FOOD HABITS IN LATIN AMERICA: A PRELIMINARY HISTORICAL SURVEY

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LATIN AMERICA today presents a varied picture of food habits. Within brief geographical spans one finds wide differences in foods consumed, mode of preparation, and allotment within a population. An adequate and comprehensive history of these habits during the past half millenium is obviously out of the question here. In the first place, the term "food habits" covers a wide range of distinct, although related, phenomena. A glance at the table of contents of the National Research Council's *Manual for the Study of Food Habits* (14) suggests that the breadth of the anthropological approach has invaded the field. Not only does it include types of production, preservation, distribution, preparation, consumption and "postconsumption" practices, but it goes into the areas of division of labor, etiquette, food ideology, food technology, etc. In tracing this broad series of variables in Latin America, we are confounded by extreme differences in social types, ranging from self-contained tribal societies of the Amazonian forests to the complex urban aggregates of modern cities such as Buenos Aires, Rio, San Paulo, and Mexico City. And, finally, in the historical perspective, we

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must recognize a variety of aboriginal, European, Asiatic, and Creole societies that have preceded the present populations.

This essay will be limited to only two phases of food habits and to a brief review of what has happened to them in the past four hundred years. The first of these is the distribution of food preference patterns, specifically, those concerning staples and important secondary foods. The second is the nature of the social organization that influences the channeling of the available food to the people.

Food Habit Areas at the Time of First Contact

In terms of these two phases of food habits, the aboriginal Latin-American cultures at the time of first European contact may be divided into four types. The first is that based on an intensive cereal agriculture subsistence pattern, or a mixed dependence upon grains and tubers. These extended from the North American Southwest down the west side of northern Mexico, through all of central Mexico and Central America, and then down the west coast of South America to approximately the forty-second parallel south. This Isthmian-Andean area held the major high cultures of aboriginal America, together with numerous lowland tribes that, under their influence, developed to a degree that distinguished them from other less advanced societies.

Common to these high culture centers, Meso-America (Central Mexico, Yucatan, and highland Guatemala) and the Central Andes, was a series of expanding nations of tribal origin, with social classes that played a role in the differential distribution of food stuffs. The Aztecs demanded tribute in food from their conquered tribes, especially hard-to-come-by items such as salt. Salt, thus gained, was distributed principally among the nobility. The intensive cultivation of and

dependence upon corn in the Meso-American area accompanied a depletion of wild fauna so that protein from that source was limited. Domesticated animals in this region were restricted to the turkey and the dog, both of which were of limited importance in the diet.

The dominant food complex of Meso-America was the famous corn and bean combination that is still the basic subsistence pattern today. The preparation of corn involved soaking it in limewater or wood-ash water in order to break down the grain so that it could be easily ground and prepared into the fine, flat corn cakes (*tortillas*) that still form the core of the Meso-American diet. As one moves out of the Meso-American area, corn continues to be a basic food of the agricultural populations, but both its processing and relative importance change. In modern Panama we can see the distinguishing character of the South American use of corn. Instead of being chemically broken down, the grain is simply crushed in a wooden mortar or on a stone. The stone was and is standard in Meso-America, but it is a tool for grinding rather than crushing. Also, in the Andes, corn is more commonly eaten green, whereas dried corn is standard in Meso-America.

The differences between Andean and Meso-American patterns in the use of corn have led Carl Sauer (63) to postulate maize as intrusive to the Andes, and hold that tubers, principally the potato, are the major crops indigenous to the region. It is true that corn did not grow at the highest altitudes, and that potatoes and the native Andean grain, quinoa, were the staples. But, archaeologically, corn appeared in the early periods of coastal Peru and was early a staple in the intermountain valleys, where major segments of the Andean population lived. At the time of contact there is no

question as to the importance of corn. Rather, the Andean pattern included a variety of highland tubers (potatoes, *oca, ulluco, mashwa*) and grain crops.

The social structure of the Andean area was also highly segmented and classified. The prohibition of wild land game to all but the Inca nobility reflected a depletion similar to that occurring in Meso-America and is suggestive of the nature of the differential distribution of food that was an intrinsic part of Incaic organization. While corn was common to the Isthmian and Andean food regions, and both regions had redistribution through central authorities, the Andeans had a much more highly systematized food control system at the time of the first contacts. The justly famous Incaic system provided that two thirds of the produce of the entire empire be turned over to the state and the church; but, much of this was set aside in granaries for supply to needy populations within the empire during times of local famine. Thus did the Incas build their state on the sufficient distribution of food.

