

Agreement in three parts: Match, Value, and Vocabulary Insertion

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Introduction

Neo-Aramaic languages have complex patterns of φ -agreement:

- (1) **Aanii an klooche** k-eeew-**ii-lii**=~~Ø~~-**luu**.
they those cookies IND-give.IMPF-**3PL-1SG**=AUX-**3PL**
'**They** (will) give **me the cookies**.' (Senaya)

- Agreement with **SBJ, DO, and IO**.
- Agreement varies with aspect.
- Differential Object Marking and Person Case Constraint effects.

Goal: Bring a complex paradigm from progressives in the Neo-Aramaic language Senaya to bear on the mechanics of φ -agreement.

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Introduction

The basic properties of φ -agreement are highly debated:

1. When does φ -agreement happen?

- *In syntax, immediately upon merge of a φ -probe* (Chomsky 2000, Béjar 2003, Preminger 2011, 2014, *i.a.*)
- *In syntax, upon completion of a phase* (Chomsky 2008)
- *In post-syntax* (Halle and Marantz 1993, 1994, Embick and Noyer 2007, Bobaljik 2008, *i.a.*)
- *In syntax and post-syntax* (Bhatt and Walkow 2013, Arregi and Nevins 2012, Marušič et al. 2015, *i.a.*)

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Introduction

2. How does φ -agreement happen?

- Agreement consists of two steps:
- (2) a. **Step 1: "Match"**, probe finds goal
b. **Step 2: "Value"**, probe copies goal's value
- Is Match immediately followed by Value, as part of one unified operation, AGREE?
(Chomsky 2000, 2001, Béjar 2003, Preminger 2011, 2014, *i.a.*)
 - **Or, is Match potentially separated from Value?**
(Arregi and Nevins 2012, Bhatt and Walkow 2013, Marušič et al. 2015, *i.a.*)

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Introduction

I will defend a three-step process of φ -agreement:

- (a) **Step 1, Match:** Probe finds goal
 - *takes place in the syntax (as soon as the probe is merged, or at the completion of a phase)*
- (b) **Step 2, Value:** Probe copies goal's value
 - *takes place early in the post-syntax (Arregi and Nevins 2012)*
- (c) **Step 3: Vocabulary Insertion:** Pair phonological strings with syntactic terminals (as in Distributed Morphology)
 - *takes place late in the post-syntax (Halle and Marantz 1993, 1994, Embick and Noyer 2007, i.a.)*

The motivating data come from progressives in Neo-Aramaic.

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Why separate Match and Value?

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- 1 Introduction
- 2 Why separate Match and Value?
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- 4 IMPF and PROG in Senaya
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Why separate Match and Value?

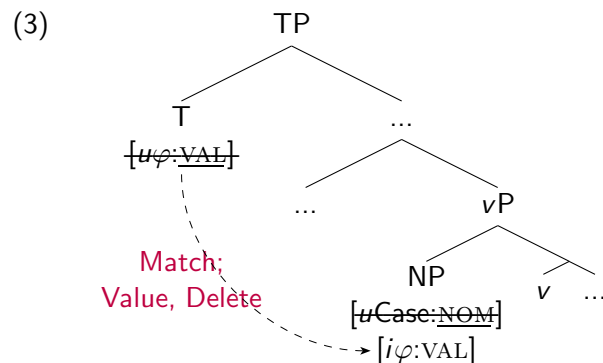
Decomposing AGREE into Match and Value gives us a way to account for instances where Match is successful but...

- ...Value fails (Chomsky 2000, Holmberg and Hróarsdóttir 2003, Preminger 2011, 2014, i.a.)
- ...Value takes place after linearization (Bhatt and Walkow 2013, Marušič et al. 2015)
- ...Match/Value get to try again over an expanded domain (Béjar 2003, Béjar and Rezac 2009)
- ...Value is fed by Impoverishment (Arregi and Nevins 2012)

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Chomsky 2000

Successful agreement:

