

Anaphor-Agreement Effect and Agreement Switch in Kutchi-Gujarati¹

Gurujegan Murugesan & Louise Raynaud

gurujegan.murugesan@uni-leipzig.de, louise.raynaud@stud.uni-goettingen.de

University of Leipzig & University of Göttingen

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1 Introduction

- Kutchi Gujarati is an SOV Indo-Aryan language, spoken in the Rann of Kutch, in the State of Gujarat, India.



- Kutchi Gujarati exhibits a split agreement pattern just like many other Indo-Aryan languages. In the imperfective, the agreement is with the subject and in the perfective, the agreement is with the object.
- This agreement split pattern provides an interesting context to observe the interaction of reflexive anaphora and agreement.
- In the perfective aspect, when the object is reflexive in the perfective aspect, the agreement is not with the object but with the subject. We refer to this pattern as **agreement switch**.
- When the agreement switches to the subject and if the subject is a coordinated DP, then the agreement is with the first conjunct (otherwise, it is resolved plural agreement).
- Puzzles:
 - Why does agreement switch to subject when there is a reflexive object?
 - Why is there first conjunct agreement only when the agreement switches?

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- To account for these puzzles, we propose an alternative the analysis given in Patel (2014), based on the one hand, on the aspectual split and the presence of a PerfP, and on the other hand, an approach to conjunct agreement based on Van Koppen’s (2005, 2008) notion of equidistance.

2 Data

Patel (2014) and Grosz & Patel-Grosz (2014) provide a detailed overview of the agreement patterns in Kutchi-Gujarati.

2.1 Aspectual split

- Kutchi Gujarati has a split agreement system based on aspect.
- In the **imperfective** aspect, the verbal agreement (in gender and number) is with the subject.
- In (1a), the verb and the auxiliary agree with their feminine singular subject *Mary*, whereas in (1b), the verb agrees with the masculine subject *John*.

(1) **Imperfective:** agreement with the subject

- a. Mary John-ne ad-th-i t-i
 Mary John-ACC touch-IMPERF-F.SG PST-F.SG
 ‘Mary was touching John.’
- b. John Mary-ne ad-th-o t-o
 John Mary-ACC touch-IMPERF-M.SG PST-M.SG
 ‘John was touching Mary.’²

- In the **perfective** aspect, the verbal agreement is with the object.
- In (2a), the verb agrees with the object *John*, while in (2b), it agrees with the object *Mary*.

(2) **Perfective:** agreement with the object

- a. Mary John-ne ad-y-o
Mary John-ACC touch-PERF-M.SG
'Mary touched John.'
- b. John Mary-ne ad-y-i
John Mary-ACC touch-PERF-F.SG
'John touched Mary.'

2.2 Agreement switch

The interaction of reflexive anaphors and agreement yields unexpected patterns.

2.2.1 Reflexive objects and agreement failure

- When a perfective verb takes a reflexive object, agreement can no longer be with the object, but tracks the subject instead.

- (3) a. John [e-na mota potha]-ne jo-y-o /*jo-y-a
 John 3.SG-GEN.PL big.PL self-ACC see-PERF-M.SG /*see-PERF-PL
 ‘John saw himself’

²All data is from Patel (2014) unless indicated otherwise.

- b. Mary [e-na mota potha]-ne jo-y-i /*jo-y-a
 Mary 3.SG-GEN.PL big.PL self-ACC see-PERF-F.SG /*see-PERF-PL
 ‘Mary saw herself.’

- The reflexive *e-na potha* in (3) is plural (as demonstrated in Patel 2014), yet matching plural agreement on the verb is ungrammatical.
- Instead, agreement seems to track the phi-features of the subject.
- It is clearly not the case that object reflexive gets its phi-features from the subject and in turn controls the agreement because when the subject is unavailable for agreement (e.g. dative), then the default singular neuter agreement appears on the verb.

- (4) Raj-ne e-na potha-ne jo-vu par-y-u
 Raj-DAT 3SG-GEN.PL self-ACC see-INF.DEF had-PERF-DEF
 ‘Raj had to see himself.’

- This clearly shows that when the object is reflexive in perfective aspect, the agreement tracks the subject.

2.2.2 Agreement with coordinated phrase

- If the newly targeted subject is a coordinated phrase, the reflex of agreement displacement is unexpected.
- In the case of imperfective, when the subject is a conjunct phrase, the verb reflects the resolved plural agreement.

