

# Structure and agreement in copular sentences

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All work reported here has been done in collaboration with  
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## 1 Introduction

Topic: a certain type of copular clause: SPECIFICATIONAL copular clauses.

- **Question 1:** What can looking at languages with varying syntactic properties tell us about the syntax of these semantically rather interesting constructions?
- **Question 2:** What can the agreement properties of this construction tell us about the syntax of agreement?

## 2 Analysing specificational copular clauses

It's often assumed that there are two quite different uses of the COPULA *be* in English, even setting aside the existential use—and that essentially the same is true for many languages, both related and unrelated.

- In PREDICATIONAL copular clauses, *be* seems to carry no meaning at all other than serving as a support for Tense:

- (1) a. I consider [ Amanda intelligent ].  
b. I consider/believe [ Amanda to be intelligent ]  
c. I consider/believe [ that Amanda is/was intelligent ].

In all of these embedded clauses, the predicate is the Adjective Phrase *intelligent*, which denotes a property predicated of the subject *Amanda*.

- In other cases it *be* seems to have a meaning of EQUATION or IDENTITY:

- (2) a. \*I consider [ the man that you saw here yesterday the man I saw today ].

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- b. I believe [ the man that you saw yesterday to be the man I saw today ].
  - c. I believe [ that the man that you saw yesterday is/was the man I saw today ].
- Higgins (1973) discussed at length a third type of copular sentence, where it seems that the first noun phrase gives a description, while the second denotes the entity that satisfies that description in the current world. This type he called SPECIFICATIONAL:
- (3)
- a. This year's winner of Best Actress is Emma Stone.
  - b. Our main problem is your parents.
  - c. My only hope is you.

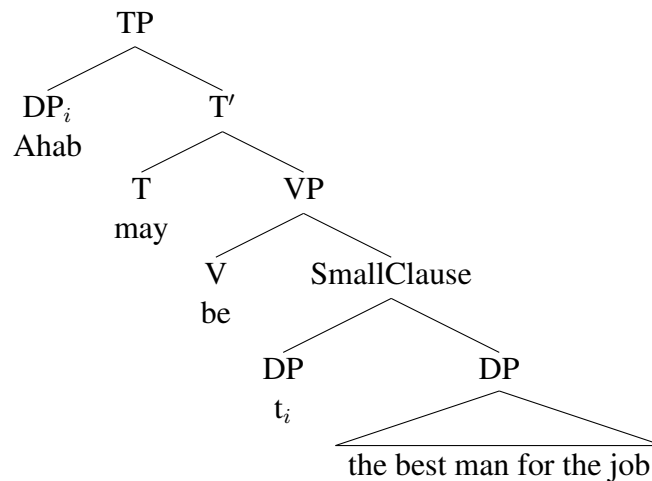
Today we'll be looking at the syntax and semantics of these SPECIFICATIONAL clauses.

It seems clear that the second noun phrase (DP2) in such clauses denotes an individual (type <e>). But what about the first (DP1)? Some analyses that have been put forward:

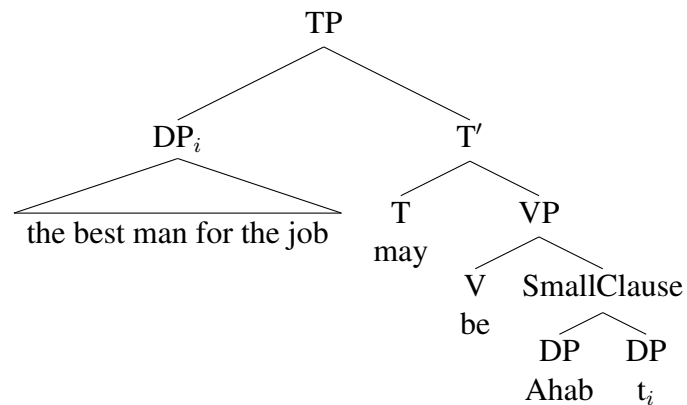
- DP1 is a **PREDICATE**. (Williams 1983, Heggie 1988, Moro 1997).

