VARIA MASKOGIANA: 
LARYNGEALS, PHONOTACTICS, AND ACCENT IN MASKOGIAN

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1.1. Background and plan of exposition

Several things drew me to the comparative study of Maskogian, most notably [1] looking for evidence of language contact between Meso-America and the Southeast, which I found, and [2] interest in sound symbolic phenomena. As of 2003, I saw that the possibilities for comparative work were there, and in 2004 I began to acquire whatever published [print books and articles], semipublished [dissertations], and unpublished [mss in the hands of their authors] materials I could lay my hands on.

As of 2006 the Maskogian languages are well enough documented for reliable comparative work to be carried out in the phonological, lexical, and morphological domains: however, Mikosoki lacks anything like a dictionary, and Chahta lacks a phonologically fully specified one.

Chahta and Maskogi have long-standing practical orthographies dating back to before 1850. They are not used in these materials, which are transcribed according to a single practical ASCII system for all languages.

The language names have conventional English pronunciations, which I use in speaking, but the names are spelled to reflect their pronunciation in the languages themselves. The Southeastern US is a linguistic area, and one of the marks of this is that the names of the various individual Indian ethnic groups are the same in all the languages of the area, no matter what the language of origin of a term might be - in fact, most of the ethnic names of the SE are not easily etymologizable in any single language. I said “not easily”, not “not at all”.

Two principal authors have assembled most of the cognate materials that have seen print – Mary Haas and Karen Booker.

Two different classification schemes or diversification models have each been favored by several Maskogianists – that of Haas and Booker, and that of Munro, Martin, and Broadwell. Evidence is offered here (little of it new) that the latter model is more adequate.

Several phonological issues relating to proto-Maskogian and its development into its various descendants have not been satisfactorily dealt with, and in some cases perhaps not even recognized. The most opaque phenomena are those relating to accent and syllable structure – both how best to describe them in the individual languages and how to model the structure of the protolanguage.
The various Maskogian languages have (or are most commonly described as having) both underlyingly contrastive and predictable accentual phenomena, as well as vowel length and vowel nasality. I will show that currently contrastive pitch, vowel nasality, and a good deal of the observed vowel length all develop out of segmental phenomena (including 7, h, n) as they appear in specific combinations within the syllable or phonological word.

Having shown that in order to account for contrastive pitch, default pitch, glottal stop, and vowel nasality in the daughter languages the protolanguage need not be reconstructed with any underlying accent(s), I will then show that differences among the languages between the developments of vowel length and the preservation or simplification of consonant clusters (in the context /VC1C2V/) can plausibly be accounted for as the effects of an accent in the protolanguage that could appear up to once per word and that then disappeared after doing its dirty work. It may perhaps most simply be thought of as stress, but I repeat that the "stress" that accounts for differential reflexes of vowel length, or cluster maintenance or simplification, does not survive as an accentual phenomenon in the daughter languages.
1.2. Conventions

With apologies to the old hands among Maskogianists, I have introduced some innovations: [a] in symbol choice, in the interest of orthographic uniformity, and [b] in the forms of language names, in the interest of accuracy. Those who are aware of my treatment of these issues for the languages of Latin America will not be surprised, even if still annoyed. When I eventually seek codes for grammatical functions/morphemes, I reckon my choices will fall within the existing range of variation. However on the issue of how to mark cliticization and other types of morpheme boundaries, and what to call “versive” versus “inchoative”, I expect to remain in the minority. My system for marking morpheme types and morpheme boundaries is as follows:

-abc, abc- inflexional morpheme
>abc, abc< class shifter
.abc, abc. derivational morpheme
=abc, abc= bound root (postpound, prepound)
%abc root
+abc, abc+ clitic (enclitic, proclitic)
R reduplicand
CV{abc}CV infix

CHI Chikasa
CHA Chahta
ALB Albamo
KOW Kowasati
MIK Mikosoki
MAS Maskoki

Maskogianists differ among themselves over matters of orthography, labelling/naming of grammatical categories, style/format of phonological statement, style/model of syntactic description, etc. I am no different in this respect. Even where there is consensus among Maskogianists, in some cases I prefer a different analysis, symbol, or label. I hope this will not hinder communication. In any case, a fresh viewpoint is sometimes helpful.
1.3. practical orthography for Maskogian languages

\begin{itemize}
  \item \texttt{p t *ts ch k *q 7}
  \item \texttt{f *th lh s sh h}
  \item \texttt{b}
  \item \texttt{m n}
  \item \texttt{l}
  \item \texttt{y w}
  \item \texttt{i o a}
  \item \texttt{ii oo aa}
  \item \texttt{i& o& a&}
\end{itemize}

\emph{<q> is [k\textsuperscript{w}]}

/\texttt{t/} + /\texttt{h/} is spelled <t.h>
/\texttt{l/} + /\texttt{h/} is spelled <l.h>
/\texttt{s/} + /\texttt{h/} is spelled <s.h>
2.1. The phonological structures/patterns of morphemes, lexemes, and synactic words.

Grammatically morphemes are of two types: roots and affixes.

Phonologically, morphemes are of two types: accentable and clitic.

Lexemes are
nouns
verbs
"adverbs"
minor classes
   numerals
   adpositions
   demonstratives/deictics
   pronouns
   time words
ETC.

Grammatical morphemes may be lexical: derivational and valence-changing, or syntactic: class changing and inflexional.

Root morphemes are nouns, verbs, and other.

There are subtypes of nouns and of verbs.

NOUN ROOTS: the formula is not yet worked out, but probably is the same as for noun stems.

NOUN STEMS (or better, non-verb stems) show the maximum possible complexity of syllable nucleus, apart from the ablaut grading of verbs. They can have up to three syllables, and usually have at least two.

VERB ROOTS
CV
CVC

VERB STEMS: these have a simple shape.
CVC
CVCVCVC: the third syllable is probably a derivational suffix

Most Maskogian languages have various forms of a verb root where [a] most of these forms have three consonants, C1VC2VC3(V), but the third C is not the same in all variants, and [b] some variants lack the third consonant. This makes the third C look like a derivational suffix. Modern describers of Southern Maskogian languages who belong to the UCLA/Munro school want
to speak of “subtractive morphology” or “truncation” when the third consonant is missing. I find truncation that is not phonologically explainable to be anathema. Kimball (1985 [dissertation], 1991) offers for Kowasati an explanation that the consonants that are missing are old “formatives” that are not present in all forms, and this is obviously on the right track.


-f- action on a surface
-p- action by hand or foot, or other organ
-lh- action involving severing
-s- action involving liquid
-y- action with circular motion
-t- action with motion from a stationary position
-: action without motion from a stationary position

Broadwell 1993, who likes truncation as the model for description, cites Kimball (1983!, 1991) as maybe being on the right track for a diachronic explanation. Chahta verbs have analogous processes.

I imagine that these formatives may originally have had a vowel after them, that was lost by a rule. The forms with the formatives show what the second vowel of the CVCV verb root is.

{=ka} “non-active”, {=li} “active”, {=chi} “causative“ are old auxiliaries: what was their phonological status?

stems of shape CVCV and CVCVCV seem to have lost their last vowel before -ka, -li, and -chi: what does this say about the accent in verb words?

preposed person markers were proclitics
incorporated nouns tsok=, nok=, ok=: were they counted for accent?
derivational suffixes {.ha}, {.tV} were probably phonologically bound.
tense/time morphemes were probably enclitic

A couple of nominalizers can be reconstructed:

{.7}
{.ka7}
2.2. Some phonological rules

A stem-final V is dropped before a V-initial suffix or enclitic

\[ \text{CVCV} = \text{oshi7} \Rightarrow \text{CVC} = \text{oshi7} \]

A stem-final syllable nucleus is also dropped in prepounds before V-initial postpounds.

