi Valley states. We hear much about a rich soil and little about intolerable insects; the climate favors a good growth of vegetation, but a man can starve in a tropical forest as easily as in a desert; certain tributaries of the Negro are bordered by rich rubber forests, yet not a single Indian hut may be found along their banks. (Bowman 1916a, 34)
When examined closely, the Amazon region presented great challenges to colonists. Apparently abundant resources (soil, rain, and forest) proved deceptive. Even local inhabitants could not settle permanently in a given area.

The coastal desert presented a situation similar to that of the Amazon basin: a natural environment too challenging for U.S. technology and knowledge. From the Chilean border to northwest Peru, the desert extended for hundreds of miles, broken up by deep transverse valleys and canyons of changing altitude and diverse vegetation. In these “dry valleys” irregular rainfall dominated the life of inhabitants. According to altitude, people cultivated alfalfa, barley, potatoes, or fruit trees, even vineyards (ibid., 114–16). Planters with enough capital could clear the land, open new canals, and cultivate cotton or sugar. But these were exceptions. Extending irrigation required large investments and transportation along desert trails was exceedingly expensive (ibid., 117). In the coastal valleys of eastern Peru, enclosed by canyons and deserts, population settlements had rather limited possibilities for travel and commercial exchange. Each valley produced the few crops allowed by its water resources, altitude, and basin size; but transporting their surplus produce to other regions was extremely costly.20

In the highlands of Peru and Bolivia, where most of the Indian population concentrated, the land was efficiently utilized. Highland Indians made a remarkable use of the different ecological levels.21 They cultivated potatoes above the frost line (about ten thousand feet); below that limit, they planted barley and corn. If irrigation permitted, they cultivated sugarcane in the lower alluvial basins. Residing in middle altitudes, “plateau Indians” took their flocks of sheep and llamas to heights above twelve thousand to fourteen thousand feet (Bowman 1916a, 61–62). The vertical integration of production showed a successful adaptation of Andean peasants to their environment.22 The wisdom of highland cultivators and shepherds was hard to match. Indigenous terrace cultivation and irrigation channels carved on stone were traces of an agricultural knowledge transmitted over generations (ibid., 59). Altitude had established an enduring racial stratification, one of Bowman’s central concerns. White or mestizo planters lived in the valley while Indians occupied the plateaus or the mountain slopes (ibid., 55–56). Harsh climate and high altitude protected these indigenous peasants from contact with white planters, as Peruvian hacendados rarely ventured into high altitudes. Bowman projected onto the highland peasants visions of contentment, good health, and autonomy.23

Eastern Peru had numerous valleys with specialized production, yet they were too distant and isolated from each other to promote an active interregional trade. Eastern valley planters, unable to take their sugarcane to the coast...
due to prohibitive transportation costs, produced brandy (*aguardiente*) and shipped it on mule trains. Hacendados used *aguardiente* to “hook” Indian peons into dependence. Planters’ recruiters (*enganchoadores*) went to the highlands to get peons, and then, back on the plantation, retained them by means of alcohol and debt. Under conditions of labor shortage and scattered settlements, railroads seemed incapable of reproducing in Peru the nineteenth-century “transportation revolution” of the United States. The creation of free-labor markets required more than economic connectivity; it necessitated a reshaping of social relations, and this demanded a new “practical morality” from Peruvian planters. The state needed to outlaw debt peonage and combat peons’ alcohol dependency by taxing the brandy trade out of existence (ibid., 76–77).

Here Bowman’s “conditional conquest” found a social-racial boundary, one located beyond the geography of fragmented territories. Peruvian climatic and soil conditions limited production possibilities, yet local inhabitants made the best possible use of the natural resources at their disposal. To this extent, foreign capital was superfluous. People moved goods in mule trains or llama packs, catering to nearby towns or highland villages. These were small markets, limited by high transport costs, scarce rainfall, and the scattered nature of settlements. As in the Amazon, Bowman could not imagine a network of cities, animated by trade and new population settlements, rising in the arid lands of Peru.

