THERE IS ONLY ONE WAY TO AGREE

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Abstract: Current minimalism takes syntactic operations Agree and Move to be triggered by underlying feature checking requirements (Chomsky 1995, 2000, 2001, Pesetsky & Torrego 2004). This standard version of Agree/Move suffers from at least five problems: (i) it does not explain the existence of Reverse Agree; (ii) it does not explain the existence of Multiple Agree; (iii) it does not explain the behavior of Concord phenomena; (iv) it does not explain the triggering of intermediate steps in successive cyclic movement; and (v) the [EPP]-feature itself remains unmotivated. Moreover, I argue that two recent proposals (Pesetsky & Torrego 2007, Bošković 2007) solve some, but not all of these problems. Finally, I argue that all these problems disappear once a simpler version of Agree is adopted where uninterpretable features can only be checked if they are c-commanded by a matching interpretable feature and not the other way round.

1. Introduction

Current minimalism takes syntactic operation Agree to be triggered by underlying feature checking requirements (Chomsky 2000, 2001), where probes, carrying some semantically uninterpretable and lexically unvalued formal feature, search down in their c-command domain for a matching active goal carrying a semantically interpretable and lexically valued feature. Syntactic operation Move, in turn, is a superfunction of Agree where the goal remerges under probe-goal Agree to a position higher than the probe if the probe contains an additional [EPP]-feature.

This standard Chomskyan theory of Agree, however, suffers from several empirical, theoretical and conceptual problems. In this paper I discuss five of these. In short, they are: (i) the existence of Reverse Agree, where the goal may have an uninterpretable feature checked against a higher probe; (ii) the existence of Multiple Agree, which seems to be an operation driven by the goal rather than by the probe; (iii) the existence of Concord phenomena, where generally the goal appears to be in a higher position than the probe; (iv) the triggering of intermediate steps in successive cyclic movement, which forms a so-called *look ahead* problem; and (v) the fact that the existence of [EPP]-features themselves has remained unmotivated.

Most of these problems have already been observed and discussed in the literature and have led to a series of minor and major modifications of the theory. Two prominent alternatives for the standard theory of Agree are offered by Pesetsky & Torrego (2007), who disentangle the notion of valuation and interpretability, and Bošković (2007), who argues that Agree should always be unidirectional and may only apply in a top-down fashion.

This article will show that, although both alternatives solve some of these problems, they cannot account for all of them. Therefore, in this paper I will propose an alternative. I will demonstrate that the exact mirror image of Bošković (2007) (i.e. a version of Agree that allows upward Agree only) actually manages to overcome the discussed problems while still capturing those cases that did not turn out to be problematic for the original version of Agree. Under this proposal, Agree between a probe and a goal may take place only at a derivational stage where the goal c-commands the probe, a version of Agree referred to as *upward Agree*.

The remainder of this article then aims at proving that, whereas some instances of Agree *must* be analysed as upward Agree and cannot be taken to reflect downward Agree, all other instances of Agree, including those that have long formed an argument in favour of downward Agree, *can* be analysed as upward Agree (without postulating additional assumptions) and therefore do not have to be taken to reflect downward Agree. That sets the stage for a unified theory of Agree where Agree takes place in an upward direction only.

The paper is set up as follows. In section 2, I briefly summarise the current standard Chomskyan version of syntactic Agree and Move. In section 3, I discuss the five problems

mentioned above in detail and in section 4, I discuss the two alternative solutions (Pesetsky & Torrego 2007 and Bošković 2007), showing that neither of them can account for all of these problems. In section 5, then, I propose the alternative version of upward Agree and I demonstrate that this account applies for all the problematic cases of Agree discussed in this article. Section 6, subsequently, shows that the account applies those instances of Agree that previously have been analysed as downward Agree as well. Section 7, finally, concludes.

2 Theoretical background

Current minimalism takes syntactic operation Agree to be to be an operation between a probe and a goal, where the probe, carrying some uninterpretable and unvalued formal feature, search down in its c-command domain for a goal, which carries a matching interpretable and valued formal feature (cf. Chomsky 2000, 2001). The interpretable and valued feature on the goal then checks off the uninterpretable feature on the probe by valuing it. Since uninterpretable features must be deleted at the level of LF (given the Principle of Full Interpretation, cf. Chomsky 1995) and feature valuation/checking is a necessary condition for feature deletion, every uninterpretable feature must be checked/valued under Agree in the course of the derivation.

Agree is standardly defined as (1) (after Chomsky 2000, 2001).

(1) *Agree* α can agree with β iff:
- a. α carries at least one unvalued and uninterpretable feature and β carries a matching interpretable and valued feature.
- b. α c-commands β.[1]
- c. β is the closest goal to α.[2]
- d. β bears an unvalued uninterpretable feature.[3]

The feature uninterpretable feature that activates the goal can be valued as a side effect of the Agree relation between the uninterpretable feature on the probe and the uninterpretable one on the goal, although, as we will see later on, valuation of the goal's uninterpretable feature against the probe is said to be dependent on certain properties of the uninterpretable features of the probe (see section 3.1 for more discussion). This means that the minimal configuration for Agree to take place is as in (2)a, which results in (2)b.

(2) a.

[α	[β]][4]
[uF: __]	[iF: *val*]
	[uK: __]

b. Agree ⇒

[α	[β]]
[~~uF: *val*~~]	[iF: *val*]
	[~~uK: *val*~~]

In (2) it is clear that [uF: __] is checked/valued by [iF: *val*]. However, the question remains open as to what checks/values [uK: __]. Two different proposals have been formulated, which do not necessarily exclude each other. One proposal, advocated for in Pesetsky & Torrego (2004), states

[1] This is generally known as the c-command condition (Chomsky 2000);

[2] A Goal β is closer to probe α than goal γ iff α c-commands both β and γ and β asymmerically c-commands γ (taken from Heck & Richards 2010 after Chomsky 2000, 2001).

[3] This is generally known as the activation condition, which is said to render interpretable feature sets (i.e. goals) visible to syntax (Chomsky 2000);

[4] *val* indicates that the feature is lexically valued; __ that it is lexically unvalued. *val* means valued in syntax. ~~Strikethrough~~ indicates feature deletion.

that the probe must carry some interpretable/valued feature [iK], which if the probe is checked/valued by the goal's interpretable feature, is allowed to check the goal's uninterpretable feature as an instance of reverse Agree. Then (2) must be replaced by (3).

(3) a.

[α	[β]]
[uF: __]	[iF: *val*]
[iK: *val*]	[uK: __]

b. Agree ⇒

[α	[β]]
[~~uF: *val*~~]	[iF: *val*]
[iK: *val*]	[~~uK: *val*~~]

However, not everybody agrees that the goal's uninterpretable/unvalued feature must be checked off by some interpretable counterpart of it. Chomsky, for instance, has argued that sometimes a feature (in particular a case or gender feature) can be *sui generis* uninterpretable, i.e. they lack an interpretable counterpart (see also Bošković to appear for a recent discussion). Such features could then simply be checked by virtue of participating in an Agree relation as in (2), where [uK] is checked in absence of [iK]. This would render the picture in (2) complete again. Note though, that adopting the perspective that a feature is *sui generis* uninterpretable does not imply that such an uninterpretable feature that does have an interpretable counterpart, cannot be checked under a configuration as in (3). Thus, under both proposals (3) is a licit configuration for Agree, the open question being whether it is the only licit configuration for Agree or not. This question ultimately depends on whether one adopts the idea that a feature can be *sui generis* uninterpretable or not.

In the remainder of this article, I take the more radical perspective, which takes such a *sui generis* uninterpretable feature not to exist. The main reason for doing so is that for one of the most canonical features for which it has been argued that it did not have an interpretable counterpart, namely nominative case, Pesetsky & Torrego (2004) have presented a series of arguments that this feature is actually an uninterpretable tense feature ([uT]). For them, case features do have a semantic counterpart and they extend this observation to a more general principle, dubbed *Thesis of Radical Interpretability*, initially proposed by Brody (1997), which states that in every Agree chain one feature must be interpretable.

(4) *Thesis of Radical Interpretability*
Each feature must receive a semantic interpretation in some syntactic location.

Another reason not to adopt the existence of a *sui generis* uninterpretable feature comes from learnability. If the set of uninterpretable features is not part of UG, it must be learnable for language learners that some formal feature is semantically uninterpretable. Zeijlstra (2008) argues that the cue for acquiring uninterpretable features lies in the fact that language learners are confronted with a morphosyntactic manifestation of a particular semantic property, which is not present on the locus of interpretation. Consequently, no uninterpretable feature can be acquired without there being an interpretable counterpart of it, thus providing a motivation in terms of learnability for the Thesis of Radical Interpretability.

Before discussing the problems for the current minimalist version of Agree, let me first say a few words on the current understanding of the relation between Agree and Move. Again, as is well known, movement in current minimalism is driven by a so-called [EPP]-feature on the probe. Under Agree, this feature triggers some constituent, of which the goal is a part, to remerge to a specifier position of the probe. In that sense, Move is nothing but a superfunction of Agree. The schemata for Move based on the Agree configurations in (2) and (3) are depicted in (5) and (6) respectively.

(5) a.

	$[\alpha_{[epp]}$	[β]]
	[uF: __]	[iF: *val*]
		[uK: __]

b. Agree ⇒

[β	$[\alpha_{[epp]}$	[β]]]
[iF: *val*]	[~~uF: *val*~~]	[iF: *val*]
[~~uK: *val*~~]		[uK: *val*]

(6) a.

	$[\alpha_{[epp]}$	[β]]
	[uF: __]	[iF: *val*]
	[iK: *val*]	[uK: __]

b. Agree ⇒

[β	$[\alpha_{[epp]}$	[β]]]
[iF: *val*]	[~~uF: *val*~~]	[iF: *val*]
[~~uK: *val*~~]	[iK: *val*]	[~~uK: *val*~~]

3. Problems for the standard theory of Agree

The standard theory of Agree (as sketched above), however, suffers from several empirical, theoretical and conceptual problems, most of them having been observed and discussed in the literature quite extensively. The five problems that I take to be most crucial for the standard version of Agree are listed below and further discussed in sections 3.1-3.5:

(7) Problems for the standard theory of Agree:
- a. The existence of Reverse Agree;
- b. The existence of Multiple Agree;
- c. The existence of Concord phenomena;
- d. The triggering of intermediate steps in successive cyclic movement;
- e. The fact that the existence of [EPP]-features themselves has remained unmotivated.

3.1 Reverse Agree

The first problem to be discussed relates to the notion of Reverse Agree, i.e. the fact that a goal can have its feature checked against the higher, c-commanding probe as a side-effect of Agree. Checking uninterpretable features of the goal is said to take place, for instance, in cases of nominative case checking by T° or when the clause-type feature of a *Wh*-term ([uQ]) is checked against [iQ] in C°, as is illustrated in (8) and (9) respectively.

(8) $[_{TP}$ T $_{[iT][u\varphi]}$ $[_{vP}$ $DP_{[uT][i\varphi]}$]]

(9) $[_{CP}$ $C_{[uWH][iQ]EPP}$] [Wh $_{[iWH][uQ]}$]]

In (8), tense is interpretable in T with T carrying a set of uninterpretable φ-features, which probe down to Agree with the subject DP's set of interpretable φ-features. The subject DP is an active goal for carrying an uninterpretable nominative case feature, which, after Pesetsky &

Torrego (2004, 2007), is taken to be an uninterpretable tense feature.[5] This tense feature then is checked against the higher [iT]-feature on T. An [EPP]-feature on T further attracts the subject DP to raise to Spec,TP.

