

SOME UNEXPECTED REFLEXES OF PROTO-MUSKOGEAN LABIOVELARS

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In her work on the classification of the Muskogean languages, Haas (1941) found four consonant correspondence sets which point to an initial two-way split of Proto-Muskogean (PM) into a Western and an Eastern division.¹ Proto-Western Muskogean (PWM) subsequently evolved into the modern dialects of Choctaw (Ch) and Chickasaw (Ck) and Proto-Eastern Muskogean (PEM) into Alabama/Koasati (A/K), Hitchiti/Hikasuki (H/M), and Creek/Seminole (Cr/S). PM *ɬ, for example, became Western Muskogean s and Eastern c, as illustrated in (1) - (3).²

- (1) PM *ɬakli/o TROUT/BASS³ > Ch sakli 'trout' (JNS), Ck sakli 'trout' (HH), A ca:lo 'bass' (KJL), K ca:lo 'trout' (MRH 1941), Cr cá:lo 'bass' (KMB)
- (2) PM *oɬapa FIELD > Ch osapa [osa:pa] (KMB), Ck osapa (HH), M òcà:p-I (D-M), Cr cãp-ó:fa (KMB)⁴
- (3) PM *xokɬo PASS WIND > Ch hokso (CB), K hokco (MRH 1941), Cr hokc-itá (KMB)⁵

There is one correspondence set, however, which defies the west/east dichotomy. While the phonemic inventories of Ch/Ck, A/K, and H/M all contain a single asymmetrical voiced bilabial stop b, no such phoneme exists in Cr/S. Haas (1947) noted a regular correspondence between Cr/S k and b in the other languages and reconstructed the phonetically plausible labiovelar stop *k^w. Note example (4), where the initial PM labiovelar of MULBERRY is preserved as b in Ch/Ck, K, and M, and k in Cr.

- (4) PM *k^wixi > Ch bíhi api 'mulberry tree' (JNS), Ck behi (HH), K bihi-coba 'fig' (MRH 1947), M bi:h-I 'red mulberries' (D-M), Cr kí: (KMB)

On the basis of pattern congruity, Haas (1947) reconstructed a labiovelar fricative *x^w which developed into modern f, a phonetically justifiable reconstruction in light of the fact that many speakers of the modern dialects, particularly older speakers, have a bilabial ɸ rather than a labiodental f. Examples (5) - (7) illustrate the modern reflexes of *x^w.

- (5) PM *x^woni BONE > Ch foní (JNS), Ck foní (KO), H -fo:n-i (MRH 1956), M fò:n-I (KMB), Cr fóni (KMB)
- (6) PM *ooax^wa/I WINTER > Ch onafa (JNS), K ɬafi (MRH 1941),

M slafi /la:f-i/ (BS), Cr lafó (KMB)⁶

- (7) PM *čokx^wi RABBIT > Ch cokφi (KMB), Ck cokfi (KO), A cokfi (KJL), K cokfi (MRH 1941), H cokf-i (MRH 1941), M cōkf-i (KMB), Cr coff (KMB)

The development of PM labiovelars is an interesting phenomenon for two reasons. One is the aforementioned fact that reflexes of the labiovelar stop do not conform to the west/east division attested by other consonant correspondence sets. Also, the reflexes of both labiovelars are not totally predictable, i.e. PM *k^w does not always develop into k in Cr/S and b in the other languages, nor does PM *x^w always appear as f. In the remainder of this paper, I will focus on some unexpected reflexes of the PM labiovelars and offer two possible explanations for their appearance.

In her discussion of the development of PM *k^w, Haas (1947) cited cognates in which Creek p corresponded to b in the other Muskogean subbranches. Most of these "can be explained as instances of dissimilation since they occur in the neighborhood of k" (Haas 1947:136). The labiovelar in (8) ARM, for instance, appears as b in Ch/Ck and A/K and p in Cr.

