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SOCIOCULTURAL ASPECTS OF LINGUISTIC DISTRIBUTIONS:
A PRELIMINARY STUDY
OF TZELTAL AND TZOZIL DIALECTS

by

Nicholas A. Hopkins

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Each speaker of a language interacts linguistically with a unique set of other speakers, and he interacts more with some of these than with others. The speech community is composed of numerous overlapping sets of speakers. Bloomfield (1933) noted that no speech community is ever observed to be quite uniform in speech, and postulated that the amount of linguistic variation within a community was directly related to the "density of communication" between speakers, linguistic sub-groups within the community being separated by "lines of weakness" in the net of oral communication. These lines of weakness are reflections of both geographical and social distance and result in what have been called local (geographically discrete) and non-local (associated with discrete social groups) dialects.

Early students of dialectology such as Wenker and Gillieron concentrated on geographical dialects. More recently, dialectologists have turned to the non-local aspects of linguistic variation. Gumperz (1958), Bright (1960), and Ferguson and Gumperz (1960) have examined reflexes of social organization in linguistic...
diversity in India. Mayers (1960) has done similar work in rural Guatemala. In India, caste lines correlate with linguistic variation; in Guatemala, the correlations are with combinations of attributes of age, sex, wealth, and prestige. These studies and others have demonstrated that social interaction does in fact influence the distribution of linguistic features within single villages or sets of contiguous villages.

Social interaction also affects linguistic distributions on a broader scale. In Italy the transition from one geographical area within the speech community to another is sharp and easily defined in terms of isoglosses (Jaberg 1928-40). In France, transition from one geographical zone to the next is gradual (Gilliéron and Edmont 1902-10). In the United States, dialect areas sharply defined along the Atlantic coast become less well defined as they spread west (McDavid 1958). In all these Western societies, the influence of urban centers is seen in the speech of surrounding areas. The linguistic distributions reflect not only social differences within the geographical sub-groups of the speech community, but settlement patterns and inter-group relations as well. That is, within a settlement,
limited interaction between speakers may result in non-local dialects, often called social dialects. Between settlements, restricted interaction may result in local or geographical dialects. Linguistic interaction and the density of communication are functions of social interaction, and the distribution of linguistic varieties follows the distribution of social groups. If these groups are geographically discrete, their dialects are "geographical"; otherwise, their dialects are "social". The terminology is somewhat misleading, as both types of dialects are ultimately related to social phenomena.

This study has four principal goals: to describe briefly the varieties of Tzeltal and Tzotzil and the geographical distributions of these varieties; to relate these geographical distributions to social factors which underlie them; to place the contemporary linguistic varieties in the perspective of their historical development; and to draw inferences about the historical development of the indigenous communities themselves.

The Dialect Survey.

To determine the linguistic diversity of the Tzeltal and Tzotzil communities, the University of Chicago's
Chiapas Study Projects carried out a dialect survey in the summer of 1961. It was suspected at the beginning of this survey that there were six major linguistic zones—a north, a central, and a south variant of each language. The major purpose of the
survey was to test this hypothesis by collecting sample vocabularies from each of the Indian communities. Of secondary interest was the collection of data necessary for the reconstruction and classification of Proto-Tzeltal-Tzotzil, the language ancestral to all the modern dialects. Linguistic materials were also collected from a number of bilinguals in both their languages to determine how, if at all, their speech differed from that of monolinguals.

The survey was carried out by the linguists O. Brent Berlin, Andrés Medina Hernández, Nicholas A. Hopkins, Terrence S. Kaufman, Norman A. McQuown, R. Radhakrishnan, Harvey B. Sarles, and Gerald E. Williams. Over most of the area the linguist travelled with a social anthropologist who took socio-cultural census material from the survey informants. Each team was assigned a part of the area in which one or both of the members had previous experience. Communities which had been studied intensively by social anthropologists were surveyed in detail. Fewer informants were selected from other communities.

The major instrument used for the collection of linguistic data was a list of 200 Spanish phrases designed to elicit two kinds of material. The first
100 phrases were to elicit the items on the Swadesh "non-cultural" glottochronological list. The second 100 phrases were to elicit further lexical and phonological differences, especially those crucial to the reconstruction of Proto-Tzeltal-Tzotzil.

Because of the difficulty of collecting data from complete monolinguals, most of the word lists were taken from informants who had at least a working knowledge of Spanish. In Chamula, and to some extent in the north-east Tzeltal zone, use was made of a set of paraphrases in the Indian language of the items on the questionnaire; these paraphrases, similar to riddles, were used to elicit material from monolinguals. Responses to either Spanish or paraphrase questionnaires were transcribed in phonetic symbols according to a standard that had been set in training sessions prior to the survey. Wherever possible, tape recordings of the responses were made. Close to 400 sets of responses were collected, representing 41 communities. Additional linguistic data were taken in the form of taped or transcribed responses to Thematic Apperception Tests and socio-cultural censuses, which were sometimes elicted in the Indian languages. A limited number of questionnaires were used to elicit responses in Spanish from both Indian and Ladino informants; Thematic Apperception
Tests and the similar Phototest for Cultural Perception were ordinarily collected in Spanish.

