How synchronic analysis informs subgrouping: Against Proto-Algonquian-Blackfoot

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Overview

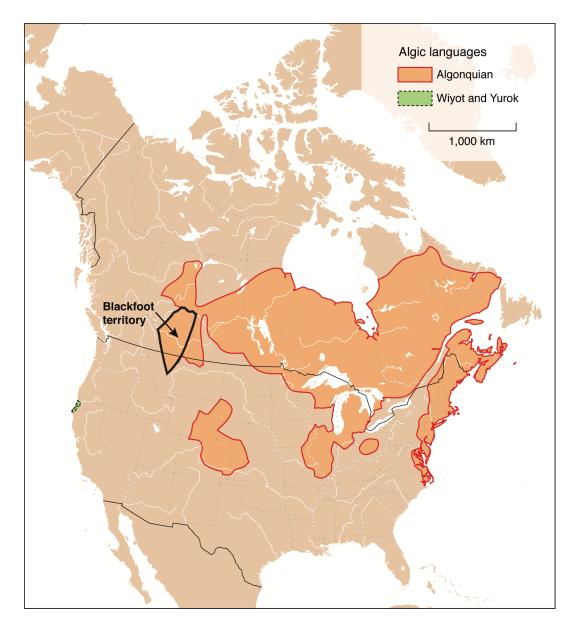
- Recent argument in Goddard (2018) that Blackfoot is a sister to the rest of the Algonquian family
- Two claims supporting this argument

- This paper:
 - synchronic phonological analysis provides simpler alternative
 - neither claim provides evidence for subgrouping
- (Today: just the first claim)

Outline

- 1. Blackfoot's position in Algonquian
- 2. Goddard's (2018) proposal (Claim #1)
- 3. Problems with the proposal
- 4. An alternative analysis
- 5. Discussion

Blackfoot's position in Algonquian



Algonquian

- Blackfoot = westernmost language
- Spoken in:
 - Alberta, Canada
 - Montana, USA

(Frantz: 2017; Goddard 1975; Mithun 1999: 336–337)



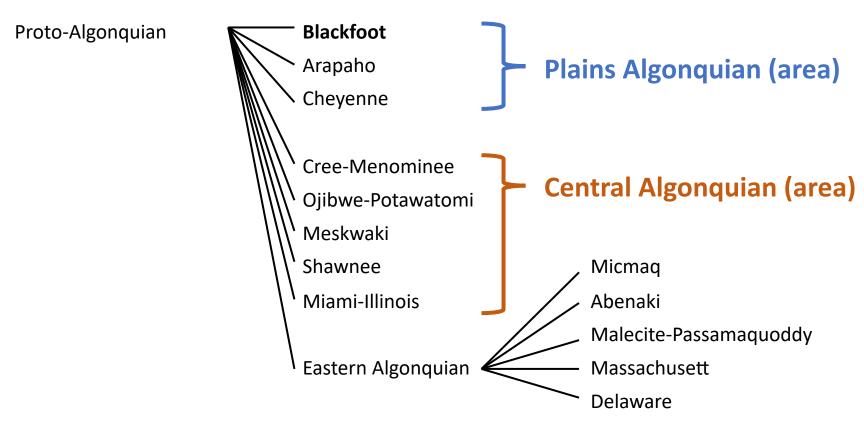
[Map by Kevin McManigal]

Blackfoot

- Blackfoot Confederacy = four sovereign Nations
- Share common language, culture, and history
- Alliance of solidarity; not a governing body
- 3 reserves in Canada (Siksiká, Káínai, Aapátohsipikani)
- 1 reservation in USA ("Blackfeet" = Aamsskáápipikani)

(Dempsey 2019; Grinnell 1892: 153; Hungry Wolf & Hungry Wolf 1989: 3; Juneau 2007: 13ff)

Proto-Algonquian (subset of languages shown)



[Proto-Algonquian: Aubin 1975; Bloomfield 1925, 1946; Goddard 1979; Hewson 1993; Hockett 1942; Michelson 1935; Miller 1959; Pentland 1979; Siebert 1941, 1975; Silver 1960; Voegelin 1941; but see Rhodes 2021 on Core Central Algonquian; Eastern Algonquian: Goddard 1974, 1980; but see Pentland 1992; Proulx 1984; Areal groupings: Mithun 1999]

Innovations and archaisms in Blackfoot

- Innovative sound changes "all contribute towards making Blackfoot vocabulary as a whole **appear as un-Algonquian**" (Michelson 1935: 142–143).
- "There are some apparent **lexical archaisms** in Blackfoot" (Goddard 1994: 188)
- "Blackfoot is clearly the most **divergent** language in the Algonquian family" (Goddard 2018).