Specificational clauses are **INVERTED** predicational clauses:

- (4) a. Predicational:

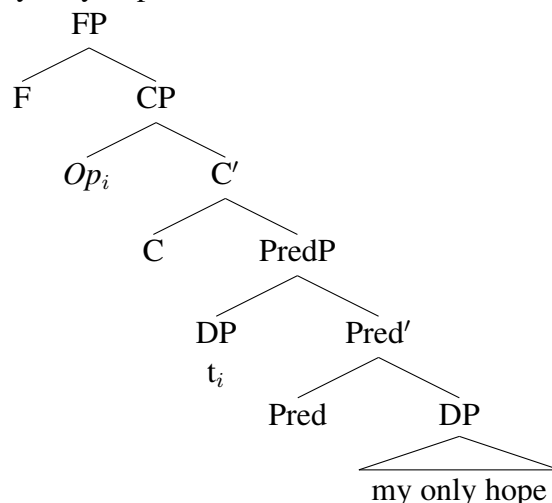


- b. Specificational:



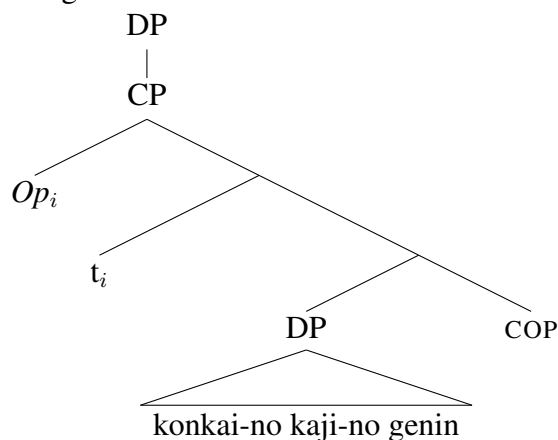
- DP1 is a kind of **REDUCED FREE RELATIVE** (den Dikken 2006, Béjar and Kahnemuyipour 2017). Structure in (5b) based on the proposal in den Dikken’s book:

- (5) a. [what<sub>i</sub> [ t<sub>i</sub> is my only hope ]] is ...  
 b.



Similar proposal made for Japanese specificational sentences in Kishimoto (2012):

- (6) a. konkai-no kaji-no gen'in-wa hi-no husimatu da  
 b.



Note that in these proposals the overt material in DP1 is buried inside a clausal structure, within which it is generally taken to function as a predicate. One consequence is that its syntactic properties will not project to the phrase that contains it (“FP” in (5), the higher DP in (6)). This turns out to be crucial for the analysis in e.g. Béjar and Kahnemuyipour (2017), as we’ll see.

- DP1 is a **concealed question**, interpreted as a function from worlds to individuals (type <s,e>) (Romero 2005, Heycock 2012):

- (7) a. Were you able to guess [<sub>CQ</sub> the winner ]?  
 b. Were you able to guess [ who the winner was ]?

- (8) [<sub>CQ</sub> The winner ] is Emma Stone.

Or possibly:

- (9) [<sub>CQ</sub> The winner ]<sub>i</sub> is [<sub>SC</sub> Emma Stone t<sub>i</sub> ]

**QUESTION 1:** How can we adjudicate between these proposals?

### 3 Agreement

A striking fact that has been taken as evidence in favour of some kind of INVERSION in these clauses is the possibility/requirement in some languages for the finite copula to **agree**, not with DP1, but with **DP2**.

- (10) Il colpevole sono io. (Italian)  
 the culprit am I  
 ‘The culprit is me.’

This is only really interesting if DP2 is not in the “canonical” subject position (say, Spec,TP). In at least some languages it is possible to prove that this is indeed the case (i.e. DP2 is agreed with even though it is in a low position). But this still leave a big question: what **is** the mechanism involved for such agreement?

Another, more famous (among syntacticians) case of agreement with a “low nominative”: **Icelandic** verbs that have a non-nominative subject and a nominative object can agree in Number with that object.

- (11) Henni líkaðu/líkaði þeir.  
 her.DAT liked.3.PL/3SG they.NOM  
 ‘She liked them.’

Strikingly, (12) shows that in such cases, agreement for **Person** is not possible.

- (12) \*Henni líkaðir/líkaði þú.  
 her.DAT liked.2.SG/3SG you.NOM  
 ‘She liked you.’

Even default agreement is not possible here; 1st/2nd person nominative objects are generally taken to be ungrammatical, regardless of agreement. This is an example of what has been called DEFECTIVE INTERVENTION: the higher dative argument somehow “intervenes” between the agreeing verb and the lower nominative argument, and although it cannot induce person agreement, it prevents person agreement with the lower argument.

What has to be added to such an account is why this causes ungrammaticality. Generally the proposal is that first and second pronouns, unlike third person, need to be licensed by an agreeing head (the Person Licensing Condition of Béjar and Rezac 2003.)

The pattern in (11) and (12) has also been cited in support of Mark Baker’s SCOPA generalization about agreement:

(13) *Structural Condition on Person Agreement (SCOPA)*

A functional category F can bear the features +1 or +2 if and only if a projection of F merges with a phrase that has that feature, and F is taken as the label for the resulting phrase. (Baker 2008)

**QUESTION 2:** Can we learn anything more about how agreement works from another case of “low nominatives”: specificational sentences? Is there a person effect, and if so, what does this tell us about agreement?

