fast-food franchises, the tacky T-shirts, the vulgarity of Hollywood films must seem as if a global "uncivilizing" process has come round at last, sweeping away the decency and decorum that often accompanied the first, less savage, liberalism. For others, long deprived of the most basic goods, the shelves of tape, tools, steel pans, designer "bluyeanes," cheap shoes, and the democratizing informality of dress and food must seem like a consumer's heaven on earth.

CHAPTER 2

The Material Landscape of Pre-Columbian America

> Inique in nahuah mozcalia quicuani motlaque cultiani ahuaque tlacualeque.[1]
>
> Pasa por aquellos dos pueblos un camino ancho, hecho a mano, que atraviesa toda aquella tierra y viene desde el Cuzco hasta Quito que hay más de tres cientas leguas; es tan ancho que seis de a caballo pueden ir por él a la par sin llegar uno a otro.[2]

The Things of Everyday Life

Everything derives from food production. The extra food that men and women produce from improved plants or edible creatures or their use of new tools and hard work enable other people such as potters, warriors, priests, or university professors to practice their crafts without having themselves to grub in the earth or worry about where the next meal might come from. The fundamental change in global food production began some fourteen thousand years ago when people slowly began to develop the various cereals that would become the main

[1] "These Nahuas were experienced eaters, they had provisions, were owners of drink, owners of edible things." Quoted in Salvador Novo, *Historia gastronómica de la ciudad de México* (Mexico City: Editorial Porrua, 1997), p. 4.

[2] "Between those two towns there's a wide road, all hand-made, that cuts through the entire land from Cuzco to Quito, which is more than three hundred leagues; it is so wide that six men on horseback can ride side by side without touching." Eyewitness account (1532) of Francisco de Xerez, *Verdadera relación de la conquista del Perú y provincia del Cuzco, llamada Nueva Castilla* (Seville, 1534), reprinted in *Cronistas de las culturas precolombinas* (Mexico City: Fondo de Cultura Económica, 1963), p. 436. A league was a little less than three miles.

source of caloric intake of everyone on the planet, and to tame a handful of animals for domestic use. Cereal crops are fast growing and have fairly high yields. Today, wheat, corn, rice, barley, and sorghum account for over half of all the calories consumed by humans beings on the planet. Eurasia, and especially Mesopotamia, was fortunate because of its particularly rich endowment of natural grasses. There are thousands of wild grass species on the earth but thirty-two of the fifty-six most important from which high-yield cereals could be derived – particularly barley and emmer wheat – were present there.

Mesopotamia was also richly endowed with the wild ancestors of the most practical and easily domesticated animals. There are today, for example, 148 large herbivorous mammals in the world that one might think possible of domestication. Yet, only 14 in fact were domesticated before the twentieth century. The wild ancestors of four of these (sheep, goats, cattle, and pigs) were present from the beginning in Eurasia. Another, the horse, domesticated for both warfare and traction, had an prolonged impact on Eurasian society. According to Jared Diamond's fascinating account, this head start made all the difference in the subsequent uneven development of global societies. Long before the European contact with America, the food surpluses generated in the eastern Mediterranean led to large empires, the inventions of ironwork and wheels, and the use of gunpowder and firearms.[3]

The Western Hemisphere had its own wild grasses. One of them, *teocinte*, now thought to have been present by 6000 to 5000 B.C. in South America as well as Mexico, began its slow development into *zea mays* – or maíz in Spanish, choclo in Quechua, maize or simply corn in American English. It became the fundamental cereal of the Western Hemisphere and the abundant food surplus generated by this plant underlay all the great Andean and Mesoamerican civilizations. In addition, throughout the Andes, from present-day Colombia to Chile, a range of tubers, the ancestors of our potatoes, supplied an even more basic food source as did manioc (or yucca) in the tropical lowlands. Any glance at a market in Mexico or Peru reveals an enormous variety of edible legumes and fruit long ago brought to fruition. Native Americans were accomplished horticulturalists.

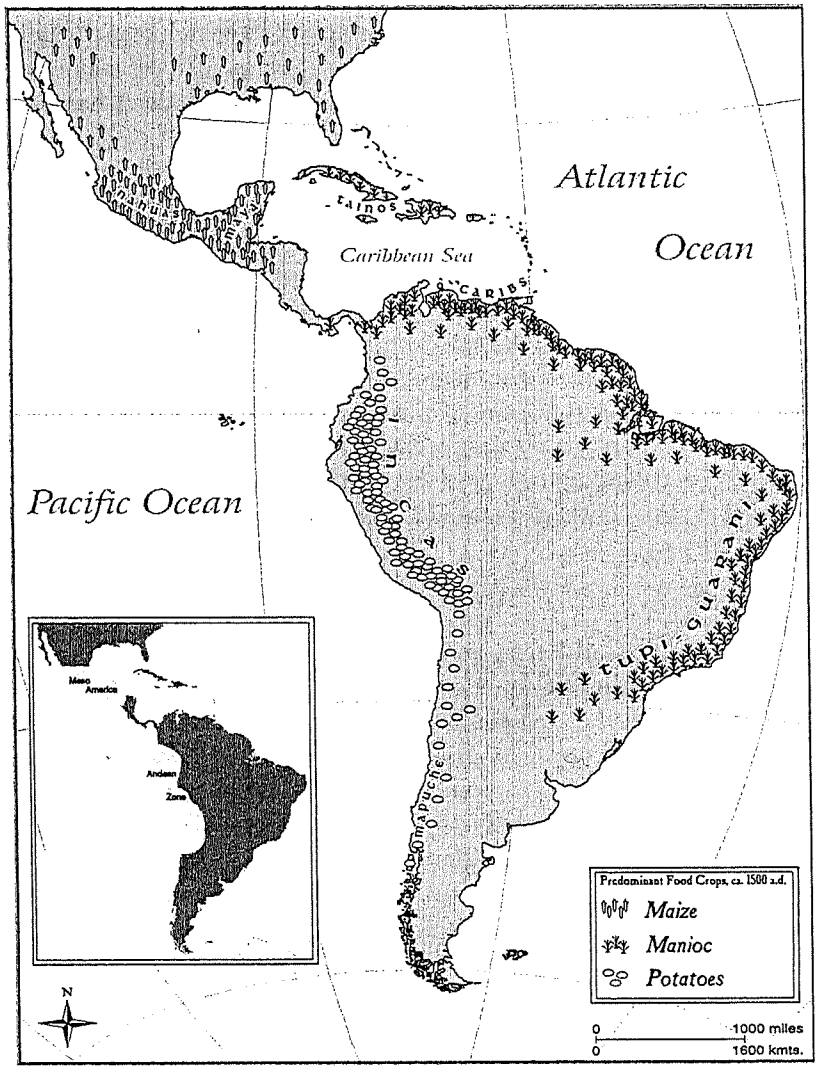
Alas, there was only a scant endowment of potentially domesticable large mammals in the Western Hemisphere. The cranky alpacas and llamas were fine for wool, yielded some meat, but were useless for traction. Moreover, they refused to carry humans and were reluctant bearers of cargo. Further north, the buffalo was the best large, local candidate for meat or milk, but this creature remained feral and, indeed, has only recently been crossed with cattle to produce the dubious "beefalo." The prehistoric horse became extinct some thirteen thousand years ago, before American development really got going. All this meant that in the fateful encounters following 1492, the European invaders rode horseback and had steel and firearms. Much worse for the native inhabitants, the invading pigs, cows, and sheep carried deadly pathogens into a numerous and accomplished people still, however, without sufficiently destructive means to defend themselves. Let us now turn our attention to the main features of this material world on the eve of the European invasion as it appears in the archaeological record and in the inevitably peculiar impressions of the invaders themselves. Food, clothing, and shelter continue to provide the main lines of inquiry.

