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THE GEOGRAPHICAL, LINGUISTIC, AND CULTURAL POSI-TION OF THE POPOLUCA OF VERACRUZ By GEORGE M. FOSTER

If THE pre-Conquest Aztecs had not contemptuously referred to a number of distinct alien groups as "Chontales" and "Popolocas" (Popoloco, Popoluca, Pupuluca, etc.), the work of later ethnologists would have been much simpler. Fifty years ago Brinton corrected the then common assumption that the various groups so designated were parts of one tribe which had been broken up by invading hordes and forced to flee in all directions. The Nahuatl words chontalli and popoloca are variously translated as "foreigner," "stranger," "barbarian," and "one who speaks an unintelligible tongue," and are common nouns, not tribal names. Brinton attempted to classify all of the groups so designated, and to a considerable extent was successful.

One of the Popoloca groups that has proven most baffling is that known as the Popoluca of Veracruz, who speak languages related to Mixe-Zoque. Various scattered references to this group, or groups, for actually there are four distinct idioms spoken, have appeared from time to time, but in none has the relationship of the four groups been clearly defined. This paper, based on field work in 1940 and 1941, attempts to delimit as precisely as possible the geographical position of the Veracruz Popoluca, comments on earlier references to them, discusses probable linguistic relationships, and very briefly summarizes the cultural status of the most numerous division.

North and west of the Coatzacoalcos River, which drains the northern part of the Isthmus of Tehuantepec, rises a local coastal volcanic mountain chain which runs from southeast to northwest past Catemaco and the Tuxtlas until it disappears in the marshy depression of the Papaloapan drainage. Individual peaks rise to 5000 feet, and the entire area, which is separated from the cordillera of Oaxaca, is rough and broken. On the southern and eastern slopes of this range, and in the flat Coatzacoalcos river basin, are found all of the present day Veracruz Popoluca. As pointed out, four linguistic groups are distinguishable. These may be referred to as the Sierra, Oluta, Sayula, and Texistepec Popoluca. The first-named, numerically most important, live in the mountains at altitudes of from 400 feet to nearly 3000 feet and occupy about 25 villages and rancherias with populations numbering from 50 to more than 1000. The total population is about 10,000. The other three groups are limited to the pueblos of the same names, all near the trans-Tehuantepec railroad line at a distance of about 40 miles from the Coatzacoalcos terminal, and are linguistic islands of about 3000 inhabitants, each surrounded by Spanish and Aztec-speaking peoples.

¹ D. G. Brinton, Chontales and Popolucas: A Contribution to Mexican Ethnology (Compte-Rendu de la Huitième Session, Congrès International des Américanistes. Paris, 1890), pp. 556-564.

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First mention of these towns known to the author is from the year 1580, when the alcalde mayor of the Villa de Espíritu Santo, near the site of modern Coatzacoalcos, compiled a list of the towns in his jurisdiction. Included in the list are the names Xoteapa (Soteapan, traditional point of dispersal of the Sierra Popoluca); Otutla (Oluta); Tezistepeque (Texistepec); and Zayoltepeque (Sayula), as well as the Aztec-speaking towns of Gozaliacaque (Cosoleacaque), Oteapa (Oteapan), Chinamecan (Chinameca), Xaltiba (Jaltipan), Soconosco, Acayucan, and Macayapa (Mecayapan). This list includes most of the principal towns of today, a fact indicating remarkable stability in populations since at least the sixteenth century. Mexicano (Aztec) is stated to be the predominant language, but attention is called to the existence of a Popoluca language, although no attempt is made to indicate in which places it was spoken.

Villa-Señor y Sanchez (1746) mentions San Pedro Xocotapa (Soteapan), San Juan Olutoa (Oluta), San Miguel Thesistepec (Texistepec) and San Andres Zayultepec (Sayula), but does not specifically connect Popoluca speech with them. He states, however, that 32 Indian families that lived in the parish of Chinameca were preached to in Popoluca. Lacking word lists, it is impossible to say whether the Popoluca which is said to have been spoken in San Francisco Ocuapa in the district of Ahualulcos is related to any of the four modern idioms. This may be the case, or it may have been another related language, or again it may have been a totally different speech.

The Estadística del Estado Libre y Soberano de Veracruz for 1831 reports that Sayula had a population of 1206, Texistepec of 2132, Oluta of 659, and Soteapan of 1665, but the linguistic affiliation is ignored.

In a relatively lengthy and important article written in 1848 Andre Iglesias points out that with the exception of Soteapan, where Popoluca was spoken, all of the municipios of southern Veracruz were inhabited by Aztec-speaking peoples. This article is of double significance because of its bearing on an oversight of Orozco y Berra in his Carta Etnográfica de México published in 1864. It is found in the Diccionario Universal de Historia y de Geografía, edited by Orozco, and published in 1856. In spite of this fact the existence of tongues other than Aztec in southern Veracruz completely escaped the pioneer Mexican linguist in his noteworthy linguistic classification.

² Suero de Cangas y Quiñones, *Descripción de la Villa de Espíritu Santo* (Revista Mexicana de Estudios Historicos, II, Mexico, 1928), Apéndice, pp. 176-180.

⁸ J. A. de Villa-Señor y Sanchez, Teatro Americano, Descripción General de los Reynos y Provincias de la Nueva España y sus Jurisdicciones. 2 vols. (Mexico, D.F. 1746), p. 377.

