unlimited number of nominal compounds, it does make it likely. And while a kinship term like dámadokoréithi *my wife's father, my husband's father*, which seems to contain réithi *husband*, cannot be written otherwise because the meaning of its first component is obscure,[5] I see no advantage to be gained by making compounds of dínthi réitho *uncle's wife*, dáthi réitho *my father's*—or *my father's brother's—wife*, any more than of daoíntho réithi *my niece's husband*. On purely semantic grounds a case might be made for treating háko réithi *pestle* (háko *mortar*) as a compound, which unlike its analogous Island-Carib equivalent it is not by linguistic criteria: note IC hána *mortar* + iuéra *penis* → áneuera *pestle*, showing loss of h-, and -a + i- → -e-.

Thirty-one of the thirty-eight different kinship terms listed by Van Renselaar and Voorhoeve[6] end in -thi or in -tho, the former designating males, the latter females; and fourteen of these differ formally and semantically by this feature alone. But as we have seen, this is not true in the case of all plurals in -no; thus daokianóthi is the plural of both daokíthi *my younger brother* and daokítho *my younger sister*, and oathonóthi *our daughters* is the plural of oátho or oathonátho *our daughter* (with *oathonáthono(n) still unattested). Moreover, -thi and -tho sometimes distinguish species rather than sex, as in kakithi(non) *human being(s)* and kakitho(be) *(nonhuman) creature(s)*, both derived from the verb kákin *to live*.

Any word in -thi or -tho may be pluralized where its function is substantival, but not where this is adjectival or predicative.[7] So, thoiothínon *mature people* serves as the plural of both thóiothi *grown (mature) man* and thóiotho *grown (mature) woman* where no noun follows; but thóiothi oadíli and thóiotho híaro, with the same meanings and which include the nouns oadíli *man* and híaro *woman*, can only be pluralized as thóiothi lokóno, in which male singular thóiothi qualifies plural lokóno *people*. And similarly in the case of thóiothi dasábe *my children (of either sex) are grown up*, where thóiothi is predicative. Adjectival and predicative functions cannot always be distinguished in default of further context; thus, sátho khotón may mean *good food* or *the food was good*, sáthi thisanóthi *her dear children* or *her children are well*.[8]

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[5] But ómadokoréithi *wife's or husband's father* also seems to contain the stem of dókothi *grandfather*, just as omíkithi *wife's mother* seems to contain that of akíthi *grandmother*, and both contain prefixed forms of the postposition óma *together with*. So that if -rei- of ómadokoréithi signifies *child*, as it does in iréino *children* (without a singular), and final -thi is here just a marker of male sex for the whole term, then this word becomes clear as *child's cograndfather*, omíkithi as *cograndmother*. And similarly, iréithi *husband* can be explained as *child-father* (cf. íthi *father*), and iréio *wife* (synonymous with iréitho) as *child-mother* (cf. óio *mother*).

[6] H. C. Van Renselaar and J. Voorhoeve, "Rapport over een studiereis naar Mata," *Bijdragen tot de Taal-, Land- en Volkenkunde* 118 (1962): 328–61.

[7] See Taylor, p. 203.

[8] Whatever may be their earlier history, the substantive (i)sa *child* and the adjective (i)sa *good, well, dear* are today different though homophonous lexemes and do not enter into the same combinations or contexts.

A NOTE ON UTO-AZTECAN CONSONANT GRADATION

It is well known that certain Uto-Aztecan languages display a regular process of medial consonant lenition, resulting in strong/weak alternations such as p/v, t/r, etc., depending on a morphological trait of the preceding element. These alternations are largely retained as a productive synchronic process in the Numic languages, but outside this subfamily the allophonic variation has become phonemic in character, yielding voiced obstruent phonemes in various daughters. While consonant gradation has

rightly received a great deal of attention from Uto-Aztecan scholars, one aspect of this phenomenon has not, to my knowledge, received adequate treatment. This is the interaction of consonant gradation with the Proto-Uto-Aztecan phonemes *m and *k^{w} and the implications of this interaction for comparative work.[1]

Since medial consonant lenition in P-UA was a very general phenomenon, it is to be expected that it would affect *m and *k^{w} along with other consonants. The Numeric languages confirm that this was the case. In Southern Paiute, for instance, /m/ has the fortis and lenis allophones [m] and [ŋ^{w}], and /k^{w}/ the allophones [k^{w}] and [ɣ^{w}]; in Mono, we find [m] and either [w̃] or [w] for /m/, and [k^{w}] and either [g^{w}] or [ɣ^{w}] for /k^{w}/. But while the implications of consonant gradation have generally been perceived by comparativists (so that scholars readily relate Hopi v, for example, to "spirantized" or lenited *p in P-UA), these implications have apparently not been noted in the case of *m and *k^{w}.