Analysis of the Data.

Preliminary analysis of the data was carried out in the field in 1961; further analyses were made in Chicago in 1962-4. The first stage in the processing of the completed wordlists was the compilation of an inventory of all responses to each item on the questionnaire. As this inventory was being made, obvious mistakes, such as those due to the lack of control of Spanish by either the linguist of the informant or both, were eliminated. From the completed inventory, sets of cognate responses were identified, and each questionnaire was coded for lexicostatistical counts. This coding was later key-punched on IBM cards, but the computer runs necessary to calculate the glotto-chronological groupings of the informants have not yet been made.

While the quantitative, lexicostatistical, differences between the varieties of Tzeltal and Tzotzil have not yet been calculated, the qualitative differences have been studied in some detail. The approach that has been used is a straight-forward one, based on the notions that language change is not random but patterned, that people who are in constant lin-
guistic contact tend to undergo the same changes in their speech, that new forms created by such changes spread along lines of social interaction, and that the study of the present-day distributions of different forms can thus discover indications of past interaction (and barriers to interaction) between groups of people.

Dialectology has always been closely connected to historical linguistics, and uses theories of language change to explain the synchronic varieties of a language. Phonetic laws which account for historical change are also used to account for synchronic differences. A certain dialect may be defined, for instance, as that speech area in which a certain phonetic change took place, creating phonological differences between that dialect and those in which the change did not take place, or where another change took place instead.

Two sets of Tzeltal-Tzotzil dialects differ, for instance, in the words for "sun". The first set of dialects have /kahkan/; the second set have /kahKal/. Both forms are developments of Proto-Tzeltal-Tzotzil *k*ahk*al*. In the area of the first set of dialects, roots of the type *CVhC*, such as *kah*- , lost the *h; in the other area, the *h was retained. The explanation of the synchronic dialect —
difference is historical: in one set of dialects a phonetic change took place that was not shared by the other set of dialects.

Phonetic changes are stated in terms of "phonetic laws"; such a law specifies the part of the language affected by a change and the change itself. The speech area in which the change took place may also be specified. For the above example, the phonetic law may be stated: In all dialects of Tzotzil, Proto-Tzeltal-Tzotzil roots of the shape *CVhC lost the *h and became roots of shape CVC. If a phonetic law is correctly stated it is absolute, that is, it applies to all the words in the language which have the elements on which the law operates; if the preceding law is correctly stated, all Proto-Tzeltal-Tzotzil roots in *CVhC will appear as CVC roots in the Tzotzil dialects, and none will appear as roots of any other shape.

But while phonetic laws are absolute within the area of their operation, borrowing of words from one dialect to another may obscure this regularity. If, in the above sets of dialects, a word from a dialect which has lost *h is loaned into a dialect which has not, it will appear that the second dialect has undergone irregular loss of *h. Unless dialect borrowing is extensive, however, these loans will appear as iso-
lated words in a pattern of massive regularity.

The processing of the Chiapas indigenous vocabularies included the listing of all phonetic changes that have taken place since the time of the reconstructed Proto-Tzeltal-Tzotzil, and the determination of the geographical speech areas where these changes were regular in the forms elicited by the phrase lists. Special attention was given to the dialects which showed apparent irregularity of phonetic change, and a number of dialect loans were identified.

Regular change and spread of items showing change are not, of course, limited to phonology, but affect morphology and lexicon as well. A 200-item questionnaire, however, does not elicit enough material to show the morphological changes clearly. In 200 selected phrases the investigator can expect to find all the phonemes of a given dialect and a number of subphonemic features, but only a small number of the inflectional and derivational features. Information about the total lexicon is likewise limited. Consequently, morphological and lexical features were analyzed somewhat differently from phonological features.

Relative frequency of occurrence among the informants of each community was taken as an index of spread.
If, for instance, all informants from one community used a particular feature, some informants in a neighboring community used the feature, and no informants elsewhere used the feature, it was inferred that the homogeneous community was either the source of an expanding feature or the center of an area which was conserving an older feature against an encroaching innovation. Other criteria were used to determine the direction of the spread.

Since in the model used in the analysis of these data phonological, morphological, and lexical borrowing are reflections of interaction between social groups, the three types of borrowing were expected to follow more or less the same lines. Since the direction of spread of phonological features can be determined— from areas of structural regularity to areas of irregularity— for purposes of this analysis morphological and lexical items which had the same distribution as loaned phonological items were assumed to be spreading in the same direction.

In this analysis, then, where statements about the direction of spread of linguistic features are made, they are based on several indices. For phonological features, the direction of spread is taken to be from areas of structural regularity to areas of
irregularity. For morphological and lexical features, the direction of spread is gauged by frequency of occurrence among informants within a geographically contiguous area and correlation with the movement of phonological features in the same area.

Historical Development of Tzeltal and Tzotzil.


"Tzeltal and Tzotzil are two Mayan languages of the Mayan family which are more closely related to each other than either is to any other language in the family.

"Tzeltal and Tzotzil are most closely related to languages of the Chol group (Chol, Chontal, and Chorti) on the one hand and to those of the Tojolabal group (Tojolabal and Chuj) on the other..."

