

The C-T Domain in Algonquian: Agreement-based and discourse-configurational

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- ⇒ Miyagawa (2010, 2017) develops a typology of the possible variation in Feature Inheritance (Chomsky 2007; Richards 2007) between C-T
- Variation in the distribution of person features (ϕ ; i.e., person, number, and gender) and discourse features (δ ; i.e., topic, focus, and Q)
 - Attempts to account for variation between languages that are agreement-based, e.g., English, and discourse-configurational, e.g., Japanese, as well as those in between

Table 1: Miyagawa's 2017 typology

Category	C-T Domain	e.g.,
I	$C_{\phi/\delta_{FOC}}$ $T_{\delta_{TOP}}$	Japanese
II	C_{δ} T_{ϕ}	English
III	$C_{\delta_{FOC}}$ $T_{\phi/\delta_{TOP}}$	Spanish
IV	$C_{\phi/\delta}$ T	Dinka

- ⇒ Big picture question: Where/how do Algonquian languages fit into this typology?
- Similar to an agreement-based language, there is ϕ -agreement in T (in addition to several other heads)
 - Similar to a discourse-configurational language, the discourse play a role in word order and appearance of arguments

- ⇒ Today's Question: Can/do discourse factors play a role in ϕ -agreement, particularly at a distance, such as in the verbal domain?
- Proposal: Yes! In addition to the C-T domain, discourse factors can impact the spell-out of Voice, theme signs
 - This presents a solution to a puzzle regarding language internal clause-based variation in theme sign patterning; (1) in main clauses vs. (2) in dependent clauses in Southern East Cree (SEC)

(1) niwaapamikunaanich
ni-waapa-m-iku-naan-ich
1-see-AN-ELSE-1PL-3PL
'They see us'
(3PL > 1PL)

(2) e waapamiyamihwaau
e waapa-m-i-y-amiht-waau
C see-AN-1OBJ-EP-1PL-3PL
'That they see us...'
(3PL > 1PL)

(Southern East Cree; Junker & MacKenzie 2011-15)

⇒ **Roadmap:**

§2 Agreement in the C-T domain: Flavors of C

§3 Agreement in Voice: Theme signs

§4 Proposal & supporting evidence (*includes joint work with Miloje Despić (Cornell)*)

Agreement overview

- ⇒ Algonquian verbs can have many affixes that covary with the person (ϕ) features of arguments
 - A typical transitive verb with animate arguments (AN) in Southern East Cree is shown in Table 2

Table 2: SOUTHERN EAST CREE TA VERB (MAIN CLAUSE)
 Junker & MacKenzie (2011-15)

prefix	verb	suffixes			
person	root	verb final	theme sign	inner suffix	outer suffix
<i>ni-</i>	<i>waapa</i>	<i>-m</i>	<i>-iku</i>	<i>-naan</i>	<i>-ich</i>
1	see	AN	ELSE	1PL	3PL
‘They(PL) see us’ (3PL > 1PL)					

Agreement overview

- ⇒ 2 different inflectional sets depending on clause-type: Main clause vs. Dependent clauses, e.g., interrogatives and embedded clauses
 - There are 4 differences in inflection (in bold)

Table 3: SOUTHERN EAST CREE TA VERB BY CLAUSE
 Junker & MacKenzie (2011-15)

prefix	root	verb final	theme sign	inner suffix	outer suffix
<i>ni-</i> 1	<i>waapa</i> see	<i>-m</i> AN	<i>-iku</i> ELSE	<i>-naan</i> 1PL	<i>-ich</i> 3PL
Main clause: 'They(PL) see us' (3PL > 1PL)					
prt	root	verb final	theme sign	inner suffix	outer suffix
e C	<i>waapa</i> see	<i>-m</i> AN	<i>-i</i> 1OBJ	<i>-yamiht</i> 3 > 1	<i>-waau</i> 3PL
Dependent clause: 'That they(PL) see us...' (3PL > 1PL)					

Person prefix

- ⇒ Indexes a single argument;
- ⇒ (infamous) 2>1>3 hierarchy for spell-out
- ⇒ Typically analyzed as either:
 - (i) the spell-out of C, e.g., Halle & Marantz 1993 & Richards 2004, or
 - (ii) proclitic which results from ϕ -agreement on T, e.g., Oxford 2013 & Lochbihler & Mathieu (2016)

Table 4: Southern East Cree
(Junker & MacKenzie 2011-15)