Blackfoot's position is contested!

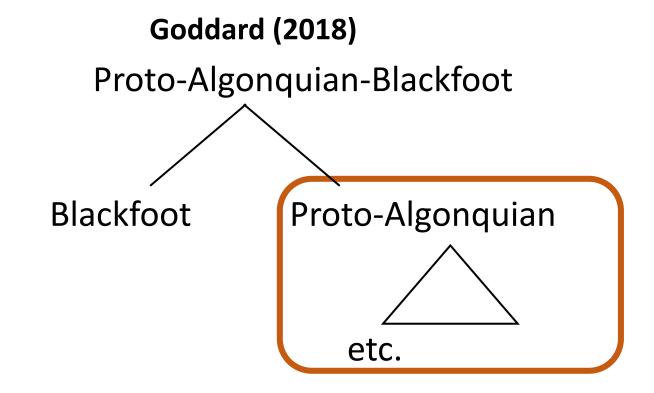
- Not even Algonquian (Franklin 1823: 109; Gallatin 1836; Howse 1849: 113; Mackenzie 1789)
- Various relationships to Algonquian have been proposed:
 - A branch of its own (Michelson 1912)
 - Grouped with Cree and Cheyenne (Hayden 1863)
 - Grouped with Conoy and Beothuk (Pentland 1979)
 - Oldest dialectal layer of Algonquian (Goddard 1994)
- Earliest diverging language (Goddard 2018; Proulx 1980)
 - "Blackfoot is by far the most **divergent** of the Algonquian languages [...] and it remains to be shown whether [...] Blackfoot is a **sister language of PA** rather than a daughter" (Proulx 1980)

Goddard's proposal

Claim #1: Word-initial *#iC

Goddard's (2018) proposal

Traditional family tree Proto-Algonquian Blackfoot etc...



Two arguments for shared innovations

- 1. Proto-Algonquian deletes word-initial #i / ___C
- 2. Proto-Algonquian restructures an older paradigm of "post-inflectional suffixes" into the so-called absentative paradigm

This talk: just the first claim

Observation: Blackfoot has many stems in #iC

PA stems with #C related to Blackfoot stems with invariant #iC

- PA *ketem- (root)
 - Meskwaki keteminaw- 'take pity on, bless with supernatural power'
- Blackfoot ikimm- TA 'show kindness to, bestow power on'
 - <u>ikímm</u>isa! 'bestow power on him!/care for her!'
 - ikímmiiwa 'he bestowed power on him'
 - nits<u>íkimm</u>oka 'he bestowed power on me'

Observation: Blackfoot has many stems in #iC

PA stems with #C related to Blackfoot stems with alternating #C ~ #iC

- PA *po-n- 'cease'
 - cf. Meskwaki po·nikegwa 'he pays his debt'
- Blackfoot ipon- 'terminate, end, be rid of '
 - ponihtáát 'pay!'
 - nits<u>ipón</u>ihta 'I paid'
 - <u>iipón</u>ihtaawa 'he paid'

"Independently, under synchronic conditions that have not been described, word-initial BI | iC-| is sometimes realized as C-" Goddard (2018).

Observation: Initial *#i rare in PA

- No PA short *i in the first syllable, except:
 - before consonant clusters (some but not all);
 - before PA *r only reconstructible in PA *iren- 'ordinary'
 - in demonstratives e.g. *iyog 'this (inan.)', *ini 'that (inan.)'
 - and in relative roots e.g *i θ ~ *i \dot{s} '{so}; to {somewhere}'

• But no lexical roots begin in *ip-, *ič-, *it-, *ik-, *is-, *iš-, *im-, or *in-.