MESOAMERICA

Forty years ago, Carl Sauer, an original human geographer, sketched out the broad outline of American food regimes, beginning with a distinction between the seed planters and those who set out cuttings for vegetative reproduction. His scheme, which new research has slightly revised, is still useful as a point of departure to understand a pre-Columbian geography of production, horticultural technique, and some peculiarities in the gender division of work. Sauer noticed the preponderance of seed planting in agricultural regimes above a line drawn through the Florida strait, south across the Gulf of Mexico and then through present-day Honduras. This line separates the present-day states of Guatemala and Mexico from the West Indies and South America. Those lands to the south, were characterized by the presence of vegetative reproduction: manioc in the tropics and several varieties of tubers in the higher elevations of the Andes.[4]

[3] Jared Diamond, *Guns, Germs, and Steel: The Fates of Human Societies* (New York: Norton, 1997), pp. 125–42, 158–64.

[4] Carl Ortwin Sauer, *Agricultural Origins and Dispersals* (Cambridge, Mass.: MIT Press, 1952). A different version of these pages and parts of the subsequent chapters were published as Arnold J. Bauer, "La cultura material," in Marcello Carmagnini, Alicia Hernández Chávez, and Ruggiero Romano, eds., *Para una historia de América: Las estructuras* (Mexico City: Fondo de Cultura Económica, 1999), pp. 404–97.



Map 2.1. Predominant food crops in pre-Hispanic America. *Source*: Courtesy, Sebastian Araya. California State University at Humboldt.

For Mesoamerica (present-day central Mexico, Guatemala, and El Salvador) we can now follow, in more detail than Sauer had available, the long process through which men and women brought to domestication, through seed selection, a wide range of plants, the most important of which were squash, beans, chiles, and, above all, corn. By around 3000 to 2000 B.C., these plants, supplemented by the pulpy leaves and the prickly pear of the nopal, wild fowl, the domesticated dog, deer, and small wild animals, provided the basis for sedentary settlement and population growth. When this system reached maturity in the higher elevations northwest of the Gulf of Fonseca (present-day Nicaragua), a wide swathe of seed planters extended from Guatemala into the present-day southwestern United States. They supported increasingly large numbers of people eating an essentially vegetarian diet of which corn in various forms was an important part of total caloric intake.

By the time we come to the centuries preceding the European invasion, the people of central Mexico had worked out a complex diet of maize, beans, squash, chiles, and amaranth, supplemented with algae from the lakes, honey from the stingless bee, a multitude of ducks, the domesticated turkey, dogs fattened for meat, and a wide range of small mammals, birds, fish, reptiles, amphibians, crustaceans, insects, worms, in fact, anything that could be eaten – a list of foods that made up the basis "for a rich and varied diet."[5] *Pulque*, the fermented sap of the maguey, was a popular alcoholic drink. Although the Mexica state endeavored to control its use, it was no more successful than the contemporary Inca in controlling the corn beer (*chicha*) of the Andes or than many modern states in similar, quixotic efforts to restrict drink or drugs.[6] There were, of course, no draft animals. Stone axes and hoes and the inevitable digging stick or *coa* were the sole farming tools.

The European invaders were understandably astonished that such huge surpluses were obtained through, in their eyes, such primitive methods. The secret was corn, often intensively cultivated in irrigated and mulched fields. This cereal, particularly when made into tortillas,

[5] Sherburne F. Cook and Woodrow Borah, "Indian Food Production and Consumption in Central Mexico before and after the Conquest (1550–1650)," in Cook and Borah, *Essays in Population History: Mexico and California* (Berkeley: University of California Press, 1979), 3:134–40.

[6] William Taylor, *Drinking, Homicide and Rebellion in Colonial Mexican Villages* (Stanford, Calif.: Stanford University Press, 1979), pp. 29–72.

Figure 2.1. Two men planting maize, depicted in a mid to late sixteenth-century codex. The first man is using the *coa* or digging stick; the second indigenous man is shown in European-style trousers. *Source*: Codex Florentino. Courtesy, Biblioteca Medicea Laurenziana, Florence.

continues to be a fundamental element in the Mesoamerican diet. Metates and griddles for baking tortillas appear in excavated strata from around 2000 B.C. on, but corn in those early years still occupied a relatively small percentage, perhaps no more than 15 to 20 percent, of the total diet.[7] From then on, as domestication advanced and settlement became more permanent, corn in various dishes became more and more important. People ate it in *atole*, *tamal*, and *pozole*, but the thin corn cakes – or, as the Spaniards called them, tortillas – came to be the most important source of nourishment. Having little grease and no oil in which to fry, the people of Mesoamerica were mainly boilers and griddle cookers. The tortilla was inevitably accompanied with chile and thus "in-chilied" or, in Spanish, *enchilada*, a practice as common in the fourteenth century as in the twentieth, when a woman near Orizaba (Mexico) told an American visitor, Charles Flandrau that "my little boy" – aged three – "won't *look* at a tortilla unless it is covered with chile."[8]

[7] William McNeish, "The Origins of New World Civilization," *Scientific American* 211, no. 5 (Nov. 1964): 10.

[8] Charles Flandrau, *Viva Mexico!* (Urbana: University of Illinois Press, 1964), p. 44.

"The dress of these people," wrote the Anonymous Conqueror, who claimed to have seen Mesoamerican society at the moment of its destruction, "consists of some sheet-like cloaks and . . . they cover their shameful parts both front and rear with pretty towels like big handkerchiefs." Women's clothing consisted of a cape, skirt and an outer shirt (*huipil*) extending to the knee. Coarse textiles were woven of maguey fiber, the superior ones of cotton, a product of the hot country to the southeast and a highly desired tribute good in the high valley of Mexico. No hats were worn. "They wear nothing on their head except their long hair which is most beautiful."[9] In the absence of abundant leather, some men and women wrapped their feet in deer skin but most in maguey-fiber sandals.

The ordinary Mexican highland dwelling was a one-room adobe hut with a single, small, open doorway; poles with thatch or slab shingles formed the flat roof. Commonly occupied by more than one family, they were mainly places for eating and sleeping; ordinary people spent most of their time outdoors. In preconquest Tepoztlán, just south of present-day Mexico City, for example, "253 out of 490 households . . . were made up of two or more related couples." A wall with a single entrance surrounded the small huts; a number of such compounds made up a hamlet. People slept on mats and ate without chairs or tables. Grinding stones and griddles, a few earthen jars and pots together with baskets and brooms were "the principle furnishing, often the only furnishing, of macegual homes."[10] Few observers failed to notice an unusual profusion of flowers in Mexican life, a feature that continues to the present, not only in decoration but in innumerable place names and song.

THE ANDEAN REGION

Whereas the seed planters and the corn tortilla regime dominated agriculture and food regimes in Mesoamerica, root crops, mainly manioc

[9] El Conquistador Anónimo, *Relación de algunas cosas de la Nueva España y de la gran ciudad de Temestitan, México* (Mexico City: Editorial América, 1941), pp. 26–7, 47–8; Frederick Hicks, "Cloth in the Political Economy of the Aztec State," in Mary Hodge and Michael Smith, eds., *Economies and Polities in the Aztec Realm* (Austin: University of Texas Press, 1994), pp. 89–90; see also Ross Hassig, *Trade, Tribute and Transportation: The Sixteenth Century Political Economy of the Valley of Mexico* (Norman: University of Oklahoma Press, 1985).