2	- <i>chi</i>
1	- <i>ni</i>
3	- \emptyset

Person prefix

⇒ Only appears in main clauses; absent in dependent clauses

(3) a. chiwaapamin
chi-waapa-m-i-n
2-see-AN-1OBJ-SAP
'**You** see me'
(2>1)

b. niwaapamaau
ni-waap-am-aa-u
1-see-AN-3OBJ-3
'**I** see her/him'
(1>3)

c. waapamaau
waap-am-aa-u
see-AN-3OBJ-3
'S/he see her/him(OBV)'
3>3(OBV)

(4) a. e waapamiyin
e waap-am-i-y-in
C see-AN-1OBJ-EP-1OBJ
'**That** you see me...'
(2>1)

b. e waapamak
e waap-am-aa-k
C see-AN-3OBJ-3
'**That** I see her/him'
(1>3)

c. e waapamaat
e waap-am-aa-t
C see-AN-3OBJ-3
'**That** s/he sees her/him(OBV)'
(3>3(OBV))

Inner suffix

- ⇒ Different forms in main and dependent clauses
 - While main clause forms are relatively stable/transparent, embedded forms can vary; tendency for special/portmanteau forms
- ⇒ Typically analyzed Spell-out of T (or INFL), e.g., Coon & Bale 2014; Oxford 2014b
 - ⇒ Table 5 summarizes the Southern East Cree inner suffixes

Table 5: Southern East Cree inner suffixes by clause type
 (Junker & MacKenzie 2011-15)

	Main	Dependent
1PL.EXC	<i>-naan</i>	<i>-aahch</i> (- <i>achiht</i> 1PL>3; - <i>amiht</i> 3>1PL)
1PL.INC	<i>-(naa)nuu</i>	<i>-ahkw</i>
2PL	<i>-(naa)waau</i>	<i>-ekw</i>
3	<i>-∅~-u</i>	<i>-t~-k</i>
2SG	<i>-n</i>	<i>-in</i> (- <i>at</i> 2>3; - <i>isk</i> 3>2)
1SG	<i>-n</i>	<i>-aan</i> (- <i>ak</i> 1>3; - <i>it</i> 3>1)

Inner suffix

- ⇒ Grammatical role is not relevant (either subject or object can be indexed) for SAP plural
- Ambiguous forms are possible, such as (5) & (6)
 - In both instances, it is unclear if 'you' refers to 'youSG' or 'youPL'
- ⇒ There is a preference 'hierarchy' which can vary between languages
- SEC (most common pattern): 1PL.INC, 1PL.EXC > 2PL > 3 > SAPSG
 - In several Cree languages, such as Moose Cree and Swampy Cree, the hierarchy is 1PL.INC, 2PL > 1PL.EXC > 3 > SAPSG (MacKenzie 1980; Macaulay 2009)

(5) chiwaapaminaan
chi-waapi-m-i-**naan**
2-see-AN-1OBJ-**1PL**
'You(-all) see **us**'
(2(PL) > **1PL**)

(6) chiwaapamitinaan
chi-waapi-m-iti-**naan**
2-see-AN-2OBJ-**1PL**
'**We** see you(-all)'
(**1PL** > 2(PL))

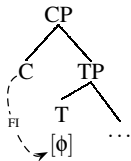
(Southern East Cree Junker & MacKenzie 2011-15)

Flavors of C: Previous Proposal

- ⇒ Lochbihler & Mathieu (2016) propose that that both clause types have different properties
 - ⇒ They dispense with Strong Uniformity (Miyagawa, 2010), the notion that all clauses have a uniform set of δ - & ϕ -features

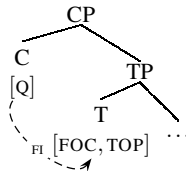
⇒ Main C: merges with ϕ -features and passes them to T via Feature Inheritance

→ C lacks δ -features



⇒ Dependent C: merges with δ and passes TOP & FOC to T via Feature Inheritance

→ C keeps Q and lacks ϕ -features



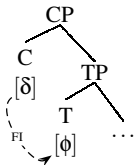
Flavors of C: Slight revision

⇒ Given the presence of ϕ -agreement in T in both clauses (inner suffix), it is necessary that Dependent C also has ϕ

→ No need to dispense with Strict Uniformity; δ -features are also added to Main clause C (δ movement attested in main clauses, e.g., Junker 2004)

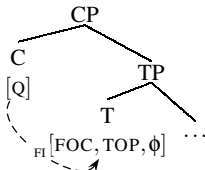
⇒ Main C: merges with δ & ϕ ; passes ϕ to T

→ C may keep a copy of ϕ (SHARE; Ouali 2008) if spell-out of person prefix



⇒ Dependent C: merges with δ & ϕ ; passes ϕ , FOC, & TOP to T

→ Under their account, δ merge with TP is followed by merge with CP



Recall: Main vs. Dependent

(7) niwaapamikunaanich
ni-waapa-m-iku-naan-ich
1-see-AN-ELSE-1PL-3PL
'They see us'
(3PL > 1PL)