In (9), something similar applies: an interrogative C-head contains an uninterpretable [uWH]-feature which agrees with an interpretable [iWH]-feature on a lower *Wh*-term, activated by its uninterpretable interrogative clause type feature [uQ]. Again, this [uQ]-feature on the *Wh*-term may be checked against the higher [iQ]-feature on C as long as this instance of Reverse Agree is licensed by standard probe-goal Agree between C and the *Wh*-term.

As Pesetsky & Torrego (2007) point out, the reverse side effect of Agree is, however, far from clear. Not only is this notion of reverse Agree a spurious one, as nothing principled within the Agree framework motivates it, but, more importantly, it suggests that some instances of Agree are dependent on other instances of Agree, indicating unmotivated connections between particular syntactic categories. Case checking is dependent on φ-agreement, and clause-type checking cannot take place without *Wh*-agreement.

The notion of Reverse Agree is thus independent of the assumption whether a case features is *sui generis* uninterpretable or not. As in the case of *Wh*-Agree the interpretable counterpart of both the [uWH]- and the [uQ]-features are undisputed.

The dependence of one instance of Agree on another is not just some theoretical coincidence. In fact, in constructions like (8), Reverse Agree is not only dependent on the presence of φ-agreement, but even stronger, on the richness, or completeness, of the φ-feature bundle on T. For Chomsky, the goal may only have its case feature checked against the probe if the probe's bundle of φ-features is complete, i.e. existing of (at least) person and number features. If the probe only carries an uninterpretable person feature, as is presumed to be the case in infinitival raising constructions, it still may enter an Agree relation with a lower (φ-complete) subject DP, but as a result of the absence of the number feature on T, the goal's case feature may no longer be checked, as shown in (10):

(10) [$_{TP}$ T [$_{vP}$ DP]]
[~~uφ: number~~] [iφ: number, person]
[uT: __]

The advantage of the Agree configuration is that the subject remains an active goal for a higher finite T°, but only does so at the expense of two mysterious assumptions: the possibility of Reverse Agree and its dependency on the completeness of the uninterpretable feature of the higher probe.

A question that may arise is what makes, for instance in the case of subject-verb agreement, the Agree relation between [uφ] and [iφ] the primary one, and the checking of the case features (i.e. the Agree relation between [iT] and [uT]) the secondary one. Nothing would go principally wrong if the case-checking relation was the primary one and φ-agreement secondary. Reversing the Agree relation is indeed the core of the analysis that I will propose in section 5. However, already at this stage I would like to include some examples that show that in languages where the finite verb does not exhibit φ-agreement with the subject DP the controlling DP always appears higher than this finite verb. As Baker (2008) has shown, in Niger-Congo languages the finite verb may agree with any DP. This means that in those languages there is no bidirectional Agree relation between T and some DP, but rather two Agree relations: one involved in case-checking and one concerned with φ-Agree. This is illustrated for Chichewa and Kinande in (11) below:

[5] Although I adopt Pesetsky & Torrego's proposal throughout in this paper, but it should be acknowledged that nothing crucial hinges on nominative case being uninterpretable *tense*. The crucial assumption here is that case features have to be checked against particular interpretable features and are not sui generis uninterpretable.

(11) a. Ka-mu-dzi ku-li chi-tsîme — Chichewa[6]
17-3-village 17-be 7-well
'In the village is a well'

b. Omo-mulongo mw-a-hik-a mukali — Kinande
LOC.18-village.3 18S-T-arrive-FV woman.1
'At the village arrived of woman'

Both in (11)a and (11)b, the verb does not agree with the subject but with some locative DP. Strikingly, in these languages, if the verb does not stand in a φ-Agree relation with the subject, φ-Agree is always of the 'reverse' form, i.e. the goal is always higher than the probe.[7] The φ-Agree configurations in (11) are thus exactly similar to the configurations of case-Agree in (8) or [Q]-Agree in (9). This strongly suggests that the primary Agree relations in (8) or (9) are actually the alleged cases of Reverse Agree and that the instances of [φ]- and [Wh]-Agree, which are primary for Chomsky, should actually be thought to be secondary. As the reader may already anticipate, it is then possible to motivate subject/*Wh*-movement in these cases in terms of an attempt to restore the proper Agree configuration.

For now, it suffices to conclude that the examples discussed in this section, including the Bantu examples, form a hard problem for the standard theory of Agree.

3.2 Multiple Agree

Agree must always take place between the probe and the highest matching goal only in its search domain, otherwise it would violate the condition that states that no additional matching inactive (i.e. previously valued) goal may intervene between the probe and the goal, known as the Defective Intervention Constraint (DIC). Consequently, Multiple Agree, i.e. Agree between one probe and multiple goals, should be expected to be ruled out: gree between the probe and the highest goal would render this goal in active and this inactive goal would in turn block Agree between the probe and any lower goal.

However, Ura (1996) and Hiraiwa (2001, 2005) argued that Multipe Agree actually does take place. One of the examples they provide concerns Japanese multiple nominative constructions, like (12).

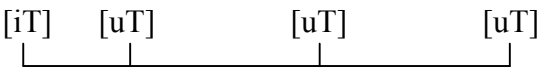
(12) John-**ga** [yosouijouni nihonjin-**ga** eigo-**ga** hidoku] kanji-ta. — Japanese
John.NOM than.expected the.Japanese.NOM English.NOM bad.INF thought
'It seemed to John that the Japanese are worse at speaking English
than he had expected.'

Following Takezawa (1987), Ura (2000), who convincingly shows that infinitivals in Japanese cannot check nominative case, argues that in (12), all three nominative DPs must have their case features checked/valued by a single T° in the matrix clause, the only available T° carrying [iT]. However, this would lead to a violation of the DIC: Agree between T° en the highest DP would render this DP inactive and this DP should then act as an intervener for Agree between T° and any of the lower DPs.

(13) [T° DP [… DP … [… DP …]]]
[uφ] [iφ] [iφ] [iφ]

[6] Data taken from Baker (2008).

[7] One might argue that in these cases, the first DP is first merged in a position below the probe and moved to satisfy an [EPP] on the probe. See Baker (2008), however, for arguments that this DP is base-generated in its surface position. (Moreover, see section 3.5 and 5.5 for arguments against Move triggered by [EPP]-features in the first place.)



Hiraiwa (2001, 2005) claims that in (12)/(13) the DIC can be circumvented if it is assumed that the probe in such constructions, due to some feature [+multiple], is allowed to match with the highest goal first and wait with establishing an Agree relation until it matches with all available goals. After multiple matching has been completed, Agree between the probe and its matched goals takes place simultaneously.

Although technically compatible with the definition of Agree as in (1) and with the DIC, this solution is far from satisfactory for various reasons. First, intervention effects for Agree are not specific to syntactic Agree. Such effects are ultimately due to some more general notion of relativised minimality (Rizzi 1989) that blocks application of a syntactic operation between a dependent and an operator if some alternative appropriate operator intervenes (see also Starke 2001). In that sense, the rationale that blocks Agree over an active goal is the same rationale that should exclude Matching over a possible matching candidate.

More importantly, the analysis suffers from an additional problem, namely that there is no necessity in the first place for the probe to apply multiple matching, as a single match between the probe and the highest goal, followed by Agree, would already satisfy all the probe's checking requirements. Hence, probing down with a second goal, for the probe, is a superfluous operation and should be ruled out under minimalist logic.

What the data seem to suggest, though, is that it is not so much the regular version of Agree that needs to apply multiply but rather the mysterious Reverse Agree. It is the properties of the goals rather than the probe that necessitate Multiple Agree, something that the spirit of the standard theory of Agree is unable to recognise.

Actually, what the discussion on Multiple Agree shows is that in one way or another Reverse Agree should be taken to be independent of straightforward Agree. If the lower goals were independently able to check off their [uT]-features against finite T° in the matrix clause, no further problem would arise. Thus the facts, so far, suggest that Reverse Agree can take place independently and should not be taken to be a side-effect of Agree between the porbe and the goal. However, in order to confirm the correctness of this suggestion, it needs to be shown first that isolated cases of Reverse Agree can be attested, too, i.e. cases where features [iF] Agree with one or more lower features [uF] in its c-commanding domain. The next subsection shows that such Agree configurations indeed exist.

3.3 Concord phenomena

In this subsection, I discuss two phenomena, Negative Concord (3.3.1) and Sequence of Tense (in 3.3.2), showing that if these phenomena are analysed as instances of syntactic Agree, then this operation Agree takes place in an upward direction.

3.3.1 Negative Concord

Negative Concord is the phenomenon where multiple negative elements, i.e. elements that in isolation may give rise to a semantic negation, together yield one single semantic negation. An example from Czech is provided in (14) (after Zeijlstra 2004). Both *nikdo* and *ne*, in isolation, can render a sentence negative, but the examples in (14) do not give rise to an iterative reading consisting of two semantic negations.

(14) a. Dnes *nikdo* *(*ne*)volá — Czech
Today n-body NEG.calls
'Today nobody is calling'

b. Milan *ne*vidi *nikoho*
Milan NEG.sees n-body
'Milan doesn't see anybody'
c. Dnes *nikdo* *(*ne*)volá *nikomu*
Today n-body NEG.calls n-body
'Today nobody is calling anybody'

Since the number of n-words does not influence the number of semantic negations, as shown in (14)c, if Negative Concord is taken to be an instance of syntactic Agree, n-words should be assigned an uninterpretable negative feature ([uNEG]). The two logical possibilities for the element carrying [iNEG] are then either the negative head *ne* (as has been proposed by Ladusaw 1992, Fitzgibbons 2010), or an abstract operator $Op_{\neg}$ (cf. Zeijlstra 2004, 2008), attributing a [uNEG] feature to the negative head *ne* as well:

(15) a. [Dnes [$_{TP}$ *nikdo*$_{[\text{~~uNEG~~}]j}$ [$_{NegP}$ *ne*volá$_{[iNEG]}$ t$_j$ *nikoho*$_{[\text{~~uNEG~~}]}$]]]
b. [Dnes *Op*$_{\neg[iNEG]}$ [$_{TP}$ *nikdo*$_{[\text{~~uNEG~~}]}$ *ne*volá$_{[\text{~~uNEG~~}]}$ *nikoho*$_{[\text{~~uNEG~~}]}$]]

In Zeijlstra (2004, 2008), a series of arguments has been provided that show that the negative heads in Negative Concord languages like Czech cannot be taken to be the carrier of semantic negation, thus favouring analyses like (15)b over (15)a. For instance, ensuring that negation is takes scope over the indefinite subject would require LF-reconstruction of the subject below negation, a type of reconstruction that is never attested for other indefinite subjects that appear above negation at surface structure. Also, if the negative head were taken to be semantically negative, cases of n-words yielding semantic negation in isolation could only be accounted for under the assumption that the negative marker is deleted under ellipsis, as is illustrated in the examples (16) below; otherwise, the source of semantic negation would remain unidentified.