Motivation for proposal

- Initial syllables in PA are "weak"
 - No true consonant clusters
 - No contrast between *i and *e
 - Relative roots beginning in *t, e.g. PA *taθ- 'somewhere'

	PA	Unami Delaware	
Initial	*taθ-	té∙kəne <u>tal</u> á∙wsu	'he lives in the woods'
Non-initial	*entaθ-	nt <u>əntal</u> á∙wsí∙ne∙n	'for us to live there'
Changed [†]	*e∙ntaθ-	yú <u>ental</u> a∙wsíenk	'here where we live'

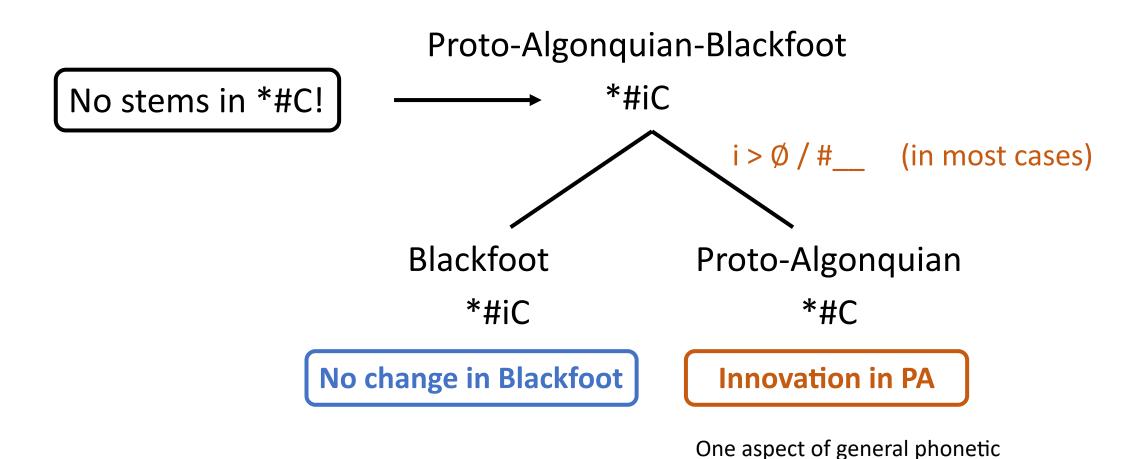
[†]initial change = morphological ablaut of initial syllable (Costa 1996)

Motivation for proposal

• Case study: PA *taθ- 'somewhere'

	PA		pre-PA	
Initial	*taθ-	<	*entaθ-	reduction
Non-initial	*entaθ-	<	$*$ enta θ -	
Changed [†]	*e∙ntaθ-	<	*e∙ntaθ-	

Proposal: innovation in Proto-Algonquian



Algonquian Conference 54, University of Colorado, Boulder

reduction in initial syllables

Problems with the proposal

Problems with proposal

- 1. Blackfoot *also* has initial weak syllables
- 2. Deletion does not occur in nouns (and other non-verbal categories)
- 3. Deletion does not occur for all clause types and valencies

1. Blackfoot *also* has initial weak syllables

- No true consonant clusters
- No contrast between *i and *e (> B i) (Berman 2006; Oxford 2015)
- Relative roots show reduction, e.g. oht- 'instrumental, source'

Initial <u>ts</u>ítskixpissi 'when he danced by'
Non-initial áxk<u>uxts</u>itokoopsskaa?wa 'so she can make broth with (them)'
Changed ixtsítsksspai?wa 'he is looking past'

[Blackfoot Words: word-AT1969-0758, word-AT1969-0016, word-AT1969-0293]

1. Blackfoot *also* has initial weak syllables

• Case study: *oht-* 'instrumental, source'

	Blackfoot [†]		pre-Blackfoot	
Initial	ts-	<	*oht-	reduction
Non-initial	uxts-	<	*oht-	
Changed	ixts-	<	*e-ht-	

 $+/t/\rightarrow$ [ts] / __{{i, j}}

2. Deletion does not occur in nouns

- Blackfoot nouns begin in C, not iC
- Unexpected if Blackfoot reflects PAB forms in *iC!