*Subalterns in Highlands and Forests*

Bowman’s interactions with indigenous subalterns are key to understanding his ideas about the relationships between humans and the environment in the Andes. In his writings the presence of indigenous peoples appears related to problems of labor scarcity, exploitation, and racial oppression. Bowman’s Indian excursus reveals his ambivalence about indigenous subalterns’ relations to economic progress, national fragmentation, and environmental management. That is, despite his denunciation of debt peonage and slavery, Bowman’s own interactions with highland peoples were clearly coercive, and his scholarship did not treat them as fully civilized humans.

In *The Andes of Southern Peru* we can find at least five episodes in which the U.S. geographer dealt with “plateau Indians” on a personal basis. In the first episode Bowman was near Antabamba, preparing a trip to the mountains. Through a mestizo *teniente-governor*, he hired four “plateau Indians” as guides. But, as he feared the Indian peons would try to escape and steal his mules, he considered the possibility of chaining them to poles. The peons, probably
aware of this possibility, ran away that night (Bowman 1916a, 97). In a subsequent episode Bowman confronted a difficult situation. On a cold winter night, he was left without porters to carry his equipment and supplies. So he stopped two Indian travelers (father and son) and, at gunpoint, forced them to work for him. When he least expected it, father and son ran away (ibid., 99).

In the third episode the U.S. geographer got more violent. Desperate and alone, unable to persuade anyone to carry his stuff, Bowman whipped an Indian porter into submission. Midway, he repeated the whipping to keep his porter going. When they reached the camp, Bowman rewarded the Indian with double pay. The native porter, who had not expected to get paid, then thanked and embraced Bowman (ibid., 100). In a fourth episode, while descending the cordillera toward Cotahuasi, the geographer decided to leave his equipment in the care of two Indians in a peasant’s hut. At first they refused to help Bowman, taking him for a railroad engineer. The local peasants did not want railways to cross their lands, because railways tended to make people emigrate, depopulating the land (ibid., 101–2). In the fifth and final episode two Indian girls were riding a donkey and carrying potatoes; as soon as they saw the U.S. geographer, they abandoned the donkey, dropped the potatoes, and ran away. Bowman concluded: the girls were terrified of the white man (ibid., 102).

All of these episodes speak of Indians’ fear of white men and of their reluctance to work for them. Paradoxically, Bowman’s violent interactions with “plateau Indians” led him to write a strong textual indictment against racial oppression. He denounced the discriminatory and repressive actions of Peruvian elites as systemic: “The policy of the whites has been to suppress and exploit the natives, to abuse them, and to break their spirit” (ibid., 102). Indian fear of white men was its overt effect. Apparently unaware of his own role as an exploitative white foreigner, he proudly affirmed the “American” principle that every laborer, if paid accordingly, would work willingly and diligently.

His relationship with “forest Indians” was less ambivalent. The transnational rubber business had brought to the surface an old evil: Indian slavery. Bowman first heard about it in an encounter with Machiganga Indians in 1912. At first glance, his report on the exploration of the Urubamba basin appears to be a typical exploration tale (Bowman 1912). With the help of indigenous guides and a few canoes, Bowman was able to overcome the dangerous rapids of the Urubamba River and reach the lower tropical forest. Yet, at midpoint, the exploration narrative is disrupted by a story of fear, brutality, and enslavement.
When Bowman tried to persuade the Machigangas to contribute carriers and rowers to his expedition, they refused. They seemed paralyzed by the fear of encountering white “rubber hunters.”