[10] Carrasco citation in Friedrich Katz, *The Ancient American Civilizations* (New York: Praeger, 1972), p. 222.

(yucca) and sweet potatoes, all reproduced vegetatively, were the main food crops of the West Indies and the tropical littoral of South America. This was perplexing to sixteenth-century Europeans because prior to 1492 no root crop in temperate Europe was a major source of calories. Tubers belonged to "the humble and despised category of vegetables."[11] The great staple of the islands was the bitter yucca grown in the lowlands of the Spanish Main as early as 3000 B.C. The islanders "grated, drained off the juice of the poisonous roots," and baked the residue into unleavened flat bread, a procedure common to the American tropics. The bread, tasty and nutritious, can be kept months even in humid weather, without spoiling. Corn was present in the Caribbean at contact, but it was not a major foodstuff in the islands and not ground into flour. Nor was it fermented into alcohol; in fact, the Caribbean people, alone among Central and South American native Americans, apparently had no alcoholic drink.[12] Among the forest people of the Caribbean littoral or in the drainage basins of the Orinoco or Amazon River, fish, turtles, and mollusks supplemented manioc. Their scant clothing was appropriate to the tropics and rather more curious than scandalous to the eyes of cold-weather Europeans.

As one climbs into the higher elevations of the Andes, manioc gives way to a wide range of other root crops that provided the fundamental food for the mass of the population. The potato, domesticated at least seven thousand years ago, was only one of several Andean root crops. Ultimately spread everywhere, the potato today is the most important root crop in the world. Most potatoes could be freeze-dried into *chuño* and preserved, although in the high elevations, the bitter varieties last longer. Root crops remain the fundamental staple of ordinary Andean people.[13] As in Mesoamerica, the Andean diet was overwhelmingly vegetarian. Some plants known in Mexico

[11] Sofie Coe, *America's First Cuisines* (Austin: University of Texas Press, 1994), p. 16.

[12] Carl Sauer, *The Early Spanish Main* (Berkeley: University of California Press, 1966), pp. 53–4; see also Irving Rouse, *The Tainos: Rise and Decline of the People Who Greeted Columbus* (New Haven, Conn.: Yale University Press, 1992), pp. 12–13. The Taino word for corn (*maíz*) spread throughout Mesoamerica in the wake of the Spanish conquest.

[13] J. Alden Mason, *The Ancient Civilizations of Peru*, rev. ed. (New York: Penguin, 1968), p. 141; see the expert account by Stephen B. Brush, "Potato," in Barbara A. Tennenbaum, ed., *Encylopedia of Latin American History and Culture* (New York: Simon and Schuster Macmillan, 1996), 4:459–61.

Figure 2.2. Tukano (Colombian Amazon) woman peeling manioc tubers in the 1980s. Apart from the steel knife, little has changed since the sixteenth century. *Source:* Linda Mowat, *Cassaba and Chicha Bread and Beer of the Amazon Indians (Aylesbury, Bucks: Shire Publications, 1989).* Photograph: courtesy, Donald Taylor and Brian Moser.

such as chiles (here called *ají*), squash, several varieties of beans, and *palta* or avocados were present throughout the present-day states of Ecuador, Peru, and Bolivia, but *quínoa* (a cereal rather like millet) *oca*, *ullucu*, *anu*, *mashua*, and lupin as well as the white potato are exclusively Andean.

Once thought to be a late (ca. 1500 B.C.) arrival from Mexico, there is now abundant evidence that maize predated the Chavin period and indeed this cereal already had a certain impact in coastal and inland coastal valleys of Peru by 4000–3000 B.C. Nevertheless, its spread onto terraces in the high intermontane valleys of the Andes apparently was not extensive until accompanied by the state-directed irrigation projects of the Inca period. People ate corn here not in tortillas but still green, on the cob, as toasted kernels, or boiled and made into *humitas*, a form similar to the Mexican tamal. Animal fat was apparently not used for frying; llama meat was dried or occasionally cooked in a kind of stew, as was the odd, dried fish. The Jesuit Bernabé Cobo, who lived in Peru for most of the first half of the seventeenth century, considered the food of the ordinary Andean inhabitant "rustic and coarse" (*rústico i grosero*). The people of the Andes cooked mainly by boiling or by grilling the occasional fish or guinea pig. Above all, corn provided the basis for the fermented chicha, widely drunk, then and now throughout the Andes.[14]

Finally coca. The extent of its use is the subject of long debate going back to the early chroniclers. It now seems clear that growers from the eastern subtropical slope traded coca with communities of highland people before and during the advent of the Incas, so the leaves were not, as once thought, controlled by the Inca state. Chroniclers such as Garcilaso de la Vega (El Inca) who wanted to portray the Incas as wise and moderate leaders, as well as writers such as Huamán Poma who were inclined to condemn the Spanish conquest as a disruption of native order, coincided in the notion that the Incas had established a state monopoly and that coca use consequently was restricted to the royal group. Recent research in ethnographic materials has overturned that view, in fact, as the foremost ethnohistorian of the Andes points out, "there is no evidence whatsoever to substantiate this widely held

[14] See Karen Olsenk Bruhns, *Ancient South America* (Cambridge: Cambridge University Press, 1994), pp. 89–96, for a summary of recent research; *Obras del P. Bernabé Cobo*. Biblioteca de Autores Españoles, vol. 92 (Madrid, 1956), p. 245.

belief."[15] With the European occupation, coca chewing continued and probably increased despite occasional complaint and pious denunciation by colonial officials and more than one member of the native elite. Of course, the practice continues today, another element in the material culture of America that has resisted centuries of opposition but continues beneath the overlay of a hybrid material culture.

A major difference from Mesoamerica was the presence in the Andes of camelids. The domesticated llama and alpaca provided meat, wool, and carriage. In the higher elevations their wool provided men and women welcome comfort against the brilliant cold of the Andean night. Just how the fibers were separated from the animal, however, is painful to imagine. Presumably, handfuls of wool were hacked off the creatures with razor-sharp obsidian, or perhaps Andean groomsmen or women combed out the shedding hair. Here the invading Europeans surely brought a welcome device. Metal shears have been present from ancient times in the Old World; in fact, the picture of a Flemish pair in 1500 is almost an exact copy of Roman design. The Spaniards, long familiar with wool and sheep, were quick to bring shears to the Andes; yet, as late as the 1820s, English merchants in the Peruvian central highland believed a substantial market was available because "the natives are unacquainted with the kind of shears used in England."[16] Llamas and alpacas never provided traction in this wheelless and plowless world, but they were able, however reluctantly, to carry goods over long distances. Camelids enabled the Andean inhabitants to bridge difficult arid and mountainous stretches and ultimately to link far-flung ecological "islands" of the Andean archipelago into coherent communities.[17] Pastoral experience also permitted the native people of the Andes to accept with less reservation than their Mesoamerican contemporaries, the unanticipated invasion of European livestock. Sheep, mules, burros, even cattle, were to settle fairly comfortably into the Indian landscape.

