

Deriving pronominal feature structures through asymmetrical dependencies: obviation, inverse, and antihierarchy effects in Algonquian languages

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1. Introduction

1.1 Goals

Broad: Dispense with pronominal feature hierarchies, both universal and language-specific as analytical primitives.

Narrow: Coherently model and predict pronominal-feature hierarchy effects in Algonquian languages, accounting for their Inverse and 2»1 constructions (and variation therein) without appeal to pronominal feature hierarchies, let alone language-specific stipulations thereof.

Inverse: • Most Algonquian languages do not show an Inverse system across all morphological clause-types: what drives consistent vs. variable occurrence of the Inverse?

2 » 1: • The pronominal-feature hierarchical ranking 1»2 seems to be a near-universal, yet Algonquian languages famously exhibit 2»1 effects. This even as other corners of the same system suggest a notional 1»2 ranking. Do we need contextually stipulated hierarchies, or can a more global characterization be reached?

1.2 Means

§2 • *Model:* pronominal feature contrasts ([1] vs. [2] vs. [3]) represented as iterations of asymmetrical dependency in interpretational access: [3] is introduced via [1|2], [2] is introduced via [1].

• Pronominal-feature hierarchy derives out of discourse-introductory dependencies: [3] depends on [1|2], [2] depends on [1]. *PCC (etc.) = local-feature-configurational antecedent-binding violations.*

• The Proximate vs. Obviative contrast in Algonquian languages shows the same set of asymmetrical dependencies: i.e. [Prox] depends on [Obv]. Both the contrast and its interpretational properties are a predicted possible extension of this same feature-contrast-deriving representation. Thus:

Prox : Obv :: [1|2] : [3]

• Since Prox vs. Obv parallels [1|2] vs. [3] in representation and interpretation, we take observed distributional constraints over Prox:Obv to also hold over [1|2]:[3].

• This parallelism, combined with morphosyntactic properties of specific morphological clause-types, accounts for the distribution of the Inverse---and consistencies and variations therein.

§3 • The only morphological clause-type consistently requiring Inverse for [3 [1|2]] configurations is the *Independent (Idp)*---in contrast to the *Conjunct* and *Imperative*.

- The Idp---uniquely in most Algonquian systems---is a formal nominal possession structure, contrastively expressing its [1|2] and transitive [3] external argument via *Possessor* morphology.
- The distribution of Proximate and Obviative in nominal and verbal [Possessor [Possessee]] constructions establishes a basic and inviolable constraint over such configurations:

*[**Obv**_{Possessor} [**Prox**_{Possessee}]]

***Possessor** « **Possessee** (*notionally*, *Possessor outranks Possessee)

- Since a [3 [1|2]] mapping directly into Idp's Possessor morphology would produce an illicit *Possessor « Possessee configuration...

*[**3**_{Possessor} [**1|2**_{Possessee}]]

...the Inverse circumvents this problem by raising the SAP internal argument above the non-SAP external argument, such that the surface [Possessor [Possessee]] configuration does not violate the *Possessor « Possessee constraint:

[[**1|2**]_i [**3**[**t_i**]]]

- Predicts that the Inverse will only be obligatory for [3 [1|2]] configurations in a morphological clause-type that engages nominal possession syntax. Namely, the Idp.
 - Predicts unidirectional variation only: Inverse *can* appear with non-Idp [3 [1|2]], but only consistently found (= required) for Idp.
 - Accounts for new data from Arapaho: an innovated morphological clause-type also using nominal possession syntax: again takes Inverse for [3 [1|2]].

- §4 • Introduce the notion of *antihierarchy* effects to show that surface-apparent 2»1 morphology could actually support a (notional) 1»2 ranking.

Antihierarchy: Where the hierarchically *lower* competitor wins morphological realization.

- Antihierarchy (or equivalent) is independently needed to account for two other morphological patterns (PWN/MWN elements, and Peripheral Endings); can thus treat apparent 2»1 as antihierarchy on 1»2 with no new machinery.

1.3 Background

- Unless otherwise noted, data is from Penobscot, an Eastern Algonquian language originally spoken in the Penobscot River valley in present-day central Maine, U.S.A. Contrastive pitch-accent only indicated if in (reliable) original source.

Proximate vs. Obviative

- Roughly: a morphosyntactic split within 3rd person, forming two distinct pronominal subtypes:

morphologically unmarked: *Proximate*
 morphologically marked: *Obviative*

Algonquian gender contrast: NA vs. NI

| | | | | |
|----|---------------|------|-----------|-----------------------|
| NA | = "animate" | e.g. | <i>na</i> | 'that ^{NA} ' |
| NI | = "inanimate" | e.g. | <i>ni</i> | 'that ^{NI} ' |

- Does not correspond directly to semantic animacy, though ultimately linked to it
- Will use "NA" and "NI" here in lieu of clumsy English pronominal translations

Direct vs. Inverse contrast

| | | |
|-----|--|---|
| (1) | [1 [3]] vs. [3 [1]]: | stem <i>ih-l-</i> 'tell (NA)' |
| a. | [1[3]] Direct | [3[1]] Inverse |
| | <i>nətihlα</i> | <i>nətihlək^w</i> |
| | <i>nə-ih-l.α-[w]</i> 1-tell-Appl.DIR-W | <i>nə-ih-l.ək^w-[w]</i> 1-tell-Appl.INV-W |
| | 'I tell NA, I say to NA' (PD:162) | 'NA tells me, NA says to me' (PD:162) |
| b. | [Prox[Obv]] Direct | [Obv[Prox]] Inverse |
| | <i>wətihlαl</i> | <i>wətihləkol</i> |
| | <i>wə-ih-l.α-[w]-al</i> 3-tell-Appl.DIR-W-Obv | <i>wə-ih-l.ək^w-[w]-al</i> 3-tell-Appl.INV-W-Obv |
| | 'Prox tells Obv' (SDasα) | 'Obv tells Prox' (SDasα) |