My claim, briefly stated, is that lenis *m and lenis *k^{w} are both generally reflected as w (or some expected derivative of w) in the daughter languages outside of Numic. This means, then, that w in a non-Numic language may reflect P-UA *w, *m, or *k^{w}. In the case of *k^{w}, the most likely course of development is *k^{w} > g^{w} > ɣ^{w} > w, where Numic attests the two posited intermediate stages. In the case of *m, the most likely course of development is *m > w̃ > w, with Mono attesting the intermediate stage. Lenis *m actually evolves in either of two distinct ways (I do not know whether there is any conditioning factor that determines which path of development a given form will take). Besides the evolution above, which results in w, we also find the following: *m > w̃ > ŋ^{w} (> ŋ); ŋ^{w} is of course attested in Southern Paiute, while both it and the further derivative ŋ are found occasionally in Tubatulabal, Hopi, and Cupan, as we will see.

It is not hard to see how the multiple origin of general UA w has been overlooked. The lenited forms of *p, *t, etc. did not coincide in phonetic shape with any other phonemes and hence were easily recognized as allophonic variants of their fortis counterparts (though the difference eventually became phonemic in most daughters). With *m and *k^{w}, on the other hand, the lenis allophone *w was bound to be confused with the phoneme *w and eventually to merge with this phoneme. Comparative UA scholars have been primarily concerned with roots, and since a root-medial consonant typically displays only a single allophone, medial *w has simply been taken as representing the P-UA phoneme *w in all instances. The situation is rather different when suffixes are reconstructed, however. With suffixes the alternations remain overt, since different roots and stems select different allophones; when the allophonic variation became phonemic, then, it gave rise to alternate versions of the same suffix, with some daughters retaining one version and other daughters the second. Morphological reconstruction therefore provides the most direct evidence for the claim that w can reflect *m and *k^{w} as well as *w, but it is not the only evidence available, for even with roots one can find evidence for the P-UA alternations posited here.

Let us begin with *m. The appearance of w in probable cognate sets for grammatically significant morphemes that apparently reconstruct with *m is more the rule than an exception, but some examples are much more striking than others and cannot be explained merely as showing sporadic lenition devoid of comparative significance. The most obvious case is probably the nonproximal demonstrative *ma: NP ma-; M ma-; SH ma-; SP ma- (accusative wa-ya); K ma-; TU waʔ; H pam (plural pɨma); SR ʔamaʔ;

[1] The following language abbreviations are used: UA = Uto-Aztecan; P-UA = Proto-Uto-Aztecan; NP = Northern Paiute; M = Mono; SH = Shoshoni; SP = Southern Paiute; K = Kawaiisu; TU = Tubatulabal; H = Hopi; SR = Serrano; GA = Gabrielino; CA = Cahuilla; CU = Cupeno; L = Luiseño; P = Papago; NT = Northern Tepehuan; TO = Tepecano; TA = Tarahumara; Y = Yaqui; MA = Mayo; CR = Cora; HU = Huichol; PO = Pochutla; A = Classical Nahuatl.