[15] John V. Murra, "Notes on Pre-Columbian Cultivation of Coca Leaf," in Deborah Pacini and Christine Franquemont, eds., *Coca and Cocaine: Effects on People and Policy in Latin America*, Cultural Survival Report, June 23, 1986, pp. 49–52.

[16] Thomas Kruggler, "Changing Consumption Patterns and Everyday Life in Two Peruvian Regions: Food, Dress, and Housing in the Central and Southern Highlands, 1820–1920," in Orlove, *The Allure of the Foreign*, p. 51.

[17] John V. Murra's ideas are developed in many publications, including *Formaciones económicas y políticas del mundo andino* (Lima: Institute of Peruvian Studies, 1975).

Had a fifteenth-century Mexica been able to peek into a contemporary Peruvian peasant house, she would have found many things familiar but also, no doubt, been startled by the sudden darting about of small, domesticated *cuyes*, or what the Spaniards called "little rabbits of the Indies" (*conejillo de Indias*). Roasted on a spit or boiled in stews, they provided a meal-sized animal protein source to the Andean household, a convenience unknown in Mexico until the arrival of the European chicken.

The clothing of ordinary people in the Andes was similar to that of Mesoamerica. Cotton was common on the Peruvian Pacific coast and appears early in the archaeological record, but in time both wool and cotton and bast fibers as well were found throughout the highlands. "The ubiquitous breechcloth," sleeveless tunic, and a simple cloak were men's dress; women generally wore a one-piece dress, a combined skirt and blouse, that reached to the ankles and was bound at the waist with a wide sash. In the absence of shears, "like all garments, this dress was a large rectangular piece of woven cloth, merely wound around the body." Where the Mesoamericans, or at least some of them, had deerskin, the Andean inhabitants had llama leather for sandals and, of course, camelid wool for clothing. The Aymara in the coldest elevations wore knitted, woolen caps, "as most of the highlanders do today."[18] There is scant mention for either sex of underclothes, which suggests either its absence or leads into uncomfortable speculation. Before trade brought cotton to the highlands where the bulk of the people lived, hard to wash and scratchy wool was the alternative to nakedness. As for more intimate apparel, particularly for women, the record is silent.

A common Mexica peasant would not have felt out of place in an Andean highland house. Both were typically one room, made of adobe, occasionally of rough stone, with thatched roofs. In neither case were there tables or chairs; ordinary people ate and slept on the floor, a practice the Spaniards would find indecent and even "barbarous." Kurakas, socially a cut above, threw down a cloth. Every house had a tiny clay stove, with adjustable fire slots, extremely economical of fuel. Bernabé Cobo wrote, "The Spaniards burn more in their stoves in one day than the Indians consume in a month," echoing Garcilaso's remark that while the Incas "were stingy with fuel, they were astonished at the way

[18] Mason, *Ancient Civilizations*, pp. 147–9.

the Spaniards wasted it."[19] Native houses were arranged around a central court where several related families lived.

Here, then, is a partial list of the basic elements in the diet, clothing and shelter of the mass of ordinary inhabitants of America in the decades before the European invasion. People produced most food items locally for local consumption and served them in clay or wooden dishes. Clothing was homemade, the cotton or alpaca wool spun and woven by thousands, indeed millions of peasant hands. The rude houses they constructed from local materials; their stone, wooden, or nonferrous metal tools, also homemade, bore the contours of long wear. These goods, some of them traded within communities or laid out on mats for exchange in innumerable local markets, represent a stratum of ordinary use that lay beneath the flow of tribute goods requisitioned by the Aztecs or the Incas' demands for labor services in the Andes. Before we take up a discussion of these developments, let us notice some striking differences between Mesoamerica and the Andes, especially in the gender division of work in the production of food and cloth, because the early patterns carry through into later centuries. Perhaps in the end these too, were partly shaped by the divisions we have seen between seed planting and vegetative reproduction.

The Food Regimes of Mesoamerica and the Andes

Most people living today, insulated from the actual production of goods by layers of packages, processing, stores, and advertising, have to remind ourselves that not too long ago, men, women, and children spent a large part of every day occupied in the daily output of their own consumer goods. The ancient European expression, "men work from sun to sun but women's work is never done" was even more appropriate in the peasant worlds of Mexico and the Andes. An examination of food and clothing preparation with attention to the gender division of work reveals interesting differences between Mesoamerica and the Andes.

[19] *Obras del P. Bernabé Cobo*, p. 243; *Obras completas del Inca Garcilaso de la Vega*. Biblioteca de Autores Españoles, vol. 133 (Madrid, 1960), p. 134. Garcilaso, the mestizo son of a Spanish conquistador and an Inca princess, was brought up in Cuzco in the early years of the conquest.

As the long march of corn domestication followed its erratic and, no doubt, discontinuous path from the tiny grains of five or six thousand years ago to a more recognizable hand-sized ear some three thousand years ago, the practice of consuming corn in the form of the maize cake or tortilla apparently spread throughout a wide area of present-day Mexico and Guatemala. It was a fateful decision taken, perhaps, after centuries of observation that while a corn-heavy diet seemed related to disease, the families of other women, who, for whatever reason, had begun to cook the kernels with lime, grind them into a wet dough on a saddle stone, or *metate*, and pat out little cakes, were less likely to suffer. They could not have known about pellagra, the plague of corn eaters the world over, or that lime-soaking removed the kernels' pericarp, thus increasing the niacin content, which serves to combat the disease. Perhaps the people of ancient Mexico simply liked the particular taste of little corn cakes prepared in that way.

Nor can we know why men, almost exclusively, cultivated the plant in ancient Mexico, whereas only women made tortillas. In the Andes, as we shall see, the division of labor in food production was quite different. But in the hundreds of pre-Columbian Mexican terracotta figurines and in the pre- and postconquest codices, only women are represented bent over the grinding stone. More recently, few travelers in the twentieth century and no important Mexican artist failed to capture in print or paint what the women themselves called their "slavery to the metate." It is safe to say that over the past two thousand years, very few men have touched a metate and we have, to my knowledge, only one male confession (by a non-Mexican) to metate work. The sixteenth-century traveler Girolamo Benzoni tried for a few minutes to prepare his own food. He found "the grinding the hardest work . . . nor did I grind it very much because my arms were undone from hunger and very weak."[20] Here, then, is a cruel paradox: as Mesoamerican people more and more drew their sustenance from the humble tortilla, they came to depend on a plant that is easy to grow but a food item that requires a great investment of time in preparation, nearly all of it the result of female labor. The several hours bent over the metate in the daily grind also defined women's role in food production and put them in the indispensable center of the household. Their importance was enshrined in the symbolic handing of the metate

[20] Quoted in Coe, *First Cuisines*, p. 130; Oscar Lewis, *Tepoztlan: Village in Mexico* (New York: Holt, Rinehart and Winston, 1960), p. 25.

Figure 2.3. Terracotta figure of pre-Hispanic Mexican woman with metate and children. Compare the depictions of food preparation with child care in the previous illustration.

on from mother to daughters (while sons received the *coa*, or digging stick) or in the practice of burying the umbilical cords of newborn baby girls under the metate.[21]

The near total absence of household animals in Mesoamerica further contributed to a strong gender line in agriculture. Unlike in European husbandry where women often tended flocks, fed chickens and pigs, and inevitably milked cows, or even in the Andes, where as we shall see, women were active shepherds of domesticated camelids, the pre-Columbian Mesoamerican regime offered no such opportunities or burden for pastoral work. It seems clear that Mesoamerican women stuck closer to the hearth than did their Andean counterparts, an arrangement that persisted into the twentieth century.

