Tsimshian iterative–aorist ablaut

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Tsimshian lexica manifest quantitative ablaut of the pre-Indo-European type. Tsimshian ablaut is phonologically relatable to the pre-Indo-European ablaut that distinguishes present tense (e-grade) and aorist aspect (zero-grade): Tsimshian ablaut distinguishes iterative aspect and plural number (full-grade) from aorist aspect and singular number (zero-grade). Iterative aspect and plural number are intrinsically related, as are aorist aspect and singular number. These equivalences have morphological status in Tsimshian grammar. Iterative is thought to be the source of present in language in general; likewise aorist is thought to be the source of past. It is further thought that pre-Indo-European was at some point in the past a language with aspect but not tense. It is therefore a reasonable hypothesis that Tsimshian iterative-plural and aorist-singular are functionally and formally relatable to Indo-European present and aorist respectively.

1 overview

The Tsimshian (TS) languages employ ablaut, vowel gradation, as a means to distinguish iterative-plural from punctual-aorist-singular in both verbs and nouns. The iterative-plural forms have full-grade; the punctual-aorist-singular forms have zero-grade. The Tsimshian full-grade and zero-grade ablaut forms are phonologically concordant with those found in Gothic, Latin, Greek, Sanskrit, and other Indo-European languages, the Tsimshian forms showing the same range of sonant and laryngeal colourings in both full- and zero-grade. Since the source of Indo-European present tense is thought to be iterative aspect, and the source of undetermined past tense is thought to be static, i.e., [-iterative] aspect, and since the ancient Indo-European (pre-IE) ablaut system used e-vocalism in present tense in contrast to zero-grade in aorist and verbal adjectives, the Tsimshian ablaut is relatable both in form and function to the Indo-European.

<table>
<thead>
<tr>
<th>pre-IE</th>
<th>present e-vocalism</th>
<th>aorist zero-grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS</td>
<td>full-grade</td>
<td>zero-grade</td>
</tr>
<tr>
<td></td>
<td>iterative</td>
<td>aorist</td>
</tr>
</tbody>
</table>
In a pre-Indo-European context Tsimshian ablaut is extremely conservative both in form and function.

2  the aspect sources of tense

There is an inherent semantic connection between iterative aspect and plural number. This relationship is especially salient in languages, such as the Tsimshian, which inflect verbs to show the number of the absolutive argument. Sm'algyax (Coast Tsimshian) reduplication and lengthened-grade ablaut both indicate plural number, plural agreement, and iterative action, thus giving morphological status to the semantic identity: iterative-plural. Simple, i.e., non-reduplicated, and reduced-grade stem variants indicate not only singular and singular agreement, but static, i.e. [-iterative] aspect and aorist, i.e., [-perfect] past. It is not clear that Sm'algyax has a future tense, but bilingual Sm'algyax-English speakers use the English future tense with a desiderative meaning. These facts support Kuryłowicz's theory (1964:10-36; 1973:63-92) as to the aspect origins of tense systems: iterative > present, static > aorist > past, desiderative > future. In terms of Kuryłowicz's developmental sequences, Tsimshian is consistently conservative.

Morphological internal reconstruction leads to the conclusion that at some stage Pre-Indo-European had an aspecral system without tense (Szemerényi 1980:301ff, Fox 1995:188ff).

3  Tsimshian iterative-aorist ablaut

The Proto-Tsimshian default vowel is *a, a genetic descendant or systematic correspondent of pre-IE *e (Dunn 2002). Tsimshian long vowels are generally the result of vowel+ laryngeal, i.e., < *ah (Boas 1911:288f, 1912:68). Tsimshian short vowels are zero- or reduced-grade, taking their colouring from a sonant or laryngeal in the Indo-European manner:

\[
\begin{align*}
\text{ii} & \quad < \ast H_1 \quad \text{i} & \quad < \ast H_1 \quad \ast H_1 = \text{PIE} \ast y \\
\text{ee} & \quad < \ast ah_1 \quad \text{e} & \quad < \ast H_1 \quad \ast H_1 = \text{PIE} \ast e \text{ or } \ast \theta_1 \\
\text{aa} & \quad < \ast ah_2 \quad \text{a} & \quad < \ast H_2 \quad \ast H_2 = \text{PIE} \ast A \text{ or } \ast \theta_2 \\
\text{oo} & \quad < \ast ah_3 \quad \text{o} & \quad < \ast H_3 \quad \ast H_3 = \text{PIE} \ast Q \text{ or } \ast \theta_3 \\
\text{uu} & \quad < \ast ah_u \quad \text{u} & \quad < \ast H_u \quad \ast H_u = \text{PIE} \ast \theta
\end{align*}
\]

In addition to colouring the vowel, the Proto-Tsimshian *H element usually survives 1) as a glottal catch (ʔ or h) or glide (ʔ or ʔ) which follows the vowel; 2), as a glottal catch (ʔ or h) or glide (ʔ or ʔ) which spreads to syllable onset in a process not unrelated to IE Schwebeablaut, 3) as falling tone, represented by [âː], etc. (Dunn 1978 [1995]:vi, 1979a [1995]:3f, 2002; see also Sasama 2001:13-26, Tarpent 1992), or, 4) as some combination of the these. Tsimshian manifests quantitative ablaut in verbs/adjectives to
distinguish between iterative aspect–plural agreement (with absolutive) and punctual aspect–aorist tense–singular agreement. The iterative–plural forms have lengthened-grade, i.e., *aH, vocalism. The static–past–singular forms have zero-grade, i.e., *H vocalism. If the source of present tense in Indo-European is iterative aspect, and the source of aorist/past is static aspect as suggested by Kuryłowicz (op. cit.), the Tsimshian and Indo-European verbal/adjectival ablaut systems are parallel in function. They are parallel in form as well: primitive IE present stems have e-vocalism (full grade) while aorist (static past) and verbal adjectives have zero-grade (Beekes 1995:228,235,250).

The Tsimshian quantitative ablaut is well-documented in Boas (1911, 1912); Dunn (1978 [1995], 1979a [1995], 1979b; Tarpent 1983, 1992; Sasama 1995a, 1995b, 1998, 2001; Thompson 1984 and in the recent, community-generated dictionaries of the Sm’algyax Authority (2001) and the Wilp Wilxo’oskwzl Nisga’a (2001). The Tsimshian iterative–static ablaut extends to nouns as well. This paper illustrates the ablaut system with citations from Nisga’a (Wilp Wilxo’oskwzl 2001) and Sm’algyax (Dunn 1978 [1995]), representing two different branches of the Tsimshian family.

Tsimshian ablaut occurs both with and without reduplication. There are three basic types of construction: 1) stem ablaut without reduplication, 2) reduplication with lengthened-grade in the first duplicate syllable, 3) reduplication with lengthened-grade in the second duplicate syllable. Table 1 summarises the attested syllable nuclei for each type.

<table>
<thead>
<tr>
<th></th>
<th>pre-IE (present)</th>
<th>*eE</th>
<th>*eA</th>
<th>*eO</th>
<th>*eU</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS (iterative)</td>
<td>*eH1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>type 1</td>
<td>ii, uu</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>type 2</td>
<td>ii, ii</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>type 3</td>
<td>ii, ii</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>pre-IE (aorist)</th>
<th>*E</th>
<th>*A</th>
<th>*O</th>
<th>*U</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS (aorist)</td>
<td>*H1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>type 1</td>
<td>i, a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>type 2</td>
<td>i, e, a</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>type 3</td>
<td>a, s</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Table 1. TS attested ablaut forms with pre-IE equivalents.
iterative–aorist ablaut without reduplication

The *aH₁ ~*H₁ ablaut without reduplication (Table 2) is most common in Nisga’a, where it may still be productive. It is, however, archaic and rare in Sm’algyax.

