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More on phi-features in and out of copular sentences

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More on phi-features in and out of copular sentences: A reply to B&K 2018 [1]

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1. DERIVING NP2 AGREEMENT IN COPULAR CLAUSES

In a copular clause where there are two nominative NPs that could be agreed with, NP1 and NP2, how can it ever happen that the copula agrees with NP2 and not the (by hypothesis) closer NP1? In the account of Béjar and Kahnemuyipour 2017, 2018 (henceforth B&K 2017, 2018) the answer is always that NP1 lacks some phi-feature that NP2 has, so that a phi-probe searching specifically for that feature will simply skip NP1 and agree with NP2.[2] In our own work, we have argued that NP2 agreement in specificational copular clauses is possible when NP1 moves out of the scope of the agreement probe(s) (Hartmann & Heycock 2016, 2017). A central point of difference between the two proposals concerns the structure and feature content of NP1, as this directly relates to how NP2 agreement can come about.

B&K 2017 show that in Eastern Armenian, if NP1 is 3rd person and NP2 1st or 2nd person, then—whether the copular sentence is specificational or equative—agreement will be with NP2. They make the case that this should be accounted for by taking the phi-probe in this language to be specified for [participant], a feature only present on 1st and 2nd person pronouns. Clearly languages vary as to what features of NPs interact with agreement,[3] and we find convincing B&K's 2017 demonstration that Eastern Armenian privileges [participant], and their account of how this can be modelled.

The concern of our paper (Hartmann & Heycock 2018, henceforth H&H 2018) was rather with the account given in B&K 2017 for the patterns observed in specificational copular sentences in languages that do not privilege [participant] in this way. That is, in Persian, as in German, Icelandic (for some speakers),

and a number of other languages, agreement either can or must be with NP2 in the specificational copular configurations in (1), while agreement in non-specificational copular clauses like (2) is always with NP1 (BE in these examples indicates that depending on the language the copula can either be 3sg or 2sg/2pl in (1a), and 3sg or 3pl in (1b))

(1)   (a)   The winner BE you.
      (b)   The source of the rumour BE the neighbours.

(2)   In his dreams, the murderer is you.

Given the assumptions of B&K 2017/2018, in order for a phi-probe to skip NP1 but to find NP2 even when the latter has no [participant] feature—as in cases like (1b)—NP2 must have a phi-feature that is shared by both pronominal and non-pronominal NPs, but crucially not by the NPs that occur as the subjects of specificational sentences. They posit that this feature is [d]. This feature is initially described in B&K 2017 as a "deictic" feature (hence the "d"), but in fact it is not restricted to classic deictic NPs. In B&K 2018 it is stated that it is common to "all referential noun phrases"; from its position in the feature hierarchy that they sketch, it seems in fact to correspond to [person] (and indeed in B&K 2017, once the feature is introduced, they refer to it as a person feature).

    In a specificational sentence, then, NP2 is assumed always to have a [d] feature, while (by hypothesis) the subject, NP1, never does. In B&K 2017 it was argued that in specificational sentences NP1 lacks *all* phi-features except the minimal specification [n]. They posited the free relative-like structure in (3) for specificational subjects, and argued that the D head in such cases carries only [n], and that "a full complement of phi-features would not be valued by phi-features lower in the structure [...] as they are contained inside a CP" (B&K 2017, p. 490).

(3)