A proclitic-initial V is dropped after a V-final proclitic

\[ a^+ \text{im}^+ \Rightarrow a^+ m^+ \]

All of these vowel-dropping rules suggest that there really were vowel-initial morphemes in older Maskogian. But Mayan (K’ichee7an) and Mije-Sokean (Soteapan and Mijean) data show us that morpheme-initial glottal stops can be elided under the right conditions.

Final vowels in verbs

In both Mik and Mas, verb stems underlyingly end in a vowel, but that vowel is elided or deleted before most suffixes. It appears, however before the causative suffix. Most Maskogiansts seem to be at pains to downplay the importance of the stem final vowel, claiming it to be predictable for quality or to be a separate morpheme, a “stem vowel”. I consider these notions not to be helpful. The vowels that verb stems end in have for the most part been inherited from proto-Maskogian.

For Maskoki I write the verb stem with its final vowel between double shashes \(/\text{ABCV}/\). For Mikosoki I write the verb ABC(V), where (V) is (i), (a), (o), or (V).

Mikosoki nouns have lost their final vowel; but any noun when cited has an enclitic or epenthetic /i/ added. I follow the custom whereby such nouns are spelled NOUN-i.
3.1. *proto-Maskogian* phonemes

<ts>, <th>, <lh>, <ch>, <sh> are digraphs for unit phonemes. labialized k should be written <q>, because k + w actually occurs.

```
p    t    ts    ch    k    q
f    th   lh    s    sh    h
m    n
l
y
w
```

All 6 possible V1V2 sequences appear; each language reduces these VV clusters to just one of the vowels (V1 or V2).

All languages (including *proto-Maskogian*) have geminate consonants. Where *qq* would be expected in the proto-language, the daughters reflect [kkʷ], written <∗kq> – that is, even when the reflex of the second member of the cluster is /b/ or /p/ (rather than the Maskoki default /k/), the first member of the cluster survives as /k/.

Accent and vowel length should be reconstructed.

Syllables that are lost in any language were plausibly not accented in the protolanguage.

Booker 2005 (2005:284) thinks that the penult syllable was accented (as the default?), but some original penult syllables are lost in some languages.
Booker 2005 is the latest on comparative Maskogian phonology. She reconstructs

*x not *h
*xw not *f [Here Booker follows Haas]
<*c> not <*ts>
<*c'>, which I spell <*ch>
*theta, as I do [spelling it <*th>] [Haas symbolizes this <N>]
*?s^  
no 7  
no vowel length  
no vowel nasality

Booker (2005:264) treats the final VV(H) clusters as having had an undetermined C in the middle.

<table>
<thead>
<tr>
<th>TK</th>
<th>Booker</th>
<th>Chahta</th>
<th>Chikasa</th>
<th>Eastern</th>
</tr>
</thead>
<tbody>
<tr>
<td>V1V27#</td>
<td>V1C&lt;a&gt;V2#</td>
<td>V17</td>
<td>V17</td>
<td>V2</td>
</tr>
<tr>
<td>V17#</td>
<td>V1C&lt;aa&gt;V1#</td>
<td>V17</td>
<td>V17</td>
<td>V1</td>
</tr>
<tr>
<td>V1V2h#</td>
<td>V1C&lt;b&gt;V2#</td>
<td>V1h</td>
<td>V1</td>
<td>V2</td>
</tr>
<tr>
<td>V1h#</td>
<td>V1C&lt;bb&gt;V1#</td>
<td>V1h</td>
<td>V1</td>
<td>V1</td>
</tr>
<tr>
<td>V#</td>
<td>V#</td>
<td>V</td>
<td>V</td>
<td>V</td>
</tr>
</tbody>
</table>

She does not recognize the correspondences that I reconstruct non-final VV clusters from.
3.2. Sound correspondences


<table>
<thead>
<tr>
<th></th>
<th>pM</th>
<th>CHA–CHI</th>
<th>ALB–KOW</th>
<th>MIK</th>
<th>MAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>*q</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>k, p</td>
<td></td>
</tr>
<tr>
<td>*ts</td>
<td>s</td>
<td>ch</td>
<td>ch</td>
<td>ch</td>
<td></td>
</tr>
<tr>
<td>*th</td>
<td>n</td>
<td>lh</td>
<td>lh</td>
<td>lh</td>
<td></td>
</tr>
<tr>
<td>*s</td>
<td>sh</td>
<td>s</td>
<td>sh</td>
<td>s</td>
<td></td>
</tr>
<tr>
<td>*sh</td>
<td>sh</td>
<td>ch</td>
<td>ch</td>
<td>ch</td>
<td></td>
</tr>
<tr>
<td>*V</td>
<td>V</td>
<td>V</td>
<td>i</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>*V7#</td>
<td>V7</td>
<td>V</td>
<td>i</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>*V1V27#</td>
<td>V17</td>
<td>V2</td>
<td>i</td>
<td>V2</td>
<td></td>
</tr>
<tr>
<td>*V1h#</td>
<td>Vh</td>
<td>V</td>
<td>i</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>*V1V2h#</td>
<td>V1h</td>
<td>V1</td>
<td>V2</td>
<td>i</td>
<td>V2</td>
</tr>
</tbody>
</table>

vowel and consonant length without tone

<table>
<thead>
<tr>
<th></th>
<th>pM</th>
<th>CHA–CHI</th>
<th>ALB–KOW</th>
<th>MIK</th>
<th>MAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>VNCV</td>
<td>V&amp;CV</td>
<td>VCV</td>
<td>VCV</td>
<td>VCV</td>
<td></td>
</tr>
<tr>
<td>VNCCV</td>
<td>V&amp;CV</td>
<td>VCCV</td>
<td>VCCV</td>
<td>VCCV</td>
<td></td>
</tr>
<tr>
<td>*V1kV2#</td>
<td>V1k#</td>
<td>V1#</td>
<td>V1k–i#</td>
<td>V2V2#</td>
<td></td>
</tr>
<tr>
<td>*V1fV2</td>
<td>V1f#</td>
<td>V1#</td>
<td>V1f–i#</td>
<td>V2#</td>
<td></td>
</tr>
</tbody>
</table>

vowel and consonant length without tone
Proto-Maskogian has 18 consonants: no descendant has more than 16 consonants

<table>
<thead>
<tr>
<th>t</th>
<th>ts</th>
<th>ch</th>
<th>k</th>
<th>q</th>
<th>p</th>
<th>ʔ</th>
</tr>
</thead>
<tbody>
<tr>
<td>th</td>
<td>lh</td>
<td>s</td>
<td>sh</td>
<td>h</td>
<td>f</td>
<td></td>
</tr>
<tr>
<td>n</td>
<td>m</td>
<td></td>
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<td>l</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>y</td>
<td>w</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*th and *sh lack unique reflexes in any language

The phonetics of *f and *h. Older (and some younger) speakers of most Maskogian languages pronounce /f/ as a voiceless bilabial spirant. Apparently for reasons of structural parallelism, Booker (following Haas) assumes that /f/ corresponds to /q/ [kʷ] and was therefore pronounced [xʷ]. However, internal evidence suggests only that *f is in the position of *p. Booker reconstructs *x rather than *h, though [x] occurs only in limited contexts, if at all, in present-day Maskogian languages. Even American English speakers occasionally pronounce /h/ as [x], and Booker’s hypothesis, while conceivable, is not convincing.
For proto-Maskogian, to account for variable cluster simplification in most languages but Cha-Chi, and for vowel length in open syllables in Mik, it is convenient to set up an accent that could occur on any of the first three syllables of a lexeme. (Basically, clusters that are preceded by an accented vowel tend to be preserved, while clusters followed [or not preceded] by an accented vowel tend to be simplified; in Mik an accented V in an open syllable is lengthened, while an unaccented V in an open syllable remains short.) This accent may have disappeared after doing the work needed of it. It does not survive as a lexically-marked accent. This accent may have been lexical, or it may have been predictable; only a survey of reconstructed accented forms can help answer this question.

