

Variation in TA theme signs

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Will Oxford • University of Manitoba

will.oxford@umanitoba.ca

Introduction

- Four TA theme signs of Proto-Algonquian
(Classification from Bloomfield 1946, 1962; modified by Goddard 1979b)

	PA	Shawnee	Ojibwe	Cree	Delaware
Theme 1	*-a·	-a·	-a·	-a·	-a·
Theme 2	*-ekw	-ekw	-igw	-ikw	-əkw
Theme 3	*-i	-i	-i	-i	-i·
Theme 4	*-eθ	-el~eh	-in~ih	-it~is	-əl

- Patterning varies across paradigms and across languages
- This talk: summarize the patterns, identify diachronic tendencies, work towards an understanding.

Plan

1. Theme signs and hierarchies
2. Independent order
3. Conjunct order
4. Inanimate actor forms

(Not discussing unspecified actor (“passive”) forms.)

1 Theme signs and hierarchies

Identity of the TA theme signs

- Various identities proposed/assumed for TA theme signs

Full direct-inverse system	
-ekw	INV
-a·	DIR
-eθ	LOC INV
-i	LOC DIR

Wolfart 1973

Doesn't work in
conjunction: Hockett
1992, Macaulay 2009

Symmetrical split system	
-ekw	INV
-a·	DIR
-eθ	2OBJ
-i	1OBJ

Hockett 1966

Asymmetrical split system	
-ekw	INV
-a·	3OBJ
-eθ	2OBJ
-i	1OBJ

Rhodes 1994,
Brittain 1999,
Oxford 2014

Theme sign selection rule

- The asymmetrical split system allows the simplest expression of the theme sign rule.
- Assuming the hierarchy $\{1, 2\} > 3 > 3'$, the theme sign is:
 - Inverse ***-ekw** when object outranks subject ($3'-3, 3-1$)
 - Object agreement elsewhere
 - when subject outranks object (e.g. $1-3, *-a \cdot 3OBJ$)
 - when subject and object not ranked (e.g. $1-2, *-e\theta \ 2OBJ$)
- Where does variation come from? Proposal:
 - No variation in the content of the theme signs.
 - No variation in the theme sign selection rule.
 - Variation results from **variation in the hierarchy**.

*-ekw INV

*-a· 3OBJ

*-eθ 2OBJ

*-i 1OBJ

Hierarchies

$$2 > 1 > 3 > 3'$$

“The Algonquian person hierarchy $2 > 1 > 3$ is ... at best an oversimplification and at worst an urban legend.” (Zúñiga 2006:127)

- Really, different morphemes are governed by different hierarchies (Zúñiga 2008; Macaulay 2009)
 - Inverse ***-ekw** in the independent order: $\{1, 2\} > 3 > 3'$
 - Person prefix: $2 > 1$
 - Central agreement suffix: $1p > 2p$
- Ties into view of hierarchies as an epiphenomenon
 - But still important to get the description right!
- Today: hierarchy for the **inverse theme sign** ***-ekw**
 - Varies both within and across languages

2 Theme signs in the TA Independent

Proto-Algonquian TA Independent pattern

- Inverse theme sign ***-ekw** in two contexts:
OBV–PROX and **nonparticipant–participant**
- PA indep't inverse hierarchy: $\{1, 2\} > 3 > 3'$