(16) a. Koho jsi vidl Nikoho — Czech
Who aux.past.2sg saw n-body
`Who did you see? Nobody.'
b. Vezmu si (bu) tebe nebo nikoho.
Take refl.dat (either) you or nobody
`I marry you or nobody (else)'

However, deletion under ellipsis can only be licensed under semantic identity (cf. Merchant 2001), which is not the case here (the antecedent does not contain a semantic negation). By contrast, assuming abstract operators to be responsible for semantic negation as in (15)b, does not lead to any problems.[8]

Under the idea that negative heads carry a feature [uNEG] as well, Negative Concord constitutes examples where the only Agree configuration is of the form [iNEG]>[uNEG]>([uNEG]). But even if the negative head were the carrier of semantic negation (and would thus carry a feature [iNEG]), Negative Concord would still display instances of Reverse Agree only.

Thus, if Negative Concord is analysed along the lines of (15), Reverse Agree is independently attested (i.e. without instances of downward probing accompanying it). However, it could still be possible to reconcile the facts described above with the traditional version of Agree that forces the probe to be equipped with a [uF]-feature, searching down its c-command domain for an [iF]-feature. Two possibilities arise: (i) n-words are not semantically non-negative

[8] The reader is referred to Giannakidou (2006), who argues that cases like (18a) do not form a problem for the semantic identity requirement controlling deletion under ellipsis, and to Zeijlstra (2011a), who argues that such cases remain problematic indeed. Giannakidou's argument does not extend to cases like (18b), however.

indefinites but rather semantically non-negative universal quantifiers that, at least at LF, must c-command the semantic negation carrying [iNEG] (a solution similar in spirit to Giannakidou's (2000) analysis of Negative Concord); or (ii) Negative Concord should not be taken to reflect syntactic Agree in the first place.

However, both solutions face serious problems. With respect to the first solution: taking n-words to be universal quantifiers is already problematic. Apart from the fact that under this style of analysis negative heads must be taken to be semantically negative (and inherit the problems discussed above), it would also require that all n-words, at least at LF, c-command the negative head. This would lead to a configuration like (19), where all n-words probe for the negative head/operator:

(17) [[uNEG] … [[uNEG] … [[iNEG]]]]

However, (17) predicts that n-words should always be able to c-command the negative head. Although this is possible in Strict Negative Concord languages like Czech, this is forbidden in so-called Non-strict Negative Concord languages such as Spanish or Italian. In these languages, n-words may never precede the negative marker under a Negative Concord reading. If n-words appear in a position left to the negative head, the negative head is no longer allowed to occur in the sentence.

(18) a. Non ha detto niente a nessuno — Italian
NEG has said n-thing to n-body
'He didn't say anything to anybody'
b. Nessuno *(non) ha detto niente
N-body NEG has said n-thing
'Nobody said anything'

(19) *[Nessuno$_{[uNEG]}$ non$_{[iNEG]}$ canta]

Hence, the overt realisation of the required Agree configuration is strictly ruled out. In Non-strict Negative Concord languages, Negative Concord relations can thus only be established between elements carrying [iNEG] that c-command elements carrying features [uNEG].Thus, if Negative Concord is taken to be an instance of syntactic Agree, then syntactic Agree must allow for upward Agree configurations.

An alternative, last resort solution to save the standard theory of Agree would be to place Negative Concord outside the domain of syntactic Agree and analyse it in different terms, for instance as quantifier resumption (cf. De Swart & Sag 2002) or a special case of NPI licensing (Ladusaw 1992, Giannakidou 2000). All these analyses, however, face serious problems (see Zeijlstra 2004 for an overview). But more importantly, 'explaining away' Negative Concord, as well as similar Concord phenomena, also seriously undermines the initial motivation behind of Agree, i.e. to provide a unified solution to the problems of semantic redundancy and displacement in natural language.

3.3.2 Sequence of Tense

Another well-known Concord phenomenon is Sequence of Tense. In languages like English and Dutch, subordinate tense is dependent on matrix tense (cf. Heim 1994, Ogihara 1995, 1996, Von Stechow 1995, 2003, 2005, Abusch 1997, Kratzer 1998, Schlenker 1999, Sharvit 2003, Kusumotu 2005, Stowell 2007, Khomitsevich 2008 a.o.).

(20) a. John said Mary was ill
b. Jan zei dat Marie ziek was Dutch
John said that Mary ill was
'John said Mary was ill'

The interpretation of the subordinate tense in English/Dutch follows from the interpretation of matrix clause tense. *Was* does not induce an absolute semantic tense of its own.

The observation that past tense morphology in subordinate clauses does not appear to be semantically active combines nicely with another observation described by Von Stechow 2003, namely that verbal tense morphology itself is semantically vacuous and that tense is induced by a different element (T°, according to Pesetsky & Torrego 2007, $Op_{PAST,}$ according to Von Stechow 2003, 2005). Take (21), for example.

(21) Wolfgang played tennis on every Sunday
= 'For every Sunday in the past there is a time t at which Wolfgang plays tennis'
≠ 'There is a past time on every Sunday at which Wolfgang plays tennis'
≠ 'For every Sunday, there is time t before it is such that Wolfgang plays tennis at that time'

In (21), the distributive quantifier *every Sunday* takes scope between past tense and the lexical contents of the verb *play*. This means that the past tense morpheme cannot a priori be said to be the carrier of semantic past tense.

Simplifying things somewhat, assuming that past tense morphemes carry a feature [uPAST] that can undergo (Multiple) Agree with a higher element carrying [iPAST], solves both the Sequence of Tense problem (i.e. why can't subordinate past tense morphemes not be interpreted as semantic past tense operators?) as well as the problem behind (21), namely why the LF position of the semantic past tense is deviant from its surface position.

This is illustrated in (22). Here, both the matrix and the subordinate finite verb do not introduce semantic past tense, whereas the entire sentence still receives a past tense interpretation.[9]

(22) [John $T_{[iPAST]}$ [$said_{[uPAST]}$ [Mary $was_{[uPAST]}$ ill]]]

Again, the attested feature checking configuration displays upward Agree:

(23) [[iF] … [[uF] … [[uF]]]]

In fact, a classical downward probing underlying Agree configuration can never account for the fact that subordinate tense is dependent on matrix tense.

Of course, Sequence of Tense has not only been analysed in terms of syntactic Agree. Traditionally, Sequence of Tense is either analysed in terms of feature checking (along similar lines as sketched above, as has been done for instance by Ogihara (1995) and Von Stechow (2003), or in terms of the so-called Upper Limit Constraint (cf. Abusch 1997), which is a semantic mechanism that can be adopted to ensure that the temporal reference of complement clause does not exceed the temporal reference of the matrix clause. Placing Sequence of Tense outside the domain of syntactic Agree, along the lines of Abusch 1997, would of course reinstall

[9]It must be acknowledged that (22) arguably is not sufficient to account for all readings of (20)a; since (20)a allows both a simultaneous and a backward shift reading (but crucially not a forward shift); it is more likely that the subordinate clause past tense morpheme encodes a relative non-future ("no later than …"), which contains [uPAST] (cf. Condoravdi & Zeijlstra in prep). However, such an additional extension still requires the underlying upward probing feature configuration.

the standard theory of Agree again, as it would dismiss with problematic feature checking configurations, such as in (22)/(23).[10]

Space limitations prevent me from discussing the phenomenon and its current analyses in detail. However, currently quite some consensus has arisen that Sequence of Tense involves at least some underlying feature checking configurations. Apart from that, it must be noted that without alluding to syntactic Agree the observation in (21) can no longer be accounted for. Finally, just as in the case of Negative Concord, it would be odd if an almost prototypical case of semantic redundancy would not be compatible with the feature checking mechanism underlying syntactic Agree.

To conclude, if concord phenomena, such as Negative Concord and Sequence of Tense, are taken to reflect underlying syntactic Agree, syntactic Agree must be allowed to apply between lower probes and higher goals in absence of accompanying downward probing feature checking relations.

3.4 Intermediate steps in successive cyclic movement

In this subsection I introduce a fourth, well-known and thoroughly investigated problem for the standard theory of Agree. In contrast to the previous problems, this problem is independent of the direction of Agree. However, as we will see in sections 4 and 5, following Bošković (2007), assuming that Agree may only take place in a unidirectional fashion will provide an elegant solution to the problem discussed here.

Bošković (2007, 2008), among many others, has shown that the traditional Agree scheme faces a serious look-ahead problem when applied to intermediate steps of successive cyclic movement.

(24) a. You think that Mary bought a car Bošković (2007)
b. What$_i$ did you think that Mary bought t_i

Take CP to be a cycle/phase (cf. Chomsky 1977/2001). Now, it follows that *what* can only move out of the subordinate CP if moves to the phase edge first.

(25) [$_{CP}$ What$_i$ did you think [$_{CP}$ t_i that Mary bought t_i]]

But this means that it should somehow be encoded at the lower CP that *what* is forced to move to the higher Spec,CP, to fulfil some feature checking requirement of the higher C-head, something which is not known at that stage of the derivation. Hence, the question is: what triggers *what*-fronting in cases like (26)? And, moreover, why are non-*Wh*-terms not fronted in subordinate clauses headed by *that* (like in (27))?

(26) [$_{CP}$ what$_i$ that Mary bought t_i]

(27) [$_{CP}$ that Mary bought a car]

In order to front *what* in (26), but not in (27), C^o, filled by *that*, should carry a feature [uWh], along with an [EPP]-feature, to attract *what* into Spec,CP. This means that *that* in (26), while being [-Wh] itself, must carry a [uWh] feature to attract *what*$_{[iWh][uQ]}$ (Chomsky 2000, 2001, Bošković 2007). Moreover, note that C^o in (26) should be a defective head, since otherwise *what* would lose its [uQ]-feature and then it could no longer act as a proper goal for the next C^o carrying [uWh].

[10] See Ogihara & Yarvit (2011) for a recent evaluation of both approaches and their problems.

(28) [CP what$_{i[iWh][uQ]}$ that$_{[\sout{uWh}]}$ Mary bought t_i]

Analyses as the one sketched above are problematic for a variety of reasons listed and evaluated in the literature (cf. Bošković 2007 for a elaborated discussion), and hinge on a number of ad hoc analyses postulated in order to account for the phenomena which are otherwise not understood. As Bošković (2007) has shown, no analysis can principally motivate the intermediate steps in successive cyclic movement in terms of featural properties of the intermediate C-head. However, still following Bošković (2007), if the *Wh*-term is taken to carry some feature itself that cannot be checked within the phase, *Wh*-fronting can be understood in a principled way. It is the mirror image of this proposal (discussed in section 4.2), that I will take to be the heart of all operations triggered by Agree.

3.5 Motivation for Move

Before evaluating some previous proposals that aim at overcoming some of the above-mentioned problems for the standard theory of Agree, it should be noted that under the current version of Agree, no principled explanation has been provided for the existence of [EPP]-features either, as has been pointed out by many scholars, e.g. Epstein & Seely (1999), Bošković (2007) among many others. Move, as has been discussed in section 2, is regarded to be a superfunction of Agree, but if Agree itself is the only mechanism that is able to check features, it is unclear why natural language would exhibit [EPP]-features in the first place.

3.6 Concluding remarks

To conclude, in the above subsections I discussed a number of problems for the standard theory of Agree, showing that what is still lacking is a theory of Move and Agree that: (i) allows for [iF]>[uF](>[uF]) Agree relations; (ii) explains intermediate steps in processes of successive cyclic movement; (iii) motivates the displacement property.

In the remainder of this paper, I first demonstrate that recent attempts to solve some of these issues still face serious problems. Then, I demonstrate how a reversed version of the second of these attempts neatly fulfils all three requirements listed above.