Certain syllable types (V7CV, V7VCV, V7hCV, V:7CV) were realized with high or falling pitch.

Simple syllable types (VCV, V:CV) were realized with accent (which probably entailed high pitch) according to a default rule. The default rule is not the same in the various Maskogian languages, and none of the languages may have preserved the original rule.

3.3.1. Accent

Each Maskogian language has both predictable and underlying accentual phenomena.

Accent is added by default to words that lack underlying accent. Default accent is normally manifested/realized as a combination of high pitch and stress.

Underlying accent can be realized as high pitch, falling pitch, and overhigh or rising pitch. High pitch occurs with both long and short vowels. Falling pitch occurs with long vowels except where the vowel is followed by two consonants. While all Maskogian languages currently have underlying pitch phenomena, these can be shown to have arisen out of segmental elements such as vowel length, glottal stop, preconsonantal /h/, and preconsonantal /n/. In many (but probably not all) cases, such elements are the exponents of infixed morphemes.
CHAhta
In nouns accent is not predictable and falls on the last or penult syllable.

CHIkasa
By default an unaccented word is accented on the last syllable.
Any other accent is marked.

ALBamo
By default the last syllable of a word is stressed.
Any other accent is marked.

KOWasati
By default a long vowel in the penult syllable is accented; if the penult syllable lacks a long vowel the final vowel is accented.
Any other accent is marked.

MIKosoki [to be worked out]

MASkoki
If there are only open syllables, accent (place high pitch on) the last even-numbered syllable;
if the last V is long, accent it;
if last V is short and the penult syllable is long or closed, accent the penult syllable.

Any other accent is marked.
### 3.3.2. Accents in Maskogian languages

<table>
<thead>
<tr>
<th></th>
<th>unmarked</th>
<th>marked</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>default</td>
<td>short</td>
</tr>
<tr>
<td></td>
<td>high</td>
<td>high</td>
</tr>
</tbody>
</table>

- **CHI**
  - last V
  - + + + + - -

- **CHA**
  - last V
  - + + + + - -

- **ALB**
  - last V
  - + + ? + - -

- **KOW**
  - VCV*
  - + + ? + - -

- **MIK**
  - last V
  - + + + + + +
  - mid
  - low low mid mid

- **MAS**
  - VCV*V
  - + + + + - +
  - V*VCV
  - V*CCV
  - VCV*
  - VCV
  - CVCV
  - CVCVCVCV*
  - CVCV*

For Don Hardy MAS “rise” is “extra high”
3.4. MERGER PATTERNS

CHIKASA

(*q \Rightarrow b)
(some *7 \Rightarrow 0)

\[
\begin{array}{ccccccccc}
t & ts & ch & k & q & p & 7 & 0 \\
\downarrow \\
1h & th & s \Rightarrow sh & h & f \\
\downarrow \\
n & m \\
1 \\
y & w
\end{array}
\]

CHAHTA

(*q \Rightarrow b)
(some *7 \Rightarrow 0)

\[
\begin{array}{ccccccccc}
t & ts & ch & k & q & p & 7 & 0 \\
\downarrow \\
1h & th & s \Rightarrow sh & h & f \\
\downarrow \\
n & m \\
1 \\
y & w
\end{array}
\]
ALBAMO

(*q ⇒ b)
(some *ts → ch; other *ts → t)

<table>
<thead>
<tr>
<th>t</th>
<th>ts</th>
<th>ch</th>
<th>k</th>
<th>q</th>
<th>p</th>
<th>7 ⇒ 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>lh</td>
<td>th</td>
<td>s</td>
<td>sh</td>
<td>h</td>
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</tbody>
</table>

KOWASATI

(*q ⇒ b)
(some *ts → ch; other *ts → t)

<table>
<thead>
<tr>
<th>t</th>
<th>ts</th>
<th>ch</th>
<th>k</th>
<th>q</th>
<th>p</th>
<th>7 ⇒ 0</th>
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<tbody>
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<td>lh</td>
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</tbody>
</table>
MIKOSOKI

(*q ⇒ b)

t  ts ⇒ ch  k  q  p  7 ⇒ 0
↑
lh <= th  s ⇒ sh  h  f
n   m

l

y  w

MASKOKI

(some *7 ⇒ 0)
(some *q ⇒ k; other *q ⇒ p)
(some *ts → ch; other *ts → t)

t <= ts ⇒ ch  k  q  p  7  0
↑
lh <= th  s ⇒ sh  h  f
n   m

l

y  w
4.1. Classification

There have been almost as many classifications as there are classifiers. [pre-structural/reconstructive: Gallatin?, Gatschet, Swanton – will remain undiscussed]

post-structural/reconstructive we have
Haas (1940s - 1960s); Booker (1980s - 2000s)
Munro, Martin, Broadwell (1980s - 2000s)
Kimball (1989)

There is a single best order the languages can be listed in that will put the most highly sharing languages next to each other

*th *ts *kw *sh *s *ia *ai *io *oi

Western
n s b sh i a i o [keep V1]

Chikasa
[NE Mississippi, Tennessee]

Chahta
[EC Mississippi]

Mikosoki
lh ch b ch sh i i i i [keep i]
[Georgia]

A-K
lh ch b ch s a i o i [keep V2]
Albamo
[N Mississippi]
Kowasati
[NE Alabama, Tennessee]

Apalachi
lh ?ch
[Florida]

Maskoki
lh ch k ch s a i o i [keep V2]
[Georgia, Alabama]

*ia *ai *io *oi
4.2. Maskogian glottochronology

Broadwell 1992 reports on a glottochronological study of Maskogian [Kowasati and Apalachi data were not used in this study]

\begin{verbatim}
+--------+
| Cha-Chi |  
| =1500=  |
| Alb =2000=  
| =1500=  |
| 2900  |
| Mik |
+--------+

2900
x
x x
x x

2000
x x
x x
x x
x x
x x
x x

<=1500=> <=1500=> <=2000=>

Cha-Chi Alb Mik Mas

all branches
Mas + Mik = proto-Maskogian
Mas + Alb-Kow = proto-Maskogian
Mas + Cha-Chi = proto-Maskogian

Cha-Chi + Alb-Kow + Mik = Southern Maskogian
Cha-Chi + Alb-Kow = Southern Maskogian
Cha-Chi + Mik = Southern Maskogian
Alb-Kow + Mik = Southern Maskogian

1. Maskoki
2. Mikasuki
3. Albamo-Kowasati + Apalachi
4. Chahta-Chikasa
\end{verbatim}
areal groupings
Cha-Chi + Alb-Kow = "Western" Maskogian, but really Southern Maskogian
Mas + Mik = "Eastern" Maskogian, but really proto-Maskogian

4.3. Maskogian diversification

before 1000 BCE
proto-Maskogian is spoken in Eastern Mississippi (or Memphis – Tupelo).

