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ON THE RELATIONSHIP BETWEEN
MIXE-ZOQUEAN AND UTO-AZTECAN

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Abstract: The paper seeks to establish evidence for the relationship between Uto-Aztecan and Mixe-Zoquean, a relationship which was proposed by Whorf (1935), but never before substantiated by actual comparisons. In order to reduce the factor of chance resemblances proto-forms are compared. Given the several thousand years of non-proximity of the two language families, borrowing cannot be used used as an explanation for the similarities in vocabulary. In several instances the comparisons reveal regular correspondences involving non-idental segments, correspondences of a sort that is expected in true genetic relationships.

0. Introduction[1]

This article will differ from earlier attempts to find external relatives to the MixeZoquean (MZ) languages both methodologically and materially. Previous attempts (see Wichmann 1994: 238-243 for a list and brief discussion) often do not cite any evidence at all. If they do, regularity of correspondances is not taken very seriously, the number of cognates given is small, and single languages rather than protolanguages are compared. In the present work, however, it is taken for granted that all segments should correspond; therefore any deviation from the expected pattern will be noticed. To alert the critical awareness of the reader, cognates will be cited as I go along and not collected in an appendix. Moreover, for the first time proto-languages are compared. The results are at variance with McQuown (1942), Swadesh (e.g. 1956), Greenberg (1987), Witkowski and Brown (1978), Brown and Witkowski (1979), and others who have thought MixeZoquean to be closest related to Totonacan and Mayan. I side more closely with Whorf (1935), who included UtoAztecan (UA) in his "Macro-Penutian" stock along with (almost certainly in the extended sense of Sapir 1929, see summary of personal communication with Whorf in Mason 1962 [1940]), Totonac, Kiowa, and Mayan. As is well known, Whorf never published any supporting evidence. Others who did try to supply evidence for the Penutian relationship of MixeZoquean unfortunately did not include UtoAztecan in their comparisons. These are the works of Freeland (1931) and Hymes (1964). The relationship of MixeZoquean to UtoAztecan is a hypothesis which is hard to ignore, as the reader shall soon see. It seems to be a mere coincidence that there has been no scholar familiar with both language families who has been sufficiently attracted to the hypothesis so as to check it in detail. Thus the relationship has been largely neglected up to this point.

UtoAztecan proto-forms are from Kaufman (1981) (abbreviated TK) when not otherwise noted. This author builds on previous studies, notably by Voegelin, Voegelin and Hale (1962), Miller (1967), Ianucci (1972), Campbell and Langacker (1978), Bright and Hill (1967), and

Bascon (1965). (These works will hereafter be referenced by the abbreviations VVH, M1, DI, C/I., B/H, BAS). Later important contributions are Miller (1987) and Lionnet (1985) (abbreviated M2 and AL). My own expertise is in MZ and I am therefore not in the position to judge the validity of Kaufman's reconstructions. But they are expressedly said to be conservative and are well argued for and embrace both length and final features unlike all previous studies but Whorf (1935). TK has some 473 UA reconstructions plus some additional reconstructions at lower nodes in the family tree. About 10% of these reconstructions enter into comparisons with MZ forms in the present article.

Occasionally I cite from VVH, M1, or the sources of M2. This will be because the reconstructed form is not included in TK (which does not purport to be an exhaustive lexical collection), not because the shape of their proto-form happen to better suit the MZ form. It should be kept in mind that Miller never offers true reconstructions, but only cognate sets indexed by some important, recurring sounds. All MZ lexical reconstructions are from Wichmann (1995), which includes a comparative dictionary. "MZ" abbreviates the MZ proto-language, "M" the immediate ancestor of Mixean (one of the two main branches), "Z" the ancestor of Zoquean (the other main branch), and "OM" is the parent of Oaxaca Mixean, a group of languages within the Mixean branch. The reconstructions of grammatical morphemes are from Wichmann (1995). For an overview of MZ studies, see Wichmann (1994).

