We don't agree (only) upwards

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Abstract: For Bjorkman and Zeijlstra (2019), Agree consists of two operations: checking and valuation. Checking involves probing, always upwards from an uninterpretable feature [uF] to an interpretable feature [iF] c-commanding it, and [iF]'s checking [uF]. Valuation generally happens downwards, with the valuer c-commanding the valuee. Upward valuation, in which the probe c-commands the goal, is exceptional and only occurs if downward valuation has failed. In this reply, we argue that this approach is not supported empirically. We present data from Matengo, German, Serbo-Croatian, Sambaa, Liko, and Nez Perce, arguing that upward valuation must be available more generally than Bjorkman and Zeijlstra suggest.

Keywords: Upward Agree, checking, subject agreement, object agreement, complementizer agreement, morphosyntax

1 The direction of valuation in Agree

Bjorkman and Zeijlstra (2019) argue that Agree involves two operations: checking and valuation. Checking takes place in a "strictly upward fashion" (Bjorkman and Zeijlstra 2019:535), with an uninterpretable feature [uF] probing upwards for an interpretable feature [iF] which commands it and can check it. Valuation generally happens downwards, from an interpretable feature [iF] to an uninterpretable feature [uF] it c-commands.

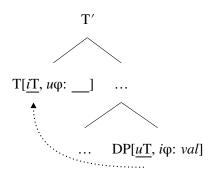
In this system, any uninterpretable feature acts as a probe in that it looks for an interpretable feature that c-commands it and can check it (upward probing). Therefore, a "goal" DP in terms

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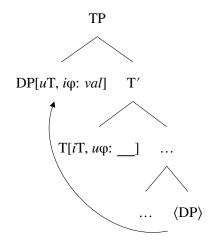
of Chomsky 2000, 2001 has its uninterpretable Case feature checked (and valued). This DP usually moves to the specifier of its Case checker and becomes the checker and valuer of the uninterpretable φ -features on the head that corresponds to the probe in Chomsky's terminology. Both the head and the phrase thus have dual functions: their respective uninterpretable features probe upwards for a checker and their interpretable features value downwards.

The interaction of checking and valuation is illustrated in (1) for agreement between T and the subject, where probing for a checker is indicated by a dotted arrow, movement by a solid arrow, and valuation by a dashed arrow. The subject, DP, has a [uT] feature (nominative; cf. Pesetsky and Torrego 2002) which is checked by the [iT] feature of a c-commanding head, T, (1a). Checking their [u/iT] features makes DP and T "accessible" to each other (Bjorkman and Zeijlstra 2019:536). DP moves to SpecTP, (1b), from where it can check T's $[u\phi]$ feature, (1c), and then value it, (1d).

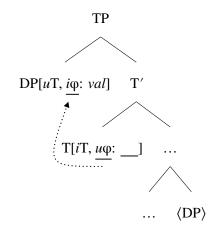
(1) a. Probing, checking of [u/iT]



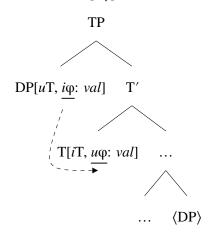
b. Movement of DP



c. Probing, checking of $[u/i\varphi]$



d. Valuation of $[u\varphi]$

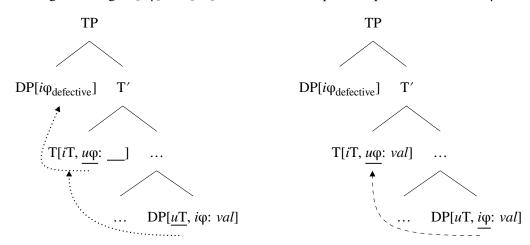


In this system, the specifier of a probe entering an Agree relation must be filled because the probe needs to have one of its features checked by a DP that c-commands it. Movement of the agreement controller to the specifier of the head it agrees with is thus crucial: rather than deriving this movement from an EPP feature associated with Agree, Bjorkman and Zeijlstra argue that the head's need to have its [uF] feature checked by the c-commanding valuer of [uF] provides motivation for moving it. In fact, Bjorkman and Zeijlstra (2019:539) explicitly assume that whenever an accessible DP can move to the probe's specifier, it moves right away. This system thus derives downward valuation as a consequence of checking and movement.

Nevertheless, Bjorkman and Zeijlstra (2019) discuss a particular case in which valuation can happen upwards: if the specifier of the probe is filled by an element that can check it but cannot value it, a lower accessible element can value the probe. This is the case when the specifier of T is filled by φ -defective *there*. Since *there* cannot value T's φ -features, T is valued by the lower subject DP after that DP and T become accessible to each other by T's [iF] checking DP's [uT] feature. Checking and upward valuation in this configuration are illustrated in (2).

(2) a. Probing, checking of $[u\varphi]$ and [uT]

b. Exceptional upward valuation of φ



This checking/valuation mechanism makes a very clear prediction: if a probe's specifier is empty (in the absence of a defective element such as *there* or an internally or externally merged DP), the probe's φ-features cannot be checked and thus cannot be valued by any DP because checking necessarily precedes valuation (Bjorkman and Zeijlstra 2019:535). This characterises a scenario in which a probe agrees with a DP that has not moved to its specifier, for example agreement between T and a subject in its base position. Bjorkman and Zeijlstra

(2019:563–564) acknowledge the existence of languages in which T agrees with an in situ subject and suggest that such configurations involve "a null expletive *pro*." This assumption is necessary on their account because a probe with an empty specifier would not be able to enter any Agree relation. Seemingly empty specifiers therefore must be filled by a null expletive to allow the probe's features to be checked by a c-commanding phrase.