900 BCE
Maskoki moves away East to NE Alabama and NW Georgia; "Southern" Maskogian remains in the homeland.

while the languages are thus situated --

*q > b in Southern
*q > k, p in Maskoki

Southern innovates
N-grade CVCV{*}&CV
G-grade CVC{C}V{*:}CV
1-500 CE
Southern Maskogian breaks up into
Chahta-Chikasa, Albamo-Kowasati-Apalachi, and Mikosoki.

Mikosoki moves Southeasterly to SE Alaamba and SW Georgia, south of Maskoki.

Albamo-Kowasati-Apalachi moves easterly and close to Maskoki.
Chahta-Chikasa remain in the homeland.

after 500 CE (500-1000 CE) --

Chikasa-Chahta undergoes these sound changes
*th > n
*s > sh
*ts > s
*V1V27# > V17
*V1V2h# > V1h
CHI-CHA loses F-grade CVCV{^:}CV
CHI-CHA changes LN-grade CVCV{~:}CV to CVCV{hV:}CV
*VHCV > V:CV
*VCHV > VCV

Kow-Alb-Apa, Mik, and Mas share the AREAL changes
*th > lh
*ts > ch
*sh > ch
Kow-Alb-Apa and Mas share the AREAL changes
   *V1V2(H) > V2
[apparently, Mik changes all word-final V1V2 sequences to /i/, thereby
masking the scope of the areal change, which is likely the same as the one
affecting *th, *ts, and *sh]

Kow-Alb-Apa
   *VHCV > V:CV
   *VCHV > V:CV

Mik
   *VHCV > V:CV
   *VCHV > VCV
   *s > sh [though this is the same reflex as found in CHA-CHI,
   it is probably an independent innovation]

Mas
   *VHCV > V:CV
   *VCHV > VCV

Probably through drift and not through contact, Cha-Chi, Mik, and Mas share
the changes:
   p t ch k (s sh) have lenited/voiced allophones [b d j g (z zh)]
   short vowels have lax allophones [I A U]

?1000 CE
Apalachi becomes separate from Albamo-Kowasati and moves to south of
Mikosoki.

?1200–1300 CE
Albamo and Kowasati diverge; Kowasati moves to north of Maskoki.

1400–1500 CE
Chahta and Chikasa diverge.

$\ldots$
4.4. Contact among Maskogian languages after separation

In protohistoric times --

Kowasati was in contact with Maskoki, Chalaki, and Yuchi.

Albamo was in contact with Chikasa and Chahta, and with Maskoki.

Mikosoki was in contact with Maskoki and Apalachi.

Apalachi was in contact with Mikosoki.

Chahta was in contact with Chikasa, Albamo, and Maskoki.

Chikasa was in contact with Chahta, Albamo, and Maskoki.

Maskoki was in contact with all Maskogian languages but Apalachi -- that is with Kowasati, Albamo, Chikasa, Chahta, and Mikosoki -- and with Chalaki and probably Yuchi.

Yuchi was in contact with Kowasati, and probably with Maskoki. Chalaki was in contact with Kowasati and Maskoki.
5. Proto-Maskogian “stress” and its effect on the development (or not) of vowel length and the maintenance (or not) of consonant clusters

5.1. Vowel and canonical shape correspondences

<table>
<thead>
<tr>
<th>V*CV</th>
<th>VCV*</th>
<th>[VHCV]</th>
<th>[VCHV*]</th>
<th>[V*CHV]</th>
<th>V*STV</th>
<th>VSTV*</th>
</tr>
</thead>
<tbody>
<tr>
<td>V:CV</td>
<td>VC7V*</td>
<td>V*C7V</td>
<td>S = h, s</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Cha    VCV    VCV    V:CV    VCV    VC1C1V    VSTV    VTTV
Chi    VCV    VCV    V:CV    VCV    VC1C1V    VSTV    VTTV
Alb    VCV    VCV    V:CV    V:CV    VC1C1V    VSTV    VSTV
Kow    VCV    VCV    V:CV    V:CV    VC1C1V    VSTV    VSTV
Apa    VCV    VCV    V:CV    VCV    V:CV    VSTV    VSTV/VSSV

<table>
<thead>
<tr>
<th>V*C1C1V</th>
<th>VC1C1V*</th>
<th>V*C1TV</th>
<th>VC1TV*</th>
<th>V*C1RV</th>
<th>VC1RV*</th>
</tr>
</thead>
</table>

Cha    VC1C1V    VC1C1V    VC1TV    VC1TV    VC1TV    VC1RV
Chi    VC1C1V    VC1C1V    VC1TV    VC1TV    VC1TV    VC1RV
Alb    VC1C1V    VC1C1V    VC1TV    VTV    V:RV
Kow    VC1C1V    VCV    VC1TV    VTV    V:RV
Apa    VC1C1V    VCV    VC1TV    VTV    V:RV
Mik    VC1C1V    VCV    VC1TV    V(:)TV    VC1RV
Mas    VC1C1V    VCV    VC1TV    VTV    V:RV

T = plosive
S = sibilant
R = resonant
H = laryngeal
5.2. Examples of the VCCV patterns

V*CV  [26, 27, 28, 29, 30, 31, 33, 35, 36, 37, 38, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 80]

VCV*  [32, 66, 67, 68, 69, 70]

V1V2  [9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 21, 22, 23, 24, 25, 26, 27, 28, 36, 39, 68, 69, 70, 82, 85, 108, 119, 120, 127, 131]

V:CV  [89, 90, 91, 93, 94, 95, 96, 97, 98]

V:CV*  [98, 108]

V*C7V  [111]

VC7V*  [100a]

V*C1C2V  [52, 55, 57, 58, 59, 60, 62, 64, 65]

VC1C2V*  [71, 76, 78, 79, 81, 82, 83, 84, 85, 86, 87, 88]

V*STV  [136, 137]

VSTV*  [65, 80]

V*C1C1V  [117, 121, 123, 128]

VC1C1V*  [124, 126, 128, 131]

V*C1TV  [53, 56, 61, 63]

VC1TV*  [79]

VC1RV*  [72, 73, 74, 75, 77]
5.3. Vowel length, consonant length, and "stress"

Originally, I resisted reconstructing vowel length, since I thought that in all languages vowel length was secondary, apart from the “grades”. Outside of the “grade” system, though, there is across the board vowel length, which I originally set up as *H. Since vowel length does seem to be part of the “grades” and not derived from another segment, I now interpret [*CVHCV] as *CV:CV.

There is a correspondence where ALB-KOW have /CV:CV/ while other languages have /CVCV/. This I formulize as [*CVCHV]. Another correspondence has MAS /CV:CV/ versus /CVC1C1V/ in the other languages. This I also set up as [*CVCHV]. One of these two patterns has “stress” on the first vowel; the other has “stress” on the second vowel.

Across the board /CVC1C1V/ has to be reconstructed *CVC1C1V, but CHA-CHI /CVC1C1V/ versus /CVCV/ in the other languages is also set up as *CVC1C1V. One of these two patterns has “stress” on the first vowel; the other has “stress” on the second vowel.

I assume that stress before a consonant cluster promotes preservation of the cluster and that stress after it allows simplification of the cluster in some daughter languages.

