Blackfoot reflexes of Proto-Algonquian clusters

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1 Overview

- Slides available at http://linguistics.ubc.ca/person/natalie-weber/
- Searching for regular sound changes that might prove the Proto-Algonquian-Blackfoot hypothesis (Goddard 2015).
- Berman (2006) claims that the first consonant of a CC cluster in PA neutralizes completely in Blackfoot: ‘In a cluster of true consonants, the first consonant becomes $h$, except after PA *i, *i, or initial *e, where it becomes ss and the preceding vowel is shortened by one mora’ (Berman 2006: 266).
- A compilation of Blackfoot reflexes of PA clusters in * indicates this is not true.

2 Blackfoot phonology

Table 1: Blackfoot consonant inventory

<table>
<thead>
<tr>
<th></th>
<th>Labial</th>
<th>Coronal</th>
<th>Velar</th>
<th>Glottal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stops</td>
<td>p pː t tː k kː P</td>
<td>sː sː ks kː</td>
<td>h</td>
<td></td>
</tr>
<tr>
<td>Affricates</td>
<td>tʃ tʃː ks kː</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fricatives</td>
<td>s sː x (h)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nasals</td>
<td>m mː n nː</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Glides</td>
<td>w j</td>
<td>(w)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Blackfoot heterosyllabic clusters (Elfner 2006; Weber in prep)

<table>
<thead>
<tr>
<th></th>
<th>m</th>
<th>n</th>
<th>w</th>
<th>y</th>
<th>p</th>
<th>t</th>
<th>s</th>
<th>k</th>
<th>ks</th>
</tr>
</thead>
<tbody>
<tr>
<td>*-e</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>*-i</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>*-a</td>
<td>*-htehwe</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
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</tr>
<tr>
<td>*-e</td>
<td>*-htehwe</td>
<td>✔</td>
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<td>✔</td>
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<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

3 Selected sound changes

- Vowels:
  - Medial PA *a, *e become i but differ in morphophonemic treatment from *i > i. Medial *e* becomes ii but differs in morphophonemic treatment from inherited *i* > ii.
  - The vowels PA *a, *e round to *o before an *o, *o or *k(w), but these changes may have taken place at different times, as there are occasional exceptions.
- Consonants:
  - Intervocalic *s, *c, *r, *θ merge to t.
  - *t assimilates to ts before an i or i from any source.
  - Initial *w and post-consonantal *w, *y are lost. Before an i from any source, *w > y.
  - Final *ya, *yi become sa, si after a vowel, and isa, isi after a consonant.

4 Vowel syncope

- Reflexes of clusters are partially obscured by a later process of vowel syncope in Blackfoot.
- ‘If the vowels in the first two syllables of a word are both short and are separated by a single consonant…, the second vowel is deleted and the resulting consonant cluster is simplified’ (Berman 2006: 266).

- Two cases:
  1. Two singleton consonants: the first consonant assimilates completely to the second consonant, forming a geminate (Thomson 1978: 250; Proulx: 1989: 56ff; Berman 2006).
  2. Singleton consonant plus a cluster: the resulting cluster simplifies to ‘C’ (Berman 2006).

The final C is always the same as the final C in the original cluster.

PA   | Gloss   | Bf   | Gloss
---   |---------|------|---------
*-een-* | TI ‘by thought’ | VTi ‘by thought’ | (Goddard 2015)
*a-tehtewi ‘it is ripe, dyed’ | -i’tsi | VII ‘be ripe, be cooked’ | (Br12)
*a-tehsaawan ‘he dyes it’ | -i’si | VTi ‘dye’ | (Br12)
*a-tepeskw ‘it is night’ | ko’kóyi ‘last night’ | (Br66)
*me9enkw ‘armpit’ | mo’kisi ‘armpit’ | (Br103)
*metempi ‘brain’ | mo’pi ‘brain’ | (Br107)
*me9enciy ‘hand’ | mo’tsisi ‘arm, hand’ | (Br108)

1 Thanks for valuable comments from Howard Berman, Richard Rhodes, Ives Goddard, David Pentland, Rose-Marie D´echaine, Donald Frantz, Inge Genee, and Conor Quinn. Any mistakes here are surely my own.
5 Reflexes of clusters in *

