ON LENITION IN SOME NORTHERN UTO-AZTECAN LANGUAGES[1]

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In a recent paper devoted to the problems of lenition and delenition of intervocalic stops and affricates (which I collectively call "plosives") in the Numic group of Uto-Aztecan dialects, McLaughlin (1992) refers to data from a more distantly related Uto-Aztecan language, Tubatulabal, to argue that lenition was the rule in the common ancestor of these languages.

While the Tubatulabal evidence does not occupy the center of attention in McLaughlin's article, it does seem to be important to his argument and in any case would be important in its own right, in terms of the reconstruction of the protolanguage of a broader subfamily of Uto-Aztecan than can be reconstructed with Numic data alone. However, in this paper I show that the Tubatulabal connection is by no means so simple as McLaughlin assumes, although a part of what he says is correct, and I sketch a fuller picture of the relevant facts.

First of all, let us be clear about the specific phenomena which McLaughlin seeks to relate. On the Numic side, the situation is relatively simple: in Western, Southern, and some Central Numic dialects, intervocalic single plosives lenite (i.e., voice, fricativize, rhoticize, etc.), while geminates stay put. The lenition is apparent both morpheme-internally and at morpheme boundaries (in the latter case, when a plosive-initial morpheme comes to stand after an originally vowel-final morpheme). However, in certain Central Numic dialects (Northern Shoshoni and Comanche), lenition is restricted (optionally in the former and obligatorily in the latter) to *-*p*- and, after back vowels, *-*t*-. McLaughlin's principal concern is to buttress Miller's (1973) proposal that these restrictions on lenition in the Central Numic dialects are the result of recent processes of delenition. He does this in two ways.

One is by suggesting a possible phonetic motivation for the delenition. The second is to argue that consistent lenition of all intervocalic plosives is not only (as noted by Miller 1973) shared by those Central Numic that

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have it with the other two branches of Numic (Western and Southern) but also with the non-Numic language Tubatulabal. It is this new argument about a kinship between Numic and Tubatulabal lenition that is my concern here. To show a Tubatulabal connection, McLaughlin invokes Voegelin's (1935*a*:80) rule, according to which in this language "plosives[2] and affricates which are in initial position become voiced when in medial position and preceded by a two-morae vowel," as in:

(1*a*) *paawiliigan-t* 'goose'

(1*b*) *aa-baawiliigan-t* 'many geese in one place'[3]

McLaughlin points out that "Tubatulabal lenition differs from Numic lenition by linking the application of the rule to mora counting in the vowels," and he notes examples of Tubatulabal words with intervocalic plosives which are not lenited, as in:

(2) *wopu-l* 'gooseberry'

All this, of course, would seem to argue against a genealogical connection between the Numic and the Tubatulabal rule. But McLaughlin then hypothesizes that "This may reflect an older simple stop versus geminated stop contrast which is now a short vowel–stop versus long vowel–stop contrast.[4] This would then be cognate with the Numic spirantized and geminated consonant series." However, this proposal does not fit the facts.

First of all, voiced plosives occur in Tubatulabal after short as well as long vowels, e.g., *otogolokan* 'he kissed her' (given in Voegelin 1935*a*:79). Such forms should not be possible with McLaughlin's theory, according to which in Tubatulabal voicing is supposed to correlate with vowel length. Voegelin's rule, which does suggest such a connection, explicitly refers only to what happens to stem-initial plosives when they become medial in reduplicated forms such as *aa-baawiliigan-t.* It does not say anything about the morpheme-internal situation.

The second problem is that no evidence has been given to show that those Tubatulabal and Numic phonological patterns which McLaughlin seeks to relate are found in cognate morphemes, which would seem to be a prerequisite for claiming that the patterns are historically related.

Finally, we should note that the results achieved earlier by other investigators of Uto-Aztecan comparative phonology make such a relationship difficult to accept. For example, Sapir (1913–14:451–52), Voegelin,

[2] Meaning "stops."