The next major area can be called the "eastern farmers." This region extends roughly from longitude 60 west to the Atlantic coast, and includes also the Caribbean coast of northern South America. Here, the northern and southern extremities are broken up by a third type of area, the collecting, to be discussed below. The eastern farmers differed from the Isthmian-Andean peoples both in terms of staples and social organization. Here the so-called poisonous or bitter manioc was the staple, and hunting, fishing, and gathering played a highly significant role in both economy and diet. These forms of collection, however, were still secondary to agriculture. While manioc was the staple, other plants were domesticated throughout this area; important among these were the sweet manioc, or yuca, and maize.

The eastern farmers lived in tribal and band organizations, moving every few years as they wore out their cultivation grounds. While they had chiefs, who were responsible in some cases for holding the bands together, there was no social stratification such as characterized the Isthmian-Andean area, and therefore no such channeling of food distribution through limited segments of the total population. The redistribution pattern in which gifts were given to the chief also required an equal or greater return on his part. Despotism was probably not characteristic of these tribal chiefs, nor was a palpable differentiation in food distribution due to segmentation of the society.

Our third area is that of the collectors. This is not a single, contiguous region, but rather a type of region that was found both at the northern and southern extremes of Latin America and in some internal regions as well. Although collectors, including gathering, hunting, and fishing peoples, appear to exercise less control over their food supply than do farming societies, they still have a good deal to say about what they consume. From the wide variety of foods available to collectors of the forest regions, selections and restrictions were made through taboos, traditions, and preferences. Thus Holmberg (34) reports that a Siriono family, although many days without food, would not eat meat since it had no fire with which to cook it. Levi-Strauss has noted in this respect that "no fundamental culture trait depended directly upon the botanical environment" (41).

Nevertheless, collectors collected only from what was available, and this in itself is enough to distinguish widely differing food habit patterns. In the north of Mexico the food gatherers subsisted in what was essentially an arid or desert area. They depended upon "tuna, mesquite, rabbits, deer,

ducks, and other small animals; seeds were of slight importance" (46). As in the case of most such collecting societies, they utilized methods of extraction and preparation that have in some part been lost to us now. In the far south there were two general types of collectors, the hunters and gatherers of the pampas of Patagonia, and the Fuegian tribes of south Chile and Tierra del Fuego. The former were hunters and gatherers, depending upon the guanaco and ostrich and a variety of other smaller game, roots, seeds, berries, and fruits. The Fuegian tribes were principally coastal and depended upon sea hunting and fishing.

In the area of the Orinoco and along the southeastern Brazilian coast were other collecting tribes, groups that occupied regions unsuited to agriculture or that traditionally depended upon hunting and riverine resources. Such groups were and are to be found scattered through the tropical lowlands of South America.

The final area here distinguished is the interior of South America, stretching from the Andes on the west to the eastern farmers. This region is distinguished because it is a mixture of the major elements that characterize the areas surrounding it. Although there is dependence on lowland farming, bitter manioc is not the characteristic staple in much of it. Also, agriculture is generally secondary to hunting, fishing, and gathering. Some tribes move from agricultural plots to hunting areas, and many divide their labor so that the men are concerned mainly with collecting activities and the women are responsible for the agriculture. Along the base of the Andes, in the Peruvian and Ecuadorian *montãna,* there is a notable influence of the Andean highlands in many aspects of the culture.

Typical of the collecting and interior areas is a complete

lack of social stratification along class lines. Food distribution is made along familial and kin relationships on the one hand, and on residential propinquity on the other. In one of the few careful studies of food distribution among these tribes, Henry (32) has shown that generosity with food was a major way for a headman to keep his group together and, if anything, the weaker tended to receive more gifts than the stronger. While periods of scarcity affected the group, they were felt equally by all. There was no systematic storage such as developed in the Andes, so reciprocal exchange played a much larger role than did redistribution of food.

Changes in Food Habits Since the First Contacts

Archaeology indicates that there had been a regular shifting in food habit emphasis during the centuries preceding the arrival of the Europeans in the New World. In areas long used to the yoke of conquest and increasing population, the arrival of the Spaniards was merely a new development. Urbanization started on the Peruvian coast by the thirteenth century and, under both the Meso-American and Andean empires, hunting had ceased to play any role in subsistence.