## 4 Agreement in Insular Scandinavian

We have been investigating agreement in copular clauses in a number of Germanic languages (German, Dutch, Icelandic, Faroese). Here I want to focus on the last two. These are both SVO languages (unlike Dutch and German); they are also both V2 languages. In order to eliminate the complications introduced by V2 (in particular, being able to tell what the subject is) we focus on embedded interrogatives, where V2 is generally taken not to occur (cf. English *Where is he?* vs. *I wonder where he is.*)

### 4.1 Icelandic: production experiment

- Online study: forced choice paradigm (speakers had to fill in blanks).
- Participants: 75 self-reported native speakers of Icelandic.
- Materials: 5 conditions

- (14) Hann var að velta fyrir sér hvort ...  
 he was wondering if  
 ‘He was wondering whether ...’
- |    |  |            |
|----|--|------------|
| A. | aðalvandamálið ___ þeir.<br>main problem.DEF ___ they<br>‘the main problem is them.’                               | 3s–3p–COLL |
| B. | aðalvandamálið ___ þú.<br>main problem.DEF ___ you.s<br>‘the main problem is you.sg.’                              | 3s–2s–COLL |
| C. | líklegasti sigurvegarinn ___ þú.<br>most likely winner.DEF ___ you.s<br>‘the most likely winner is you.sg.’        | 3s–2s–DIST |
| D. | aðalvandamálið ___ þið.<br>main problem.DEF ___ you.pl<br>‘the main problem is you.pl.’                            | 3s–2p–COLL |
| E. | líklegustu sigurvegararnir ___ þið.<br>most likely winners.DEF ___ you.pl<br>‘the most likely winners are you.pl.’ | 3p–2p–DIST |

15 sets like (14) constructed and distributed in Latin square design so each participant saw 3 exemplars of each condition, each from a different set.

| Cond | Structure  | DP1Agr    | DP2Agr    | DP2Agr(Nr) | Total |
|------|------------|-----------|-----------|------------|-------|
| A    | 3s-3p-coll | 74 (34%)  | 143 (66%) | n.a.       | 217   |
| B    | 3s-2s-coll | 109 (52%) | 99 (48%)  | n.a.       | 208   |
| C    | 3s-2s-dist | 113 (52%) | 105 (48%) | n.a.       | 218   |
| D    | 3s-2p-coll | 68 (32%)  | 80 (38%)  | 63 (30%)   | 211   |
| E    | 3p-2p-dist | 118 (56%) | 91 (44%)  | n.a.       | 209   |

Table 1: DP1 vs. DP2 Agreement per condition in Icelandic (irrelevant cases excluded)

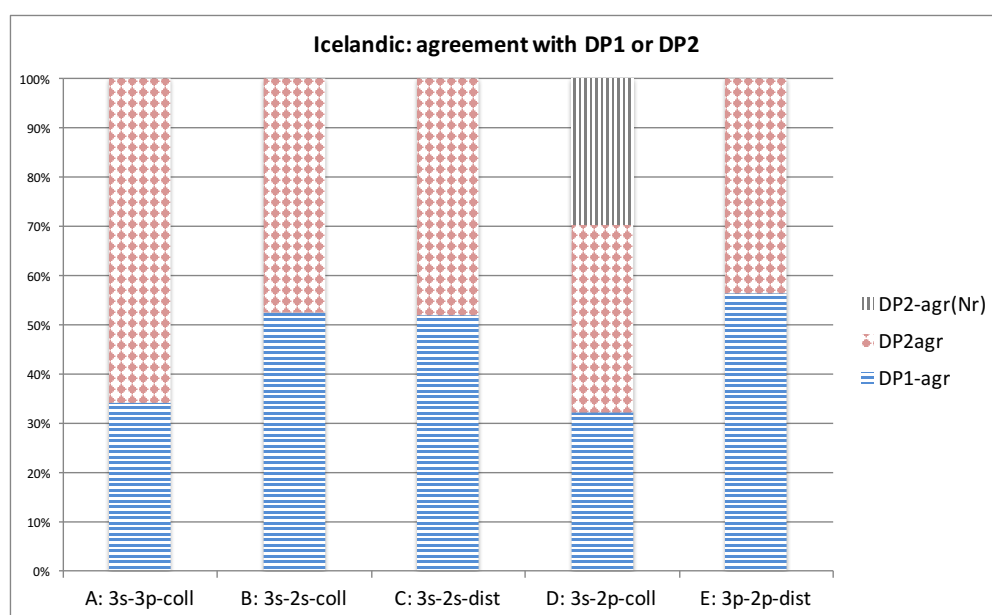


Figure 1: Agreement in Icelandic specificational clauses (production)

