

Semantic Agreement and the Mechanism of AGREE

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Overview: Semantically motivated agreement (SA) differs from morphologically motivated agreement (MA) in ways that are not accounted for in existing models of AGREE in the literature. Furthermore, interactions between the two processes suggest that they are part of the same operation, rather than two distinct operations: for nouns that control both SA and MA, in sentences with two targets of agreement, it is often the case that mismatches between the targets are allowed, but only in one way, in a manner reminiscent of Corbett's (1979) Agreement Hierarchy. In this paper we provide a new formulation of AGREE that is able to capture the differences between SA and MA, as well as deriving which mismatches are allowed and which are not.

SA versus MA: Certain 'hybrid' nouns allow for variable agreement options, which target either the morphological shape of the noun, or the semantic interpretation (if different). For instance, British varieties of English allow for morphologically singular collective nouns to control either singular or plural agreement:

- (1) The committee **is/are** making the decision right now.

Though there is often free variation, SA and MA are not completely interchangeable for speakers who allow both. In British English, plural agreement with collective nouns (=SA) is only allowed in a subset of environments that singular agreement is (=MA). The relevant generalisation that covers the differences is that SA is possible only when the controller or agreement c-commands the target of agreement *at the level of LF* (Smith 2013, 2015). In other words, *SA is only licensed in a Reverse Agree configuration* (see Wurmbrand 2011, Zeijlstra 2012 on Reverse Agree), whilst any local c-command relationship suffices for MA (Smith 2015). A CNP that controls plural agreement thus cannot reconstruct for scope, nor can it control plural agreement in existential constructions (Elbourne 1999).

- (2) a. A northern team **is** likely to be in the final. $\exists \gg \text{likely} / \text{likely} \gg \exists$
b. A northern team **are** likely to be in the final. $\exists \gg \text{likely} / * \text{likely} \gg \exists$
(3) *There **are** a committee making the decision.

SA and MA interact: When 'hybrid' nouns like CNPs control agreement on two separate targets in a sentence, though there are 4 logically available configurations (i) matching SA on targets 1 and 2, (ii) matching MA on targets 1 and 2, (iii) SA on target 1, MA on target 2, (iv) MA on target 1, SA on target 2, it is often the case that only 3 configurations are grammatical, with one mismatch sentence allowed, but the other sharply ungrammatical. Consider British English:

- (4) a. The government **has** offered **themselves** up for criticism.
b. *The government **have** offered **itself** up for criticism.

This is also seen in Hebrew, where the noun *be'alim* 'owner' is always morphologically plural but allows for singular agreement when the referent is a single owner (Landau to appear, only mismatches are shown, matching SA and MA are grammatical):

- (5) a. ? ha-beal-im **ha-kodm-im maxar** et ha-makom lifney šana
the-owner-PL the-previous-PL sold.3.SG ACC the-place before year
'The previous owner sold the place a year ago.'
b. *ha-beal-im **ha-kodem maxru** et ha-makom lifney šana
the-owner-PL the-previous.SG sold.3.PL ACC the-place before year
INTENDED: 'The previous owner(s) sold the place a year ago.'

A revised model of AGREE: In order to capture the differences between SA and MA, we propose that AGREE is a two step process of AGREE-LINK and AGREE-COPY (Benmamoun et al. 2009, Arregi & Nevins 2012, Bhatt & Walkow 2013). Building on these, we propose the following two-step model of AGREE:

- (6) Agreement by Probe Γ with Goal γ proceeds in two steps:
a. AGREE-LINK: a Γ has unvalued ϕ -features that trigger Agree with γ (possibly more than one). The result is a link between Γ and the ϕ -features of the γ .

- b. AGREE-COPY: the values of the ϕ -features of γ are copied onto Γ linked to it by AGREE-LINK.
 - i. if AGREE-COPY happens at transfer, this requires that γ c-command the Γ .