4. Previous solutions to (some of) these problems

Several of the addressed problems have received serious attention in the literature, others less so. In this section, I discuss the two solutions to some of these problems that I consider most prominent. In subsection 4.1, I evaluate Pesetsky & Torrego's (2007) implementation of Agree as feature sharing, where both interpretable and uninterpretable features search down in order to be valued. In subsection 4.2, I discuss Bošković's (2007) analysis of successive cyclic movement in terms of foot-driven movement, which predicts that strictly unidirectional Agree (in the traditional top-down sense) actually derives movement, including intermediate steps in successive cyclic movement, without having to allude to [EPP]-features. At the same time, I conclude that both analyses still have their shortcomings, as they still suffer from some of the remaining problems that the standard theory of Agree faces too.

4.1 Pesetsky & Torrego 2007

Pesetsky & Torrego (2007) further elaborate the relation between uninterpretability and unvaluedness. Chomsky (2000, 2001) takes, by stipulation every interpretable feature to be lexically valued and every uninterpretable feature to be lexically unvalued. The central

motivation behind this assumption, is to avoid that syntactic operations are triggered by properties of features (in casu semantic interpretability) that cannot be determined during the syntactic derivation but only at LF.

Though Pesetsky & Torrego (2007) adopt Chomsky's distinction between LF-interpretability, they argue that if (un)interpretability and (un)valuedness are taken to be independent notions; actually, four kinds of features must be distinguished:

(29) a. [uF]-unvalued
b. [uF]-valued
c. [iF]-unvalued
d. [iF]-valued

Although it is less clear whether features of the fourth type can easily be exemplified, instances of the other three types are listed in (30) below.

(30) Tns: [iT]-unvalued
V_{fin}: [uT]-valued
Subject DP [uT]-unvalued

Agree, for Pestesky & Torrego, is driven by the need of feature valuation. This, for them applies in the following multiple-step procedure where feature valuation is taken to result from feature sharing (cf. Frampton & Gutmann 2000). In short, an unvalued feature will look down in its search domain until it meets a second, matching feature. If that feature is already valued, the features will share the value and valuation is complete; if not, the two features will nevertheless share their (open) valuation and continue the search until final valuation. One of the advantages of this approach is that it can handle the fact that inherent values (such as tense morphology on finite verbs) and the locus of their interpretation (T°) may be distinct, as called for in section 3.3.2. Also, it allows for case checking in a classical top-down fashion, where the valued feature must be the lowest element in the Agree relation, without alluding to spurious operations as Reverse Agree or any (stipulated) dependencies of the Agree relation between T and the subject DP on φ-feature agreement. Instead of the bidirectional Agree relation in (8) (repeated as (31)), Agree now takes place in two unidirectional steps, illustrated in (31)-(32).

(31) Step 1: Agree between probe Tns and Goal DP, resulting in feature sharing (whatever the value of Tns, it will also be the value of DP)
$[_{TnsP}\ Tns_{iT[\ ]}\ [_{vP}\ DP_{uT[\ ]}\ v_{uT}\ \mathit{val}]$

$[_{TnsP}\ Tns_{[iT][u\varphi]}\ [_{vP}\ DP_{uT[\ ]}\ v_{uT}\ \mathit{val}]]$ →

$[_{TnsP}\ Tns_{iT[2]}\ [_{vP}\ DP_{uT[2]}\ v_{uT}\ \mathit{val}]\ ]$

(32) Step 2: Agree between probe Tns and Goal v, resulting in feature sharing between Tns, DP and v, which leads to the valuation of T on Tns and DP, whereby T will only be interpreted on Tns. Since T is interpretable on Tns, it can and must be deleted on all other instances of T.

$[_{TnsP}\ Tns_{iT[2]}\ [_{vP}\ DP_{uT[2]}\ v_{uT}\ \mathit{val}]\ ]$ →
$[_{TnsP}\ Tns_{iT[2]}\ [_{vP}\ DP_{uT[2]}\ v_{uT\text{-}\mathit{val}:[2]}\ ]\ ]$

The major advantage of this proposal is that it, successfully, no longer relies on instances of reverse Agree. However, this advantage comes with a certain price; the proposal does not allow

Agree to apply after valuation by a lexically valued feature has taken place. Consequently, it is not allowed for multiple inherently valued features to participate in a single Agree relation.

Still, the data show that Agree relations with multiple inherently valued elements should be possible. This is, for instance, the case with Multiple Agree, Sequence of Tense and Negative Concord. I discuss each in turn.

First, the problems around the data around Multiple Agree still exist. Take the case of Japanese multiple nominatives, as first presented in (13), and represented here as (33) in Pesetsky & Torrego's terms.

(33) $[_{TP}$ T° $[_{vP}$ DP V_{fin} [… DP … […DP …]]]]
[iT:__] [uT:__] [uT: *val*] [uT:__] [uT:__]

Even though only one element in the Agree configuration is valued, it is not clear why Agree would continue after the probe ([iT: __] on T°) agrees with highest subject DP (carrying [iT: __]) and the finite verb (carrying [uT: *val*]). This can only be done after adopting additional assumptions and further complication of the account (e.g. unvalued Agree relations may look upward if valuation has not taken place, as has been suggested, in slightly different terms by Bejar & Rezac 2009).[11] However, without such additional assumptions, the features of the lower DP's in (33) cannot be valued.

Second, the claim that T is interpretable on (finite) Tns seems too strong, given the Sequence of Tense data (as in (20) repeated below).

(34) a. John said Mary was ill
b. Jan zei dat Marie ziek was Dutch
John said that Mary ill was
'John said Mary was ill'

If the tense feature in T is interpretable in both the matrix and the subordinate clause T, Sequence of Tense effects should receive a different explanation.

Third, the other Concord data also seem to run counter Pesetsky & Torrego's (2007) analysis in the sense that Negative Concord allows Agree to continue after valuation. Take the following example from Italian. Following Zeijlstra (2004), Italian *non*, being a non-Strict Negative Concord language, carries [iNEG] whereas n-words carry [uNEG]. Although Zeijlstra (2004) does not talk about the values of these elements, n-words should be taken to be valued in the course of derivation (cf. Tubau 2008); otherwise no two n-words could participate in an Agree relation. By contrast, the negative marker should then be lexically valued. However, if that were true, Agree can never take place between a higher *non* and a lower n-word, whereas this is actually the only kind of attested order between n-words and negative markers in this type of Negative Concord languages, as is illustrated in (35) below.[12]

[11] See also section 6.3 for an evaluation of this particular version of Agree.

[12] Note that suggesting that Neg° in languages like Italian carries an additional unvalued feature, [iPol][], which is valued by Agreeing with head *non* or an n-word, does not work either. Since Neg° has already been valued by *non* ([uNEG], value +NEG), it can no longer act as a probe for any of the n-words that also carry [uNEG], value +NEG. Yet, elements carrying valued [uF] may not remain unchecked, otherwise all sentences in (i) would be ruled in as well, contrary to fact (examples (ia-b) taken from Pesetsky & Torrego's (2007)).

(i) a. *John has walks
b. *Mary bough which book ('Mary bought this book')
c. *Gianni ha telefonato a nessuno

(35) a. Gianni non ha detto niente a nessuno Italian
Gianni neg has called to n-body
'Gianni didn't call anybody'
b. *Nessuno non ha detto niente a nessuno
N-body neg has called to n-body

Hence, even though Pesetsky & Torrego's (2007) analysis proves a more coherent version of Agree and does not inherit the problems around Reverse Agree (as discussed in 3.1), the issues discussed in 3.2-3 still remain open.[13]

4.2 Bošković 2007

Bošković, after discussing a number of prior analyses (Chomsky & Lasnik 1993, Takahashi 1994, Chomsky 2000, 2001) argues that it is not the feature [EPP] that encodes the information that some particular goal must be moved, but that it is rather the presence of an uninterpretable feature on the goal itself that drives this property.

Arguing that the presence of an uninterpretable feature may drive the [EPP]-property, nicely solves the problem concerning the nature of successive cyclic movement, most notably the question as to why a goal in matrix clause first has to raise to the lower Spec,CP position before the highest C° that has an [EPP]-requirement is even part of the derivation. Take again the relevant configuration:

(36) [CP $C°_{[uWH][iQ][EPP]}$ … [CP … $DP_{[iWH][uQ]}$]]

When the first CP is built, the feature [uQ] on the *Wh*-term makes that CP will not survive at LF: then [uQ] on the DP will never be checked. The only way to rescue this sentence is by fronting the *Wh*-term to the CP phase edge[14], as from there its [uQ] may still Agree with some feature [iQ] later on, an instance of so-called foot-driven movement (cf. also Platzack 1996, Koeneman 2000 and Van Craenenbroeck 2006). Note that fronting the *Wh*-term at this stage does thus not immediately save the derivation, but ensures that is no longer doomed to crash at LF; only if at a later stage of the derivation some element carrying [iQ] is merged, the sentence is grammatical again. Successive cyclic movement can thus be accounted for, once it is taken to be driven by the needs of the moved element itself and not by the need of some target position.

However, as Bošković shows, this cannot be the complete story. If it were, it would predict that configurations like (37) are grammatical, contrary to fact. The question is thus what bans Agree between the features on matrix C° and the *Wh*-term in subordinate Spec,CP.

(37) *$Did_{[uWH][iQ]}$ you think $what_{i[iWH][uQ]}$ that Mary bought t_i

For Bošković, this problem is circumvented once Agree is no longer allowed to take place in a reverse fashion, i.e. if Reverse Agree as described in sections 2 and 3.1 is not possible. In that case, [uQ] on the *Wh*-term may still not be checked by matrix C° as the latter c-commands the former. The only way for the *Wh*-term to have its [uQ] feature checked against [iQ] in matrix C° is by fronting it across C° to Spec,CP, resulting in grammatical (38):

(38) $What_{i[iWH][uQ]}$ $did_{[uWH][iQ]}$ you think t_i that Mary bought t_i

[13] Since Pesetsky & Torrego (2007) do not intend to pose solutions for problems discussed in 3.4-5 (intermediate steps in successive cyclic movement and the motivation for the [EPP]-feature), it would be unfair to present these as particular problems for this analysis as such.

[14] Bošković (2007) disregards *v*P as a phase for movement. In this paper, only phase-hood of CP is adopted (both for Move and Agree).

Hence, once it is assumed that Agree always works in a unidirectional fashion (solving the problems addressed in 3.1), the triggering of intermediate steps in successive cyclic movement can be solved and movement is no longer dependent on the [EPP]-features. However, at the same time, this very strict [uF]>[iF] version of Agree seems to be contradicted by the Multiple Agree and Concord phenomena discussed in 3.2 and 3.3, which quite strictly exhibit [iF]>[uF] Agree.

Apart from these general problems, which do not affect Bošković's specific proposal but rather the general top-down scheme of the standard theory Agree that Bošković adopts, albeit it with a number of important modifications, Bošković's proposal leads to some particular questions. In short, his proposal requires that every instance that is diagnosed with some uninterpretable feature [uK] must raise across an element [iK] if such an [iK] feature is lacking in its (local) c-command domain. This requirement appears to be too strong. Let me give two different examples here (although more could be given).

First, the requirement would predict that in principle all *Wh*-terms should front across matrix C°. This is the case in Bulgarian, as shown in (39). However, for languages like English this is not true, as illustrated in (40).