In the absence of independent evidence in favor of such null expletives, however, this proposal is not attractive, as it is difficult to falsify and it potentially predicts a proliferation of null elements (see for example Preminger 2014:86–87 for an argument against the presence of null expletive pro in Kichean agent-focus constructions). Discussing several types of configurations involving in-situ agreement controllers which have not featured in the debate on the directionality of Agree, we argue below that such ϕ -agreement phenomena indicate that Bjorkman and Zeijlstra's (2019) proposal is not adequate from an empirical point of view (see also Zeijlstra 2012, Preminger 2013, Bjorkman and Zeijlstra 2014, Preminger and Polinsky 2015 for further discussion).

Our main goal in this reply is to discuss additional empirical data as part of this ongoing debate, as we believe that if a given approach is not empirically adequate, the question whether it has conceptual advantages is moot (see Section 5). In what follows, we present data (mostly) from the existing literature which have consequences for both checking and valuation in Bjorkman and Zeijlstra's (2019) proposal. First, because checking can only be diagnosed through subsequent valuation (checking by itself cannot be spelled out), the fact that an agreement relation between a head with an empty specifier and a DP it c-commands can occur suggests either that checking can also happen downwards, that is that a [*u*F] can check a [*i*F] it c-commands, or that checking is not necessary for valuation at all (*contra* Bjorkman and Zeijlstra 2019:535). Second, given this point about checking, it follows that upward valuation can happen in more contexts than the exceptional one described by Bjorkman and Zeijlstra (2019): upward valuation, either as a consequence of downward checking or no checking at all, is necessary in a number of different languages and configurations (again, see Preminger 2013, Preminger and Polinsky 2015 for additional discussion).²

In Section 2, we discuss subject agreement between a head and a low subject in Matengo and German that does not involve movement of the subject to the specifier of the agreeing

head and mention an agreement asymmetry with coordinated subjects in Serbo-Croatian. In Section 3, we turn to object agreement in the absence of object movement in two Bantu languages. Section 4 discusses agreement between a complementizer and multiple targets in Nez Perce in the absence of movement. In Section 5, we briefly address conceptual issues and their role in arguing for the directionality of checking and valuation.

2 Subject agreement

2.1 Low subjects in Matengo

Our first set of data involves agreement between the verb and a postverbal subject in Matengo (Bantu N13, south-west Tanzania), as in (3).³

(3) Matengo

Ju-i múundu.

1sm-die.pfv 1.person

'Someone died.'

Assuming that the subject marker reflects φ -agreement on T (as is standard in Bantu syntax; see for example Carstens 2005, Halpert 2015), there are two possible derivations under Bjorkman and Zeijlstra's (2019) analysis: either the postverbal subject must raise to SpecTP to check T's [uF] feature, or there is a zero expletive in SpecTP, allowing valuation by the lower external argument (EA) after T has checked its [uCase] feature. However, Van der Wal (2012) shows, first, that postverbal subjects in Matengo are low and, second, that the data do not support the assumption that there is a null expletive.

There are several arguments indicating that postverbal subjects are in fact structurally lower than the verb and the agreeing head T. First, the verb head-moves only above νP in Bantu languages (Julien 2002), and not to C—a subject in SpecTP would thus necessarily be preverbal. Alternatively, if the remnant phrase moved around the subject in SpecTP, the verb could linearly precede and be structurally higher than the subject. However, this predicts a VOS order for transitive predicates, which is not attested: VSO is possible but VOS is ungrammatical in

Matengo. This is compatible with the assumption that both arguments of a transitive predicate are inside the verb phrase, but incompatible with a structurally high subject.

- (4) Matengo (Yoneda 2011:763)
 - a. Ju-a-teleka María wâ:le.1sm-pst-cook/sf 1.Maria 9.rice

'Maria cooked rice.'

b.??Ju-a-teleka wáli Marî:a.

Next, Van der Wal (2009, 2012:207) argues that the "conjoint" verb form indicates that the verb c-commands the following phrase. Matengo has the so-called "conjoint/disjoint" alternation, in which the form of the verb reflects whether it is final in its constituent or not (see Yoneda 2017 for an overview of the alternation in Matengo). If the verb is final in its constituent (presumably the ν P, see Buell 2006 for Zulu), the disjoint form is used: with SV order as in (5c), the ν P domain is empty, requiring disjoint marking (-*iti*). The conjoint form is ungrammatical here (5b), as it needs a following element within the ν P. Without going into further detail (for which see Yoneda 2017 and Van der Wal 2017), we can see that the conjoint form appears in subject inversion in Matengo, as in (5a), and we deduce from this that the verb c-commands the subject (assuming Kayne 1994's Linear Correspondence Axiom).

- (5) Matengo (Yoneda 2011:759; Yoneda 2009 cited in Van der Wal 2012:207)
 - a. Ju-a-lwal-aje mwaná gwa.1sm-pst-suffer-cj 1.child 1.my
 - b. *Samuéli ju-a-butuk-aje.1.Samuel 1sm-pst-run-cj

'My child was sick.'

c. Samuéli ju-a-butuk-iti.

1.Samuel 1sm-pst-run-dj

'Samuel ran.'

Finally, scope effects show that the postverbal subject is in a lower position than the verb. The interpretation of a quantified subject under negation shows that the subject is c-commanded by negation in the VS order (6a), in contrast to the SV order (6b). Under the assumption that the verb moves to just above vP, this suggests that the subject stays in situ in subject inversion, and is at no point in the derivation in SpecTP.