(5) Imperfective: coordinated subject - plural agreement

- a. [John ane Mary] Bill-ne jo-th-a t-a
 John and Mary Bill-ACC see-IMPF-PL PST-PL
 ‘John and Mary were watching Bill’.
- b. [Mary ane John] Bill-ne jo-th-a t-a
 Mary and John Bill-ACC see-IMPF-PL PST-PL
 ‘Mary and John were watching Bill’.

- Similarly, in the case of perfective, when the object is a coordinated phrase, the verb reflects the resolved plural agreement.

(6) Perfective: coordinated object - plural agreement

- a. Bill [John ane Mary]-ne jo-y-a
 Bill John and Mary-ACC see-PFV-PL
 ‘Bill saw John and Mary’.
- b. Bill [Mary ane John]-ne jo-y-a
 Bill Mary and John-ACC see-PFV-PL
 ‘Bill saw Mary and John’.

2.2.3 Reflexive object and coordinated subject

- In the case of perfective, when the object is a reflexive and the subject is a coordinated phrase, then the agreement is with the first conjunct.

(7) **Perfective: Reflexive object and coordinated subject - First conjunct agreement**

- a. [John ane Mary] pot-potha-ne jo-y-o/*a
 John and Mary themselves-ACC see-PFV-M.SG/*PL
 ‘John and Mary saw themselves.’
- b. [Mary ane John] pot-potha-ne jo-y-i/*a
 Mary and John themselves-ACC see-PFV-F.SG/*PL
 ‘Mary and John saw themselves.’

2.2.4 Summary of the data

	Imperfective	Perfective
Standard pattern	subject agreement resolved plural agreement	object agreement resolved plural agreement
Reflexive object	subject agreement resolved plural agreement	subject agreement first conjunct agreement

Three pieces of the puzzle:

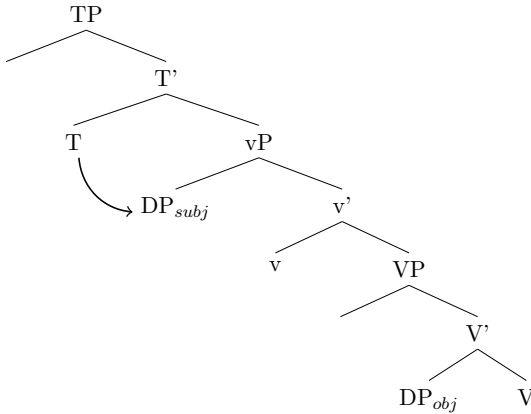
- ☞ an aspectual split
- ☞ agreement displacement when the object is a reflexive (in the perfective)
- ☞ first conjunct agreement when there is agreement displacement

3 Analysis

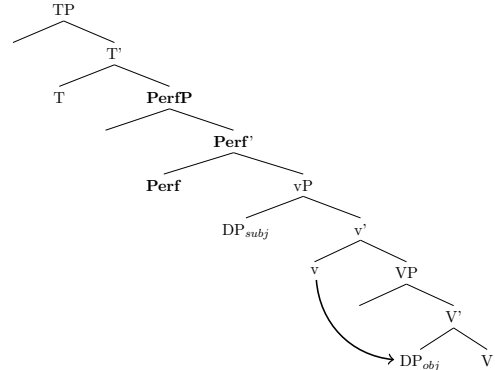
3.1 Background assumptions

- Aspect, and more specifically, *viewpoint* aspect, the one we are concerned about, is thought to have its own phrase AspP, somewhere between TP and vP.
- We assume after Mahajan (1997, 2012), Anand & Nevins (2006), Bjorkman (2014) that Perfective is special and has its own projection PerfP, whereas Imperfective does not.
- PerfP plays a crucial role in the observed pattern.