- (8) PM *sakk^wa ARM > Ch šakba (JNS), Ck šakba (HH), A sakba (KJL), K sakba (MRH 1947), Cr sákpa (KMB)

Presumably Creek dissimilated *kk^w sequences to kp and *k^wk combinations to pk.

Haas mentioned one other instance (9) in which Cr p corresponded to Ch b, one which cannot be explained by dissimilation.

- (9) PM *lak^wi LAP UP > Ch ok-lab-bi 'lap water' (CB)⁷, Cr laplapi:c-itá (MRH 1947)

The underlying Ch root must be lap rather than lab since the morphophonemic rules of the language are such that only bl clusters geminate to bb; an underlying pl would surface as bli (Nicklas 1975). The Cr cognate is a reduplicated plural of the root lapi. The plural suffix -i:c suggests an underlying i as a root final vowel which surfaces only with an immediately following vowel initial suffix.⁸ In Choctaw, root final vowels are often lost before the active suffix -li, especially in plural verbs. Therefore, *lak^wi is reconstructed as the proto-form.

Although Haas (1947) included only three examples of Cr p corresponding to b in the other languages, such a correspondence is relatively common. In (10) BURN, the A/K term is assumed to be the most archaic. The development of singular vs. plural verb stems is a recent phenomenon in Muskogean (Booker 1980). One technique for deriving a number-differentiated stem is by vowel

and/or consonant syncope as illustrated here by the K stems. Since the disappearing t is not reconstructible either internally or comparatively, it is presumed to be part of the proto-form.⁹

- (10) PM *lik^Watli BURN > Ch libbi 'to blaze, flame, burn' (intrans.) (CB), A libatli 'burn, bake, cook' (KJL), K lib-at-li (MRH 1956), libatli 'get burned, once', liba:li /libali/ 'get burned, often' (GK), Cr lipli:y-itá 'to flicker, twinkle' (MRH)

The geminate b in Ch libbi is assimilated from an earlier bl cluster, though the final li is probably not the active suffix since libbi is an intransitive verb.

In (11) HIGH, the initial *ak^Wa of the reconstruction is fairly certain but the final a: of the Ch cognate and the a:/ay of the A terms suggest a longer reconstruction; long vowels and diphthongs generally arise from the loss of an intervocalic consonant.

- (11) PM *ak^Wa... (possibly *ak^WaCi) HIGH > Ch aba: 'up' (KMB), Ck aba 'up' (HH), A aba:-li, aba:-li-ci 'up' (KJL), abayli: (ER), M amb-i 'high' (KMB), Cr on-ápa 'high up on' (KMB)

Only the apa of the Cr term is cognate here; the initial on is a fossilized reflex of the PM prefix *on- 'on' (Booker 1980).

Finally, reflexes of PM COPY/IMITATE (12) are well attested in the daughter languages.

- (12) PM *axok^Wa COPY/IMITATE > Ch hoba-ci 'imitate, mock', ahoba 'seem' (JNS), Ck hoba-ci 'copy', ho, l, ba 'picture' (HH), K st-aho, l, ba 'picture', iy-ist-aho:ba 'footprint' (FT), M à:b-i 'picture', a:ba:c- 'take a picture' (D-M), Cr ahopa:-y-itá 'to measure', ahopá:-k-a 'a pattern' (KMB)

Numerous cases of a M b, Cr p correspondence are attested as well, e.g. M tabaksi:c- 'unfold' (D-M), Cr tapíks-i: 'flat' (KMB). Many of these, however, may be cases of borrowing. Since Cr has no b, M b would be borrowed into Cr as p.

What is interesting about the labiovelar reflexes in (9) - (12) is that they are derived from proto-forms where *k^W stood between vowels. Of the eight cognate sets which Haas (1947) offered in support of the correspondence between Cr k and b in the other languages, only one, SLIPPERY ELM (13), is reconstructed with an intervocalic labiovelar stop.