[3] McLaughlin writes *pawiligant* and *aabawiligant*, without vowel lengths in the stem.

[4] This is stated backward. Read: "an older simple stop versus geminated stop contrast which is now a long vowel–[voiced] stop versus short vowel–[voiceless] stop contrast.

Voegelin, and Hale (1962:63), and Miller (1967:9) discussed cases where Tubatulabal has continuants (*-l-* from original **-t-*, possibly in contrast to *-t-* from **-tt-*, and *-h-* from **-k-*). Manaster Ramer (1984) then showed that in certain vocalic environments there is a regular correspondence between the Numic contrast *-γ-* (lenited from **-k-*):*-kk-* and the Tubatulabal contrast *-h-*:*-k-*/*-g-*. Thus, the existing scholarship indicated that Tubatulabal reflexes of the original single:geminate contrast would in some cases have to be continuants vs. plosives (rather than voiced vs. voiceless plosives).

It remains now, based on the latest findings, to describe more fully what happened to intervocalic plosives in Tubatulabal. First, Manaster Ramer (1991*a*) has shown that **-k-* goes to *-h-* in Tubatulabal and to *-x-* in Luiseño, a Uto-Aztecan language belonging to yet another branch of the family, conventionally called Takic,[5] only when the preceding vowel was one of **a*, **o*, or **ï*, and the following vowel one of **a* or **o*.[6] Examples of **-k-* that spirantizes are found in (3)–(6).[7]

(3) **makaC* 'to give'
Ls *na-mxa-* 'to distribute'[8]
Tb *mahaa-*
SP *maγa-*

(3) **taka* 'person'
Ls *a-taax*
Tb *taaha-m ~ taha-m-bi-l* 'old man'[9]
SP *taγap-pïa-pi* 'servant'

(5) **wokon* 'pine'
Ls *pa-wxi-t*, *wixe-t* 'canoe'
Tb *wohon-t*
SP *oγom-pï* 'fir'

[5] Although I have only discussed Luiseño in print, the same developments appear to apply to some other Takic languages as well. These processes were already discussed by Sapir (1913–14:465). However, as I show below, they did not take place in at least one Takic language, Serrano, so they cannot represent Proto-Takic.

[6] Sapir (1913–14) had not specified the conditions under which this process applied. Voegelin, Voegelin, and Hale (1962:63) proposed that the change to *h* took place before **a* and **o*. Manaster Ramer (1984) agreed with this but added the stipulation that the process applied only to **k*, not to **kk*. Manaster Ramer (1992*d*; 1992*e*; 1992*g*) discusses some further related issues.

[7] The existence in PUA of stem-final consonants, usually of unknown point of articulation and hence written "C," is justified in Manaster Ramer (1991*b*; 1992*a*; 1992*b*; 1992*c*; to appear; in preparation *a*).

[8] With the plural prefix *na-*.

[9] See Manaster Ramer (1992*f*) for other cognate forms in Tubatulabal.

(6) **yaka* 'speak'
Ls *ya(x)-*
SP *yaɣa-* 'to cry, neigh, hoot'

The sole known example of a simple **-k-* preceding a nonhigh vowel but preceded by **i* or **u* (and therefore exempt from spirantization) is:

(7) **tuka* 'night'
Ls *tuk-va*
Tb *tuuga-l*
SP *tuɣwa-*

Finally, examples of geminates (which also resist spirantization) are given in (8)–(13).[10]

(8) **mïkka?* 'to kill'
Ls *mok-na*
Tb *mï?ïga-*
SP *ca=ŋwïkkaa-* 'to disappear'

(9) **pakkaC* 'to be beaten'
Ls *paqa-* 'to be pounded'
Tb *pa?ag-inaa-* 'to beat'[11]
SP *pakka-* 'to beat'

(10) **takka* 'flat'
Ls *-taak* 'palm of the hand'
SP *takkaa-pi* 'flat country', *mut-takka* 'forehead'