Unlike the Mesoamerican maize tortilla regime, food preparation in the Andes seems somewhat simpler, at least from a distance. Women boiled unpeeled potatoes and prepared maize, either toasted or boiled. Thus the main caloric source was obtained without the laborious procedure of hand shelling, hand grinding, and the use of charcoal-consuming griddles typical of Mexico and Guatemala. Less "enslaved to the metate" than their female counterparts among the seed planters to the north, Andean women participated more in field work. Men normally opened the earth with the chaquitaclla, while women dropped slices of cut potatoes into the furrow. The harvest followed a reverse procedure: men dug up hills of tubers and women gathered them into hampers.

The native chronicler Huamán Poma de Ayala, drawing on observable practice in the early seventeenth century, probably little changed from the pre-European epoch, provides graphic evidence of men and women working in the fields side by side in a gender-integrated agriculture.[22] Spanish chroniclers, who make little or no reference to women in Mesoamerican agriculture, were struck by their activity in the Andes. Cieza de León, writing about the Cañari, remarked that "these women are good for hard work because it is they who open the earth, plant the fields, and gather the harvest while many of their

[21] James Lockhart, *The Nahuas after the Conquest* (Stanford, Calif.: Stanford University Press, 1992), p. 92; Arnold J. Bauer, "Millers and Grinders: Technology and Household Economy in Mesoamerica." *Agricultural History* 64, no. 1 (Winter 1990): 1–17.

[22] Felipe Huamán Poma de Ayala, *El primer nueva coronica* [sic] *y buen gobierno*, ed. John V. Murra and Rolena Adorno (Mexico: Siglo XXI, 1980); see, e.g., folios 1033, 1044, 1047, 1050, 1062.

Figure 2.4. "Trabaxos Papa allaimitapi." Man and woman harvesting potatoes. Produced by a native chronicler in the early seventeenth century, writing in a mixture of Spanish and Quechua, this drawing is meant to depict pre-Hispanic Peru. *Source:* Felipe Guaman Poma de Ayala, *El primer nueva coronica* [sic] *y buen gobierno* (Mexico City: Siglo Veintiuno Editores, 1980).

husbands are sitting at home spinning and weaving and fixing their weapons and clothes and taking care of their faces and other effeminate things." Women here also were bearers: "they gave us a large number of women who carried the loads of baggage for us."[23]

Writing later, Garcilaso de la Vega makes a similar point: "Men and women both went to the fields to help each other." Perhaps, in fact, he drew on Cieza for his remark that "in some provinces very distant from Cozco [sic] that were not yet well cultivated by the Inca kings, women went to work in the fields and their husbands stayed home to spin and weave," but that practice, he quickly adds, was both barbarous and unusual "and deserves to be forgotton." Polo de Ondegardo equated wives with wealth and status because the women "made cloth and prepared the fields for the husband."[24] Father Cobo too, in the mid-seventeenth century, was struck by the amount of women's work in Peruvian agriculture. "The women serve their husbands like slaves, carrying the entire weight of work, because apart from raising children, they cook the food, make chicha, make all the clothes they and their husbands and children wear, and work more in the fields than the men do." A century later, Juan and Ulloa repeat the charge of male indolence on haciendas in colonial Ecuador. Nothing can move the men to work; "they leave everything to the care of women. They are the ones who spin, prepare food, make chicha . . . and if the landowner does not force the men to work, they sit squatting down, which is the normal posture of all of them, drinking or cozying up to a little fire, watching the women work." His only task is "to plow the land of the little plot he has to plant; all the rest of the work in the field is the work of women."[25]

The gender line, then, seems to have been much more rigid in Mesoamerican food regimes than in the Andes and, in fact, drawn along very different contours. Why was this so? We can never know

[23] Pedro Cieza de León, *La crónica del Peru* (Madrid, 1922), p. 156. Cieza mentions that this may be explained in part by the scarcity of men because of the recent civil wars.

[24] *Obras completas del Inca Garcilaso*, p. 133; Polo is quoted in Karen Spalding, *Huarochirí: An Andean Society under Inca and Spanish Rule* (Stanford, Calif.: Stanford University Press, 1984), p. 86.

[25] *Obras del P. Bernabé Cobo*, p. 22; Jorge Juan and Antonio de Ulloa, *Relación histórica del viaje a la América meridional*, vol. 1, introd. and ed. José P. Merino Navarro and Miguel Rodríguez San Vicente (Madrid: Fundación Universitaria Española, 1978), p. 545.

the original explanation but only observe the scant evidence at hand and speculate. Somehow, for health or taste, once the tortilla with its extraordinarily heavy kitchen labor requirement became established in Mexican and Guatemalan diet, perhaps implicit negotiation over the long term was worked out in which men accepted the responsibility for field work in return for the indispensable tortilla. What began as intermittent and voluntary became customary and obligatory. Perhaps in the Andes, the simpler preparation of boiled tubers and stews left women more time for outdoor tasks. Or perhaps the extreme and brusque climatic changes in the high Andes impelled an urgency in planting and harvest that requires a greater degree of women's work in the fields than in the more moderate elevations of Mesoamerica, and this original necessity hardened into long-term cultural practice.

Goods and Commodities in Ritual and Power

The thick, uneven layer of common goods that we've seen, contained the essential elements of diet, dress, and housing. They formed, in Braudel's term, the "structures of everyday life" for the mass of the population. These items were usually grown or made nearby or in the household for the members' use. They were laid out for barter on a thousand mats in innumerable local market stalls or exchanged among community members in some cases scattered across long reaches of space. They were so common and ordinary that they are barely remarked upon. Nor were these quotidian goods visible in the later European accounts: "Indian housing, clothing, and food, the omnipresent Indian goods, the metates and petates for which Spaniards had small use, the exchange of simple materials in cheap markets, all were features of a native substratum beneath the notice of colonists."[26]

Beyond these common goods, which must have occupied a large part of peoples' time and effort (even though their work must not have been felt or expressed in such terms), there are present even in the earliest archaeological record goods that reveal differences in social and political status. Although it was once possible to think that these goods were a "kind of automatic result of surplus agricultural production," recent research shows their importance in cementing power relations in the

[26] Charles Gibson, *The Aztecs under Spanish Rule* (Stanford, Calif.: Stanford University Press, 1964), p. 335.

early indigenous American states and in making and maintaining social relations.[27] People in pre-Columbian America have expressed differences in social and political status for a long time. Moreover, the elite in various city-states had been able to impose its demands on clusters of subordinate people for several centuries. Our focus here is on the decades just preceding the European invasion when societies under both the Mexica-dominated Triple Alliance (which we now call by the misleading but conventional term, Aztec) and the Inca regime were rapidly changing.

The Aztecs began by bringing under control the settlements and towns within the lush, lacustrine valley of Mexico and then by gradually imposing tribute obligations on surrounding regions. Their tribute lists detail the quotas: roof beams, jaguar skins, feathers of all kinds, stones such as the *chalchihuites* treasured by the Mexica, and, above all, a profusion of cloth, came from various outlying peoples. Aztec rulers claimed large surpluses of ordinary foods such as corn, dried chiles and beans, pulque, and fowl for their households. Bernal Diaz and other eyewitnesses provide vivid descriptions of the Aztec elites' Lucullan feasts, where reverential waiters served dozens of exotic dishes of game, fish, vegetables, fruit, and grain.[28] Two goods, cacao (chocolate beans) and cloth, played an especially important role in the definition of social and political power.