(8) Imperfective



(9) Perfective



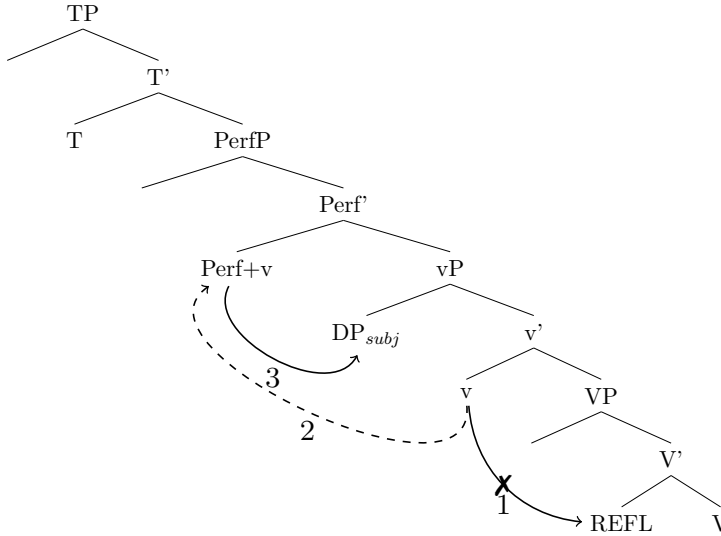
- The assumption is that Kutchi-Gujarati has two agreement probes, T for subject agreement and *v* for object agreement (Bobaljik, 1993; Laka, 1993, 2000; Rezac, 2008, Grosz & Patel-Grosz 2014).

- Finally, it has been proposed that anaphors are ϕ -deficient. Kratzer (2009) and Tucker (2011) argue that anaphors lack all (or some) inherent values for ϕ -agreement, and are thus unable to serve as the source of ϕ -agreement on the verb.

3.2 Deriving agreement switch

- In order to derive the agreement switch, we propose the following:
- Firstly, the v head cannot agree with the anaphor because the anaphor is ϕ deficient in the sense of Kratzer (2009).
- So the v head would remain with its ϕ features unvalued. In the next step in the derivation, the subject DP would merge at the spec of vP , whose head has an unvalued v .
- With the DP merged in the structure, we assume that the unvalued v head would move and adjoin to the Perf head, the next available functional head.
- The adjunction of v head with Perf head would result in unification of their probe features. They form a complex probe in the sense of D'Alessandro (2011).
- The complex probe Perf+ v would then search in its domain for the suitable goal. When the goal is a singular DP, then the unvalued features of v would get valued, thus correctly deriving the agreement switch.

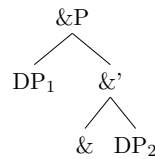
(10) Agreement displacement



3.3 Deriving first conjunct agreement

- We standardly assume that &P has an asymmetrical structure (Munn 1993, 1999), as in the following:

(11) Conjunct phrase:



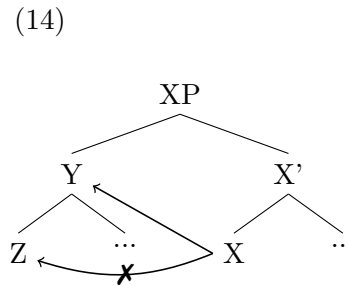
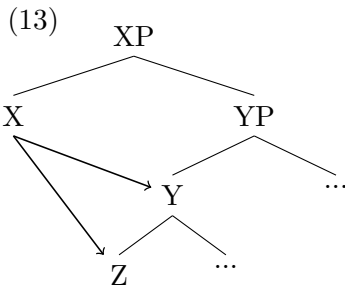
- Van Koppen (2005, 2008) argues that syntax establishes an agreement relation with both the coordinated subject (&P) as a whole and the first conjunct (DP₁).

- When Agree searches for a goal in the **c-command domain** of the probe and is confronted with a coordinated subject, it finds two equally local, matching goals.