Blackfoot		Proto-Algor	Proto-Algonquian	
kóóna	'ice'	*ko∙na	'snow'	
mííni	'berry'	*mi _⁻ ni	'berry'	
miistsísa	'tree'	*mi _* twiya	'quaking aspen'	
<u>ksíssk</u> stakiwa	'beaver'	*ki·šk-	'cut, chop, sever'	
<u>pisst</u> óóhtsi	'inside'	*pi∙nt-	'inside'	

3. Deletion does not occur for all clause types and valencies

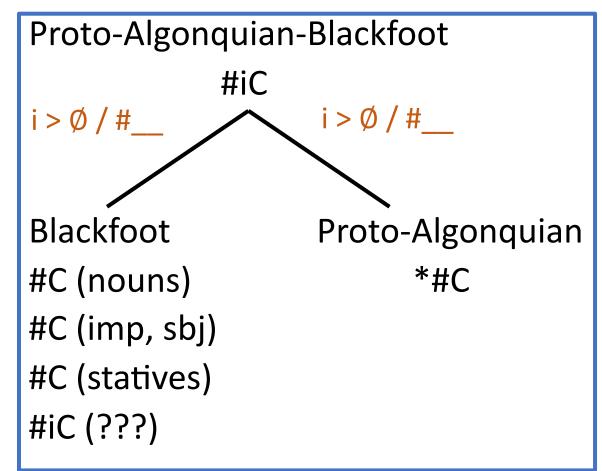
- Clause types: Imperatives and subjunctives (with no prefixes)
 - PA *po·n- 'cease'
 - B ponihtáát 'pay!'
- Valencies: Statives (with no prefixes)
 - PA *ra-nk- 'light in weight'
 - B saahksstssímma anná pookááwa 'the child is light in weight' [F&R 2017: 232]

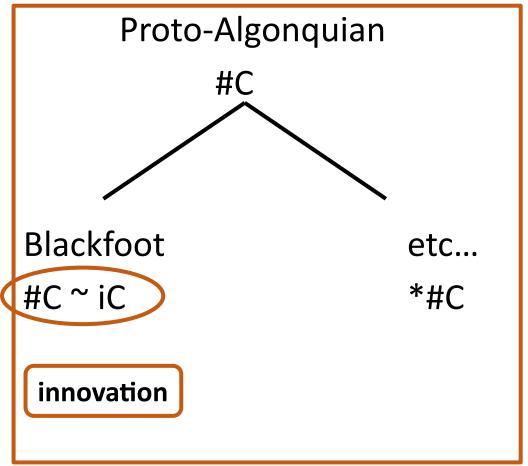
Summary: Problems with proposal

- Blackfoot shows synchronic reduction in initial syllable
 - This was motivation for $*i > \emptyset / \#_{\underline{}}$ in Proto-Algonquian
 - So why doesn't Blackfoot delete...?

- Blackfoot must delete in many cases
 - Nouns and non-verbs
 - Imperatives and subjunctives
 - Statives

An alternative analysis





An alternative analysis

Arguments that #i was added in Blackfoot

- Initial #i only occurs
 - after a prefix
 - in past tense (a novel alternative to archaic initial change)

- Evidence that Blackfoot roots begin in *C
 - 1. Synchronic analysis explains roots in #C ~ #iC
 - 2. Historical record explains roots in invariant #iC
 - 3. Morphological ablaut additional evidence

Synchronic analysis: roots in #C ~ #iC

Left edge

<u>pon</u>ihtáát

'pay!'

After prefix

áaks<u>ipon</u>ihtaawa

'she will pay'

After C

áká<u>ípon</u>ihtsiwa

'he is dead'

After V

(Frantz & Russell 2017: 91)

Synchronic analysis: non-alternating roots

Left edge After prefix

<u>ipótsim</u>atsísa! áaks<u>ipótsim</u>atsiiwa

'poison him!' 'she'll poison him'

<u>ikímm</u>isa! áaks<u>ikimm</u>iiwáyi

care for her! 'he will bestow power on her'

Non-alternating roots have been reanalyzed as /i/-initial.