Thus /CVC1C1V/ across the board is set up as /*CV*C1C1V/, and /CVC1C1V/ in only CHA-CHI is set up as /*CVC1C1V*/

ALB-KOW /CV:CV/ corresponding to /CVCV/ elsewhere is set up as /*CVCHV*/, while MAS /CV:CV/ versus /CVC1C1V/ elsewhere is set up as /*CV*CHV/. The *H in these two patterns can be reinterpreted as /*7*/.

There is an across-the-board correspondence /CVCTV/. This I set up as /*CV*CTV/. Where /CVCTV/ in CHA-CHI corresponds to /CVTV/ in other languages, I set up /*CVCTV*/.

There is an across-the-board correspondence /CVSTV/, which I reconstruct as /*CV*STV/. Where CHA-CHI /CVTTV/ corresponds to /CVSTV/ elsewhere, I set up /*CVSTV*/.

There is a correspondence of CHA-CHI-MIK /CVCRV/ to ALB-KOW-MAS /CV:RV/, which I reconstruct *CVCRV, but there is no partially similar correspondence to reconstruct with the same segments but different “stress”; however, the pattern seems most likely to go back to /*CVCRV*/ since the same languages that drop C in /*CVCTV*/ also drop them in /CVCRV/, so I reconstruct /*CVCRV*/.
Booker 2005:268-283 has an extended discussion of VCCV sequences. Her approach to the data discussed here is somewhat different, and she deals with some data not touched on here. In a later version of this study I will discuss in detail my agreements and disagreements with her formulations.

6.1. Aspect Ablaut Grades (AAGs)

The “grades” (Munro & Martin 2005:313)

The process of imposing grades affects the penultimate (next to last) or antepenultimate (third from last) syllable of a verb stem

[1] lengthened grade imperfective aspect [ok TK]
[2] aspirated h-grade imperative recently completed event [ok TK] delarations
[3] nasalized grade added to other grade forms for emphasis
[4] falling tone grade agent nominalizations
[5] geminating falling tone grade verbs describing position number verbs

My own reconstruction of the aspect ablaut grades is outlined below: first are presented the comparisons and reconstrucion; next are presented the phenomena from each language.

TK reconstruction (L [p], H [p], F [p], LN [p]; N [S], G [S])

(S = Southern Maskogian; p = proto-Maskogian)

proto-Maskogian
    Z = zero grade
    L = lengthened grade
    H = aspirated grade
    F = falling grade
    LN = lengthened nasal grade

proto-Southern Maskogian
    N = nasal grade
    G = geminate grade)
Some individual languages have grades that cannot be reconstructed to any earlier node in the family tree.

6.2. Grades found in proto-Maskogian

6.2.1. Z-grade

<table>
<thead>
<tr>
<th>name</th>
<th>structure</th>
<th>function</th>
</tr>
</thead>
<tbody>
<tr>
<td>pMsk</td>
<td>*(CV)CVC(C)V</td>
<td>negative</td>
</tr>
<tr>
<td>Z-grade</td>
<td></td>
<td>irrealis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(future, optative)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>imperative</td>
</tr>
<tr>
<td>CHI</td>
<td></td>
<td>negative</td>
</tr>
<tr>
<td>Munro NLSEUS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHA</td>
<td>Nicklas 1974.73-74</td>
<td>after conjunction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>= ?aorist [TK]</td>
</tr>
<tr>
<td></td>
<td></td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>optative</td>
</tr>
<tr>
<td>ALB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KOW</td>
<td>Kimball 1985.262</td>
<td>2s imperative</td>
</tr>
<tr>
<td>MIK Z-grade</td>
<td>Boynton 1982.89-91</td>
<td>neutral aspect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>present</td>
</tr>
<tr>
<td>MAS</td>
<td>D. Hardy NLSEUS 218</td>
<td>irrealis mood</td>
</tr>
<tr>
<td></td>
<td></td>
<td>infinitive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>most nominaliz’ns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>future tense</td>
</tr>
<tr>
<td></td>
<td></td>
<td>imperatives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>negatives</td>
</tr>
<tr>
<td></td>
<td></td>
<td>statives</td>
</tr>
</tbody>
</table>

Zero-grade does not involve superimposing (= infixing) any complexity on a syllabic nucleus

Grammarians of individual Maskogian languages rarely discuss the functions of the zero grade. As usual, Chahta and Maskoki are better described than the other languages. Is this related to the fact that these two languages have more life in them than their sister languages?
6.2.2. L-grade

pMsk
*L-grade
/CVCV{*:}CV/ imperfective

CHI

CHA
*L-grade
/CVCV{:7}CV/

with negative -o(k)
with complementizers -cha, -na
“do it, then do something else’

ALB
*L-grade
/CVCV{*:}CV/ imperfective

“VERB often;
“keep on VERBing”

KOW
/CVCV{*:}CV/ indicative

MIK

MAS
*lengthening grade
/CVCV{:}CV/ imperfective aspect

subject nominals
ongoing
progressive
counterexpectational
potential
obligational
might/can/will -ii
6.2.3. H-grade

pMsk                      *CVCV{*h}CV
H-grade                   /CVCV{7h}CV/                              immediate;
                        just VERB-ed

?*CVCCV => *CVC(h7)CV

CHI                      H-grade
                        CVCV{*hhV7}CV

CHA                      H-grade
                        CVCV{*h}CV
                        instantaneous;
                        just VERB-ed,
                        VERB quickly

                        CV{hV*}CCV

ALB                      H-grade
                        CVCV{*h}CV
                        imperfective aspect,
                        increase in quantity
                        repetition
                        increase in degree in
                        adjectives
                        (comparative,
                        superlative)

KOW                      H-grade
                        CVCV{*h}CV

MIK                      perfective
                        (CV)CV{*h}CV
                        (CV)CVC(hayh)CV
                        [2 days to 1 year ago]

imperative

MAS                      h-grade
                        CVCV{*h}CV
                        immediacy
                        just done
                        earlier today
                        “perfective”

H                        CVCVC(e^y)CV

ALB-KOW may have innovated away from the original function
6.2.4. F-grade

pMsk                  *CVCV{^:}CV
F-grade                /CVCV{7V}CV/   no uniform function

CHI

CHA

ALB
F-grade                CVCV{^:}CV   negative
agent nominalization
low degree of clause

transitivity

KOW

MIK A-grade              high pitch   perfective
[is this real? from *CV7CV??]   past I
[a few minutes ago]

MAS
falling tone grade      CVCV{^:}CV   perfective
F                     punctual
past

F-grade clearly has a restricted attestation and no clearly definable function. Whether it should be reconstructed to proto-Maskogian may be debated, but it would be hasty to reject it. If Mikosoki “high pitch” grade can come from *(CV)CV7VCV, though it has no vowel length, Mik + Mas support a function perfective. Unfortunately, Mik and Mas are in fairly intimate contact, rendering this mutual support less convincing than if the agreement had been between two languages that have not been in prolonged contact.
6.2.5. LN-grade

+++

pMsk *CVCV{~:&)CV
LN-grade /CVCV{:7n}CV/

**continuative, “keep on VERBing”**

intensive

CHI
HN-grade CVCV{hV*&)CV
[p129,lix] repeated or prolonged action, “keep/kept on”;

iterative

CHA
HN-grade CVCV{hV:*&)CV [p184] iterative

ALB

KOW CVCV{~:}CV intensive

MIK (CV)CV{*(:)&}CV intensive

MAS extra high tone grade CVCV{**::&}CV
continuative intensive “keep on VERBing”