- (13) PM *xok^Walopa: SLIPPERY ELM (MRH 1947) > Ch balop (JNS),

K sil-hoba (MRH 1947), Cr lopá:ka < *lopa:k^wa < *(xo)k^walopa: (MRH 1947)

The reconstruction is suspect for two reasons. In the first place, a good bit of unusual shifting is required to correctly position the Cr consonants. Although metathesis is not unheard of in Muskogean, especially within the Cr/S subbranch, many previously reported cases of metathesis have proven to be explainable in other terms.¹⁰ Secondly, the initial syllable of the reconstruction, i.e. *xo, is based solely on the hoba of the K word, which Haas presumes to be a compound of an unidentified root sil and hoba. If the K word is indeed a compound, it is equally probable that hoba is the verb COPY/IMITATE encountered in (12). The compound would then refer to something which is similar to a sil, whatever a sil might be. In this event, the K form would not be cognate with the Ch and Cr words.¹¹

If the K term is noncognate, then an alternative reconstruction *k^walopa is indicated. The final ka of the Cr word and the preceding long vowel is current Cr noun derivational morphology. In other words, Cr lopá:ka may be a derived noun. A similar situation exists in the Cr and Ch words for necklace, both of which are derived from the PM verb PUT AROUND THE NECK: PM *inoči > Ch inoci, innoci 'necklace' (CB), Cr ohh-inó:c-k-a 'necklace, scarf' (lit. something which is put on around the neck) (KMB).¹² One advantage of the alternative reconstruction is that metathesis is not needed to explain the order of the Cr consonants. The initial syllable of the reconstruction was lost in Cr. Thus, Cr lopá:ka contains no reflex of PM *k^w. The alternative reconstruction, then, poses no counter-example to the hypothesis supported by the data in (9) - (12), namely, that the intervocalic PM labiovelar stop became Cr p.

Occasionally w can be found to correspond to b.¹³ In (14) OVERLAP, Ch, K, and H/M have an initial b corresponding to Cr w rather than to the expected k.¹⁴

- (14) PM *k^wana-li¹⁵ > Ch a-bano-li 'to lay over, on', a-bana-li 'to lay across' (CB), K abana:-li 'to place across' (GK), H a-bana-li-li-s 'I tie, fasten to', bana-li-li-s 'I tie' (ASG), M bana:l-om 'She's tying it.' (D-H), Cr wana-y-itá 'to tie' (KMB)

In (15) PARCH, Cr has p, the now expected intervocalic reflex of *k^w, where Ch/Ck has w instead of b.¹⁶

- (15) PM *ak^was-li PARCH > Ch awaş-li 'fry' (KMB), Ck awaş-li 'fry' (KO), Cr apás-k-i 'parched corn', apas-itá 'to parch' (KMB)

Even more puzzling are the initial correspondences in (16)

RUH, where Ch b corresponds to Ck m, to A/K w, and to M p.

- (16) PM *k^wal... (possibly *k^walaCi) RUN > Ch balili [bali:li] (KMB), Ck mal:li (KO), Ā wali:ka (KJL), K wali:ka (MRH 1956), M pala:k-om 'They (du.) run.' (KMB)

Turning now to the development of the PM labiovelar fricative, it becomes immediately apparent that the modern reflexes are not as predictable as the examples in (5) - (7) would suggest. Haas (1945) was the first to note a dialect variation between f and h in Cr, e.g. the Cr word for cloud is either afolocí: or aholocí: depending on the speaker's dialect. But an f:h correspondence is widespread among the Muskogean languages. PEM *čax^wikna HEALTHY survives as H cáhn-i (ASG) and Cr caffkn-i: 'healthy', cafikneyc-itá 'to cure' (MRH), where the H cognate has h and the Cr cognate has f as a reflex of *x.

In (17) JAW, Cr has h where Ch/Ck and K have f.