(Frantz & Russell 2017: 46, 92)

Synchronic analysis: two groups of roots

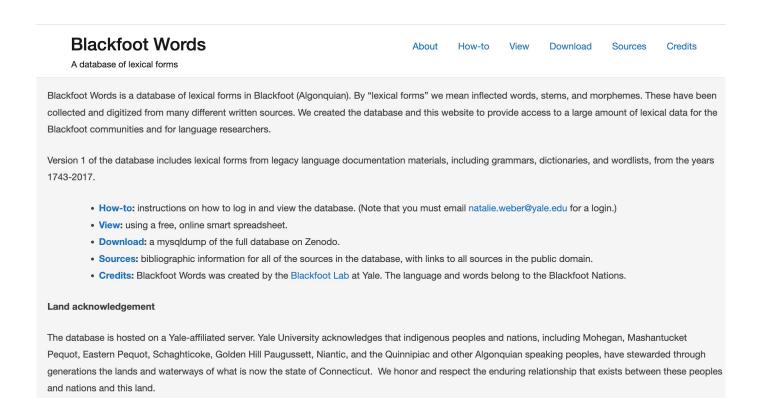
Left edge	After prefix	UR	Gloss
p on-	- ip on-	/pon-/	'cease'
ip otsim-	- ip otsim-	/ipotim-/	'poison'
*p	*-p		

- NB: very few roots in #iC under this analysis
- Similar to Proto-Algonquian

(Similar argumentation: Weber 2020, 2021, 2022, in press)

Historical record

- For roots with invariant #i, often possible to show this is a recent addition by looking at the historical record.
- Tool: Blackfoot Words database (https://www.blackfootwords.com/)



(Weber 2022; Weber et al. forthcoming)

Historical record: Blackfoot Words

- relational database of inflected words and phrases, and their subparts
- 63,493 lexical forms have been digitized to date from 30 sources
- timespan: 1743–2017 (almost 300 years!)
- Version 1.1 includes 9 of 30 sources

- F&R 2017 = Frantz & Russell (2017)
- word-AB1234-000789 = unique id from the database

Historical record: kimm- 'pity'

• ikímmisa! 'bestow power on him!/care for her!' [F&R 2017: 46]

• <u>kímm</u>isa! pity thou him! [word-AT1969-1405]

• <u>kim'is</u> pity him! [word-JT1889-6231]

• <u>kim'okit pity me!</u> [word-JT1889-6232]

• <u>kímm</u>okit pity me! [word-CU1938-13981]

Morphological ablaut ("initial change")

- Initial change = morphological ablaut of first syllable (Costa 1996)
- In C-initial stems, initial change has been restructured:
 - Archaic: first vowel ablauts (~100 stems; Taylor 1967)
 - Novel: add an initial i- or ii-

- Archaic changed forms can diagnose whether a syllable is initial
- Not all stems have archaic changed forms

(aspects of Blackfoot initial change in Berman 2006; Frantz 2017; Proulx 2005; Taylor 1967, 1969)

Root: ipotsim- 'poison'

Plain: <u>ipótsim</u>atsísa! 'poison him!' [F&R 2017: 92]

Changed (arch.): <u>náápotsim</u>atsiiway 'he poisoned him' [word-AT1969-2978]

<u>niipotsím</u>atsisa 'poison thou him!' [word-AT1967-107]

Changed (new): <u>iipotsím</u>atsiiway 'he poisoned him' [word-AT1967-105] ipótsimatsiiwáyi 'she poisoned it' [F&R 2017: 92]

Root: pon- 'cease' is C-initial

Plain: ponihtáát! 'pay!' [F&R 2017: 91]

poonixtátsisa 'pay thou him!' [word-AT1967-112]

• Changed (arch.): <u>paan</u>ixtátsisa 'pay thou him!' [word-AT1967-111]

(not: *<u>náá</u>ponixtatsisa, *<u>níí</u>ponixtatsisa)