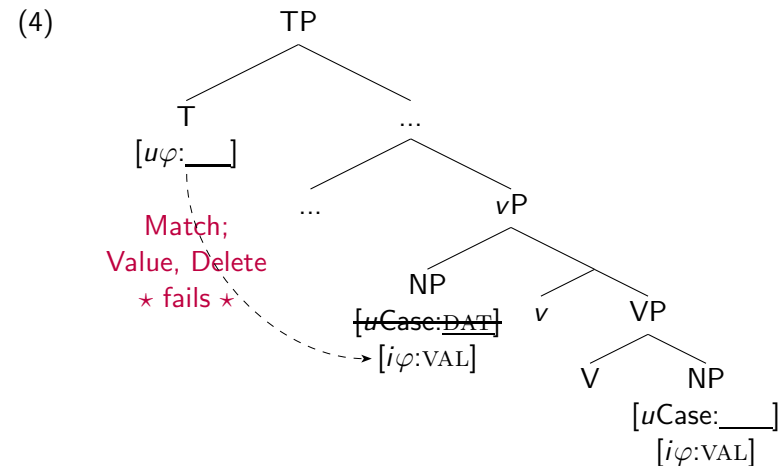


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Chomsky 2000

Defective intervention:

(e.g., Icelandic DAT-NOM constructions; Holmberg and Hróarsdóttir 2003)



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Bhatt and Walkow 2013

Separating Match from Value allows us to understand **closest conjunct agreement** in Hindi.

- Coordinated subjects: Resolved agreement on V

(5) M.SG+F.SG → M.PL

[Ram aur Sita] gaa rahe hãĩ
 Ram.M and Sita.F sing PROG.M.PL be.PRES.PL
 'Ram and Sita are singing.'

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Bhatt and Walkow 2013

Separating Match from Value allows us to understand **closest conjunct agreement** in Hindi.

- Coordinated objects: Closest conjunct agreement on V

(6) M.SG+F.SG → F.SG

Ram-ne [ek thailaa aur ek peṭii] uṭhaa-yii
 Ram-ERG a bag.M and a box.F lift-PFV.F.SG
 'Ram lifted [a bag and a box].'

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Bhatt and Walkow 2013

Analysis:

- At the point where agreement is triggered, the subject does not have Case.
 - Match and Value both succeed with the whole subject.
 - ⇒ **Resolved agreement**
- At the point where agreement is triggered, the object does have Case (ACC).
 - Match succeeds with the whole object, but Value fails, since the object already has Case.
 - Valuation is attempted again in the post-syntax, where it operates over linear order.
 - ⇒ **Closest conjunct agreement**

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Basics of Neo-Aramaic

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Interim summary

We need to separate Agree into Match and Value in order to understand various agreement phenomena.

Match is freer than Value:

- Match is instantiated whenever a uF finds a matching iF .
- Value can only happen if the goal (bearer of iF) does not yet have Case (among other things).

(See also, among others, Béjar (2003), Preminger (2011, 2014), Arregi and Nevins (2012), Marušič et al. (2015).)

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Neo-Aramaic

Semitic; around 100 dialects; endangered

- Language in this talk: Senaya (fieldwork with Laura McPherson and Kevin Ryan)

Word order in Senaya: SOV

- (7) Aana xelya shaatan.
I milk drink
'I drink milk.' (Senaya, SOV)

Nouns: Often determinerless and do not inflect for case; pronouns are typically null in object position, and optionally null in subject position.

Verbs: Non-concatenative (root-and-template) morphology and concatenative (affixal) morphology.

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Verbs in Neo-Aramaic

Root-and-template morphology = “verb bases”; encode aspect, tense, or mood

(8) *Verb bases in Senaya*

Root	IMPF	PFV	IMPER	INFIN
r-k-w ('ride')	rakw	rkuu	rkuu	rkaawa
q-t-l ('kill')	qaṭl	qṭel	qṭol	qṭaala
s-m-x ('wait')	samx	smex	smox	smaaxa

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Verbs in Neo-Aramaic

Affixes:

- Further encode grammatical distinctions:
 - waa = past tense
 - k- = indicative
- Encode agreement:
 - Two paradigms of agreement suffixes, the so-called **S-suffixes** and **L-suffixes**

(9) *Agreement morphemes in Senaya*

S-suffixes

	Singular	Plural
1	-en(M)/-an(F)	-ox
2	-et(M)/-at(F)	-iiton
3	-∅(M)/-a(F)	-ii

L-suffixes

	Singular	Plural
1	-lii	-lan
2	-lox(M)/-lax(F)	-looxon
3	-lee(M)/-laa(F)	-luu/-lun

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Verbs in Neo-Aramaic

Which arguments agree?

- All subjects trigger agreement obligatorily.
- Objects trigger agreement if and only if they are specific.
 - = Differential Object Marking (Coghill 2014)
- The agreement configuration depends on the aspect of the verb (Doron and Khan 2012).