<table>
<thead>
<tr>
<th>pre-IE</th>
<th>TS</th>
<th>iterative–plural</th>
<th>static–aorist–singular</th>
</tr>
</thead>
<tbody>
<tr>
<td>present</td>
<td>e-vocalism</td>
<td>*eH₁ &gt; i₁, wuW</td>
<td>iterative-plural</td>
</tr>
<tr>
<td>aorist</td>
<td>zero-grade</td>
<td>*i₁ &gt; i, w, a</td>
<td>static–aorist–singular</td>
</tr>
</tbody>
</table>

Table 2. *aH₁ ~*H₁ ablaut in stems without reduplication.

bii’l < *paH₁ l, bi’l < *pH₁ l

bii’ts < *paH₁ ts, bi’ts < *pH₁ ts

gii < *kaH₁ i, gi < *kH₁ i
jaga-gii-ła’l, jaga-gi-la’l ‘watch (someone/thing) cross (a road/river)’ (Nisga’a, Wilp Wilx’oskwhl 2001, p. 87)

gii’nam < *kaH₁ nam, gi’nam < *kH₁ nam
gii’nam, gi’nam ‘give’ (Nisga’a, Wilp Wilx’oskwhl 2001, p. 43)

guuu < *kauH₁ u, gah < *kH₁ u
ii -guuu, ii -gah ‘halibut hook’ (Sm’algyax, Dunn 1978 [1995], entry 2240)

gwii... < *kaH₁... gwi... < *kH₁...
gwii-nee-x-kw, gwi-nee-x-kw ‘be cold’ (Nisga’a, Wilp Wilx’oskwhl 2001, p. 63)
lax-gwii-de-k, gah-t-k ‘to be cold, have a cold’ (Sm’algyax, Dunn 1978 [1995], entry 1106)

gwiila < *kaH₁ la, gwila < *kH₁ la
gwiila, gwila ‘blankets’ (Nisga’a, Wilp Wilx’oskwhl 2001, p. 63)
gwiila-t’in, gwila-t’in ‘to cover’ (Nisga’a, Wilp Wilx’oskwhl 2001, p. 63)

gwii’na < *kaH₁ na, gwii’na < *kH₁ na
gwils-gwii’na, gwilks-gwii’na *ask for (something) back’ (Nisga’a, Wilp Wilx’oskwhl 2001, p. 60)
gwiix < *kʷaH₁x, gwix < *kʷH₁x
  gwix-wok, gwix-wok 'sleep a lot' (Nisga’a, Wilp Wilxo’oskwhl 2001, p. 64)

kw’ii... < *kʷaH₁..., kw’i... < *kʷH₁...
 kw’iiniiskw, kw’iiniiskw ‘to bend over’ (Nisga’a, Wilp Wilxo’oskwhl 2001, p. 108)

‘nii’ < *nau₁, ‘na < *nH₁
 gan-‘nii’-lu-gwi, ga-‘na-gwi ‘length’ (Nisga’a, Wilp Wilxo’oskwhl 2001, p. 52)

There is only one attested example of *aH₁~*H₁ ablaut without reduplication (Table 3).

<table>
<thead>
<tr>
<th></th>
<th>pre-IE</th>
<th>TS</th>
</tr>
</thead>
<tbody>
<tr>
<td>present</td>
<td>e-vocalism *eθ₁ = *aH₁ &gt; ee, êê, aa</td>
<td>iterative-plural</td>
</tr>
<tr>
<td>aorist</td>
<td>zero-grade *θ₁ = *H₁ &gt; a</td>
<td>static-aorist-singular</td>
</tr>
</tbody>
</table>

Table 3. *aH₁~*H₁ ablaut without reduplication.

haana’k < *hau₂nH₂q, haana’k < *hH₂nH₂q
 haana’k, hana’k ‘woman’ (Nisga’a, Wilp Wilxo’oskwhl 2001, p. 74)

The *aH₂~*H₂ ablaut in stems without reduplication (Table 4) and the *aH₂~*H₂ ablaut in stems without reduplication (Table 5) are also rare, one example of each. There are no attested examples of *aH₂~*H₂ ablaut in stems without reduplication.