“repeated/iterative” is a CHA-CHI innovation
### 6.3. Grades found only in Southern Maskogian

#### 6.3.1. N-grade

<table>
<thead>
<tr>
<th>Language</th>
<th>N-grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>pSMsk</td>
<td><em>CVCV{</em>&amp;}CV</td>
<td>&quot;durative&quot;</td>
</tr>
<tr>
<td>N-grade</td>
<td>/CVCV{?n}CV/</td>
<td>&quot;*progressive&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&quot;incompletive&quot;</td>
</tr>
<tr>
<td>CHI</td>
<td>CVCV{*}&amp;CV</td>
<td>backgrounded or concurrent action standardless comparatives of adjectives</td>
</tr>
<tr>
<td>ALB</td>
<td>CVCV{*:&amp;}CV</td>
<td>repeated intensity</td>
</tr>
<tr>
<td>KOW</td>
<td>CVCV{*}&amp;CV</td>
<td>n-grade</td>
</tr>
<tr>
<td>MIK</td>
<td>(CV)CV{:&amp;}CV</td>
<td>progressive</td>
</tr>
<tr>
<td>MAS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6.3.2. G-grade

```
pSMsk  *CVC{C}V{*:}CV                   “deintensive”
G-grade /CVC{C}V{:7}CV/                “unbounded”
                                “attenuated”
                                “imperfect(ive)”

CHI
G-grade CVCV{*CCV7}CV                intensive
        deintensive
        finally

CHI
Y-grade CV{*yyV7}CV                   intensive

CHA
G-grade CV{*}C{C2}V{:}CV             finally VERB-ed
                                intensive

CHA
Y-grade CV{*yyV1:}(C)CV              intensive

ALB
G-grade CVC{C}V{^:}CV                imperfect
                                unbounded
                                attenuated
                                inchoative

KOW CVC{C}V{*:}CV                   imperfective

MIK

MAS

“finally” and “intensive” are CHA-CHI innovations
```
6.4. Grade-systems in the individual languages

6.4.1. CHIKASA

Munro, NLSEUS, 128-129
Munro dictionary, lv-lxii

<table>
<thead>
<tr>
<th>name</th>
<th>structure</th>
<th>function</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHI</td>
<td>CVCV{*}&amp;CV</td>
<td>backgrounded or concurrent action standardless</td>
</tr>
<tr>
<td>CHI</td>
<td>CVCV{*yyV7}CV</td>
<td>intensive</td>
</tr>
<tr>
<td>CHI</td>
<td>CVCV{*CCV7}CV</td>
<td>intensive, deintensive finally</td>
</tr>
<tr>
<td>CHI</td>
<td>CVCV{hV*}&amp;CV</td>
<td>repeated or prolonged action</td>
</tr>
<tr>
<td>CHI</td>
<td>CVCV{*hhV7}CV</td>
<td></td>
</tr>
</tbody>
</table>

[p 129]
6.4.2. CHAHTA

Broadwell, NLSEUS, 181-184; Booker dissertation 1980:90

<table>
<thead>
<tr>
<th>name</th>
<th>structure</th>
<th>function</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHA</td>
<td>CVCV{*:}CV</td>
<td>with negative -o(k)</td>
</tr>
<tr>
<td>L-grade</td>
<td></td>
<td>with complementizers -cha, -na</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHA</td>
<td>CV{*}C{C}V{:}CV</td>
<td>finally VERB-ed intensive</td>
</tr>
<tr>
<td>G-grade</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHA</td>
<td>CV{*yyV1:}C(C)V</td>
<td>finally VERB-ed intensive</td>
</tr>
<tr>
<td>Y-grade</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHA</td>
<td>CVCV{*&amp;}CV</td>
<td>duration incompletive</td>
</tr>
<tr>
<td>N-grade</td>
<td></td>
<td>progressive</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHA</td>
<td>CVCV{hV*:&amp;}CV</td>
<td>repeated/iterative</td>
</tr>
<tr>
<td>HN-grade</td>
<td>[p184] on” action</td>
<td>or prolonged/”keep”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHA</td>
<td>CVCV{*h}CV</td>
<td>just VERB-ed, VERB quickly</td>
</tr>
<tr>
<td>H-grade</td>
<td>CV(hV1*)CCV</td>
<td>instantaneous</td>
</tr>
</tbody>
</table>
6.4.3. ALBAMO

Heather Hardy, NSLEUS, 94-95

<table>
<thead>
<tr>
<th>Name</th>
<th>Structure</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-grade</td>
<td>CVCV[^:}CV</td>
<td>negative agent nominalization low degree of clause transitivity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L-grade</td>
<td>CVCV[^:}CV</td>
<td>imperfective aspect, “still”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H-grade</td>
<td>CVCV[^:}CV</td>
<td>imperfective aspect, (comparative, superlative)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G-grade</td>
<td>CVCV[^C)}CV</td>
<td>imperfective aspect unboundedness attenuation inchoativeness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N-grade</td>
<td>CVCV[^:}CV</td>
<td>markedly repeated activity intensity of activity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 6.4.4. KOWASATI

Kimball 1991:294-313

<table>
<thead>
<tr>
<th>name</th>
<th>structure</th>
<th>function</th>
</tr>
</thead>
<tbody>
<tr>
<td>KOW</td>
<td>CVCV{*:}CV</td>
<td>indicative</td>
</tr>
<tr>
<td>KOW</td>
<td>CVC{C}V{*:}CV</td>
<td>imperfective</td>
</tr>
<tr>
<td>KOW</td>
<td>CVCV{*}CV</td>
<td>aorist</td>
</tr>
<tr>
<td>KOW</td>
<td>CVCV{*h}CV</td>
<td>h-grade</td>
</tr>
<tr>
<td>KOW</td>
<td>CVCV{*&amp;}CV</td>
<td>n-grade</td>
</tr>
<tr>
<td>KOW</td>
<td>CVCV{~:}CV</td>
<td>intensive</td>
</tr>
</tbody>
</table>
### 6.4.5. MIKOSOKI [analysis in progress]

Derrick-Mescua 1980.xx-xx; Boynton 1982.88-112

<table>
<thead>
<tr>
<th>name</th>
<th>structure</th>
<th>function</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIK Z-grade</td>
<td>no infix;</td>
<td>neutral aspect</td>
</tr>
<tr>
<td></td>
<td>mid pitch</td>
<td>present</td>
</tr>
<tr>
<td>MIK A-grade</td>
<td>high pitch</td>
<td>perfective</td>
</tr>
<tr>
<td></td>
<td>[is this real? from *CV7CV??]</td>
<td>[a few minutes ago]</td>
</tr>
<tr>
<td>MIK N-grade</td>
<td>(CV)CV{:&amp;}CV</td>
<td>progressive intensive</td>
</tr>
<tr>
<td>MIK LN-grade</td>
<td>(CV)CV{*(::)&amp;}CV</td>
<td>intensive</td>
</tr>
<tr>
<td>MIK H-grade</td>
<td>(CV)CV{h}CV</td>
<td>perfective past III</td>
</tr>
<tr>
<td></td>
<td>(CV)CVC(hayh)CV</td>
<td>[2 days to one year ago]</td>
</tr>
</tbody>
</table>
### 6.4.6. MASKOKI