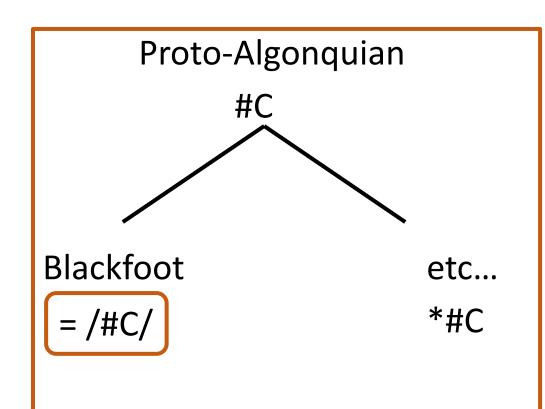
• Changed (new): iipónihtaawa 'he paid' [F&R 2017: 91]

- If this root were /ipon-/, it should pattern with other i-initial roots
- Initial change only affects first syllable, showing that p is initial

Summary

- Evidence that Blackfoot roots begin in *C
 - 1. Synchronic analysis explains roots in #C ~ #iC
 - 2. Historical record explains roots in invariant #iC
 - 3. Morphological ablaut additional evidence

An alternative analysis: Blackfoot innovations



- Blackfoot #C continues in:
 - nouns
 - imperative and stative verbs
- Blackfoot #iC innovated for:
 - verbs, after prefixes
 - verbs, past tense (< initial change)

An alternative analysis

- Blackfoot roots are shared retentions from PA with additional innovations within the verbal system
 - Roots in non-initial position have initial #i
 - Some roots reanalyzed as truly #i-initial, contrasting with C-initial roots
 - Initial change in C-initial roots was restructured
- No innovations for the remaining languages = no subgrouping
- Shared retentions cannot support subgrouping (cf. Atkinson & Gray 2005; Koch & Bowern 2004).

Discussion

Synchronic analysis

- Synchronic analysis is necessary!
 - Morphophonological alternations
 - Phonological underlying forms
 - Internal reconstruction
- Cannot look at words in isolation without considering their place in the system.

(See our organized session on prosodic structure on Sunday!)

Historical record

- Digitizing and annotating the historical record is necessary!
 - Blackfoot Words aims to do this (Weber et al. 2022)
 - Huge task!
 - Two years and counting...

Comparative method

- New cognate sets are needed!
 - Many papers on historical phonology in Algonquian compare forms in a language to the established Proto-Algonquian reconstructions
 - But new data might reveal new things!
 - Need new cognate sets and correspondence sets
 - (Perhaps Pentland's posthumous Proto-Algonquian dictionary?)

- Comparison of prosodic structure is necessary!
 - (See our organized session on prosodic structure on Sunday!)
 - Possibly: Blackfoot has *restructured* prosodic structure over time.

Summary

- No evidence for Proto-Algonquian-Blackfoot
 - No major prevalence of #iC roots in Blackfoot
 - Determined by synchronic analysis
 - Alternative: Blackfoot continues PA roots in #C

In memoriam

Donald Frantz (d. 2021)



David Pentland (d. 2022)

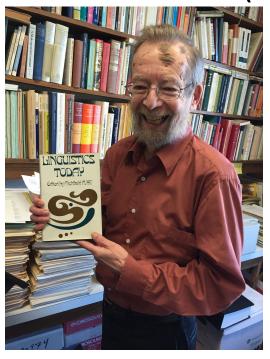


Photo by Arden Ogg

Nítohtsikaahsi'taki! Thank you!