(6) Matengo

- a. Míkəəngú j-oote ngase ji-á-bwiíke.
 4.trees 4-all NEG.AUX 4SM-PST-fall
 'All trees have not fallen.'
 - $\forall \gg \neg$: All trees are still standing.
- b. Ngase ji-á-bwiki míkəəngú j-oote.
 NEG.AUX 4SM-PST-fall 4.trees 4-all
 'It is not the case that all trees have fallen.'
 - $\neg \gg \forall$: Some trees have fallen and others are still standing.

Having established that subjects are low in Matengo, Van der Wal (2012) considers whether the preverbal position could be filled by a null expletive. For Bjorkman and Zeijlstra (2019), agreement with a low subject is only possible if $[u\phi]$ on T is checked, but not valued, by an expletive in its specifier, allowing the low subject to value T's $[u\phi]$ features. We are aware of two types of expletives with a clear semantic contribution: locative expletives and expletives triggering a definiteness effect. Because (4a) and (5a) do not show definiteness effects, they provide evidence against the existence of an expletive triggering a definiteness effect in Matengo.

Considering the former type of expletive, Pinto (1997) suggests that presentational verb—subject constructions in Italian include a null expletive argument she calls "LOC" that contributes specific locational and temporal semantics, meaning 'here and now'. Pinto (1997) argues that positing such a meaningful null expletive is supported by contrasts such as (7).

- (7) Italian (Pinto 1997:128)
 - Irene è arrivata.

'Irene arrived (somewhere).'

b. LOC è arrivata Irene.

'(Here/at this place) arrived Irene.'

Van der Wal (2012:210–211) rejects the possibility of such an expletive filling the preverbal position in Matengo for several reasons. First, Pinto (1997) argues that LOC is restricted to certain unaccusative and unergative verbs, while Matengo also allows transitive predicates in subject inversion. Van der Wal (2012:213) thus argues that there is no clear way of determining which predicates would take a null LOC expletive.

Second, clauses with postverbal subjects in Matengo can be modified by adverbials such as 'yesterday' that are incompatible with an expletive meaning 'here and now':

(8) Matengo (Yoneda 2011:765)

Ju-a-tina María nhánzu lí:so.

1sm-pst-gather 1.Maria 10.firewood yesterday

'Maria gathered firewood yesterday.'

Van der Wal (2012:214) concludes that "positing a loco/temporal null element does not seem to explain the subject inversion constructions in Matengo." It is of course possible to posit a meaningless null element in the preverbal position that allows the verb to check its $[u\phi]$ features (cf. Bjorkman and Zeijlstra 2019:563–564) but a claim to this effect is not falsifiable. In light of evidence *against* different types of null expletives, the most straightforward analysis of postverbal subject agreement in Matengo is that the agreeing head c-commands the postverbal subject and enters an Agree relation with it involving upward valuation.

2.2 Low subjects in German

As also discussed by Carstens (2016), Bobaljik and Wurmbrand (2005) provide evidence for agreement between T and low subjects in German. In a nutshell, Bobaljik and Wurmbrand (2005) argue that there are scenarios in which a nominative agreement controller enters an Agree relation with T but cannot move to SpecTP. One of their baseline examples is shown in

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(9). The verb *gefallen* (lit. 'to please') takes a dative experiencer argument and a nominative theme, with the dative c-commanding the nominative.

In (9), the reading in which the existential scopes over the universal quantifier is preferred (the inverse reading "requires a special rise–fall intonation," Bobaljik and Wurmbrand 2005:819, fn. 7). Bobaljik and Wurmbrand (2005) argue that the inverse reading is derived by covert movement of the nominative theme over the dative experiencer. On the direct reading, there is no such movement, and T enters an Agree relation with the nominative remaining in situ, leading to upward valuation.

(9) German (Bobaljik and Wurmbrand 2005:819)

... weil mindestens einem Kritiker jeder Film gefallen sollte. because at least one.DAT critic every.NOM film please should.3sG '... since at least one critic likes every movie.' $\exists \gg \forall$; $?\forall \gg \exists$

Bobaljik and Wurmbrand (2005:819–820) go on to show that fronting the VP including the nominative theme removes the inverse scope reading: in (10) the only possible reading involves high scope of the existential quantifier over the universal quantifier:

(10) German (Bobaljik and Wurmbrand 2005:819)

?[Jeder Film gefallen] $_{VP}$ sollte mindestens einem Kritiker. every.Nom film please should at least one.DAT critic 'At least one critic should like every movie.' $\exists \gg \forall; *\forall \gg \exists$

While (9) is compatible with a situation in which there is no critic that likes all films, as long as all films are liked by some critic (the inverse scope reading), (10) is not: for (10) to be true, there must be at least one critic who likes all films. Bobaljik and Wurmbrand (2005:820) attribute this to "scope-freezing": while the fronted VP may reconstruct to its base position, it behaves as an island for covert movement of the universal quantifier out of it and reconstruction of the existential quantifier into it, making it impossible to derive inverse scope.

It follows that the nominative theme *jeder Film* 'every film' that controls agreement cannot move to the specifier of T for valuation but must enter an Agree relation with T while remaining in its low position, resulting in upward valuation. This is the only option in (10) and the

preferred option in (9). Once again, it is in principle possible that SpecTP is filled by a null expletive when T agrees with a low subject, but in the absence of independent evidence for the presence of such an expletive, that option remains unattractive due to its unfalsifiability.