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                        DP
                   ┌─────┴─────┐
              D_defective      CP
                          ┌─────┴─────┐
                        Op_i          C′
                                 ┌─────┴─────┐
                                 C          PredP
                                        ┌─────┴─────┐
                                       DP          Pred′
                                    ┌───┴───┐    ┌───┴───┐
                                 the murderer  Pred    t_i
```
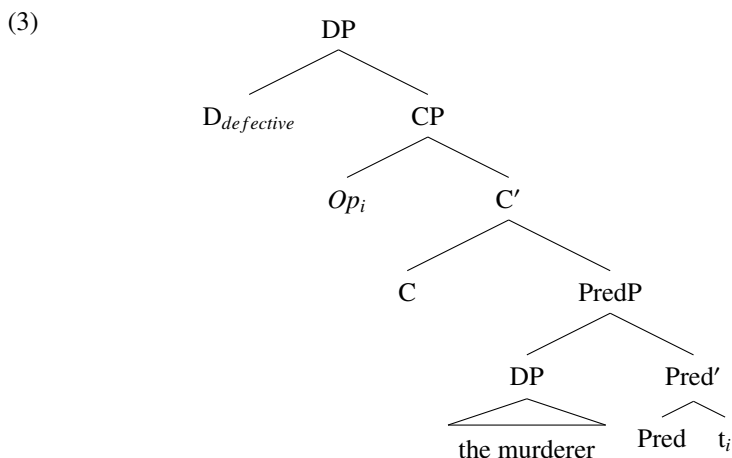
One of the points that we made in H&H 2018 was that this last claim could

not be correct at least for the Germanic languages that we have been working on, as all the evidence points to specificational subjects not being entirely devoid of phi-features. In particular, whenever a language allows for NP1 agreement in specificational sentences, we find full number agreement with NP1, never just "default" agreement (bear in mind that given the semantics of specificational copular clauses, NP1 can only ever be 3rd person).[4] This is one reason why we have argued that the Germanic languages that allow NP2 agreement in specificational sentences do so because they allow NP1 to evade agreement by virtue of its structural position(s) (Hartmann & Heycock 2016, 2017).

In their response, B&K 2018 amend their proposal concerning the defective nature of the phi-bundle on NP1 in specificational sentences, to capture the observation that these NPs do have number features. They add to their original analysis an account of how their proposed structure for specificational subjects in (3) allows number (but crucially only number) features to be passed from the embedded audible nominal to the D head, arguing that this allows their analysis to handle the facts from Germanic—in H&H 2018 principally Icelandic and English—that we discuss. They also make more explicit how the particular type of phi-sensitivity that they appeal to for these copular constructions allows a phi-probe that is specified to search for person ([d]) to also become valued for number.

Despite these amendments and clarifications, however, we believe that this proposal still does not, as it stands, provide an account of the phenomena that we have documented in Germanic. We will make two main points below. First, even given the additional assumptions that B&K introduce concerning agreement for number within their structure for specificational subjects in (3), this structure still makes the wrong predictions about agreement. Second, B&K assume a parasitic feature valuation mechanism that would undermine a number of existing accounts of "Low Nominative" agreement in Icelandic including, but not limited to, that found in copular constructions. We address these two issues in turn.

2. THE STRUCTURE AND FEATURE SET-UP OF NP1

Our first point concerns the structure in (3) and the additional mechanisms that B&K 2018 appeal to in order to maintain their claim that specificational subjects lack the [d] feature carried by other noun phrases, while explaining the fact that in languages that allow NP1 agreement in specificational sentences, such specificational subjects trigger number agreement:

(4) (a) The most likely source of the rumour is/*are Adam's parents.
     (b) The most likely culprit is/*are Belinda.

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[4] A large part of our discussion was devoted to copular clauses in Icelandic where NP1 is a plurale tantum nominal (semantically singular but formally plural), in order to show more clearly that NP2 agreement cannot be reduced to a system where agreement is simply with the most "marked" value for number. As these cases are not discussed in B&K 2018 we will not discuss them further here but refer interested readers to H&H 2018).

(c) The most likely culprits *is/are Carl and Dana.

B&K 2018 draw on the account of agreement in binominal small clauses (and in the predicational copular clauses that are based on them) argued for in Béjar et al. (forthcoming). They distinguish the relevant mechanism from Agree, calling it "Merge Concord". The details of this mechanism are not important here, the crucial point is that it is designed to ensure that a predicate nominal like *a violinist/violinists* has to have the same value for number as the subject:

(5) (a) I would not consider Mary {a violinist/*violinists}
     (b) Mary is {a violinist/*violinists}.
     (c) Mary and Jane are {*a violinist/violinists}.

Crucially for the account of the phi-features of specificational subjects under the proposed analysis in (3), the null operator in the covert free relative is merged in the predicate position of a small clause whose subject is the audible nominal. Hence, it is "take[n] for granted that the same number matching process applies between the subject and the operator" (B&K 2018, p. 5)—that is, the null operator behaves like *a violinist/violinists*. Subsequently, the number value transmitted to the operator becomes accessible to the D domain when the operator fronts. In cases like (3) and (4b) the number value will be singular, but in examples like (4c) it will be plural, by virtue of Merge Concord with the plural NP *the most likely culprits*:

(6) $[_{DP}$ D$_{[\#]}$ $[_{CP}$ OP$_{[\#]}$ $[_{C'}$ [. . . $[_{SC}$ the most likely culprit(s)$_{[\#]}$ t$_{OP_{[\#]}}$]]]]]

As we showed in H&H 2018, for Icelandic speakers who show the same NP1 pattern of agreement in specificational clauses as English speakers, specificational subjects where the audible nominal is a plurale tantum nominal such as *upptökin* ('cause(s)') also trigger plural agreement on the copula. Given the account of B&K 2018, this means that their formal plural number must also induce a plural value on the operator:

(7) Þau spurðu hvort   eldsupptökin væru   ekki þurrkurinn.
     they asked whether fire.causes be.SBJ.3PL not drought.DEF
     'They asked whether the cause of the fire wasn't the drought.'

(8) $[_{DP}$ D$_{[\#PL]}$ $[_{CP}$ OP$_{[\#PL]}$ $[_{C'}$ [. . . $[_{SC}$ fire.causes$_{[\#PL]}$ t$_{OP_{[\#PL]}}$]]]]]

B&K argue that the type of agreement observed in small clauses / predicative copular constructions, captured by their process of Merge Concord, has exactly the properties needed to explain the nature of specificational subjects: in particular, while nominal predicates may agree in number, they never agree in person. However, if we look a little more closely, we see that this proposal is problematic from three perspectives.

First, as B&K themselves state, the proposed structure in (3) is plausibly a type of (covert) free relative. But if we consider overt free relative clauses, we see that

an operator originating in a predicate position does **not** acquire plural features. [5]

(9) A: All your aunts are {violinists/*a violinist}, aren't they?
         So I guess your sisters must also be {violinists/*a violinist}, right?
     B: Wrong again.
         [What$_i$ my sisters are t$_i$] is/*are not [what$_j$ my aunts are t$_j$].

Note that the matrix verb—the copula—has to be singular. If the operator in the subject free relative (*what$_i$ my sisters are t$_i$*) was forced/able to carry plural features because of its origin in a position where it is in concord with *my sisters* (as proposed in B&K 2018 for the silent operator in their structures) it should induce plural, not singular agreement.

One might possibly argue that *what* in free relatives is specified for singular, and therefore blocks concord; and that the null operator posited by B&K 2018 might be different in this respect. However, assuming a valued number feature for *what* and an unvalued one for its silent counterpart is not only a stipulation, it also leads to the wrong results elsewhere. Consider another set of examples, one that does not rely on the analogy to overt free relatives.[6] English plurale tantum nominals like *jeans* or *spectacles* behave like singulars in not forcing plural concord in copular clauses parallel to the ones cited in B&K 2018:[7]

(10) (a) I only have one pair of jeans. Those jeans are {a very expensive item of clothing / my favourite garment}
      (b) I have a couple of dresses. Those dresses are {*a very expensive item of clothing / *my favourite garment}

Although it is not obvious how the Merge Concord system in Béjar et al. (forthcoming) could capture the pattern in (10a),[8] for the sake of the argument let us just assume that a solution can be found. However this is achieved, the crucial point for us here is that B&K's proposal—that the null operator in a specificational subject has the same number properties as a predicate nominal like *an item of clothing*—predicts that a specificational subject built around such a plurale tantum nominal should equally require singular agreement. But this is the wrong result:

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[5] For the copular agreement experts: note that B's response is *not* a specificational pseudocleft (which might have some other special properties) but an "ordinary" equative sentence—apart from the interpretation we can tell this because specificational pseudoclefts do not allow modification such as negation (Higgins 1979: p. 321).

[6] We take our examples from English largely because in this language NP1 agreement in specificational clauses is essentially obligatory; this makes the argument more straightforward than when we are considering a language like Icelandic where NP1 and NP2 agreement both occur in the modern language, as we have documented in Hartmann & Heycock (2016, 2017).

[7] Of course, plural predicates are also fine with *jeans*, but this forces the irrelevant reading where *jeans* is taken to refer to multiple pairs.

[8] In Béjar et al. (forthcoming) whether or not Merge Concord applies depends on the predicative noun phrase. Here, however, the relevant factor is the nature of NP1 (the subject noun phrase).

the agreement is plural.[9]

(11) (a) $[_{DP}$ D$_{[\#SG]}$ $[_{CP}$ OP$_{[\#SG]}$ $[_{C'}$ $[\ldots[_{SC}$ my favourite jeans t$_{OP_{[\#SG]}}$ $]]]]]$
      (b) My favourite jeans {are/*is} that pair over there.