- (17) PM *notakx^wa JAW > Ch notákfa (JNS), Ck notakfa (IHH), K notakfa (MRH 1956), Cr notákha (MRH 1956)

A correspondence between Ch f and M h is also attested: PM *čilax^wa PEEL > Ch čilafa 'to peel up' (intrans.) (CB), M čila:h-li-k (WS).

Even within Western Muskogean an f:h variation can be found. In (18) BIRD, Ch has an initial h but Ck has f, as do the Eastern languages.

- (18) PM *x^wosi BIRD > Ch hoši (KMB), Ck foši (KO), A fosi, fo:sí (KJL), K fo:sí (GK), H fós-i (ASG), M fô:s-í (KMB), Cr fós-wa (KMB)

The cognates in (19) BEE are interesting because the M consonants appear to have undergone metathesis. But based on the large number of correspondences attested between f and h, a more accurate reconstruction may be one with two labiovelar fricatives.

- (19) PM *x^wox^wi/o BEE > Ch fowi (JNS), Ck fohi, foyi (KO), A hofo, foho (KJL), K foho (FT), M hōf-í (KMB), Cr fó: < *fōho (KMB)

If the PM labiovelar fricative does not appear as f in the daughter languages, it will most likely occur as h. There are times, however, when something entirely unexpected appears. In (20) REVERSE DIRECTION, H y corresponds to f, and in (21) PRODUCE/YIELD, Ch w corresponds to M and Cr h.

- (20) PM *x^walam- $\begin{Bmatrix} ka \\ li \end{Bmatrix}$ REVERSE DIRECTION > Ch falam-mi
 'return' (CB), Ck falam-mi 'return' (HH), A falam-ka
 'get up' (KJL), H yalán-ka-li-s 'I turn back, return.'
 (ASG), Cr falala:fakí: 'curls' (MRH)
- (21) PM *x^waya PRODUCE/YIELD > Ch wa:ya 'to mature (plant)'
 (JNS), M ha:ya:c- 'raise vegetables' (D-M), Cr ha:y-itá
 'to make' (KMB)

So what conclusions, if any, can be drawn from the preceding data? It appears that the labiovelar stop and perhaps the fricative as well evolved into their respective reflexes after the four consonant shifts which divided PM into two groups. When PM *ɟ, for example, became s in PWM and c in PEM, the labiovelars remained unchanged. As PWM and PEM separated into their individual subbranches, the labiovelars developed into their present reflexes.

The variation found in the labiovelar reflexes may be due at least in part to conditioned sound change. It seems likely that the intervocalic labiovelar stop became Cr p. Perhaps as more cognates are found, conditioning environments will be discovered for other seemingly aberrant reflexes as well.

Yet one other factor may be involved in the appearance of certain unexpected labiovelar reflexes. PM may well have had a system of consonant symbolism which is no longer productive in the modern languages. There survive, however, certain lexically frozen reflexes to attest to its function in earlier times. Since consonant symbolism commonly involves diminutives, consider the modern Muskogean diminutive/intensive morphemes in Figure 1, next page.

H/M and Cr have both a diminutive -oc(i) and an intensive -os(i). The diminutive is restricted to nouns, and the intensive generally appears with verbs, although there are a few nouns with -os(i) as the diminutive ending. Note in particular the Cr words 'little girl' and 'little boy', where the former has a suffixed -oci, and the latter, a suffixed -osi. According to Nicklas, the Ch diminutive is -oši or -osi, depending on the dialect. In dialects where both -oši and -osi occur, -osi "intensifies the meaning of smallness" (Nicklas 1974:42). Though Nicklas does not mention the use of either suffix with verbs, verbs with a suffixed -osi can be found in the Ch dictionary (Byington 1915). So, it appears that Ch, like H/M and Cr has or had a distinction between diminutive and intensive. Alabama seems to parallel Ch dialects in which -osi is the only diminutive. It is suffixed to both nouns and verbs.