Note also that while Bobaljik and Wurmbrand (2005) assume that Agree is evaluated at LF, Bjorkman and Zeijlstra (2019:544) suggest "that the checking of uninterpretable features must be accomplished prior to LF." The fact that (9) can show different scopal readings with identical word order suggests that if the inverse reading in (9) is derived by moving the universally quantified phrase *jeder Film* to SpecTP *at* LF, this movement would happen too late on Bjorkman and Zeijlstra's (2019) analysis (although see Preminger and Polinsky 2015:11 for discussion of covert movement and agreement).

Hedde Zeijlstra (pers. comm.) suggests that T could enter an Agree relation with the dative quantifier phrase and partially value it so that T still needs to enter an Agree relation with the nominative quantifier phrase (as Bjorkman and Zeijlstra 2019 propose for Icelandic): this second valuation could happen upwards. This is unlikely, however: in contrast to Icelandic, where the person of the nominative theme is restricted in configurations involving dative subjects, in German there are no restrictions on agreement between T and the nominative theme, so there is no evidence for defective intervention of the dative in these constructions. Neither is it clear that the dative would be in the specifier of T, as necessary for it to check T, because it can be preceded by discourse particles like *ja* and *doch*, indicating a position below TP (cf. Diesing 1992, Meibauer 1994, Ormelius-Sandblom 1997, Zimmermann 2011).

To summarize, the German data discussed here provide further evidence for our main claim: either checking can happen in a configuration where feature [uF] c-commands and is checked by and interpretable feature [iF], or checking is not necessary at all before agreement between a head and a phrase c-commanded by that head is established. In addition, in these configurations, upward valuation can take place without the movement of the agreement controller. As Bobaljik and Wurmbrand (2005:821) explicitly note, this is evidence against "the Move approach" of agreement. Movement coupled with valuation is an option for Bobaljik and Wurmbrand (2005), however, in particular to derive inverse scope. Bobaljik and Wurmbrand's system thus supports Carstens's (2016) proposal that the directionality of valuation should not

be restricted either way to be exclusively downward or upward (see further discussion in Section 5).

2.3 Agreement with coordinated subjects in Serbo-Croatian

Bošković (2009) shows that agreement in Serbo-Croatian differs with pre- and postverbal coordinated subjects.⁴ The agreement target in these cases is a participle that agrees in gender and number with one of the conjuncts. When the subject is postverbal, the participle shows first conjunct agreement (FCA); when the subject is preverbal, the participle shows last conjunct agreement (LCA). This is illustrated in (11a) and (11b), with the same meaning.

(11) Serbo-Croatian (Bošković 2009:456)

- a. Juče su uništena sva sela i sve varošice.

 yesterday are destroyed.PL.N all villages.N and all towns.F
- b. Sva sela i sve varošice su (juče) uništene.
 all villages.N and all towns.F are yesterday destroyed.PL.F
 'All villages and all towns were destroyed yesterday.'

Bošković (2009) derives the different agreement patterns from different configurations of agreement: in FCA the subject remains below the probe, while in LCA it moves to the probe's specifier. One option for Bjorkman and Zeijlstra (2019) to derive this pattern would again be a null expletive in the probe's specifier, which would have to be independently motivated. Other options could involve movement of the coordinated phrase in both FCA and LCA with subsequent movement of the participle in (11a), or spelling out different copies. However, in these cases, the agreement asymmetry shown in (11) could not be derived from the configuration of the probe and its goal. Hence, this forms another instance in which a higher head agrees with an arguably lower phrase, against Bjorkman and Zeijlstra's (2019) predictions.

3 Object agreement

Although Bjorkman and Zeijlstra 2019 do not discuss object agreement, their agreement system does make predictions for it. Assuming that v is responsible for object agreement in cer-

tain languages, Bjorkman and Zeijlstra's (2019) analysis requires v to have its φ -features checked by a phrase in its specifier. For languages which spell out separate subject and object agreement, this means that the head responsible for object marking must not be the one introducing the external argument because otherwise v could and would immediately check its φ -features with the (non-defective) external argument in its specifier and be valued by it, leading to "object agreement" with the external argument.

To avoid this, Hedde Zeijlstra (pers. comm.) suggests that object agreement in such languages involves an additional v head responsible for object agreement below v (see also Koeneman and Zeijlstra 2014:599–600). Another option would be for Voice to introduce the external argument and v to host a probe for object agreement. Separating the argument-introducing function and the object agreement function thus provides a way out of the first objection to v's upward agreement. However, Bjorkman and Zeijlstra (2019) would still require the agreeing object to move to the specifier of the head responsible for object agreement.

In this section, we show that there are languages in which object agreement does not correlate with object movement. We suggest that these provide evidence for an agreement relation between v and an object that is in a position c-commanded by v, which cannot be accounted for by Bjorkman and Zeijlstra's (2019) proposal. We base this on data from two Bantu languages, Sambaa and Liko, starting with the former.

In Sambaa ditransitives, recipients c-command themes, as shown by the examples in (12).⁵

(12) Sambaa (Riedel 2009:106)

- a. N-za-m-som-e-a [kia mwandisi] $_i$ kitabu ch-akwe $_{i/k}$. 1sG.SM-PFV.DJ-1oM-read-APPL-FV every 1.writer 7.book 7-Poss.3sG 'I read for each author his book.' (ambiguous)
- b. N-za-m-som-e-a mwandisi w-akwe $_i$ [kia kitabu] $_{k/*i}$. 1sG.SM-PFV.DJ-1oM-read-APPL-FV 1.writer 1-Poss.3sG every 7.book 'I read for his author every book.'

Riedel (2009) shows that word order in ditransitives is also restricted such that the recipient must precede the theme (unless the recipient is right-dislocated; see below for discussion of obligatory right-dislocation in other Bantu languages).