From the southeast piedmont of the Soconusco just up the coast from present-day Guatemala, the Aztec state required loads of cacao beans from several peoples, even from those who did not grow the trees. Bales and bales of cotton cloth also found their way on the backs of human carriers up from the lowlands to the lacustrine capital. "The most beautiful materials and the most brilliantly colored embroideries came from the Totonac and Huaxtec countries. The tribute brought thousands of loads of the splendid cloaks, loincloths, and skirts woven in the eastern provinces."[29] Both cacao and cloth, apart from their use or consumability, functioned also as kinds of money goods and in the

[27] Craig Morris, "The Wealth of a Native American State: Value, Investment and Mobilization in the Inka Economy," in J. Henderson and Patricia Netherly, eds., *Configurations of Power: Holistic Anthropology in Theory and Practice* (Ithaca, N.Y.: Cornell University Press, 1993), pp. 33–8.

[28] Bernal Diaz del Castillo, *Historia de la conquista de Nueva España*, introd. and ed. Joaquin Ramírez Cabañas (Mexico: Porrua, 1992), pp. 166–8.

[29] Jacques Soustelle, *The Daily Life of the Aztecs* (Stanford, Calif.: Stanford University Press, 1970), p. 132.

absence of small coin. In fact, cacao beans remained in circulation well into the seventeenth century.

Some of these goods, food and cloth alike, ended up in the vast market at Tlatelolco where they were exchanged for exotic items to enrich the diet and dress of the Aztec elite. The merchants responsible for organizing trade and tribute also knew how to display their power in ritual feasting. We are told by Náhuatl-speaking informants still able to remember the years before the conquest that "when some of the merchants or traders believed themselves to be rich, they gave a banquet inviting all other merchants and local notables because they thought it bad form to die without having thrown a splendid party which would reflect well on themselves and give thanks to their gods." Before dawn, the guests began to drink chocolate and nibble on little black mushrooms, "which made them see visions and even provoked lust." When the mushrooms took effect, many began to dance, others sang, some wept. But others sat quietly, overcome by frightening visions of themselves captured in warfare, devoured by beasts, or punished for adultery or theft. Others had happier visions of becoming rich in goods and slaves. As the effect wore off, "they spoke with each other of the visions they had seen." The meal itself might well have included six different kinds of tortilla, several different tamales, turkey stewed with ground pumpkin seeds and several spices (or *pipián* sauce, still popular today), different kinds of wild fowl, a range of squash, tomatoes, and chiles, lake fish, and pulque. The older merchants greeted the guests, giving each a burst of flowers "according to their custom." But the lion's share of tribute was earmarked by the Tlatoani (i.e., in 1519, Moctezuma) for the noble class. The Spaniards were astonished by the huge numbers fed daily. Cortés mentions hundreds of retainers who filled two or three large courtyards, and Bernal Diaz believed Moctezuma's household served more than a thousand meals a day. Ixtlilxóchitl wrote that in the neighboring city of Texcoco the annual consumption of the ruler's palace was 31,600 fanegas (some 50,000 bushels) of maize, 243 loads of cacao, and thousands of cotton mantles.[30]

[30] The merchants' feast is from Bernadino de Sahagún, *Historia general de las cosas de la Nueva España*, also known as the *Florentine Codex*, libro IX, cap. VIII: the description of "las comidas que usaban los señores" is from libro VIII, cap. XIII. Both are quoted in full in Novo, *Historia gastronómica*, pp. 170–3, 167–70. The haluciogenics are called "honguillos negros," or *nanácatl* in Náhuatl. The account of Ixtlilxóchitl is cited in Katz, *Ancient Civilizations*, p. 206.

Apparently, in this nonmonetary economy goods also provided indirect access to labor. Bernal Diaz saw the profusion of Moctezuma's domestic help through European eyes and painfully imagined the salaries: "why, with all his women, servants, bakers and chocolate makers, what huge expenses he must have had!"[31] But legions of retainers and servants were the perquisites of office, paid directly or indirectly by tribute forced from a subject people. Although there is little information on forced workers for public or private works – nothing like the Peruvian *mita* seems to have existed in ancient Mexico – villagers in the valley of Mexico were required to perform labor services. They built the dikes and irrigation works; presumably they or perhaps the semi-slave *mayeques* built the impressive palaces for the nobility in Mexico and Texcoco. Aztec profligacy in human sacrifice, which wasted the potential labor services of thousands of able-bodied men, suggests either the predominance of ideology over economic value or an extraordinary abundance of workers.[32] In any case, Aztec practice contrasts with the much more efficient use of labor by the Incas in the Andes. Because only a minority of ordinary people had sufficient land in the valley of Mexico, numbers of craftsmen, bearers, and construction workers as well as potential military people were maintained out of tribute supplies. Ceremonial feasting, sometimes lasting eight days, helped feed the population and must also have cemented political relations with important members of the bureaucracy.

We know that the nobles' houses were splendid and impressive. The Anonymous Conquistador claimed to have seen "very good houses of the lords, so large with many big and small gardens . . . a marvelous thing to see. More than four times I went into the house of a main lord just to look around but I got so tired that I never got to see it all. It was the custom to have huge salons and large rooms all around the entrance to a grand patio."[33] From this impressive display one stepped down considerably to the dwellings of secondary lords and caciques.

Of all the profusion of goods in pre-Hispanic Mesoamerica, cloth was the single most important marker of social status and power. Lacking horses, or the finely worked manufactures available to contemporary Spaniards as status markers, and of course not having any of the range of prestige goods available today to suggest wealth and power,

[31] Diaz, *Historia*, p. 168. [32] Katz, *Ancient Civilizations*, pp. 170–1.
[33] El Conquistator anónimo, *Rélacion*, p. 46.

fabric provided visible and easily displayed symbolic meaning. It varied in quality from ordinary unbleached bast to the exquisitely worked and multicolored cottons and *plumería* or feather work. None of the European invaders, themselves finely tuned to its importance in their own culture, failed to notice the meaning of dress. When lesser lords talked with Moctezuma "they had to remove their expensive capes and put on others of less value and they had to be cleaned and enter barefoot." "All witnesses," says Jacques Soustelle, noticed the "brilliance and splendor of the blouses and skirts worn by the women of noble families."[34]

On the eve of the Spanish conquest, cloth obtained ever greater importance in use and as a symbol and wealth good. Even from provinces that did not grow cotton, the state often required that subject people scurry about to come up with tribute of *quachtli* (a fine white cotton fabric). Raw cotton and tropical feathers brought up from the hot country were passed on to increasingly specialized women artisans in the capital, who produced the luxuriant dress of native leaders that so bedazzled the first European observers. Bernal Diaz commented on women weavers who made "such a multitude of fine cloth and all of feathers." In the very house of Moctezuma "all the lords' daughters that he had around as friends wove very beautiful things and many other young women who seemed to be something like nuns, also made all sorts of things from feathers."[35]

Tribute goods, requisitioned and produced under state guidance, were used in "state-administered foreign trade" and in market transactions for other luxury raw materials. They may also have been used as gifts to buy support or loyalty among uncertain allies.[36] There are several well-known instances, when in the course of the Spaniards' advance on Tenochtitlan, Moctezuma endeavored through gifts to demonstrate his power and to persuade the invaders to return from whence they came. The Spaniards, of course, interpreted these gestures as weakness. Perhaps the practices of using tribute goods to cement political support were in their infancy among the Mexica, not yet developed to the degree present in the Andes. Certainly, there is some

[34] Diaz, *Historia*, p. 166; Soustelle, *Aztecs*, pp. 128–38.
[35] Diaz, *Historia*, p. 170.
[36] Terrance N. D'Altroy and Timothy K. Earle, "Staple Finance, Wealth Finance and Storage in the Inka Political Economy," in Terry Y. LeVine, ed., *Inka Storage Systems* (Norman: University of Oklahoma Press, 1992), pp. 51–2.