<table>
<thead>
<tr>
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<th>pre-IE</th>
<th>TS</th>
</tr>
</thead>
<tbody>
<tr>
<td>present</td>
<td>e-vocalism *eθ₂ = *aH₂ &gt; aa</td>
<td>iterative-plural</td>
</tr>
<tr>
<td>aorist</td>
<td>zero-grade *θ₂ = *H₂ &gt; a</td>
<td>static-aorist-singular</td>
</tr>
</tbody>
</table>

Table 4. *aH₂~*H₂ ablaut without reduplication

<table>
<thead>
<tr>
<th></th>
<th>pre-IE</th>
<th>TS</th>
</tr>
</thead>
<tbody>
<tr>
<td>present</td>
<td>e-vocalism *eû = *aH₃ &gt; ūû</td>
<td>iterative-plural</td>
</tr>
<tr>
<td>aorist</td>
<td>*û = *H₃ &gt; θ</td>
<td>static-aorist-singular</td>
</tr>
</tbody>
</table>

Table 5. *aH₃~*H₃ ablaut without reduplication.
5 reduplication with full-grade in the first duplicate syllable

Reduplicated forms with lengthened-grade in the first duplicate syllable are archaic; the current productive form for reduplication, at least in Sm'alyax, has a reduced vowel in the first duplicate syllable. More recent stress assignment has resulted in distortions in the punctual-aorist (simple) inflection; the reduplicated (complex) forms manifest the more archaic zero-grade ablaut in the second duplicate syllable. This section accordingly compares the first and second syllables in the reduplicated forms, taking the second syllable as an archaic, relic form of the punctual-aorist.

The *aH₂ ablaut in reduplicated forms, where *aH occurs in the first duplicate syllable and *H in the second (Table 6), though not common, do occur in both Nisga’a and Sm’alyax.

<table>
<thead>
<tr>
<th>pre-IE</th>
<th>TS</th>
</tr>
</thead>
<tbody>
<tr>
<td>present</td>
<td>e-vocalism</td>
</tr>
<tr>
<td>aorist</td>
<td>zero-grade</td>
</tr>
</tbody>
</table>

Table 6. *aH₁ in the first duplicate syllable

dii < *taH₁, di < *uH₁,
lu-xw-dii-di-x, xw-da-x ‘to be hungry’ (Nisga’a, Wilp Wilx̱oskwhl 2001, p. 189)
lə-kw-dii-di, kw-dii ‘to be hungry’ (Sm’alyax, Dunn 1978 [1995], entry 1010)

hlii < *tH₁, hli < *H₁,
galksi-kw-hlii-hli-k, galksi-kw-hla-k ‘(garment) to be inside out’ (Nisga’a, Wilp Wilx̱oskwhl 2001, p. 49)

hlii < *tH₁, hli < *H₁,
̱įl < *tH₁, ̱i < *H₁-
hlii-hli-k, hla-k ‘to bend’ (Nisga’a, Wilp Wilx̱oskwhl 2001, p. 82)

̱iιi-ιe-k, ̱e-k ‘to bend’ (Sm’alyax, Dunn 1978 [1995] entry 1279)
nii < *nH₁, ni < *nH₁,
ga-nii-ni-ks-kw, na-ks ‘spouse’ (Nisga’a, Wilp Wilx̱oskwhl 2001, p. 52)

plii, plii < *pH₁, hli, p̱i < *pH₁,
phlii-hli-k-skw, pla-k-skw ‘to be tired’ (Nisga’a, Wilp Wilx̱oskwhl 2001, p. 142)
plii-plə-k-sk, plə-k-sk ‘to be exhausted’ (Sm’algyax, Dunn 1978 [1995] entry 1601)

There is but one example of *aH₁ ~ *H₁ ablaut with lengthened-grade in the first duplicate syllable (Table 7).