(13) Sambaa (Riedel 2009:79)

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a. N-za-m-nka [R Stella ] [T kitabu ].
lsG.SM-PFV.DJ-10M-give 1.Stella 7.book
'I gave Stella a book.'
b. *N-za-m-nka [T kitabu ] [R Stella ].
lsG.SM-PFV.DJ-10M-give 7.book 1.Stella
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Intended: 'I gave a book to Stella.'

Sambaa further allows agreement with both internal arguments in a ditransitive construction simultaneously. The recipient has to precede the theme (as in (13a); cf. (13b), (14c)) and the object marker referring to the recipient has to follow the object marker for the theme (compare (14a) and (14b)). In other words, the recipient's object marker must be closer to the verb root:

(14) Sambaa (Riedel 2009:102, 103)

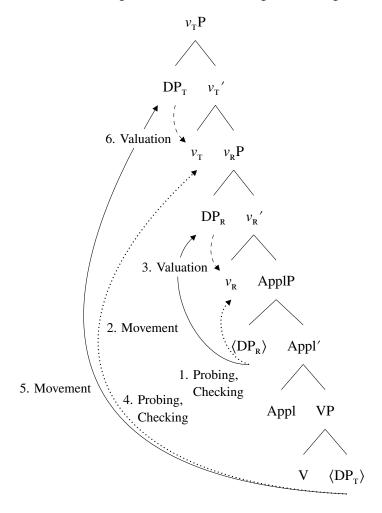
- b. *Stella a-i-m-chi-nk-iye [$_R$ ng'wana] [$_T$ kitabu]. 1.Stella 1SM-PRF.DJ-1OM-7OM-give-PFV.CJ 1.child 7.book Intended: 'Stella gave the child the book.'
- c. *Stella a-i-chi-m-nk-iye [$_{\rm T}$ kitabu] [$_{\rm R}$ ng'wana]. 1.Stella 1sm-prf.dj-7om-1om-give-pfv.cj 7.book 1.child Intended: 'Stella gave the child the book.'

Given these ordering constraints, a simple analysis involves agreement with in situ objects (see e.g. Riedel 2009:103–104). To derive the correct order of objects and object markers in Bjorkman and Zeijlstra's system, a different approach is needed. In what follows, we explore three possible alternatives and argue that they all fail to derive the data shown in (13) and (14), specifically both the correct order of arguments and the correct order of agreement markers.

Recall that in order to derive object agreement, additional heads that can host the agreement controller in their specifier are necessary for Bjorkman and Zeijlstra. We represent these as v_T for the head agreeing with the theme DP_T and v_R for the head agreeing with the recipient DP_R .

Consider first the (partial) derivation in (15) (cf. also Riedel 2009:103). First, the recipient DP_R in its base position in SpecApplP enters a checking relation (dotted arrow) with a higher head responsible for agreement with this object, v_R . Moving to the specifier of this head (solid arrow), DP_R can check and value the $[u\phi]$ features on the head (dashed arrow). A second agreement-related head, v_T is merged. The theme DP_T has its uninterpretable features checked by this head, moves to its specifier, and checks and values the $[u\phi]$ features on the head.

(15) Correct order of agreement markers, wrong order of arguments



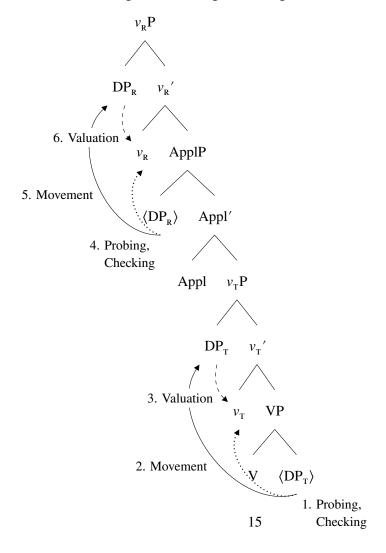
While it is feasible in principle, this (partial) derivation raises a number of issues. First, it is not clear what kinds of features would be checked: Case is not an obvious choice for Bantu languages as they lack morphological case and have been argued to lack abstract Case, too

(see Diercks 2012, Sheehan and van der Wal 2016, 2018 for discussion). Information-structural features could be an alternative for some Bantu languages.

A second issue is more critical: assuming that V moves up through v_R and v_T , (15) accounts for the correct order of morphemes with OM_T outside of OM_R , but it predicts the wrong order of the DP_T preceding the DP_R , which was shown to be ungrammatical in (14).

Instead, one could assume the opposite order of the heads v_R and v_T such that v_R c-commands v_T and each immediately c-commands the phrase introducing the respective argument, as in (16). This order of heads could reflect the correct order of arguments in ditransitives, however, the derivation would result in the same order *after* movement that is found before movement applies. In other words, movement would be string-vacuous. This makes it difficult to falsify the claim that DP_T and DP_R actually move to derive agreement and the order shown in (14a) (see also Preminger 2013:493, Preminger and Polinsky 2015:5–6). Furthermore, this alternative would need additional assumptions to derive the correct morpheme order on the verb.