"Tzeltal and Tzotzil together constitute a single linguistic area. The speakers of these two languages live in the same geographical area, share a common culture, and seem to consider Tzeltals and Tzotzils as a single type of Indian distinct from Chols, Tojolabals, Zoques, Zapotecs, and other Indians they may know about. Any speaker of Tzeltal or Tzotzil will indiscriminately call the speech of any town where..."
either Tzeltal or Tzotzil is spoken by the same term /'SaOu lcop/ or /tfadi lfop/ which means 'genuine speech'.

Kaufman has carried out a reconstruction of Proto-Tzeltal-Tzotzil based on extensive data from the Tzeltal communities of Bachajón, Tenejapa, Oxchuc, Aguacatenango, and Pinola, and from the Tzotzil communities of Chamula, Huistán, San Bartolo (Venustiano Carranza), and Zinacantan. The phrase lists collected by the 1961 Chicago survey were also consulted and incorporated into the reconstruction (Kaufman 1962:130-131).

The model of Proto-Tzeltal-Tzotzil that Kaufman has proposed has been adopted here, as it is strongly supported by the survey data. While the survey includes a number of Tzotzil communities for which Kaufman had no data, the additional Tzotzil material does not greatly affect the reconstruction.

The phonemes of Proto-Tzeltal-Tzotzil have been reconstructed as follows (Kaufman 1962:150):

- Plain stops and affricates: \( p, t, c, s, k, ?, \)
- Glottalized stops and affricates: \( \tilde{p}, \tilde{t}, \tilde{c}, \tilde{s}, \tilde{k}, \tilde{?}, \)
- Voiced glottalized stop: \( \tilde{g} \)
- Fricatives: \( s, \tilde{s}, x, h \)
- Nasals: \( m, n \)
- Semivowels: \( w, y \)
- Lateral: \( l \)
- Vowels: \( i, e, a, A, o, u \)
Several major phonological developments separate Tzeltal and Tzotzil. The major phonological isogloss concerns the developments of *A as /a/ in Tzeltal and as /o/ in Tzotzil. The developments of *h are also diagnostic: in forms of the type *CVhC, the internal *h is completely lost in all varieties of Tzotzil. In the community of San Bartolo the loss of this *h is compensated for by the development of a two-way tonal contrast in which vowels followed by *h in Proto-Tzeltal-Tzotzil have low tone in the modern dialect. Elsewhere in Tzotzil the loss is complete and uncompensated. In two varieties of Tzeltal the root-internal *h is also lost— in Teopisca without compensation, in Sitalá with compensatory vowel length in some forms. In other varieties of Tzeltal this *h is lost before certain consonants.

The major morphological feature that separates Tzeltal and Tzotzil is a set of Tzotzil verbal prefixes that correspond to Tzeltal suffixes. Tzeltal has a set of personal suffixes which occur as subjects with intransitive verbs and as objects with transitive verbs. The corresponding morphemes in Tzotzil are non-cognate prefixes, although Tzotzil also has a set of suffixes, cognate with those in
Tzeltal, which may be used in place of, or in addition to, the personal object prefixes with transitive verbs. The Tzotzil prefixes are not unique in the Mayan family (Kaufman 1962:142-144) but within Tzeltal and Tzotzil they are an unambiguous diagnostic for Tzotzil dialects.

In addition to the phonological and morphological features, a number of lexical items unambiguously distinguish Tzeltal from Tzotzil. Kaufman (1962:236) lists the following, in their reconstructed forms:

<table>
<thead>
<tr>
<th>Tzeltal only</th>
<th>Tzotzil only</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>paxel</td>
<td>*cochko'</td>
<td>tomorrow</td>
</tr>
<tr>
<td>pa'</td>
<td>pa'xa'</td>
<td>pineapple</td>
</tr>
<tr>
<td>tumin</td>
<td>tuš-noh</td>
<td>cotton</td>
</tr>
<tr>
<td>tuhl</td>
<td>wo' - wa'</td>
<td>noun classifier for persons</td>
</tr>
<tr>
<td>tulan</td>
<td>coc - cac</td>
<td>strong</td>
</tr>
<tr>
<td>*uš</td>
<td>kaš</td>
<td>urine</td>
</tr>
<tr>
<td>*it</td>
<td>čak</td>
<td>buttocks</td>
</tr>
<tr>
<td>*ihnam</td>
<td>*axnil</td>
<td>wife</td>
</tr>
<tr>
<td>*češ</td>
<td>*eš, *ešel</td>
<td>axe</td>
</tr>
<tr>
<td>*ažš</td>
<td>cayošt, cayuš</td>
<td>girl</td>
</tr>
<tr>
<td>*čah</td>
<td>*iš</td>
<td>bile, gall</td>
</tr>
<tr>
<td>*čučul-čan</td>
<td>winahel</td>
<td>sky, heaven</td>
</tr>
<tr>
<td>Tzeltal</td>
<td>Tzotzil</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>Kασ, neį</td>
<td>?eék'</td>
<td>to pass</td>
</tr>
<tr>
<td>Kayoų, Kayuų</td>
<td>wahi</td>
<td>drum, guitar</td>
</tr>
<tr>
<td>Ḡehen</td>
<td>Ḡanaw</td>
<td>to walk</td>
</tr>
<tr>
<td>xoį</td>
<td>Ḡi?il</td>
<td>companion</td>
</tr>
<tr>
<td>mamalal</td>
<td>malal</td>
<td>husband</td>
</tr>
<tr>
<td>namey</td>
<td>wo?ney</td>
<td>long ago</td>
</tr>
<tr>
<td>wań</td>
<td>wet</td>
<td>fox</td>
</tr>
<tr>
<td>wayib'</td>
<td>tem</td>
<td>bed</td>
</tr>
<tr>
<td>-leh</td>
<td>-sa?</td>
<td>to seek</td>
</tr>
<tr>
<td>iš</td>
<td>ša</td>
<td>already</td>
</tr>
</tbody>
</table>