In Meso-America the growth of the Spanish colonial system did not alter the traditional subsistence habits of the majority of the population. It did, as elsewhere, have a startling effect on the general welfare of the people and in Central Mexico the population dropped from about ten million in 1520 to two and one half million a hundred years later. The basic food habits that are to be found in the countryside of Meso-America today, however, are clearly carry-overs from the pre-contact period. Corn and beans remain dominant in the higher regions, and the special lime or wood-ash chemical breakdown of the corn for grinding and

ultimate conversion into the tortilla is still found from Mexico to Costa Rica. The most significant innovation in this diet is the appearance of sorghum in areas of soil depletion. This crop continues to give a good yield where corn weakens, and, what is more important, it can be handled in the domestic economy in the same manner as corn.

This central complex of food is supplemented today by animal products, especially meat, whenever possible. In the populations maintaining an indigenous tradition, the food making the greatest inroad has been the plantain. There has also been regional acceptance of certain crops due to their peculiar adaptability to a climatic situation. Thus in the higher areas of Guatemala wheat and sheep are important, although the latter are perhaps more important for their wool than for their meat. The major change in diet of Meso-America, however, is not a result of a gradual diffusion of European products into the older Meso-American system, but of a gradual and differential shift of the entire culture to a new tradition. Where food patterns are found to be different today in Meso-America, the differences basically reflect the fact that the entire cultures are different. While there has been a certain amount of food habit syncretism, the greatest consistent differences evident in the studies of the Institute of Nutrition in Central America are between Spanish Americans and Indians, and between the rural and urban components of the population (23, 24, 25, 55, 56, 57, 58, 64). Rice, wheat bread, tubers, greases, and the greater use of meats are the mark of the Spanish-American culture and urban aggregates. In the rural areas it is the wealthier families that partake of these essentially urban habits; the poorer families tend to eat beans, corn, vegetables, and meat whenever available. A curious nutritional consequence of this

differential is that in some communities it is the poorer families who show a nutritionally superior diet; the wealthier have been drawn away from the better-balanced Indian diet by the urban habits of consumption of sweets, wheat bread, and fats. This is not universal, but it has appeared in enough of the INCAP dietary surveys to suggest that it is certainly not unique. The same situation is to be found where people of the Spanish-American heritage live side by side with Indians in Central American communities. The Spanish-Americans' diets turn out at times to be nutritionally inferior to those of their lower-class Indian neighbors. In the urban, Ladino, and wealthy categories we find a general decrease in the amount of corn consumed.

The Andean countries, unlike the Meso-American, have undergone a significant regional change in patterns. The difference becomes evident when we move from Costa Rica, across the border into Panama. Although indigenous patterns have remained dominant in the Andean highland population, the lowland diet has shifted strongly toward a base of European-introduced staples. The most important of these is rice. From Panama, south along the west coast of Peru and the eastern region of the Andes, rice has become a major staple. Although the reasons behind this are complex, the following circumstances may account for it.

The Andean area, like Central Mexico, underwent an enormous population decrease following the conquest. In the first fifty years of Spanish control the population of the Inca Empire dropped from approximately six million to one and one half million, roughly the same proportion as the loss in Central Mexico. While data are far from complete, the research of Rowe (61) suggests that the greatest loss by far was in the coastal rather than the highland areas. The

Chincha Valley was reduced from fifty thousand to two thousand and the Rimac Valley (where Lima is located), from one hundred and fifty thousand to nine thousand. When the population finally began to recuperate, in the eighteenth century, the population increase on the coast was basically Spanish-American, while in the highland there tended to be a renewed population maintaining a basically Indian tradition.

The fantastic loss of population along the coast, plus the Spanish demand for the lowland cereal, rice, probably account in part for the successful dominance of that food. The Spanish consistently introduced their crops and animals all over the Andes, but altitudinal differences precluded the acceptance of some, while the highland populations simply undertook the cultivation of wheat and barley as a necessity for tribute payment and seldom took these foods into their own diet. Thus, while many crops of European origin were being cultivated extensively in the highlands, in 1600 the diet of the Indian could still be described as consisting of quinoa flour, potatoes, and dried llama meat. The highlanders rejected the new crops because they did not need them, but, of more importance, the social structure of the agricultural producing unit was not broken down. The Spanish conquest merely placed a new leader on top and broke up the Incaic redistribution system.