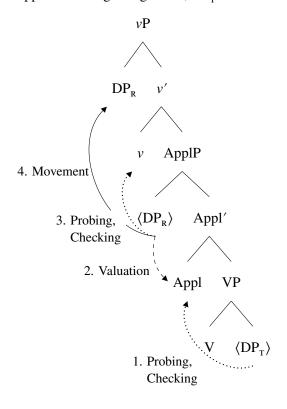
(16) Correct order of arguments, wrong order of agreement markers



A final option compatible with Bjorkman and Zeijlstra's (2019) analysis is shown in (17). It also relies on the assumption that multiple object agreement originates from two sets $[u\phi]$ features on distinct heads, but locates one of these between the recipient DP_R and the theme DP_T , on Appl. The derivation would then proceed as follows. Starting from the lowest [uF], DP_T 's [uCase] (or some other uninterpretable feature) is checked by Appl. $[u\phi]$ on Appl is checked and valued by DP_R in its specifier (hence there is no reason to move DP_T). DP_R 's [uCase] feature is then checked by v, and DP_R moves to SpecvP to check and value v's $[u\phi]$ features. The straightforward application of this model thus leads to agreement with DP_R twice.

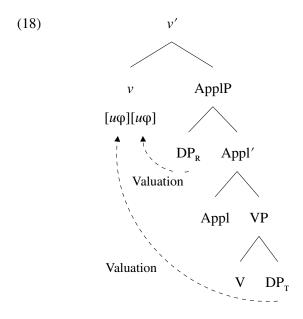
In order to establish agreement with DP_T too, it would be necessary that DP_R be unable to value the $[u\phi]$ feature on Appl, allowing DP_T to value Appl upwards. This would be parallel to the case of a ϕ -defective DP such as *there* in a head's specifier licensing the head's valuation from a lower DP. The question is what property of DP_R could allow for this possibility, considering that DP_R has a full set of ϕ -features.⁶ Without blocking DP_R from either valuing Appl or checking features on v, DP_T will not be able to value either head's ϕ -features.

(17) Appl and v as agreeing heads, DP_T cannot value v



In sum, none of the options shown in (15), (16), and (17) derive the desired result.

In contrast, Riedel (2009:103–104) proposes that two heads AgrDO and AgrIO, dominating vP, probe and agree with the in situ direct object (DO; our DP_T) and indirect object (IO; our DP_R), respectively. This accounts for the correct morpheme order without any movement at all (in fact, movement of the objects would give rise to ungrammatical constituent orders, as in (15) above). Van der Wal (2020:219–223) proposes yet another alternative analysis without movement, involving two probes on v. If one of the probes establishes an Agree relation with DP_R in SpecApplP and is valued by it, it spells out DP_R 's features as an object marker and the object becomes inaccessible for further Agree relations. The second probe can then agree with the theme DP_T . Both object markers can be spelled out on v and the internal arguments are in the correct order. This is illustrated in (18). The probes are spelled out with the first Agree relation (DP_R) closer to the stem, and the second (DP_T) outside of the first morpheme.



We conclude that object agreement in Sambaa does not provide evidence for the movement of agreeing objects. This means that if the correct analysis of object agreement in this language does in fact involve movement, the checking–movement–valuation procedure will have to be hard-wired in UG as learners of Sambaa have no evidence from primary linguistic data that movement is necessary for object agreement.

Arguments similar to Bjorkman and Zeijlstra's (2019) proposals have in fact been made for other Bantu languages in the literature. Movement of (agreeing) objects has been motivated in two ways. The first of these concerns the extraposition of arguments that corefer with ob-

ject markers, as proposed for Chichewa (Bresnan and Mchombo 1987) and Zulu (Buell 2008, Zeller 2015; see also the discussion in Baker 2018). It has been shown that object markers in these languages cannot co-occur with the co-referential DP inside the *v*P, resulting in the extraposition of the DP. In ditransitives with an object marker referring to the recipient, this is reflected in theme–recipient order.

However, extraposition is not necessary in Sambaa, as seen above, or Liko (also referred to as Lika, D201; Augustin 2010, de Wit 2015). Liko verbs display subject and object agreement (object agreement in Liko is phonologically fused with surrounding morphemes but visible through ATR harmony; object markers are visible separately in imperatives):

(19) Liko (Augustin 2010:60)

```
Sukopi #-p-a [R bo-nya-ki ] [T k#gba].

1.leopard 1sm:2om-give-Fv 2-in.laws-1 9.bag

'Leopard gives his in-laws a bag.'
```

Since the recipient precedes the theme, no right-dislocation has taken place. (19) therefore shows a true instance of agreement, rather than an incorporated pronoun.

The second motivation for object movement relates it to focus. Many Bantu languages display a so-called "immediate after verb" (IAV) focus position (Watters 1979). While it has been argued that, at least in some Bantu languages, this is a linear rather than a structural position (Buell 2006, Cheng and Downing 2009, Hyman and Polinsky 2009), for the sake of argument we assume a low FocP (Belletti 1999, Van der Wal 2006) which is higher than *v*P. From Spec-FocP, the focused object could c-command the head responsible for object agreement, and head-movement of the verb ensures verb—object order and adjacency.

Such a position is not relevant for object agreement in Sambaa or Liko, however, and we are not aware of any Bantu language in which focussed objects always trigger object marking. While Sambaa does have an IAV position (Riedel 2009:163–164), the possibility and distribution of object agreement in Sambaa do not depend on focus, and Liko does not show evidence for a dedicated IAV focus position in the first place. In (20), the verb agrees with a non-focused object ('the snake'): the focus is on the adverb 'with a stick', marked by the con-

trastive particle *aka*. Note, too, that the object controlling agreement is interpreted as indefinite and therefore cannot be displaced for backgrounding or topicality.

(20) Liko (De Wit 2015:453; glosses adapted)

Ikόθú a-mwí bi nzóka na likŏ áka.
1.Ikobu 1sm:1om-kill.ANT pst 1a.snake with 5.stick CNTR
'Ikobu killed a snake with a stick.'