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Imperfectives and progressives in Senaya

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Imperfectives in Senaya

Progressives build on imperfectives in Senaya.

Imperfectives use the IMPF verb base and (unlike progressives) have a fixed agreement pattern:

(10) Verb-**S**(subj)-**L**(obj)

- a. Aana kasw-**an**.
I write-**S.1FS**
'I (will) write.'
- b. Aana ksuuta kasw-**an-aa**.
I book write-**S.1FS-L.3fs**
'I (will) write **a book**.'

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Progressives in Senaya

Progressives are formed by taking the imperfective verb and adding an enclitic auxiliary, which itself hosts more agreement.

Intransitives: Double subject agreement

- (11) a. Aana kasw-**an**.
I write-**S.1FS**
'I (will) write.' (IMPF)
- b. Aana kasw-**an=yan**.
I write-**S.1FS=AUX.1FS**
'I am writing.' (PROG)

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Progressives in Senaya

Transitives are more complicated, with three options for how agreement shows up in the progressive.

- (12) a. Aana ksuuta kasw-**an-aa**.
I book write-**S.1FS-L.3fs**
'I (will) write **a book**.' (IMPF)

- b. Aana ksuuta kasw-**an**
I book write-**S.1FS**
'I am writing **a book**.' (PROG)
- $\left\{ \begin{array}{l} \text{-aa=yan} \\ \text{-L.3fs=AUX.1FS} \\ \text{(Obj=Aux.Sbj)} \\ \text{-aa=lee} \\ \text{-L.3fs=AUX.DFLT} \\ \text{(Obj=Aux.Dftl)} \\ \text{-ee=laa} \\ \text{-L.DFLT=AUX.3fs} \\ \text{(Dflt=Aux.Obj)} \end{array} \right.$

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Progressives in Senaya

- (13) Aana ksuuta kasw-**an**
I book write-**S.1FS**
'I am writing **a book**.'
- $\left\{ \begin{array}{l} \text{-aa=yan} \\ \text{-L.3fs=AUX.1FS} \\ \text{(Obj=Aux.Sbj)} \\ \text{-aa=lee} \\ \text{-L.3fs=AUX.DFLT} \\ \text{(Obj=Aux.Dftl)} \\ \text{-ee=laa} \\ \text{-L.DFLT=AUX.3fs} \\ \text{(Dflt=Aux.Obj)} \end{array} \right.$

Generalizations about agreement in transitives:

- Subject agreement is always (at least) in its usual slot.
- Object agreement must appear exactly once.
- Aux can agree with the subject, the object, or neither.
- When the object agrees on Aux, default agreement must surface on the verb.

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Progressives in Senaya

- (14) Aana ksuuta kasw-*an*
I book write-*S.1FS*
'I am writing a book.'

{ -aa=*yan*
-L.3fs=*AUX.1FS*
(Obj=Aux.Sbj)
-aa=*lee*
-L.3fs=*AUX.DFLT*
(Obj=Aux.Dflt)
-ee=*laa*
-L.DFLT=*Aux.3fs*
(Dflt=Aux.Obj)

All other agreement configurations are ungrammatical, e.g.,...

- Doubled object agreement
- Doubled default agreement
- Subject agreeing only on Aux

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Proposal

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Goals

1. Understand why the IMPF has a fixed agreement pattern (as compared to the PROG).
2. Understand why intransitive PROGs have a fixed agreement pattern (as compared to transitive PROGs).
3. Model how the 3 variants of transitive PROGs are derived, while ruling out all other configurations.

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The main claims

Match and Value have distinct behaviors, the first applying in the syntax, the second in the post-syntax.

- A goal can only transfer its value once (Béjar 2003), though it may enter into Match multiple times.
- Countercyclicity is tolerated phase-internally in the post-syntax, namely, in the deployment of Value.