GA maraama?, piema; L wunal (< *wanal);[2] P higa(i); NT ?igai; TO higga; TA (w)era; Y wa; MA ?ama; CR mii(mi); HU mii; PO ma. Recall that g is the expected reflex of *w in Pimic. Notice that the daughters with m and those with w or its reflex are largely in complementary distribution. Moreover, various daughter forms (especially in Hopi, Serrano, Gabrielino, Pimic, and Mayo) indicate that P-UA *ma was or could be preceded by another syllable in the demonstrative form, so that the *m of *ma could be considered a medial consonant. The reconstructed sequences *pi-ma and *?a-ma immediately suggest themselves, where *pi and *?a are known to be UA third-person pronouns, presumably themselves of demonstrative origin.[3] Since *wa can be reconstructed for P-UA as a proform meaning *one* (e.g., Hopi ?i?-wa *this one*), we can reconstruct "DEM-one" sequences of the form *pi-ma and *?a-ma for Pre-Proto-Uto-Aztecan, where the *ma *one* in these sequences is related to P-UA *wa *one* by a round of lenition and phonemicization prior to the one posited here for the phoneme *m in P-UA.[4]

A second set illustrating the m/w alternation for reflexes of *m is the P-UA postposition *-mi, with the approximate gloss *to/with/at*.[5] Note once again the basic complementarity of the daughters with m and those with w, though in this case doublets are found in several languages. The segmentation of mi or wi in the complex forms is in no case terribly problematic; *na- reconstructs as a reciprocal prefix known to have occurred with postpositions in P-UA, the third-person pronouns *pi and *?a can be recognized in certain forms, and the remaining elements can in most cases be related to other postpositions. NP -tami *toward*, -wi *about*, nami!k^{w}a *together*, -noo *with/and* (< *na-w(i)); SP -mi *direction*, -ua?mi *in front of*, -ŋ^{w}i! *in/on* [*TIME*]; K -tawi *to;* TU -miik *toward*, naawidam *between;* H -mi *to* (with third-person, ?a-mi → ?aw), -miq *into*, -ŋami *benefactive;* SR -mia? *together with;* CA -new *with* (*na-w(i) > *nəw(i) > -new), -niw *with* (*na-wi > *nəwi > *niw(i) > -niw); CU -nəw *with* (*na-w(i) > *nəw(i) > -nəw), -?aw *in/on/at* (< *?a-w(i)—cf. H); L -maaŋi *benefactive;* TA (a)mi(na) *to/toward/against;* Y -w(i) *at/in/to*, bewit *before/in front of;* CR -hemi *with/about/concerning/toward;* A -wik *toward/against*. Besides supporting the m/w alternation, this set also illustrates the alternative m/ŋ^{w}/ŋ pattern. Southern Paiute -ŋ^{w}i! shows the regular lenis version of m in this language, while for the benefactive forms -ŋami and -maaŋi in Hopi and Luiseño we can posit an earlier *-ma-mi with lenition of either the first or second syllable.[6]

[2] But see Michael J. P. Nichols, "Northern Paiute Historical Grammar" (Ph.D. diss., University of California, Berkeley, 1974), pp. 194–96.

[3] P-UA *p normally becomes w in Pimic, so *pi > hi (> ?i) is not a fully regular development. Note that *p did become h in Cora and Huichol; this change can also be posited for Aztec. In general terms, *p follows either of two paths of lenition in the UA daughter languages. One path involves voicing and spirantization, leading to w/b/etc. The other involves spirantization without voicing, yielding h or some derivative of h, presumably as follows: *p > *Φ > h. I suggest that the *p of *pima simply follows the alternate path of lenition in Pimic rather than the one it most commonly follows.

[4] See Ronald W. Langacker, *Non-Distinct Arguments in Uto-Aztecan* (Berkeley and Los Angeles: University of California Press, 1975), where I argue that P-UA *l derives from Pre-P-UA *t by a round of lenition and phonemicization prior to the one affecting P-UA *t; thus there are two reasons to believe that consonant lenition has been a recurring process in the history of Uto-Aztecan, a process of which the Numic alternations represent only one cycle.

[5] See the work cited in n. 4 above and also Langacker, "The Syntax of Postpositions in Uto-Aztecan," *IJAL* 43 (forthcoming).