The dialect survey confirms all these pairs but one; the wayib': tem pair is not unambiguous, as the term /wayeb/, bed, occurs in the Tzotzil of Chalchi-huitán, a dialect for which Kaufman had no data. Two additional unambiguous lexical distinctions can be made:

<table>
<thead>
<tr>
<th>Tzeltal</th>
<th>Tzotzil</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kαl</td>
<td>Ḡoų</td>
<td>cornfield</td>
</tr>
<tr>
<td>iš</td>
<td>Kanal</td>
<td>star</td>
</tr>
</tbody>
</table>

In addition to these pairs of single items there is a second type of unambiguous lexical distinction between Tzeltal and Tzotzil: sets of lexical items that occur in dialects of one language but not in dialects of the other. The dialect survey shows the following pairs:
<table>
<thead>
<tr>
<th>Tzeltal only</th>
<th>Tzotzil only</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>ti, tin(ti),</td>
<td>ku</td>
<td>what</td>
</tr>
<tr>
<td>te(luk), tut,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>tut(ti), tut</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wayel, Wayal</td>
<td>rep</td>
<td>many</td>
</tr>
<tr>
<td>Wayil, ootol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ta(ti),</td>
<td>ku</td>
<td>where</td>
</tr>
<tr>
<td>tan(ti)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ke'nan, Ke'n</td>
<td>det</td>
<td>left side</td>
</tr>
<tr>
<td>Ke'nam, tin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hos, humen</td>
<td>woskon, tanhol, vulture (black-headed)</td>
<td></td>
</tr>
<tr>
<td>ca'los</td>
<td>lo'co'</td>
<td></td>
</tr>
<tr>
<td>t'ut, tut,</td>
<td>cut, kiikut</td>
<td>small</td>
</tr>
<tr>
<td>din, cael,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sail</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Further diagnostic items can be taken from Kaufman's list of skewed (non-recurrent) correspondences (Kaufman 1962:164-165). In their reconstructed forms:
<table>
<thead>
<tr>
<th>Tzeltal</th>
<th>Tsotzil</th>
<th>Gloss</th>
</tr>
</thead>
<tbody>
<tr>
<td>pay</td>
<td>pan</td>
<td>to boil</td>
</tr>
<tr>
<td>tik-un</td>
<td>tak</td>
<td>send</td>
</tr>
<tr>
<td>toh(y)iy</td>
<td>tahiw</td>
<td>frost</td>
</tr>
<tr>
<td>toh(y)iw</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cukum</td>
<td>cukut</td>
<td>paunch</td>
</tr>
<tr>
<td>cum-cun</td>
<td>can</td>
<td>to kindle</td>
</tr>
<tr>
<td>čuhyel</td>
<td>kuhel</td>
<td>smallpox</td>
</tr>
<tr>
<td>*ip(al)</td>
<td>*ep(al)</td>
<td>much</td>
</tr>
<tr>
<td>*ištä?, *ištäf</td>
<td>*ištäl</td>
<td>toy</td>
</tr>
<tr>
<td>*ahtray</td>
<td>*aht</td>
<td>count</td>
</tr>
<tr>
<td>*o(h)kol</td>
<td>*aol</td>
<td>unfortunate</td>
</tr>
<tr>
<td>*ula?, *ulaš</td>
<td>*ula?</td>
<td>visitor</td>
</tr>
<tr>
<td>yahl</td>
<td>yel</td>
<td>noun classifier for words</td>
</tr>
<tr>
<td>čiwič</td>
<td>čiwit</td>
<td>market</td>
</tr>
<tr>
<td>źač</td>
<td>źek</td>
<td>kernel, pit</td>
</tr>
<tr>
<td>čahal</td>
<td>čel</td>
<td>contents</td>
</tr>
<tr>
<td>sit</td>
<td>sat</td>
<td>fruit</td>
</tr>
<tr>
<td>źuhk</td>
<td>šehkon</td>
<td>side</td>
</tr>
<tr>
<td>hiš</td>
<td>heš</td>
<td>thus</td>
</tr>
<tr>
<td>nehkel</td>
<td>nehkeš</td>
<td>shoulder</td>
</tr>
<tr>
<td>map</td>
<td>map</td>
<td>coyol palm</td>
</tr>
</tbody>
</table>
Limiting the establishment of diagnostic Tzeltal-Tzotzil lexical pairs is the large number of cognates in the two lexicons. Of the first 100 items on the dialect survey eliciting questionnaire, the Swadesh glottochronological list, some sixty percent of the responses are cognates shared by all dialects. Within Tzeltal, an additional twenty percent of the responses are cognates shared by all dialects. Within Tzotzil, an additional ten percent are shared. Of the second 100 items on the questionnaire, about thirty percent of the responses are cognates shared by all Tzeltal and Tzotzil dialects.

