THE UNIVERSITY OF CHICAGO PRESS JOURNALS

On Linguistic Affinities of Amuzgo<br>Author(s): Robert E. Longacre<br>Source: International Journal of American Linguistics, Vol. 32, No. 1 (Jan., 1966), pp. 4649<br>Published by: The University of Chicago Press<br>Stable URL: http://www.jstor.org/stable/1263447<br>Accessed: 16-09-2016 14:59 UTC

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# ON LINGUISTIC AFFINITIES OF AMUZGO 

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1. Phonemes of Amuzgo and of proto languages
2. Tabulation of reflexes and cognates
3. Although Amuzgo has commonly been classified as a Mixtecan language, recent systemic comparison of certain Mexican Indian languages has failed to reveal any good reason for so classifying it. Detailed comparative work has been done within the Mixtecan, ${ }^{1}$ Popolocan ${ }^{2}$ and Chiapanec-Manguean ${ }^{3}$ language families. It has further been demonstrated that these three families are related. Gudschinsky's initial coupling of Mixtecan and Popolocan has been more recently amplified and brought into sharper focus. ${ }^{4}$ Amuzgo itself has been worked into the reconstructions. ${ }^{5}$ By now we can with considerable confidence offer (1) a sketch of the phonological structure of reconstructed Popolocan-Mixtecan-Amuzgoan (and probably including Chiapanec-Manguean); (2) a phonological characterization of ProtoMixtecan as a descendant of this earlier layer; and (3) a phonological characteriza-

[^0]tion of Proto-Popolocan as another descendant of this earlier layer.

Meanwhile, the phonological structure of Amuzgo has been recently described. ${ }^{6}$ Tracing the development of Amuzgo from the common horizon ( $\mathrm{PPnMx}+$, i.e., Proto-Popolocan-Mixtecan plus Amuzgo), we find that Amuzgo does not share the structural innovations characteristic of Proto-Mixtecan (nor, on the other hand, of Proto-Popolocan).

The following are the phonemes of Amuzgo:

| p | t | $t^{y}$ | $\mathrm{k}, \mathrm{k}^{\mathrm{w}}, \mathrm{k}^{\mathrm{y}}$ |
| :---: | :---: | :---: | :---: |
| b | s | š |  |
| $\mathrm{m}^{\text {p }}$ | $\mathrm{n}^{\text {t }}$ | $\tilde{n}^{\text {t }}$ | $\mathrm{n}^{\mathrm{k}}$ |
| m | n | ñ |  |
| w | 1 | y |  |
|  | r | $\tilde{r}$ |  |

(and syllabic m, $\mathrm{n}_{\mathrm{o}}, \mathrm{l}$, and ${ }^{m} \tilde{\mathrm{p}}$ )
$i, e, æ, a, \rho, o, u$ and $e, \nsim, a, \imath, ~ \varrho$.
The third row of consonants are occluded nasals rather than prenasalized stops; the nasal articulation is the more prominent phonetically and the units pattern distributionally as nasals rather than as stops. The nasalized vowel e varies phonetically to [en] in utterance final, while 0 is most frequently actualized as [əm]. Clusters of from two to four consonants may occur in syllable onset. Only glottal stop occurs syllable final. There are two syllable types, controlled and ballistic. Individual tones and monosyllabic tone sequences are radically conditioned (as to phonetic contour) by occurrence in one syllable type versus the other.

The following system of reconstructed phonemes is indicated by the comparison of
${ }^{6}$ Bauernschmidt, Amy. The Syllable Dynamics of Amuzgo (to appear in Lg ).

Proto - Mixtecan, Proto - Popolocan, and Amuzgo (and probably Chiapanec-Manguean as well):


Proto-Popolocan had a similar system of consonants except that (1) $\mathrm{PPnMx}+{ }^{* *} \theta$ and ${ }^{* *}{ }^{*}{ }^{\mathrm{y}}$ split into $\mathrm{PPn}{ }^{*} \mathrm{c},{ }^{*}$ č, ${ }^{*} \mathrm{~s}$, and ${ }^{*}$ s ; (2) $\operatorname{PPn}{ }^{*} \tilde{n}$ developed from $\mathrm{PPnMx}+{ }^{* *}$ my. (3) $\mathrm{PPn}{ }^{*} \mathrm{l}$ developed as a split-off from $\operatorname{PPnMx}+{ }^{* *} \mathrm{y}$.