The third problem of the structure proposed for specificational subjects is a more general one relating not only to agreement. Because in B&K's structure for a specificational subject, the audible NP is the **subject** of a small clause, there is a serious problem of overgeneration. Most specifically, nothing seems to rule out the subject of such a small clause being a 1st or 2nd person pronoun, as in a free relative like the examples in (12):

(12) (a) I am [what$_i$ you$_j$ are $[_{SC}$ t$_j$ t$_i$]] (a vioinist).
      (b) [What$_i$ you$_j$ are $[_{SC}$ t$_j$ t$_i$]] should be important to you.

That is, the structure proposed for specificational subjects wrongly predicts that examples like (13) should be grammatical, on a par with (14):

(13) (a) *You is Ezra.
      (b) $[_{DP}$ D$_{[\#]}$ $[_{CP}$ OP$_{[\#]}$ $[_{C'}$ $[\ldots[_{SC}$ you $_{[\#]}$ t$_{OP_{[\#]}}$ $]]]]]$ is Ezra.
(14) (a) The murderer is Ezra.
      (b) $[_{DP}$ D$_{[\#]}$ $[_{CP}$ OP$_{[\#]}$ $[_{C'}$ $[\ldots[_{SC}$ the murderer$_{[\#]}$ t$_{OP_{[\#]}}$ $]]]]]$ is Ezra.

This last problem (and in fact to some extent also the issues with agreement) could be avoided if one were to adopt instead the analysis in den Dikken (2006). In that proposal the audible nominal in the initial "covert free relative" is not the subject of a small clause, but its predicate, as sketched in (15), a simplified version of den Dikken's structure (p. 95):

(15) $[$ Ø $[_{CP}$ OP$_i$ $[_{C'}$ $[\ldots$ $[_{SC}$ t$_i$ [the murderer]$]]]]]$ is Ezra.

However, this proposal is very problematic for a different reason: namely, there is no non-stipulative way that we can think of that would predict that this predicate has to be a DP, rather than, say, an AP:

(16) *$[$ Ø $[_{CP}$ OP$_i$ $[_{C'}$ $[\ldots$ $[_{SC}$ t$_i$ [intelligent]$]]]]]$ is Ezra.

In summary: we agree wholeheartedly that the syntactic structure of specificational subjects is a topic ripe for exploration. However, for English at least that exploration has to start from the observation that the category restrictions and the agreement properties of specificational subjects exactly track the category restrictions and agreement properties of the audible NPs around which the

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[9] Note that the plural agreement in (11b) cannot be argued to be forced by the features of NP2 *that pair over there*. First, English requires NP1 agreement in specificational sentences. Second, *that pair [of jeans]* does not force plural agreement even in subject position: *That pair (of jeans) is/are nice.*

specificational subjects are "built". The proposed structure seems to us to be a hindrance rather than a help in capturing this observation.

3. THE NATURE OF PHI-AGREEMENT

The discussion in the previous section related to the proposals in B&K 2017/2018 about how to derive the relative phi-defectivity of NP1. The other essential components of the agreement system are of course the nature of the probe and the mechanism of agreement and valuation.

As discussed in H&H 2018, some speakers of Icelandic have an NP2 agreement pattern. For B&K's proposal to work for Icelandic NP2 agreement, the probe must be searching specifically for [d], which—as expected in the kind of feature-geometry they assume, given that [d] is essentially equivalent to [person]—dominates "participant" and "speaker", but crucially not number, see (17), taken from B&K 2018:

(17)
$$
\begin{array}{c}
[n] \\
\diagup\diagdown \\
[\#] \quad [d] \\
| \\
[part]
\end{array}
$$
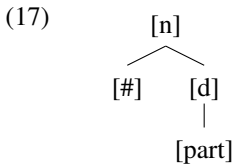
In order for the valuation process to yield the right results, B&K 2018 make explicit their assumption that even if the phi-probe is searching for [d], or [participant], once it makes a match even the non-dominated number feature on the probe will be valued "parasitically." This is a necessary move, given that in the more elaborated system in B&K 2018, NP1 has an accessible number feature. If number probed separately to person ([d]), the prediction would be that in specificational sentences in Persian and Icelandic (for speakers with NP2 agreement) we would find person agreement with NP2 but number agreement with NP1, which is not the case.

Notice, however, that the assumption that a probe can search for a particular feature but have non-dominated features valued "parasitically" is not an innocent one. In particular, there is by now an extensive literature on agreement, much of it drawing on Béjar (2003), Béjar & Rezac (2003), that relies on the possibility of person and number—or other phi-features—probing separately. Crucially, in such proposals, probing by person results in valuation only of the subpart of the feature structure dominated by person, and the same for number. This aspect of how agreement works in a feature-geometric approach to phi-features is set out very explicitly in Preminger (2014), Chapter 4, where it is presented as a synopsis of ideas from Béjar & Rezac (2003); Preminger goes to some lengths to distinguish between this property of agreement and the "featural coarseness" of clitic-doubling, which "copies feature-sets in their entirety" (p. 31).