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General assumptions

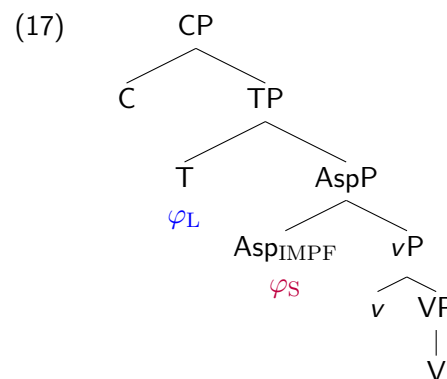
- (15) a. vP and CP are phases (Chomsky 2001, *i.a.*)
- b. The vP phase is “soft” (Baker 2015)
 $\Rightarrow vP$ is transparent for new case/agreement relations even after it has been spelled out.
- c. Phases can be extended by head movement (den Dikken 2006, 2007, Gallego 2010)

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General assumptions

Agreement configuration in Senaya (Kalin and van Urk 2015):

- (16) a. Asp_{IMPF} : φ -probe; morphologically: **S-suffix**
 b. T : φ -probe; morphologically: **L-suffix**



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Proposal: Outline

- Part 1 of the proposal: Match, Value, and Activity
- Part 2 of the proposal: Match and Value feed Vocabulary Insertion
- Part 3 of the proposal: Aux as realizing a higher clause
- Part 4 of the proposal: Head movement

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Proposal, part 1: Match, Value, and Activity

- (18) **Match** (*cyclically in the syntax*)
 An unvalued feature F (a probe, α) Matches with the closest accessible valued instance of F (the goal, β) in its c-command domain.
 (= “ α Matches with β ”)
- (19) **Value** (*early in the post-syntax*)
 The probe α copies the value of the goal β .
 (= “ α Values with β ”)
- (20) **Activity Condition**
 Once a nominal has transferred its φ -feature values, it is invisible (not eligible for Match).

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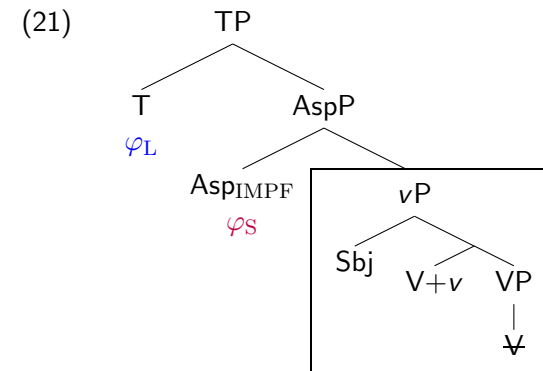
Proposal, part 2: Match and Value feed VI

Every φ -probe that has Matched and/or Valued is eligible for Vocabulary Insertion.

- No Match (and no Value): No features spelled out
- Match and Value: Valued features spelled out
- Match but no Value: Default features spelled out
- Multiple Matches at a single insertion point compete for exponence.

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Implementation in intransitive imperfectives



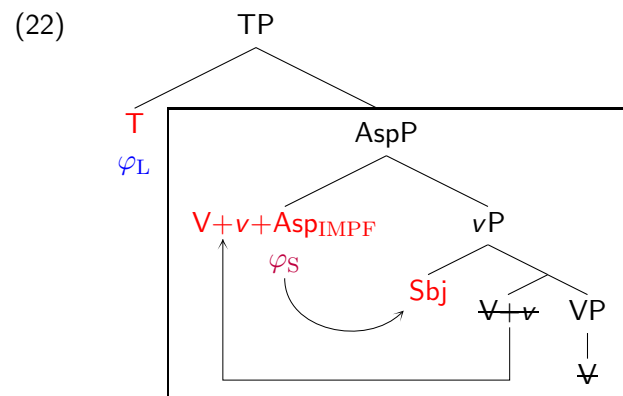
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Implementation in intransitive imperfectives

In the syntax, phase 1: Asp Matches with SBJ

In the post-syntax, phase 1: Asp Values with SBJ

In the syntax, phase 2: No available Match for T



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Implementation in intransitive imperfectives

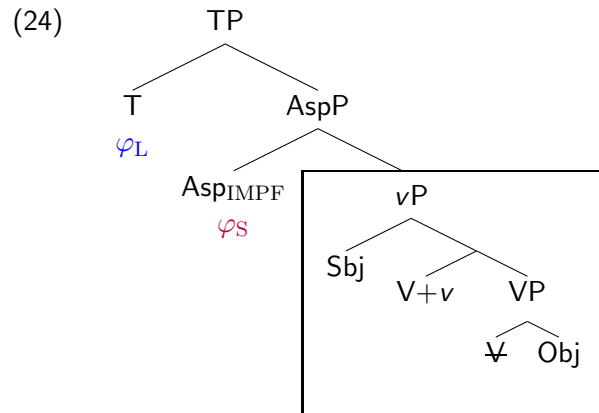
Phase 1: Match+Value (Asp with Sbj) successful!