Only after repeated assurances of our friendship could we learn the real reason of their refusal. Some of them were escaped rubber pickers that had been captured by white raiders several years before, and a return to the rubber country meant enslavement, heavy floggings, and separation from their numerous wives. Their recollection of their hardships, their final escape, the cruelty of the rubber men, and the difficult passage of the rapids below were a set of circumstances that nothing in our list of gifts could overcome. (ibid., 889)

When Machigangas revealed to him the hidden history of enslavement in the rubber country, Bowman understood better the problem of labor shortage. It was clear to him that “rubber hunters” had continued the predatory activities of Spanish conquerors. Gathering raw materials to produce mass commodities in the United States (automobile tires) entailed increased exploitation of, disease among, and enslavement of indigenous forest peoples. Implicit in the Machigangas’ tale was an indictment of the workings of neocolonial exploitation. Bowman tried to distance himself from the brutal coloniality implicit in the transnational rubber business, then subject to increased public criticism. (The first Yale Peruvian Expedition, in 1911–1912, coincided with the exposure of rubber men’s atrocities in Putumayo, made by Irish humanist Roger Casement.)

At the time of Bowman’s second visit, some Machigangas had gotten caught by the trap of plantation labor. They had accepted work for short periods of time in exchange for brandy, machetes, and ammunition. Rubber companies, realizing that enslavement provided no permanent solution to the labor problem, had started to recruit Indians with such material incentives. This contact with white people, Bowman thought, had broken the spirit of these Machigangas, turning them into a submissive, exploited group. Rubber tappers had used alcohol to produce this degradation (Bowman 1916a, 31–32). Other Machigangas had become fugitives. To escape entrapment and slavery, they had turned into a nomadic people, difficult to trace and hostile to white men. Now they lived in small scattered settlements on the banks of rivers, under the cover of palm-leaf huts that were easy to dismantle. To avoid discovery, they cultivated cassava fields during the night. They had developed the “consciousness of a fugitive,” and some had turned hostile.
To place racial exploitation in context, Bowman underscored the transnational nature of the rubber business. The sad condition of Machigangas revealed the intricate connection between consumers in the United States and producers in the Amazon forests. The Indians gathered the raw material for rubber in the forest, then formed it into balls and rolled them down to the river to be loaded onto ships bound for U.S. ports. If one of those rubber balls could talk, Bowman speculated, all the brutality of the rubber business would come into the open.

For this is one of the cases where a direct road connects the civilized consumer and the barbarous producer. What a story it could tell if a ball of smoke-cured rubber on a New York dock were endowed with speech—of the wet jungle path, of enslaved peons, of vile abuses by immoral agents, of all the toil and sickness that make the tropical lowland a reproach! (ibid., 24; emphasis added)

Bowman compared the condition of indigenous peoples in the Amazon forests to that of black slaves in the U.S. South and in Brazil. In his view Amazonian “peonage” was a system of exploitation as egregious as slavery: “In South America there has lingered from the old slave-holding days down to the present, a labor system more insidious than slavery, yet no less revolting in its details, and infinitely more difficult to stamp out. It is called peonage; it should be called slavery” (ibid., 25). Indian peons remained captive to their masters, who flogged them at the slightest sign of resistance. Foreign businessmen and local state authorities shared responsibility in perpetuating this cruel condition. The rubber tappers flogged the forest Indian into submission chiefly because local authorities permitted them to do so. The lawless nature of the Peruvian borderlands perpetuated the rule of the rubber barons.28

Bowman’s interactions with forest subalterns had rendered visible a terrible truth: the Peruvian Amazon was an enclave of white barbarism and terror. This is perhaps the moment of greatest moral condemnation in the whole book. Touched by the stories of Machigangas, the U.S. geographer launched a severe indictment against the rubber business as colonialist oppression. But he then returned to the middle ground of objectivity and disciplinary authority. Having understood the geographic basis of the problem, he considered the capitalists’ point of view. The activities of rubber entrepreneurs reflected the perennial problem of labor scarcity. Forest peoples, unwilling to work for white and mestizo entrepreneurs, stood as a hindrance to progress.29

Contacts with indigenous peoples clarified Bowman’s understanding of the economic and human geography of Peru. Machiganga Indians confirmed what
had already been denounced in international forums: the revival of Indian enslavement in the Amazon forests. Bowman’s violent interactions with plateau Kechua peoples made explicit the relation between labor scarcity and peonage. Indian labor could be recruited only by entrapment into debt and alcohol dependency. Indians’ fear of white men signaled the persistence of unresolved racial and social conflicts in modern Peru. Bowman’s challenge was to interpret these tensions within the field of geography: that is, as a problem of inadequate transportation, fragmented settlements, and insurmountable physical hurdles.