(39) a. *Koj vižda kogo? Bulgarian
Who watches whom
b. Koj kogo vižda?
Who whom watches

(40) a. Who watches whom?
b. *Who whom watches?

In (40) only one *Wh*-term must be fronted to Spec,CP; the other *Wh*-term may remain in situ. For Bošković, this is due to the optionality of [uQ] on *Wh*-terms: only if a *Wh*-term carries [uQ], must it raise across $C°_{[iQ]}$. In accordance with the criterion that interrogative C° always has only one specifier position to be filled and always carries a feature [uWH], exactly one *Wh*-term will front to Spec,CP in interrogative constructions. This solution is, however, problematic for two reasons. First, any independent motivation for the possible absence of a [uQ]-feature on a *Wh*-terms is lacking. Second, and more importantly, this leads to overgeneralizations: if *Wh*-terms carry [uQ] only optionally, it is predicted that that *Wh*-terms may appear in base position in a clause such a clause does not contain an interrogative C°-head carrying [iQ]. Then, for instance, (41) is expected to be well-formed, contrary to fact.

(41) *John bought what

If [uQ] on the *Wh*-term may be absent, the ungrammaticality of (41) is no longer explained. Note that, since in many languages *Wh*-terms are in fact allowed to appear in non-interrogative sentences (always yielding an indefinite interpretation), the presence of some element carrying [iWH] in a non-interrogative environment cannot be taken to rule out examples like (41) either.[15] Therefore, the unavailability of examples such as (41) in languages like English is a problem for Bošković's account.

Second, a number of languages allow so-called postverbal nominatives, such as the Bantu languages described in secton 3.1 (cf. Baker 2008). If nominative case is indeed [uT], then it is predicted that universally all nominatives must raise at least to Spec,TP, although it is known that such a generalization is too strong. It thus remains an open question for Bošković

[15] Languages that allow *Wh*-terms in non-interrogative clauses are of course not problematic for Bošković.

how to account for the existence of postverbal nominatives in its various guises (see also sections 5.4 and 6 for more examples and discussion).[16]

5. Proposal

As the reader may have noticed, the crucial step in Bošković's analysis is the step from bidirectional Agree to unidirectional Agree. Once Reverse Agree is no longer allowed, movement can be triggered to instantiate a proper Agree configuration.

However, nothing principally depends on in which direction unidirectional Agree should take place. In this section, I demonstrate that once it is adopted that Agree always strictly applies place in a fashion where under Agree [iF] must c-command one or more [uF]'s, the problems Bošković aimed to solve are still solved (as well as some of the particular problems that his analysis faces), but at the same time it solves the problems listed in 3.2 and 3.3, too.

Concretely, I propose to redefine Agree as follows:

(42) *Agree*: α can Agree with β iff:
- a. α carries at least one uninterpretable feature and β carries a matching interpretable feature.
- b. β c-commands α.
- c. β is the closest goal to α.

This is exactly the version of Agree outlined above, where Agree (i) applies in a strictly unidirectional fashion; and (ii) allows for upward Agree only. Following the logic of the arguments above, this version of Agree should solve all problems listed in 3.1-5. In this section, I show that this is indeed the case by discussing the problems introduced in section 3 in turn. Further consequences of this proposal will be discussed in section 6.

However, before discussing how this version of Agree, solves these problems, let me first address the notion of valuation. In this version, contrary to the standard Theory of Agree, Agree is driven by the need of uninterpretable features to be checked in the course of the derivation where checking is said to take place under c-command by a higher matching interpretable feature. The reason for doing so is that the discussion in sections 3 and 4 shows that Agree in terms of valuation is problematic, since multiple lexically valued elements may still participate in a single Agree configuration. Consequently, without adopting further assumptions,, the need to be valued cannot be said to be the driving force of Agree. Note that this does not entail that valuation does not play a role in Agree at all. The only claim argued for here is that the operation Agree itself is not driven by the need for valuation.[17]

The idea that Agree applies in an upward fashion only has independently and partially on different grounds been developed and elaborated in Wurmbrand (2010, 2011, to appear). Wurmbrand's proposal is different from the proposal pursued here in taking valuation (albeit it in a different version that may overcome the problems discussed above) to be the trigger for Agree instead of uninterpretability: Agree for her takes place only if a valued feature c-commands an

[16] Bošković explores a number of possibilities to account for these facts under his system, but acknowledges that none of them lead to truly satisfactory answers.

[17] As has been pointed out by Epstein et al. (1998), Epstein and Seely (2002) and others, Agree driven by uninterpretability faces a *look ahead* problem: at the stage in the derivation where Agree must take place, it is not yet known that the uninterpretable feature, if remained unchecked, would cause the derivation to crash at LF. A possible solution to this problem has been proposed in Zeijlstra (2011b), that overcomes this *look-ahead* problem. Zeijlstra argues that carrying a feature [iF] does not entail that this feature itself receives a semantic interpretation in terms of F, but rather that, during the language acquisition process, elements that have the semantics of F and that are able to participate in Agree relations are assigned by the language learner a feature [iF]. As a result, [iF]-features are not semantically interpretable themselves. The close relation between carrying a feature [iF] and carrying the semantics of F is epiphenomenal of the process of language acquisition.

unvalued one. Since, Wurmbrand follows Pestesky & Torrego (2007) in disentangling the Chomskyan bidirectional correlation between (un)interpretability and (un)valuedness, she argues that Agree can apply between a higher element carrying an uninterpretable feature that c-commands a lower element that is interpretable, provided that the highest feature values the lower one. Consequently, Agree for her cannot take place if a lower feature would value a higher one. In order to account for those phenomena, where at first sight the lower element is lexically valued, such as the Negative Concord or Sequence-of-Tense phenomena discussed in section 3.3, Wurmbrand, basing herself on a number of arguments involving mostly VP ellipsis, argues that actually the higher head is the valuer of the lower element, whose value later gets realized a an inflectional morpheme.

Apart from Negative Concord and Sequence-of-Tense, Wurmbrand accounts for a number of other phenomena as well in terms of upward valuation, including binding, case assignment, control, polarity licensing, parasitic morphology, and Germanic verb clusters. Furthermore, she aims at explaining syntactic selection by arguing that Reverse Agree forms a condition on Merge. Given the novelty of her approach and the scope of this paper, I regret that I am not able to provide a fuller assessment of her proposal here, but rather refer the reader to her work for comparison and evaluation.

5.1 Reverse Agree

First, cases of so-called Reverse Agree naturally follow under the Agree proposal in (42). Take, for instance, (43). If T° carries [iT], this [iT] can already establish an Agree relation with the subject DP, carrying [uT]. Thus, checking the subject's nominative case feature by T° does not require movement of the subject DP.[18]

(43) $[_{TP}\ T_{[iT][u\varphi]}\ [_{vP}\ DP_{[uT][i\varphi]}\ ]\ ]$

However, T° also carries a feature [uφ]. This feature therefore requires the subject DP to move to a position immediately c-commanding T°: Spec,TP. Subject movement, under this proposal, is not triggered by case-checking requirements, but instead results from the presence of [uφ]-features on T°.

(44) $[_{TP}\ DP_{[\sout{uT}][i\varphi]>}\ T_{[iT][\sout{u\varphi}]}\ [_{vP}\ <DP_{[\sout{uT}][i\varphi]>}\ ]\ ]$

These effects (checking both the subject's case and T's φ-features as well as movement of the subject to Spec,TP) can thus be derived without alluding to principles such as Reverse Agree. And this analysis (or Bošković's, as the analyses yield exactly the same results in this case) does not even require an [EPP]-feature to drive this movement.

Under the proposal in (42), the notion of feature-defectivity becomes obsolete, since it derives raising constructions, too. Take, for instance, (45).

(45) $Mary_i$ seems to win t_i the race

[18] One question that may arise concerns ECM constructions where the subject of an infinite clause has accusative case (as in *I want him/*he to come*). Under this proposal it must be prevented that such DPs cannot have a nominitive case feature checked against T°. The most likely reason why this is ruled out is that the feature on V° that is responsible for the checking of the accusative feature also functions as an intervener for Agree with higher T°. See also fn. 5.

Case-feature checking requirements do not trigger movement of the subject DP *Mary*. *Mary* can already have its [uT]-feature checked in base-position. However, since both finite and infinite T carry a feature [uφ], which must be checked by one and the same argument, since the argument structure of *win* and *seem* allows for no more arguments than *Mary* and *the race* in (45), *Mary*'s [iφ] can check off these [uφ]-features as soon as it is raised to the highest Spec,TP position. So, movement of subject DPs of infinite clauses to the specifier position of raising verbs is in fact predicted.[19]

Finally, this implementation of Move/Agree solves one of the problems that Bošković (2007) has been facing, namely the existence of postverbal nominatives. If nominatives carry [uT] they must be checked against T°, but this does not require any movement. Subject raising to Spec,TP is only driven by [uφ]-features on T°. But nothing a priori demands that T° must universally carry [uφ]. So, languages could actually have T-heads without [uφ]-features. Consequently, in these languages there is no need for the subject to raise to Spec,TP and the subject can remain in its base position.[20]

But even stronger, even if T° does carries [uφ] it is not guaranteed that it is the subject that must raise to Spec,TP. This is exactly what happens in the cases described in Baker (2008), presented in section 3.1 and repeated in (46) below.

(46) a. Ka-mu-dzi ku-li chi-tsîme — Chichewa
17-3-village 17-be 7-well
'In the village is a well'

b. Omo-mulongo mw-a-hik-a mukali — Kinande
LOC.18-village.3 18S-T-arrive-FV woman.1
'At the village arrived of woman'

For Baker, languages parametrically differ with respect to whether V_{fin} agrees with the DP to which it assigns case. However, in the current, slightly more liberal version of Agree, this correlation is no longer a primitive parameter, but is rather derived as a result from the lack of alternative DP candidate goals. Given that the only DPs that may appear in an English sentence without being selected by a preposition are arguments (that may receive structural case by standing in some syntactic configuration with either T° or *v*°), it follows that the only candidate that can raise to a position across T° to check its [uφ] must be the highest argument DP.[21]

However, if a language is more liberal with respect to allowing DPs in non-argument positions, as the Bantu languages are, it is no longer unexpected that such DPs, carrying [iφ] may actually stand in an Agree relation with [uφ] on T°, leaving the subject (having checked its [uT]-feature against higher T°) in situ.

To conclude, all cases where Reverse Agree seemed to play a role, now receive a principled explanation that does not rely on poorly understood featural dependencies and defectivity notions.

[19] Naturally, this requires that the goal must be base-generated before the probe is merged and starts searching for a matching goal. One consequece of this is that *v*° cannot carry any [uφ] features, since otherwise an object could be triggered to move to Spec,*v*P, unless one postulates that the probes first checks whether its sister has a matching feature before it searches down.

[20] Note that this, however, does not apply to those postverbal subjects that still agree with the finite verb, which are still problematic under this approach too. Those cases will be dealt with in section 6.1.

[21] Note that I do not claim that there is a 1:1 correspondence between the availability of a non-argument DP and agreement with non-arguments. The claim is that the properties of the element that may appear in Spec,TP that agrees with V_{fin} are determined by the kind of uninterpretable features on T and the availability of possible candidates in the derivation that carry the required interpretable features.

5.2 Multiple Agree

Another advantage of this new version of Agree, is that it naturally captures instances of Multiple Agree, as illustrated in the Japanese facts, repeated below.