[6] The nature and status of *-ma-mi needs further investigation. It could very well be a compound postposition (literally *to on* or something similar), as suggested in the text, reconstructible for Proto-Hopi-Takic or some other level. There are other possibilities, however. The Luiseño form -maaŋi may be a derivative of the expression -ma-ŋay (*hand-from*), which translates as *because of* or *make;* if so, Hopi -ŋami could be

The *m > w̃ > ŋʷ > ŋ development also explains the postposition -ŋa *in/on/at* found in Hopi and the Cupan languages, which has no apparent cognates elsewhere until it is recognized that ŋ can reflect P-UA *m in these daughters. For -ŋa, then, we can posit *-ma, which may be the first element of the benefactive *-ma-mi just considered and which is further attested in Proto-Numic *-ma(ⁿ) *on* (NP -ma *on*, M -hoˈma *over/above*, SH -maⁿ *on*, SP -maⁿ *on*, K -wa *on*), Proto-Pimic *dama *over/above*[7] (P daam *above*, NT dama *over/above*, TO -dam *over/above/on/in*), and possibly in Huichol -heimaa *above/over/on top of* and Aztec -naawak *near/with*.

The developments posited here for *m further explain Pamela Munro's otherwise somewhat puzzling discovery that P-UA *w is one apparent source for Luiseño ŋ.[8] For example, this correspondence allows her to relate L ʔi-heŋ-mal *bird* to *howi *dove*, and L tuŋ-la *name* to P-UA *tiw. In terms of my analysis, the *w reconstructed for P-UA in these forms is better regarded as lenited *m, and since this consonant was stem-internal in these forms, it did not display the fortis/lenis alternation typical of suffixes and was consequently reflected in lenited form in all the daughter languages retaining it. In the case of *name*, further corroboration of this analysis is provided by TU tiŋʷa and H tiŋʷa, in which ŋʷ attests to the intermediate stage posited between m and ŋ; although this and related cognate sets present a complicated picture, we might speculate that */tima/ is the proper reconstruction (TA riwa and HU tewa are fully regular given this reconstruction) and that the lenis medial */m/ in this form fluctuated phonetically between [w̃] and [ŋʷ] (perhaps stress was the conditioning factor—note TA riwá). For the other set, Munro suggests, on the basis of *howi *dove* and *wici *bird*, that *howi was segmentable. When it is further recognized that */homi/ (with lenis */m/) is the proper reconstruction, we can relate these forms to Luiseño mixel *dove*, in which */mi/ is reflected with m rather than w or ŋ because it is initial.

Much more extensive lexical research is obviously needed to establish these reconstructions definitively, but the evidence they provide for deriving some instances of w and ŋ from lenis *m seems clear enough. This analysis has many further ramifications for lexical reconstruction, some of which I will briefly mention here but cannot explore in any detail. The sound change of *w to ŋʷ after a nasalizing vowel in Tubatulabal and Hopi posited by Voegelin, Voegelin, and Hale[9] should probably be abandoned; they cite only the forms for *name* to support this sound change, and we have seen that the nasal component in the ŋʷ of TU tiŋʷa and H tiŋʷa is better accounted for by positing */tima/ than by attributing nasalizing properties to the preceding vowel. The analysis allows us to establish relations between elements whose relationship would otherwise be problematic, for example, TU ʔayaawa-t and SR yaŋah-t for *grow*[10] or H moŋʷi and SR mum-t for *owl*, both reduplicated from *muhu.[11] It accounts for the sporadic occurrence of w as the reflex of *m in

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metathesized from this or from a parallel Hopi formation. Luiseño also has a benefactive postposition -qʷaan(i), which reconstructs as *-kʷa-ni, where *-kʷa is a P-UA postposition meaning *to* and *-ni means *be*. One might posit an analogous benefactive expression *-ma-ni, with a different postposition, which undergoes assimilation to *-ma-mi. Under any obvious analysis, however, lenition of *m to ŋ is required for *ma, *mi, or both.

[7] See Burton Bascom, "Proto-Tepiman (Tepehuan-Piman)" (Ph.D. diss., University of Washington, 1965), p. 131.

[8] Pamela Munro, "Proto-Uto-Aztecan *w: One Source for Luiseño ŋ," *IJAL* 39 (1973): 135–36.

[9] C. F. Voegelin, F. M. Voegelin, and Kenneth Hale, "Typological and Comparative Grammar of Uto-Aztecan: I (Phonology)," *IJAL Memoir* 17 (1962).

[10] Wick R. Miller (*Uto-Aztecan Cognate Sets*, UCPL, no. 48 [Berkeley and Los Angeles: University of California Press, 1967], p. 39) reconstructs *yam with a question mark that can now be removed.