It could be that there are distinct types of phi-sensitivity in probes, with one type allowing for the kind of "parasitic" valuation of phi-features that Preminger

takes to be the hallmark of clitic-doubling rather than agreement, and another type restricting valuation to the substructures matching the specification of the probe. As analysed in B&K 2018, Persian and Eastern Armenian would instantiate the first type. In addition to whatever concerns one might have about this theoretical multiplication, however, there is a specific problem that arises from the attempt to extend the same analysis to Icelandic. Again, we have shown in Hartmann & Heycock (2016, 2017, 2018) that some Icelandic speakers allow/prefer NP2 agreement in specificational clauses; the claim in B&K 2018 is that this can be dealt with by assuming a [d] probe, plus parasitic evaluation of number. But Icelandic is a language where there are long-standing arguments that person and number agreement have to be treated as separate probes (whether or not these probes are distinct heads). See in particular Béjar & Rezac (2003), Sigurðsson (2004), Sigurðsson & Holmberg (2008), Preminger (2014).

Most of these arguments relate to agreement with "Low Nominatives" in Dative-Nominative constructions. Beyond the Dative-Nominative cases, in Hartmann & Heycock (2016, 2017) we showed that Icelandic has three agreement options in specificational copular clauses: NP1 agreement, NP2 agreement and number-only agreement with NP2, see (18).

(18) Hann var að velta fyrir sér hvort ...
      he   was wondering   if

  (a) aðalvandamálið   **væri** þið.
       main problem.DEF **be.3SG** you.PL
       'the main problem is you.pl.'
  (b) aðalvandamálið   **væruð** þið.
       main problem.DEF **be.2PL** you.PL
       'the main problem is you.pl.'
  (c) aðalvandamálið   **væru** þið.
       main problem.DEF **be.3PL** you.PL
       'the main problem is you.PL.'

  (Hartmann & Heycock 2017: 268f)

We argue that this third pattern of number-only agreement is the result of number and person being two independent probes. In our configurational analysis, the pattern is straightforwardly accounted for: as NP1 can move above number, but below person, NP1 may intervene for the person probe, without doing so for number. We do not see how this pattern could be handled given the assumptions about agreement made in B&K 2018.

Note that, as alluded to briefly above, it is not possible simply to graft the possibility of separate number and person probes onto the account for NP2 agreement given in B&K 2017/2018. In such a system, the person probe would search for [d], and find and agree for person with NP2. The number probe, however, would find and agree for number with NP1 (given the amendment in B&K 2018 to take into account the fact that NP1 has number features). That is, it

would predict, not the attested "number-only" NP2 agreement, but an unattested "person-only" NP2 agreement, and would also block the attested full (person and number) agreement with NP2. Therefore, we think that an approach along the lines of B&K 2017/2018 does not account for the patterns of agreement in Icelandic that we have described and analysed. There is a configurational aspect needed in the structure. NP1 in a specificational sentence has phi-features that are in principle accessible to a probe, but it can be invisible to the probe when outside its domain.

4. CONCLUSION

In this reply we have argued that the adjustments made in B&K 2018 in response to H&H 2018 are not sufficient to account for the range of data we encounter in Icelandic. First, we argued against the specific proposal of number inheritance for specificational subjects. The structure and mechanism proposed in B&K 2018, drawing on Béjar et al. (forthcoming), does not make the correct predictions for number agreement, if we consider either overt free relatives or specificational sentences involving plurale tantum nouns in English. Second, we have argued that the probe structure and agreement mechanism proposed for Persian specificational copular clauses in B&K 2017 and extended to Icelandic in B&K 2018 is inconsistent with the wider picture of agreement in Icelandic, some of which we have discussed elsewhere (Hartmann & Heycock 2016, 2017). In Icelandic there is a range of evidence that number and person need to be separate probes, evidence that is incompatible with B&K's 2018 proposal of "parasitic" agreement in number. While we are convinced by arguments in B&K 2017 that the phi-sensitivity of probes can vary cross-linguistically, the featural specification of the probe proposed, in combination with a featurally defective NP1, does not suffice to capture the facts in Icelandic, contra the suggestion in B&K 2018 that the system outlined there can provide a unified account that includes the Icelandic and English data. We thus still do not see a viable alternative to taking into consideration the configurational position of NP1, as we have proposed.

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