A Desert Full of Life

How could U.S. capital and consumer culture incorporate the vast desertic areas of South America? Only an in-depth knowledge of life in the desert could answer this crucial question. Deserts, Bowman argued, contained valuable natural resources, whose exploitation depended on local labor and supplies. If observed closely, deserts presented themselves as places full of life, indicating the presence of human communities that were much older than foreign companies (salitreras and copper mines).

Bowman’s third book on South America, Desert Trails of Atacama (1924), communicated this new understanding about settlements in the desert. Atacama was a “true desert,” a place with scarce rainfall, almost no vegetation, and very low population density. The traveler could ride for miles seeing nothing but “naked rocks and sand.” At the same time, Atacama was full of activity and life. Here, in the most arid place in South America, were human settlements and trade. Surviving in this harsh environment demanded much ingenuity and effort. Desert peoples had to “mine” their wood. Over time the sand had buried older algarrobo forests, so woodcutters had to dig into the sand for wood. Desert people used scarce water with utmost economy. Long water galleries cut in sandstone carried precious water to cave-like ponds and from there to orchards, vegetable patches, and homes. This ingenious water-recovery system matched the most sophisticated methods of Persia, India, Pakistan, and California (Bowman 1924, 20).

Villages were interconnected by a complex system of trade that extended into northern Argentina and Chile. If one stood long enough at one of these villages, one could watch the passage of the “llama caravans” that descended from the Bolivian highlands carrying needed supplies. Indian traders carried wool, firewood, blankets, and cloth and exchanged these items for local bread, candles, and barley. The northern Chilean desert was the territory of

Geographic Conquest
nitrate fields. Bowman visited an English salitrera near Lagunas. Instead of concentrating on the foreign enclave, he described the surrounding environment and its population. Small and sparse settlements were characteristic of the “nitrate country.” Bowman passed by an abandoned copper mine at Victoria, where he found few inhabitants living meagerly; after the copper mines were exhausted, people had migrated to the nitrate districts for work (ibid., 38).

The other central feature of the northern Chilean desert was the irregularity of rainfall. Sudden precipitation and snowfall in the cordillera could produce floods in the valleys that destroyed crops, houses, and roads. Although infrequent and rare, floods could interrupt the railway service to the salitreras and paralyze export production.

Traveling along the desert trails from southern Peru to northern Chile, Bowman found great changes in vegetation. A landscape of bare rocks gave way to pajonales made up of bunch grass and shrubs, where sheep and llamas could graze. Looking at this changing landscape, he spotted the migratory shepherds of the desert (ibid., 45). People moved from place to place according to variations in rainfall. In wet years, green pastures abounded and the number of sheep and llamas multiplied. In the dry years, shepherds were forced to sell their stock (ibid., 58). Irregular rains caused shepherds to seek pasture on higher terrains or in the valleys below.

The term desert, Bowman explained, was confusing, for desert areas generally contained vegetation whose life was nurtured by underground water from drainage. In the United States people used to call the Great Plains a desert, but in time it proved to have a dependable water supply, a large acreage of irrigated land, and even forests. Most of the Atacama Desert was a “true desert,” a zone of meager vegetation, scarce rainfall, and great daily variation in temperature. Between four thousand to eight thousand feet were some shrubs, but aside from that, there was little to sustain permanent human settlement (ibid., 61–62).