3–3'	-a·~e·
3'–3	-ekw
1–3	-a·
2–3	-a·
3–1	-ekw
3–2	-ekw
2–1	-i
1–2	-eθ

Pan-Algonquian TA Independent patterns

	PA	Shawnee	Miami-Illinois	Meskwaki, Kickapoo	Menominee	Cree	Ojibwe (Bloomfield)	Ojibwe (Valentine)	Delaware	Massachusetts	Maliseet-Passamaquoddy	Penobscot	Cheyenne	Arapaho	Blackfoot (independent)	Blackfoot (conjunctive)
3—3'	-a·~e·	-a·	-e·	-e·	-æ·	-e·	-a·	-a·	-a·~e·	-ã·~a·	-a	-α	-o	-e·	-i·	-a·
3'—3	-ekw	-ekw	-ekw	-ekw	-ekw	-ikw	-ikw	-igw	-əkw	-əkʷ	-kw	-əkʷ	-ae	-éi	-ok	-yi
1—3	-a·	-a·	-a·	-a·	-a·	-a·	-a·	-a·	-a·	-ã·	-a	-α	-o	-o·	-a·	-a·
2—3	-a·	-a·	-a·	-a·	-a·	-a·	-a·	-a·	-a·	-ã·	-a	-α	-o	-o·	-a·	-a·
3—1	-ekw	-ekw	-ekw	-ekw	-ekw	-ikw	-ikw	-igw	-əkw	-əkʷ	-kw	-əkʷ	-ae	-éi	-ok	-yi
3—2	-ekw	-ekw	-ekw	-ekw	-ekw	-ikw	-ikw	-igw	-əkw	-əkʷ	-kw	-əkʷ	-ae	-éi	-ok	-yi
2—1	-i	-i	-i	-i	-e	-i	-i	-i	-i·	-ə~i·	-i	-i	-e	1s -í 1p -éiʔe·	-ok	-ok
1—2	-eθ	-el	-el	-en	-en	-it	-in	1s -in 1p -igo·	-əl	-ən~əš	-əl	-əl	-at	1s -éθ 1p -e·	-o·	-o·

All changes involve “you-and-me” forms

	PA and most daughters	Ojibwe (Valentine)	Arapaho	Blackfoot (independent)
3-3'	-a·~e·	-a·	-e·	-i·
3'-3	-ekw	-igw	-éi	-ok
1-3	-a·	-a·	-o·	-a·
2-3	-a·	-a·	-o·	-a·
3-1	-ekw	-igw	-éi	-ok
3-2	-ekw	-igw	-éi	-ok
2-1	-i	-i	1s -i 1p -éi?e·	-ok
1-2	-eθ	1s -in 1p -igo·	1s -éθ 1p -e·	-o·

- PA Indep't inverse hierarchy: {1, 2} > 3 > 3'
- Blackfoot **2-1** forms > inverse
 - Blackfoot hierarchy : **1** > **2** > 3 > 3'
- Arapaho **2-1p** form > inverse
 - Arapaho hierarchy: **1p** > {1s, 2} > 3 > 3'
 - A step toward the Blackfoot hierarchy
- Ojibwe dialects **1p-2** form > “inverse”
 - Actually replaced by X-2 form; passive theme sign -igo· (Valentine 1994:226-7)
 - If reanalyzed as allomorph of inverse -igw, Ojibwe hierarchy: {1s, 2} > **1p** > 3 > 3'
 - A step toward the 2 > 1 > 3 > 3' hierarchy

3 Theme signs in the TA Conjunction

Proto-Algonquian TA Conjunct pattern

	Conj't	Indep't
3—3'	*-a· 3OBJ	*-a· 3OBJ
3'—3	*-ekw INV	*-ekw INV
1—3	*(-a·) 3OBJ	*-a· 3OBJ
2—3	*(-a·) 3OBJ	*-a· 3OBJ
3—1	*-i 1OBJ	*-ekw INV
3—2	*-eθ 2OBJ	*-ekw INV
2—1	*-i 1OBJ	*-i 1OBJ
1—2	*-eθ 2OBJ	*-eθ 2OBJ

- Pattern differs from independent
- Two contexts for inverse theme sign in independent: **3'—3** and **3—{1, 2}**
 - Independent hierarchy: $\{1, 2\} > 3 > 3'$
- Only one context in conjunct: **3'—3**
 - Conjunct inverse hierarchy: $3 > 3'$
 - 3'—3 inverse, elsewhere object agr't
- Independent order was innovated in Pre-PA (Goddard 1967, 2007; Proulx 1982)
 - First of many extensions of ***-ekw**