|  | PPn consonants |  |  |
| :---: | :---: | :---: | :---: |
| ${ }^{\text {t }}$ | ${ }^{\text {ty }}$ | ${ }^{\text {k }}$ | ${ }^{*} \mathrm{k}^{\text {w }}$ |
| ${ }^{*}$ c | *ど |  |  |
| ${ }^{\text {s }}$ | * | *h | *x" |
| $*_{\text {n }}$ | ${ }^{\text {nin }}$ |  | *m |
| ${ }^{*} 1$ | * y |  | *W |

PMx modified the system of PPnMx+ consonants by two mergers which are diagnostic of Mixtecan: (1) Reflexes of PPnMx ${ }^{* *} \mathrm{t}^{y}$ merged with those of ${ }^{* *} \mathrm{t}$; and reflexes of ${ }^{* *} \theta^{y}$ with those of ${ }^{* *} \theta$. (2) PPnMx + clusters of ${ }^{* *} \mathrm{~m}$ plus stop or spirant (the first two rows of PPnMx+ consonants-except for ${ }^{* *}$ ) fused into the PMx unit phonemes ${ }^{{ }^{*} \mathrm{n}} \mathrm{d},{ }^{{ }^{* n} \mathrm{~g}}$, ${ }^{{ }^{* n} \text { gw. The }}$ phonemic status of ${ }^{*}$ l is uncertain; it may still have been an allophone of ${ }^{*} \mathrm{y}$.

| PMx consonants |  |  |  |
| :---: | :---: | :---: | :---: |
| * t | *k | *kw | *? |
| * $\theta$ | *x | * ${ }^{\text {w }}$ |  |
| ${ }^{*}{ }_{\text {d }}$ | *ng | ${ }^{*} \mathrm{~g}^{\text {" }}$ |  |
| *n |  | *m |  |
| * 1 (?) | *y | * ${ }^{\text {w }}$ |  |

PPnMx + had a series of postposed elements which we reconstruct as:

$$
\begin{aligned}
& \text { **-m } \\
& \text { **-xm **-xV } \\
& \text { **-xm? } \quad{ }^{* *-x V} \text { ? } \\
& \text { **->m **- }{ }^{*} / \text { /V }
\end{aligned}
$$

In PPn **-m is lost almost without trace, but reflexes of the other postposed elements
survive. In PMx , the former postposed elements were collapsed into ${ }^{*}-\mathrm{m},{ }^{*}-\mathrm{m}^{?}$, and ${ }^{*}-\mathrm{P}(\mathrm{V}) . \mathrm{PMx}{ }^{*} \mathrm{i},{ }^{*} \mathrm{i},{ }^{*} \mathrm{a}$, and ${ }^{*} \mathrm{o}$ occurred before ${ }^{*}$-m and ${ }^{*}$-m .

Amuzgo has not participated in either of the two characteristic Mixtecan mergers listed above. Thus, Amuzgo clearly preserves separate reflexes of ${ }^{* *}$ t and ${ }^{* *}{ }^{*} y$, and of ${ }^{* *} \theta$ and ${ }^{* *} \theta^{y}$. Furthermore, although Amuzgo has developed unit phonemes (the occluded nasals) which bear a superficial resemblance to the PMx prenasalized series, there are separate reflexes of ${ }^{* *}$ mt versus ${ }^{*} \mathrm{~m} \theta$ and of ${ }^{* *} \mathrm{mt}^{\mathrm{y}}$ versus ${ }^{* *} \mathrm{~m} \theta^{\mathrm{y}}$. Thus, Amuzgo does not unconditionally merge stops and spirants after nasals in the characteristically Mixtecan manner. Amuzgo preserves separate reflexes of vowel versus vowel plus *-m (and ${ }^{* ?} \mathrm{~m}$ ) for all six PPnMx + vowels; it does not reduce the number of vowels before ${ }^{*}$-m to four as in PMx.