Phase 2: No Match for T.

(23) Aana kasw-*an*.
I write-*S.1FS*
'I (will) write.' (IMPF)

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Implementation in transitive imperfectives

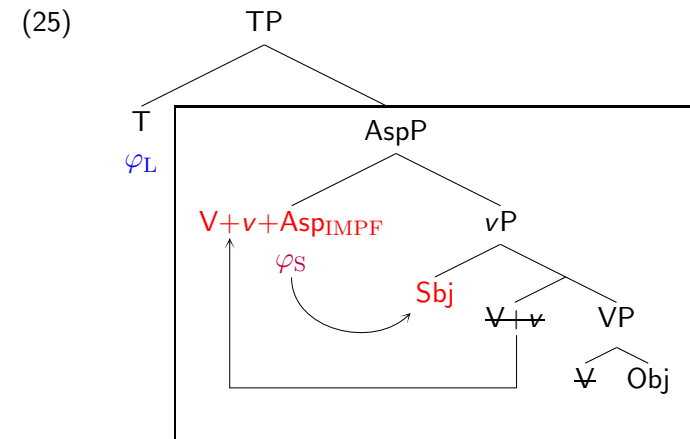


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Implementation in transitive imperfectives

In the syntax, phase 1: Asp Matches with SBJ

In the post-syntax, phase 1: Asp Values with SBJ

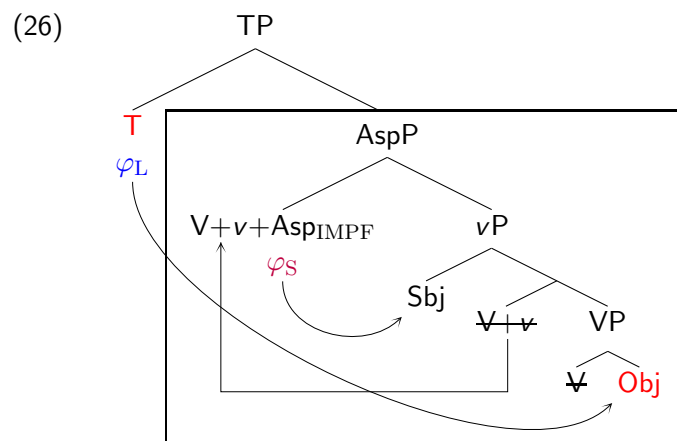


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Implementation in transitive imperfectives

In the syntax, phase 2: T Matches with OBJ

In the post-syntax, phase 2: T Values with OBJ



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Implementation in transitive imperfectives

Phase 1: Match+Value (Asp with Sbj) successful!

Phase 2: Match+Value (T with Obj) successful!

(27) Aana ksuuta kasw-*an-aa*.
I book write-*S.1FS-L.3fs*
'I (will) write *a book*.' (IMPF)

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Proposal, part 3:

Aux as realizing a higher clause

- (28) Aana kasw-*an=yan*.
I write-*S.1FS=AUX.1FS*
'I am writing.' (PROG)

Aux in PROG represents matrix clause in biclausal structure:

- Subject agreement can surface twice
- Past tense surfaces twice (on V and Aux)

But, the embedded clause is not independent/complete.

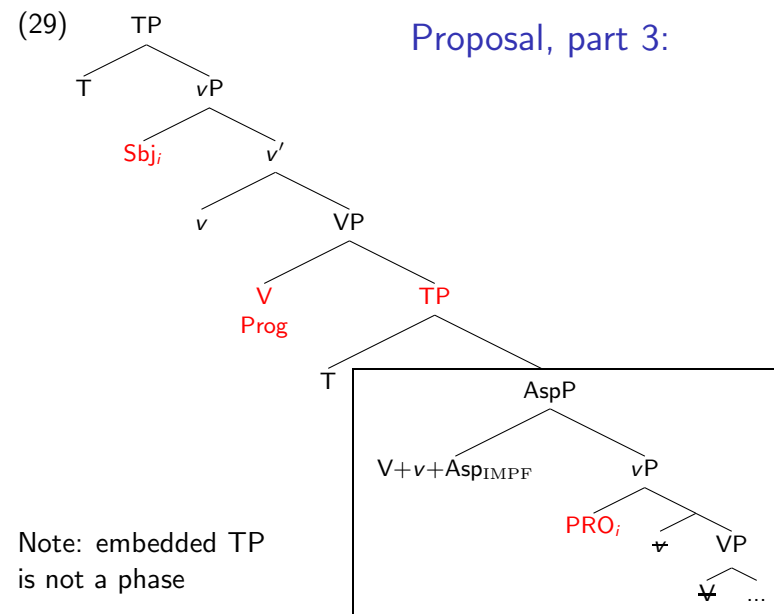
- Tense must match across clauses
- Embedded V must be IMPF
- Negation can only surface once