The cognates are cited in an order that focuses first on reflections of the vowel system, then on changes involving consonants. The symbol "?" and "9" represent a glottal stop and a velar nasal, repectively. Correspondences signalled by V, C, and ( ) are not accounted for. Other things that look like they are not accounted for will be explained by sound laws to be revealed as I go along.

1. Correspondences Involving Changes

Correspondences signalled by V, C, and () are not accounted for.

UA *a(:) : MZ *o(:)

(1)   **?ahyV 'good'   >   UA *?ahyɨ
                                    MZ *?oya

(2)   **?a(:)CV(h) 'louse'   >   UA *?atɨʜ
                                    M *?o:ci

(3)   **hVka(s) 'not warm'   >   UA *hɨka 'shade, be cool'
                                    MZ *hokos 'tepid'

(4)   **ko?V `die'      >      UA \*ko?i/o `to die, kill'
     Z *ka? `to die'
     Cf. also UA *ko?-ya `to kill', MZ *yak-ka? to kill'

(5)   **ma(?)C `grind'      >      UA \*mataa `quern' (final aa must be an old suffix)
     MZ *mo?c `to grind'

(6)   **ma(:)sah `deer'   >   UA *maasa/oh
     Z *mɨ?ah

(7)   **na?(V) `burn'      >      UA \*na?a/i `to burn, kindle'
     Z *no? `to light, set fire to'

(8)   **pa:k(a:) `reed'   >   UA *paakaa
     MZ *?o:k(wi?n)

(9)   **?o(:)ka `old woman'   >   SUA *?ooka
     MZ *?oko `grandmother'

(10)   **taCV `put'      >      Tak \*tavV `put'
     OM *to?o `basket woven of palm'

(11)   **yo?(o)k `heat;      >      UA \*ya?a `to desire'
     desire'   MZ *yo?k `to get warm'

UA initial kWi- : MZ kc-

(12)   **kWit `fall'      >      UA \*kWita `shit'
     (final /a/ a suffix?)
     MZ *kct `fall'

UA initial 9- : MZ w-

(13)   **Wan? `cry'      >      UA \*9a.. `to cry'
     MZ *wan? `to sing; want'

(14)   **Woy `roll'      >      UA \*9o.. `to bend back'
     MZ *woy `to roll'

(15)   **Wa(:)-ci `little root'      >      UA \*9aa `root'
     Z *waci `root'
     (contains **-ci `dim.)

MZ initial p- : UA zero

(16)   **pa(h)-ci `elder brother' >   UA *paa-ci (*-ci is dim.)
                    MZ *?ahci

(17)   **po(:)c-i `rolled'     >     UA *po(o)ci `navel'
                                MZ *?oc-i `folded or rolled (as paper or cigar)'

(18)   **piw(i) `sleep'   >   Numic *(p)iwi
                                MZ *?iw `to sing; sleep'

(19)   **pu(n)ku `dog'     >     UA *punku `dog'
                                MZ *?uku `agouti' or `dog'

(20)   **paC(a) `leaf'     >     Cup *pala `leaf'
                                MZ *?ay `leaf'

MZ initial c- : UA s-

(21)   **cik `cut'     >     UA *sik `cut' (M)
                                MZ *cik `husk, harvest, peal'

(22)   **cok(o) `wet ground'     >     UA *sok, *cok `ground, earth' (M)
                                Z *coko `soaked'

(23)   **cum(a) `tie'   >   UA *suma (M)
                                MZ *cum

UA medial s : MZ ? between like vowels, y between low-high configurations, Ø elsewhere

(24)   **kuhsi `wood'     >     UA *ku(X)si `wood'
                                MZ *kuy `tree'

(25)   **kWisi `grab'     >     UA *kWisi `to take, cath'
                                MZ *ki? `hand, arm'

(26)   **nasi(:) `product of     >     UA *nasii `ashes'
        burning'   Z *nayi `wax'

Set cited already: (6) `deer'.