In sum, neither Sambaa nor Liko provide evidence for the movement of objects that control agreement, be it via extraposition or a correlation between object agreement and focus. The only remaining option in Bjorkman and Zeijlstra's (2019) account is a zero expletive in the specifier of the relevant agreeing head, which is difficult to motivate or acquire. An analysis of object agreement in Sambaa and Liko (and a subset of other Bantu languages) involving a φ-probe for object agreement which c-commands its goal is in any case a simpler analysis.

4 Nez Perce complementizer agreement

Deal (2015a,b) discusses various types of agreement in Nez Perce, including complementiser agreement (CA). The sentence-initial complementizer ke can agree with first and second person pronouns and it shows person hierarchy effects: ke can continue to agree after agreeing with a first person pronoun but stops after agreeing with a second person pronoun. Third person arguments do not control overt CA. This means that the complementizer can agree with more than one argument, unless the first argument it encounters is second person:

- (21) Nez Perce (Deal 2015a:410, 2015b:6)
 - a. ke-x kaa Angel-nim hi-nees-cewcew-téetu nuun-e
 C-1 then Angel-ERG 3.SBJ-OBJ.PL-call-HAB.PRS 1PL-ACC
 'when Angel calls us'
 - b. ke-m kaa 'ee nees-cewcew-téetu-m
 C-2 then 2sg.cl obj.pl-call-hab.prs-cis
 'when you call us'

c. ke-m-ex kaa pro_{sвј} cewcew-téetu pro_{овј}
 C-2-1 then 1sg telephone-там 2sg
 'when I call you'

While both arguments in (21c) are null, (21a) shows their surface positions. Crucially, the first person plural object *nuun-e* in (21a) does not move to the specifier of the complementizer and neither does the second person clitic '*ee* in (21b). There is thus no reason to assume that either of the arguments controlling CA in (21c) have moved to the specifier of *ke*.

Deal (2015b) further shows that CA in Nez Perce involves Agree and not clitic doubling, using distributional and morphological evidence (in contrast to certain instances of Germanic CA which have been argued to involve clitic doubling, see Zeijlstra 2012, van Koppen 2017, Weisser 2019, van Alem 2020a,b for discussion; see also Carstens 2016, Diercks, van Koppen, and Putnam 2020 on CA in Lubukusu).

To account for this agreement pattern, one could assume that there is a null expletive in the specifier of the complementiser *ke*. Again, in the absence of independent evidence in favor of such expletives in the specifier of C, an analysis not requiring them is preferable.

CA raises another issue, however. As mentioned in Section 1, Bjorkman and Zeijlstra (2019) suggest that a DP and a head entering an Agree relation must be accessible to each other. Accessibility is established by upward probing and subsequent checking of a pair of [*u*F] and [*i*F] features. For the data discussed by Bjorkman and Zeijlstra (and in Sections 2 and 3), these are mostly Case features—[*uli*T] for nominative, [*uliv*] for accusative. To account for Nez Perce CA in this system, the DPs controlling agreement must check some feature with a matching feature on the C head. But this cannot be Case, as the DPs' Case features have already been checked for predicate agreement (cf. (21a), for example). In principle, any pair of [*uli*F] features could be stipulated to be present on the relevant DPs and C to derive CA. But since not all sentences show CA, DPs must not generally be specified for a [*u*F] that would allow them to check a matching [*i*F] feature on C: unchecked [*u*F] features would crash the derivation. This means that DPs could only come with [*u*F] when a complementizer will be present (the same stipulation is arguably necessary for any approach that assumes activity).

Neither of these issues arises on Deal's (2015b, 2019) analysis of CA in Nez Perce in terms of interaction and satisfaction features. Interaction features specify a set of features that can value a probe but do not stop it from probing (first person for CA) while satisfaction features value the probe and halt it (second person for CA). This approach does not require the presence of uninterpretable features on a probe (see also Preminger 2014 for arguments against uninterpretable features as "derivational time bombs").

5 Conceptual questions

Before concluding, we briefly turn to conceptual aspects of what a successful theory of agreement can look like which have been raised in the literature.

One of the main questions in this respect, discussed by Bjorkman and Zeijlstra (2019:562–563) for example, is whether phenomena like sequence of tense and negative concord should be analysed in the same way as φ -feature agreement (see also Preminger and Polinsky 2015). Bjorkman and Zeijlstra (2019:563) suggest that a "hybrid mechanism with a default direction and well-motivated constraints on exceptions" to the default direction is attractive and arguably conceptually superior to approaches that assume "two coexisting single-direction mechanisms," namely both upward and downward valuation, to cover semantic phenomena like negative concord, on the one hand, and φ -agreement, on the other.

Even if a hybrid mechanism with default and exceptional orders is preferable over others, this need not be an argument in favor of Bjorkman and Zeijlstra's (2019) particular approach. The same description fits Carstens's (2016) proposal equally well: for Carstens, the default direction of Agree is downward (with upward valuation), with well-defined exceptions allowing upward Agree (with downward valuation). Carstens argues, building on Epstein (1999), that allowing the [uF] features of a head α to probe the head's c-command domain at the point of Merge is natural as the head's c-command domain coincides with what α has been merged with. If head α finds a goal to enter an Agree relation with, its features can be valued in that configuration, without movement. If the [uF] feature of a probe does not find a goal in its c-command domain, its valuation can be *delayed* (Carstens 2016:2–3), instead finding a goal upwards. The restrictions here are formed by the general principle of earliest valuation ("agree

if you can") and by phase boundaries (a probe cannot agree with a goal in a different phase, whether upward or downward)—both independently established factors.