(8) e waapamiyamihtwaau
e waapa-m-i-y-amiht-waau
C see-AN-1OBJ-EP-1PL-3PL
'That they see us'
(3PL > 1PL)

⇒ Different theme sign distribution

- Main clause: elsewhere ('inverse') *-iku* in (7)
- Dependent clause: 1st person object *-i* in (8)

Theme signs

- ⇒ I follow an object-marking (plus elsewhere) analysis of theme signs (e.g., Rhodes 1994, McGinnis 1999, Brittain 1999, Oxford 2019)
 - This analysis is shown for Southern East Cree in Table 6
- ⇒ Under an alternate analysis, *-aa* and *-ikw* are ‘direct’ and ‘inverse’ theme signs (e.g., Hockett 1966, Wolfart 1973, Dahlstrom 1991)

Table 6: Southern East Cree (Junker & MacKenzie 2011-15)

suffix	gloss
<i>-i</i>	1st person object
<i>-iti</i>	2nd person object
<i>-aa</i>	3rd person object (aka ‘direct’)
<i>-ikw</i>	elsewhere (aka ‘inverse’)

Quick background: Proximate-Obviative distinction

- ⇒ In a span with two 3rd person arguments, typically only one can be proximate and all others are obviative
 - **proximate**: 3rd person discourse topic
 - **obviative**: non-topical 3rd person
- ⇒ But only the obviative DP is morphologically marked, e.g., *-an* on *Mary-an* in (9)

- (9) John waabmaan Maryan
John waabm-**aa**-n Mary-an
John see-**DIR**-PROX Mary-OBV
John sees Mary...'
(3>3OBV)

(Kitigan Zibi Algonquin; Lochbihler & Mathieu 2016)

Quick background: The direct-inverse system

⇒ There is a difference between direct and inverse forms in Algonquian languages

→ **Direct** forms: the subject is proximate and the object is obviative, e.g.,
(10)

→ **Inverse** forms; the subject is obviative and the object is proximate, e.g.,
(11)

(10) John waabmaan Maryan
John waabm-**aa**-n Mary-an
John see-**DIR**-PROX Mary-OBV
John sees Mary...'
(3>3OBV)

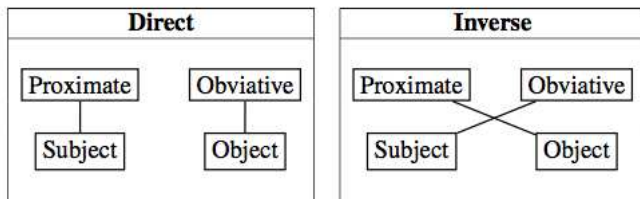
(11) John waabmigon Maryan
John waabm-**igo**-n Mary-an
John see-**INV**-PROX Mary-OBV
'If MaryOBV sees John...'
(3OBV>3)

(Kitigan Zibi Algonquin; Lochbihler & Mathieu 2016)

Quick background: The direct-inverse system

- ⇒ There is a difference between direct and inverse forms in Algonquian languages
- **Direct** forms: the subject is proximate and the object is obviative, e.g., (10)
 - **Inverse** forms; the subject is obviative and the object is proximate, e.g., (11)

Figure 1: ALIGNMENT: *adapted from Aissen (1997) and Junker (2003)*



Theme signs: 2 main distributions

Table 7: SEC Main Clause

↓S/O→	2	1	3
2		<i>-i</i>	<i>-aa</i>
1	<i>-iti</i>		<i>-aa</i>
3	<i>-iku</i>	<i>-iku</i>	<i>-iku</i>

Table 8: SEC Dependent Clause

↓S/O→	2	1	3
2		<i>-i</i>	<i>-aa</i>
1	<i>-iti</i>		<i>-aa</i>
3	<i>-iti</i>	<i>-i</i>	<i>-iku</i>

- ⇒ Majority of Algonquian languages have Table 7 in Main Clauses (Oxford, 2014a)
- ⇒ Table 8 is the most common in Dependent Clauses (Oxford, 2014a)
 - Some languages have either only Table 7 or Table 8 in both
- ⇒ There is also a mixed distribution, e.g., Mi'gmaq, Plains Cree, and Cheyenne (Oxford, 2014a), can be analyzed as a variation of one of these patterns, but I do not discuss this today

Theme signs: 2 Distributions

Table 9: SEC Main Clause

↓S/O→	2	1	3
2		<i>-i</i>	<i>-aa</i>
1	<i>-iti</i>		<i>-aa</i>
3	<i>-iku</i>	<i>-iku</i>	<i>-iku</i>