(47) John-**ga** [*yosouijouni* nihonjin-**ga** eigo-**ga** hidoku] kanji-ta. Japanese
John.NOM than.expected the.Japanese.NOM English.NOM bad.INF thought
'It seemed to John that the Japanese are worse at speaking English
than he had expected.'

Multiple Agree now simply follows from (42). All DPs and V_{fin} are probes carrying [uT] that need to look upstairs for an [iT]-feature by which to be checked. Since no intervening goal surfaces between any of the probes and matrix T°, nothing forbids Agree to take place between the multiple probes and the single goal, so the configuration in (48) is no longer problematic for Agree (in fact, such examples of Multiple Agree are even predicted).[22]

(48) $[_{TP}$ T° $[_{vP}$ DP V_{fin} [… DP … [… DP …]]]]
[iT] [uT] [uT] [uT] [uT]

However, there is one possible caveat in the sense that it must be ensured that the Agree relations do not violate any locality relation. If the lower DPs are part of CPs, the question arises as to why the phase edge does not forbid Agree to apply across the board.[23]

This critique, however, can be circumvented by assuming that Agree, in general, may only apply across phase boundaries, provided that the phase edge itself also participates in the Agree relation, a corollary of phase theory (cf. Chomsky 2001). So the Agree configuration is licit in (49)a, but not in (49)b, XP being a phase.

(49) a. $[_{HP}\ H_{[iF]}\ [_{XP}\ WP/X_{[uF]}\ [_{ZP}\ YP_{[uF]}]]]$[24]

b. $*[_{HP}\ H_{[iF]}\ [_{XP}\ WP/X\ [_{ZP}\ YP_{[uF]}]]]$

There is nothing strange or unmotivated about (49). It only states that some feature is visible for syntactic computation outside the phase as long as it appears in the phase edge, too. This is exactly the same principle that, for instance, requires that elements that cross a phase edge must also land in that phase edge. In fact, given the logic of phasehood, it would actually be strange if the principle that enables one syntactic operation to apply across phases would not extend to other syntactic operations.

5.3 Concord phenomena

[22] Under the proposal outlined here, Multiple Agree applies at once. An alternative might be that two probes first Agree with each other and later on Agree with a higher element until the goal participates (as the highest element). The latter approach, for instance applied by Haegeman & Lohndal (2010) in their reimplementation of Zeijlstra's (2004, 2008) analysis of Negative Concord, would be the mirror image of Frampton & Guttman's (2000) analysis of feature sharing (as adopted by Pestesky & Torrego 2007). Although I pursue the former approach here, I do not commit myself to a choice a between the two options. The essentials of the proposed mechanism are compatible with both views.

[23] But see Bošković (2007) for some claims that locality in terms of phases only apply to Move and not to Agree.

[24] Note that nothing crucial hinges on the whether the phase head X° or some specifier WP carries [uF] here. For Agree to take place between H and YP it suffices in principle that some element in the phase edge carries [uF]

Just as is the case with Multiple Agree phenomena, the discussed Concord phenomena do not pose any problems for the proposal in (42) either, since they have all been analysed as cases of Multiple Agree. Both Negative Concord and Sequence of Tense have been said to display Agree configurations of the form [iF]>[uF](>[uF]). Examples of each phenomenon are provided below.

In the case of Negative Concord, Zeijlstra's (2004, 2008) analysis, which states that n-words carry a [uNEG] feature that must be checked against a negative operator carrying [iNEG], can be fully adopted. This operator can either be a negative marker (in Non-Strict Negative Concord languages like Italian) or an abstract negative operator (for instance in Strict Negative Concord languages like Czech).[25]

(50) a. Gianni non ha detto niente a nessuno — Italian
Gianni NEG has said n-thing to n-body
'Gianni didn't say anything to anybody'
b. [Gianni non$_{[iNEG]}$-ha [ditto niente$_{[uNEG]}$ a nessuno$_{[uNEG]}$]]

(51) a. Dnes *nikdo* *(*ne*)volá *nikomu* — Czech
Today n-body NEG.calls n-body
'Today nobody is calling anybody'
b. [Dnes *Op*$_{\neg[iNEG]}$ [$_{TP}$ *nikdo*$_{[\sout{uNEG}]}$ *ne*volá$_{[\sout{uNEG}]}$ *nikoho*$_{[\sout{uNEG}]}$]]

For Sequence of Tense, more needs to be said about the exact interpretation of tense features and past tense morphemes, but a minimal requirement for all analyses that treat Sequence of Tense as an agreement phenomenon is that verbal morphology contains some uninterpretable past tense feature. Such a feature can either be thought of as an uninterpretable valued tense feature ([uT: past]) or as an uninterpretable feature [uPAST]. For now, I implement the latter, though the two analyses are interchangeable. Then the Agree relation underlying (52)a should minimally be like (52)b:

(52) a. John said Mary was ill
b. [$_{CP}$ John *Op*$_{[iPAST]}$ said$_{[uPAST]}$ [$_{CP}$ Mary was$_{[uPAST]}$ ill

However, as discussed before, Negative Concord and Sequence of Tense differ with respect to being clause-bounded. Negative Concord may not apply across the board, as shown in (53) below, but Sequence of Tense can (see (52)).

(53) *Gianni non ha detto che ha telefonato a nessuno — Italian
Gianni NEG has said that has called n-body
'John didn't say that he called anybody'

This difference is expected, though, once it is assumed that the relevant C-head responsible for the locality violation in (53) carries an uninterpretable tense feature but not an uninterpretable negative feature. Given the corollary in (49), the locality differences between Negative Concord and Sequence of Tense immediately follow. Under this assumption, the distributional and interpretational properties of both Negative Concord and Sequence of Tense follow as a result of the Agree mechanism in (42).

[25] Note that an abstract negative operator may still be adopted in Non-strict Negative Concord languages in cases when the negative marker is absent (cf. Zeijlstra 2004, 2008).

5.4 Intermediate steps in successive cyclic movement

Not very much changes with respect to Bošković's account of successive cyclic movement: the fact that an uninterpretable feature [uQ] on a *Wh*-term cannot be checked if it is not c-commanded within is local domain (in casu an embedded CP-phase) forces movement towards the phase edge from where it may Agree with some higher goal carrying [iQ]. The fact that if the relevant goal in the higher domain, apart from its [iQ]-feature also carries a feature [uWh] that needs to be checked by the probe, again triggers further movement to higher Spec,CP. This is illustrated in (55) for the derivation of (54).

(54) What do you think that Mary bought?

(55) 1. [$_{CP}$ that Mary bought what$_{[iWH][uQ]}$]
[uQ] forces movement of *what* to Spec,CP
2. [$_{CP}$ what$_{[iWH][uQ]}$ that Mary bought]
Now the matrix clause can be built
3. [$_{CP}$ [C°$_{[uWH][iQ]}$ did] you think [what$_{[iWH][uQ]}$ that Mary bought]]
Agree([iQ], [~~uQ~~]) can take place
4. [$_{CP}$ [C°$_{[uWH][iQ]}$ did] you think [what$_{[iWH][~~uQ~~]}$ that Mary bought]]
[uWh] forces movement of *what* to Spec,CP
5. [$_{CP}$ what$_{[iWH][~~uQ~~]}$ [C°$_{[uWH][iQ]}$ did] you think [that Mary bought]]
Agree([iWh], [uWh]) can take place
6. [$_{CP}$ what$_{[iWH][~~uQ~~]}$ [C°$_{[~~uWH~~][iQ]}$ did] you think [that Mary bought]]

So far, nothing really changes. However, in cases of Multiple *Wh*-questions, things are different. For instance, under this proposal only one *Wh*-term needs to front to Spec,CP, whereas under Bošković's proposal, in principle all *Wh*-terms should front to the specifier position of C°$_{[iQ]}$. He tries to circumvent this problem by assuming that *Wh*-terms only optionally carry a feature [uQ], an assumption, though, that illegitimately allows *Wh*-terms to occur in non-interrogative clauses in languages like English.

Hence, this proposal fares better for languages like English where single-claused multiple *Wh*-questions like (41)a (repeated as (56)a below) follow immediately. The Agree configuration in (56)b is licit under (42).

(56) a. Who watches whom?
b. [CP Who$_{i[uQ][iWH]}$ C$_{[iQ][uWH]}$ t$_i$ watches whom$_{[uQ][iWH]}$]

However, the question arises again how the Slavic cases of multiple *Wh*-fronting should then be explained, as Bošković's analysis applied straightforwardly to those, contrary to this proposal. Take (39), repeated below.

(57) a. *Koj vižda kogo? Bulgarian
Who watches whom
b. Koj kogo vižda?
Who whom watches

This question cannot be answered on the basis of (42) alone. However, what this question ultimately boils down to is whether multiple *Wh*-fronting should follow from Agree only or whether it must be independently motivated. Cheng (1996), for instance, has argued for the latter, assuming that *Wh*-terms in Slavic languages need to have a covert null determiner that needs to be licensed at S-structure in the C-domain. It would be hard to see how such a particular

mechanism can be implemented under the proposal presented in this article, but the idea is that it is some independent property that drives any Slavic *Wh*-term to Spec,CP, regardless of whether it appears in matrix or embedded clauses. Such a property should then be more likely to be thought of in semantic terms. For instance, since *Wh*-terms under Hamblin (1973)/Karttunen (1997) semantics need their variable to be bound by an existential quantifier that outscopes the interrogative operator, it could be suggested that Slavic *Wh*-terms have this quantifier as part of their lexical semantics, whereas in languages like English *Wh*-terms are indefinites in the sense of Heim (1982) that need to be bound by existential closure at C-level.[26] In this article I will not spell out an exact analysis along these lines, but rather conclude by stating that it is conceivable that for some semantic reasons Slavic *Wh*-terms all need to undergo fronting to Spec,CP.

However, the analysis propsed here also faces some problems when it comes to multiple *Wh*- questions. Take (58):[27]

(58) Who said that Mary ate what?

In (58) *who* is base-generated in matrix CP, so the question arises as to why *what* does not appear in Spec,CP. Stronger yet, *what* is not even allowed in intermediate Spec,CP, even when the complementizer is lacking:

(59) *Who said what (that) Mary ate?

However, (59) is predicted to be grammatical under the presented proposal.

At the same time, it is questionable whether the ungrammaticality of (59) should follow from the underlying Agree system. Note that in general *Wh*-terms are odd in Spec,CP if C is non-interrogative. This is shown for Dutch *wat* ('what'), which can be used as an indefinite (and should thus only optionally be equipped with a [uQ]-feature). However, in Spec,CP it may only survive in interrogatives. Even though in non-interrogative clauses elements may be fronted to Spec,CP to receive a topic or focus reading, *wat* may not.

(60) a. Hij heeft wat gegeten
He has what eaten
'He ate something'
b. Brood heeft hij gegeten
Bread has he eaten
'It was bread that he ate'/'He ate BREAD'
c. Wat heeft hij gegeten
What has he eaten
'What did he eat'
*'There is something that he ate'/'He ate SOMETHING'

Consequently, it could be assumed that what rules out (59) is the appearance of a *Wh*-term in the specifier position of a non-interrogative C°. The question, then, is why (58) is grammatical. One solution that comes to mind is that the *Wh*-term does front to Spec,CP but due to the ban on *Wh*-terms appearing at surface structure in non-interrogative CPs, it is spelled out in a lower position.[28] Motivation for this solution comes from three facts. First, low spell-out is a PF

[26] The idea that *Wh*-terms can be indefinites that must be bound by existential closure has been first proposed by Pesetsky (1987).