An examination of the distribution of the various phonological, morphological, and lexical items which differ from dialect to dialect reveals a number of relationships between communities. While these relations are not of primary concern in reconstructing the proto-language, they are of primary concern in reconstructing the history of the communities. These relations will be discussed in the following sections, samples of the data on which the relations are based will be presented, and some historical interpretations will be proposed.
The Dialects of Tzotzil.

Dialect survey questionnaires were collected from the Tzotzil communities of Bochil (3 informants), Chalchihuitán (6), Chamula (38), Chenalhó (5), Chiapilla (2), Huistán (1), Ixtapa (3), Jitotol (3), Magdalenas (3), Mitontic (4), Pantelhó (4), Santiago (3), San Andrés Larráinzar (7), San Bartolo Venustiano Carranza (24), San Juan El Bosque (1), Santa Marta (2), Simojovel (3), Soyaló (2), Totolapa (3), Zinacantan (19), and Zapotal (5). Colonies of these communities where questionnaires were collected are Huistán: Asufre (1) and Santa Catarina (1); Chamula: Rincón Chamula (5) and Flores Magón (1); San Andrés Larráinzar: Yuquím (1).

Three sets of phonological developments from Proto-Tzeltal-Tzotzil are of special interest in the study of Tzotzil dialects:

1. Developments of *x- and *h- (word-initial).
   a. Huistán: *x- becomes /h/; *h- becomes /H/, manifested phonetically as voiced vocoidal onset with local friction varying from pharyngeal to velar.
   b. Zinacantan, Chamula, Mitontic, Chenalhó: *x- becomes /h/; *h- becomes /y/ before /i e/, /h/ before /a/, and /w/ before /o u/. These dialects
have these developments in variation with /h/ for some speakers.

- Elsewhere in Tzotzil: *x- and *h- merge as /h/.

2. Developments of *h in roots of shape *CVhC.
   b. Elsewhere in Tzotzil there is no tone system, and *CVhC becomes CV'C.

3. Developments of *p and *t.
   a. Chamula: *p and *t merge as /#/.
   b. Elsewhere in Tzotzil *p and *t are maintained as /p t/.

Morphological features of interest are:

1. Non-past verbal prefix; all dialects have /ta-/,
   but some dialects have an additional prefix which may be used with, or may replace, /ta-/.
   a. Simojovel, Huetiupan and its colonies: /tipal (ta)-/.
   b. Bochil, Soyaló, and western parajes of San Andrés Larráinzar: /yak (ta)-/.
   c. Ixtapa: /yot (ta)-/.
2. Past tense prefixes with intransitive verbs
(first, second, and third person markers included here):

a. San Bartolo, Zapotal, Totolapa, Huistán:
   /ni-, na-, *i-/

b. Elsewhere in Tzotzil: /li-, la-, *i-/

Lexical items selected from the Tzotzil data to illustrate typical distributions are shown in Figure 1.

The distributions of lexical items show a number of clusters of dialects which tend to share lexical items of limited distribution. One such cluster includes the northern communities of Huetiupan (with its colonies Asufre and Santa Catarina), Simojovel, and Chalchihuitán. A second cluster includes the central communities of San Andrés Larránzar, Santiago, Santa Marta, Magdalenas, Bochil, Soyaló, and Jitotol. The third lexical cluster is composed of Huistán, San Bartolo, Zapotal, and Totolapa. Some affinities can be noted between the first two clusters and between the second two. Morphological groupings tend to support these three clusters of dialects.

Phonological features identify a further set of related dialects: Mitontic, San Pedro Chenalhó,
The Indians of Chiapilla are also fairly recent immigrants, being former plantation labor that acquired ejido land following the Mexican Revolution. Their speech is like that of the southern parajes of Zinacantan, and it is likely that their linguistic ancestors were laborers recruited from that zone.

Considering phonological, morphological, and lexical features together with what we know about recent migration, the Tzotzil dialects may be grouped into four clusters. The first includes Simojovel, Huetiupan, and Chalchihuitán. The second includes San Andrés Larráinzar, Santiago, Santa Marta, Magdalenas, and probably San Juan El Bosque. The third cluster is composed of Chenalhó, Kitontic, Chamula, and Zinacantan. Huistán, Totolapa, and San Bartolo make up the fourth cluster. The dialect of Pantalhó is definitely not linked to either of the last two clusters, as it is phonologically distinct from them, but neither is it lexically tied to the first two clusters, and it is perhaps best considered a separate "cluster" of one dialect. Likewise Ixtapa speech is phonologically like the first two clusters, but separate from all other dialects by a number of lexical items and at least one unique morphological feature.
Within the first cluster, Chalchihuitán is peculiar in that the northern parajes show greater lexical similarity to Simojovel and Huitiupan than do the southern parajes, which share some lexical items with Chenalhó. The single informant from the Huitiupan colony Asufre, which also has Chol speakers, had retroflex /h/ rather than the usual blade-articulation. Within the second cluster, San Andrés colonies and the western parajes of San Andrés shared some features not found in the rest of San Andrés. Chamula, in the third cluster, has both lexical and phonological peculiarities not shared by its neighbors. The fourth cluster is unique in that each of its members has a different phonological system. Huistán has the phoneme /h/, San Bartolo has a tone system and unround, centralized allophones of /w/, and Totolapa has a voiced, labialized, velar stop as the major allophone of /w/.