There are a lot of things that one can take away from the results in Table 1 / Figure 1. Just a few important points:

- **Downward agreement for Person is possible** (see B, C, E) although less favoured than downward agreement for Number (A).
- When speakers choose not to agree with DP2, the alternative is **agreement with DP1**, and **not “default” agreement**. This can only be shown when DP1 is plural, as in Condition E. “Default” agreement would be 3rd singular. This was never chosen.
- In one condition only, an unexpected option: In Condition D, where DP1 was 3rd singular, and DP2 2nd plural, about 1/3 of the time speakers produced **3rd plural** agreement:

(15) Hann var að velta fyrir sér hvort aðalvandamálið væru þið.  
 He was wondering if main problem.def **be.3pl** you.pl  
 ‘He was wondering whether the main problem is you.pl’

## 4.2 Faroese

A forced-choice production study parallel to the Icelandic study above.

- Participants: 54 self-reported native speakers of Faroese.
- Materials: 5 conditions

- (16) Hann ivaðist í, um ...  
 he wondered if  
 ‘He wondered whether ...’
- A. høvuðstrupulleikin \_\_\_ tey.  
 main problem.DEF \_\_\_ they  
 ‘the main problem is them.’ 3s–3p
- B. høvuðstrupulleikin \_\_\_ tú.  
 main problem.DEF \_\_\_ you.s  
 ‘the main problem is you.sg.’ 3s–2s
- C. høvuðstrupulleikin \_\_\_ tit.  
 main problem.DEF \_\_\_ you.pl  
 ‘the main problem is you.pl.’ 3s–2p
- D. høvuðstrupulleikin ikki \_\_\_ tey.  
 main problem.DEF NEG \_\_\_ they  
 ‘the main problem isn’t them.’ 3s–NEG–3p
- E. høvuðstrupulleikin ikki \_\_\_ tú.  
 main problem.DEF NEG \_\_\_ you.sg  
 ‘the main problem isn’t you.s.’ 3s–NEG–2p

15 sets like (16) constructed and distributed in Latin square design so each participant saw 3 exemplars of each condition, each from a different set.

Note that some of the conditions here are different to those in the Icelandic experiment. This is largely because of differences in the morphosyntax: Faroese has much more extensive SYNCRETISM in its agreement system than Icelandic. In particular, in the **plural**, all person distinctions have been lost, in all verbs (including the copula).

Overview of Faroese results is in Table 2 and Figure 2.

| Cond | Structure | DP1Agr    | DP2Agr    | Total |
|------|-----------|-----------|-----------|-------|
| A    | 3s-3p     | 55 (41%)  | 80 (59%)  | 135   |
| B    | 3s-2s     | 129 (90%) | 14 (10%)  | 143   |
| C    | 3s-2p     | 45 (31%)  | 102 (69%) | 147   |
| D    | 3s-NEG–3p | 55 (43%)  | 72 (57%)  | 127   |
| E    | 3s–NEG–2s | 129 (88%) | 17 (12%)  | 146   |

Table 2: DP1 vs. DP2 Agreement per condition in Faroese (irrelevant case excluded)

Some points to take away from the Faroese data:

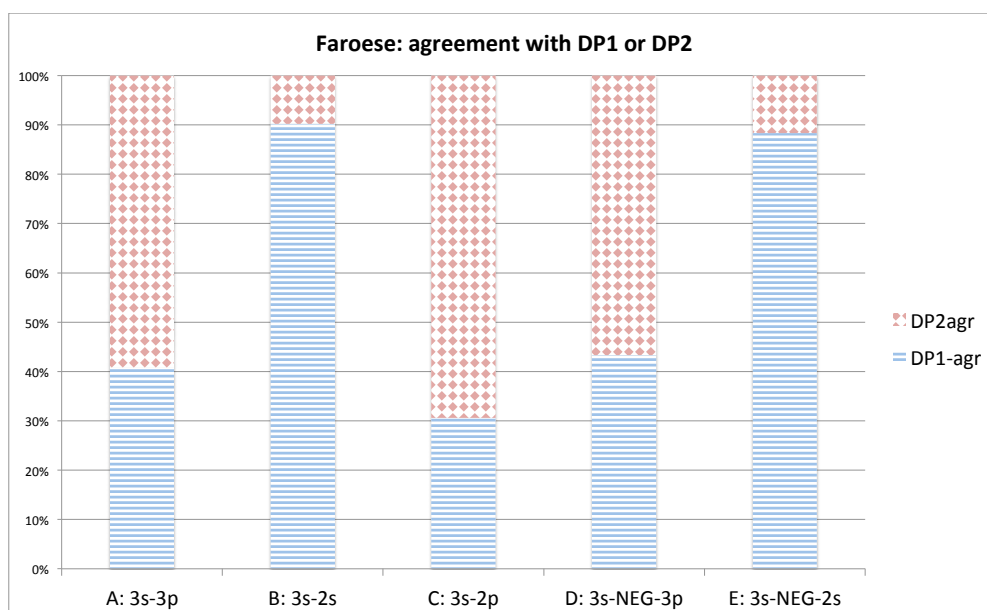


Figure 2: Agreement in Faroese specificational clauses (production)