[11] See ibid., p. 49.

Tubatulabal and Cahuilla.[12] Finally, it bears on the complicated question of the desirability of reconstructing *ŋ for P-UA in addition to *m and *n. In a set like *husband*, for instance (M kuwa, SP kuma, TU kuuŋa, H kooŋ^{y}a, L kuŋ, P kun, TA kuna, Y kuuna, CR kiin, HU kina), it may be best to reconstruct */kuma/ with lenis /m/ and account for the common n reflex through a tendency to eliminate the sound ŋ, which is otherwise foreign to the UA languages, when the evolution of lenis m results in this sound. For the time being, however, this is only speculative.

Let us turn now to *k^{w}. Evidence for the claim that general UA w often reflects lenis *k^{w} is not quite as extensive as in the case of *m, but it is nevertheless substantial. One relevant fact, though hardly significant in itself, is that *k^{w} regularly becomes w in both Tubatulabal and Tarahumara. These sound changes are not restricted to medial position but are quite general; for example, for P-UA *k^{w}a *eagle* we find (among others) the following: SP k^{w}ana, TU waaʔa *hawk*, H k^{w}aa, P baʔag, Ta waco *heron*, HU k^{w}aazuu *heron*.[13] For these two languages, then, we can say that the lenis allophone was generalized to all environments. Miller also cites Cahuilla as showing w as a sporadic reflex of *k^{w}.[14]

Further evidence for the alternation is a direct trace it left in the Western Numic languages as a phonological rule. Specifically, w surfaces as ˡk^{w} in fortis environments in both Northern Paiute and Mono.[15] In Mono, for example, we find ʔi-waqa-ˡna (my-say-NR) *what I said* with the nongeminating possessor prefix ʔi-, but ʔi-ˡk^{w}aqa-ˡna (your-say-NR) *what you said* with the geminating prefix ʔi-. While I have not investigated the historical phonology of Western Numic, this alternation clearly supports the hypothesis.

Next, considerable lexical evidence is provided by initial consonants in reconstructed roots. In a number of instances Miller (n. 10 above) found reason to reconstruct alternate forms for the same meaning, one beginning in *k^{w} and the other in *w. He could not collapse the variants because it was not recognized that *k^{w} and *w bore any systematic relation to one another; but by treating *w as the spirantized form of *k^{w}, and by noting that consonant gradation sometimes occurs across word boundaries, the pairs can be related in a natural way. These pairs include at least the following (identified by the number of the cognate set in Miller's book): *k^{w}i (1), *wi (2) *acorn;* *wi (39*a*), *k^{w}i (39*d*) *big;* *k^{w}i (76), *wi (77) *carry;* *k^{w}a (110*a*), *wa (110*b*) *coyote;* *k^{w}a (191), *waka (192) *frog;* note also *k^{w}a (152*a*), *suwa (153) *eat*. Closer examination will doubtless reveal further lexical evidence for the alternation.

Definitive evidence from suffixes and other grammatically significant elements cannot be presented here, both because reconstructions are still quite tentative and because adequate discussion of each of them would require a lengthy presentation. However, preliminary indications can be offered. For example, Kawaiisu ʔiwʔana, Serrano ʔahk^{w}, Gabrielino ʔik^{w}a, and Opata ʔig^{w}ati (Opata g^{w} derives from earlier *w) suggest the reconstruction *ʔi-k^{w}a *here*. This form clearly incorporates the proximal demonstrative base *ʔi, and the second element can be equated with a postposition *-k^{w}a *to/at/against;* the reconstruction of this postposition can be strongly supported,[16] but a presentation of the evidence would take us too far afield. I will present just one other example here. There is a fair amount of evidence for reconstructing the subordinator *-k^{w}(a), with the approximate meaning *when/while*, possibly restricted to instances where the main and subordinate clause subjects are nonidentical. Reflexes

[12] Ibid., p. 9; see also cognate sets 200 and 338.

[13] Ibid., p. 31.

[14] Ibid., p. 8; note cognate set 126.

[15] See "Notes from the First Uto-Aztecan Working Conference," Reno, Nevada, August 22–25, 1973. See also Nichols, p. 56 and Sydney M. Lamb, "Mono Grammar" (Ph.D. diss., University of California, Berkeley, 1958), p. 96.