An interesting feature of Tzotzil dialects, one which is repeated in Tzeltal, is the occurrence of a large number of lexical items which are universal in the among informants from a single community, but do not occur elsewhere. Examples are San Bartolo: /tso'oo/ vulture, /tso'oh/ heart, /mä'kinašal/ rainbow, and /ceoš/ girl; Ixtapa: /ciš/ girl, /to'om/ heart, /tšašal/
rainbow, and /صوم/ prickly pear; Totolapa /تون کاشان/ egg; Chamula /هینی/ ant; Pantelhó /تیپول/ meat.

The Dialects of Tzeltal.

Dialect survey questionnaires were collected from the Tzeltal communities of Abasoló (4 informants), Aguacatenango (9), Altamirano (2), Amatenango (4), Bachajón (15), Cancuc (7), Chilón (3), Chanal (3), Guaquitepec (3), Ocosingo (7), Oxchuc (23), Petalcingo (2), Pinola (20), Sibacá (13), Sitalá (3), Tenejapa (24), and Yajalón (3). Colonies of these communities where questionnaires were taken are Aguacatenango: El Puerto (2), and Oxchuc: La Palizada (2).

Phonological developments from Proto-Tzeltal-Tzotzil that are of most interest in the study of Tzeltal dialects are the following:

1. Developments of *x and *h.
   a. Bachajón and Petalcingo: *x becomes /x/, *h becomes /h/.
   b. Sitalá and Yajalón: word-medial *h becomes /H/, manifested phonetically as vowel length.
   c. Elsewhere in Tzeltal: *x and *h merge in word initial as /h/, undergo other developments in other positions, but are not kept distinct.
2. Developments of $C_2$ in *CVhC_2 where $C_2$ is one
of the consonants /p t c s k/.

a. Oxchuc: $C_2$ becomes glottalized.

b. Elsewhere: $C_2$ remains plain.

3. Developments of *$y$ and *$y$.

a. Oxchuc: *$y$ and *$b$ merge as /$y$/.

b. Elsewhere: *$y$ and *$b$ remain /$y$/.

Kaufman (1962b:141) distinguishes two sets of
Tzeltal dialects on the basis of allophones of /$y$/;
one set includes Cancuc, Tenejapa, Oxchuc, Teopisca,
and Pinola. Other phonological developments important
for the study of individual dialects but less import-
ant for the interpretation of the present data are dis-

While some morphological differences no doubt
exist between Tzeltal dialects, they have not been
used here in the delineation of dialect clusters.
It should be noted that at least one of the non-past
verbal prefixes mentioned above in connection with
Tzotzil dialects, /yak (ta)-/, is common to most
Tzeltal dialects.

Lexical items selected for the Tzeltal data to
show typical distributions are shown in Figures 2.
In the Tzeltal dialects we are once again dealing with clusters of communities and not with sharp breaks between individual communities. One cluster is formed by the northern communities of Petalcingo, Yajalón, Chiilón, Sitalá, Bachajón, Guacutepec, Tenango, Sibaco, Ocosingo, and Altamirano. A second cluster includes the central communities of Oxchuc, Chanal, Abasolo, Cancuc, and Tenejapa. The third cluster is formed by the southern communities Amatenango, Aguacatenango, and Pinoila.

Within the northern cluster, Petalcingo, Bachajón, Sitalá, Yajalón, and Chiilón form a sub-group. Oxchuc, Chanal, and Abasolo form a subdivision of the central cluster. Within the southern communities there are a number of features which cut the three into alternate two-way divisions.

Abasolo often shares items with Tenango and Sibaco on the one hand and with Aguacatenango on the other. Cancuc often shares items with Ocosingo and Sibaco; Tenejapa shares items with Sitalá and Guacutepec to the north and with Amatenango to the south.

As in Tzotzil, colonies of Tzeltal-speaking communities are much like their parent communities; El Puerto speech agrees with that of Aguacatenango in almost all details. La Palizada, an Oxchuc colony in the
neighborhood of Aguacatenango, remains basically like Oxchuc even though it has begun to acquire features from Aguacatenango.

Tzeltal lexical items that are universal in a single community but peculiar to that community are Petalcingo /vatil ha'al/ frost; Oxchuc /mahl /it/ bat; Abasolo /San/ ant; Tenejapa /Sin/ left side; Amatenango /ke'om/ left side, /hoom/ frost, /tut/ what; Aguacatenango /mun/ there, /kohote/ tree trunk, /kisak/ camote, /tuluk san/ armadillo; Pinola /tu'ti/ what, /me'mut/ armadillo; El Puerto (Aguacatenango) /mayil/ many. In addition to these lexical items there are a number of phonological developments limited to single communities (Kaufman 1962b:168-218).