UA medial -hC- : MZ -C-

(27) **nVhyV 'to name' > Num *nihyá 'to name, call'
                              MZ *niyɨ 'name'

Two additional sets have been cited earlier which bear evidence to this correspondence: 'good' (1), 'wood' (24). A third follows: 'grandfather' (43).

MZ final k : UA zero

(28) **hukWak 'smell' > UA *hu[v]a 'smelly'
                              Z *hukuk 'smell bad'

(29) **ko-pak 'head' > UA *kopa 'forehead'
      (pertaining to head + bone) MZ *ko-pak 'head'

(30) **ko-ta(:)k 'neck' > UA *kutaa 'neck'
                              MZ *ko- pertaining to head'
                              MZ *tak(us) 'walking stick'

(31) **ma(:)nVk 'child' > UA *maana 'female child'
                              MZ *manɨk 'son/daughter'
                              (Cf. also for UA Cupeño *man-da 'diminutive' and for
                              MZ Texistepec Popoluca *man-da? 'plural diminutive')

(32) **to9o(:)k 'protube- > UA *to9oo 'knee'
      rance in leg area'   Z *to9ko 'heel'
                              (metathesis unaccounted for)

Other example, already cited: (11) 'heat; desire'.

MZ final c : UA zero

(33) **wɨc 'to comb' > UA *wes, *wen (M wɨ-09)
                              MZ *wɨc 'comb; drip'

MZ final s : UA zero

(34) **kɨ?ɨs 'bite' > UA *kɨ?ɨ/i 'to bite'
                              MZ *kɨ:?s 'pull; bite'

(35) **hVkos 'not warm' > UA *hɨka 'shade, be cool'
                              MZ *hokos 'tepid'

MZ final y : UA zero

(36)   **maka(:)y 'give'   >   UA *makaa 'to give; hit'
                                      MZ *ma?ay 'to sell'

(37)   **tɨ(:)kay 'put'   >   UA *tɨɨka 'to put, lay down'
                                      MZ *tɨkɨy 'to enter'
                                      (Vowel-leveling)

(38)   **win-cay 'tumpline'   >   UA *win(CV) 'string'
       or 'umbilical cord' (?)   MZ *win 'eye, person', *cay 'rope'

Other examples are 'to roll' (14) and (MZ morpheme-final y : UA zero) 'reciprocal' (82).

MZ contraction

(39)   **hiya-kWisV 'breathe' >   UA *hiya-kWisV 'suffocate'
                                   MZ *hi?ks 'suffocate'

(40)   **to(:)9i 'burn'   >   UA *too9a/i 'to be hot'
                                   MZ *toy 'to burn, hurt'

The set 'give', cited earlier (36), is an unparallelled example of **k > *? in MZ between vowels.

2. Correpondences of Identity

UA *i : MZ *i(:)

(41)   **wik(u) 'whistle'   >   UA *wiku (M-457a)
                                   M *wi:k~wi?k

UA *ɨ : MZ *ɨ

(42)   **tɨ(n)wV 'namesake'   >   UA *tɨnwa 'name'
                                   Z *tɨwɨ 'relative'

UA *a(:) : MZ *a

(43)   **?ahpV 'GrFa'   >   UA *?ahpɨ '(grand)father'
                                   MZ *?apu 'grandfather'

(44)   **?a(:)w 'mouth'   >   UA *?aawV 'to tell' (V probably a suffix)
                                   MZ *?aw 'mouth'

(45)   **mV:ca(?) 'moon'   >   UA *miɨca 'moon'
                                   MA *ma:ca? 'star'

(46)   **ya(h) 'die'   >   UA *ya 'die' (M-132)
                                   MZ *yah 'end'

UA *u(:) : MZ *u(:)

(47)   **su(:)n- 'central inner   >   UA *suuna 'heart, middle'
       organ, seat of emotions'   Num *sunpa 'to know etc.'
                                       MZ *sun 'want'