Our argument against classifying Amuzgo as Mixtecan is based on the irreversibility of merger. Merger, like shuffling a deck of cards, is irreversible; it precludes any subsequent separate developments of the elements which have entered into the merger. If the three Mixtecan languages reflect merger of certain PPnMx + phonemes, and Amuzgo does not reflect these mergers, then Amuzgo could not have shared with PMx the common stage at which these mergers took place. Whatever innovations are shared between Amuzgo and either PPn or PMx, are no more significant than those shared between PPn and PMx or between either of these and Chiapanec-Manguean. Amuzgo should therefore be classified as a separate language family within the Otomanguean stock. The Mixtecan family includes Mixtec, Cuicatec, and Trique; ${ }^{7}$ not Mixtec, Cuicatec, and Amuzgo as
${ }^{7}$ Cf. Longacre, Proto-Mixtecan (1957). Also: Longacre, Swadesh's Macro-Mixtecan Hypothesis. IJAL 27.9-29 (1961). On pages 11-19 of the latter article I carefully trace isoglosses which unite Mixtecan, Cuicatecan and Trique into one welldelineated linguistic family.
formerly held. Whether or not Popolocan, Mixtecan, and Amuzgoan (plus ChiapanecManguean) form a recognizable substock with Otomanguean remains to be seen.
2. In a brief note of this sort, space precludes adequate documentation of various claims made here. Fuller evidence is forthcoming in an article, The Linguistic Affinities of Amuzgo, which is to be published sometime in 1965 in the Homenaje a Roberto Weitlaner volume (Mexico City). I close with a summary tabulation of reflexes of PPnMx + phonemes in PPn, PMx and Amuzgo, followed by a few cognate sets.
${ }^{* *} \mathrm{t}>\mathrm{PPn}{ }^{*} \mathrm{t}$; $\mathrm{PMx}{ }^{*} \mathrm{t}$ (but ${ }^{* *}$ mt $>$ PMx ${ }^{* n}$ ) ; A t (but ${ }^{* *}$ mt A n ${ }^{t}$ ).
${ }^{* *} \mathrm{t}^{\mathrm{y}}>\mathrm{PPn}{ }^{*} \mathrm{t}^{\mathrm{y}}$ (*t before ${ }^{* *}$ e); PMx ${ }^{*} \mathrm{t}$ (but ${ }^{* *}$ mt $^{y}>\mathrm{PMx}^{* n}$ ); A ty (but ${ }^{* *} \mathrm{mt}^{y}>$ $\mathrm{A} \tilde{n}^{\mathrm{t}}$ ).
${ }^{* *} \mathrm{k}>\operatorname{PPn}{ }^{* k}$ (but $\left.{ }^{* *} \mathrm{yVk}>\operatorname{PPn}{ }^{*} \mathrm{t}^{\mathrm{y}}\right)$; PMx ${ }^{* k}$ (but ${ }^{* *}$ mk $>$ PMx ${ }^{*}{ }^{*} \mathrm{~g}$ ); $\mathrm{Ak}\left(\mathrm{k}^{\mathrm{y}}\right.$ by contraction of earlier *Cik).
${ }^{* *} \mathrm{k}^{\mathrm{w}}>\operatorname{PPn}{ }^{*} \mathrm{k}^{\mathrm{w}}$-, ${ }^{*}$-k-; PMx ${ }^{*} \mathrm{k}^{\mathrm{w}}$ (but-