Donald Hardy, NLSEUS, 218-220
Donald Hardy dissertation 1988.135-149

<table>
<thead>
<tr>
<th>name</th>
<th>structure</th>
<th>function</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAS</td>
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<td></td>
</tr>
<tr>
<td>zero grade</td>
<td>CVCVCV</td>
<td>irrealis:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>infinitive</td>
</tr>
<tr>
<td></td>
<td></td>
<td>future</td>
</tr>
<tr>
<td></td>
<td></td>
<td>imperative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hortative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-ii static</td>
</tr>
<tr>
<td></td>
<td></td>
<td>most</td>
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<tr>
<td>nominalizations</td>
<td></td>
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<tr>
<td>MAS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lengthening grade</td>
<td>CVCV{::}CV</td>
<td>imperfective aspect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>subject nominals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ongoing</td>
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<tr>
<td></td>
<td></td>
<td>countereventual</td>
</tr>
<tr>
<td></td>
<td></td>
<td>potential</td>
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<tr>
<td></td>
<td></td>
<td>obligational</td>
</tr>
<tr>
<td></td>
<td></td>
<td>might/can/will</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-ii</td>
</tr>
<tr>
<td>MAS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>falling tone grade</td>
<td>CVCV{^::}CV</td>
<td>perfective aspect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>punctual</td>
</tr>
<tr>
<td>MAS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>extra high tone grade</td>
<td>CVCV{**::&amp;}CV</td>
<td>markedly continuative aspect</td>
</tr>
<tr>
<td></td>
<td></td>
<td>intensification</td>
</tr>
<tr>
<td></td>
<td></td>
<td>+ii static</td>
</tr>
<tr>
<td>MAS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>h-grade</td>
<td>CVCV{*h}CV</td>
<td>immediacy</td>
</tr>
<tr>
<td>H</td>
<td>CVCCVC{e^y}CV</td>
<td>just done</td>
</tr>
</tbody>
</table>
6.5. Prehistory of the aspect ablaut grades (AAGs)

Chahta and Chikasa show that proto-Maskogian had *7 in word-final position and intervocalically in the last two syllables of a word.

Chikasa also shows that *7 occurred in some preconsonantal environments.

Maskogi data cited by Haas (Haas 19xx.xxx) [I HAVE TO TRACK THIS DOWN] show that root-initial prevocalic [7] is sometimes present in non-initial roots in compounds, suggesting either that [7] is phonemic or that there is a word-boundary inside of what are otherwise considered to be compounds. The Maskogi texts posted by Jack Martin and read by Margaret McKane Mauldin at <http://www.wm.edu/linguistics/creek/> regularly have word-initial [7] before orthographically initial vowels.

Chahta has word-initial glottal stop before orthographically initial vowels. (Leroy Sealy at <http://www.nativevillage.org/Libraries/Language%20Libraries.htm>)

Apart from word-initial V, and V1V2 diphthongs, there are no V-initial medial syllables in proto-Maskogian -- that is, all syllables (except initial syllables and V1V2 diphthongs) must begin CV -- suggesting that apparent V-initial forms were probably 7-initial. The step has not yet been taken to spell all proto-Maskogian forms with some initial consonant -- including *7 -- but it is the next logical step.

The Chi, Cha, and Mas facts suggest that [7] may have had a wider distribution in proto-Maskogian or pre-Maskogian.

As long as /7/ is not currently found in Chi-Cha intervocalically or preconsonantally after a long vowel - *: (vowel length), *n, and *7 could be manipulated to account for length, tone, and nasalization in the AAGs.
The following recapitulates my structural and phonetic reconstruction of the Maskogian “ablaut grades”

\[
\begin{align*}
\text{pMsk} \quad & *\text{CVCV}{*:}CV = /\text{CVCV}{:7}CV/ \\
\text{L-grade} \quad & \\
\text{pMsk} \quad & *\text{CVCV}{:h}CV = /\text{CVCV}{7h}CV/ \\
\text{H-grade} \quad & \\
\text{pMsk} \quad & *\text{CVCV}{^:\text{V}}CV = /\text{CVCV}{7V}CV/ \\
\text{F-grade} \quad & \\
\text{pMsk} \quad & *\text{CVCV}{~:\&}CV = /\text{CVCV}{:7n}CV/ \\
\text{LN-grade} \quad & \\
\text{pSMsk} \quad & *\text{CVCV}{:*}CV = /\text{CVCV}{:7}CV/ \\
\text{N-grade} \quad & \\
\text{pSMsk} \quad & *\text{CVCV}{*:}CV = /\text{CVCV}{:7n}CV/ \\
\text{G-grade} \quad & \\
\end{align*}
\]

Vowel nasality is accounted for by preconsonantal *\text{n}.

High and extra-high/rising tone are accounted for by preconsonantal *\text{7} combined with *: (vowel length) or *h.

Falling tone with length is accounted for by *\text{7V}.

*\text{7} accounts for high pitch.
7.1. Phonotactics of proto-Maskogian

No syllable begins with a vowel, but there are VV syllables of the shapes ai, oi, ia, io, ao, oa (the last 2 are rare). These always get simplified to a single vowel, in regular ways, in the daughter languages. The reflexes of these vowel clusters give no evidence that either vowel was desyllabified/nonsyllabic in the protolanguage, but the reflexes in the daughter languages do suggest that V1V2 sequences were homosyllabic.

Final syllables (H = /7/ or /h/)

$CV(V2)(H)#$

I am not sure whether there is any clear evidence for *: in final syllables

nonfinal syllables (C = onset; (C) = coda; V:7nh = nucleus)

$CV(V2)(7)(n)(h)(C)$

possible nuclei

V
V7
Vn
Vh
V: = VH
V:7 (L-grade, G-grade)
V:n* [is this excluded?]
V:h* [is this excluded?]
V7n (N-grade)
V7h (H-grade)
V7V1 (F-grade)
V:7n (LN-grade)
V:7nh? [this might be (underlyingly) possible as LN-grade of CVhCV]
V7nh? [this might be (underlyingly) possible as N-grade of CVhCV or H-grade of CVnCV]
V:7h? [this might be (underlyingly) possible as L/G-grade of CVhCV]

C is any consonant, especially *7

There may be some restrictions on (C), but I doubt it for pMsk.
Some word-final grammatical morphemes, such as *-t ‘subject’, *-n ‘object’, which may in fact be enclitics, end in a consonant. No lexical item ends in a consonant (other than a laryngeal). Some verb roots end in consonants, and these, along with some vowel-final verb roots, must occur with either -ka ‘less active/intransitive’ or -li ‘more active/transitive’ to function as lexical verbs.

I have set up vowel clusters mainly to account for the regular discrepancies between stem-final vowels in nouns across languages of the family. (Verb stems can not end a morphological/syntactic word: some inflexional suffixes are always present). But these discrepancies also occur in non-final syllables, though not frequently.

In general, for these reconstructed vowel clusters CHA and CHI preserve the first vowel and the other languages preserve the second vowel. These vowel clusters must be considered as forming single syllables, and are therefore diphthongs. Since every diphthong contains at least one high vowel, the non-syllabic part of a diphthong can be attributed to a high vowel. When the clusters io or oi are at issue, non-syllabicity may be attributed to /i/, since /i/ is arguably less sonorous than /o/. These vowel clusters are probably not to be thought of as equivalent to such sequences as /ay/, /oy/, /aw/, etc., which have been reconstructed by Booker. It remains to be determined whether such sequences as *CayCV as reconstructed by Booker might not better be analyzed as *CayiCV. [see examples 3-8]

In any case, the nucleus of a syllable can be a 2-vowel sequence, a diphthong.