Pan-Algonquian TA Conjunct patterns

	PA	Miami-Illinois	Shawnee	Meskwaki, Kickapoo	Menominee	Moose Cree	Ojibwe (Bloomfield)	Ojibwe (Manitoulin)	Maliseet-Passamaquoddy	Penobscot	Mi'gmaq (Proulx)	Plains Cree	Ojibwe (Parry Island)	Mi'gmaq (Listuguj)	Cheyenne	Delaware	Arapaho	Massachusetts	Ojibwe (optional at Parry Island)	Blackfoot (subjunctive)
3—3'	-a·	-a·	-a·	-a·	-a·	-a·	-a·	-a·	-a	-α	-a	-a·	-a·	-a	-o	-a·	-o·	-ã·	-a·	-a·
3'—3	-ekw	-ekw	-ekw	-ekw	-ekw	-ikw	-ikw	-igw	-kw	-əkw	-kw	-ikw	-igw	-gw	-ae	-əkw	-éi	-əkw	-igw	-otsi
1—3	(-a·)	(-a·)	(-a·)	(-a·)	(-a·)	(-a·)	(-a·)	(-a·)	(-a)	(-α)	(-a)	(-a·)	(-a·)	(-a)	(-o)	(-a·)	1s (-o·) 1p -e·	(-ã·)	(-a·)	-a·
2—3	(-a·)	(-a·)	(-a·)	(-a·)	(-a·)	(-a·)	(-a·)	(-a·)	(-a)	(-α)	(-a)	(-a·)	(-a·)	(-a)	(-o)	(-a·)	(-o·)	(-ã·)	(-a·)	-a·
3—1	-i	-i	-i	-i	-e	-i	-i	-i	-i	-i	-i	1s -i 1p -ikw	1s -i 1p -igw	1s -i 1p -ugsi	1s -aʔé 1p -ae	1s -i 1p -əkw	3p-1s -i 3s-1s -éi 3-1p -éiʔe·	-əkw	-igw	-otsi
3—2	-eθ	-el	-el	-en	-en	-it	-in	-in	-əl	-əs	-ul	2s -is 2p -ikw	2s -ih 2p -igw	2s -əs 2p -ugsi	2s -at 2p -ae	-əkw	-éi	-əkw	-igw	-otsi
2—1	-i	-i	-i	-i	-e	-i	-i	-i	-i	-i	-i	-i	-i	-i	-e	-ə	1s -i 1p -éiʔe·	-i·	-i	-ok
1—2	-eθ	-el	-el	-en	-en	-it	-in	1s -in 1p -igo·	-əl	-əl	-ul	-it	1s -in 1p -igo·	-ul	-at	-əl	1s -éθ 1p -e·	-ən	1s -in 1p -igo·	-∅

- **You-and-me** changes are the same as in the independent.
- The big story: inverse extended to **mixed forms** (3–{1,2})

Extensions in mixed forms

	PA	Type A	Type B	Type C
3—3'	-a·	-a·	-a·	-a·
3'—3	-ekw	-ekw	-ekw	-ekw
1—3	(-a·)	(-a·)	(-a·)	(-a·)
2—3	(-a·)	(-a·)	(-a·)	(-a·)
3—1	-i	1s -i 1p -ekw	1s -i 1p -ekw	-ekw
3—2	-eθ	2s -eθ 2p -ekw	-ekw	-ekw
2—1	-i	-i	-i	-i
1—2	-eθ	-eθ	-eθ	-eθ

- PA conjunct hierarchy: $3 > 3'$
- A: ***-ekw** → 1p/2p objects
 - Plains Cree, Parry Island Ojibwe, Listuguj Mi'gmaq, Cheyenne
 - $\{1p, 2p\} > 3 > 3'$
- B: ***-ekw** → 1p/2p, 2s objects
 - Delaware, (Arapaho)
 - $\{1p, 2\} > 3 > 3'$
- C: ***-ekw** → all 1/2 objects
 - Massachusetts, Blackfoot, optional in Parry Island Ojibwe
 - $\{1, 2\} > 3 > 3'$ (= Independent)

Order of extensions


- An implicit ordering, sometimes actually attested:
 - **Parry Island Ojibwe:** **-igw** universally extended to plural objects and optionally to singular objects (Valentine 2001:295)
 - **Massachusett:** **-əkw** for all 1/2 objects, but a non-inverse 1s object form is also attested (Goddard & Bragdon 1988:555-6)

	Ojibwe (Manitoulin)	Ojibwe (Parry Island)	Ojibwe (opt'l at Parry Island)
3-1	-i	1s -i 1p -igw	-igw
3-2	-in	2s -ih 2p -igw	-igw

	Massachusett (also attested)	Massachusett (general)
3-1	1s -i· 1p -əkw	-əkw
3-2	-əkw	-əkw

More Ojibwe plural-object forms

- Above: inverse extended to plural obj before singular obj
- But even more granularity: Lac Simon Algonquin extends ***-ekw** to **2p obj only**, not to all plural-object forms.