⇒ **PROG = a control verb that selects a truncated clause**

= Restructuring (Wurmbrand 1998, et seq), at TP

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Proposal, part 3:



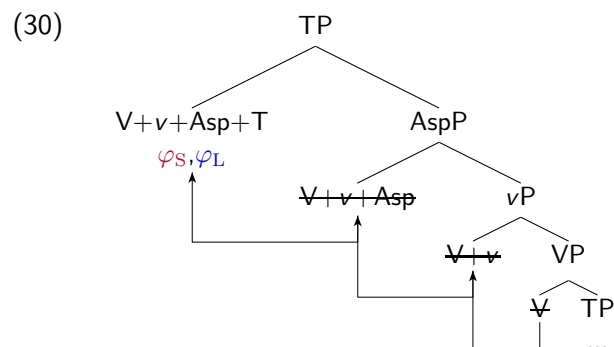
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Proposal, part 4:

Head movement

In the matrix clause, V raises all the way to T.

- T now has φ_S and φ_L ; vP phase is extended to TP.
- Aux is inserted to host agreement in the matrix clause.
- Agreement on Aux is a mix of S-suffixes and L-suffixes.



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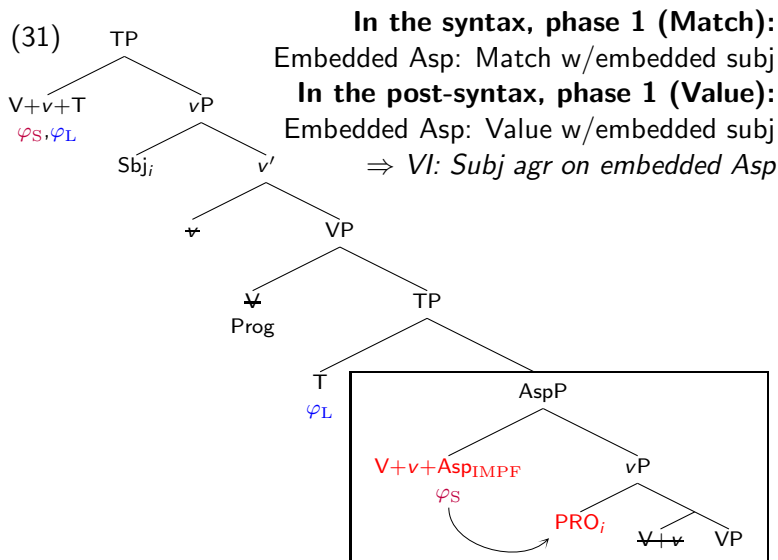
Proposal: Summary

Four components:

1. Match feeds Value, imperfectly.
2. Match and Value feed Vocabulary Insertion, imperfectly.
3. Progressive is a restructuring control verb.
(Truncated TP is not a phase.)
4. In the matrix clause, V raises to T.
(Matrix vP phase is extended to TP.)

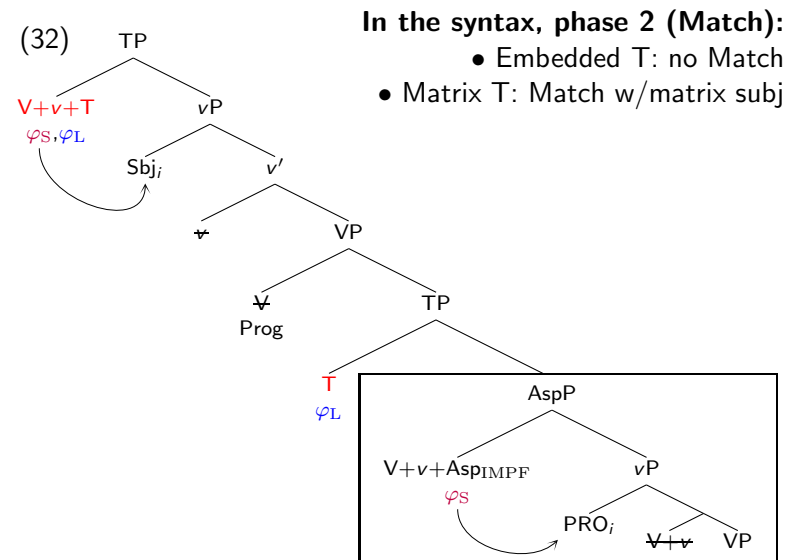
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Implementation in intrans PROG



