Syntactic & post-syntactic aspects of Algonquian theme signs
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Background: Theme signs, a verbal affix in Algonquian languages, have two competing analyses, (i) **Relational**, in that they index the person (ϕ) features of multiple arguments and their relation with respect to each other on the Person Hierarchy (e.g., Bloomfield 1946, Hockett 1966, Wolfart 1973), and (ii) **Object-marking**, in that they only index the ϕ-features of the object (e.g., Rhodes 1994, McGinnis 1999, Brittain 1999), apart from the elsewhere form (Oxford, 2016). Variation in theme sign distribution between languages complicates a this debate.

Proposal: We employ novel syntactic and post-syntactic proposals to synthesize the intuitions of both competing analyses by deriving the ability for ϕ-features of multiple arguments to interact (relational), yet in an asymmetric fashion (object-marking). Assuming that theme signs are the spell-out of Voice (e.g., Bruening 2001), our **syntactic proposal** involves the collection of subject and object ϕ-features via different methods (MERGE and AGREE, respectively) which is the root of both (i) locality effects, and (ii) object spell-out preference. Our **post-syntactic proposal** involves the extension of Nevins' 2011 contextual markedness account to include interactions between feature sets, and argue that [+α] features in the context of their opposing [-α] value are marked. We propose that the resolution of marked features leads to impoverishment, which results in underspecification and insertion of the elsewhere form (Oxford 2016).

Data: Table 1 summarizes the distribution of theme signs across Algonquian by subject and object ϕ-features (based on Oxford's 2014 data with Proto-Algonquian forms to abstract away from phonological variation). Note that 3OBV refers to non-topical 3rd person, and SAP refers to Speech Act Participants (i.e., 1st and 2nd persons). Table 2 shows the proposed Vocabulary Items and examples are provided for Northern East Cree (Junker, 2011-15) in (1) & (2). The 4 crucial generalizations are: (a) **Locality**: the only relevant arguments are subjects and the structurally highest object (i.e., transitive direct objects and ditransitive indirect objects); (b) **Subject-object asymmetry**: only (animate) objects are overtly indexed, i.e., 1st person *-*i*, 2nd person *-*eθ*, and 3rd person *-*aa*; (c) **3rd person subjects**: the elsewhere is limited to 3rd person subject forms, i.e., 3OBV>4 (in grey) and 3>SAP (in black); (d) **Variation**: variation is limited to 3>SAP forms.

Table 1: Theme sign distribution

OBJ		SAPSUBJ	3rdSUBJ
1		*-*i* 2>1	*-*i*/*-*ekw* 3>1
2		*-*eθ* 1>2	*-*eθ*/*-*ekw* 3>2
3		*-*aa* SAP>3	*-*ekw* 3OBV>3
3OBV		*-*aa* SAP>3OBV	*-*aa* 3>3OBV

Table 2: Vocabulary Items *(adapted from Oxford 2016)*

*-*i*	$\Leftrightarrow$	1OBJ	[+participant, +speaker]
*-*eθ*	$\Leftrightarrow$	2OBJ	[+participant, (+hearer)]
*-*aa*	$\Leftrightarrow$	3OBJ	[-participant]
*-*ekw*	$\Leftrightarrow$	ELSEWHERE	$\emptyset$

(1) chi-waapam-**i**-n
     2-see-***i**-SAP
     'You see me'

(2) chi-waapam-**iti**-n
     2-see-***eθ**-SAP
     'I see you'

Syntax: Locality and subject-object asymmetry generalizations result from the position of Voice relative to the subject (in its specifier) and object (in its complement). Voice has a ϕ-feature probe which allows a single search cycle in its c-command domain triggering agreement with the direct object (or ditransitive indirect object under a high applicative account, e.g., Bruening 2001). Additionally, Voice receives subject ϕ-features via MERGE (following Legate, 2014), as shown below in (3). We propose that the asymmetry between obtaining ϕ-features by AGREE vs. MERGE is the reason why object ϕ-features are spelled-out and subject ϕ-features can only condition spell-

out (e.g., Deal's 2015 satisfying vs. interacting features). The unique presence of an additional 5th theme sign (*-ugsi*) in Listuguj Mi'gmaq only appears in 3>SAPpl forms (and is distinct from the elsewhere *-gwi*), supports the presence of both subject and object ϕ-features in Voice.