Following Smith (2015), we assume that ϕ -features are formed of two halves, a uF that is legible to the morphological component and an iF that is legible to the semantic component. Hybrid nouns arise through a divergence of values on the uF and iF of a feature (the number feature on CNPs in British English is [$uF:sg, iF:pl$]). The two feature-halves are both present in the syntax, before being separated at the point of transfer to the LF and PF components. This version of AGREE captures the fact that SA is possible only in a Reverse Agree configuration; since iFs are only present in narrow syntax and LF, and AGREE is an operation distributed over the narrow syntax and PF, then at the latest, iFs will only be able to be targeted at the point of transfer. SA is therefore no different to syntactic processes utilising AGREE that have motivated Reverse Agree models of AGREE (Zeijlstra 2012, Wurmbrand 2011, Zeijlstra & Bjorkman 2015). However, since AGREE-COPY also occurs post-syntactically, though only on morphological uFs , a distinction remains between processes that target the uF and the iF , and MA is able to look downwards (Baker 2008, Preminger 2015).

Constraining mismatches: The contrast in mismatches is captured through the timing of AGREE. MA (agreement targeting the uF) appears to be the default choice for languages, with SA happening additionally to MA. Thus, we propose that for SA to be possible, a language must choose to make iFs *active* for agreement, in which case they are able to factor into agreement. We assume that AGREE-LINK cannot ignore an active iF in favour of a corresponding uF : an active iF will bleed MA. Furthermore, we propose that when AGREE-LINK targets an iF this can optionally result in the deactivation of the iF , at which point AGREE-LINK is able to target the uF value of the feature. Crucially, we assume that AGREE-LINK takes place iteratively at the first derivational point that target and controller are in the derivation. Mismatches arise when an iF is deactivated by the first instance of agreement.

British English: Since anaphors canonically merge in an object position, they merge into the structure before T (due to lack of data, we ignore languages which allow for anaphors in subject position). Thus, the anaphor in (4) undergoes AGREE-LINK with the subject when only vP is built. If the iF on the controller is active, the anaphor will receive plural agreement when AGREE-COPY applies. If the AGREE-LINK between anaphor and subject deactivates the iF , then the only option for T is to undergo AGREE-LINK (and AGREE-COPY) with the uF of the controller. Since iFs cannot be ignored if active, there is no possibility that the anaphor undergoes AGREE-LINK with the uF of the controller, and T undergoes AGREE-LINK with the iF .

Hebrew: The contrast between mismatches in BrE is derived through the fact that the anaphor in object position merges before T, and the iF on the controller is deactivated before T undergoes AGREE-LINK. We extend this logic to the Hebrew data in (5), by assuming that adjectives undergo AGREE-LINK after T. We propose that this derives from the proposal of Stepanov (2001) that adjuncts necessarily merge counter-cyclically into the derivation. Thus, the adjective in (5a) merges after T has undergone AGREE-LINK and deactivates the iF on the controller. Again, since T undergoes AGREE-LINK before the adjective, there is no possibility that T can agree with the uF and the adjective the iF .

Mismatches between the same type of elements Finally, we show that the current theory also accounts for mismatches among multiple attributives, as seen in Chichewa, where the gender class feature of *ngwazi* is [$uF:9, iF:1$] (we also discuss Hebrew in the talk, which is a point of cross-linguistic variation with Chichewa):

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| (7) ngwazi y-athu w-oyamba
hero 9-our 1-first
‘Our first hero.’ | (8) *ngwazi w-athu y-oyamba
hero 1-our 9-first
INTENDED: ‘Our first hero.’ |
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Though they are both treated as adjuncts, we show that the ordinal numeral in Chichewa merges before the adjective, and hence undergoes AGREE-LINK first, with the possibility of deactivating the iF before the adjective undergoes agreement.

Conclusion: By taking into account SA, largely ignored in Minimalist syntax, we obtain a more complete picture into the nature of AGREE. This model captures the structural differences between SA and MA, adding further support to recent proposal that splits AGREE into two distinct steps. Furthermore, we show that it also extends to capture possible and impossible patterns in agreement mismatches.