Table 10: SEC Dependent Clause

↓S/O→	2	1	3
2		<i>-i</i>	<i>-aa</i>
1	<i>-iti</i>		<i>-aa</i>
3	<i>-iti</i>	<i>-i</i>	<i>-iku</i>

Generalizations:

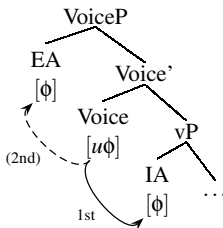
- (i) *-iku* is limited to 3rd person subject forms (Oxford, 2014a; Despić & Hamilton, 2018)
- (ii) Variation is limited to 3>SAP (i.e., 3>1 & 3>2) (Oxford, 2014a; Despić & Hamilton, 2018)
 - Main: *-iku* elsewhere ('inverse') in Table 9
 - Dependent: Object-markers; *-iti* 2nd person object in 3>1; *-i* 1st person object in 3>1 in Table 10

Theme signs: Previous Proposals

- ⇒ General consensus that theme signs are spell-out of Voice (or v^*) (e.g., Oxford 2014b)
- ⇒ Many accounts, but only a few address clause-based variation

(i) Lochbihler (2012)

- Account: Cyclic Agree account with relativized probing
- Variation: Flavors of Voice, i.e., Voice_{IND} (Main) vs. Voice_C (Dependent)

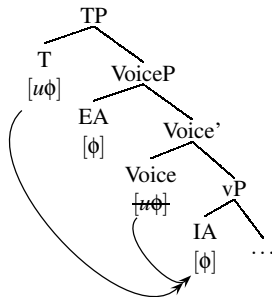


Theme signs: Previous Proposals

- ⇒ General consensus that theme signs are spell-out of Voice (or v^*) (e.g., Oxford 2014b)
- ⇒ Many accounts, but only a few address clause-based variation

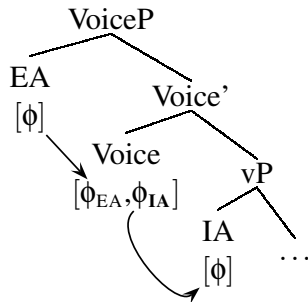
(ii) Oxford (2019)

- Account: Single probe object agreement with T agreement triggering underspecification and post-syntactic elsewhere insertion
- Variation: T agreement differs in Main vs. Dependent (More portmanteau forms in 3>SAP; T does not solely agree with the object, thus, underspecification does not occur)



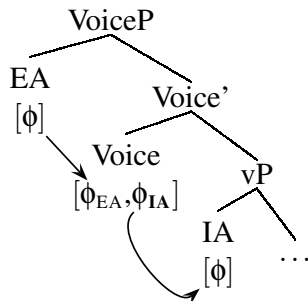
Theme signs: Our Proposal (Despić & Hamilton, 2018)

- (i) Voice enters into a single probe-goal agree relation with the Object; Object values the ϕ -probe (same as Oxford 2019)
- (ii) Voice has access to the ϕ -feature content of the subject via Spec-Head agree-like relation
- (iii) Voice has a set with both the object's and subject's ϕ -features, but asymmetrically represented;



Theme signs: Our Proposal (Despić & Hamilton, 2018)

- (iv) Post-syntactic spell-out of the object can be conditioned by the subject's ϕ -features (the subject is never spelled-out, only interacts)
- (v) Underspecification and post-syntactic elsewhere insertion is a possible result of interaction (similar to Oxford 2019 but different trigger)

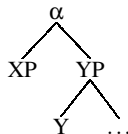


Labeling theory (Chomsky, 2013, 2015)

⇒ A theory of Labeling that is proposed to account for movement and agreement

→ Merge results in 3 possible structures

- (i) {H,XP}
- (ii) {**XP**,**YP**}
- (iii) {X,Y}



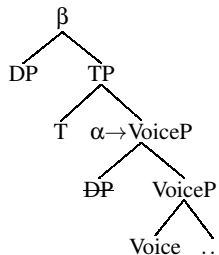
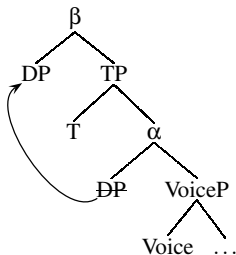
⇒ While H unambiguously projects as the label in (i), however, in (ii) & (iii), it is not clear which projects, which results in a Problem of Projection (POP)

Labeling theory (Chomsky, 2013, 2015)

⇒ Problem of Projections (POPs) can only be resolved in one of 2 ways:

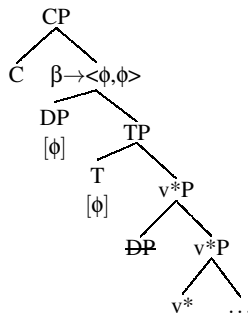
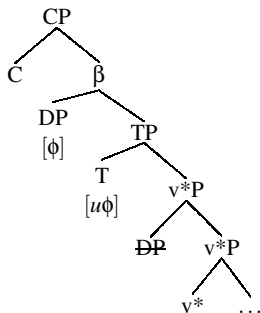
(a) Movement: One phrase/head move (IMs) to a higher position

e.g., {DP, VoiceP} POP at α is resolved by the DP merging (IM) with TP;
which results in α being labeled VoiceP



Labeling theory (Chomsky, 2013, 2015)

- ⇒ Problem of Projections (POPs) can only be resolved in one of 2 ways:
- (b) Shared feature: The Labeling Algorithm (LA) searches each head for a shared feature to serve as the label
- e.g., {DP,TP} POP is resolved by β being labeled $\langle\phi,\phi\rangle$ (which results in unvalued ϕ on T to be valued by D)

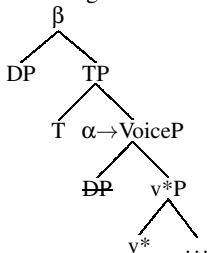


Weak vs. Strong Heads (Chomsky, 2015)

Weak Heads:

- Cannot project after Merge (EM)
- Need an argument to help it project

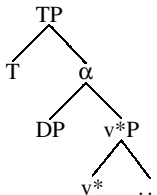
e.g., T in English & R universally



Strong Heads:

- Project independently after Merge (EM) without
- Do not need an argument to help it project

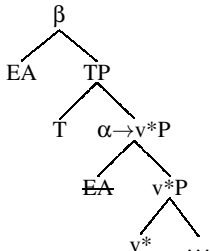
e.g., T in Italian



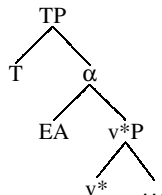
⇒ Weak-Strong distinction argued to derive the Extended Projection Principle (EPP) & Empty Category Principle (ECP) adherence in English (due to ‘weak’ T), but not in Italian (due to ‘strong’ T)

{EA, v*P} POP?

Weak Heads:



Strong Heads:



- \Rightarrow {EA, v*P} POP, or α above, is resolved by movement in 'weak' T languages
- \Rightarrow But what about in 'strong' T languages?
 - (i) Movement, if EA IMs with CP (potentially discourse driven)
 - (ii) Shared labeling via LA (if EA does not IM further)

Theme signs: Our account

1. Algonquian languages have ‘strong’ T

- T has ϕ -features in all clauses (inner suffix)
 - Algonquian does not adhere to the ECP; it is a radical pro-drop language
- e.g., Every example thus far has been transitive and has had not overt arguments

2. {EA, v*P} POP is resolved by shared feature labeling: $\langle \phi, \phi \rangle$

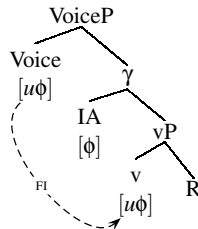
- However, Voice already has been valued by the IA ϕ -feature set via a previous agree relation
- e.g., Similar to $\langle \phi, \phi \rangle$ labeling in Icelandic quirky-case subjects and T, which has the ϕ -feature set

⇒ Theme signs are the spell-out of the IA ϕ -feature set with the potential for the EA ϕ -feature set to interact post-syntactically

- Main clauses: EAs do not IM further and are labelled $\langle \phi, \phi \rangle$ allowing for EA interaction
- Dependent clauses: EAs IM further due to discourse factors, thus, {EA, v*P} is labeled v*P and the EA (typically) does not interact

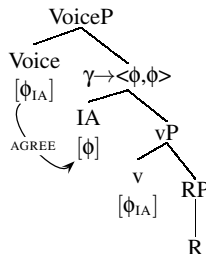
Theme signs: Our account

- ⇒ Voice EMs, projects, and undergoes Feature Inheritance with v
 - Tripartite verbal domain: Voice- v -R (e.g., Pylkkänen 2002; Harley 2013; Oxford 2014b)
 - Voice keeps a set of $u\phi$ -features and passes a set of $u\phi$ -features to v (i.e., SHARE Ouali 2008)
- ⇒ Note: that v (Chomsky's R) is universally 'weak', so needs the IA to merge with it to project
 - This creates the γ POP ($\{IA, vP\}$)