⁴ Estadistico del Estado Libre y Soberano de Veracruz (Jalapa, 1831), pp. 23, 26, 27 and 31.

⁶ Andre Iglesias, Soteapan (Apéndice al Diccionario Universal de Historia y de Geografía, III, Mexico, D.F. 1856), pp. 433-438.

⁶ Manuel Orozco y Berra, Geografia de las Lenguas y Carta Einográfica de México (México, D.F. 1864).

The first real information on the affiliation of the Popoluca of Veracruz dates from 1862 when Berendt obtained a 64 word vocabulary, evidently in Oluta, although the place is not made clear. He believed that this language was spoken in "Tesistepec, Oluta, Joteapa (Soteapan), Pajapan, and S. Juan Volador." The list, which is reproduced by Brinton, is badly mixed and is not pure Oluta, or pure anything else, as far as that goes. Pajapan and San Juan Volador are Aztec-speaking towns of long standing, and there is absolutely no indication that Popoluca was spoken in them as late as 1862 and then abandoned in favor of Aztec. Moreover, Berendt was not aware that in speaking of Oluta, Tesistepec and Joteapa he was dealing with three distinct, if related, tongues. Nevertheless, on the basis of this defective linguistic fragment he correctly placed the Veracruz Popoluca speeches (or speech, as he believed) in the Mixe-Zoque family.

Unfortunately, later authors making loose use of this vocabulary largely destroyed the prospects of further clarification of Berendt's initial work, and thereby unnecessarily added fuel to one of Mexican linguistics' most debated questions: Who are the Popoloca? Brinton confused Berendt's vocabulary with the Popoloca of Tecamachalco of Puebla, or rather thought them to be one and the same, and classified both as Mixe dialects. The correctness of the Mixe affiliation of Sayula, Oluta and Soteapan apparently made no impression on subsequent scholars, while the error of the Puebla Popoloca lived to be perpetuated by Thomas, León, and others, so that today the non-specialist who is familiar with the term Popoloca almost invariably thinks of Puebla. As is now well known, this Popoloca is related to Mazatec and Chocho, and bears no known relationship to Mixe, Zoque or the Veracruz Popoluca.

In his original linguistic classification of the languages of Mexico (1903), León badly confuses the several Popolucas, and wrongly classifies those of Puebla with Mixe while ignoring those of Veracruz.¹² Later (1912) he obtained and published word lists from Oluta, Sayula and Texistepec which, although badly written by amateurs, are still sufficiently clear to indicate that three

⁷ H. Berendt, *Die Indianer des Isthmus von Tehuantepec* (Verhandlungen der Berliner Gesellschaft für Anthropologie, Ethnologie und Urgeschichte. Berlin, 1873), pp. 146-53.

⁸ D. G. Brinton, op. cit., p. 559, and The American Race (Philadelphia, 1901), pp. 150-151.

⁹ Cyrus Thomas and John R. Swanton, Indian Languages of Mexico and Central America and their Geographical Distribution (Bureau of American Ethnology, Bulletin 44, Washington, 1911), p. 60.

¹⁰ Nicolás León, Familias Lingüísticas de México (Anales del Museo Nacional de México, Tomo VII, México, 1903), pp. 279-335.

¹¹ In spite of the well-known Distribución Prehispanica de las Lenguas Indigenas de México of Mendizabal and Jiménez Moreno (Instituto Panamericano de Geografía e Historia, México, D.F.).

¹² Nicolás León, op. cit., p. 282, and map.

separate languages are concerned.¹⁸ Lists from all three towns were recorded in 1905, in addition to which there is one from Sayula dating from 1887. In a postscript to the second Sayula list, which is in the final position in this rather jumbled article, León recognizes that "this language is Mixe, although much altered and badly written." It is not clear whether this note applies to the other word lists, or even whether León realized that he was dealing with three distinct idioms. At any rate, in no place does he state that the three tongues are distinct, and in his 1921 Resûmen he simply lists a Popoluca of Veracruz as being in the familia Zoque-Mixeana.¹⁴

In 1908 Calderón¹⁶ published what I believe to be the first really satisfactory vocabularies to indicate definitely the distinctions between Oluta, Sayula and Texistepec, and these have since been reproduced by Lehmann.¹⁶ On the basis of these, and later personal contact with Texistepec informants,¹⁷ Lehmann decided that the speech of Oluta was closest to Mixe, that of Sayula somewhat more like Zoque, and that of Texistepec much like Zoque in both morphology and vocabulary. I am in partial agreement with these conclusions, but feel that the material at Lehmann's disposal was inadequate to definitely establish such precise affinities.

Meanwhile, in 1925, Blom and LaFarge spent several days among the Sierra Popoluca, and their very welcome vocabulary is the first known to exist of this numerous group. They, however, make no mention of the other three Popoluca groups, and the unwary reader is left with the impression that there is but the one Veracruz Popoluca language. On the other hand, although Lehman includes the Blom and LaFarge reference in his bibliography (1928) he refers to it in no other place, leaving the reader to believe that the Sayula, Oluta and Texistepec speeches are the only ones extant.