(11) **tïkka* 'to eat'
Tb *tïka-*
SP *tïkka*

(12) **pikkat-* 'stone'
Tb *piga-t* 'stone knife'
SP *pikka-* 'hard; stone'

(13) **tukka?* 'deep'
Tb *tuga?-*
SP *tukkwa-*

However, Tubatulabal did not completely neutralize the **-k-*:**-kk-* contrast after **i* and **u*, even though the spirantization of **k* to *h* did not apply in this environment. Initially in open syllables, **-kk-* gives Tubatulabal *-k-*, whereas **-k-* yields *-g-* (unless, of course, it goes to *-h-*). The crucial

[10] As the examples below show, in Tb stems of the form **CVkkVC* move the final consonant to the left, and it is realized as a glottal stop in the middle of the first vowel, viz., CV?V*g*V-. This appears to be *lautgesetzlich*.

[11] Includes the causative suffix *-ina-*.

examples are (11) **tïkka* → *tïka-* 'to eat' vs. (7) **tuka-tV* → *tuuga-l* 'night'. Here, then, we find a partial confirmation of McLaughlin's thesis that there is a connection between voicing vs. voicelessness of plosives in Tubatulabal and the original single vs. geminate contrast. On the other hand, initially in closed syllables, **-kk-* gives *-g-*, as in (12) **pikkat-* → *piga-* 'stone knife' and (13) **tukkaʔ* → *tugaʔ-* 'deep'. So in this case the voicing of the plosive does not reflect the original single vs. geminate contrast.

It is also true, as suggested by McLaughlin, that voicing is sometimes connected with preceding vowel length. Specifically, stressed vowels lengthened before original **-k-* (which is itself realized as *-g-* or *-h-*) but stayed short before original **-kk-* (which is now realized as *-k-* or as *-g-*). However, this connection is complicated by three factors.

First, as we have seen, in case *-g-* comes from **-kk-*, the preceding stressed vowel does not lengthen. Second, unstressed vowels did not lengthen even before single plosives (Manaster Ramer 1992*c*; to appear; in preparation *a*), e.g., *aa-sagïï-* 'to roast' (reduplicated) ← **á-sakì*, as opposed to *saagï-* 'to roast' (unreduplicated) ← **sáki*.[12] Third, Manaster Ramer (1992*b*; 1992*c*) shows that Tubatulabal exhibits voiced plosives preceded by long vowels as reflexes of original sequences of glottal stop + plosive (specifically, **-ʔ-t-* and **-ʔ-c-*). This then is another source of voiced plosives and of long vowels in Tubatulabal, but not one related to Numic lenition.

To summarize what has been shown so far, Luiseño and Tubatulabal reflect the simple vs. geminate contrast also found in the Numic languages, at least in the case of velars. However, the lenition of the simple intervocalic **-k-* to *-h-* in Tubatulabal and to *-x-* in Luiseño involves specific vocalic environments, whereas in Numic lenition applies to all instances of intervocalic **-k-*. Similarly, the distribution of voiced *-g-* vs. voiceless **-k-* in Tubatulabal, and the distribution of short vs. long vowels in Tubatulabal and in Luiseño, also involve complex conditioning, without parallels in Numic. Thus, it is not possible to postulate a single event of lenition that would have occurred in the common ancestor of these languages and of Numic.

And there are two additional reasons for this conclusion. First, in Tubatulabal the change of **k-* to *h-* before **a* and **o* regularly took place in initial position as well as intervocalically (Voegelin, Voegelin, and Hale 1962:63–64), something which did not happen in Numic or in Luiseño. Second, the lenition of **-k-* (to *-h-* in Tubatulabal and to *-x-* Luiseño) did not occur in all of the Takic languages (the group that Luiseño belongs to). For example, in the Takic language Serrano, we find *maqai* 'to give'

[12] Tubatulabal regularly has *ï* for PUA **i* in final position. See Manaster Ramer (in preparation *b*) for the functions of the reduplicated and unreduplicated forms.