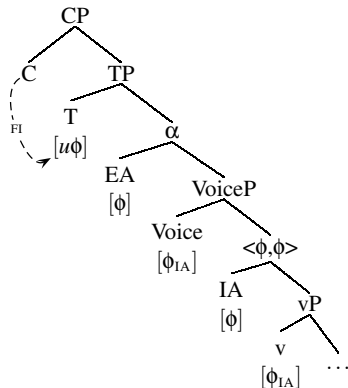
Theme signs: Our account

- ⇒ Voice enters into a probe-goal agree relation with the IA
- ⇒ γ POP ($\{IA, v\}$) is resolved by shared $\langle \phi, \phi \rangle$ feature labeling
 - $u\phi$ -features on v are valued by the IA; verb final spell-out (sensitive to animacy of IA)
- ⇒ Head movement of R to v to Voice precedes transfer (not shown here)
 - transfer is of the complement of R; Voice loses phase head status after adjoining to R- v (similar to phase sliding Gallego 2008)



Theme signs: Our account

- ⇒ EA merges (EMs) with VoiceP creating α POP ($\{EA, \text{VoiceP}\}$)
- ⇒ T merges (EMs) and projects; since it is 'strong'
- ⇒ C merges (EMs), projects, and undergoes Feature Inheritance with T
 - Abstracting away from the flavors, C minimally passes a set of $u\phi$ -features to T



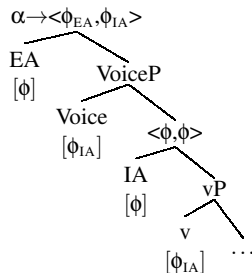
Theme signs: Our account

⇒ Several operations occur before head movement & transfer:

- (i) T probes the EA & IA: spells-out as inner suffix
 - Neither EA & IA can merge with TP after C has merged (Chomsky 2015 avoiding counter-cyclic movement)
 - (ii) For C, either:
 - (a) Main C: probes the EA (& possibly the IA); spells-out as person prefix
 - (b) Dependent C: Discourse-marked arguments merge with CP
 - e.g., *wh*-, focus, or topic marked arguments
 - (iii) For α POP ($\{EA, \text{VoiceP}\}$) either:
 - (a) Main C: labeled $\langle \phi, \phi \rangle$
 - (b) Dependent C: Discourse-marked arguments merge with CP
- ⇒ With respect to ordering, it is important for our account that:
- (1) In main clauses: T agree $>$ α labeled $\langle \phi, \phi \rangle$ $>$ discourse movement
 - (2) In dependent clauses: T agree $>$ discourse movement $>$ α labeled $\langle \phi, \phi \rangle$
 - Plains Cree shows the the main clause ordering and (a variant of) theme sign distribution in dependent clauses
- See Obata et al. (2015) for a discussion of variation and ordering of phase final operations

Theme signs: Our account

- ⇒ Main C derivation: LA labels $\alpha <\phi, \phi>$
 - LA finds valued ϕ on EA and valued ϕ Voice (‘last-resort’ labeling?)
- ⇒ Importantly, this does not involve valuation
 - Typically shared feature labeling results in valuation of one head, e.g.,
 - (i) $<\phi, \phi>$ labeling of {EA, TP} typically involves $u\phi$ on T valued by D in EA
 - (ii) $<Q, Q>$ labeling of {wh, CP} typically involves uQ on wh valued by C
 - Following Miyagawa et al. (2019), there are necessarily examples of labeling that do not involve valuation
 - e.g., Icelandic quirky-case DP and TP with IA ϕ -features (via Long-Distance Agree; possibly also a ‘last-resort’ operation)



Theme signs: Our account

- ⇒ This configuration allows the possibility for EA ϕ -features to interact with the spell-out of the IA's features on Voice
 - This results in post-synatactic underspecification and elsewhere insertion (following Oxford 2019) which is triggered by context-sensitive markedness (following Nevins 2011), i.e.,
 - [+F] becomes marked in the context of [-F] (Despić & Hamilton, 2018), i.e.,
 - (i) [-participant] > [+participant] (3>SAP)
 - (ii) [-proximate] > [+proximate] (3OBV>3)
 - This accounts for the main clause distribution

Table 11: SEC Main Clause

↓S/O→	2	1	3
2		<i>-i</i>	<i>-aa</i>
1	<i>-iti</i>		<i>-aa</i>
3	<i>-iku</i>	<i>-iku</i>	<i>-iku</i>

Theme signs: Our account

⇒ However, in Dependent clauses, discourse marked arguments can merge with CP

- If subjects are discourse marked, they will move and not interact with spell-out of Voice (since discourse movement precedes labeling)
- If all 3rd person subjects, except [-proximate] in (3OBV>3), we would derive the dependent clause distribution
 - [-proximate] > [+proximate]
(3OBV>3)