7.2. Summary of results regarding phonotactics

The CVCV disyllabic couplet has the following maximum formula

\[
CV(:/V) (7) (h) (N) (C) CV(V) (H).
\]

VV is a cluster of different vowels (of which one is necessarily /i/ or /o/, since there are only 3 vowels).

V: could be analyzed as a geminate vowel.
8.1. The contributions of this study

I have shown that

[1] glottal stop *7 should be reconstructed, including word-initially (I have not yet gotten around to respelling vowel-initial words with initial 7);

[2] certain discrepant vowel correspondences should be reconstructed as V1V2 clusters;

[3] some stem-final V1V2 clusters are followed by *7 or *h;

[4] vowel length should be reconstructed;

[5] *VC7V sequences should be reconstructed;

[6] the “grades” -- with pitch contrasts, vowel length, and vowel nasality -- can be accounted for segmentally by establishing the correct phonotactic pattern for syllabic nuclei;

[7] an accentual feature informally labelled “stress” can be set up that accounts for a variety of *VC(C)V developments.

8.2. Methodological lessons

In languages with phonetic glottal stop, be suspicious of analyses that do not recognize the phonemic status and ample distribution of glottal stop!

Pitch phenomena typically have their origin in consonantal segments and features.
8.3. Further vistas

I plan to learn more about the derivational patterns, the uses of inflected forms of verbs, and the syntactic patterns of Maskogian languages generally. Whether this will lead to any novel hypotheses remains to be seen.

Most likely some of the solutions I offer in the present study are subject to refinement, and hopefully that will be achieved with time.

There are some minor details regarding consonant clusters not yet dealt with; these will be addressed in a later version of this study once all the available Mikosoki data have been entered in the etymological database.

9. Background to the research reported here

After having found a number of Meso-American loans in Southeastern languages, I decided to look more deeply into Maskogian cultural vocabulary. A ms article by Aaron Broadwell (1994) discussed cultural and environmental terms found in a collection of Maskogian cognate sets assembled by Pam Munro and some of her students at UCLA.

In the dictionaries I have at hand I found equivalents for most of the terms discussed by Broadwell. The Maskogianist group led by Pam Munro has been assembling a set of Maskogian cognate sets since the 1990s. Broadwell suggested I contact Pam Munro and ask for a copy of the cognate sets, but she said it wasn’t ready for distribution outside the group. So I decided to create my own cognate sets. To the cultural and biological terms I added the items in Booker’s comparative phonology article. Then I entered all the glosses of TK’s high density cognate finder [Kaufman 1973 ms]. I proceeded to fill those entries in from Maskoki, Chikasa, and Albamo; STILL TO COMPLETE ARE CHAHTA AND KOWASATI. Work on entering Mikosoki data is ongoing because I have to extract the examples from the two dissertations on Mikosoki (Derrick-Mescua 1980 and Boynton 1982; there is no dictionary of Mikosoki, not even a long vocabulary or text collection). Cognates within the sets of synonyms are marked red for proto-Maskogian or proto-Southern Maskogian; blue for intra-group cognates, and green for the second of two proto-Maskogian or proto-Southern Maskogian cognates.

I have been working on my own model of Maskogian comparative phonology. The elements I am playing with are vowel length, glottal stop, and accent. The rules I am working out account not only for segments but also the pitch patterns of the “aspect grades”
On May 21, 2005, I discovered a set of file slips that I had made back in the 60s containing cognate sets extracted from comparative Maskogian articles by Mary Haas.

Haas 1956 on Nahchi cites 69 etymologies
Haas e cites 18 etymologies
Haas f has 29 etymologies
Haas g has 13 etymologies
Haas LCP has 118 Maskogian etymologies

Altogether, there are fewer than 10 Haas etymologies that neither Booker had reported nor I myself had found before my coming across and entering the Haas data. Booker seems not to have reported many more cognate sets than what Haas did, though not all of Booker’s sets are the same ones as Haas’s [most are, though].

When I have the entries filled out, there should be on the order of 1100 sets. Their initial state will be like the forty-buck Buck, except that the semantic control on the “synonyms” will not be sure until I consult the Indian to English parts of the several dictionaries.

Then I will extract the real cognate sets, which should be on the order of 750 items. More than half of these will be limited to Southern Maskogian, that is, not containing a Maskoki form.
10. Person Markers [which are clitics]

I suspect that for first plural there was an inclusive : exclusive contrast;  
For the patient set, one was *pi+ and the other was *po+

person markers

possessors and participants

```
pM   CHA   CHI   ALB   KOW   MIK   MAS
```

“alienable” and dative

1 *a+m+  am-  a-m-  sa-m-  cha-m-  am-  am-  a-m-  
[though /am+/ is viewed by many as a simplification of /*tsam+/, most likely ALB cha-m- and CHI sa-m+  
were created on the analogy of /cha+/ and /sa+/

2 *chi+m+  chim-  chi-m-  chi-m-  chim-  chim-  chi-m- 

3 *im+  im-  im-  im-  im-  im-  im-  
[Haas f#11 *im-  /_V ~ *in-  /_C  ‘to/for him/her/it’; Apalachi im- ~ in-

4 *po+m+  pim-  po-m-  po-m-  kom-  pom-  po-m-  
[Haas ‘to/for us’; Apalachi pim- ~ pin-

4’  hapo-m-

5 *hachi+m+  hachim-  hachi-m-  hachi-m-  hachim-   
[Haas f#12 *hac^im-  /_V ~ *hac^in-  /_C  ‘to/for you (pl)’; Apalachi hachin- <hachin->]
"Inalienable" and patient

1 *tsa+ ~ atsa+ sa− ~ ha− ~ si− sa− cha− cha− cha−, ach− cha−
2 *chi+ ~ ichi+ chi− chi− chi− chi−, ich− chi−
3 0
4 *po+ ~ ipo+ pi− po− po− ko− po−, ipo− po−
   [Haas ‘first person plural object and possessor’; Apalachi pi−]
4’ hapi− hapo−
5 *hachi+ hachi− hachi− hachi− hachi− chi−
In MAS and MIK the agent set has been entirely infected with the forms resulting from combining agent markers with the auxiliary {ka}; this has happened for some classes of verbs in ALB–KOW and not at all in CHA–CHI. If the aux {ka} mainly expressed non–active valency, it is not clear why it would have occurred with any prevailing frequency with agent subject markers. This is a puzzlement.
11. Works cited and used

* = not seen

IJAL = International Journal of American Linguistics


Choctaw Nation: see Anonymous; see Cogswell

Creek National Council: see Watson


Haas, Mary R. 1940b. “Creek Inter-town Relationships”, *American Anthropologist, n.s.* 42.479-489.


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Haas, Mary R. 1944. “Men’s and Women’s Speech in Koasati”, *Language* 20.142-149.


Hardy, Donald E. 1994. “Middle Voice in Creek”, IJAL 60.39-68.

Hardy, Donald E. 2005. “Creek”. NLSEUS 200-245.


Kaufman, Terrence. 1973 ms. Kaufman’s Basic Concept List on Historical Principles: Being a Basic Vocabulary Questionnaire, Lexicostatistic Diagnostic List, and High-Density Cognate Set Assembler. 35 pp. [704 entries, several with subentries]


THE END