In their generally excellent linguistic map of Mexico, Mendizabal and Jiménez Moreno correctly list the Popoluca (in the form Popoloca) as related to Mixe-Zoque, but apparently assume that the four languages represent only slight dialectic differences that need not be considered separately.¹⁹

¹³ Nicolás I.eón, Vocabulario de la Lengua Popoloca Chocho ó Chuchona, con sus Equivalentes en Castellano (Anales del Museo Nacional de Arqueología, Historia de y Etnología de México. Número extraordinario en homenage al XVIII Congreso Internacional de Americanistas que se reunirá en Londres el mes de Mayo de 1912. México, D.F. 1912), pp. 1-55.

¹⁴ Nicolás León, Familias Lingütsticas de México: idiomas y dialectos a ellas pertenecientes (4a Revisión [Resúmen], México, D.F. 1921), p. 1.

¹⁶ Eustorijo Calderón, Estudios Lingüisticos (Guatemala, 1908). These vocabularies are known to me only in Lehmann.

¹⁶ Walter Lehmann, Zentral-Amerika (Berlin, 1920), pp. 771-787.

¹⁷ Walter Lehmann, Ergebnisse einer mit Unterstützung der Notgemeinschaft der Deutschen Wissenschaft in den Jahren 1925/26 ausgeführten Forschungsreise nach Mexiko und Guatemala (Anthropos, vol. 23, 1928), pp. 749-791.

¹⁸ Franz Blom and Oliver LaFarge, Tribes and Temples (New Orleans, 1926), Vol. 2, pp. 455-564.

19 Miguel O. de Mendizabal, and Wigberto Jiménez Moreno, op. cit.

In spite of this lengthy, if admittedly not always first class array of material, the status of the Popoluca of Veracruz is still so little understood that in the Tozzer anniversary volume Mason²⁰ completely ignores them, while Johnson²¹ dismisses them as "scarcely more than a rumor." Apparently Popoluca source material is so inadequate as to be easily overlooked by the person interested in the total linquistic picture of Mexico. It therefore seems advisable to define the geographical, linguistic, and cultural position of the elusive Veracruz Popoluca as accurately as is possible.

First of all it is desirable that a standard terminology be used henceforth in designating the peoples in question. I believe that the term "Popoluca of Veracruz" (or "Veracruz Popoluca") can best be applied collectively to the four languages. It is necessary to emphasize the slight difference in pronunciation of the two words "Popoloca" and "Popoluca," and to explain my reasons for insisting on the latter for the Veracruz groups. Earliest reports refer to them as Popoluca, as do Berendt and almost all other persons who have had first hand contact with them. They call themselves "Popoluca" and are deeply offended when someone through ignorance or carelessness speaks of them as "Popoloca." Moreover, this minor difference, if strictly adhered to, is sufficient to distinguish the Veracruz peoples from the Puebla Popoloca, thereby ending three hundred years of confusion.

Within the Popoluca of Veracruz nomenclature offers no problem. Three of the languages are limited to single towns, and the names of these towns can logically be applied to the languages spoken. From this we get the Texistepec Popoluca, the Oluta Popoluca, and the Sayula Popoluca. For the fourth group I propose the name Sierra Popoluca. As mentioned, about 10,000 persons living in more than a score of towns and villages in the Tuxtla Sierra compose this unit. Consciousness of linguistic identity and similar habitat is justification for the term.

Summarizing, we have the following picture:

POPOLUCA OF VERACRUZ (Branch of Mixe-Zoque).

- 1. Sierra Division. 10,000 persons.
- 2. Texistepec Division. 3000 persons.
- 3. Oluta Division. 3000 persons.
- 4. Sayula Division. 3000 persons.

No two of the four languages are mutually intelligible. The phonemic patterns are similar, but each has its distinctive features. That of the Sierra, which as here reproduced is not to be considered final, will serve to illustrate.²²

²⁰ J. Alden Mason, *The Native Languages of Middle America* (The Maya and Their Neighbors. New York, 1940), pp. 52-87.

²¹ Frederick Johnson, *The Linguistic Map of Mexico and Central America* (The Maya and Their Neighbors. New York, 1940), p. 109.

²² A more detailed linguistic analysis is now in preparation.

	Consonants					Vowels			
	labials	dentals	front palatals	mid palatals	glottals		Unrou	nded Roun	ded
stops	p	t	ty	k	9 -		Front	Mixed	Back
affricatives		tś	č			High	i— <i>i</i>		uv
spirants		s	š		h	Mid		co 3	
nasals	m	n	ñ	ŋ		Low		ŭ a	
semi-vowels	127		37						

Noteworthy is the palatalizing effect of the vowel i, which when in nexus with t, ts or s causes them to become t^{ν} , \check{c} and \check{s} respectively. In addition, t^{ν} , \check{c} and \check{s} occur as separate phonemes. When in syllable initial in nexus with i, n becomes \tilde{n} ; when final in a closed syllable it remains unchanged. \tilde{n} also occurs as a separate phoneme, although it may be a later secondary development, the original phonetic conditioning vowel i having disappeared through normal morphologic processes. The surd stops are sometimes voiced as free variants, and in conjunction with certain vowels and vowels plus glottal stops they are always voiced.