Figure 2.5. Starting over. In pre-Hispanic Mexico, at the end of a fifty-two-year cycle, household goods were shattered and discarded. The "devil" indicates that in the eyes of postconquest (and Christian) native informants, this was now seen as a pagan practice. *Source:* Codex Florentino. Courtesy, Biblioteca Medicea Laurenziana, Florence.

evidence that the Aztecs stored goods for ceremonial or practical distribution but they had nothing like the storage network that the Incas had designed, precisely to make wealth goods available for social and political ends.[37]

In Mesoamerica then, we are in the presence of a "tributary despotism," which demanded not labor services directly, as in the case of

[37] Katz, *Ancient Civilizations*, p. 223; LeVine, *Inka Storage Systems*, pp. 50ff.

the Incas, but rather goods themselves – food, cloth, cacao – which, of course, were produced by people compelled to work. These goods were then used to help maintain artisans, construction workers, and the multitude of bearers drawn from the native settlements. Other tribute goods, either through ceremonial display or through direct gifts to the nobility, served to cement political or bureaucratic alliances that gave the Aztecs state access to workers. This process, as we shall see, was a less direct way of acquiring workers than the Incan mita, but it seems to have accomplished comparable ends. The Mexican practice of female workhouses for textile manufacture appears similar to the Peruvian *aklla*. The forced extraction of food, cloth, and building material was designed to obtain luxury and wealth goods for social and political ends. Wealth and status in both ancient Mexico and Peru were consequently created not so much by market exchange as by state-directed compulsion.

A profusion of research on the Inca period, those relatively few decades in the long, rich sweep of Peruvian prehistory, has substantially altered earlier understanding. Underneath the impressive structures of Inca rule lay territorial political units known as *saya*, which included a variable number of communities or *ayllu*. These units, adapting to the extremes of Andean topography, were clusters of households in an endogamous kin group. But their communal territories were spread across a wide range of ecological niches, forming, in John V. Murra's striking term, "archipelagos" or stepping-stone islands of kinfolk, at various elevations throughout the Andes. Thus, a single ayllu might include fishermen on the coast, maize farmers on terraces in the middle elevations, potato growers or quínoa further up, llamas on the high plateaus, and then coca fields in the subtropical valleys on the eastern slope. In Murra's scheme, members strove for self-sufficiency within each ayllu by combining goods and food from the various niches, and consequently they engaged in little trade with other ayllus. An immediate implication is the absence of large markets and consequently of a merchant group.

The first Europeans to see the dramatic topography of the Andean world made no mention of the great markets that had so impressed their companions in Mesoamerica a decade earlier, nor has there been much evidence for an equivalent in the Andes of the Mexican *pochteca*, or long-distance traders. Recent research, however, suggests that the archipelago model was most likely brought into full existence only by the later Incas, when their suppression of ethnic rivalries in the Andes

provided sufficient order to make such far-flung communities feasible. It is also true that merchant groups or *mindalaes* were present further to the north, in Quito. In any case, when imagining much of the Andean world, we should have in our mind's eye a number of adobe-walled, productive ayllus, scattered like so many brown hankerchiefs across a dramatically broken landscape. These produced an abundant yield of the basic elements of Andean diet, clothing, and shelter. A tendency toward reciprocity among members also seems to have been a central feature of Andean civilization.

In the decades immediately preceding the European invasion, the Incas undertook to extract from the Andean peasantry a growing volume of workers who were then "manipulated by the state to provide food both to support the labor effort itself and to produce special prestige items that were important to the state as gifts for its subjects." Recognizing not only the Andean tendency toward reciprocity, the Inca state's exactions were also based on a long-standing "community practice that gave its leaders the right to organize workers." On the eve of the European invasion, the Inca had mobilized workers in three main categories: they imposed the mita, a universal labor service; they formed groups of craft specialists such as the aklla, women devoted to making chicha and fine cloth; and they forcibly resettled portions of the peasantry in colonies known as *mitmaq*. Administrative cities were then built "to support a vision of rule based on gift giving and generosity by the ruler."[38]

Although we can clearly see that the Inca managed to turn an increasing amount of peoples' work away from personal and local pursuits to state projects, the question is *how*, in the absence of strong coercive force, was this done? One specialist argues that in this particular "archaic kind of mobilization," that is, where markets and monetary incentives are weak, the symbolic value of goods drives the "growth of wealth and power." Goods become signs of prestige, acceptance, and security." According to Morris, "Human labor is not a simple constant that can be measured by the size, age and health of the population. People work to gratify needs, some of which are biologically based, others are learned as part of the cognitive apparatus of culture."[39]

[38] Morris, "Wealth of a State," pp. 37–8, 45; on the Mandalaes in Quito, see John V. Murra, "Existieron el tributo y los mercados antes de la invasión europea," in Oliva Harris, Brooke Larson, and Enrique Tandeter, eds., *La participación indígena en los mercados surandinos* (La Paz, 1987), pp. 51–64; Terry LeVine, "The Study of Storage Systems," in LeVine, *Inka Storage Systems*, p. 17.

In the Inca world, as in Mesoamerica, cloth was the major carrier of the signs and symbols that guided social relations. Cloth "was given in bride wealth, presented as gifts at weaning, buried in mummy bundles, sacrificed in rituals and used as a status marker." Ceremonies using cloth punctuated life's passage. Both boys' puberty rites as well as marriage required sets of new clothing. Another ritual use of fabric can be seen in the wall hangings in temples and shrines. Cloth was central to Andean creation myths. Huamán Poma describes the three stages of mankind as distinguished by stages of garb. First, people dressed in leaves and straw, then animal skins, and finally in woven cloth. Indeed, one of the civilizing missions cited by the Incas was to clothe the naked savages. "The literature of the Incanato abounds with extensive description of the cameloid herd, their care and culling and even more . . . about the varieties of cloth."[40] The state produced fine fabric through the two basic mechanisms of corvée labor and through the use of the growing number of displaced colonists and specialist female weavers.

Two recent writers believe it reasonable that cloth, especially *qumpi* came to be a kind of special purpose money similar to quachtli in the Aztec world. It now seems clear that the great administrative centers' warehouses were for the storage of food and prestige items, mainly cloth, primarily used during ceremonies as gifts to cement alliances or given in advance for the subjects' anticipated cooperation and only secondary as famine relief. The leader of Chucuito province, near Lake Titicaca, "received 50 to 100 pieces of cloth a year from Inka state warehouses . . . cloth was a perquisite of office." In the excavations of Huánuco Pampa in the central highlands of Peru, there are over 4,000 structures, including 497 storehouses together with cloth and chicha-making facilities, but there is no "positive evidence of a marketplace," nor was Huánuco Pampa a location of permanent family residence. Most of the place "was devoted to public ritual and feasting."[41] Forty

[39] Morris, "Wealth of a State," pp. 40–1, 47.