<table>
<thead>
<tr>
<th></th>
<th>pre-IE</th>
<th>TS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>present</td>
<td>e-vocalism *e₁ = *aH₁ &gt; ee</td>
<td>iterative-plural</td>
<td></td>
</tr>
<tr>
<td>aorist</td>
<td>zero-grade *e₁ = *H₁ &gt; o</td>
<td>static-aorist-singular</td>
<td></td>
</tr>
</tbody>
</table>

Table 7. *aH₁ in the first duplicate syllable

see < *saH₁, sa < *sh₁

see-sə-ʔ, sə-ʔ ‘to be sharp’ (Sm’algyax, Dunn 1978 [1995], entry 1637)

Note also (below) sək-saa-sək ‘thornbush’ (Sm’algyax, Dunn 1978 [1995], entry 1637)

The *aH₂ ~ *H₂ ablaut with lengthened grade in the first duplicate syllable (Table 8) is fairly common in Nisga’a but somewhat rare in Sm’algyax.

<table>
<thead>
<tr>
<th></th>
<th>pre-IE</th>
<th>TS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>present</td>
<td>e-vocalism *e₂ = *aH₂ &gt; aa,a’</td>
<td>iterative-plural</td>
<td></td>
</tr>
<tr>
<td>aorist</td>
<td>zero-grade *e₂ = *H₂ &gt; i,e,a,∅</td>
<td>static-aorist-singular</td>
<td></td>
</tr>
</tbody>
</table>

Table 8. *aH₂ in first duplicate syllable.

baa < *paH₂, ba < *pH₂

gə-baa-bə-kəkw, gə-bə-kəkw ‘struggle wildly’ (Nisga’a, Wilp Wilpx’oskwæl 2001, p. 45)

daa < *taH₂, da < *tH₂

axgəm-daa-da-x-kw, axgəm-da-x-kw ‘unclean’ (Nisga’a, Wilp Wilpx’oskwæl 2001, p. 15)

daas < *taH₂, daas < *tH₂

ksi-kws-daa-daks, kxi-kws-daks ‘to leave (a place)’ (Nisga’a, Wilp Wilpx’oskwæl 2001, p. 94)
kws-daa-daks, kws-daks ‘to leave, abandon’ (Nisga’a, Wilp Wilpx’oskwæl 2001, p. 106)

hlaa < *taH₂, *hla < *tH₂

hi-hlaa-hla-k, hi-hla-k ‘break’ Nisga’a, Wilp Wilpx’oskwæl 2001, p. 74

(see also hløk, hillhlik ‘bend’)

laa < *laH₂, la < *lH₂
laa-la-₃, la-₃ 'fish' (Nisga'a, Wilp Wilxo'oskwhl 2001, p. 111)

laa < *laH₂, la < *lH₂
laa-la-₃, la-₃ 'to bathe' (Nisga'a, Wilp Wilxo'oskwhl 2001, p. 112)
galdim-laa-la-₃, galdim-la-₃ 'bathtub' (Nisga'a, Wilp Wilxo'oskwhl 2001, p. 48)

laa < *laH₂, hla < *lH₂
ks-laa-hla-₃, ks-la-₃ 'kick' (Nisga'a, Wilp Wilxo'oskwhl 2001, p. 96)

naa < *naH₂, na < *nH₂
naa-na-₃, na-₃ 'snowshoe' (Nisga'a, Wilp Wilxo'oskwhl 2001, p. 134)

naa < *naH₂, na < *nH₂
naa-na-₃, na-₃ 'a dress' (Nisga'a, Wilp Wilxo'oskwhl 2001, p. 134)

naa7, naʔ鸥 < *naH₂, ne < *nH₂
kw11-naaʔ-ne-₃-t 'to break into pieces' (Sm'algyax, Dunn 1978 [1995], entry 1020)
kw11-naʔ-e-ne-₃ 'to be broken' (Sm'algyax, Dunn 1978 [1995], entry 1020)

paa < *paH₂, p₁ < *pH₂
χ-paa-₃-i-₃, χ-paa-₃ 'to fold' (Sm'algyax, Dunn 1978 [1995], entry 2159)

saa < *saH₁, s₉ < *sH₁
s₉-saa-s₉ 'thornbush' (Sm'algyax, Dunn 1978 [1995], entry 1637)