- Agreement with DP2 for **Number** is possible (and in fact slightly preferred to agreement with DP1)—see (A) and (D). Not very different to Icelandic.
- Agreement with DP2 for **Person** is strongly dispreferred—see the contrast between (A) and (B), and between (D) and (E). We saw a similar tendency in Icelandic, but the dispreference for Person agreement is much stronger in Faroese . . .
- . . . **except** that where Person agreement is not distinctively marked on the verb, DP2 agreement is possible, and indeed preferred (compare B to C).

## 5 What does this tell us about agreement?

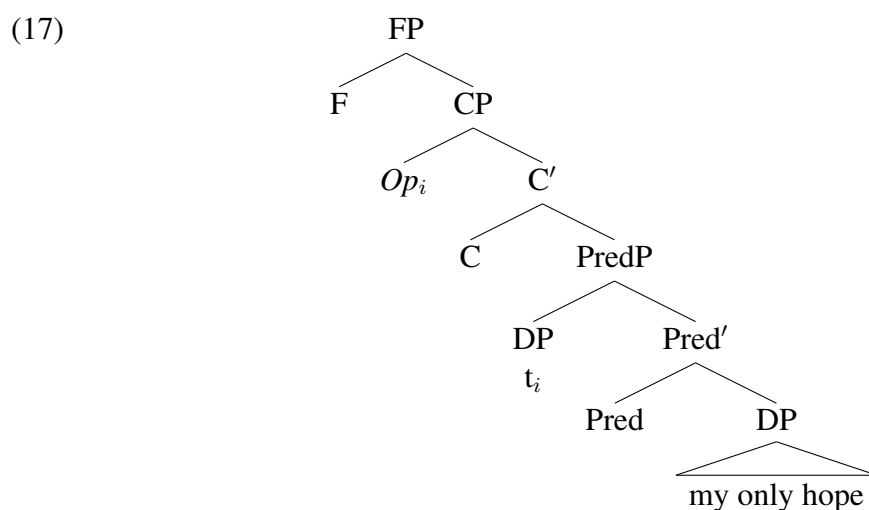
- “Downward” agreement for person is possible (evidence from Icelandic in particular). This is evidence against the general validity of Mark Baker’s “SCOPA” generalization (see (13) above).
- There is a “person effect” in these data too, however, most notably in Faroese (where agreement with DP2 for Person is much less likely than agreement for Number).
- The “person affect” cannot be due to the special needs of 1st/2nd person pronouns to be licensed, given that **it disappears where person agreement is not distinctively marked** (see in particular the contrast between condition B and condition C in Faroese. This lends additional support to the proposal of Schütze (2003) that such effects (observed in Sigurðsson 1996 for the DAT/NOM constructions mentioned earlier) are rather due to a morphological clash: the verb tries to agree with **both** arguments, but the result is only grammatical where there is a consistent morphological exponence). For recent discussion, see Ackema & Neeleman (to appear).



## 6 What does this tell us about the structure of specificational sentences?

- The initial DP in a specificational sentence is **specified for Number**. See in particular condition E in the Icelandic data: when DP1 is 3rd person plural, and DP2 is 2nd person plural, the choice of agreement is between those two: **default** (3rd person singular) agreement was **never** chosen by our participants.

Recall the “reduced free relative” structure proposed by den Dikken, along the lines of (5b), repeated here as (17):



The proposal for DP2 developed in Béjar and Kahnemuyipour (2017) (and similar in outline to the more sketchy proposal in den Dikken’s paper, is that DP2 agreement is possible in a language when the Probe associated with T is searching for  $\phi$ -features.

If DP1 has the kind of structure given in (17), the features of the embedded DP will not be accessible from outside the larger structure (“FP” in this tree), which is **devoid** of  $\phi$ -features. In such a language, such a DP will be “invisible” to the Probe, which will instead find DP2.

In a language like English, on the other hand, where the finite verb essentially never agrees with DP2, the Probe is less selective, it is simply looking for a nominal category of some kind. Presumably then, since there are no  $\phi$ -features available, the 3rd singular agreement found in English in e.g. *My only hope is/\*are your parents* is just a default.