	Chippewa, Manitoulin	Lac Simon Algonquin	Parry Isl., Saulteaux
3-1p	-i	-izhi	-igw
3-2p	-in	-igw	-igw

- (Data from Valentine 1994: 347, 350; 2001: 295; 1OBJ theme sign ***-i** replaced by **-izhi** in this dialect)

Gradient inverse extension in conjunct mixed forms

Extend *ekw to	Hierarchy	Languages/dialects
n/a	$3 > 3'$	PA
2p objects	$\{2p\} > 3 > 3'$	Lac Simon Algonquin
2p 1p objects	$\{1p, 2p\} > 3 > 3'$	Plains Cree, Parry Island Ojibwe, Listuguj Mi'gmaq, Cheyenne
2p 1p 2s objects	$\{1p, 2\} > 3 > 3'$	Delaware, (Arapaho)
2p 1p 2s 1s objects (=Independent)	$\{1, 2\} > 3 > 3'$	Massachusetts, Blackfoot, Parry Island Ojibwe (optional)

- Extend to **plural before singular**; extend to **2 before 1**
- No attested system contradicts this gradient (?)
 - Explanation: markedness? frequency? feature structure?
- End result is simpler system (same hierarchy in Ind & Conj), but path via more complexity (adding **number** to hierarchy)

4 TA inanimate actor forms

Inanimate actor forms in PA

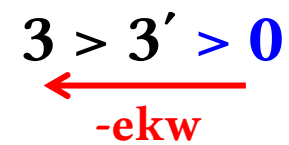
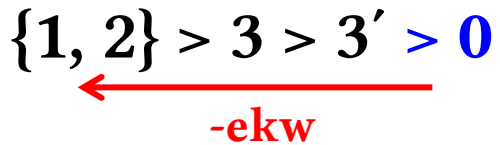
- PA pattern differed in the independent and conjunct:

Independent

Core TA		Inan Actor	
3—1	*-ekw INV	0—1	*-ekw INV
3—2	*-ekw INV	0—2	*-ekw INV
3'—3	*-ekw INV	0—3 0—3'	*-ekw INV

Conjunct

Core TA		Inan Actor	
3—1	*-i 1OBJ	0—1	*-i 1OBJ
3—2	*-eθ 2OBJ	0—2	*-eθ 2OBJ
3'—3	*-ekw INV	0—3 0—3'	*-ekw INV



(no ranking between 0 and 1/2)

Independent inanimate actor forms

- $\{1, 2\} > 3 > 3' > 0$ stable across the family

	PA	Shawnee	Meskwaki, Kickapoo	Menominee	Cree	Ojibwe	Delaware	Massachusetts	Maliseet- Passamaquoddy	Penobscot	Cheyenne
0-1	-ekw	-ekw	-ekw	-ekw	-ikw	-igw	-əkw	-əkw	-kw	-əkw	-ae
0-2	-ekw	-ekw	-ekw	-ekw	-ikw	-igw	-əkw	-əkw	-kw	-əkw	-ae
0-3	-ekw	-ekw	-ekw	-ekw	-ikw	-igw	-əkw	-əkw	-kw	-əkw	
0-3'	-ekw		-ekw	-ekw		-igw					-ae

Conjunct inanimate actor forms

	PA	Kickapoo	Maliseet- Passamaquoddy	Mi'gmaq (Proulx)	Cheyenne	Delaware	Massachusett	Meskwaki, Menominee	Cree	Ojibwe
0-1	-i	-i	-i	-i	1s -aʔé	1s -i > -əkw	-əkw	-ekw	-ikw	-igw
0-2	-eθ	-en~eh	-əl~s	-ul~əs	2s -aʔe	-əkw	-əkw	-ekw	-ikw	-igw
0-3	-ekw	-ekw	-kw~∅	-kw~∅	2p -ae	-əkw	-əkw	-ekw	-ikw	-igw

- PA pattern retained in Kickapoo, Mal-Pqy, and Mi'gmaq
- Elsewhere extension of the inverse, familiar gradient:
 - Plural objects in Cheyenne
 - All but 1s objects in earlier Delaware
 - All forms in the remaining languages