It is unclear, therefore, what makes for the best model on conceptual grounds. Bjorkman and Zeijlstra (2019) argue that their hybrid account is more restrictive than alternative mechanisms, but Preminger and Polinsky (2015), in response to the earlier Bjorkman and Zeijlstra (2014), suggest that allowing both upward and downward valuation is *less* restrictive than other approaches, in part because the unification of valuation mechanisms "leaves us with a weaker account of φ-agreement" itself (Preminger and Polinsky 2015:2). Carstens (2016), in turn, argues that from a Minimalist point of view, a theory that *does not* restrict operations to one particular direction only is preferable over one that does. Given these differences in interpretation, conceptual arguments about the directionality of Agree (and checking and valuation) seem to be inconclusive at present, in particular in the absence of an explicit mechanism to decide between different positions (see also Preminger and Polinsky 2015).

Two other issues that could be raised in this respect concern the role of movement in local, clause-internal agreement and the analysis of long-distance agreement (LDA). With respect to the former, Bjorkman and Zeijlstra (2019:534, 563) refer to EPP features as theoretically "undesirable" and to deriving movement of an agreement controller to the specifier of its head "a major challenge." If, as we argue, φ-valuation can happen in an upward direction, without movement of the agreement controller, it is simply an empirical fact that controllers sometimes move and sometimes do not. If this is true, this movement has to be accounted for in some way, even if it complicates the resulting theory. In contrast, with respect to LDA, the analyses of Tsez and Basque LDA in Polinsky and Potsdam (2001), Bobaljik and Wurmbrand (2005), Preminger (2013), Preminger and Polinsky (2015) are much simpler than the one proposed by Bjorkman and Zeijlstra (2019) for the two languages.

In sum, there are trade-offs in either direction. Before questions about which type of approach is conceptually simpler can be adequately settled, it seems necessary to reach descriptive adequacy. We hope that the current reply is a step towards that goal.

6 Conclusions

We have presented a number of empirical arguments against Bjorkman and Zeijlstra's (2019) claims that checking is unidirectional and valuation is by default downwards, that is, that a uninterpretable features are checked and valued by a c-commanding goal. Bjorkman and Zeijlstra (2019) allow for exceptional valuation by a lower goal only if a head cannot be valued by its specifier. We argued, using data from the literature on Matengo, German, Serbo-Croatian, Sambaa, Liko, and Nez Perce, that upward probing from [*u*F] to a c-commanding [*i*F] cannot be the only option and that therefore upward valuation appears in more configurations than suggested by Bjorkman and Zeijlstra (2019). These data add to existing proposed counterarguments to strict downward valuation discussed by Preminger (2013), Preminger and Polinsky (2015), and Carstens (2016).

We have not addressed whether upward valuation might be the only possibility for ϕ -agreement. Considering arguments in favor of both downward and upward ϕ -agreement, an adequate model of agreement needs to be flexible enough to handle both. Carstens's (2016) proposal seems to be able to handle this flexibility, requiring of probes only that they are valued as soon as possible and before the phase containing them is spelled out.

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¹While it is mostly Case features ([*u*T] and [*uv*]) which establish checking relations, Bjorkman and Zeijlstra (2019:556) acknowledge that other features, for example information-structural features, can do so too. We assume the same. This is particularly relevant as it has often been argued in recent years that not all languages have abstract Case see for example Marantz (1991), McFadden (2004), Legate (2008), Diercks (2012), Preminger (2014), Baker (2015), Sheehan and van der Wal (2016, 2018). Checking as discussed by Bjorkman and Zeijlstra also has consequences for activity, which we briefly discuss in Section 4.

²We thank an anonymous reviewer for prompting us to clarify this issue.

³In Bantu examples, numbers refer to noun classes, unless followed by "sG" or "PL". Other abbreviations: 1 = first person, 2 = second person, 3 = third person, ACC = accusative, ANT = anterior, APPL = applicative, ATR = advanced tongue root, AUX = auxiliary, CA = complementiser agreement, CIS = cislocative, CJ = conjoint, CL = clitic, CNTR = contrast, DAT = dative, DJ = disjoint, DO = direct object, EA = external argument, EPP = Extended Projection Principle, ERG = ergative, F = feminine, FCA = first conjunct agreement, Fv = final vowel, HAB = habitual aspect, IAV = immediate after verb, IO = indirect object, LCA = last conjunct agreement, LDA = long-distance agreement, N = neuter, NEG = negative, NOM = nominative, OBJ = object, OM = object marker, PFV = perfective, PL = plural, POSS = possessive, PRF = perfect, PRS = present, PST = past, R = recipient-like argument of a ditransitive verb, SBJ = subject, SF = simple final (=non-perfect final), SG = singular, SM = subject marker, T = theme- or patient-like argument of a ditransitive verb, TAM = tense, aspect, mood.

⁴We thank an anonymous reviewer for pointing us to this phenomenon.

⁵Note that *-akwe* 'poss.3sG' shows concord with the possessed noun in noun class, class 7 in (12a) and class 1 in (12b). *-akwe* itself is a third person singular possessive and can be bound by nouns of class 1 such as *mwandisi* 'writer' (his/her/its writer) or class 7 such as *kitabu* (his/her/its book) 'book'; compare English singular *their*, which can be bound by both masculine and feminine antecedents.

⁶A reviewer suggests that the property in question might be that a DP is externally merged: this would quite generally rule out that a specifier in its merge position value the head projecting that specifier, capturing the absence of agreement with an expletive in SpecTP (unless it is moved there), "object agreement" with a subject in SpecvP, as well as a recipient valuing the Appl head that introduces it. It is unclear to us at this point why this would be the case and we suspect that this restriction is too general, in particular with respect to Appl and a recipient.

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