Clause-type morphology contrast: Independent (Idp) vs. Conjunct (Cj)

| | | |
|-----|---|--|
| (2) | Idp vs. Cj: | stem <i>ih-l-</i> 'tell (NA)' |
| a. | Independent: main clauses, certain sentential complements | |
| | <i>wətihlαl</i> 'Prox told Obv' (SDasα) | <i>wə-ih-l.α-[w]-al</i> 3-tell-Appl.DIR-W-Obv |
| | <i>wətihləkol</i> 'Obv told Prox' (SDasα) | <i>wə-ih-l.ək^w-[w]-al</i> 3-tell-Appl.INV-W-Obv |
| b. | Conjunct: relative and other subordinate clauses, certain freestanding uses | |
| | <i>ihlαt</i> 'Prox told Obv' (k., t., & m.:2) | <i>[e]-ih-l.α-t</i> C-tell-Appl.DIR-NACj |
| | <i>ihləkoh̄t</i> 'Obv told Prox' (wanəkəmehsəwak#1:11) | <i>[e]-ih-l.ək^w-əht</i> C-tell-Appl.INV-NAobv{NA}C |

2. Deriving pronominal features (and their hierarchies): referential-access dependency

Referential-access dependency:

Pronominal feature contrasts ---[1] vs. [2] vs. [3]---can be usefully and predictionfully represented as iterations of asymmetrical dependency in interpretational access.

- [3] is introduced via [1|2], [2] is introduced via [1]
- [3] is interpretationally dependent on [1|2], [2] is interpretationally dependent on [1]
- The same system generates the [Prox] vs. [Obv] contrast in the same way:
 - [Obv] is introduced via [Prox]
 - [Obv] is interpretationally dependent on [Prox]
- Feature contrasts so generated are subject to binding constraints, which give rise to PCC effects.
 - [3] is interpretationally dependent on the contrastive feature structure of [1|2]
 - When [3] is structurally higher than [1] or [2] in a narrow locality domain (e.g. a ditransitive Goal-Theme configuration), the result is the feature-configuration-level homolog of a Condition C violation.
 - * $[3 [1|2]]$ = * Pronoun locally c-commanding a coindexed Referring Expression.
- This we will then use in §3 to drive the *Idp* requirement for Inverse in $[3 [1|2]]$ configurations.
- Some observational assumptions.
 - The Speaker is logically the first pronominal contrast, introduced and identified by virtue of some individual initiating a speech act.
 - Contrast is a crucial component to features: a truly lone Speaker feature is interpretable, but logically is not a featural contrast in the absence of other elements to contrast against in a system. Hence 1st person always as [+Author, +Participant] or [+1, -2], rather than just [+Author] or [+1] alone.
 - The first and fundamental contrast is between Speaker and Addressee: Addressee status depends on the establishment of a 1st person referent off of which to contrast. Hence 2nd person always includes features like [-Author], [-1], and not just [+2] alone etc.
 - 3rd person status is equally dependent: it exists only as a contrast against the previous two, i.e. 3rd persons are those which are neither Speakers nor Addressees.

Algorithm: Core-Periphery iteration (*= asymmetrical Merge*)

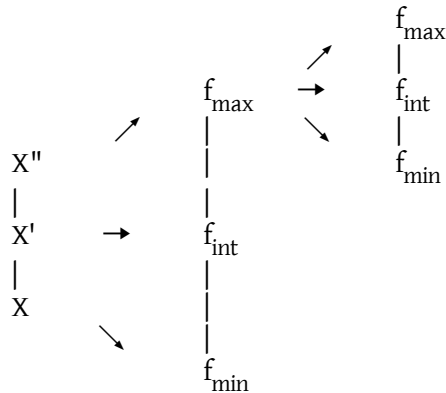
(3) [Core]Periphery...

Constraint: "*Maximal triparticity*" = a well-formed structural representation can access at most three nested terminal elements.

- Boeckx 2008:159: well-formed projections of an element X project at most three, nested elements. My term: *maximal triparticity*

- Emergent from binary merge (p. 124); hence the triparticity of X-bar syntax, among others.
- This tripartite hierarchical organization is *fractal*: it pervades narrow syntax, reappearing at all levels/scales of projection. (p. 129)

(4) Maximal triparticity of a well-formed projection representation (Boeckx 2008:59)



Constraint: "Maximal triparticity" = a well-formed structural representation can access at most three locally nested elements; beyond that, further structural relations entail iteration.

- Applying maximal-triparticity-constrained iteration of Core-Periphery model:

(5) Core-Periphery iteration under maximal triparticity

| <i>representation</i> | <i>pronominal feature contrasts</i> |
|--|-------------------------------------|
| a. [Core ₁] Periphery ₁ | 1-2 |
| b. [[Core ₁] Periphery ₁] _{Core₂} Periphery ₂ | 1-2-3 |
| c. [[[Core ₁] Periphery ₁] _{Core₂} [[Core ₃] Periphery ₃] _{Periphery₂} | 1-2-3Prox-3Obv |
| d. [[[Core ₁] Periphery ₁] _{Core₂} [[[Core ₃] [[Core ₄] Periphery ₄] _{Periphery₃}] _{Periphery₂} | 1-2-3Prox-3Obv-3Surobv |

- System of *contrasts* begins at (5-a): presumably a lone [Core₁] element is interpretable, and as a Speaker, but not as a featural *contrast* to an Addressee.

- Captures the interpretational fact of Speaker as the instigator of the speech act deixis domain.
- Hence also representations of [1] as [+Auth, -Part] rather than just [-Auth].

- [2] status depends on the establishment of a 1st person referent off of which to contrast.

- Captures the interpretational fact that an Addressee implies an Addressor, i.e. a Speaker.
- Hence also representations of [2] as [-Auth, +Part] (or [-1, +2]), and not just [+Part] or just [+2].

- Notice the apparent symmetry of [1] vs. [2] because of this, even though [2] is dependent on [1]. This is in the nature of 1st Merge, and is homologous to the special status of [Head-Complement] as X'.