${ }^{* *} \theta>\operatorname{PPn}{ }^{*} \mathrm{c}$ (in cluster with ${ }^{*} \mathrm{~h}$ or ${ }^{*} \mathrm{n}$ ), *š (varying freely to ${ }^{*} \mathrm{~s}$ in a few environments); PMx ${ }^{*} \theta$ (but ${ }^{* *}$ m $\theta>$ PMx $^{* n}$ ); A ts ( s in a few environments, chiefly in noun paradigms where it contrasts with ts and may therefore have developed by backformation).
${ }^{* *} \theta^{\mathrm{y}}>\mathrm{PPn}^{*}$ č; PMx ${ }^{*} \theta$ (but ${ }^{* *} \mathrm{~m}^{\mathrm{y}}>$ PMx ${ }^{* n d}$ ); A tš
${ }^{* *} \mathrm{x}>\operatorname{PPn}{ }^{*} \mathrm{~h} ; \mathrm{PMx}{ }^{*} \mathrm{x}$ (but ${ }^{*} \mathrm{mx}>$ PMx ${ }^{* n g}$ ); A k in roots, h in old preposed and postposed elements (now usually fused with the root).
${ }^{* *} \mathrm{x}^{\mathrm{w}}>\mathrm{PPn}{ }^{*}{ }^{\mathrm{m}} ; \mathrm{PMx}^{*} \mathrm{x}^{\mathrm{w}}$ (but ${ }^{* *}{ }^{*} \mathrm{mx}^{\mathrm{w}}>$ PMx ${ }^{*{ }^{n}}{ }^{\mathrm{w}}$ ); A šu (initial), ku (when preceded by another consonant).
${ }^{* *} \mathrm{n}>\operatorname{PPn}{ }^{*} \mathrm{n}$; $\mathrm{PMx}{ }^{*} \mathrm{n}$; A n.
${ }^{* *}{ }^{2} n \gg \operatorname{PPn}{ }^{*}$ m; PMx ${ }^{*} \mathrm{n}$; A nn.
${ }^{* *}$ y $>\operatorname{PPn}{ }^{*}$ y, *l (obscure conditions of split); PMx *y, ${ }^{*}$ (similarly obscure conditions); A has various reflexes: **yVCV > A lCV; **yVm > A yV; ${ }^{* *} \mathrm{CVyV}>\mathrm{A}$ CiV .
${ }^{* *}$ my $>\operatorname{PPn}{ }^{*} \tilde{n} ; ~ P M x{ }^{*} \mathrm{~m} ; \mathrm{A} \tilde{\mathrm{n}}<$
${ }^{* *} m-y V(m), \emptyset<{ }^{* *} C V m-y V m(>A C V)$.
${ }^{* *} \mathrm{w}>\mathrm{PPn}{ }^{*} \mathrm{w}$; PMx ${ }^{*} \mathrm{w}$; A w < ${ }^{* *} \mathrm{w} V$ ( $>\mathrm{A} w V$ ), and $\mathrm{u}<{ }^{* *} \mathrm{CVwV}(>\mathrm{A} \mathrm{CuV})$.
${ }^{* *}{ }_{\mathrm{mw}}>\mathrm{PPn}^{*}$ m; PMx ${ }^{*}$ m; A m $<$
${ }^{* *} \mathrm{~m}-\mathrm{wV}$ ( $>\mathrm{A} \mathrm{mV}$ ). $\varnothing<{ }^{* *} \mathrm{CVm}-\mathrm{wVm}$ ( $>\mathrm{A} C Y$ ).
${ }^{* *_{i}}>\operatorname{PPn}{ }^{*} \mathrm{i}, \quad\left({ }^{*} \mathrm{t}, \quad{ }^{*} \mathrm{y}\right) \mathrm{e}, \quad\left({ }^{* *} \mathrm{mw}\right) \mathrm{i} / \mathrm{e}$; PMx ${ }^{*} ;$ A i, $\left(n^{t}, \tilde{n}^{t}, u\right) e,(w) i / e,(* * m n) a$, and (** ${ }^{*}$ ) .
${ }^{* *}{ }_{i m}>\mathrm{PPn} \mathrm{i} / \mathrm{e}$ as above (in roots), ${ }^{*} i$ (in postposed nasalized elements and in roots which have coalesced with a postposed nasalized element); PMx *im; A e, (**mw, ${ }^{* *} \mathrm{mn}$ ) 0 .