### But

Already it is problematic that in an English specificational sentence with a plural subject, the agreement on the verb is **not** default, but plural:

(18) My favourite authors {\*is/are} Austen and Heller.

And we can now see the same phenomenon in our Icelandic data. As we’ve seen, agreement in specificational sentences in Icelandic is not always with DP2. If DP1

has no accessible  $\phi$ -features, the only alternative should be 3rd person singular (default) agreement. **But this is not what we find.** If DP1 is plural—as it was in Condition E—see Table 1 or the corresponding graph in Figure 1—we find not one single case of 3rd person singular agreement.

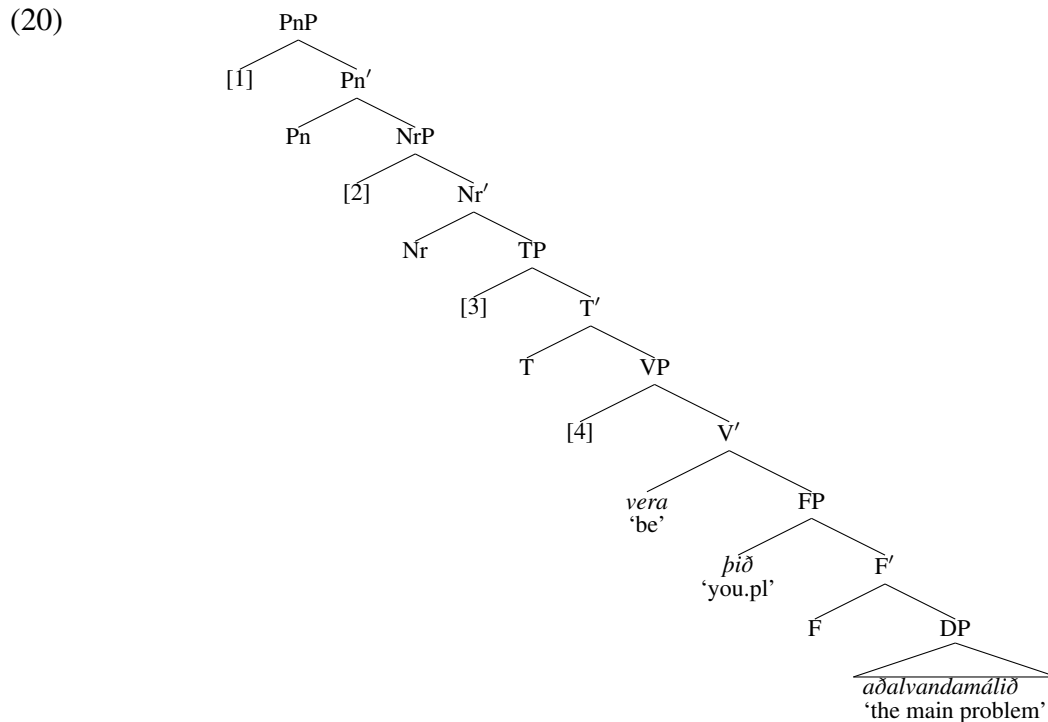
## 7 Proposal: evading agreement

Here I am going to illustrate only for Icelandic (we can discuss extending this to the other languages).

We adopt the proposal of Sigurðsson and Holmberg (2008) that in Icelandic Person and Number are distinct heads, with Person the higher of the two, and both located above Tense:

(19) [CP ... Top ... Fin ... [TP ... Pn ... Nr ... T ... v ... DAT ... NOM ]]

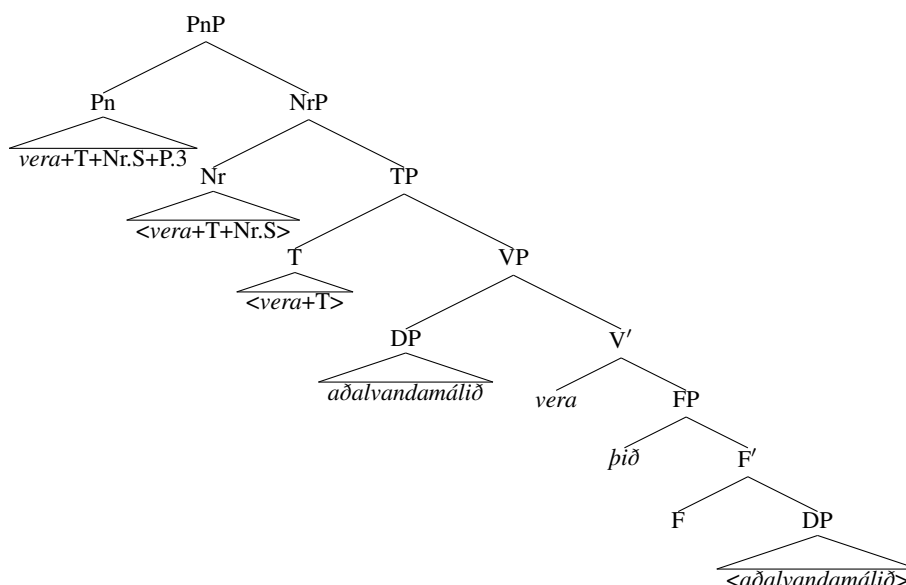
There are now multiple positions to which the initially lower DP may move, labelled 1–4 in the schematic tree in (20).