- [3] status depends on the establishment of the entire [1|2] (= [Participant]) status

- Captures the interpretational fact that [3] status *unidirectionally* implies the establishment of [1] and [2] referents in that cycle of pronominal feature interpretation. That is, it is possible to introduce [1] and [2] features in an argument structure without implying any [3]-featured argument. But any [3] necessarily implies that [1][2] statuses have been determined, since [3] status is (in whole or in part) negatively defined off of [1][2].
- Hence also representations of [3] as [-Auth, -Part], or [-1, -2]---or [-1, -2, +3]---and not just [+3].
- Notice in (5-b) that with Periphery₂ = [3] we hit the first boundary of maximal triparticity. Every iteration beyond this will share in a common property in accordance with their scale of iteration--- which, as (5-c) and (5-d) show, are that further contrasts will be [3] in some sense.
 - Which is true: Prox, Obv, and Surobv share certain morphology (e.g. -t in the Conjunct), which has led all accounts to treat them as subdivisions of 3rd person.
- Hence too iteration proceeds at a new level of structure, i.e. all in Periphery components.
- [Obv] status depends on the establishment of [Prox] status = (5-c)
 - Prox 3rd persons can be freestanding, without any implication of other 3rd persons.
 - A freestanding Obv 3rd person always implies some implicit Prox 3rd person:

Goddard 1990: Prox-Obv pattern in passage from a Meskwaki text:

A group of manitous engage in all of the main action, while the hero simply watches from the side, yet the manitous stay consistently Obv for nearly the whole 34-page passage.

= sustained "obviative span" (Hasler 2002); Goddard 1990:328 explains; "contrasts with the largely backgrounded proximate status of the hero and is an indication that it is the hero's viewing of of the manitous' activity that is significant to the narrative."

- Obv signals that the "narrative perspective/narrative access" is via the Prox: can tell a story about 3rd persons Y and Z while constantly maintaining an overt, clear sense that the whole story crucially comes as a viewing through 3rd person X, by maintaining X as Prox.
- Just as there can be multiple distinct 3rd persons in a single cycle of pronominal feature interpretation, but only one each of 1st and 2nd persons; so too can there be multiple Obvs but only one Prox (Goddard 1990, inter alia). Follows from iteration-local uniqueness of each Core element.
- Assignment of Prox status is typically flexible (associated with topicality)---but one syntactic explicitly requires a particular Prox-Obv relationship: a structural Possessor-Possessee (Goal-Theme) configuration. (*examples in §3*)
 - I.e. *her mother* must be: $her_{(relative)Prox} mother_{Obv}$
 - And never: $*her_{Obv} mother_{Prox}$
 - Bc in a Possessor-Possessee configuration, the referential introduction of the *mother* referent is necessarily via that of the *her* referent.
 - So: **Prox : Obv :: [1|2] : [3]**

- This will be the key point for §3; what remains here is simply some additional consequences of the model.
- Key point of significant variation across languages (i.e. ±morphological contrast of Prox-Obv) is precisely at the most significant breaking point in the representation: the first maximal triparticity boundary.
- The entire representation itself is subject to a maximal triparticity constraint itself: hence only three iterative pairings of [Core-Periphery], i.e. only (5-d) and no further.
- By maximal triparticity, only these possible pronominal-feature contrasts, and no more.

Impersonals possibly accounted for as the absence of this structure. Cf. Nevins 2006:43 representation of impersonal pronouns: [∅Participant, ∅Author], i.e. impersonal rather than 3rd person is the truly featurally unmarked pronominal contrast. Impersonal as "pre-Core" also may capture oddly [1|2]-like properties of Impersonal in Algonquian languages, as well as close relationship of impersonal to reflexive.

- So if the 3rd person can divide into a 2-level representation of [Prox] vs. [Obv], a 3rd degree of contrast within that domain should be possible:

| | | |
|-----------|---|-------------------------|
| Primary | = | Proximate 3rd person |
| Secondary | = | Obviative 3rd person |
| Tertiary | = | Surobviative 3rd person |

And indeed the surobviative is attested for some Algonquian languages, albeit rather thinly.

(5) Surobviative (Eastern Swampy Cree; adapted from Ellis et al. 2000:111)

| Prox | Obv | Prox | Obv | SurObv |
|------|----------------|------|--------------------------------|----------------|
| Cwân | ot-âšokan-a | Cwân | o-stês-a | ot-âšokan-ilîw |
| John | 3-wharf-Obv | John | 3-older_brother-Obv | 3-wharf-SurObv |
| | 'John's wharf' | | 'John's older brother's wharf' | |

- Relative rarity/diachronic instability of the surobviative contrast perhaps due to its being the maximal and most structurally complex possibility in this representational system.

• Last note: this model is NOT additively gluing on nodes to build up a featural tree (as per Harley and Ritter 2002). Simply creating a structurally-defined constraint on possible pronominal feature contrasts and the interpretational relations that hold between them. Each contrast is reading a specific point off of the entire tree of contrasts, not just building up to that point and no further.

- Again, key for next section: **Prox : Obv :: [1|2] : [3]**

3. Pronominal features in configuration

Core notion:

- (a) The Inverse is obligatory for [3 [1|2]] configurations only in the Idp morphological clause-type.
- (b) Constraints on Obv being local-structurally higher than Prox (i.e. *[Obv [Prox]]) are found in nominal possession constructions (Rhodes 1993), but also in verbal possession constructions

(ditransitive Goal-Theme configurations.

(c) Constraints on pronominal feature complexes in ditransitive Goal-Theme configurations = PCC constraints (Bonet 1991, 1994, 1995)---which also include *[3 [1|2]].

(c) Which follows from the parallelism established in §2:

Prox : Obv :: [1|2] : [3]

(d) Like *[Obv [Prox],]a [3 [1|2]] configuration cannot licitly enter a Goal-Theme type local syntax.

(e) A morphological clause-type that surface-marks pronominal features by Goal-Theme morphosyntax---e.g. nominal possession morphology---cannot realize a [3 [1|2]] configuration directly.