(12) **Equally local**

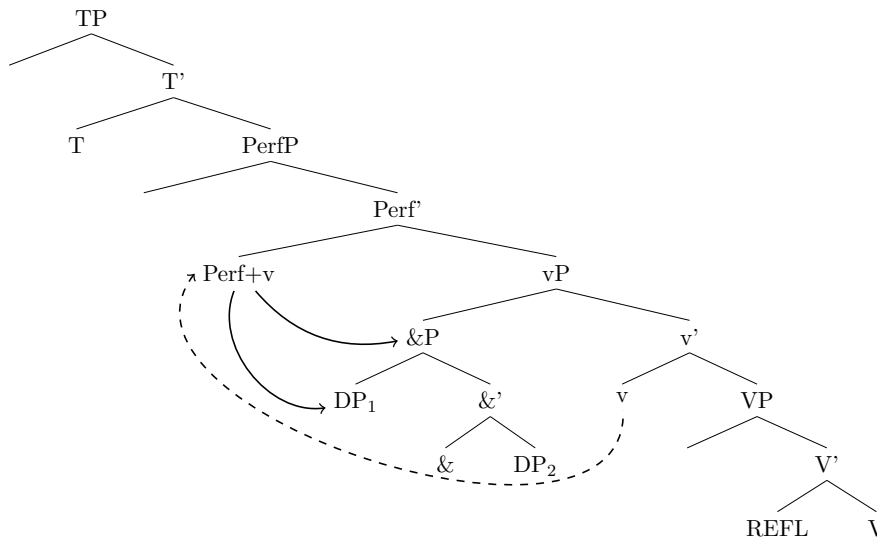
Y and Z are equally local to X iff,

- X c-commands both Y and Z
 - the set of nodes that c-command Y is equal to the set of nodes that c-command Z.
- (Van Koppen 2008: 5)



- As can be seen in (15), when there is agreement displacement, the (conjunct) subject stands in a c-command relation to the conjoined probe Perf+v.
- Whole conjunct and first conjunct are thus equally local goal to the probe and Agree can establish a matching relation between the probe and its two goals.

(15) First conjunct agreement



- How does the grammar pick which agreement gets to be realized?
- For Van Koppen (2008), the choice over which one to choose occurs later at the level of morphology/PF.
- The choice is regulated by the **Subset Principle** (Halle 1997), that states:

(16) Where several vocabulary items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen.

- Recall examples (7), repeated below.

- (17) a. [John ane Mary] pot-potha-ne jo-y-o/*a
 John and Mary themselves-ACC see-PFV-M.SG/*PL
 ‘John and Mary saw themselves.’
 b. [Mary ane John] pot-potha-ne jo-y-i/*a
 Mary and John themselves-ACC see-PFV-F.SG/*PL
 ‘Mary and John saw themselves.’

- In KG, the PL morpheme -a on verbs is underspecified for gender, unlike SG.

- (18) Agreement paradigm for *v* (gender and number)

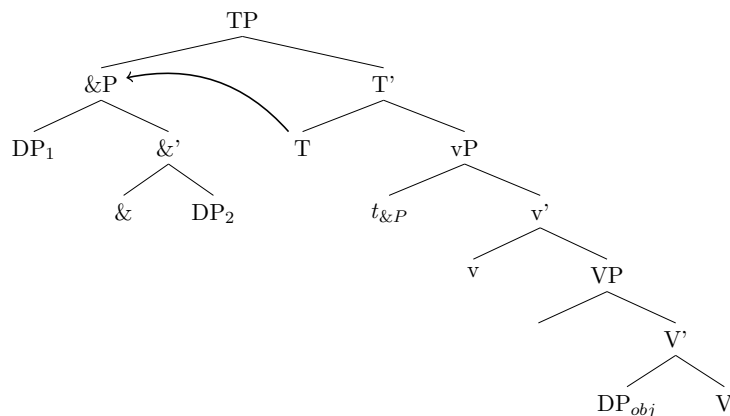
	SG	PL
M	-o	-a
F	-i	-a
N	-u	-a

- Compared to the plural, the singular has its gender feature overtly expressed. Therefore, the first conjunct that has the greatest feature specification is chosen rather than that of the resolved plural DP.