(48)   **yumu   >   Cup *yumu- 'put on hat'
                                   MZ *yu:?m 'come together, raise'
                                   (compensatory lengthening)

UA *o : MZ *o

(49)   **soho 'tree sp.'   >   UA *soho 'cottonwood'
                                   MZ *soho 'oak'

(50)   **to?k 'spread, weave' >   UA *to?ka 'spider'
                                   (is -a an agent noun forming suffix?)
                                   MA *to?k 'to spread out on the ground'

(51)   **?oh(V)(ni) 'cough'   >   Numic *?oh(ni) 'to cough'
                                   M *?oho 'cough (n)'

(52)   **?o(:)CV 'stick'   >   Sonoran *?oto 'to get stuck, stick'
                                   OM *?o:?c 'to stick'

(53)   **toC 'swell'   >   UA *to 'stomach' (M)
                                   Z *toh 'blister'

(54)   **wohi 'to bark'   >   Numic (?) *wohi, etc. 'bark, ell, howl' (IAN-274)
                                   MZ *woh

Additions from Miller (1987). Reconstructed forms need to be checked and projected phonologically back to UA

(55)   UA *?as 'eagle' (MIL-147)
                                   OM *?ɨš 'eagle'

(56)   *ʔiʼʔovi `tasty' (BAS-315)
Z *om `tasty'

(57)   *ʔoi'mɨrai `to walk around' (BAS 318)
MZ *ʔoy `go (and have returned)'

(58)   UA *hɨɨ `yes' (MIL-481)
MZ *hɨ: `yes'

(59)   **sV(:)wV `(to)day'            >      *sivi `now, today' (BAS-194)
MZ *sɨ:w `day, sun'

(60)   **cu(:) `night'                  >      *cu, *co `disappear' (IAN-258)
MZ *cu: `night'

(61)   **ʔak(V)   >   UA *ʔaki "river" (MIL-348)
MZ *aka `riverbank'

(62)   **hot(a)   >   *hota `to dig' (IAN-34)
M *hot `to dig a hole'

(63)   **ho(:)n...   >   *ho(ʔ)napi `bat'
MZ *ho:n `bird'

(64)   **hu..   >   *hú-ʔ `pull out' (B/H)
MZ *huʔt `take out'

(65)   **kaka   >   UA *kaka `sweet' (MIL-427)
MZ *kakawa

(66)   **kap..   >   oo. kawadk, yu. kapó `plano'
M *ʔa9-kapɨ `solera'

(67)   **mak `10'                    >      *makoi `10' (LIO-135)
MZ *ma(h)k(V)y `10'

(68)   **ko(:)m..   >   *ko:mV `pitcher, jug, pot' (C/L-127)
MZ *kom `put in'

(69)   **kum..   >   *kuna, *kuma `husband' (MIL 504a, 504b)
Z *komi `master'

(70)   **kʷana   >   *kʷana `smelly' (IAN-78)

Sierra Popoluca kɨn 'smell'

(71) **pu(n)C(i)   >   UA punci 'eye' (TK)
                                  (eye, seed associated in IAN)
                                  Z *puh 'seed'

(72) **sapa 'fruit meat'   >   *sapa 'meat' (LIO-232)
                                  Z *sapane 'plantain'

(73) **sam   >   *sami 'adobe' (LIO-230) (contains suffix -i 'resultative')
                                  MZ *sam 'heat'

(74) **so(:)n..   >   sh. so:n 'many', hp. so: 'all, many' (M-so-14)
                                  Z *sone 'much, many'

(75) **suh..   >   *su(w)ah 'breathe' (IAN-187)
                                  MZ *suh 'blow'

(76) **suy..   >   B/H *súyi- 'sting'
                                  MZ *suy 'sew, fish with hook'