While there is a common pattern of diminutive vs. intensive

FIGURE 1
Muskogean Diminutive/Intensive Morphemes

	<u>NOUNS</u>		<u>VERBALS</u>
Ch (KMB)	ak̄a:ka 'chicken'	alla 'child'	ci:ki 'soon' (CB)
	ak̄a:k- <u>oši</u> 'egg'	all- <u>oši</u> 'baby'	ci:k- <u>osi</u> 'very soon' (CB)
A (KJL)		itto 'tree'	kostini 'to know' (JRS-A)
		itt- <u>osi</u> 'twig'	kostin- <u>osi</u> 'full know- ledge of' (JRS-A)
H (JRS-H)	opósk-i 'children'	nák-i 'thing'	ca-maló:st- <u>osi</u> -k 'I am very desirous' (JRS-H)
	oposk- <u>oc</u> -i 'little children'	nák- <u>os</u> -i 'little object'	
M (KMB)	sòk-i 'pig'	nàkn-i 'man'	wíkc-i 'small'
	sòk- <u>o:c</u> -i 'little pig'	nàkn- <u>o:s</u> -i 'old man'	wíkc- <u>o:s</u> -i 'very small'
Cr (KMB)	hoktí: 'woman'	ci:paní: 'boy'	cótk-i: 'small'
	hokt- <u>oci</u> 'lit- tle girl'	ci:pan- <u>oši</u> 'little boy'	cótk- <u>os</u> -i: 'very small'
	[Diminutive]	[Intensive]	[Intensive]

in Ch, H/M, and Cr, the sibilant correspondences present a difficult reconstruction problem. If the diminutives are compared across the languages, i.e., Ch -oši and H/M and Cr -oci, the Western ʒ, Eastern c correspondence is one which has been proposed for Muskogean (Haas 1941), but it is extremely rare.¹⁷ If the intensives are then compared in the modern languages, i.e. Ch -osi and H/M and Cr -osi, the result is an unattested Western ʒ, Eastern s correspondence. To arrive at convincing sibilant correspondences, the Ch intensive must be compared with the H/M and Cr diminutive and the Ch diminutive with the H/M and Cr intensive. But then it is not clear which reconstruction was the original diminutive and which, the intensive. The confusion, I suspect, results from an earlier system of sound symbolism, traces of which can still be found in the daughter languages.

Consonant symbolism may be the cause of certain tentative Muskogean sibilant correspondences such as the Western s, Eastern c correspondence mentioned earlier.¹⁸ A correspondence between Choctaw c and Eastern s also occurs, e.g. (22) and (23).

- (22) Ch cako-a 'dried, like venison' (CB)
 M sákw-om 'It's dried up.' (D-M)
 Cr sákp-i: 'dry' (KMB)
- (23) Ch cilq:-ka-ci 'to scream', cilq:k 'a scream' (CB)
 Cr silálakk-itá 'to scream' (KMB)

Within Choctaw there are numerous examples of sibilant symbolism¹⁹, e.g. Ch canafila 'hawthorn', sanafila 'black hawthorn' (CB).

There is some evidence to suggest that symbolism was also involved in certain reflexes of the PM labiovelars. Ch fotoli 'to grind' and botoli 'to pulverize' (CB) are probably derived from a common source. Puzzling labiovelar reflexes found among the daughter languages may be a result of consonant symbolism as well. Compare, for example, Ch baš-li 'to cut, slice' (KMB) with Ch pas-li 'to cut meat into thin pieces' (CB), where b becomes p and š becomes s in the derived plural verb.²⁰ M wac-ka-k 'to cut many' (JDW) is most likely related to Ch baš-li since b has been found to correspond to w. Cognate with the M plural verb is Cr wask-itá 'to cut many' (KMB) with a different sibilant. Cr kac-ita 'to break off one' (MRH) is probably also related.