[27] This problem was pointed out to me by Edwin Williams and Jeroen van Craenenbroeck (p.c.).

[28] Alternatively, one could also assume that in those cases an abstract operator $Op_{[uQ]}$ is merged in Spec,CP, which, given the corollary in (49), allows the lower *Wh*-term in (58) to Agree with matrix C°. Note that this step would not

phenomenon and should therefore be sensitive to PF properties. This is indeed the case. The ban against *Wh*-terms in non-interrogative Spec,CP must be a PF property in the first place, since covert *Wh*-terms may of course survive in such intermediate Spec,CPs, so it is the overtness of the *Wh*-term, which is relevant. Hence, a PF-solution is invoked to solve a PF problem. Second, lower spell-out of *Wh*-terms is not uncommon at all. For instance, in Serbo-Croatian, multiple *Wh*-fronting is blocked under haplology if the two *Wh*-terms are phonologically identical, and a lower copy must be spelled out too, as the following minimal pairs, taken from Nevins (2010) show:

(61) a. Ko <koga> vidi <*koga>
who whom sees
'Who sees who'
b. Šta <*šta> uslovljava šta?
What conditions what
'What conditions what?'

Third, in German, in multiple *Wh* questions the non-interrogative complementizer *dass* ('that') can be omitted. If the complementizer is absent, the embedded *Wh*-term moves to intermediate Spec,CP (as predicted). However, if the complementizer is presented, the *Wh*-term must be realized in situ. Since the semantics of the two are identical, this strongly suggests that only PF-effects cause the difference.[29]

(62) a. Wer hat gesagt wo Hans hingegangen ist?
Who has said where Hans PRT.gone ist
b. *Wer hat gesagt wo dass Hans hingegangen ist?
Who has said where that Hans PRT.gone ist
c. Wer hat gesagt dass Hans wo hin gegangen ist?
Who has said that Hans where PRT gone ist
'Who said where Hans went'

Thus, I tentatively conclude that under the analysis proposed the distribution of *Wh*-terms and the way they participate in successive cyclic movement are nicely covered by the proposal in (42) and that the problems it may face can be accounted for in terms of independently motivated principles.

5.5 Motivation for Move

Finally, and this the proposal inherits from Bošković's proposal, Move can be motivated in order to reverse c-command relations between possible probes and goals, so that they can further on undergo Agree. In this sense, Move is an operation that is supports Agree rather than the other way round (as is the case in the Standard version of Agree).

The major advantage of this proposal, or rather of the strict unidirectionality of Agree that underlies it, is that its movement can be understood and explained without alluding the [EPP]-feature, and thus this proposal provides a more insightful theory of Move.

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yield overgeneralisations, as an embedded clause that consists of such an abstract operator in Spec,CP and a *Wh*-term in situ can only survive if the highest clause contains an interrogative C-head and a *Wh*-term too.

[29] These facts cannot be accounted for in terms of independently driven Wh-movement in the subordinate clause, as the sentence can only yield an interrogative reading (without echo effects) if the matrix clause contains a *Wh*-term too.

6. Further questions

So far I have argued that several Agree phenomena can only be explained once it is assumed that Agree always takes place in an upward fashion. This solves a number of problems addressed in sections 3 and 5. However, the idea that Agree is always upward raises a number of questions as well.

Although space and other limitations prevent me here from addressing all these questions in detail, in this section I spell out those questions that I consider most important and I discuss to what extent they are compatible with the proposal spelled out in the previous section. In short, my tentative conclusion is that none of these questions constitute unsolvable problems for this analysis, although in some cases additional assumptions have to be adopted.

6.1 Expletive constructions

One of the first possible counter-examples against the upward-Agree only hypothesis are expletive constructions with unaccusative verbs as in (63).

(63) a. There seems to have arrived a student
b. There seem to have arrived some students

Here, the finite verb agrees with the lower DP *a*/*some student*(*s*), which is clearly equipped with interpretable φ-features. Since this DP is base-generated in a position where it could never have c-commanded V_{fin}, this looks like a counter example for the presented proposal.

However, as has been proposed by Moro (1997) and Koopman (2005) (and in slightly different terms also by Hornstein & Witkos 2003, Kayne 2006 and Leu 2008), *there* actually originates out of the subject and is thus part of the associate subject.[30,31] If that is correct, the underlying structure is as in (64). Note that such a movement analysis is further supported by the fact that the expletive and the main subject always stand in the same local domain.

(64) $\text{There}_{[i\varphi]i}$ $\text{seems}_{[u\varphi]}$ t_i to have arrived [a student t_i]$_{[i\varphi]}$

As Koopman (2005) points out, there is ample independent evidence for an analysis in terms of expletive movement. For instance, it fares better than any other known analysis in accounting for the syntactic distribution of expletive *there*.

Movement of the expletive out of the associate subject DP is not the only possible way to derive the desired effects. Alternatively, along the lines of Barbiers, Koeneman & Lekakou (2008), a different analysis along the same track is that either the subject, or a subpart of it, actually copies to the higher position where it is partially realized as the expletive.[32] This is illustrated in (65), where the highest subject copy spells out as *there*.

(65) <a student>$_{[i\varphi]}$ $\text{seems}_{[u\varphi]}$ to have arrived <a student>$_{[i\varphi]}$
→ there

[30] Koopman (2005) argues that most cases of Agree display Spec-head configurations. In that sense she argues against long-distance Agree. In my terms, Spec-head agreement results from a head carrying [uF] that searches for a lower element carrying [iF] to c-command it. In that sense my proposal and the requirement that Agree always requires Spec-head configurations are very close in nature, the primary difference being that the proposal put forward in this paper also allows Agree between an goal base-generated in a position than the specifier position of the probing head. Consequently, many of Koopman's arguments naturally extend to this proposal.

[31] Though, see Bošković (2007) for a criticism of expletive movement out of the associated subject.

[32] See also Stjepanovic (2003) for a series of arguments that subjects, as well as other elements, may be the spell out of a lower copy at PF.

A possible objection may come from languages where no expletive is required in constructions like (63). Spanish, as shown in (66), is an example of such a language.

(66) a. Parece haber llegado un estudiante
Seem.3SG have arrived a student
'There seems to have arrived a student'
b. Parecen haber llegado unos estudiantes
Seem.3PL have arrived some students
'There seem to have arrived some students'

However, Spanish is known to be a null-subject language without expletives in the first place. The most likely conclusion is then that Spanish behaves similar to English in this respect, except for the fact the expletive pronoun is not phonologically realized. The prediction that this conclusion makes is that all languages that allow constructions such as (66) must be null-subject languages, a prediction that to the best of my knowledge is correct.

To conclude, as long as the expletive can be argued to have originated within the associated subject, expletive constructions and constructions with postverbal subjects of unaccusatives in Romance languages do not form a proper counter argument against the idea that Agree takes place in an upward direction only.

6.2 Long-distance agreement

A problem for the proposal presented concerns long-distance agreement in Icelandic. As is shown in (67), Icelandic finite verbs may agree with lower objects carrying nominative agreement instead of with quirky subjects carrying dative case. Such examples have long formed major evidence in favour of the standard theory of Agree as these examples quite clearly seem to indicate long-distance agreement (i.e. agreement where the goal is never in a position higher than the probe).

(67) a. Jóni líkuđu Tessir sokkar — Icelandic
Jon.DAT like.PL these socks.NOM — (Bobaljik 2009)
'Jon likes these socks'
b. Mér virdast hestarnir vera seinir
Me seem.PL the.horses be slow
'It seems to me hat the horses are slow'

However, at the same time, this type of long-distance agreement is severely restricted. For instance, *Wh*-fronting the experiencer yields ungrammaticality, as Grewendorf and Kremers (2009) have shown:

(68) *Hvada manni veist thu ad virdast hestarnir vera seinir
Which man know you that seem.PL the.horses be slow
'To which man do you know that the horses seem to be slow'

This is an unexpected fact if (68) would be an instance of regular Agree and already calls for an alternative treatment.[33] However, as Koopman (2005) points out, analyses of agreement with lower nominative DPs in Icelandic in terms of long-distance agreement are actually even more flawed, since such constructions appear not to be sensitive to intervention effects.

[33] One such alternative treatment being parallel movement (cf. Chomsky 2008), but see Grewendorf & Kremers (2009) for a criticism of that.

Take (67) again. In both examples the dative must have raised from a position below T to is specifier position. This means that the underlying Agree configuration is as in (69);

(69) $[DP_{DAT}\ T\ [\sout{DP_{DAT}}\ DP_{NOM}]]$

But if (69) is indeed the underlying syntactic structure, it does not follow that T can establish an Agree relation with the nominative subject, since the dative DP must act as an intervener. One could reason, though, that the dative's φ-features do not participate in Agree relations with T, but such an account is problematic for two reasons: first datives subjects can stand in an Agree with T, albeit that the agreement on the finite verb can only be 3rd person singular (cf. Boecks 2008).

(70) a. Honum batnaði
Him.DAT recovered.3SG
'He recovered'
b. Okkur batnaði/*bötnuðum
Us.DAT recovered3.SG/recovered.1PL
'We recovered'

Second, other cases are known where the dative is able to act as an intervener, for instance in (71), taken from Holmberg & Hóarsdóttir (2004), where the dative blocks φ-Agree between T and the nominative DP:

(71) Það virðist/*virðast einhverjum manni hestarnir vera seinir
There seem.SG/seem.PL a man the.horses be slow
'It seems to some man that the horses are slow'

Koopman (2005) argues that these facts can be understood once it is assumed that dative-nominative verbs have an additional structural TP-vP layer In short, Koopman argues that since dative-nominative verbs exhibit voice agreement after the tense inflection, this voice morphology is introduced by a Voice° higher than TP. This VoiceP, in turn, must be selected by a TP>vP layer that introduces the dative experiencer. Note that if the dative orginates in the higher vP layer, it can never block φ-Agree between the lower T and DP_{nom}.

(72) TP > vP > VoiceP > TP > vP

Furthermore, Koopman (2005), partly basing herself on Sigurđsson (1996), argues that in these cases, T actually does not Agree with the subject dative, but rather with a covert expletive that bears nominative case too. She takes this to be supported by the fact that the subject-verb agreement with dative subjects is always 3rd person singular. Slightly simplifying things (for a proper assessment the reader is referred to Koopman original paper), the underlying structure of (67)b, for her, is as in (73):

(73) $[_{TP}$ Me Expl T $[_{vP}\ [_{TP}$ [The horses]$_i$ T $[_{vP}$ seem $[_{TP}\ t_i$ to be slow]]]]]

Now the underlying structure contains two finite T heads, one that establishes plural agreement with the overt nominative DP and one that agrees with the silent expletive. Then, after Schütze (2003), Koopman assumes that both T heads are 'compressed' into one finite verb establishing both singular and plural agreement, which is realized as plural agreement.

Koopman's analysis thus contains of two assumptions: the additional structure that dative-nominative verbs introduce and the assumption of a null expletive. The first assumption appears to be independently motivated to account for the non-intervention effects of dative

experiencers, the second one Koopman adopts to ensure that nominative agreement (enforced by T) always takes place under spec-head configuration with a nominative DP.