${ }^{* *} \mathrm{e}>\operatorname{PPn}{ }^{*} \mathrm{e},\left({ }^{* *} \mathrm{y},{ }^{* *}{ }^{* \mathrm{y}},{ }^{* *} \mathrm{x}^{\mathrm{m}}\right)^{*} \mathrm{a}$; PMx
${ }^{*} \mathrm{e},\left({ }^{* *} \mathrm{y},{ }^{* *} \theta\right){ }^{*} \mathrm{a},\left({ }^{* *} \mathrm{x}\right){ }^{*}$; A ( $\left.\mathrm{t}^{\mathrm{y}}, \tilde{\mathrm{n}}^{\mathrm{t}}, \mathrm{uw}\right) \mathrm{e}$, ( $\left.\mathrm{s}, \mathrm{ts}, \mathrm{nts}, \mathrm{tsh}, \tilde{n}^{\mathrm{t}} \mathrm{h}\right) \mathrm{a},(\mathrm{nt}) æ$.
${ }^{* *} \mathrm{em}>\mathrm{PPn}{ }^{*} \mathrm{e},\left({ }^{* *} \mathrm{w}\right)^{*} \mathrm{a},\left({ }^{* *} \mathrm{x},{ }^{* *} \mathrm{my}\right){ }^{*}$; PMx ${ }^{*} \mathrm{a},\left({ }^{* *} \mathrm{y},{ }^{* *} \theta\right)^{*} \mathrm{am},\left({ }^{* *} \mathrm{w},{ }^{* *} \mathrm{x}\right)^{*} \mathrm{e}$; A o, (nt) $)$, (u)a.
${ }^{* *}{ }_{i}>\operatorname{PPn}{ }^{*} \mathrm{i},\left({ }^{* *} \theta\right.$, nasal, stop-nasal) ${ }^{*}$ a, $\left({ }^{* *} \mathrm{k}\right){ }^{*} \mathrm{u}$; $\mathrm{PMx}^{*} \mathrm{i}$; A e, (nt)æ, ${ }^{* *}{ }^{*}$ > u) i, (n)a.
${ }^{* *}$ im $>$ PPn reflexes of ${ }^{* *}$ (nasalized only in old postposed nasalized elements or syllables which have coalesced with such elements); PMx *im; A e, (u)a, (**y) , **(my) a.
${ }^{* *} \mathrm{a}>\mathrm{PPn}^{*} \mathrm{a} ; \mathrm{PMx}$ *a; A a, (ts? $\left.\mathrm{t}^{\mathrm{tP}}\right) \mathrm{o}$, (** $\left.{ }^{*} \mathrm{~m},{ }^{* *} \mathrm{mn},{ }^{* *} \mathrm{mw}\right)$ a
${ }^{* *} \mathrm{am}>\operatorname{PPn}\left({ }^{* *} \mathrm{t},{ }^{* *} \mathrm{t} \mathrm{y},{ }^{* * \mathrm{k})}{ }^{*} \mathrm{e},\left({ }^{* *} \theta\right.\right.$, ${ }^{* *}{ }^{\text {y }}{ }^{*} \mathrm{u}$; PMx ${ }^{*} \mathrm{am}$; A (stop or spirant)o/u, ( $\left.\mathrm{n}, \mathrm{y},{ }^{* *} \mathrm{mn},{ }^{* *} \mathrm{my},{ }^{* *} \mathrm{mw}\right)_{\mathrm{Q}}$.
${ }^{* *}{ }_{o}>\operatorname{PPn}{ }^{*}$; PMx ${ }^{*}$; A o/u.
${ }^{* *} \mathrm{om}>\mathrm{PPn}^{*} \mathrm{u} ; \mathrm{PMx}{ }^{*} \mathrm{om} ; \mathrm{A} \mathrm{Q}$.
${ }^{* *} \mathrm{u}>\operatorname{PPn}{ }^{*} \mathrm{a},\left({ }^{* *} \mathrm{t}^{\mathrm{y}}\right)^{*} \mathrm{u} ; \mathrm{PMx}^{*}{ }_{\mathrm{i}},\left({ }^{* *}{ }^{*} \mathrm{y}\right.$, ${ }^{* *} \mathrm{y}$ ) ${ }^{*} \mathrm{u}$; A i, (s, ts, nts, nt, $\mathrm{n}^{\mathrm{t}}$ )æ.
${ }^{* *}$ um $>$ PPn and PMx reflexes of ${ }^{* *}$; A u, (t)o/o.