5.1 Summary

<table>
<thead>
<tr>
<th>Sound change</th>
<th>Number of reconstructions</th>
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<tbody>
<tr>
<td>*²t &gt; sst (after i, i)</td>
<td>2</td>
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</tr>
<tr>
<td>*²r</td>
<td>1</td>
</tr>
<tr>
<td>*²s</td>
<td>2</td>
</tr>
<tr>
<td>*²θ</td>
<td>2 (+1 partial evidence)</td>
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</tbody>
</table>

- Sources for PA reconstructions are given in parentheses as an abbreviated author plus item or page number. Abbreviations: A = Aubin (1975), Br = Berman (2006), H = Hewson (1993); Bf = Blackfoot, PA = Proto-Algonquian
- When a Blackfoot reconstruction has been proposed elsewhere, that source is given as [Reconstr. XXXX].
- PA transcription follows Goddard (1994). I use *ʔ for Bloomfield’s (1946) *q, *r for his *l, *sC for his *xC, and *C for his *xC. (Note that Aubin’s *sC corresponds to my *rC.)
- I have normalized transcriptions from other sources.
- All Blackfoot forms are Frantz & Russell (1995) unless otherwise stated.
  - Standard Blackfoot orthography mostly mirrors IPA, except that long vowels and sonants are written as doubled letters, <y> stands for [i], <ü> stands for [u], <ai> stands for [e] or [æ], <a> stands for [a] or [o], and <i> stands for [i] (Frantz 1978).
  - A syllable with a relatively higher pitch than neighboring syllables is marked with an acute (’) accent, but not all entries in the dictionary have pitch accent marked.

5.2 Reflexes of PA *²t

(1) PA *pi²t- in *pi²twewi ‘froth, foam’ (A1883) > Bf pisst- [Reconstr. Taylor (1960:16)]
Examples: pisstsitsisittswa ‘foamy, it looks like foam’ (Taylor 1960), pisstskii’tayi ‘bay (landform)’ (Frantz & Russell 1995). Cluster *²t > sst after Bf *i, with subsequent shortening of *i > i.

(2) PA *saki²tanro ‘bite it!’ (Goddard 2015) > Bf sikstsit ‘bite it!’ [Reconstr. Goddard (2015)]
Medial *a > i. Imperative suffixes were reshaped. Cluster *²t > sst after Bf *i, with subsequent deletion of short i.

5.3 Reflexes of PA *²r

(3) PA *aʔtahanwa ‘extinguish by tool’ > Bf ḥiltšiwa ‘extinguish’
Medial *a > i, and intervocalic *h deletes, with subsequent vowel fusion, creating Bf *aʔtiwa. Long *i shortens in this form, and post-vocalic *w deletes. (Br24 suggests an alternate reconstruction that does not take stem morphology into account; it still posits a sound change *²t > ht.)

(4) PA *aʔte’we ‘it is in place’ (A174)>
Bf -lihtswa ‘be in such a position’
This form became a suffix in Bf, e.g. sádkihtswa ‘it is flat, horizontal’ (root saok ‘flat, straight’); dásowyihtswa ‘it is not at a right angle’ (waawow ‘uneven, misaligned, reversed’). Medial *a > i. Long *e > i normally, but was shortened in this form. Cluster *²t > ht.

(5) PA *aʔtawáwa ‘he places it, has it’ (A171) > Bf -ohtooowa ‘he places it’
This form became a suffix in Bf, e.g. saokhtoít ‘straighten it out!’ (saok ‘flat, straight’), insitawoftoot ‘make it tidy!’ (insitaw ‘tidy’), itsinootoot ‘place it among the rest!’ (itsin ‘among’). Medial *a > o before oo in the next syllable. Bf has generalized -oo as the theme sign in all TI-2 stems. Cluster *²t > ht.

(6) PA *péʔt- ‘by accident, by mistake’ (A1847) > Bf paahsts-; ipahst- ‘false, mistaken, erroneous, imitation’ (Reconst. Br48)
Examples: paahstsíipittoo ‘false, other’; paahstsísitrep ‘lid’ (lit. ‘false head’); paahstsísipittoo ‘long-eared owl’ (lit. ‘false owl’); paahstsípíwá ‘it was a mistake’; ipaltsí ‘be mistaken’.

5.3.3 Reflexes of PA *²θ

(7) PA *aʔrapya ‘net’ (A162) > Bf a sipíwa ‘thread, sinew used for sewing’
Initial *a > a, medial *a > i, and final *ya > isa. Cluster *²θ > ’s.