We further adopt the assumption from Sigurðsson and Holmberg (2008) that Number and Person agreement are established as soon as the Verb+T complex moves to adjoin to the Number and Person heads, respectively (in Minimalist terminology, T probes for Number/Person immediately after T-raising to Nr and T/Nr-raising to Pn, respectively).

If the originally lower DP (*aðalvandamálið* ‘the main problem’ in (20)) moves to either Spec,TP or Spec,VP (positions 3 or 4), it will be the highest DP below the V+T+Nr complex when this is established. This will result in Number agreement with this DP (DP1).

(21)



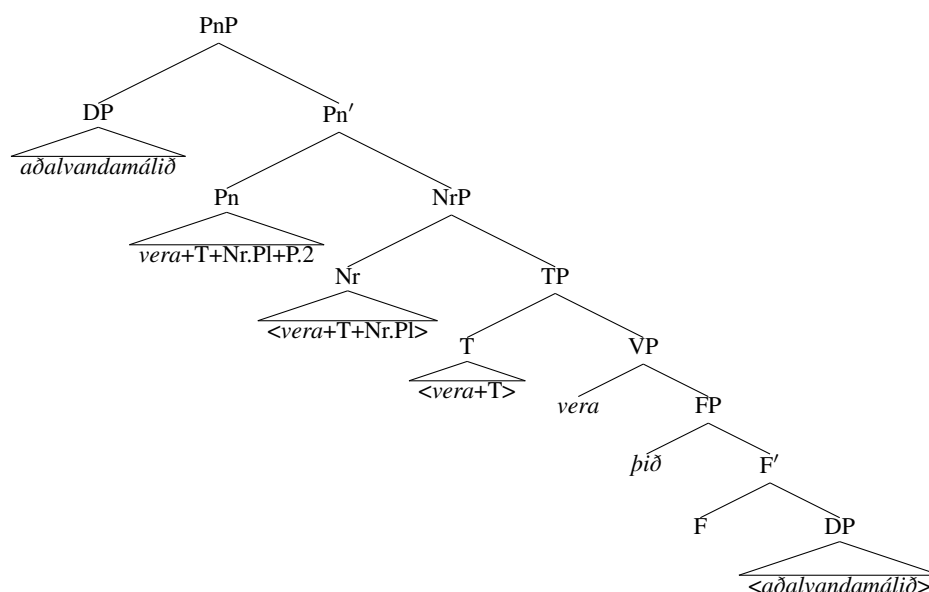
This is a possible derivation for the cases where speakers produce DP1 agreement, for example 3rd person singular agreement in examples like (22):

- (22) Hann var að velta fyrir sér hvort aðalvandamálið **væri** þið.  
 He was wondering if main problem.DEF **be.3s** you.pl  
 ‘He was wondering whether the main problem is you.pl.’

Full DP2 agreement, as in (23), is produced by a derivation where the initially lower nominal moves directly to a position **above** both Pn and Nr, as shown in (24).

- (23) Hann var að velta fyrir sér hvort aðalvandamálið **væruð** þið.  
 He was wondering if main problem.DEF **be.2pl** you.pl  
 ‘He was wondering whether the main problem is you.pl.’