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- Atkinson, Quentin D., & Gray, Russell D. 2005. Curious parallels and curious connections—phylogenetic thinking in biology and historical linguistics. *Systematic biology*, 54(4), 513-526.
- Aubin, George F. 1975. *A Proto-Algonquian dictionary*. (National Museum of Man, Mercury Series, Canadian Ethnology Service Paper 29). Ottawa: National Museums of Canada.
- Berman, Howard. 2006. Studies in Blackfoot prehistory. *International Journal of American Linguistics* 72(2): 264–284.
- Bloomfield, Leonard. (1925). On the sound-system of Central Algonquian. Language, 1(4), 130–156.
- Bloomfield, Leonard. 1946. Algonquian. In *Linguistic structures of Native America*, Hoijer, Harry (ed.), 85–129. (Publications in Anthropology 6). New York: Viking Fund.
- Costa, David J. (1996). Reconstructing initial change in Algonquian. Anthropological Linguistics, 39-72.
- Dempsey, Hugh A. 2019. Blackfoot Confederacy. *The Canadian Encyclopedia*, 18 July 2019, Historica Canada. Online access: https://www.thecanadianencyclopedia.ca/en/article/blackfoot-nation. (Accessed 29 June 2021.)

- Franklin, Sir John. 1823. *Narrative of a journey to the shores of the Polar Sea in the years 1819, 20, 21, and 22*. London: John Murray. Printed by William Clowes.
- Frantz, Donald G. 2017. Blackfoot grammar. 3rd edn. University of Toronto Press.
- Frantz, Donald G. and Norma Jean Russell. 2017. *Blackfoot dictionary of stems, roots, and affixes*. 3rd edn. University of Toronto Press.
- Gallatin, Albert S. 1836. A Synopsis of the Indian Tribes Within the United States East of the Rocky Mountains, and in the British and Russian Possessions in North America. *American Antiquarian Society's Archaeologia Americana*, 2: 1-422.
- Goddard, Ives. 1974. Remarks on the Algonquian independent indicative. *International Journal of American Linguistics* 40(4): 317–327.
- Goddard, Ives. 1975. Algonquian, Wiyot, and Yurok: Proving a distant genetic relationship. In *Linguistics and Anthropology: In Honor of C. F. Voegelin*, Kinkade, M. Dale, Kenneth L. Hale and Oswald Werner (eds.), 249–262. Lisse: Peter de Ridder Press.

- Goddard, Ives. 1979. Comparative Algonquian. In *The Languages of Native America*, Campbell, Lyle and Marianne Mithun (eds.), 70–131. Austin/London: University of Texas Press.
- Goddard, Ives. 1980. Eastern Algonquian as a genetic subgrouping. In *Papers of the Eleventh Algonquian Conference*, Cowan W. (ed.), 143-158. Ottawa: Carleton University.
- Goddard, Ives. 1994. The west-to-east cline in Algonquian dialectology. *Papers of the Twenty-Fifth Algonquian Conference*: 187–211.
- Goddard, Ives. 2018. Blackfoot and Core Algonquian inflectional morphology: Archaisms and innovations. In Macaulay, M. and M. Noodin (eds.), *Papers of the Forty-seventh Algonquian Conference*, 83–106. East Lansing, MI: Michigan State University Press.
- Grinnell, G. B. (1892). Early Blackfoot History. *American Anthropologist*, 5(2), 153-164.
- Hayden, Ferdinand Vandeveer. 1863. Contributions to the Ethnography and Philology of the Indian Tribes of the Missouri Valley. *Transactions of the American Philosophical Society*, 12(2), 231–461.

- Hewson, John. 1993. *A computer-generated dictionary of Proto-Algonquian*. (Mercury Series, Canadian Ethnology Service Paper no. 125). Hull, Quebec: Canadian Museum of Civilization.
- Hockett, Charles F. 1942. The position of Potawatomi in Central Algonquian. *Papers of the Michigan Academy of Science, Arts and Letters 28*, 537–542. Ann Arbor, University of Michigan Press.[2.1]
- Howse, Joseph. 1849. Vocabularies of certain North American Indian Languages. *Proceedings of the Philological Society*, 4(84), 101–121.
- Hungry Wolf, Adolf & Beverly Hungry Wolf (eds). 1989. *Indian tribes of the Northern Rockies*. Summertown: Book Pub. Co. / Good Medicine Books.
- Juneau, Linda. 2007. Small Robe Band of Blackfeet: Ethnogenesis by Social and Religious Transformation. MA thesis, University of Montana.
- Koch, Harold, & Claire Bowern. 2004. Introduction: subgrouping methodology in historical linguistics. In Australian languages: classification and the comparative method, Bowern, C. and H. Koch (eds.). John Benjamins Publishing Company.