Oluta consonants differ in that the stops are almost never voiced, while b replaces the Sierra w, which here does not occur. When in nexus with i, ts becomes \check{c} , but \check{c} does not otherwise occur. s is rare and its equivalent is usually \check{s} . Both t^{v} and \check{n} are entirely lacking, and p almost so. The palatalizing tendency of i so clearly seen in the Sierra is thus almost lacking in Oluta.

Likewise in Sayula the palatalizing effect of i is slight. t and n are never palatized, and \tilde{n} does not exist. ts in nexus with i becomes \tilde{c} , which also exists as a separate phoneme. g occurs as a free variant with k, particularly between vowels, but p is rarely voiced, and t never. p is almost entirely lacking.

The outstanding feature of Texistepec consonants is the strong development of voicing. p, t and s in word initial positions are almost always voiced. k preceded by m, n, or y tends to be voiced, as well as when found between two vowels. t following m or n is voiced. Sierra word initial n usually becomes d, and occasionally transitional nd. Sierra word initial m usually becomes d, and word initial y often becomes dy. d and d usually are palatalized following the same rules as the Sierra, but d appears to be little affected.

Vowel values have not been completely worked out. In the Sierra language, front rounded vowels are long and short i, which may or may not be variants of the same phonemic entity, short e, and a very short u; back rounded vowels are long and short u, and o, which under certain conditions is short; a is low mixed.

A preliminary and impressionistic comparison of common roots based on

a 116 word vocabulary, including Mixe and Zoque, shows the following relationships. The figures refer to the number of words with recognizably common roots.

	Tex.	Say.	Ol.	Mixe	Zoque
Sierra	96	59	54	54	83
Texistepec		53	54	50	84
Sayula			77	79	58
Oluta				77	57

Forty-one roots are common to all languages.

Thus, Texistepec and the Sierra are seen to resemble Zoque most closely, while Oluta and Sayula favor Mixe. Oluta and Sayula are just as distant from Texistepec and the Sierra as is Mixe, and the difference between them is about as great as the difference between each of them and Mixe. The Sierra and Texistepec are the most closely related of any of the six languages (on this admittedly unscientific basis), and this conclusion is borne out on the basis of informants' statements.

Phonemically, Texistepec and the Sierra resemble both Mixe and Zoque in the pronounced tendency to palatalize, while Oluta and Sayula are less similar. On the basis of morphology the Sierra Popoluca is more like Mixe than it is like Zoque, particularly in the practice of compounding verb stems with prefixes to indicate pronominal objects, the sense of "to make to do," and of "to do with." Oluta and Sayula apparently resemble Mixe more closely in morphology than they resemble Zoque, while Texistepec may resemble Zoque more closely than Mixe. But before these relationships can be defined more precisely, additional material is necessary from Oluta, Sayula and Texistepec. It is enough to say that the four languages are sufficiently different to indicate a long period of separate existence undoubtedly going far back into pre-Conquest times. By no stretch of the imagination can they be thought of as mere recent dialects of the same speech.

This linguistic diversity is all the more remarkable when it is known that an arbitrary circle with a radius of 5 miles would include Sayula, Oluta and Texistepec, which in turn are only a few hours' walk from the nearest Sierra Popoluca. It is quite possible that people speaking Popoluca languages at one time occupied the entire northern part of the Isthmus of Tehuantepec, touching the Mixe on the south and west, and the Zoque on the southeast. With the Huave on the shores of the Gulf of Tehuantepec there was thus formed a solid linguistic block extending from the Atlantic to the Pacific oceans, with one

²³ Example: Sierra ka?apa? = "to die"
ak-ka?apa? = "to make to die" = "to kill."

Mixe aokp = "to die"
yak-aokp = "to make to die" = "to kill."

possible small break in the form of a southern and eastern extension of Zapotec intrusive between Huave and Mixe-Zoque. This block apparently was disrupted with the arrival from the north in pre-Conquest times of Aztec-speaking groups which flowed into the rich lands of the southern Veracruz coast, forcing the Popoluca onto the less fertile and hence less desirable land of the Tuxtla Sierra, and breaking their contact with the Mixe and Zoque. At the time of the Spanish colonization of the Coatzacoalcos basin, beginning in 1522 with the founding of the Villa de Espíritu Santo, the Aztecs were so firmly established that the existence of a completely distinct Popoluca tongue usually was overlooked.

An important cultural difference exists between the towns of Texistepec, Sayula and Oluta on the one hand, and the towns of the Sierra on the other. Geographically and culturally these three pueblos have more in common with the non-Popoluca peoples who inhabit similar lowland, unforested country than with their Sierra cousins. Texistepec is but a mile from the railroad, and is a stop on the line. Oluta is on the all year highway between the railroad station of Ojapa and Acayucan. Sayula is an hour and a half distant by horse from both Oluta and Acayucan. In all three towns Spanish is generally understood, mail arrives daily, newspapers are read by a few, schools and civil government function, and the general increment of civilization is noticeably higher than in the mountains. They are by no means as advanced, however, as the Mexican "folk-cultures" as described for Mitla and Tepoztlán.

The Sierra group occupies relatively poor and inaccessible territory, and has therefore remained much less influenced by European civilization than the populations living in the lowlands. These people are very suspicious of all outsiders, do not like to leave their land, and have knowledge of the outside world principally from traders and their own hurried journeys to the railroad towns. Two historical accidents, the establishment of a coffee finca in the 1890's and the Mexican Revolution, were the most important factors in bringing about a change in the way of life followed for centuries. Beyond a strong dislike for all outsiders, the outstanding effects of these events may be summarized as knowledge of Spanish by most men, general use of money as contrasted to a former barter economy, a new cash crop in the form of coffee, stimulated desire for trade articles, and a decline in the old arts and crafts.