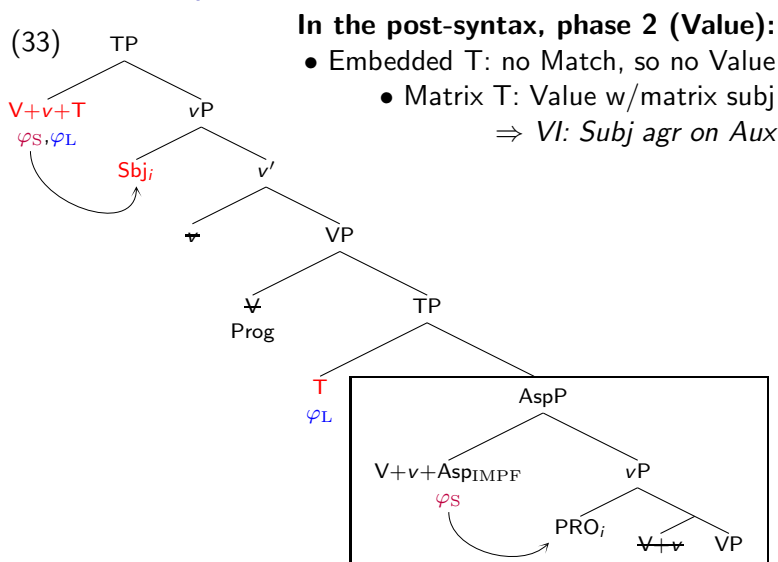
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Implementation in intrans PROG



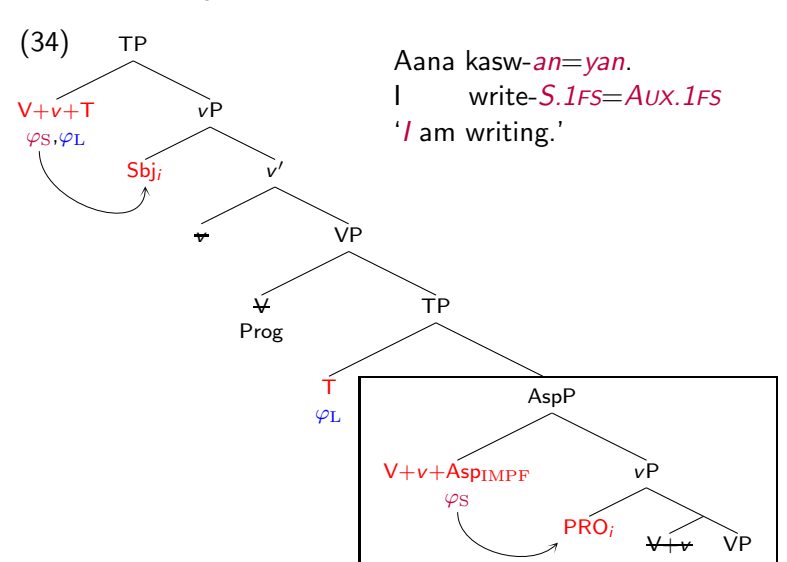
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Implementation in intrans PROG