Table 12: Southern East Cree Dependent Clause

↓S/O→	2	1	3
2		-i	-aa
1	-iti		-aa
3	-iti	-i	-iku

Theme signs: Our account

- ⇒ Support for this is that in addition to the 3OBV>3 forms, the only other instance that an elsewhere form appears is with impersonal subjects
- Note the difference in theme signs between 3>SAP and IMP>SAP
- Object-marking theme signs appear with 3>SAP, i.e., *-iti* 2nd person and *-i* 1st person
 - elsewhere theme sign appears with IMP>SAP, i.e., *-iku*

- (12) a. e waapamitaakw
e waapa-m-**iti**-ekw
C see-AN-**2OBJ**-2PL
'That s/he sees you-all...'
(3>2PL)
- b. e waapamit
e waapa-m-**i**-t
C see-AN-**1OBJ**-3
'That s/he sees me...'
(3>1)

- (13) a. e waapamikuyekw
e waapa-m-**iku**-y-ekw
C see-AN-**ELSE**-EP-2PL
'That someone sees you-all...'
(IMP>2PL)
- b. e waapamikuyin
e waapa-m-**iku**-y-in
C see-AN-**ELSE**-EP-1
'That someone sees me...'
(IMP>1)

Support: LDA

- ⇒ LDA in Algonquian languages is optional and involves a full CP
→ LDA possible with embedded clause in (a), embedded subject in (b), or embedded object in (c); notice the embedded verb is invariant

- (14) a. ngikendaan gii-bashkizwaadj
ni-giken-**daan** gii-bashkizw-aa-d
1-know-**IN** PST-shoot-3OBJ-2
'I know that you shot him'
- b. ggikeninimin gii-bashkizwaadj
gi-giken-**im-in** gii-bashkizw-aa-d
2-know-**AN-1>2** PST-shoot-3OBJ-2
'I know that **you** shot him'
- c. ngikenmaa gii-baashkzwad
ni-giken-**im-aa** gii-bashkizw-aa-d
1-know-**AN-1>3** PST-shoot-3OBJ-2
'I know that you shot **him**'

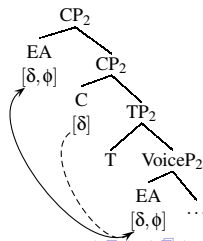
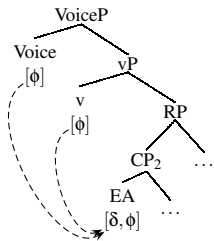
(Kitigan Zibi Algonquin Lochbihler & Mathieu 2016)

Support: LDA

- ⇒ There is variation in whether LDA patterns across Algonquian
- (i) LDA can target most embedded arguments: in Passamaquoddy (Bruening, 2001), Innu-aimûn (Branigan & MacKenzie, 2002), and Kitigan Zibi Algonquin (Lochbihler & Mathieu, 2016)
 - (ii) LDA targets restricted to mainly subjects: Plains Cree (Dahlstrom, 1991), Ottawa Ojibwe (Rhodes, 1994), and Mi'gmaq (Hamilton, 2015a)
 - Embedded subject LDA target in (a), but not object in (b); notice the embedded verb is invariant
- (15) a. ggikeminin gii-baashkzwad
gi-giken-im-ini gii-baashkizw-0-ad
2-know-AN-1>2 PST-shoot-3OBJ-2
'I know that you shot him'
- b. *ngikenmaa gii-baashkzwad
ni-giken-im-aa gii-baashkizw-0-ad
1-know-AN-3OBJ PST-shoot-3OBJ-2
intended: 'I know that you shot him'

Support: LDA

- ⇒ Under standard accounts of LDA targets reaching the edge of embedded clauses, e.g., Bruening 2001; Branigan & MacKenzie 2002; Lochbihler & Mathieu 2016 shown below, Restricted-LDA patterns support the proposal that subjects undergo discourse movement, e.g., topicalization
- Note that the embedded clauses are identical whether matrix verb agrees with the LDA target or the clause itself
 - By assumption, we can use restricted LDA languages to provide information about discourse movement in dependent clauses



Support: LDA

- ⇒ There are 3 instances in which the object can be an LDA-target in Restricted-LDA languages
- (i) When the subject is an Impersonal
- The impersonal is defective, i.e., cannot be a topic
 - Dahlstrom (1991) takes this to be evidence that ‘they’ is the embedded subject in 16, but Wolvengrey (2011) and Oxford (2014b) posit that there is a subject, but it is ϕ -defective
- (16) nikiskeeyimaawak eekiiseekihihcik
ni-kiskeey-**im-aa-w-ak** ee-kii-seekihihcik
1-know-**AN-3OBJ-3-3PL** C-PERF-scare.IMP>3PL
‘I know **they** were scared.’
(Alternate gloss: ‘I know someone scared **them**’)