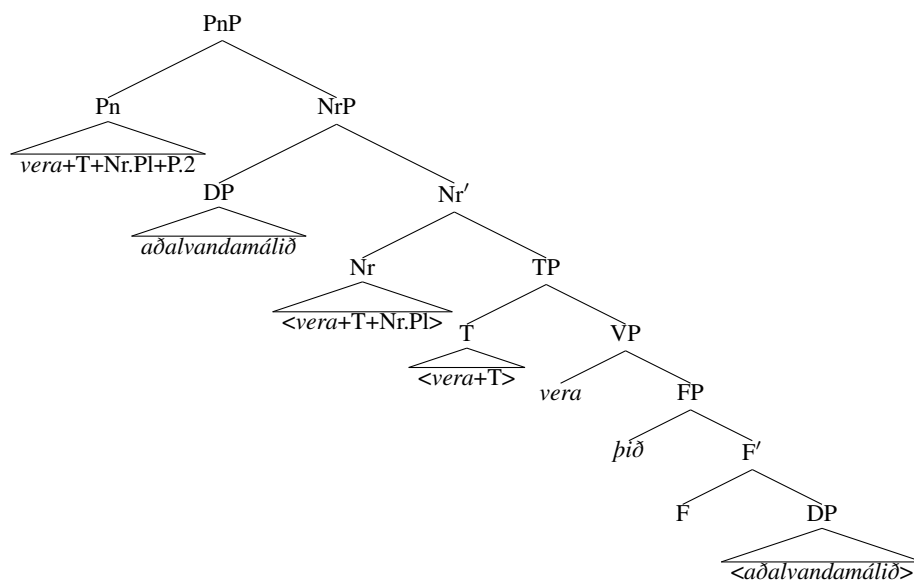
(24)



The final possibility is that the initially lower DP moves to Spec,NrP: that is, a position

where it is above Nr (and hence not visible for Number agreement, which is looking *down* the tree) but immediately below Pn. As in (21), (25) shows the derivation at the point where the verbal complex has reached Pn but DP1 has not yet moved to a left peripheral position. This derives the “partial agreement” pattern, illustrated in (26), that we saw was produced by a significant number of Icelandic speakers.

(25)



(26) Hann var að velta fyrir sér hvort aðalvandamálið **væru** þið.  
 He was wondering if main problem.DEF **be.3pl** you.pl  
 ‘He was wondering whether the main problem is you.pl.’

## 8 Conclusion

- Agreement can give us some more clues concerning the hidden structure of copular clauses.
- In particular, we have argued that the crucial place to look for more structure is in the verbal spine, but not within the initial DP
- Copular clauses provide more information about the mechanisms of agreement available to natural language.

For further research:

- What is the explanation for the differences between languages?
- What is the explanation for the differences between individual speakers?

## References

- Baker, Mark. 2008. *The syntax of agreement and concord*. Cambridge Studies in Linguistics. Cambridge: Cambridge University Press.
- Béjar, Susana, and Arsalan Kahnemuyipour. 2017. Non-canonical agreement in copular sentences. *Journal of Linguistics* 53.
- Béjar, Susana, and Milan Rezac. 2003. Person licensing and the derivation of PCC effects. In *Romance linguistics: Theory and acquisition*, ed. Ana Teresa Perez-Leroux and Yves Roberge, 49–62. Amsterdam: John Benjamins.
- den Dikken, Marcel. 2006. *Relators and linkers: The syntax of predication, predicate inversion and copulas*, volume 47 of *Linguistic Inquiry Monographs*. Cambridge, MA: MIT Press.
- Heggie, Lorie. 1988. The syntax of copular structures. Doctoral Dissertation, University of Southern California.
- Heycock, Caroline. 2012. Specification, equation, and agreement in copular sentences. *Canadian Journal of Linguistics* 57:209–240.
- Higgins, Francis Roger. 1973. The pseudo-cleft construction in English. Doctoral Dissertation, MIT.
- Kishimoto, Hideki. 2012. Nihongo kopyurabun-no imi-to kozoo (The meanings and structures of the Japanese copular construction). In *Zokusei-zyozyutu-no sekai (The world of property descriptions)*, ed. Taro Kageyama, 39–67. Kurosio.
- Moro, Andrea. 1997. *The raising of predicates: Predicative noun phrases and the theory of clause structure*. Cambridge: Cambridge University Press.
- Romero, Maribel. 2005. Concealed questions and specificational subjects. *Linguistics and Philosophy* 28:687–737.
- Schütze, Carson. 2003. Syncretism and double agreement with Icelandic Nominative objects. In *Grammar in focus: Festschrift for Christer Platzack*, ed. Lars-Olof Delsing, Cecilia Falk, Gunlög Josefsson, and Halldór Ármann Sigurðsson, 295–303. Lund: Department of Scandinavian Languages, Lund University.
- Sigurðsson, Halldór Ármann. 1996. Icelandic finite verb agreement. *Working Papers in Scandinavian Syntax* 57:1–46.
- Sigurðsson, Halldór Ármann, and Anders Holmberg. 2008. Icelandic dative intervention: Person and Number are separate probes. In *Agreement restrictions*, ed. Roberta D'Alessandro, Susann Fischer, and Gunnar Hrafn Hrafnbjargarson, 251–279. Berlin: Mouton de Gruyter.
- Williams, Edwin. 1983. Semantic vs. syntactic categories. *Linguistics and Philosophy* 6:423–446.