(3)
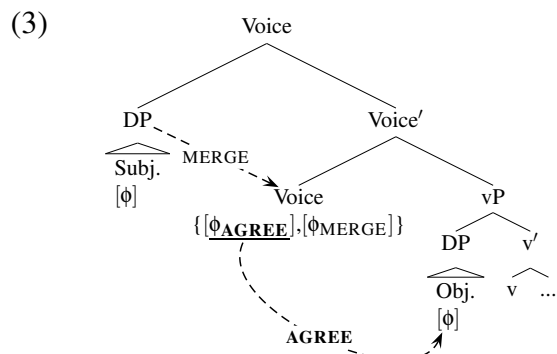
(4) $*\{[\mathbf{+participant}], [\text{-participant}]\}_{\text{VOICE}}$

   a.   SAP>**3**: $\{[\mathbf{\text{-part}}], [\text{+part}]\} \Rightarrow *\text{-}i/e\theta$

   b.   3>**SAP**: $\{[\mathbf{\text{+part}}], [\text{-part}]\} \Rightarrow *\text{-}ekw$

(5) $*\{[\mathbf{+proximate}], [\text{-proximate}]\}_{\text{VOICE}}$

   a.   3>**4**: $\{[\mathbf{\text{-prox}}], [\text{+prox}]\} \Rightarrow *\text{-}aa$

   b.   4>**3**: $\{[\mathbf{\text{+prox}}], [\text{-prox}]\} \Rightarrow *\text{-}ekw$

Post-syntax: The distribution and variation of the elsewhere occurs post-syntactically due to markedness. We expand on the Nevin 2011's concept of contextual markedness to include interaction between ϕ-feature sets on Voice, such that [+α] features in the spelled-out feature set (i.e., the object's via AGREE) are marked in the presence of [-α] features in the conditioning feature set (i.e., the subject's via MERGE). Specifically: (i) [+participant] is marked in the context of [-participant], i.e., in 3>SAP but not SAP>3, as in (4), and (ii) [+proximate] is marked in the context of [-proximate], i.e., in 4>3 but not 3>4, as in (5). In both contexts, feature impoverishment of the marked features can occur, leading to underspecification, and insertion of elsewhere *-ekw* (Oxford, 2016). Support for this proposal comes from the unique extension of the elsewhere in several Ojibwe dialects into 1PL(exclusive)>2 forms (Oxford, 2014) in which [+hearer] (in the 2nd person object) is marked in the context of [-hearer] which is necessarily present in the 1st person plural exclusive subject (Watanabe 2013), given the distinction in Algonquian between 1st person exclusive (1st person + 3rd person) and inclusive (1st person + 2nd person) plurals.

Variation in theme sign distribution can be straightforwardly attributed to differences in markedness thresholds between languages. There are three patterns of 3>SAP variation (adapted from Oxford 2014) shown in Table 3 from highest to lowest threshold: (i) Pattern A (highest threshold) does not have elsewhere forms, (ii) Pattern B (lower threshold) only has the elsewhere in 3>SAPpl forms when an additional marked feature [plural] is present; and (iii) Pattern C (lowest threshold) the elsewhere appears in all forms. This variation is similar to differences in markedness thresholds in nominative plural pronouns across Slavic language, shown for comparison in Table 4.

Table 3: Algonquian theme signs

Pattern (e.g.,)	3>1	3>1pl	3>2	3>2pl
A (Ojibwe)	*-i*	*-i*	*-e*θ	*-e*θ
B (Mi'gmaq)	*-i*	*-ekw*	*-e*θ	*-ekw*
C (NEC)	*-ekw*	*-ekw*	*-ekw*	*-ekw*

Table 4: Slavic pronouns (NOM, PL)

Pattern (e.g.,)	MASC	FEM	NEUT
A (BSC)	*on-i*	*on-e*	*on-a*
B (Polish)	*on-i*	*on-e*	*on-e*
C (Russian)	*on-i*	*on-i*	*on-i*

Some implications: 1) AGREE can be limited to downwards probing, with upwards probing effects limited to being a by-product of MERGE. 2) Person Hierarchy effects are a result of smaller contrasts, such as [±Participant], [±Proximate], and possibly [±Hearer] and/or [±Speaker].

Selected references: **Deal, 2015**. Interaction & satisfaction in ϕ-agreement, *NELS 45*; **Legate, 2014**. *Voice and v: Lessons from Acehnese*; **Nevins, 2011**. Marked triggers vs. marked targets, *LI*; **Oxford, 2016**. Inverse Marking as Impoverishment, *WCCFL 34*.