The geographical position of the Sierra Popoluca has been as much of a puzzle as their linguistic position. Blom and La Farge give us our first definite information, but mention only the easternmost villages. The author fell into the same error on his first trip. The second trip established the presence of the western villages, and now the approximate location of all the Sierra Popoluca can be outlined. The area which they occupy is oval in shape, and ex-

Blom and LaFarge, op. cit., Vol. 1, p. 51.

²⁶ George M. Foster, *Notes on the Popoluca of Veracruz* (Instituto Panamericano de Geografía e Historia, Pub. No. 51. México, D.F. 1940), p. 6.

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tends from 18° to 18° 20′ N. Lat., and from 94° 40′ to 95° 15′ W. Long., and includes about 500 square miles of mountainous terrain, not all of which is actually inhabited.

Because of faulty maps, the disruptive effects of the Mexican Revolution, the tendency for small groups of people to break off from the parent settlement to form new villages, and the ubiquitous use of certain favored place names which results in endless confusion, it is impossible to enumerate all the villages where Sierra Popoluca is spoken. I believe the following list to be, however, essentially accurate.* Cabecera of the municipio of the same name, San Pedro Soteapan is the traditional point of dispersal of all Popoluca, and with a population of 800-900 is probably the third largest Popoluca settlement. Legend tells how Dios made four couples of clay, blew breath into them, and placed them in Soteapan. All Sierra Popoluca are descended from these original eight persons. Because of many man-eating animals in the vicinity, Dios placed San Pedro in the new settlement to watch over the people, whence the patron saint name of Soteapan. Buena Vista and Ocozotepec, each with more than 1000 inhabitants, are the largest of all Sierra Popoluca pueblos. Other settlements belonging to the municipio of Soteapan are Cuilonia, Tulin, Ocotal Grande, Ocotal Chico, Mirador de Pilapa, Piedra Labrada, Amameloya, and San Fernando Chimpa. The municipio of Hueyapan de Ocampo includes most of the western Popoluca towns-Aguacate, Horno de Cal, Sogotegoyo, Loma Larga, Tierra Nueva, Sabanetas, Los Mangos, Barrosas, Santa Rosa, and Soncuabital (Cerro Grande on some maps). In the same area, Popoluca was probably formerly spoken in El Coyol, Casas Viejas (now uninhabited), Meapa, Amapa, and Mata de Caña. Possibly a small settlement called Zapote at one time existed on the shores of Lake Catemaco, near the finca La Victoria. Since the Popoluca apparently have never really crossed the mountains that separate most of their villages from Lake Catemaco, it seems probable that this settlement was composed of persons who migrated in recent times to work for the German owners of La Victoria. The municipio of Acayucan includes Comején, Corral Nuevo, and possibly several small rancherías. In broad outline it is apparent that there has been a basic core of villages which have existed in their present locations for many generations. These villages have grown or contracted, satellite communities have broken off from them and then returned, and population has shifted from one point to another, depending on the vicissitudes of war, revolution, drought and other economic factors. All evidence indicates, however, that the Sierra Popoluca have been in their present location since long before the Spanish conquest.

The brief ethnological summary which follows applies only to the Sierra Popoluca.

Agriculture forms the economic basis of life, and a typical migratory dig-

^{*} A map of the Popoluca area can be found facing p. 4 in my A Primitive Mexican Economy (Monograph V, American Ethnological Society, New York, 1942).

ging stick tillage is practiced. Villages and milpas form a constantly uniform pattern. Lined along both sides of the top of a high ridge are rectangular, gable-roofed thatched houses, and the crest itself forms the principal artery of communication. Water is obtained from arroyos which separate the ridges, and the journey sometimes involves a climb of as much as half an hour. Immediately surrounding the village is a half mile wide belt of wooded land originally left because marauding pigs made milpas closer to the houses impractical, and now serving the all-important purpose of shading coffee trees, as well as providing a convenient source of fire-wood. Beyond this belt one finds the typical patchwork pattern characteristic of the milpa system of agriculture—irregular clearings of from $\frac{1}{2}$ to 10 acres, surrounded by savanna and brush land.

Favored elevations for villages are within the 1000-2000 foot belt—high enough so that coffee, the most important cash crop, can be grown conveniently close to the villages, and low enough so that at least one of the two annual maize crops will produce well. Characteristic of the Sierra Popoluca habitat is a bright red soil, probably lateritic, and known as "tierra colorada."