Urbanization in the Andean coastal valleys started before the conquest, as did the strict control of food production. By the eighteenth century rice was a crop of important urban consumption supplied by the coastal area. South of Meso-America, in Panama, rice is the major staple. In rural Panama it is two to four times as important as corn, but in urban Panama rice vastly outweighs the aboriginal grain. In

studies of the Peruvian Institute of Nutrition, rice consistently appears as an important staple on the coast. The importance of rice on the jungle side of the Andes answers to another set of historical circumstances. There the European staple was preferred by the Spanish-American settlers to the native corn, and the new communities that grew up in that region were populated by these immigrants.

The Andean situation differs from the Meso-American picture, then, in that there is also a strong regional difference in terms of highlands and lowlands as well as rural-urban differences. While altitude differences are of local importance in Meso-America, there is no vast areal distinction simply because the staples, corn and beans, grow equally well in both areas. Quinoa and potatoes grow neither in the tropical jungle nor on the coastal valleys of Peru, nor does rice survive in the highlands. Where wheat, barley, and other European crops have been successfully taken into the highland diets, there is a strong Spanish-American component in the population as is the case in the eleven-thousand-foot-high Jauja Valley of Central Peru. The Isthmian-Andean area has become further differentiated today than it was at the time of first contact, and this differentiation has taken place along geographic, urban-rural, ethnic, and wealth lines. In all, however, the dominance of European-derived food habit patterns is to be found only as they have been synthesized with aboriginal habits, specifically, as they have been carried by actual population segments with a general European or Spanish-American tradition. Introduced staples have not significantly diffused into the indigenous populations; indigenous staples, on the other hand, have been taken over to a great extent by the Spanish-American population.

Events in the other aboriginal areas have been similarly

complex. The pampa collectors of the far south, following the introduction of the horse, experienced a development parallel to that of our own Plains Indians. Meat became the major item of their diet. The Spaniards, availing themselves of the pasturage of the pampa region, developed a cattle culture that dominated their diet. Jesuit missionary reports of 1750 claimed that the rural farmer ate two kilograms of meat per meal, and that he consumed nothing else except water and *mate*. The rank and file of the army at this period received between three and four kilograms as their daily ration, and nothing more, and to this was added biscuit and dried *pimiento* for the officers.

The present area of northeast Argentina, Uruguay, eastern Paraguay, and southern and central western Brazil is what de Castro regards as a generally well-fed region (18, 19). The food patterns in this area vary, with heavy emphasis on beef in the south, manioc as a staple in the west and interior section, and a wide variety of commercial crop production in much of it. Here are to be found patterns of the variety of European settlers combining with the aboriginal manioc, beans, and corn. In the rural areas, particularly toward the interior, the aboriginal complex dominates, with rice for urban consumption added in irrigated regions.

In this area and in northeastern Brazil the aboriginal population has essentially been extinguished. In some cases refugee groups have pushed back into the interior, but for the most part we know these groups only through early accounts. They were first friends, then enemies, then slaves and labor for the developing plantation systems of eastern Brazil. A few, such as the Cayuá, have until recent years stayed just out of reach of the neo-Brazilians. Among surviving aboriginal groups, the degree of change in food

patterns is directly related to the degree to which their hunting and collecting activities have been restricted and the degree to which they have undertaken to trade with Westerners. The Cayuá, as an example, have shifted more than ever onto a diet dependent upon agricultural products, but the staples are still of aboriginal origin. Tribes of the area that we called the interior at the time of contact have been touched less directly, but they have received various indirect influences and have maintained an aboriginal adjustment to the habitat to a greater degree than have any other Indians to the east or west.

Manioc, corn, and beans—the first is the principal staple—have survived over most of the Amazon basin. Although, as James (37) has pointed out, the Amazon flood plain is a strong potential rice-producing area, very little of it is so used. Evidently the movement of Ibero-Americans into the area has been such that an adjustment to aboriginal patterns has been easier than the introduction of new cereal crops. One of the consequences of contact between some of these tribes and the expanding Brazilians has recently been described by Murphy and Steward (50). In former years many of these groups were organized in tribal societies with leaders and, presumably, there was considerable exchange of foodstuffs. The contact with Brazilian economic needs has tended to break down the societies into individual family units, each of which works more or less alone in the process of extracting jungle products for sale. This breakdown reflects a shift in dependence from extended kinship and tribal territorial ties to dependence upon profits and goods derived from trade with the outside and a consequent breakdown of the reciprocal exchange fundamental to the earlier groupings. Although the food insurance of the tribal and kin-based society has

thus deteriorated, the basic food patterns of these people are doubtless similar to those of earlier years.