Another asymmetry in the extension of the inverse

- PA: same theme sign pattern in inan-actor and core TA
- Some languages: inan-actor **fully inverse**, core TA **partially**

PA Conjunct

Core TA		Inan Actor	
3-1	-i	0-1	-i
3-2	-eθ	0-2	-eθ
3'-3	-ekw	0-3	-ekw

Plains Cree Conjunct

Core TA		Inan Actor	
3-1	1s -i	0-1	-ikw
	1p -ikw		
3-2	2s -is	0-2	-ikw
	2p -ikw		
3'-3	-ikw	0-3	-ikw

Delaware Conjunct

Core TA		Inan Actor	
3-1	1s -i·	0-1	-əkw
	1p -əkw		
3-2	-əkw	0-2	-əkw
3'-3	-əkw	0-3	-əkw

- Indicates two steps in the analogical extension of the inverse (Dahlstrom 1989; Valentine 2001:278):
 - 1. Independent inan-actor to conjunct inan-actor
 - 2. Conjunct inan-actor to core conjunct
- Inan-actor forms are the “leak” between indep’t and conjunct

Conclusions: Change in TA theme signs

- Change always involves **extending the inverse**.
- Two directions of extension are attested
- Extension to **you-and-me forms** (less common)
 - Ranking 1st and 2nd person with respect to each other
- Extension in the **conjunct** (common). Generalizations:
 - Inanimate-actor forms before animate-actor forms
 - Plural-object forms before singular-object forms
 - 2nd-person object forms before 1st-person object forms
 - Adding 2p/1p/2s/1s to the hierarchy
 - Explanation: markedness, frequency, structure?

Thank you!

- And thanks to David Pentland and Conor Quinn for helpful discussion.

Appendices

(References downloadable at

<http://home.cc.umanitoba.ca/~oxfordwr/>)

Other recent work on TA theme signs

- Jacques, Guillaume, and Anton Antonov. 2014. The directionality of analogical change in direct/inverse systems. Manuscript (under review).
- Examine changes in TA conjunct theme signs in Plains Cree, Ojibwe, Listuguj Mi'gmaq, and Arapaho as part of a bigger project on analogical change in direct/inverse systems.
- Conclusions:
 - Analogy operates from non-local inverse forms (3'–3) to all inverse forms
 - Analogy affects plural forms before singular forms
 - Analogy affects inverse forms before direct forms
- Good discussion, but limited number of languages and no consideration of independent forms or inanimate actor forms.

Allomorphy of direct theme sign, TA Independent

- Direct/3OBJ theme sign ***-a·** has the allomorph ***-e·** when followed by the umlaut-triggering absolute formative ***-w** (Goddard 2007).

Allomorphy of TA Conjunct theme signs

	Conj't
3—3'	*-a· 3OBJ
3'—3	*-ekw INV
1—3	*(-a·) 3OBJ
2—3	*(-a·) 3OBJ
3—1	*-i 1OBJ
3—2	*-eθ 2OBJ
2—1	*-i 1OBJ
1—2	*-eθ 2OBJ

- Direct/3OBJ theme sign *-a· → ∅ / +V
 - *-a· can be restored by adding a following consonant-initial suffix (e.g. Rhodes 1976:176-7; Goddard 2006:189; Quinn 2006: 259-60; Costa 2003:342).
 - Delaware examples (Goddard 1979b:184-5)
 - *mi·l -∅ -ak* 'I give it to him/her'
give-DIR-1s3s
 - *mi·l -a· -w -ak* 'I do not give it to him/her'
give-DIR-NEG-1s3s
- 2OBJ *-eθ splits into two allomorphs due to special sound laws for consonant clusters:
 - 1s-2s *-eθa·n > M-I -ela·n, Cree -ita·n
 - 3s-2s *-eθk > M-I -ehk, Cree -isk

PA conjunct inverse hierarchy

- Conjunct inverse hierarchy: $3 > 3'$
- $3'-3$ inverse, elsewhere object agreement
- Why not $\{1, 2, 3\} > 3'$?
- Correctly captures that $3-1$, $3-2$ aren't inverse
 - object agreement
- But incorrectly predicts $3'-1$, $3'-2$ to be inverse
 - object agreement
- $3'$ is outranked **only by 3**. Not by 1 or 2.
 - Hierarchy $3 > 3'$, just a partial ranking of persons