The nitrate district in northern Chile was also a desert in the strict sense. Nitrate deposits depend on the lack of rainfall. When, on rare occasions, streams of water reached these Chilean deposits, the alluvial material buried the nitrates. Capitalists foreign to the region had built towns, railroads, and nitrate establishments. These enclaves were surrounded by migratory shepherds who moved their cattle from place to place, responding to the vagaries of the weather. The desert itself was crisscrossed by trails that connected isolated villages. Each of these villages was a “self-contained community” formed prior to the nitrate boom, their existence inscribed in a long temporality (ibid., 65). Since the time of the Incas, the desert trails of Atacama had served to connect a larger eco-
The nitrate export economy was also part of the “conditional conquest,” a costly economic penetration not deep enough to transform the way of life of local inhabitants (ibid.). Desert Trails of Atacama addressed the question of neocolonialism from a pessimistic perspective. Interconnected valleys generated a volume of trade that was negligible to U.S. exporters. The miserable condition of indigenous peoples placed them outside the calculations of U.S. export promoters and advertisers (ibid., 68). These communities lived under what Marx defined as “simple commodity exchange.”

Available transportation technology (railroads) could only unite mine with port, leaving most human settlements in the region untouched. South American physiography presented great obstacles to the expansion of the U.S. informal empire. If indigenous peasants could not enter mass consumer markets, it was unlikely that railroads or engineering works could reconfigure life and culture in Atacama. Bowman’s railroad pessimism was in this regard extreme. Railroads could complement the traditional “pack trains” over desert trails, but in no way affect the way of life of “desert people.” Once the nitrate boom was over, these towns would go back to their daily routines and activities, to a way of life unchanged since colonial times. “The remote, isolated, self-dependent, desert village is therefore a permanent feature. The traveler of a century hence will still find certain groups unaffected, in the main, by the industrial development of the mines and the nitrate deposits of the desert of Tarapacá” (ibid., 71). Indeed, export-commodity booms were a transient, weak force in the long-term history of the region. The nitrate boom had multiplied the population of Iquique, mobilizing the surrounding areas to provide laborers, food, building materials, and services.²² Yet the nitrate bonanza did not last. The First World War brought about the closing of many nitrate oficinas, forcing migratory workers to return to their towns.³³ In the early 1920s a new export staple, copper, shifted the center of economic activity toward the southern limits of the Atacama region. Copiapó, the center of the new copper bonanza, represented a new form of progress and civility. It was a city of clean streets, well-repaired buildings, and excellent administration, as well as the site of a famous school of mines. The signs of Euro-American modernity—railroads, telephones, telegraphs, gas works, and even an opera house—were everywhere (ibid., 100–101). In addition, Copiapó had developed complex regulations for the use of water, systematically and communally enforcing them. The communal distribution
of water and the upkeep of canals facilitated the consolidation of “primitive
democratic organisms” (ibid., 111, 118–19, 130).

Towns in the desert were highly dependent on scarce water resources. A
flood or the deviation of a stream could affect livelihoods, more than could
a fall in the price of copper or nitrates. Depending for their survival on the
surrounding hinterland, desert towns were rooted in geography. This environ-
mental dependence gave these communities social and political stability. Vil-
lages seemed immune to occasional “revolutions” and resilient to the shocks of
the export economy. Coastal desert towns were isolated, provincial, and self-
governing, not easy to transform by external forces.34

In Chile, during the first decade of the twentieth century, two U.S. mining
conglomerates, Braden and Chuquicamata, had established the technical and
financial bases for profits. These companies mobilized U.S. large-scale capital
and modern technology to exploit low-grade ore.35 Their corporate enclaves
depended for supplies on native trade connections with the Chilean north, the
Argentine northwest, and the Chilean central valley. But the reverse was not
true. The economic life of a town in the Puna de Atacama did not depend on
mining enclaves.