Note also (above) see-s₉, s₉-q 'to be sharp' (Sm'algyax, Dunn 1978 [1995], entry 1637)
ts’aa < *tsaHs, ts’a < *tsHs
Ga-ts’aa-ts’a-χ, ts’a-q ‘nose’ (Sm’algyax, Dunn 1978 [1995], entry 1912)

wa? < *wuHs, we < *wuHs
wá?weHχ, wá?a ‘to bury, dig’ (Sm’algyax, Dunn 1978 [1995], entry 2015)

The *auHs ~ *Hs ablaut (Table 9) is fairly common in Nisga’a, but quite rare in Sm’algyax.

<table>
<thead>
<tr>
<th></th>
<th>pre-IE</th>
<th>TS</th>
</tr>
</thead>
<tbody>
<tr>
<td>present e-vocalism</td>
<td>eH3 = *auHs &gt; oo</td>
<td></td>
</tr>
<tr>
<td>aorist zero-grade</td>
<td>o3 = *auHs &gt; o, o, o, o</td>
<td></td>
</tr>
</tbody>
</table>

Table 9. *auHs in first duplicate syllable.

k’oo < *qaHs, o < *qHs
ksa-k’oo-’o-χ, ksa-k’o-χ ‘pull out’ (Nisga’a, Wilp Wilx’ooskw’h1 2001, p. 91)

loo < *laHs, l < *lHs
gilk’a-loo-la-χ, gilk’a-l-lo-χ ‘rotten’ (Nisga’a, Wilp Wilx’ooskw’h1 2001, p. 37)
loo-la-χ, lo-χ ‘to rot’ (Nisga’a, Wilp Wilx’ooskw’h1 2001, p. 117)
lóó-l-t, lo-q ‘to be rotten’ (Sm’algyax, Dunn 1978 [1995], entry 1183)

loo < *laHs, l < *lHs
loo-l-g-ask, lo-g-ask ‘to be wet’ (Sm’algyax, Dunn 1978 [1995], entry 1182)

moo < *maHs, ma’ < *mHs
-di-moo-ma’-χ, di-mo’-χ ‘do (something) silently’ (Nisga’a, Wilp Wilx’ooskw’h1 2001, p. 28)

moo < *maHs, ma’ < *mHs
moo-ma’-χ, mo’-χ ‘have in one’s mouth’ (Nisga’a, Wilp Wilx’ooskw’h1 2001, p. 129)

moo < *maHs, ma < *mHs
hm-moo-ma-χ ‘smile’ (Sm’algyax, Dunn 1978 [1995], entry 802)
*Note also ga-m-moo’-ma-x, m-mo’-m-x ‘smile’ (Sm’algyax Authority 2001, p.145)

moo < *maHs, na < *nHs
nú-ma-x-kw, no-x ‘mother’ (Nisga’a, Wilp Wilx’ooskw’h1 2001, p. 135)
noo < *nah₃, na’a < *nh₃
galksi-noo-na’a, galksi-no’o ‘hollow, have a hole’ (Nisga’a, Wilp Wilx’o’oskw’hl 2001, p. 49)

k’an-noo-na’a, k’an-no’o ‘be open, unlocked’ (Nisga’a, Wilp Wilx’o’oskw’hl 2001, p. 102)

ts’oo < *tsah₃, ts’ə < *tsH₃
ts’oo-ts’ə-χ-t, ts’oo ‘to split open, pull out of a skin’ (Sm’algyax, Dunn 1978 [1995], entry 1968)

woo < *ūah₃, wa < *ūh₃
woo-wa-k, wo-k ‘to sleep’ (Nisga’a, Wilp Wilx’o’oskw’hl 2001, p. 185)

ioo < *faH₃, io < *iH₃
yoo < *faH₃, yo < *iH₃
ioo-ik-ks, yo-o-ks ‘to wash’ (Sm’algyax, Dunn 1978 [1995], entry 2239)
yoo-‘o-ks, yo-o-ks ‘to wash’ (Nisga’a, Wilp Wilx’o’oskw’hl 2001, p. 198)

The *aH₃ ~ *H₃ ablaut (Table 10) is rare with only one attested form each in Nisga’a and Sm’algyax.