(77) **tak..   >   *taka 'fruit' (LIO-269)
                                  Z *taki 'casco'

(78) **pak   >   UA *pak 'shirt' (MIL-371)
                                  Sayula Popolucaa pak 'fade (cloth)'

(79) **pa 'wild'   >   UA *pa 'mountain sheep' (MIL-369)
                                  MZ *pa- prefix: 'wild'

3. Grammatical morphemes

(80) **-i 'deverbalizer'   >   UA *-i derives nouns
      (resultative)   meaning 'result of action'
                                  from verbs
                                  MZ *-i/e derives nouns and adjectives 'meaning product
                                  of action' from verbs

The existence of this suffix explains the following set in which the UA cognate is the derived form, and the MZ cognate the basic one:

(81) **hu(:)k 'tie'   >   UA *huuki 'bunchgrass'
                                  M *huk 'to tie together (cargo, etc)'

Other grammatical morphemes are:

(82)   **na(:)y- 'reciprocal'   >   UA *naa- 'twice, double; reciprocal'
                                              MZ *nay- 'reciprocal'

(83)   **hu 'demonstr.'   >   UA *hu 'that'
                                        MZ *hu 'question marker'

(84)   **-pɨ(:?) 'distrib.'   >   UA *pɨ 'mediopassive, distributive particle'
                                            (M)Z *-pɨ? 'distributive'

(85)   **-pɨ(:?) 'participle'   >   UA *pɨ 'mediopassive,
                                              distributive particle'
                                              MZ *pɨ? '(human) participial or deverbative'

(86)   **-m(ɨ) 'plural'   >   UA *-mɨ
                                          Z *-m (requires that *-tam 'plural' be segmentable)

(87)   **-ci 'diminutive'

See the sets 'little root' (15), 'elder brother' (16)

(88)   **ka(:h) 'negation'   >   UA *ka 'negative'
                                            MZ *ka:h 'no'

4. Conclusion

A possible reaction to evidence such as that presented above is to focus the attention on forms that are widespread (and thus possible borrowings), onomatopoietic/symbolic forms, and non-evident semantic equations. Along with monosyllables, lexical correspondence types that have possible non-genetic explanations such as those just mentioned are often considered weak as evidence for establishing genetic relationships. Although I agree with this, I would like to stress that the method of weakening an argument about a genetic relationship by weeding out such possible non-genetic forms is much more warranted in the gather-as-many-look-alikes-as-possible approach than in the present approach. When proto-languages are compared and attention is paid to strict correspondences, actual falsification in fact becomes possible: the proper refutation method here is to point out cases where sound laws are not adhered to. After all, also proto-languages may have symbolic forms and monosyllables. Finally, in this particular instance apparent correspondences cannot be explained as loan words, since the two language families appear to have non-adjacent home-lands and have generally continued to be spoken in different areas. Thus, is has been proposed that ProtoUtoAztecan was spoken in Arizona and northern Mexico, possibly extending into Southern California (Fowler 1983), whereas the home-land of the MixeZoqueans is generally assumed (Campbell and Kaufman 1976, Wichmann 1999) to be

close to the Mexican Gulf Coast.

Many things need to be refined. I have sacrificed one half of my cognate collection for the sake of making things work phonologically. I hope, however, that approximately the same amount may be regained on the basis of strict criteria. These new sets may include perhaps twice as many grammatical morphemes as we already have. Though things look promising, the sort of evidence that we really need is, for instance, to be able to explain in detail how MZ increased its vowel system with an *e* and how vowel length works. We should look more at verb roots and grammar. Success at explanations in these areas would have me finally convinced of a genetic relationship between UA and MZ. I do think, however, that the preceding pages provide a promising start.

NOTES

[1] The present work is a slightly revised version of a paper originally prepared for circulation among participants at the 13. International Congress of Anthropological and Social Sciences, Mexico City, July 29-August 5, 1993. I gratefully acknowledge critical comments from Lyle Campbell.

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