Beginning at some distance below the 2000 foot level one finds a fine pine forest, which continues uninterrupted to the tops of the highest peaks of the Tuxtla Sierra. Milpas cut from this forest, because of soil and climate, do not do well, so it is rather in the lower levels that one finds most fields. Here a variety of trees, including palms, oaks, papachota (Arundinella hispida), chancarro (of the genus Cecropia), cañafistula (Cassia grandis), moral (Chlorophora tinctoria), guayacán (Guaiacum sanctum), mulato (Elaphrium simaruba), jonote (Heliocarpus tomentosus) and guasimo (Guazuma ulmifolia) is found. At these lower altitudes great areas of coarse grass savanna are interspersed between milpas and wooded sections, and it is impossible to tell to what extent the original covering was forest. Rainfall exceeds 100 inches annually, and occurs throughout nine months of the year. March, April, and May are the hottest and driest months, with noon temperatures as high as 90°. Rains begin late in May or early in June, increase in intensity in July and August, slacken somewhat in September and October, but continue in considerable quantities through February. Heavy rainstorms accompanied by high winds, known as Nortes, occur from October to March. The cold season is from November to February, and night temperatures fall as low as 40° or even less in the higher villages. If it is cloudy or rainy, maximum day temperatures will not exceed 60°.

Agriculture fills the time, thoughts, and interest of all Popoluca. In the town of Soteapan, with which I am most familiar, there is no man physically able who does not work his own milpas. Maize and beans are the traditional crops, the former subsistence and the latter used to exchange for pots, lime, salt, and other commodities from the lowland Aztec and Popoluca towns where the soil is less well adapted to bean culture. Only since the revolution has coffee

become important, and most enterprising individuals now have small fincas of from a few hundred to several thousand trees. Potential full production has not yet been reached, but already the effect on the economy is visible—greater profits with less work from coffee cultivation is causing a neglect of bean production.

Brushland and abandoned milpas are favored over grassland and heavily wooded areas for new milpas, because terrain of this type is more easily cleared and gives a greater yield. During the dry season the selected land is cleared, burned, and during the first rains in June planted with maize. A field usually is not completely cleared for three years, so that greatest production is not realized until this time. A milpa is expected to last a minimum of 5 years to justify the work of clearing, and good ones will produce well for from 8 to 10 years, and in exceptional cases even longer. No fertilizer is used. Usually a man will clear a small section of land one year, improve it the second, and at the same time begin work on an adjacent plot, repeating the process the third year, so that most milpas have sections, or tablas, of varying ages.

All land is theoretically communal, so that abandoned milpas are supposed to revert to public domain. Actually land rights are jealously guarded, and a man is felt to have a claim to land that he or his father has at some time cultivated, even though it may be lying idle. Hence, sections of land tend to remain in families over long periods of years, even though no title is officially recognized. But no man may sell or trade land; if he is using it, or has at one time used it and may reasonably be expected to use it in the near future, it is his. Otherwise it may be taken by whoever wishes to plant.

Trees, on the other hand, are considered to be private property, to be disposed of as the owner wishes without regard to the land on which they stand.

Maize, of which several varieties are grown, is planted in even rows with an untipped digging stick. Two crops are grown, the economically more important temporal which is planted in June, and the relatively unimportant tapachole planted in December. Maize requires about four months to mature. Several varieties of beans, of which the common kidney bean (Phaseolus vulgaris) is the most important, are planted in October between the rows of the now mature temporal. Other plants grown are squash, chayote, camote, yuca (sweet manioc), sugar cane, pineapple, papaya, banana, jícama, and small onions. Important fruit trees are the mango, chicozapote, zapote mamey and guanábana. Achiote (Bixa orellano, the "urucu" of South America used widely for body painting) is used only for giving color to the interior of tamales.

The principal domestic animals are the pig, chicken, and turkey. Horses and mules are important as beasts of burden, but do not reproduce sufficiently well to maintain their numbers. Hence, they are purchased from stock breeders who make annual trips through this area. The common European bee is kept, and hollow log colmenas of the indigenous stingless bee are brought in from

the forest and hung under house eaves.²⁶ Lack of adequate pasture land prevents the keeping of cows.

Hunting supplies a limited amount of meat, and the principal game animals are deer, wild boar, raccoon, armadillo, agouti, and rabbit. Most men have rifles or shotguns, but no home is without bow and arrows. A lure made of a deer shank and bladder is used to imitate the sound of a doe, and is successfully used in calling deer. Because of the lack of large streams, fishing is relatively unimportant. Techniques include the hand-thrown net, bow and arrow, and poisoning. Three meals a day are normally eaten, always centered around the tortilla, which comprises 75% of all food. Some foods are considered "hot"—rice, maize, eggs, meat—because they give strength. Cold foods are fish, fruit, and beans, and are felt to have little food value; they are eaten merely to fill the stomach. There is no feeling that hot and cold foods should not be eaten at the same meal.

Local manufactures include cooking pots fashioned from one lump of clay, serviceable but undecorated twined baskets, colorful cotton skirts woven on the girdle-back (belt) loom, simple bows four feet long, and unfeathered arrows from four to six feet long tipped with six inch iron or wire points. Canoe-shaped hollow log containers vary in length from three to fifteen feet, and are used for feeding livestock, storage, and preparing maize for large fiestas. Considerable ritual surrounds the construction of church drums, which consist of hollow log sections covered on both ends with deer skin. The maker observes continence for 21 nights, then consecrates the drum with music, singing, drumming and feasting, after which all leftovers from both consecration and construction are ritually thrown into an arroyo. Certain woods, notably cedro and pine, are "hot" and cannot be used in the construction of platform beds which line the walls of Popoluca houses, for fear they will induce malaria, tuberculosis and other ills.