The phoneme ${ }^{*} \mathrm{~m}$ played a peculiar role in the historical phonologies of Popolocan, Mixtecan, and Amuzgoan. PPnMx+ roots (and presumably Otomanguean roots as well) were consonant initial. The phoneme ${ }^{* *} \mathrm{~m}$ had considerable range of allophonic variation: (1) initial in roots it was [ n ]; (2) postvocalic, it was [m]; (3) in postposed and preposed syllables of ${ }^{* *} \mathrm{xm}\left({ }^{?}\right)$ and
**? m structure it was syllabic ( m ), except that (4) [m] immediately preceding stops and spirants varied phonetically to [n]which probably at an early period was also syllabic. The phonetic clusters ${ }^{* *} \mathrm{mn},{ }^{* *} \mathrm{my}$, and ${ }^{* *}$ mw have had varied developments in Popolocan, Mixtecan, and Amuzgoan (see above); but an understanding of these developments enables one to bring together apparently disparate elements into the same set (or collection of sets). The following limited sample of Popolocan-MixtecanAmuzgoan sets is taken from sets involving these clusters. The transcription is not strictly phonemic in that root initial nasal is symbolized as ${ }^{* *} \mathrm{n}$ for formulaic convenience.

The Proto-Popolocan sets are numbered as in Gudschinsky, 1959; the Proto-Mixtecan sets are numbered as in Longacre, 1957 (see also Longacre, 1962). PPn (23) *?nihi maize ear ( $<{ }^{* *} \mathrm{n}$ ) and (199) *hme maize ( $<{ }^{* *} \mathrm{mn}$ ); PMx (37) ${ }^{*}$ ?ni? maize; A $n_{0}{ }^{1} \mathrm{ną}^{2}$ maize. PPnMx+ ${ }^{* *} \mathrm{xVm}-\mathrm{ni}$ and **? ni-xVm (two roots in free permutation within Otomanguean noun phrases?). PMx
*nam/yam face, in front of, surface; $\mathbf{A}$ $\mathrm{n}_{0}^{1} \mathrm{n}^{2}{ }^{2}(\mathrm{sg}), \mathrm{n}^{\mathrm{t}} æ(\mathrm{pl})$ face. $\mathrm{PPnMx}+{ }^{*}(\mathrm{~m}) \mathrm{nam}$ (origin of A plural is obscure). PPn (97)
 later $\operatorname{PPn}{ }^{*} \mathrm{c}$ ) and (147) sę dawn, light, candle, heart, face; PMx (172) *(?)yam?, *日am? fire, sun, light; A tso (sg), ño (pl) fire. $\mathrm{PPnMx}{ }^{* *}(\mathrm{~m}) \theta \mathrm{em},{ }^{* *}(\mathrm{~m}) \mathrm{yem}$. The Amuzgo singular seems to hark back to ${ }^{* *} \theta^{\mathrm{y}}$ rather than to ${ }^{* *} \theta$; or the palatalization in A could be by analogy with the plural. PPn (300) *ñu, *?nu (with preposed *naand ${ }^{*}$ ni-) teeth; PMx (221) ?yam? teeth; A $\mathrm{n}{ }^{?} \mathrm{Q}^{2}$ teeth $\left(<^{* *} \mathrm{nVm}-\right.$ ?yam) and na ${ }^{921}$ palate (<**m-?ya). PPn (303) *? ${ }^{*}$ wi, *? ${ }^{*}$ li, *?nti fire, sun, (196) *hmi sky (**xm-?wi), and (225) *?mi to be named (**m-?wi); PMx (21) k/xa?mi to burn and (47) wi to roast; A $\mathrm{w}^{9 \mathrm{i}^{2}}$ to be angry, wi${ }^{3}$ warm oneself, and hmę ${ }^{93}$ to be angry ( ${ }^{* *} \mathrm{xm}_{\mathrm{m}}-$ ?wi). For the semantic association of day and name, see LongacreMillon, 1961, 9-10. PPn (326) *wa mouth; PMx (160) $\mathrm{k}^{\mathrm{w}} / \mathrm{k} / \mathrm{xa}$ ? ma(m) to say (**CVm?wa(m)) and (226) ${ }^{*} \theta /{ }^{\mathrm{n}} \mathrm{d} / \mathrm{yi}$ ?wam mouth, mouthful (**CV-?wam); A -?ma ${ }^{12}$ to call, to talk over (**CVm-?wa), ntsmą? a bite, e.g., of tortilla ( ${ }^{*} \mathrm{~m}_{\mathrm{o}}-\theta \mathrm{Vm}-? \mathrm{wa}$ ).


[^0]:    ${ }^{1}$ Longacre, Proto-Mixtecan. Publication 5, Indiana University PRCAFL (1957).
    ${ }^{2}$ Gudschinsky, Sarah C., Proto-Popolocan, IUPAL Memoir 5 (1959).
    ${ }^{3}$ de Miranda, Maria Teresa Fernández and Weitlaner, Roberto, Sobre Algunas Relaciones de la Familia Mangue, AL 3:7 (1961).
    ${ }^{4}$ Longacre, Amplification of Gudschinsky's Proto-Popolocan-Mixtecan. IJAL 28.227-42 (1962).
    ${ }^{5}$ Evangelina O. Arana, Relaciones Internas del Tronco Mixteco-Trique. Los anales del Instituto Nacional de Antropología e Historia 12.221-73 (1960). Arana at this time considered Trique to be outside the Mixtecan family-although she now concurs with my position of 1957 that Trique belongs to Mixtecan (cf. Swadesh, Interim Notes on Oaxacan Phonology. SJA 20.168, 1964). Arana in this same study treated Amuzgo as part of Mixtecan.