Patterns of distribution.

Two patterns of feature distribution are especially prominent in the Tzeltal and Tsotzil data. The first is the formation of dialect clusters—sets of adjacent communities which share large numbers of features. The second is the widespread occurrence of community-bound forms—items which occur in the speech of all informants from a given community but do not occur outside that community.
Dialect clusters. Since the linguistic unity of Tzeltal-Tzotzil is firmly established, all dialects of both Tzeltal and Tzotzil must be descended from the language of a single speech community. The number of forms which must be reconstructed for Tzeltal only, or for Tzotzil only, but which cannot be reconstructed for both, indicates that this ancestral speech community must have split into two divisions before further diverging into the immediate ancestors of the modern dialects.

As the number of cognates shared by each pair of dialects has yet to be calculated, glottochronological dates for all the splits necessary to produce the modern situation cannot be given. But since the minimum number of cognates shared by all dialects, and by all Tzeltal dialects alone, and by all Tzotzil dialects alone, has been determined in the course of processing the dialect survey material, some dates can be calculated. The single speech community ancestral to both Tzeltal and Tzotzil, i.e., that which spoke Proto-Tzeltal-Tzotzil, had begun to split into two branches by about 260 A.D. The branch that became Tzotzil had begun to develop internal varieties by about 650 A.D.; the Tzeltal branch had begun to divide by about 1200 A.D. (Dates are derived from Swadesh 1960:111, using the index.)
of retention $r = .86$). If allowances are made for dialects that have not been found, and for possible increased cognate retention due to close contact between the various communities, these dates could be moved further back in time.

While borrowing of features from dialect to dialect has taken place, borrowing is responsible for only a minor part of the linguistic similarity of the members of each dialect cluster. Rather, the similarity is due to the genetic connection between the dialects. As each relatively homogeneous speech community splits up through processes like migration, the daughter communities at first retain that homogeneity, but then begin to undergo changes independent of each other and of the parent community, which likewise continues to change. The similarities of the parent community to the daughter communities, and of the daughter communities to each other, is a natural consequence of the homogeneity of the parent. The diversity within a cluster of genetically related dialects is the result of the independence of changes that take place after the split. The new communities may retain features which are later lost in the parent; they may replace other features with innovations or with borrowing from their new linguistic neighbors.
Community-bound forms. The pattern of features limited to a single community seems to be the direct consequence of the closed nature of the Tzeltal and Tzotzil communities. Although each community is composed of a number of subdivisions, these are tightly bound to each other, the set of subdivisions making up, in traditional communities, a closed corporate group. Parajes of a community may be widely scattered, but they interact with one another through activities carried out in the ceremonial center regardless of geographical location. Consequently there is little tendency for linguistic boundaries to develop within a community. On the other hand, there are sharp breaks at community boundaries, both in interaction and in linguistic distributions.

As long as a community remains a single corporate group it seems to remain linguistically homogeneous—hence the high degree of homogeneity of the Indian communities. Once a part of the community has split off geographically and socially, however, it begins to act as a separate unit. El Puerto, for example, while still very similar to its parent Aguacatenango, has begun to diverge linguistically, partly because of a mixture of population with Huistán immigrants. La Palizada, while still remaining much like Oxchuc, has acquired new lexical
items from the southern communities with which it is in contact.

The distributions of a number of lexical items suggest that they are former community-bound forms which are spreading out along lines of trade. Items showing the Ochuc Tzeltal glottalization of consonants following *h are found in many nearby communities; items showing the central Tzotzil developments of *h to /y w/ are found in communities which have strong trade connections with San Pedro Chenalhó, one of the communities where these developments were regular. The Tzotzil community of Pantelhó, whose market services mostly Tzeltal speakers from nearby plantations and from Cancuc and Tenejapa, has the Tzeltalism /ti'vol/, meat; Cancuc and Tenejapa, on the other hand, have the form /pe'f/, duck, an apparent Tzotzil loan.

A notable exception to the general rule of community homogeneity is Chalchihuitán, where there is no important central market which unites the five parajes. Instead, each of the five parajes trade outside the community regularly, and not all trade in the same markets. The northern parajes trade in Simojovel, and have a number of lexical items which they share with that community. The southern parajes trade in Chenalhó, and show a considerable number of
loans from the Chenalhó variety of Tzotzil. This tends to support the theory that intra-community interaction leads to community linguistic homogeneity, as in Chalchihuitán there is neither extensive interaction between the parajes nor linguistic homogeneity.

Summary.
The distribution of linguistic features in the speech of Tzeltal and Tzotzil informants contacted during a dialect survey indicates that each community is relatively homogeneous internally, and has some features, either phonological, morphological, or lexical, shared by no other community. Likewise, clusters of geographically contiguous communities share features not found outside the cluster. It is suggested that this situation results from a series of splits in speech communities, the single, homogeneous, Proto-Tzeltal-Tzotzil speech community having split into two divisions, the ancestors of Tzeltal and of Tzotzil; each of these further split into several speech communities, the progenitors of the modern dialect clusters, which in turn developed into the modern individual dialects. Dialect clusters are thus interpreted as the result of retention of
features in the parent speech rather than the result of dialect borrowing, and are thus an indication of genetic affiliation of dialects.