However, since under my proposal nominatives can be checked in situ against a higher T head, no such null expletives are needed. In fact, only assuming that the structure of dative-nominative verbs is as in (72), already suffices and predicts that experiencer and raising verbs agree with DP_{nom}. The underlying structure in (73) then reduces to:

(74) $[_{TP}$ Me $[_{T}$ seem$_j]$ $[_{vP}$ $[_{TP}$ [The horses]$_i$ T $[_{vP}$ t_j $[_{TP}$ t_i to be slow]]]]]

In (74), after the infinite TP has been created, the raising verb is merged, followed by T. The nominative DP has its case feature checked against T°, which carries [uφ]. Due to this [uφ]-feature, the nominative object further raises to Spec,TP, where it c-commands T. Afterwards, the second *v*P-shell is created, which attracts the raising verb and furthermore invokes movement of the dative to the specifier position of its T-head. Since the dative is only able to check 3SG φ-features, the highest head must be understood to carry [u3SG].

The central claim I would like to make here is that, once it is assumed that dative-nominative verbs introduce a second T-head of their own, long-distance agreement reduces to φ-Agree between a head and its specifier. Of course, many questions remain open, such as why dative DPs can only check 3SG φ-features or why in (71) the dative intervenes in the Agree relation between T and the nominative. Although I am not in the position here to provide any more answers to those questions, it is safe to conclude that analyses in terms of long-distance agreement face severe, if not fatal problems and that it is possible to come up with alternative analyses that are not based on downward Agree. Consequently, Icelandic long-stance agreement cannot be said to form a counterargument against upward Agree.

6.3 Object agreement and flipping Agree

In a recent paper, Béjar & Rezac (2009) argue that φ-Agree is sometimes upwards and in other cases downwards. For them, upward probing is indeed a systematic property of language, but downward probing must be possible as well. To illustrate their point, they provide the following data from Basque:

(75)	a.	Ikusi n-ind-u-en	Basque
		seen 1.X.have.PAST	
		'He saw me'	(Int. arg. controls Agree)
	b.	Ikusi n-u-en	
		seen 1.have.PAST	
		'I saw him'	(Ext. arg. controls Agree)

In Basque, generally, the internal argument controls agree on the finite verb (as in (75)a). However, in some configurations the internal argument is unable to Agree (as it lacks the relevant features; third person singular features cannot act as a goal in Basque). Then, the external argument controls agreement on the verb, as shown in (75)b. What the data in (75) show for them, then, is that in Basque the probe on v° first searches down in its c-command domain for a matching goal. Only if no matching goal is available may the Agree relation 'flip' and can the probe start to look upward to Agree with a proper goal.

However, note that this is only downward agreement if the (fairly standard) view is pertained that the uninterpretable feature is base-generated and hosted on *v*°, not on V_{fin} or any other *v*P-internal head position. This assumption has been inspired by the idea that Agree should apply in a downward fashion, but empirically nothing goes wrong if object agreement is said to be probed from a lower position inside *v*P, provided that Agree takes place in an upward fashion.

If that is indeed the case, then the agreement patterns in (75) do not raise any problem in the first place. If the underlying feature configuration is as in (76), the facts follow as well. Given (42), the probe agrees with the first higher goal, i.e. the internal argument. This then rules out agreement with the external argument. However, if that internal argument lacks the relevant features, it no longer acts as a matching goal. Then the external argument automatically becomes the goal.

(76) $EA_{[i\varphi]} > IA_{[i\varphi]} > V_{[u\varphi]}$

If the configuration in (76) is correct, on the other hand, that means the direction of Agree never has to flip. The pattern in (75) is then nothing but a relativised minimality effect *avant la lettre* (cf. Rizzi 1989).

6.4 Complementizer agreement

Another possible problem for upward Agree is complementizer agreement. Complementizer agreement is illustrated in below.[34]

(77) Ik denk de-s doow Marie ontmoet-s Limburg Dutch
I think that.2SG you Mary meets.2SG
'I think that you will meet Mary'

Complementizer agreement forms a problem for the proposal in (42), since the probe (i.e. the complementizer) appears to be in a higher position than the goal. However, this is only the case under the assumption that C's [uφ]-features originate in C°. But several scholars have argued that this is not the case and that these features (or even the complementizer itself) actually originate in T° (cf. Den Besten 1977, 1989; Zwart 1993, 1997; Hoekstra & Marantz 1989 and many others). If that is the case, then complementizer agreement no longer forms a problem for upward Agree as the relevant Agree configuration is Spec,TP > T°, with Spec,TP being the goal and T° the probe.

Van Koppen (2005, 2011) lists two possible objections against such an analysis, both consisting of examples that show that the [uφ]-features on the verb are different from those on complementizer. The relevant examples are given below.

(78) a. Ik denk de-s doow en ich Marie ôs kenn-e treffe Limburg Dutch
I think that.2SG you and I Mary meets.2SG
'I think that you and I can meet'

b. Omda-n André en Valerè tun juste underen computer kapot was West Fl.
Because.PL André and Valerè then just their computer broken was.SG
Because André and Valerè's computer broke down just then

However, it is a question whether these examples are truly problematic for complementizer agreement in terms of upward Agree. What these examples show is that two different probes carrying [uφ] are present. However, this does not entail that that T must lack the [uφ] that the verb agrees with. Koeneman & Zeijlstra (2011), following Koeneman (2000) and basing themselves partly on Bobaljik & Thrainsson (1996), claim that rich agreement languages, such as Limburg Dutch, actually may have an additional head position available in the middle field, dubbed by them ArgP and in a sense very similar to AgrSP, which they take to be responsible for

[34] All relevant data in this subsection are taken from Van Koppen (2011).

subject-verb agreement. For them, subject-verb agreement is then realized on Arg°, which must carry [uφ].

Also, for reasons discussed earlier, T° must carry [uφ] as well. Nothing demands, however, that those [uφ]-features must be identical. But, if those features may be different, then complementizer agreement may be expected to involve different φ-features than subject-verb agreement and this is exactly what is found in (78).

One may wonder, though, whether this does not overgeneralize. If complementizer agreement can be different from subject-verb agreement, would one not expect many more counterexamples than the ones in (78)? However, recall that if the [uφ]-features responsible for complementizer agreement are different from the ones that the subject agrees with, a different goal should be available. That assumably can only be the case with highly base-generated arguments such as the West Flemish external possessors, and coordinated subjects that consist of more than one interpretable [iφ]-feature set (cf. Van Craenenbroeck & Van Koppen 2002).[35]

So, the examples presented in (78) simply show that different [uφ]-probes may be active in a single clausal spine, but do not show that the highest of these probes must originate in C°. Consequently, these examples do not provide any conclusive evidence against (42).

6.5 Movement-driven agreement

The final case to be discussed here is movement-driven agreement or agreement impoverishment. This concerns cases where agreement is richer if the goal appears in a higher position than the probe, but where agreement is poorer if the goal is in a lower position. Well-known cases are Arabic subject-verb agreement, Hungarian preposition/postposition agreement and French participle agreement. I illustrate the phenomenon with Arabic subject-verb agreement.

(79) a. L-banaat-u darab-na/*-atl-?awlaad-a St. Arab[36]
The-girls-Nom hit-PAST-3Fpl/*-3Fsg the-boys-Acc
The girls hit the boys
b. Darab-at/*-na ?al-banaat-u Zayd-an
Hit-PAST-3Fsg/*-3Fpl the-girls-Nom Zayd-Acc
The girls hit Zayd

In (79)a the subject precedes the verb and the subject and the verb agree both in gender and number. In (79)b the subject appears after the verb and only gender agreement is realized. Number agreement on the verb reflects a default value.

What these data show is that the default situation is as in (80)a, where the verb, having checked its gender feature against the subject, must further raise to a higher position, e.g. T°. Now, optionally, an additional abstract probe may be included carrying [uNumber] or [uPlural]. If this probe is included, it needs to Agree with a plural D and consequently the subject must move to its specifier position. This is illustrated in (80)b and results in examples such as (79)a.

(80) a. $[V_{fin\text{-}i}\ SUBJ\ [t_i]]$
b. $[SUBJ_j\ H_{[uPLUR]}\ [V_{fin\text{-}i}\ SUBJ_j\ [t_i]]]$

The fact that all known examples result in richer agreement once the movement has taken place thus seems to call for an upward rather than downward Agree approach, for if downward Agree had been possible such additional movement could no longer be explained.[37]

[35] Possibly ethical datives may form another class of such argumental goals.
[36] Examples taken from Harbert & Bahloul 2002

6.6 Concluding remarks

What I have done in this section is show that a number of phenomena that at first sight look problematic for the hypothesis, spelled out in (42), at closer inspection actually turn out to be compatible with this view. On these grounds, I conclude that the hypothesis in (42) makes more correct predictions than previous versions of Agree.

Of course, many more examples could have been discussed, for instance DP-internal agreement, binding, and fake indexicals and many of the examples discussed by Wurmbrand (2010, 2011), but those have to be left for future research.

Another discussion I have ignored so far, is whether all cases of agreement should reflect syntactic Agree. In the literature, Ackema & Neeleman (2004), Bobaljik (2008) and many others have argued that much if not all of agreement takes place at PF rather than in syntax. I hope to have shown in this article, though, that many phenomena, especially where agreement is connected with movement, must take place in syntax.

Nevertheless, this does not mean that this proposal should reject post-syntactic agreement as proper agreement mechanism. For instance, default agreement (as in (79)b) or agreement in cases where no syntactic effect ever arises (such as subject-verb agreement in languages with poor paradigms) might still be considered to result from post-syntactic agreement mechanism.[38] Also, I do not a priori exclude cases where agreement seems to have failed (Preminger 2011). The only thought that I pursue in this article is that if syntactic Agree applies, it always does so along the lines of (42).

7. Conclusions

In this paper I argue that the standard theory of Agree faces a number of problems, such as Reverse Agree, Multiple Agree, Concord, intermediate steps in successive cyclic movement and the spurious notion of the [EPP]-feature. I first discuss two recent modifications of the theory, namely Pesetsky & Torrego (2007) and Bošković (2007) and I argue that these newer versions still face some of the problems that have been mentioned above.

In this article I propose a new version of Move and Agree that forms the mirror image of Bošković (1997) proposal. I have shown that this version can overcome the same problems that Bošković's theory overcomes, as well as the problems that previous theories have been facing.

Concretely, this new proposal states that the c-command relation between a probe and a goal is such that the goal always c-commands the probe and not the other way round. In its very essence, this boils down to the idea that Agree is always of the form [iF]>[uF](>[uF]), i.e. it is always upward Agree, and that Move is a case where a lexical item β carrying [iF] moves across an element α carrying [uF], thus deriving the former [EPP]-property.

Apart from the fact that this version of Agree solves all problems addressed above, I also demonstrate that it is not incompatible with phenomena that have long formed arguments in favour of downward Agree, such as expletive constructions, alleged long-distance agreement in Icelandic or complementizer agreement.

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[37] Note that in all cases where agreement-driven movement takes place optionally, the higher probe is only present in cases where it triggers movement, as illustrated for the Arab constructions abobe. For French participle agreement (where object agreement only takes place of the object appears before the participle), V only optionally carries a feature [uϕ], which then triggers object movement. In all other cases V lacks a feature [uϕ].

[38] For a recent approach where post-syntactic spell-out is taken to be some last resort option that may only applies if syntactic agreement is impossible, the reader is referred to Bhatt & Walkow (2011).

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