<table>
<thead>
<tr>
<th></th>
<th>pre-IE</th>
<th>TS</th>
</tr>
</thead>
<tbody>
<tr>
<td>present</td>
<td>e-vocalism *eā = *ah₃ &gt; uu,iā</td>
<td></td>
</tr>
<tr>
<td>aorist</td>
<td>zero-grade *i = *ński &gt; a,a,∅ static–aorist–singular</td>
<td></td>
</tr>
</tbody>
</table>

Table 10. *aH₃ in first duplicate syllable.

niu < *nah₄, ne, n < *nh₄

ga-niu-na-ks ~ ga-niu-n-skt, naks ‘spouse’ (Sm’algyax, Dunn 1978 [1995], entry 1496)

ts’uu < *tsah₄, ts’a < *tsH₄
ts’uu-ts’a’waks, ts’a’waks ‘a pair of shoes’ (Nisga’a, Wilp Wilx’o’oskw’hl 2001, p. 177)

6 lengthened-grade in the second duplicate syllable

Ablaut with lengthened-grade in the second duplicate syllable is quite rare. Later stress rules have reduced prominence in first duplicate syllables. As a result analogical levelling has largely obscured the ancient, second duplicate syllable lengthened-grade ablaut. The old ablaut here is only evident when the second duplicate syllable is stronger than the simple, i.e., non-reduplicate, stem. There are only four documented examples from Dunn 1978 [1995] and
Wilp Wilxo’oskwhl 2001, one each with \(^{*}H_1\), \(^{*}H_2\), and \(^{*}H_3\) grade.

‘nii’ < \(^{*}naH_1\), ‘na < \(^{*}nH_1\)

\(ga-n\text{-}‘nii\text{-}lu-gw-i, ga\text{-}\text{na-gw-i} \) ‘length’ (Nisga’a, Wilp Wilxo’oskwhl 2001, p. 52)

\(g^{*}\text{a}l < \(^{*}k^{*}aH_1\), \ g^{*}\text{a}l < \(^{*}k^{*}H_1\)

\(g^{*}\text{re\text{-}g^{*}\text{a}l\text{-}k, g^{*}\text{el\text{-}k} \) ‘to make burn’ (Sm’algyax, Dunn 1978 [1995], entry 512)

\(g^{*}\text{as} < \(^{*}k^{*}aH_2\text{s}, \ g^{*}\text{as} < \(^{*}k^{*}H_2\text{s}\)

\(g^{*}\text{os\text{-}g^{*}\text{as\text{-}k, g^{*}\text{as\text{-}k} \) ‘borrow’ (Sm’algyax, Dunn 1978 [1995], entry 510)

\(lob... < \(^{*}laH_3\text{p...}, \ lb... < \(^{*}lH_3\text{p...}

\(lak\text{-}lob\text{-}ts’auq, lube\text{-}ts’auq \) ‘kidney’ (Sm’algyax, Dunn 1978 [1995], entry 1141)

summary

The Tsimshian languages exhibit archaic and relic ablaut forms that are phonologically similar to ablaut in several Indo-European languages. The Tsimshian lengthened-reduced grade contrast that marks iterative vs. punctual-past is congruent, both in form and function, with the pre-IE e-vocalism vs. zero-grade found in present (< *iterative) and aorist (< *static) respectively. Tsimshian ablaut, in the context of pre-IE morphology, is extremely conservative, manifesting as it does, not only the same vowel grades and sonant-laryngeal colourings, but also overt reflexes of the sonant coefficients, sonants and laryngeals, hypothesised by Saussure (1879) and Møller (1987).

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