[40] John V. Murra, "Cloth and Its Function in the Inca State," *American Anthropologist* 64, no. 4 (Aug. 1962): 712; D'Altroy and Earle, "Staple Finance," p. 56; Louis Segal, "Threads of Two Empires," unpublished essay in my possession. Bruhns, *Ancient South America*, pp. 166–7.

[41] Spalding, *Huarochirí*, p. 84; D'Altroy and Earle, "Staple Finance"; Morris, "Wealth of a State," p. 50.

years after the conquest, Pedro Pizarro, who accompanied his distant relative, Francisco, in the invasion of Peru, spoke in tones still stunned by the enormity of all he saw. "I won't be able to describe all the storehouses I saw filled with clothes and all kinds of cloth and dress that are used in this kingdom. There was not enough time to see and comprehend such a thing."[42] Chicha too, the corn beer of the Andes, lubricated social and political arrangements. It was considered the "essence of hospitality, the common denominator of ritual and ceremonial relationships." It was the drink generous leaders were required to provide as part of their obligations of authority.[43] The terraces and irrigation that brought new warm lands into cultivation in the "sacred" Urubamba Valley and elsewhere in Tawantinsuyu were not to produce ordinary food but for the prestige food and drink that formed part of the substance of sociopolitical relationships.

Finally, the state controlled a large portion of the production and distribution of a specialty crop, coca leaves. The state maintained fields of coca in the deep crevices in the earth that run down to the semitropical elevations of the Amazon and along the eastern, warmer slopes of the Andes, which were cultivated by designated laborers, often from colonies established for this purpose. As part of the regular dole to corvée laborers in mines and road work, the state and local elites provided a ration of coca. Coca was one of several (consumable) currencies circulating on the arid central coast and may have been used as a medium of exchange to obtain metals from highland people. Recent research documents the existence of coca leaves as currency in highland Ecuador in the colonial period.

Summary

On the eve of the European invasion, native peoples across the board from present-day Alaska and Canada to Patagonia had devised an array of goods to mediate between themselves and their environment. From

[42] Pedro Pizarro, *Descubrimiento y conquista de los reinos del Perú*, Biblioteca de Autores Españoles, vol. 168 (Madrid, 1965), p. 168; see also Terrence N. D'Altroy and Cristine Hastorf, "The Architecture and Contents of Inka State Storehouses in the Xauxa Region of Peru," in LeVine, *Inka Storage Systems*, pp. 259–86.

[43] Morris, "Wealth of a State," pp. 42–3; John V. Murra, "Rite and Crop in the Inca State," in Stanley Diamond, ed., *Culture in History* (New York, 1960), pp. 393–401.

neighboring or rival groups they rejected some items, accepted others, apropriating and adapting yet others. From an Asian or European perspective, their efforts were as notable for what they had accomplished as for what they had not. Three great food plants – maize, potatoes, and manioc – supplemented by an impressive range of other cereals, vegetables, and fruit had been brought to domestication. Together with an extraordinarily inventive use of the entire biomass, the native people created nutritional regimes that underlay large and complex populations. Without the shear, clothing for the mass of people was plain, shelter generally primitive, and tools rudimentary. Despite the presence of the appropriate ore, native people had not worked out the techniques of iron- or steelmaking, nor had they developed the use of draft animals or the wheel.

In the high civilizations of Mesoamerica and the central Andes, complex states arose to organize production and distribution. There were several similarities in the material culture and state organization of Aztec and Inca societies on the eve of the European conquest and a few striking differences. Eyewitness observers and modern scholars have noticed that the Aztecs extracted tribute in *goods* through political coercion, whereas the Incas tapped into the long-standing Andean practice of demanding *labor* services of their subject peoples, which, it's true, were often used *to produce* goods. Thus, although both regimes got goods from subject people, the means were different. The Andean leaders also directed corvée workers into public projects more effectively than did their Mexican counterparts. The Incas appear more disposed to negotiate with provincial leaders than were the Aztecs, and more inclined to accept reciprocity as principle. The Aztecs pushed surplus food and prestige tribute goods through the market system; the Inca developed more extensive storage systems. Both encouraged textile production using specialized female workers.

As new zones were incorporated into the Mexica tribute empire, particularly as the Aztecs pushed into the lowlands of the southeast, its elite acquired cacao, cotton, or tropical feathers as exotic import items. As the Inca colonized new areas, coca, cotton fabric, and rare sea shells (*spondylus*) conferred status on their possessors. But apart from consuming "exotic imports," the Aztec and Inca elites employed the large surpluses of ordinary goods commanded through tribute or labor services in order to wield social and political influence. The display of abundance represented by Moctezuma's incessant changing into dozens of the same kind of tunic rather than donning a single glittering cloak

was his claim to high status. By the same token and for the same ends, the Inca elite amassed thousands of jars of ordinary food such as chicha and bales of cloth – not, as once believed, as stores against famine (although it also served that purpose), but primarily for distribution in order to cement social and political arrangements.

Over the course of several millennia the people of Mesoamerica and the Andes had established their essential elements of diet, clothing, shelter, and tools, some of which would endure through the sixteenth-century invasion and even through the more pervasive intrusions of world markets after the 1870s. Pre-Columbian life was not of course, a "historia casi inmóvil" but rather a world of truck and trade where the most ordinary objects were laid out for display in innumerable village squares, or, in the case of the Andes, exchanged among members of extended communities. Patterns were never immutable. Men and women modified their diet, dress, and shelter to the environment and accepted new materials and techniques.

People across the hemisphere also created a long list of innovations in their material culture. One might begin with the rudimentary hammock or a dugout canoe, or the device used to press out prussic acid in order to make edible the poisonous manioc root, and procede to the sophisticated quipu, or knotted string method of accounting, or the ingenious wind-blown clay furnaces used to smelt silver from ore on the slopes of the great mine of Potosí in Upper Peru. There was, besides the exquisite textiles and elegant pottery, the spectacular work by gold- and silversmiths. To this should be added the development of the remarkably productive agricultural systems that so astonished the invading Europeans. All of these techniques and original products grew out of the elaboration of materials native to aboriginal America.

In the Northern Hemisphere autumn of 1492, the first Europeans appeared from the east, out of the Ocean Sea. They came upon, at first, not the great kingdoms on the high plateaus of Mesoamerica and the Andes, but the simpler island cultures of the Taino and Arawak in the stream of the trade winds. Here they found rudimentary farmers and fishermen able to support a substantial number of people. Into this more or less benign world of polished stone and carved wood, there came, in the words of a Caribbean scholar, "A hurricane of culture from Europe. There arrived together and in mass, iron, gunpowder, the horse, the wheel, sail, the compass, money, wages, writing, the printing-press, books, the master, the King, the Church, the banker . . . at one bound

the bridge between the drousing stone ages and the wide-awake Renaissance was spanned."[44] The Europeans required three or four decades more to uncover and bring under tentative control the formidable highland empires of the Aztec and Inca. The conquering Christians introduced radically new techniques and tools, new plants and animals, to alter the production of material culture; and they carried new markers of social and political prestige in a world they "turned upside down." The initial assault was quick; its consequences are still with us.

[44] Fernando Ortiz, *Cuban Counterpoint: Tobacco and Sugar*, introd. Bronislaw Malinowski, prologue by Herminio Portell Vilá, trans. Harriet de Onís from the Spanish (New York: Alfred A. Knopf, 1947), pp. 99–100.