(f) Such a morphosyntax could, however, handle an A-moved inversion thereof, i.e.

[[1|2]_i][3[t_i]]

...since then there would be no PCC violation entering this Goal-Theme "filter".

(g) The Inverse independently shows precisely these sorts of A-movement properties.

(h) The Idp morphological clause-type uniquely surface-marks pronominal features with nominal possession morphology...and uniquely requires the Inverse for [3 [1|2]] configurations.

• In the Idp, Inverse for Prox/Obv (6-a) configurations parallels that for [1|2]/[3] configurations (6-b):

(6) Idp morphology: Prox/Obv and [1|2]/[3] configurations

a. [Prox[Obv]] Direct [Obv[Prox]] Inverse

wətihləl

wətihləkol

wə-ih-l.α-[w]-al
3-tell-Apppl.DIR-W-Obv

wə-ih-l.ək^w-[w]-al
3-tell-Apppl.INV-W-Obv

'Prox tells Obv' (SDα)

'Obv tells Prox' (SDα)

b. [1[3]] Direct [3[1]] Inverse

nətihlα

nətihlək^w

nə-ih-l.α-[w]
1-tell-Apppl.DIR-W

nə-ih-l.ək^w-[w]
1-tell-Apppl.INV-W

'I tell NA, I say to NA' (PD:162)

'NA tells me, NA says to me' (PD:162)

• In other words:

[Prox [Obv]] : [Obv [Prox]] :: [1|2 [3]] : [3 [1|2]]
Dir Inv Dir Inv

- In most Algonquian languages, Possessor morphology is unique to the Idp clause-type.

- We will return to that "most".

- The only morphology completely distinctive to the Idp is also nominal in origin:

(9) Idp-distinctive PWN morphology has nominal origins (after Goddard 1974)

a. P-element: nominal PA *-Hm (Goddard 1974, 1967:87)

associated with impersonals

PA *wi:kiwa:Hmi 'house'

AI *wi:ki- 'dwell'

| | | |
|-----------|------------|------------------------|
| Shawnee | wi:kiwa:p- | 'house' |
| Penobscot | wikəwəm | 'house, home' (PD:486) |

PA *akweHmi '[blanket, robe]'

AI+O *akw- (archaic of *akwi-) 'don, wear'

| | | |
|-----------|-------|-----------------|
| Menominee | ako-m | 'broadcloth' |
| Cree | akohp | 'blanket, robe' |

b. W-element nominal PA *-w (after Goddard 1974:325, pace ±"umlauting" W contrast)

associated with agentive and patientive nominalizations; Menominee

| | | | |
|---------------|-----------|----------|------------|
| nominal stem: | anohki:w- | anohki:w | 'workman' |
| verbal stem: | anohki:- | anohki:w | 'he works' |

| | | | |
|----------------|----------|---------|---|
| nominal stem: | na:na:w- | na:na:w | 'invited guest' (animate noun denoting undergoer) |
| verbal stem+Th | na:na:- | na:na:w | 'he is fetched' (indefinite-actor or passive form)' |

c. N-element: nominal PA *-n (after Goddard 1974:325); triggers PA *e·→*a·

| | | | |
|---------------|-----------|-----------|---|
| nominal stem: | ahkihkan- | kkihkan | 'garden' (PD-Akins:227) |
| verbal stem: | ahkihke- | kkihke[w] | 'NA farms, plants, sows' (PD-Akins:227) |

Quinn 2006 alternative account: this -əne = -ən.e 'NA grasp, handle', embedded under the W-element---explains certain morphological peculiarities of the N-element, as well as situating those peculiarities along with its wide range of uses into a cross-linguistically precedented system. By dint of the W-element, this Idp formation is still nominalizing.

- The Idp is formally a possessed nominal.

- Now: a distributional constraint on Prox and Obv in nominal possession constructions:

(10) Updated Possessor Constraint (after Rhodes 2002, 1993 original)

An Obviative cannot asymmetrically c-command a clausemate Proximate in a Goal-Theme construction.

Or: Obv is oblig on Possesseees when the Possessor is 3rd person, but not when 1/2.

- This constraint is observed for nominal possession constructions (11)....

(11) Possessor Constraint: nominal Goal-Theme = possession (PD:8)

| | | |
|------------|----------------|---|
| nikawæss | 'my mother' | 1-mother |
| kikawæss | 'your mother' | 2-mother |
| wikawæssal | 'h/her mother' | 3 [Prox]-mother-Obv |
| *wikawæss | 'h/her mother' | 3[Prox? Obv?]-mother[Prox] = [unattested under normal 'h/her mother' interpretation] |

...and also for the verbal equivalent.

• Namely, the configuration of Goal (= notional indirect object) and Theme (notional direct object) in a ditransitive:

(12) Possessor Constraint: verbal Goal-Theme = ditransitive (Rhodes 2002:(7), 1991:(27))

Ngii-mkamwaa kiwenziinh niw wgwisan.

| | |
|-----------------------------|----------------------|
| ni-gii-mak-amaw-aa | akiwenziinh |
| 1SUBJ-PAST-find-BEN-3AN OBJ | old man _i |

| | |
|------------------------|------------------------------|
| niw | o-gwis-an |
| that _j -OBV | 3POSSi-son _j -OBV |

a. 'I found the old man_i's son_j for himi.'

b. * 'I found the old mani for his_i son_j.'

• Recall now that the present model of pronominal features allows us to derive the following parallelism:

[Prox [Obv]] : [Obv [Prox]] :: [1|2 [3]] : [3 [1|2]]

• Holding to this predicts that if [Obv [Prox]] is ill-formed in a possession configuration, so is [3 [1|2]]:

***[Obv [Prox]] :: *[3 [1|2]] / Possession configuration**

• Recall that the Idp morphological clause-type uses Possessor morphology.