Geographers had much to contribute to the understanding of the role of
great deserts in the hinterlands of the U.S. informal empire. The Atacama Des-
ert and Puna were critical regions in the long-term history of empires in South
America. Despite centuries of imperial incursions, the region had maintained
its distinctive economy and way of life. Though apparently tied to world mar-
kets and empires, its towns and valleys were actually self-sufficient and inward
oriented. It was this resistance to change that Bowman found most striking
about the Atacama region (ibid., 344). At the end of Desert Trails of Atacama,
Bowman turns the region into a synecdoche for the “whole history of Hispanic
America.” To Bowman, Atacama belonged to “a class of natural regions” in
which the environment had produced a pattern of isolated settlements living
outside the reach of great empires. Through natural impediments and great
distances, physical geography had nurtured political regionalism and frag-
mented republics. Strong environmental factors had prevented the continen-
tal unification of former Spanish colonies—and also the fall of Andean South
America into the grip of modern empires (ibid., 344–45). The Atacama Desert
had delayed the absorption of this large territory within the sphere of eco-
nomic and cultural influence of the United States.

Chapter 7
180
In the 1930s, with growing tensions in Europe and the sharp decline in multilateral trade, the search for raw materials and foodstuffs turned crucial to U.S. statesmen and policy makers. It was at this conjuncture that the distribution of natural resources and their potential use by industrialized nations became important geopolitical issues. U.S. geographers contributed to this debate, signaling South America as a new frontier for the development of natural resources. Mapping agricultural frontiers thus turned into a geopolitical priority.

At this time, Bowman launched the initiative of studying the “fringe areas” of the world. In 1931 he published *The Pioneer Fringe*, a study of areas of recent agricultural colonization: western Canada, Siberia, Mongolia, Manchuria, tropical Australia, South Africa, and South America. The book called attention to a new type of agricultural pioneer. The classic era of mass migration was gone, as was the figure of the western “pioneer settler.” The pioneers were no longer Europeans but “natives” who were on the lookout for cheaper land, lower taxes, and less labor regulation. Now, national immigration quotas, the exhaustion of land in areas of high productivity, and the decline of world markets imposed new restrictions on settlement. Against Frederic J. Turner’s prediction that the frontier had disappeared, Bowman found that U.S. farmers continued to move to new lands. New settlers demanded modern conditions and comforts: schooling, transportation, electricity, technical advice, and bank credit. Because of this, to facilitate the effective occupation of marginal lands, governmental planning was required.

People were moving from cities or overpopulated areas to new lands of low productivity. It was the role of geography to identify these settlement frontiers and study their characteristics. Bowman called for a new “science of settlement,” an interdisciplinary initiative that would establish principles for new world agricultural frontiers. No longer a hemispheric or regional exercise, this was a research effort of global scope. In a report published in 1937 Bowman identified and located on a map the different areas of South America where there was potential for further colonization. In Argentina the humid Pampas seemed already settled and, consequently, had no room for a new wave of immigrants. In the subtropical northern region (Chaco, Misiones, and Santiago del Estero), there was still space for migrants willing to cultivate cotton and yerba mate. But these were fragile lands that would support only a limited number of settlers. In Patagonia further colonization and settlement was not expected. Though two-thirds of the territory remained sparsely settled, the land was already “overpopulated” by sheep. In southern Chile Bowman
found energetic German farmers transforming the land: this was a true “laboratory of development.”

The Brazilian interior could still support new settlers, at a very low standard of living. Most tropical lands remained unattractive to new settlers. Only Mato Grosso, a region with excellent grasslands, offered “greater promises” to new colonists. Yet the transportation problem had proven intractable, and Bowman predicted that the Brazilian interior would remain a “permanent experimental frontier.” In the southern plateau coffee cultivation was already suffering from overproduction. The Amazon basin remained as inhospitable to settlers as it had been in the first decade of the century. A little rubber, Brazil nuts, and palm fibers were insufficient incentives to attract great numbers of new colonists.

In the late 1930s Bowman moved toward political geography. Yet his developmental pessimism remained strong. The success of agriculture in Andean South America still depended crucially on the capacity of creoles to continue to exploit indigenous labor, an alternative that was morally reproachable. In Peru and Bolivia limited immigration experiments—Mennonites in the Gran Chaco, Bavarians in eastern Peru—had ended in failure. The transportation revolution had failed to transform agricultural methods or ways of life in the Andes. And still, survival in the inhospitable highlands depended on the high productivity and ingenuity of local peasants. Further development in the Andes was possible, but only at the expense of additional burdens on the back of natives. “Conquest” was still “conditional.”