- Berman (2006) suggests Bf -ysitosi-; -iyitsi- ‘have whiskers, have a beard’ < PA *mirʔ-‘hairy’ (H1956) [reconstr. Br16]. Multiple PA forms have been reconstructed, and Bf is likely from *mirʔ- (H1956), *mirʔi- Aubin (1975) or from PA *mirʰi- (A1308) instead.
- The reflex of PA *aʔrewa ‘he places him’ (A163) is not the expected -síwa. Instead, Bf -lihtswa is as if from *aʔrewa, probably due to paradigmatic pressure.

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- Bf Gloss
  - VTA -lihtswa ‘he places him’ cf. *aʔrewa (A163)
  - VTI -ohtooowa ‘he places it’ < *aʔtawáwa (A171)
  - VII -lihtswa ‘it is in such a position’ < *aʔtewi (A174)
5.4 Reflexes of PA *?s

This stem includes the common VTI final -atoo. Medial *e apparently rounds to o before *?sw, and post-consonantal *w deletes. Cluster *?s > ’s.

5.5 Reflexes of PA *?θ

Initial and post-consonantal *w delete. Long *a’ shortens to a. Medial *a, *e > i. Taylor’s suggestion that *m was re-interpreted as a possessor suffix is probable. Cluster *?θ > ’s.

The following reconstruction offers only partial evidence.

1. Bf has some doublets, with reflexes in both C1 and glottal stop. But in clusters these contrasts are partially preserved: *?t behaves differently than *?t, *?s, *?θ.

1. Intervocalic *t, *s, *c, *r, *θ > t. In clusters these contrasts are partially preserved: *?t behaves differently than *?t, *?s, *?θ.

2. C1 in a cluster normally neutralizes to Bf h ~ ss (after *i, *ir). But C1 is preserved in *?t, *?s, *?θ.

• The following reconstruction offers only partial evidence.

2. C1 in a cluster normally neutralizes to Bf h ~ ss (after *i, *ir). But C1 is preserved in *?t, *?s, *?θ.

• There is still lots of work to be done on clusters . . .

• A preliminary look at other PA clusters reveals more reflexes where C1 is a glottal stop.

– PA *we’skw- ‘young, new’ > Bf o’k- ‘raw’
– PA *kwe’span- ‘fear’ (Pentland 1979: 383) > Bf ko’po- ‘fear’

7 Puzzles in Blackfoot clusters

1. Bf has some doublets, with reflexes in both h and glottal stop.

• PA *mekw- ‘red’ > Bf moshik- ‘red’, Bf miik- ‘red’ (in compounds)

• PA *eskwe’ ‘head, hair’ (Hewson n.d. #205) > Bf ohi in verbs (e.g. saohkinaki - VAI ‘stick out one’s head’), Bf ihkin as medial (e.g. yasonikhint- VTA ‘shave the head of’, ksíkkilíkiniwa ‘bald eagle’ (lit. ‘white-headed’))
2. Bf has 'C cluster but PA does not:
   - PA *ćyak- 'burn' (H0583) > Bf sa'kss- VTA 'burn someone' (with VTA final -ls 'by heat'), Bf sa'kssoy- VAI 'burn or scald oneself' (with VAI final -hsyai 'by heat')
   - PA *rekw- 'cover' (H1426) > Bf si'k- 'cover'
   - PA *sa;k- 'out' (Br5, Br54) > Bf (i)saksi- 'exit', sa'kap-

3. Bf has hC cluster but PA does not:
   - PA *nekiwa 'he barks' (A1204) > Bf ohk´ıt 'bark!', as if from earlier *meXki-

4. Cases where syncope before singleton C led to 'C clusters instead of gemination:
   - PA *nekwe- 'one' (Berman 2006: 266) > Bf ni't 'one' [reconstr. Berman (2006: 266)]. This form as if from PA *nekweXi-. Otherwise, syncope leads to Bf *kwt > 't instead of expected tt.
   - PA *wemek- 'scab' (H3699) > Bf *i'kssk´ı́si- 'have a marred face' (with medial sski 'face' and AI final -isi). This form as if from *wemeXk-. Otherwise, syncope leads to Bf *mk > 'k instead of expected kk.

References


2Credit to Howard Berman for bringing this to my attention.