In this part of Mexico the plaza market is unknown, and trade is largely in the hands of professional traders who go from door to door in each village. Cash is now used, but in the immediate past barter was the rule, with beans constituting the unit of exchange. In trading pottery, for example, a common rule was to trade a pot for the quantity of beans it would hold.²⁷

Social organization is simple. There are no clans, moieties, clubs, associations, puberty rites or work groups. Each family, consisting of husband and wife or wives, and children, is the basic social and economic unit. Since siblings are often half brothers and sisters only, fraternal bonds tend to be weak. In aboriginal times marriage involved the use of a go-between who approached the father of the desired girl. If successful, the boy was expected to make

²⁶ George M. Foster, Indigenous Apiculture Among the Popeluca of Veracrus (American Anthropologist, Vol. 44, 1942), pp. 538-542.

²⁷ More detailed economic information is found in my A Primitive Mexican Economy (Monograph V, American Ethnological Society, 1942).

weekly visits to see the father, taking small gifts and a large load of firewood, and seeing the girl only incidentally. After a varying number of visits the marriage ceremony took place, and involved the killing of a pig or chicken, the making of tamales, and the feeding of all members of the families, as well as friends. This correct procedure has largely fallen into disuse, and today adult individuals of opposite sex live together as long as it suits their convenience and on the basis of mutual agreement alone. Sex mores are extremely lax both among the married and unmarried, in spite of great jealousy on the part of husbands, which extends to the killing, socially condoned but not always carried out, of an unfaithful wife. More agreeable to all parties is the custom of allowing the deceived man sexual relations with the wife of the man who accomplished the original seduction. If this right is granted, both men are expected to remain friends. No married woman will be seen talking to a man if her husband is not also present—the mere fact of their presence together is considered ample proof of an adulterous relation, and few women wish to risk the anger of their husbands or possible injury and death at their hands without something more to show for it than a few minutes of pleasant conversation.

Polygyny is fairly common, two wives, living in either the same or different houses, constituting the usual polygynous grouping. Economically advantageous in theory, since women do much work in the fields, polygyny actually does not always work out in this way. Often quarreling results, or one wife may be lazy, particularly if she is young and a favorite, in which case the larger household may be an actual economic drain on the husband. There is no apparent correlation between wealth and wives in Popoluca villages.

Politically, groups of villages are organized along customary Mexican lines. A presidente is elected to govern the municipio, which is composed of several of the largest towns, called congregaciones, and smaller towns designated as rancherias. The presidente is assisted by various officials, the regidor, sindico, secretario, tesorero, and juez. Political practice does not always follow political theory, and the power of the central state government in the Popoluca area is very slight. In theory all towns have schools; actually there is a maestro in but one—and he has no school building and conducts no classes!

The Christian veneer which comes from long, if not particularly intense, contact with the Catholic church has to a considerable extent effaced aboriginal religious practices. In Soteapan, at least, during parts of the nineteenth century there was a resident priest, although documentary evidence suggests that he was absent from his parish more often than present. Today Soteapan and Ocozotepec have churches—rectangular barns of corrugated metal which have replaced the former picturesque wood and thatch structures which exceeded 100 feet in length, and which were comparable in magnitude to the communal dwellings of the Amazon basin. Riding rural circuit, a priest comes two or three times a year from Acayucan and puts in a busy 24 hours baptizing babies, saying mass, and occasionally marrying a couple who feel that the

social status so derived justifies the expense. The inhabitants of neighboring towns lacking churches usually attend such fiestas en masse. Other than these major events, the typical religious celebration is the velorio, at which a saint or virgin is honored. For several preceding Sundays the selected image is carried from door to door in a sedan chair, by widows, and contributions in the form of maize or money are exacted. On the appointed day one or more hogs are killed, tamales are made, and a leafy bower to shelter the image is erected, gaily festooned with palm and flower decorations. The tamales are placed in large pots and boiled all night, while singers chant hymns in front of the image and women hold children and look on from a distance, occasionally advancing timidly to light a candle for the saint or virgin. About four in the morning the pots are opened, the tamales are consumed, and everyone goes home for a few hours of rest. Apparently even to a Popoluca a velorio—but not the preparations—is very boring, and men and women stand around the bower, never mixing company, looking as if they wish a YMCA secretary would appear to organize games. There are no group competitions, no races, no gambling—even liquor is of slight interest to most Popoluca and inebriation no problem. One cannot help but be reminded of the industrial captain who works so hard most of the time that in his rare hours of leisure he doesn't know how to play.

Underlying this historical veneer is a mass of superstition and belief which has survived but little changed from aboriginal times. In addition to the Christian God, who has been incorporated into the divine hierarchy, there are numerous spirits of greater or lesser powers. Most important is Homshuk, god of maize. He is anthropomorphized as a form a yard tall, with hair of corn silk. When the corn is young, he is like a child, with hair light and fine in texture; as the maize matures, he becomes wizened, and his hair coarse and dark. At various stages of the growth of the corn, copal is burned in the milpa, continence observed, and sacred tamales made so that Homshuk will be satisfied. The chanekos are mountain-dwelling dwarfs of a type widely believed in in aboriginal America. They are "masters" of fish and game, expect copal to be burned in their honor before they will grant luck to a hunter, and sometimes kidnap souls of men. Hunchuts stand four feet tall, have flat heads without brains, have feet reversed, and have stiff necks so that they must turn the entire torso to look to either side. In spite of these physical peculiarities, female hunchuts are of rare beauty and often entice unwary men away from home, only to kill them and eat their brains in never-successful attempts to make up for their own deficiencies. They live in caves behind waterfalls, and are masters of all armadillos, who also serve as chairs for them (small wooden benches, found in all Popoluca houses, made from half logs, often with handles rudely carved to represent head and tail, are called "armadillos"). Grand Salvajes are gigantic creatures, normal in form, except for the women, who have one breast only, live in the remote mountain fastness, and sleep sitting up because there are no clearings large enough for them to lie down in. They likewise eat human beings.