(Plains Cree Dahlstrom 1991)

Support: LDA

- ⇒ There are 3 instances in which the object can be an LDA-target in Restricted-LDA languages
- (ii) ‘inverse’ 3OBV>3 forms in which only LDA is possible with the 3rd person object
- Subject to variation: attested in one dialect of Ottawa Ojibwe (Rhodes, 1994) and Mi’gmaq (Hamilton, 2015a), but not in the other dialect (Rhodes, 1994) or Plains Cree (Dahlstrom, 1991)
 - Object ‘Marge’ is LDA target (b); obviative subject ‘the men’ cannot (a)
- (17) a. *ngikenmaag ninwan gii-baashkzogod Maagii
ni-giken-**im-aa-ag** aniniw-an gii-baashkizw-igo-d Maagii
1-know-AN-**3OBJ-3PL** man-3OBV PST-shoot-INV-3 Marge
intended: ‘I know that **the men** shot Marge’
- b. ngikenmaa Maagii gii-baashkzogod ninwan
ni-giken-**im-aa** Maagii gii-baashkizw-igo-d aniniw-an
1-know-AN-**3OBJ-3PL** Marge PST-shoot-INV-3 man-3OBV
‘I know that the men shot **Marge**’

(Ottawa Ojibwe Rhodes 1994)

Support: LDA

⇒ There are 3 instances in which the object can be an LDA-target in Restricted-LDA languages

(iii) *wh*-objects are the only possible LDA target if present

- only the plural *wh*-object can be the LDA target a; the subject cannot b
- only the object ‘Marge’ can be an LDA target b; the obviative subject ‘the men’ cannot a

- (18) a. geji’gig ta’n wenig Sa’n gesalaji
gej-**i’-g-ig** ta’n **wen-ig** Sa’n ges-al-a-j-i
know-AN-**3-3PL** COMP **who-PL** John love-AN-3OBJ/DIR-3-3PL
‘I know **who(PL)** John loves.’
- b. *geji’g ta’n wenig Sa’n gesalaji
gej-**i’-g** ta’n wen-ig **Sa’n** ges-al-a-j-i
know-AN-**3** COMP who-PL **John** love-AN-3OBJ/DIR-3-3PL
intended: I know who(PL) **John** loves.

(Mi’gmaq; Hamilton 2015b)

Summary: Account

- ⇒ Today I have proposed a solution to a morphological puzzle in the verbal domain via the C-T domain which involved the interaction of
- (i) Discourse movement indirectly triggering a morphological alternation
 - Discourse factors can impact agreement from afar
 - (ii) Derivational agreement via labeling
 - Support for a derivational account for Voice agreement (reminiscent of the original Béjar & Rezac (2009) Cyclic Agree account)

Summary: Predictions

- ⇒ We have made a connection between 'strong' T languages and the possibility of the External Argument influencing the spell-out of Voice (or v^*)
- ⇒ Our account makes a prediction that languages with 'strong' T and object agreement on Voice (or v^*) may find similar 'direct-inverse' characteristics (in a descriptive sense)
- ⇒ In addition, if our account is on the right track, then we might expect similar interaction characteristics at T in Icelandic quirky-case configurations
 - In fact, Miyagawa et al. (2019) has suggested that it is sufficient for only 1 XP to have a relevant feature for shared labeling (in a 'last resort; manner) such as in English 'there' constructions (e.g., There are **3 books** on the table)
 - We have considered the reverse effect with the DP having features but not the Functional Projection in examples such as person/politeness prefixes in Acehnese (Austronesian), which is similar to, but different, from subject agreement (Legate, 2014)


Summary: Questions

- ⇒ How do we capture Miyagawa's 2017 typology in the labeling framework?
- ⇒ Specifically, with (i) movement to Spec-TP limited to 'weak' T languages, and (ii) the shedding of movement to Spec-TP after C merges, how do we account for discourse movement to Spec-TP? What generalizations may we miss? Does this necessitate the use of an articulated left-periphery, i.e., all discourse movement to C?

Table 13: Miyagawa's 2017 typology

Category	C-T Domain	e.g.,
I	$C_{\phi/\delta_{FOC}}$ $T_{\delta_{TOP}}$	Japanese
II	C_{δ} T_{ϕ}	English
III	$C_{\delta_{FOC}}$ $T_{\phi/\delta_{TOP}}$	Spanish
IV	$C_{\phi/\delta}$ T	Dinka

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