**Conclusion**

Bowman’s writings problematized U.S. expectations of the economic conquest of South America. He coined the term *conditional conquest* to highlight the great hurdles imposed by the natural environment to the introduction of modern technology and capital in the region. The southern Peruvian Andes was a region in which man had conquered the physical environment only partially and in an incomplete fashion. In the Atacama Desert, in the eastern lowland forests, and in the small valleys of coastal Peru, foreign economic colonization was unsustainable. Geographical accidents had established a pattern of dispersed settlements that was inimical to U.S. notions of economic progress.

Peru was the quintessential exemplar of a nation in which the forces of progress had failed to transform preexisting patterns of land use. Native peoples used efficiently the natural resources of highlands, lowlands, deserts, and forests. Yet, given the high cost of transportation, isolated settlements generated
infrequent and small-scale economic exchanges. Feeble markets based on petty-commodity production did not constitute enticing markets for U.S. mass-manufactured products. Hence, for the time being, U.S. capital would continue to exploit a few mineral resources, leaving traditional ways of life almost unaffected.

Bowman's geographic determinism extended a pessimistic outlook to Peru's political development. Burdened by an excessive regional fragmentation, and the consequent cultural provincialism, Peru had been unable to build a successful national community. The highlands, the coast, the desert, and the forests constituted four different ecological regions with distinct sensibilities and quite provincial viewpoints. In addition, Peru had proven unable to overcome the racial and social divisions created by the colonial experience.

Bowman's notion of conditional conquest contradicted enlightened visions of progress. Neither the Atacama Desert nor the Amazon was ready for white-settler colonization and U.S. modernity. With regard to the Amazon basin, Bowman argued against Humboldt's predictions. Even with modern transportation technologies and tropical medicine, the region would not become a site of burgeoning cities and growing commerce in the foreseeable future. Mining enclaves, too, were exploiting natural resources near the border of production possibilities. Why enter into diplomatic and economic conflicts with Britain when the resource itself (nitrates) could be washed away by rains?

Implicit in Bowman's arguments was a precautionary tale about development and about the potential conquest of Andean South America by U.S. capital and commodities. A large part of the eastern coast of South America, over which many speakers and statesmen had projected ambitious expectations of economic progress, was in actuality a desert, a territory inhospitable for human settlement due to insufficient rainfall and the lack of modern transportation. At great expense, railroads and roads could connect the west coast with the mining districts, but this would not confer any significant benefits on the local population.40 U.S. geography thus carried a warning to U.S. businessmen. South America was not the “land of opportunity” publicized by the promoters of the Pan-Americanism. There were many obstacles to overcome before U.S. firms could sell typewriters, refrigerators, toothpaste, and breakfast cereal to Andean peasants.

Bowman's human and economic geography of South America had illuminated important social preconditions for modernity. The question of development could not be extricated from issues of labor and racial oppression and from the prejudiced outlook of local proprietary classes. Through his travels and research, Bowman discovered old and new forms of racial oppression and
exploitation in the Peruvian Andes. His moral condemnation was directed against white Peruvian planters and hacendados who subjected their indigenous peons to crude forms of exploitation. In the forest lowlands Bowman found the worst form of human oppression, slavery, reactivated by the international rubber trade.

The intersection of race and environment contributed to racial oppression in Peru. In the low and warmer valleys soil fertility and abundant water made the land apt for the cultivation of valuable crops. This attracted white planters and merchants who, for the sake of profits, degraded the lives of indigenous peoples (Bowman 1916a, 43). On the cotton and sugar plantations, the geographer learned about the disdain and brutality with which white planters and mestizo officials treated their Indian laborers. Here were traces of “feudal” personal dependence and colonialism. But it was rubber tappers who committed the worst forms of abuse, enslaving forest Indians.