• A [3 [1|2]] mapping directly into Idp's Goal-Theme (=Possessor) morphosyntax would produce an illicit *Possessor « Possessee configuration:

*[3Possessor [1|2Possessee]] (cf. *[Obv [1|2Prox]])

• A morphological clause-type that surface-marks pronominal features by Goal-Theme morphosyntax---e.g. nominal possession morphology---cannot realize a [3 [1|2]] configuration directly.

• Such a morphosyntax could, however, handle an A-moved inversion thereof, i.e.

[[1|2]_i[3[t_i]]

...since then there would be no PCC-type violation entering this Goal-Theme "filter".

• This is what the Inverse does.

- Inverse independently attested as an A-raising-type predicate: Inverse Spatial (13-a) and Inverse Reflexive (13-b).

(13) Inverse Spatial and Inverse Reflexive

a. Inverse Spatial: -Appl.əkw.e *typically: spatial/diffuse/ambient agent/force*

ak^wanələyákhoke, áwikəwəm.
 ak^wan-əliyak-ah-^o.əkw.e-[w] a-wikəwəm
 cover-snow-by_GenInstr-Appl.INV.LV^{NI}-W 3-house
 'His house [= NI] is covered with snow.' (S:60:62)

cf. nəkatáləyakħa nə-kə-l.t-əliyak-ah-^o.ə-[w]
 'I hide NA in the snow' 1-hide-Appl.T-snow-by_GenInstr-Appl.DIR-W

b. Inverse Reflexive *typically: notional middle (voice) of perception*

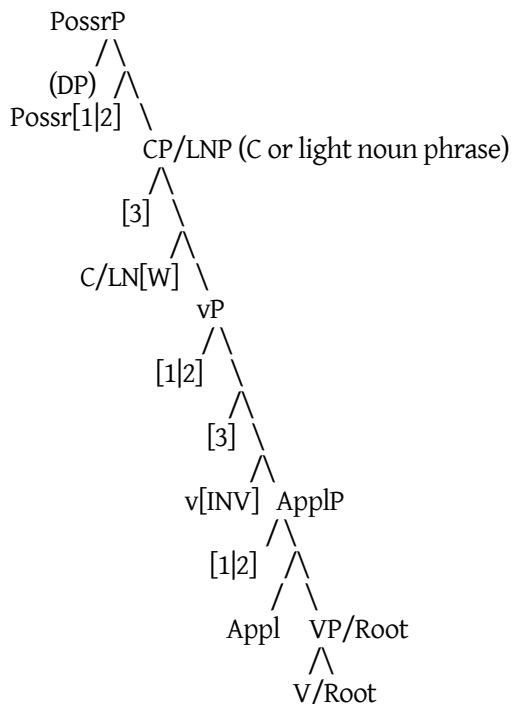
sipkéləməkwət sipk-el-əm.əkw.at-[w]
 'NI seems like a long time' (PD:482) long_time-emote-Appl.INV.rflxLV^{NI}-W

cf. nóleləmə nə-wəl-el-əm.ə-[w]
 'I am pleased, delighted with NA' (PD:464) 1-good-emote-Appl.DIR-W

- Inverse as A-movement: Inv (and not Dir) scope ambiguities in Passamquoddy are passive-like, i.e. notional object over notional subject (Bruening 2001, 2005).

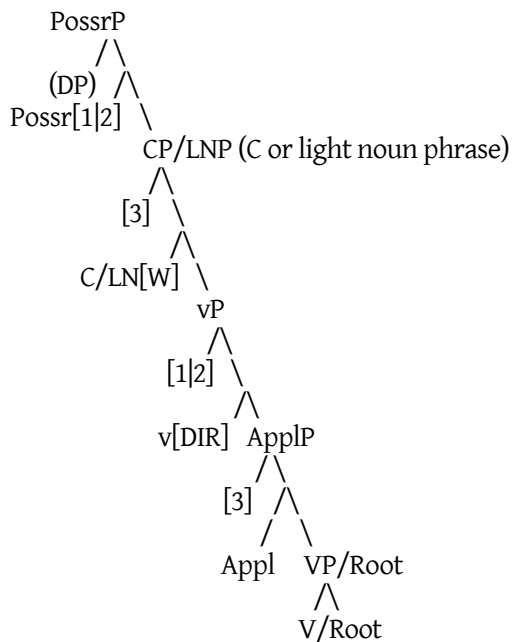
• A basic A-raising syntax for the Inverse:

(14) Idp Inverse syntax: [[1|2|3 [1|2]]] configuration



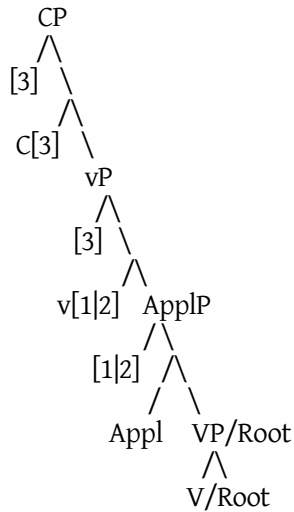
- Still open question as to the exact syntax at and above the level of the Idp CP/light noun phrase.
 - E.g. could be double-headed construction, as above, or single head hosting two arguments (i.e. Nevins 2006:21's Multiple Agree (Hiraiwa 2001, 2004) domain for PCC effects).
 - Crucial for present account is simply that above the level of core argument structure (vP) lies a filtering Goal-Theme construction.
 - Rough idea as to how/why of PCC effects in Goal-Theme constructions: assume pronominal feature interpretation is locally cyclic. Pronominal features in the same local domain are thus sent off to interpretation (semantic Spell-Out) together: Condition C violations (= dependent feature contrasts c-commanding their interpretational antecedents) at this point result in a crash.
- Has no visible effects in Direct construction:

(15) Idp Direct syntax: [1|2 [3]] configuration



- And this filtering layer of Goal-Theme morphosyntax is absent in the Conjunct:

(16) Idp Direct syntax: [1|2 [3]] configuration



- Hence Conjunct does not require [3 [1|2]] Inverse. Just looks like average Subj-Obj- pattern.
- The Idp morphological clause-type uniquely surface-marks pronominal features with nominal possession morphology...and uniquely requires the Inverse for [3 [1|2]] configurations.
- Cj does not. Nor Imperative.