[16] See Langacker, *Non-Distinct Arguments in Uto-Aztecan* (n. 4 above).

that point to the fortis variant *-k^{w}(a), with possible vocalization of (or assimilation to) the labial component to yield a rounded vowel, include Southern Paiute -ku *while/as/when*, Chemehuevi -k^{w}a$^{?}$ *when*, Yaqui -tek(o) *if/when*, Mayo -k(o) *when*, and others. Reflexes that point to the lenis variant *-w(a), also with vocalization or assimilation to yield a rounded vowel, include Serrano -u/-w *while/as*, Yaqui -o *when/while*, and Tarahumara -o (nonadverbial subordinator). Other sets could be added, but they would not be convincing except in the context of a broader study.

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CHECKLIST ANNOTATIONS

In *Current Trends in Linguistics*, vol. 10, *Linguistics in North America* (The Hague: Mouton, 1973), pp. 1253–1441, I published "The Tribes and Languages of North America: A Checklist." The manuscript was completed in 1970, except for an addendum (pp. 1437–39). Since the manuscript was completed, I have been collecting new data.

Many of my notes have been made during work on a linguistic bibliography for the revision of the *Handbook of American Indians North of Mexico* (Washington, D.C., 1907–10). Ives Goddard, editor of the "Language" volume, and William Sturtevant, general editor, have provided much stimulation and data, as will be indicated below.

1259 Chumashan. Campbell Grant, *Handbook* ms., lists as Central Chumash (1) Purisimeño, (2) Barbareño (probably including Emigdiano), (3) Ventureño (probably including Alliklik), and (4) Ynezeño; he has also (5) Obispeño and (6) Island Chumash [Santa Rosa] outside the central group. Corresponding to Interior (?) is Cuyama. M. S. Beeler, letter to W. C. Sturtevant, sent from Berkeley, September 25, 1974, identifies "Emigdiano" (Merriam, ms.) as Barbareño.

1260 Eskimo. Replace Inupik with Inupiaq. Under Inupiaq I have labels for data not yet subjected to subgrouping techniques, but for which sources will be named. The listing, partly geographical, is unsatisfactory but it is at the same time a move toward something better.

Greenland: Ammassalik, East Greenland, Frederick VI Coast, Thule, West Greenland (including South Greenland).

Labrador.

Northern Alaska: Barrow, Inglestat, Seward Peninsula, Wales, King Island, Diomede (Kingingmiut, Bering Straits Innupiaq), Colville River, Kobuk River, and Kotzebue Sound.

Canada: rubrics other than Labrador include Baffin Island, Caribou, Upper Kazan River, Coppermine or Copper Eskimo, Coronation Gulf, Kangerjuarmiut, Umingmaktormiut, Cumberland Sound, Herschel Island Eskimo (a trade jargon), Icy Cape, Iglulik, Inupiat, or Inupiaq. Mackenzie (also called Chiglit or Mackenzie River), Melville Peninsula, Netsilik, Arviligjuaq, Simpson Peninsula, Ungava Bay.

Yupik covers Sirenik

Chaplino-Naukan (with Chaplino, including Chaplino of St. Lawrence Island; and Naukan)

Pacific Yupik (labels include Kodiak, Prince William Sound, Chugach, and Kodiak Aleut or Sugcestun)

Central Yupik (labels include Nunivak or Nunivarmiut, Nelson Island, Kuskokwim, and Mainland)

In B. F. Grimes, ed., *Ethnologue* (Huntington Beach, Calif.: Wycliffe Bible Translators, 1974), p. 2, the Bible translations listed as in progress are for Baffinland or Eastern Arctic Eskimo, Keewatin or Caribou Eskimo [west of Hudson Bay], Copper or Central Arctic Eskimo [Northwest Territories, Victoria Island], and potentially Quebec Eskimo [east of Hudson Bay]; Labrador Eskimo [Labrador and Newfoundland] has a Bible; Mackenzie or West Arctic Eskimo speakers "can understand Inupiat Eskimo" and can use Biblical texts in "a closely related dialect."

1267 Molale. Correct the synonym Molale