The splitting process continues with the modern establishment of new colonies, which have begun to diverge linguistically from their parent communities. The closed nature of the communities tends to isolate each dialect from all others, limiting the spread of innovations from one community to the next. Dialect loans that have been observed appear to follow lines of trade.

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FIGURES 1 and 2.

Symbols: + all or most informants gave this form
- some few informants gave this form

Abbreviations:

Northern Tzotzil
Si Simojovel de Allende
H Hueiupan
SC Hueiupan colony: Santa Catarina
A Hueiupan colony: Asufre
Ch San Pablo Chalchihuitán

Western Tzotzil
J Jitotol
B Bochil
So Soyaló
SA San Andrés Larrainzar
Y San Andrés colony: Yuquín
S Santiago
M Magdalenas (Aldama)
SM Santa Marta

Central Tzotzil
SP San Pedro Chenalhó
Mi Mitontic
SJ San Juan Chamula
R Chamula colony: Hinón Chamula
P Chamula colony: Florés Magón
Z Zinacantan
C Zinacantan colony: Chiapilla

Southern Tzotzil
Za Zapotal
T Totolapa
VC San Bartolo Venustiano Carranza
Hu Huixtán

Unclassified
P Santa Catarina Pantelhó
EB San Juan El Bosque
I Ixtapa
Abbreviations (continued)

Northern Tzeltal
P Petalcingo
Y Yajalón
C Chilón
S Sitalá
B Bachajón
G Guachitepec
T Tenango
Sí Sibaco
O Ocosingo
A Altamirano

Central Tzeltal
Ox Oxchuc
Pa Oxchuc colony: La Palizada
Ch Chanal
Ab Abasolo
Ca Cancuc
Te Tenejapa

Southern Tzeltal
Am Amatenango
Ag Aguacatenango
EP Aguacatenango colony: El Puerto
Pí Pinola (Villa Las Rosas)
### Figure 1: Tzotzil Dialect Clusters

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1. zapilote
2. chico
3. murcielago
4. muchacha

Figure 1: Tzotzil Dialect Clusters (008 1)
| Si | H | SC | A | Ch | P | EB | J | B | So | SA | Y | S | M | SM | I | SP | Mi | SJ | R | F | Z | C | Za | T | VC | Hu |
|----|---|----|----|----|---|----|---|---|----|----|---|---|---|----|---|----|---|----|---|----|---|----|---|----|
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| +  | +  | +  | +  | +  | +  |    | +  | +  | +  | +  | +  | +  | +  | +  |    | +  | +  | +  | +  | +  | +  | +  | +  |
| +  | +  | +  | +  | +  | +  |    | +  | +  | +  | +  | +  | +  | +  | +  |    | +  | +  | +  | +  | +  | +  | +  | +  |

**Figure 1 (Page 2)**
| Si | H | SC | A | Ch | P | EB | J | B | So | Sa | Y | S | M | SM | I | SP | Mi | SJ | R | F | Z | C | Za | T | VC | Hu |
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**Figure 1.** (page 3)
**FIGURE 2: TZELTAL DIALECT CLUSTERS**

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<td>4. <em>moco</em></td>
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<td></td>
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<td>simal, caʔ (il, al, ul) niʔ</td>
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</table>

**FIGURE 2. Tzeltal Dialect Clusters**

(page 2)
| P | Y | C | S | B | G | T | Si | O | A | Ox | Pa | Ch | Ab | Ca | Te | Am | Ag | EP | Pi |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|
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| + | + | + | + | + | + | + | + | - | + | + | + | + | + | + | + | + | + |
| + | + | + | + | + | + | + | + | - | + | + | + | + | + | + | + | + | + |

5. pie
Tok Pakan

6. morir
čam lah

7. qué
b'ti (n), beluk
tu
tut
tu?ti
tut'

8. (mano) derecha
wopel
wápel
Bac'il (k'ab')

**Figure 2 (page 2)**
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| P | Y | C | S | B | G | T | Si | O | A | Ox | Pa | Ch | Ab | Ca | Te | Am | Ag | EP | Pi | 10. naranjas |
|---|---|---|---|---|---|---|----|---|---|----|----|----|----|----|----|----|----|----|----|----|----|---|---|
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| + | + | + | + | + | + | + | + + | + + | + | + + | + + | + | + | + | + | + | + | + | + | Palcaš, palzáš |
|   |   |   |   |   |   |   |   |   |   |   |   | naraš, naržaš |
|   |   |   |   |   |   |   |   |   |   |   |   | nalaš |
|   |   |   |   |   |   |   |   |   |   |   |   | Palžaš, palžaš |
|   |   |   |   |   |   |   |   |   |   |   |   | nara(n)žaš, narižaš, nalažaš, naranža, naranha |

Figure 2. (p. 403)
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