Nutritional studies of semi-horticultural, semi-hunting tribes are few. In one such study, on the Miskito of Nicaragua, Pijoan (53), concludes that although eating is irregular, the diet is generally adequate. The major staple of this group is the banana, but there is both extensive and varied supplementation from numerous wild meat and vegetable sources.

An Overview

The foods of the Europeans have made rather less impression on the New World than have other aspects of their culture. Whereas European languages and political systems, European religions and territorial organizations have eliminated the aboriginal from many parts of the continent, and have markedly altered it elsewhere, almost nowhere have European foods entirely pushed aboriginal foods out of the picture, and in very few places have they taken over as staples in essentially aboriginal populations. If one were to pick the introduced foods that have made the greatest impression on contemporary diets, they would probably be rice, wheat, the plantain, cattle, pigs, and chickens. The last of these is mentioned with some reservation, for although every rural yard has chickens, most are for sale rather than consumption. Of these, and the other foods once available to tribal societies, nothing has successfully replaced the wild meat which was subsequently restricted from the general diet with the pre-Columbian higher cultures of the Isthmian-Andean region. Beef is nutritionally sound, but economically out of the question for many. Although wheat, barley, and other European grains have become of major importance in much of Latin America, it is in areas of European culture tradition

that they are staples. They are secondary or unimportant where aboriginal traditions dominate. On the other hand, beans, corn, manioc, and a variety of New World crops have been taken over by many Ibero-American populations in essentially the same form, but not necessarily to the same extent, as used by the Indians.

The segmentation of society that characterizes the Western urban-rural axis has led to differentiation in food patterns not only as between the urban and rural, but also along ethnic lines, wealth and occupational differences, and regional specialization of production. As nutritionists have long been aware, the differential distribution of food due to these factors is just as important in determining nutritional status as is the outright absence of foods due to reasons of environment or taboo. Although transportation of foods can today sustain such metropoli as Mexico City, Buenos Aires, Sao Paulo, and Rio de Janeiro, food taboos, class prestige, and economic ability still reduce the effectiveness of some diets.

While publicists and politicians have from time to time felt the necessity of calling the world's attention to the fact that many of the people of Latin America are malnourished, there has also been some prejudiced reporting on the matter. The International Labor Organization (36), after consulting with a few people, declared almost all aborigines to be in an incredible state of undernourishment. De Castro (19) claims that all but a small portion of the southeast coast of South America is in dreadful condition. These claims cannot be sustained on the basis of the present survey. Where intensive dietary studies have been made, the results have varied. In a study of over one thousand Otomi Indians in 1946 (1), it is reported that they have a well-balanced diet. The work of

INCAP, while demonstrating serious infant malnutrition, has certainly not shown that general diets adversely affect the individual. Although there are specific lacks, these are often regional in nature, and the reasons for their presence or absence are not always clear on the basis of our present knowledge of food habits.

The present survey suggests that while European foods have added greatly to the range of diets in Latin America, the surviving aboriginal diets have sometimes proved to be more satisfactory nutritionally than the mixed diets of new tradition. Because of socioeconomic factors, the new mixed diets are so limited in their distribution that it is virtually impossible to generalize concerning their effect on nutrition. The development of a diet, well adjusted both to the habitat and the necessities of the population, is a delicate process at best; when it is beset by a multitude of accelerating changes, such as Latin America has experienced in recent years, it can hardly stabilize with ease. Unfortunately, our knowledge of this subject is just beginning. The dietary surveys are as yet few and far between; fewer yet have taken into account the social variables that can be significant for understanding differences in food distribution and preference.

Finally, it is clear from these glimpses into a vast and underexplored field that food habits, if anything, have tended to change rather less rapidly than other aspects of culture, and that where they occur, they signal a much vaster change in the entire social structure. The entrance of wheat bread, milk, and more meat in the Meso-American diet today is a part of ladinoization and urbanism, and the motives leading to their acceptance are not, fundamentally, an interest in better nutrition. The dominance of rice in the

lowland Andean zone heralds the fact that these populations are no longer basically Indian.

If a change in the pattern of staples means a change in the entire culture of a society, the nutritionist is indeed engaged in a momentous and far-ranging task. It may, in fact, be more difficult than the recent attempt to eliminate the family in Communist China, or the almost successful attempt to eradicate the American Indian in the course of our own westward expansion.

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