3.4 Not overgenerating

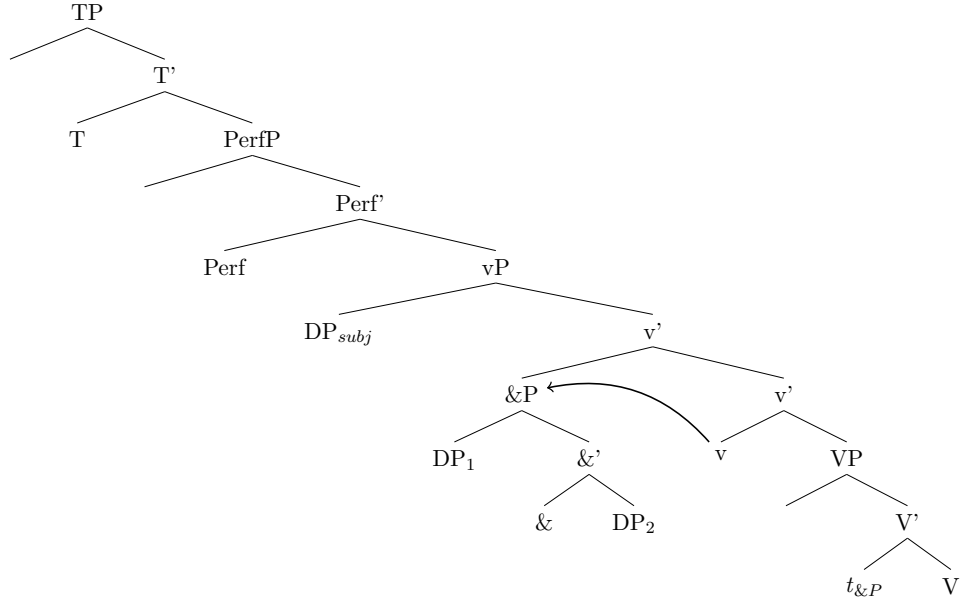
- First conjunct agreement occurs only (but not always...) in case of agreement displacement.
- For coordinated subjects in the imperfective, we assume that T has an EPP feature that requires the subject to move to Spec, TP. Therefore when T probes in its domain for agreement, it does not c-command the conjunct subject anymore, therefore first conjunct agreement cannot obtain.

- (19) Imperfective



- Coordinated objects in the perfective: we also assume that the object moves to Spec, vP.

(20) Perfective

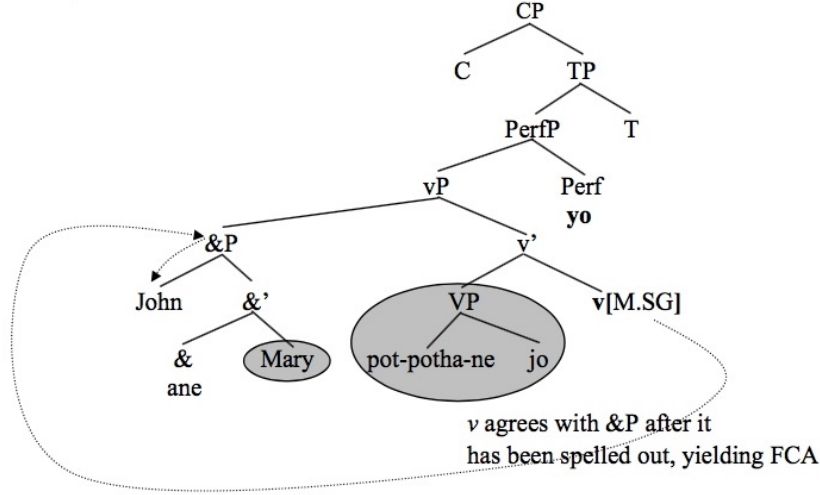


- So we assume that *canonical* agreement, with T and v, occurs in a Spec, head configuration.
- Agreement switch and first conjunct agreement, with Perf, on the other hand, do not occur in a Spec, head configuration.
- In the former case, the goal c-commands the probe, whereas in the latter, the probe c-commands the goal.
- When the probe is either T or v, their EPP feature first moves the goal to their Spec position and only then does the valuation take place. With a Perf+v probe, there is no EPP feature therefore, valuation can happen at a distance.

4 Comparison with Patel's analysis

- Patel (2014) proposes the following analysis.
- To account for agreement displacement, Patel argues that when the agreement requirements of *v* are not met by the reflexive object, agreement is suspended and occurs after Spell-Out as it probes upwards for the subject as a second cycle/last resort mechanism.

(21) Derivation of first conjunct agreement in Patel (2014)



- The derivation in syntax would proceed as follows: Once vP is built, the probe from *v* would search in its domain for agreement but the anaphor in the argument position cannot act as a suitable goal.
- In the next step in the derivation, the &P would merge. Both & and *v* would mark their complement for Spell-Out but they would not actually get spelled out until the C head merges in the structure.
- Agreement with *v* is suspended and it remains with unvalued ϕ features.
- Once the C head merges in the structure, the structure is spelled-out. After the spell out of the complement, what remains in the derivation is the *v* head and the first conjunct (they are considered as phase edges).
- The agree relation between the two results in first conjunct agreement. For the simple DP subject, the derivation would work in the same way, where the *v* would agree with the subject.
- Though this analysis accounts for the agreement switch pattern, it is not without problems.
- The main problem has to do with the timing of the agree relation, where the probe from *v* has a potential goal to agree with in but it would not enter into agree relation until C gets merged in the structure.
- The assumption that subjects are phases is also not uncontroversial.
- Furthermore, this approach hinges on a particular implementation of phase theory, where the complement of *v* gets only spelled out after merger with C.
- The analysis we have propose here is an attempt at obviating these issues by taking a different take on the issue.