(but Ls *na-mxa-* 'to distribute', Tb *mahaa-* 'to give'), *taaqt* 'person' (but Ls *a-taax* 'person', Tb *taaha-m ~ taha-m-bi-l* 'old man'), etc. Hence, lenition was probably not Proto-Takic. As a result, even though Tubatulabal and the Takic languages appear to form a genealogical unit, which I call "Californian" (Manaster Ramer 1992*f*; 1993), the lenition of simple **k* cannot be considered a Proto-Californian process, and so there could not have been a direct connection between the Tubatulabal phenomena and the Numic ones, such as suggested by McLaughlin.

So much for the velars. As far as palatals **-c-* and **-cc-* are concerned, Manaster Ramer (1992*b*) shows that all Northern Uto-Aztecan languages (which include not only Numic, Takic, and Tubatulabal but also Hopi) lenited **-c-* to *-y-*. This does not preclude instances of **-c-* arising later in some or all of these languages (see Manaster Ramer 1993), but these would not be true cognates, and so would be irrelevant to our concerns here. Moreover, the evidence for **-cc-* in words of common Uto-Aztecan origin appears to be slender.

In the case of coronals (**-t-* vs. **-tt-*), Manaster Ramer (1992*a*; 1992*c*) shows that, as suggested by Sapir, Tubatulabal exhibits *-l-* for **-t-*, whereas **-tt-* is realized as a voiceless stop. As documented by Manaster Ramer (to appear; in preparation *a*), the Takic languages behave very much like this too, although the reflexes of **-t-* here are quite varied: *-l-*, *-r-*, and *-ç-*. However, I have found this contrast primarily at morpheme boundaries, specifically when a morpheme beginning with a **-t* appears after one ending in a vowel or one ending in **t-*. Unlike in the case of velars, I have not been able to establish a convincing case for such a contrast morpheme-internally.

The case of labial plosives is even less clear. Thus, in the Takic languages and in Hopi we find a contrast between *-p-* and *-v-*, and in Tubatulabal a contrast between *-p-* and *-b-*. However, it is not clear whether these are connected. Thus, it is too soon to try to relate these phenomena to anything in Numic.

So, what about the Tubatulabal reduplicated forms cited by McLaughlin, such as (1*b*) *aa-baawiliigan-t* 'many geese in one place'? Swadesh and Voegelin (1939), who studied the matter in detail, were forced to conclude that it is synchronically unpredictable which stems reduplicate with a long vowel (and voice a stem-initial plosive) and which ones reduplicate with a short one (and keep a stem-initial plosive voiceless).[13] Diachronically, we do not at present possess a clear-cut account of these reduplicated forms. Although clearly connected to those in other Uto-Aztecan languages, these

[13] As a result, Swadesh and Voegelin (1939) used different morphophonemic symbols to distinguish those morphemes which reduplicate with long vowels from those which reduplicate with short vowels.

forms are not straightforwardly derivable from a single common Uto-Aztecan prototype. As a result, they cannot be used to inform our understanding of Tubatulabal–Numic phonological correspondences.

In conclusion, I return to the relation between the Tubatulabal and the Numic lenition facts. It is true that Tubatulabal (as well as Takic) data confirm the existence of a contrast between simple and geminate plosives (specifically, velars) in Proto-Uto-Aztecan. However, the lenition of the intervocalic simple plosives in Numic cannot be assumed to be cognate to the various lenition processes of Tubatulabal.

Moreover, to the extent that lenition has taken place independently several times in the various languages, this very fact tends to undermine McLaughlin's argument about the history of lenition and delenition in Comanche and Northern Shoshoni. If lenition has applied independently several times in the history of Uto-Aztecan, then it is that much more plausible to assume that it was not a Proto-Numic phenomenon but rather could have developed subsequently in the various Numic dialect areas. This is not to say that I reject McLaughlin's (and Miller's 1973) theory about delenition in Comanche and Northern Shoshoni. It is merely to say that the case for it is not strengthened by the proposed Tubatulabal connection.

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