Predictions:

- Unidirectional variation only in Inverse [3 [1|2]]: Inverse not prohibited from appearing with non-Idp [3 [1|2]], but only consistently found (= required) for Idp.

(17) [3 [1|2]] Pseudo-Inverse Cj (after Goddard and Bragdon 1988:556; Valentine 2001:295)

Wp = Wampanoag (Massachusett)
 Nsb = Nishnaabemwin (Ojibwe, Ojibway, Ojibwa)

a. Conjunct: [3[1]]

| | | | |
|-----|------------------------|----------|----------------------------|
| | Appl.INV-?LV-1sCj | variant: | Appl.LV ¹ -NACj |
| Wp | Appl.ukw-ē-y(ôn) | | Appl.i-t |
| Nsb | Appl.ig(w)-o-yaanh | | Appl.i-d |
| | '(that) NA acts on me' | | |

| | | | |
|----|-------------------------|----------|----------------------------|
| b. | Conjunct: [3[2]] | | |
| | Appl.INV-?LV-2sCj | variant: | Appl.LV ² -NACj |
| | Wp -ukw-ē-yan | | (not attested) |
| | Nsb -ig(w)-o-yan | | V-.ø-k |
| | '(that) NA acts on you' | | |

c. Penobscot Idp [3[1|2]] Inverse comparandum to (42☉37a)

| | |
|----------------------------|------------------------------|
| nətihlək ^w | nə-ih-l.ək ^w -[w] |
| 'he told me' | 1-tell-Apppl.INV-W |
| (kesihlat (GD version):45) | |

- I.e. [3 [1|2]] Inverse in Cj is possible, but at best motivated by analogy/leveling to Idp pattern---a weak and variation-prone motivator at best---and not by a strong, exceptionless grammatical constraint like that found in Idp. Hence relative rarity of [3 [1|2]] Inverse in Cj, and at least dialectal variation with non-Inverse even where attested.

- Nature of the interposed vowel (Wp -ē-, Nsb -o-) still not understood.

- Inverse only obligatory for [3 [1|2]] configurations in a morphological clause-type that engages nominal possession syntax. Namely, the Idp...or any other nominal-possession-based morphological clause-type.

- New data from Arapaho (Cowell and Moss 2008:374-377): Arapaho has innovated a morphological clause-type (Dependent Participle) based on a different nominalizer element than PWN/MWN elements, but still uses etymological nominal possession syntax. And again takes Inverse for [3 [1|2]].

- Similar though less extensive (due to a corpus closed more than 150 years ago) data for still another independent innovation of nominal-based morphological clause-types with Possessor-based pronominal morphology, in Wampanoag (Massachusetts; Goddard and Bragdon 1988).

4. Antihierarchy: 2»1 could actually reaffirm 1»2

Core notion:

(a) Maintain universal 1»2»3(...) notional hierarchy (as derived in §2) by treating cases of apparent 2»1 as instances of *antihierarchy* = where the hierarchically *lower* competitor wins morphological realization.

(b) Antihierarchy (or equivalent) is independently needed to account for two other morphological patterns (PWN/MWN elements, and Peripheral Endings) in which the hierarchically lower/lowest competitor wins.

(c) Can thus treat apparent 2»1 as antihierarchy on 1»2 with no new machinery.

(d) Predicts that only possible apparent orderings of notional hierarchy can be

1»2»3(...) and (...)3»2»1

i.e.

*1»3(...)»2 and *2»(...)3»1 and *2»1»3(...)

(e) Sets up new project to identify and characterizer domains triggering direct and reversed hierarchy effects.

• Algonquian languages are famous for exhibiting morphology that suggests a 2»1 ranking of pronominal features, rather than the far more common (and putatively universal) ranking 1»2.

(18) Algonquian 2»1 effects: Idp

a. kənamihol kə-nam-h-^o.əl-əp
'I see you' (SDMC) 2-seen-cause-Appl.LV²-P

kənamihi kə-nam-h-^o.i-əp
'you see me' (SDMC) 2-seen-cause-Appl.LV¹-P

b. kətəli-wisi... kə-əl-wis.i-əp
'you are called...' (SDMC) 2-Xmanner-be_called.LV^{NA}-P

nətəli-wisi... nə-əl-wis.i-əp
'I am called...' (SDMC) 1-Xmanner-be_called.LV^{NA}-P

• *kə-* '[2]' occurs as the pronominal proclitic in all Idp [1]/[2] configurations, in favor of *nə-* '[1]'.

• 2»1, apparently.

But: 2»1 is already well-established as descriptively inadequate as a global parameterization for Algonquian languages (Déchaine 1999, Quinn 2006, Zuñiga 2008).

• In most Algonquian languages, Possessor Plurals show a 1»2 ranking:

(19) 1pl»2pl (adapted from S:72:105)

a. kə-----ələpəna kə-[-----].əl-əp-əna^w
'1pl → 2(sg/pl)' 2-[stem collocation].LV²-P-1pl

kə-----ipəna kə-[-----].i-əp-əna^w
'2 (sg/pl) → 1pl' 2-[stem collocation].LV¹-P-1pl

b. kə-----ələpα kə-[-----].əl-əp-əwα^w
'1sg → 2pl' 2-[stem collocation].LV²-P-≠1NApl

kə-----ipα kə-[-----].i-əp-əwα^w
'2pl → 1sg' 2-[stem collocation].LV¹-P-≠1NApl

But: ...only in "Type A" Algonquian languages. "Type B" show the reverse, i.e. 2»1:

(20) Cree Type A and Type B (adapted and corrected from Zuñiga 2008:282, via Wolfart 1973)

| | Type A | Type B |
|----|--|--|
| a. | - <u>iti-nān</u> - <u>i-nān</u> | 1pl → 2(sg/pl) 2(sg/pl) → 1pl |
| | | <u>1pl</u> → 2sg 2sg → <u>1pl</u> |
| b. | - <u>iti-nāwāw</u> - <u>i-nāwāw</u> | 1sg → 2pl [<i>sic</i> : 2(sg/pl)] <u>2pl</u> → 1sg |
| | | 1(sg/pl) → <u>2pl</u> <u>2pl</u> → 1(sg/pl) |

But: Apparent 2»1 in pronominal proclitics is found in both "Type A" and "Type B" languages.