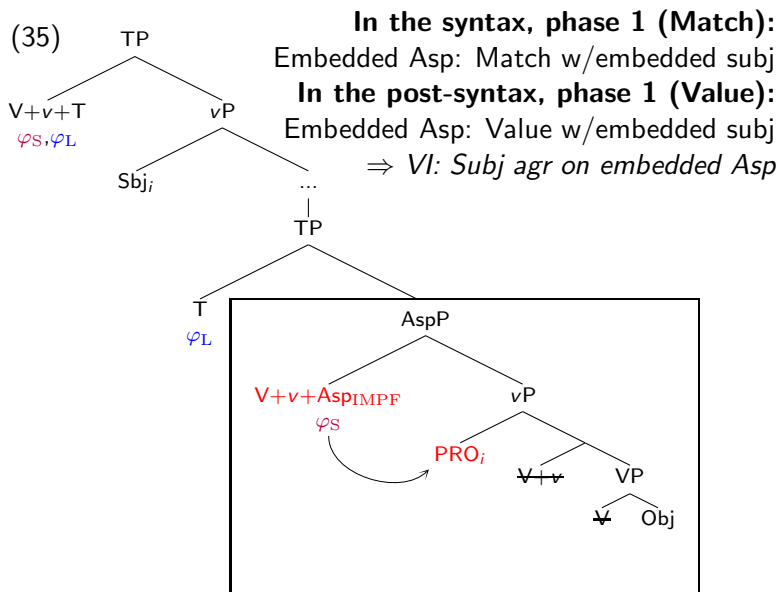
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Implementation in intrans PROG



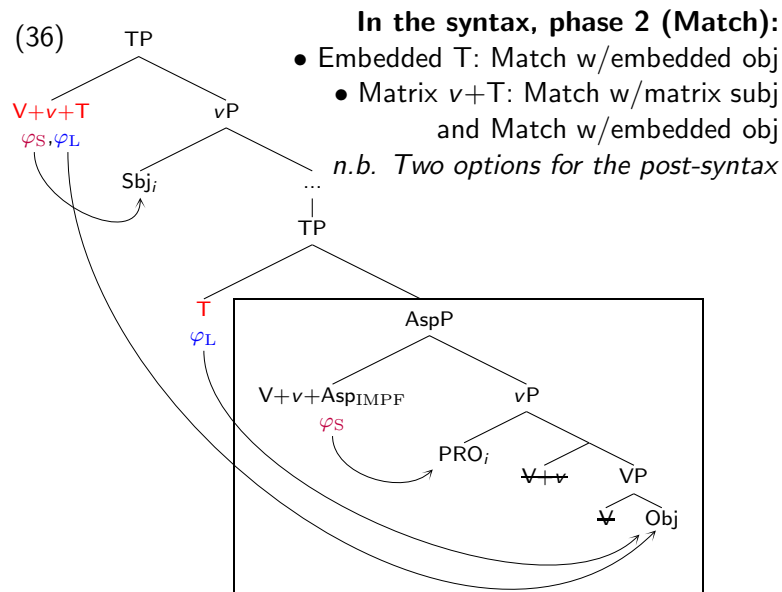
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Implementation in trans PROG



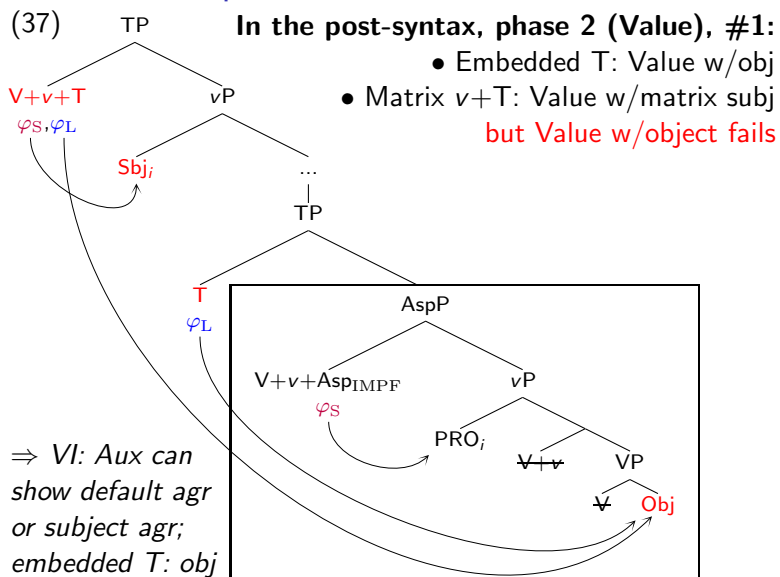
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Implementation in trans PROG



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Implementation in trans PROG



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Implementation in trans PROG

- (38) Aana ksuuta kasw-*an*
I book write-*S.1fs*
'I am writing a book.'
- aa*=*yan*
 -*L.3fs*=*Aux.1fs*
 (Obj=Aux.Sbj)
 -*aa*=*lee*
 -*L.3fs*=*Aux.Dflt*
 (Obj=Aux.Dflt)

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Thank you!

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