Taken together, these denunciations (against peonage, slavery, and racial hierarchies) could be read as a counterdiscourse about Americanization and neocolonial conquest. They raised doubts about the impact of the “forces of progress” (railroads, highways, industry, and foreign trade) on the lives of native peoples. Bowman’s “Indian exploitation” excursus constituted a departure or anomaly in the narrative of “geographic conquest.” His discourse conveyed a genuine indignation about outdated forms of labor exploitation and racism. Repeated encounters with Indian subalterns helped him understand better Spanish colonialism. “Plateau Indians” were frightened at the sight of white men.

What lessons then could geography offer to U.S. policy makers and businessmen? An environmental—almost geological—view of the subcontinent brought to the surface long-term continuities in the relationship of humans to the environment. Andean native shepherds and farmers had resisted the successive waves of colonialism. Their poverty and efficiency carried a clear anti-colonial message. Geography, on the other hand, promised further conquests. Scientific inquiry could establish the features and regularities in human settlement and illuminate the true problems in the expansion of agricultural frontiers. Bowman’s regional geography offered policy makers and businessmen the possibility of understanding “development” from the perspective of environmental barriers and the longue durée of coloniality.

At the end of a long discussion about the relationship between human settlements and the environment in the Atacama Desert, Bowman wonders what might be the role of these isolated villages in the middle of the South American desert. Seen from the perspective of “progressive men” in the industrialized
nations, these villages were “inviting gardens” offering comfort and rest to the Western traveler. As links of communication, these old towns could still play a strategic role in the unfolding of the U.S. informal empire (Bowman 1916a, 204). These villages were sites of transit and also living memory of people’s long-term efforts to adapt to the natural environment. Oasis settlements were also enticing to the foreign geographer, for there he could discover the great organizing principles of human settlements.

Perhaps geography could complete the “conquest” that U.S. capital had begun and only conditionally achieved. This conquest, of course, would not be based on the expanded reproduction of profits, but on the promises of comprehensive knowledge. Regional science could provide the basis for understanding societies and natural resources in South America. Based on that knowledge, Washington could design better policies in relation to their southern neighbors. By fitting South America’s problems of population and agriculture into particular theories about “frontier settlement,” geography could help U.S. policy makers understand the strategic and economic importance of key regions: the central Andes, the Atacama Desert, Patagonia, the prairies of southern Brazil and Argentina, and the fertile valleys of central Chile. More important, geographic science held the key to understanding regional politics and thus could help foster better interaction with local elites.

In Desert Trails of Atacama Bowman revealed the secret about the political history of South America. Physical geography could explain why the region had failed to create integrated national economies and self-conscious national communities. Here was dependency theory avant la lettre. Since colonial times, settlers had accommodated into particular locations and lived without much communication or trade with other regions. Unable to overcome great natural barriers, each area developed a provincial spirit inimical to nation-building. In the early twentieth century Andean nations remained a mosaic of self-sufficient regions where local revolts were a recurrent possibility.

Bowman read in South America’s geography the reason for the region’s political incompleteness and lack of modernity. Fragmented territories translated into forms of regionalism that resisted U.S. visions of progress predicated on transportation improvements. In the Atacama Desert Bowman found instances of the successful adaptation of native populations to their harsh physical environment. Their ways of life predated the arrival of foreign corporations and, Bowman predicted, would outlive their presence. If this were so—that is, if market development and technological progress were only conditional conquest—policy makers could derive interesting corollaries. South American economic and political elites did not truly represent the majority of the population. The

Geographic Conquest
region not only confronted the problem of underdevelopment but also suffered from incomplete nationhood and regionalism. Elites, attached to outdated forms of labor control, were unlikely to share “American ideals” of political democracy, legal equality, and minimum welfare. Consequently, there was little point in conversing with Andean elites. Only in certain regions—in the humid Pampas of Argentina, in southern Chile, and southern Brazil—U.S. Americans faced equal interlocutors. It was with them that U.S. policy makers had to discuss issues of hemispheric scope.