- In "Type A" languages 2»1 vs. 1»2 has to be stipulated on a domain-by-domain basis.
- "Type A" systems are far more common...

...and "Type A" pattern is also found in Cj (no survey done yet for "Type B" possibility):

(21) 1pl»2pl: Conjunct (Nishnaabemwin, adapted from Valentine 2001:276)

| | | | |
|----|-----------------------------|--|--------------------|
| a. | -inaang '1pl → 2pl' | -in-(y)aang -LV ² -1plCj | *...-(y)eg '2plCj' |
| b. | -iyaang '2(sg/pl) → 1pl' | -i-(y)aang -LV ¹ -1plCj | *...-(y)eg '2plCj' |

N.B. '1pl → 2sg' has innovated; syncretized with 'Impersonal → 2sg'.

So: Take 1»2 as a global and universal notional ranking---directly derivative of the pronominal feature system representation argued for in §2...

...and bring in the notion of **antihierarchy**.

Antihierarchy: Where the hierarchically *lower* competitor wins morphological realization.

• Usually noted in passing in descriptions, but rarely cited in analysis of hierarchy effects.

- Bruening 1999: Wampanoag (involves object-definiteness)
- Quinn 2006: Penobscot PWN elements (more or less purely pronominal-featural)
- Trommer 2008: Menominee MWN elements (also involves non-pronominal features)

• PWN/MWN elements follow a reverse(d) hierarchy.

• P-elements: in [1|2]-only configurations:

(22) P-elements: distribution and form

a. Intransitive

[nə]notessepəna... nə-note-ohs.e-əp-ənaw
'we (excl)go out...' (SDasα) 1-out-walk.DO^{NA}-P-1pl

b. Transitive

kənamihpənač kə-nam-h-^o.i-əp-ənaw=č
'you will see us (SDasα)' 2-seen-cause-Appl.LV¹-P-1pl=FUT

• W-elements: in configuration with any [3] but no N-element-triggers [= SecObj, TI notional direct object, Impersonal argument of (AI) intransitive]

• Descriptively, W-element = basic, unmarked third person element in the Idp

• In Penobscot, rarely surfaces as /w/: primarily as mutation on vowel (23-a) or even dissimilation to /i/ when adjacent to negative /w/ (23-b):

(23) W-elements: distribution and form

a. Intransitive (w/ vowel mutation)

àpo ap.i-[w]
'NA sits' (PD:73) sit.LV^{NA}-W

nətapi nə-ap.i-əp
'I...' (PD:73) 1-sit.LV^{NA}-P

b. Transitive (with dissimilation)

...àtakatteč kək^wəss kkisi-aliháwina.

αta=ka=tte=č kək^wəss kə-kis-əl-h-^o.α-w-[w]-ənaw
not=FOC=INT=FUT what 2-can-Xmanner-cause-Appl.DIR-NEG-W-1pl

'...there is nothing at all we can do with him.' (čəwamis:10)

• N-elements: all other cases, i.e. if there is a Secondary Object (24-a), TI notional direct object (24-b), or Impersonal argument of (AI) intransitive (24-c)

(24) N-elements: distribution and form

a. nəmílanal nətémisal nə-m-l.α-əne-al nə-em-s-al
'I give NA my dog' 1-give-Appl.DIR-N-Obv 1-dog-DIM-Obv

b. nətələsəmən nə-əl-əs.əm-əne
'I cut NI' 1-Xmanner-by_blade.LV^{NA}-N

c. mítsolətin mit-Vhs.i-w-ələt.i-əne
'there is a feast, a feast is given, there eat-?.LV^{NA}-W-ExtPl.LV^{NA}-N
tis eating by a group, it is time to eat' (PD:282)

Omitted: use of N-element as Subordinative morphological clause-type marker (argued to be extension of Secondary Object use;

see Goddard 1983, Quinn 2007).

- Choice of PWN elements follows an inverted hierarchy:

| | | | | |
|-----------|---|-----|---|-------|
| N-trigger | » | [3] | » | [1 2] |
| N | | W | | P |

- PWN endings show antihierarchy pattern.
- Primary and Secondary Objects in Peripheral Endings: another antihierarchy pattern.
- Primary and Secondary Objects (Rhodes 1990, inter alia)

(25) Primary Object: ditransitive notional indirect object (25-a)t, takes same morphology as monotransitive notional direct object (25-b)

- | | | |
|----|---|--|
| a. | nətakámənal 'I hit NA with NA(obv)' (PD:447) | nə-tak-am.α-əne-al 1-hit-Appl.DIR-N-Obv |
| b. | nətákamə 'I hit NA, strike NA' (PD:447) | nə-tak-am.α-[w] 1-hit-Appl.DIR-W |

(26) Secondary Object: ditransitive notional direct object (26-a), same morphology as AI+O (26-b) and TI notional direct objects (26-c)

- | | | | |
|----|--|---|-----------------------------|
| a. | nəmílənal nətémisal 'I give NA my dog' | nə-m-l.α-əne-al 1-give-Appl.DIR-N-Obv | nə-em-s-al 1-dog-DIM-Obv |
| b. | nətehsíkəpawin iyo 'I am standing on this [NI]' | nə-tehs-kəpaw.i-əne 1-atop-stand.LV ^{NA} -N | iyó this ^{NI} |
| c. | nətə̀ləsəmən 'I cut NI' | nə-əl-əs.əm-əne 1-Xmanner-by_blade.LV ^{NA} -N | |

- Possessor Constraint (= fundamental "ranking" test) holds between them:

*[PrimObj(Obv) & SecObj(Prox)]

(27) Possessor Constraint: verbal Goal-Theme = ditransitive (Rhodes 2002:(7), 1991:(27))

Ngii-mkamwaa kiwenziinh niw wgwisan.

| | |
|---|-------------------------------------|
| ni-gii-mak-amaw-aa 1SUBJ-PAST-find-BEN-3AN OBJ | akiwenziinh old man _i |
|---|-------------------------------------|

| | |
|-------------------------------|---|
| niw that _j -OBV | o-gwis-an 3POSSi-son _j -OBV |
|-------------------------------|---|

- | | |
|----|--|
| a. | 'I found the old man _i 's son _j for himi.' |
| b. | *'I found the old mani for his _i son _j .' |

Reasoning:

SecObj is/must be Obv to PrimObj Prox
Prox»Obv

→ PrimObj»SecObj

- Suggests that Primary Objects notionally outrank Secondary Objects: *PrimObj»SecObj*
- PrimObj and SecObj morphologically compete: for Peripheral Ending position.

(28) Peripheral Endings

a. Nominal plurality, obviation indexed by Peripheral Endings (SDMC)

| | | |
|------------|--------|------------|
| pəsəwis | 'cat' | (Prox, sg) |
| pəsəwis-ak | 'cats' | (Prox, pl) |
| pəsəwis-al | 'cat' | (Obv, sg) |

b. Primary Objects indexed via Peripheral Endings

| | |
|-----------------------|---|
| ...nətihlāk | kə-ih-l.α-[w]-ak |
| '...I told them (NA)' | 2-tell-AppI.DIR-W-NApl (S:30:tapawas nākā wikohset) |

c. Secondary Objects indexed via Peripheral Endings

| | | |
|--------------------|-----------------------|---------------|
| nəmłānal nətémisal | nə-m-l.α-əne-al | nə-em-s-al |
| 'I give NA my dog' | 1-give-AppI.DIR-N-Obv | 1-dog-DIM-Obv |

d. Secondary Objects outcompete Secondary Objects to index via Peripheral Endings

wəkəmotənəmáwāna, təmáhk^wewa.

| | |
|--|---|
| wə-kəmot-ən.əm-aw.α-əne-a | təm-αhk ^w .e-ewe-a. |
| 3-theft-by_hand.LV ^{NA} -AppI.DIR-N-Obvpl | sever-wood.DO ^{NA} -pelt-Obvpl |

'he steals beaver skins from him' (S:60:44:(147))

• Mechanism for antihierarchy still not clear. Possible directions:

- Antihierarchy: marking dependents, marking the featurally more complex case (cf. bare Prox, singular, vs. marked Obv, plural).
- All covered under Trommer 2008 account of Menominee MWN antihierarchy?
- What can be done, now: seek to characterize the configurations/domains that trigger antihierarchy effects.
- E.g.: quite striking that Pb antihierarchy effects occur only at the two edges:

Pronominal Proclitics ... Peripheral Endings

5. Concerns and conclusions

Still remaining:

- Better characterization of Goal-Theme syntax needed, and of "featural Condition C" therein.
- Survey of 1/2 ranking effects (esp 1pl/2pl) in the Conjunct sorely needed.
- Antihierarchy domains and core mechanism need to be explained; predicted constraint on possible notional reranking needs to be tested.
- Nature of the interposed vowel (Wp -ē-, Nsb -o-) in [3 [1|2]] Pseudo-Inverse Cj still not understood.
- Model needs to be run mechanically through more Algonquian languages...
- ...and then perhaps some other inverse systems as well.

6. Abbreviations

| | |
|-----------|---|
| 1 | 1st person (if not otherwise specified, indicates Possessor marking) |
| 2 | 2nd person (if not otherwise specified, indicates Possessor marking) |
| 3 | 3rd person (if not otherwise specified, indicates Possessor marking) |
| 1pli | first person plural inclusive |
| 1ple | first person plural exclusive |
| NA | NA gender class ("animate"); (in glosses) pronominal gloss for same |
| NI | NI gender class ("inanimate") (in glosses) pronominal gloss for same |
| sg | singular (usually not marked) |
| pl | plural |
| obv | obviative |
| abs | absentative |
| Imps | Impersonal (pronominal feature) |
| ExtPl | Extended Plural (special verbal derivation, something like a pluractional or collective/distributive) |
| T | t-element |
| Appl | Applicative (general transitivizer with NA Primary Objects) |
| ° | diacritic rounding effect on weak vowels |
| LV | light verb |
| | LV ^{NA} : light verb taking NA-class argument |
| | LV ^{NI} : light verb taking NI-class argument |
| DIR | Direct light verb |
| INV | Inverse light verb |
| GenInstr | general instrument |
| rcp | reciprocal light verb |
| rflx | reflexive light verb |
| mediorflx | medioreflexive ("mediopassive") light verb |
| Idp | Independent (morphological clause-type) |
| Sbd | Subordinative (subtype of Independent) |
| Cj | Conjunct (morphological clause-type) |
| Imp | Imperative (morphological clause-type) |
| P | P-ending (clause-type marker) |
| W | W-ending (clause-type marker) |

| | |
|------|--|
| N | N-ending (clause-type marker) |
| VAR | variable |
| =FUT | future enclitic |
| =POT | potential enclitic |
| =UCT | uncertainty-marking evidential enclitic |
| =QT | quotative/secondhand information evidential enclitic |
| TA | transitive animate (verb-stem class) |
| TI | transitive inanimate (verb-stem class) |
| AI | animate intransitive (verb-stem class) |
| II | inanimate intransitive (verb-stem class) |
| AI+O | animate intransitive taking Secondary Object (verb-stem class) |
| OTI | transitive inanimate taking no object (verb-stem class) |
| | |
| SUBJ | = subject |
| PAST | = past tense |
| BEN | = benefactive |
| 3AN | = DIR |
| POSS | = Possessor |
| OBV | = Obv |

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