5 Conclusion

- Agreement displacement is the result of an agreement failure that drives the construction of a complex probe.
- Diverging from Patel's (2014) account, we propose that first conjunct agreement in the past perfective comes about as a conspiracy of two factors.

- The aspectual split and the presence of a PerfP create a configuration in which the whole &P and its first conjunct are equally accessible by a goal that c-commands them, as proposed in Van Koppen (2005, 2008).
- This configuration is exceptional and does not obtain in instances of regular agreement, which occurs in a Spec,head configuration.
- Kutchi-Gujarati seems to be a case of the Anaphor-Agreement Effect and a new repair strategy, i.e. agreement displacement.

6 Appendix: Open questions

- There are at least two open questions that concerns us here.

6.1 Resolved agreement in future perfective

- The first question is a data point, concerning analytic tenses in the perfective aspect.
- Kutchi Gujarati has analytic tenses (e.g. future imperfective, future perfect and present perfect), composed of a tensed auxiliary and a non-finite verb.
- In the perfective analytic tenses, the T auxiliary agrees with the subject in person and number while the participle agrees with the object in number and gender (Grosz & Patel-Grosz 2014).

(22) Future perfect: verb agrees with object and T agrees with subject

- a. Hu chokra-ne jo-y-a ha-is.
 I boys-DOM see-PFV-PL AUX-FUT.1SG
 ‘I will have seen the boys.’ (Grosz and Patel-Grosz 2014)
- b. John mane jo-i ha-se.
 John me.DOM see-PFV.F.SG AUX-FUT.3SG
 ‘John will have seen me.’(speaker is female) (Grosz and Patel-Grosz 2014)

- The first conjunct agreement that we have seen earlier occurs in a (seemingly) simplex perfective tense, namely past perfective, but not in the complex perfective tense. Here the agreement is either resolved plural or default on both T and v.

- (23) John ane Mary pot-potha-ne jo-y-*o/a/u ha-se.
 John and Mary themselves-ACC see-PFV.*MSG/PL/DEF AUX-FUT.3
 ‘John and Mary will have seen themselves.’ (Pritty Patel-Grosz p.c.)

- It would seem as if, although agreement displacement does occur, this is an instance of resolved agreement.
- One hypothesis would be that, unlike in simplex perfective tenses, the T head is active and gets its person and number features morphologically realized on the tensed auxiliary, as in (22).
- Therefore, if the T is active, it could attract the Perf+v complex to T, therefore resulting in T+(Perf)+v agreement, like in the imperfective.
- In other words, while the v would have no reason to move higher than Perf to have its features valued in simple tenses, in analytic tenses the presence of an active T would be a motivation for further movement.

- So agreement with T would result in a Spec,head configuration favorable to resolved plural agreement with the coordinated subject.
- A potential problem with this proposition is the following: why doesn't Perf+v agree immediately with the subject in Spec,vP in a c-commanding configuration, therefore triggering first conjunct agreement?
- Maybe it does, resulting in (23) in first conjunct MSG agreement with v on the non-finite form, which gets overwritten by PL agreement when Perf+v subsequently adjoins to T.
- Alternatively, the conflicting values obtained independently by v (MSG) and T (3PL) could be resolved post-syntactically in such a way that the agreement values are uniformly either plural or default.

6.2 Split *v*

- The second question is more technical in nature. In a structure like (15), why doesn't *v* agree with the subject immediately when the agreement fails with the reflexive object.
- Here we reason out that there are two *v* heads (cf Koenenman & Zeijlstra 2014), or at least a multi-layered one, the lower one that agrees with the object and the higher one that agrees introduces the subject.
- So at the point when the agreement fails with the reflexive object, there is no subject in the structure to agree with. By the time subject merges in the structure, the reflexive object would be already in the spec of lower *v* and acting as a defective intervention.

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