- Mackenzie, Alexander. 1789. A general history of the fur trade from Canada to the North-west. Hudson Bay Company.
- Michelson, Truman. 1912. Preliminary report of the linguistic classification of Algonquian tribes. *Bureau of American Ethnology Annual Report* 28; 221–290b.
- Michelson, Truman. 1935. Phonetic shifts in Algonquian languages. *International Journal of American Linguistics* 8(3/4): 131–171.
- Miller, W. R. (1959). An outline of Shawnee historical phonology. *International Journal of American Linguistics*, 25(1), 16-21.
- Mithun, Marianne. 1999. The Languages of North America. Cambridge: Cambridge University Press.
- Oxford, Will. (2015). Patterns of contrast in phonological change: Evidence from Algonquian vowel systems. Language, 308-358.
- Pentland, David. 1979. Algonquian historical phonology. Toronto: University of Toronto dissertation.
- Pentland, David. 1992. Palatalization in Narragansett. Paper, Twenty-Fourth Algonquian Conference, Ottawa.

Proulx, Paul. 1980. The linguistic evidence on Algonquian prehistory. Anthropological linguistics, 22(1), 1-21.

Proulx, Paul. 1984. Proto-Algic I: Phonological sketch. *International Journal of American Linguistics* 50: 165–207.

Proulx, Paul. 2005. Initial change in Blackfoot. *Calgary Papers in Linguistics* 26: 1–26.

- Rhodes, Richard. 2021. The case for Core Central Algonquian. In Webs of Relationships and Words from Long Ago: A Festschrift Presented to Ives Goddard on the Occasion of his 80th Birthday, Thomason, L. et al (eds)., 305-345.
- Siebert Jr, Frank T. (1941). Certain Proto-Algonquian consonant clusters. Language, 298–303.
- Siebert Jr, Frank T. (1975). Resurrecting Virginia Algonquian from the dead: The reconstituted and historical phonology of Powhatan. *Studies in southeastern Indian languages*, 285–453.
- Silver, Shirley. 1960. Natick consonants in reference to Proto-Central Algonquian: I. *International Journal of American Linguistics*, 26(2), 112-119.
- Taylor, Allan R. 1967. Initial Change in Blackfoot. In *Contributions to Anthropology: Linguistics I (Algonquian)* (Bulletin No. 214, No. 78), 147–156. Ottawa.

- Taylor, Allan R. 1969. A Grammar of Blackfoot. University of California, Berkeley, PhD thesis.
- Tims, John W. 1889. *Grammar and Dictionary of the Blackfoot Language in the Dominion of Canada*. London: Society for Promoting Christian Knowledge.
- Uhlenbeck, Christianus C. 1938. A Concise Blackfoot Grammar Based on Material from the Southern Peigans. Amsterdam: Hollandsche Uitgevers-Maatschappij.
- Voegelin, Carl F. 1941. Internal relationships of Siouan languages. American Anthropologist, 43(2), 246-249
- Weber, Natalie. 2020. Syntax, prosody, and metrical structure in Blackfoot. PhD dissertation, University of British Columbia.
- Weber, Natalie. 2021. Phase-based Constraints within Match Theory. In *Supplemental Proceedings of the 2020 Annual Meeting on Phonology*, Bennett, Ryan et al. (eds.). Washington, DC: Linguistic Society of America.
- Weber, Natalie. 2022. Prosodic Word Recursion in a Polysynthetic Language (Blackfoot; Algonquian). *Languages* 7(3):159.

- Weber, Natalie. 2022. Weber, Natalie. *Blackfoot Words*. https://www.doi.org/10.5281/zenodo.5774980. https://www.blackfootwords.com/.
- Weber, Natalie. *in press*. Phonological Domains in Blackfoot: structures shared with Algonquian and the misbehavior of preverbs. Accepted to the *Papers of the 52nd Algonquian Conference*. East Lansing, MI: MSU Press.
- Weber et al. *forthcoming*. Blackfoot Words: A lexical database of Blackfoot legacy sources. Accepted to *Language Resources and Evaluation*.