As in many parts of Mexico, the Popoluca witch-doctor is called nawal. Lacking, however, is the widespread concept of tonal, the guardian spirit insect or animal seen at the time of birth of a baby, whose spirit is so intimately connected with that of the child that should either die the other will follow. Nawals are able to transform themselves into the form of any animal or insect, but prefer that of a tiger or a snake. They may fly through the night as a ball of fire, or go head downward in daylight in a whirlwind. They cause and cure illness, exhume and eat corpses, and suck blood from sleeping persons. Power comes not from divine revelation, but from long years of study from established nawals, and because of this feature they should not be considered as true shamans.

The tsauka is a type of nawal who can bring or prevent rain through his control of the rayos (lightning), which are personified as beings who live in various hills scattered throughout Popoluca territory. Tsaukas themselves may take the form of rayos and as short, violent tempests, ravage milpas in a restricted area.

Illness is believed to be caused by object intrusion, usually a small insect or animal, or soul loss resulting from fright. In the former case the *curandero*, who may also be a *nawal*, treats with herbs, applied both externally in the form of a poultice and taken internally. In the latter case he divines by placing seven copal balls in water. If they first sink and then rise to the surface, the patient will recover. Treatment consists of singing in a strange voice, placing seven grains of corn in the mouth, and sucking all places on the body where the pulse is visible. Sucking to cure fright illness, and never to cure object intrusion disease, is an interesting reversal of the almost universal pattern.

Until recently a secular fiesta, called carnival, was held each spring. Its purpose was to ensure good crops, prevent sickness and epidemics, and promote the general welfare of the community. The leaders—the town officials, nawals, and tsaukas—observed strict taboos on food and sex for varying preliminary periods, and during the week of festivities were supposed to go entirely without sleep. The core of the fiesta consisted of animal impersonators wearing tiger skins and masks who danced in the streets. Other dancers carrying stuffed animal skins of other varieties attacked the tigers with bows and toy arrows, and were "eaten" by the tigers. Some women danced, holding dried fish above their heads, and others threw pots of water on all participants. Flutes and a special large drum with a skin head at one end only, furnished music. Death was believed to be certain for anyone who did not strictly follow correct procedure, and since the taboos were so onerous, involving for the presidente continence for four months, the carnival has not been held recently, much to the annoyance of older people who feel that times were much better when the old ritual was followed.

Death rites show a combination of Christian and aboriginal traits. The corpse is extended on the house floor, candles lighted, and alabanzas sung during part of the night. A whip of seven cotton strands is specially woven and placed in the hand of the departed to drive unknown animals from the path to the afterworld. No coffins are used, and the body is placed in an extended position in a six foot deep grave. Two to three weeks later pigs are killed; tamales made; a velorio-like celebration, minus saint, held; special music consisting of a crude violin and a ukulele-like jarana played; two old women dance, the possessions of the deceased are purified with copal, and the clothing and rubbish remaining thrown into an arroyo. Excessive signs of grief are frowned upon; it is felt that it is better for the soul if everyone has a good time.

Folklore can be divided into three types of tales: origin and pre-Conquest stories; European folktales; and biblical accounts which have so lost their original sense as to be in some cases almost unrecognizable. Cannibalistic motifs are found in all three, and the Popoluca appear to have the feeling that any unknown and hence strange being will have the desire to eat them—"comer Cristianos," as it is always put. Most feared are "los Franceses," probably having origin in the unsuccessful French colonizing attempt near Minatitlan in 1829 and 1830.²⁸

The Popoluca are located between the centers of high culture of Mexico the Valley of Mexico and Oaxaca on one hand, and the Maya on the other, and are geographically even closer to the sites of Tres Zapotes and La Venta, and to San Andres Tuxtla where the famous Tuxtla statuette was found. Since they are obviously in an area of ancient high cultures, it is surprising that archaeological remains are for the most part limited to a few crudely scratched stones,²⁹ and village sites indicated by pot sherds. Exceptions are the statue on top of nearby Mt. San Martin, not in the Popoluca territory proper, and carved stones near Piedra Labrada, which is actually marginal to the center of Popoluca population.³⁰ Mounds and carved stones are much in evidence around Lake Catemaco, which also is not, and apparently never has been, in Popoluca territory. One has the impression that these people have always been culturally less advanced than their neighbors, and for this reason have been forced onto the least desirable terrain in the region—land which has never harbored peoples of more advanced ways and technology, and which has never been the site of higher cultural developments.

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²⁸ A paper on Sierra Popoluca folklore is now in preparation.

²⁹ See my Notes, plates 13, 14, and 22.

³⁰ Blom and LaFarge, op. cit., pp. 40-47.