It is unlikely that any one factor will be able to account for all of the modern reflexes of the PM labiovelars. The perplexing array of reflexes is doubtless due to a number of independent factors, two of which may be conditioned sound change and consonant symbolism.

NOTES

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²Data sources are abbreviated as follows: (ASG) = (Gatschet 1888), (BS) = (Smith 1866), (CB) = (Byington 1915), (D-M) = (Derrick-Mescua 1980), (ER) = (Rand 1968), (FT) = Frank Trechsel, field notes on Koasati (personal communication), (GK) = Geoffrey Kimball, field notes on Koasati (personal communication), (HH) = (Humes and Humes 1973), (JDW) = (West 1975), (JNS) = (Jacob, Nicklas and Spenser n.d.), (JRS-A) = (Swanton 1922-23), (JRS-II) = (Swanton 1921-22), (KJL) = (Lupardus 1982), (KMB) = Karen M.

Booker, personal field notes on Creek, Mikasuki, and Choctaw, (KO) = (Ohmori 1979), (MRH) = (Haas n.d.), (MRH 1941) = (Haas 1941), (MRH 1947) = (Haas 1947), (MRH 1956) = (Haas 1956), (WS) = (Sturtevant 1951).

³See T. Dale Nicklas "Final h and Certain Vowel Alternations in Muskogean" (this volume) for an historical explanation of these final vowel alternations.

⁴A/K caffa 'field' may be derived from an earlier *capofa with syncope of the second vowel and assimilation of the p to f. If this is the case, a more accurate reconstruction might be *oʔapofa.

⁵Cr verbs are cited in the infinitive -ita form.

⁶It is assumed that the labialization of *x^w accounts for the rounding of *i to o.

⁷ok- is the Ch prefix 'water'.

⁸If the underlying final vowel were a, it would coalesce with the i of the following plural suffix -ic and appear as -eyc or -æc, depending on the dialect; if it were an underlying o, the surface form would be -oyc or -wic, again depending on the dialect.

⁹Even if -t- were shown to be a separate plural marker, the preceding a must be considered part of the root since it appears in both the singular and plural stems. The b < *k^w would still occur in intervocalic position, a point which is crucial to the hypothesis which follows.

¹⁰See, for example, the reconstruction of WATER (Booker 1981).

¹¹Geoffrey Kimball (personal communication) says K silhoba is the eastern hophornbeam or ironwood tree, not the slippery elm.

¹²It is reasonably certain that PM had no length contrast in the vowels. Therefore, the long vowel of Cr lopá:ka must be accounted for within the development of the Cr/S subbranch.

¹³The reconstructions in (14) - (16) are based on the hypothesis that all occurrences of modern b are derived from *k^w. This may well be a fallacious assumption. Certain instances of b may have a different PM source, e.g. *w.

¹⁴The a which appears initially in Ch and H is a locative prefix.

¹⁵The present reconstruction assumes that the o of Ch

a-bano-li is a plural morpheme. (See Booker (1980) for a discussion of plural stems in Muskogean.) If it is not, then the reconstruction should be adjusted to *k^wano-li with assimilation of the second vowel in all the languages.

¹⁶One might speculate that the principal of homophony avoidance played a role in the development of Ch/Ck w rather than b here. If the regular reflex b were retained in 'fry', the word would then be homophonous with abašli 'to slice on or at' (CB). Since both words could appear in similar semantic contexts, there exists the potential for misunderstanding.

¹⁷Haas (personal communication) has since discarded this correspondence set.

¹⁸Haas (personal communication) has suggested sibilant assimilation as a possible explanation of the Western š, Eastern c correspondence.

¹⁹Robert Rankin (personal communication) has assembled a long list of sound-symbolic sibilant correspondences in Ch.

²⁰The examples cited here and above suggest c → š and š → s as two rules involved in Ch sibilant symbolism.

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