When Can You Agree with a Closest Conjunct?

Martin Walkow
University of California at Los Angeles

1. AGREE and Agreement

Agreement, the morphological covariation between a head and the person/number/gender-features (ϕ-features) of a phrase, has recently been the basis of arguments about the relation between syntax and post-syntactic/PF processes. Chomsky (2000, 2001) proposes that agreement is the result of the operation AGREE.[1] His proposal locates both the choice of which phrase a head can agree with and the transfer of ϕ-values between the two in the syntax. The only role of post-syntactic processes is to insert morphological exponents for the ϕ-features on the head. Several proposals have emerged that redraw the line between syntax and post-syntax in agreement. Bobaljik (2008) proposes that both the choice of the phrase to be agreed with and consequently the transfer of ϕ-values from the phrase to the head happen post-syntactically. van Craenenbroeck & van Koppen (2002) and van Koppen (2005, 2008) make the more limited proposal that AGREE determines possible phrases to agree with, but that the transfer to values is post-syntactic. Recently, data from agreement with conjoined arguments have been used in this debate to both defend a purely syntactic analysis (Bošković, 2009) and to promote a division between syntactic and post-syntactic effects on agreement (van Koppen, 2005, 2008; Benmamoun et al., 2009; Walkow, 2012; Bhatt & Walkow, t.a.). This paper contributes to this debate by showing that common restrictions on agreement with conjunctions can be understood in a system that is allows limited post-syntactic influence on on the result of AGREE.

In agreement with a conjoined argument, languages typically use one of two options: (i) *Resolved agreement*, where the morphological form of the agreeing head varies as a function of the combined ϕ-properties of the conjuncts (sans-serif in the examples below), or (ii) *Conjunct Agreement* (CA), where the morphological form of an agreeing head varies as a function of the ϕ-properties of one conjunct (underlined in the examples below). Both possibilities are illustrated in example (1) for complementizer agreement in Bavarian. The complementizer *daß* can either show CA in second person singular with the first conjunct, or resolved agreement with the whole conjunction in second person plural.

(1) *Resolved and first conjunct agreement in Bavarian:*
 … *daß*{-*st* / -*ts* } [*du*   *und d'Maria*]₂ₚₗ *an Hauptpreis gwunna hab-ds*
   that{-2SG/ -2PL} you.SG and the Maria   the first prize   won   have-2PL

 '…that Maria and you have won the first prize'   (van Koppen, 2008:134)

First conjunct agreement (FCA) as in (1) has been analyzed as a purely syntactic fact. Conjunctions are hierarchically organized such that the first conjunct c-commands the following ones (e.g. Munn, 1993; Kayne, 1994). If so, the accessibility of the first conjunct rather than the last one reduces to syntactic locality. Benmamoun et al. (2009), Walkow (2012) and Bhatt & Walkow (t.a.), however, have argued recently that there are bona fide effects of linear proximity in agreement. Benmamoun et al. (2009) discuss *last conjunct agreement* (LCA) in Hindi-Urdu, (2a), and Tsez. LCA in these languages cannot be explained by reference to the internal structure of conjunction, they show, because structural

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[1]I will use 'agree/agreement' when referring to the empirical phenomenon of morphological covariation and AGREE when referring to the syntactic operation.

tests reveal conjunction in these languages to have the same structure as in English. In addition, CA in Hindi-Urdu and Tsez alternates between FCA and LCA as a function of word order. In Hindi-Urdu for example, LCA with objects arises in O-V-orders, (2a), while FCA arises in V-O-orders, (2b).

(2) *Closest conjunct agreement with objects in Hindi-Urdu:*

    a.   *Ram-ne*   [*kai*   *thaile*   *aur*   *ek*   *peṭii*   ]   (*aaj*)   *uṭhaa*{-*yii*   / ??-*ye*   }
        Ram-ERG   many   bags.M   and   a   box.F   (today)   lift{-PFV.F.SG/   -PFV.M.PL}

        'Ram lifted many bags and a box today.'   (Bhatt & Walkow, t.a.)

    b.   *us-ne*   *kharid-ii*   [*kursii*   *aur*   *sofa*   ]
        he-ERG   buy.PERF-F.SG   chair.F.SG   and   sofa.M.SG

        'He bought the chair and the sofa'   (abbreviated from Benmamoun et al., 2009:77)

Walkow (2012) and Bhatt & Walkow (t.a.) show that this alternation cannot easily be reduced to the effect of movement, as proposed for similar data in Serbo-Croatian by Bošković (2009).

    Bhatt & Walkow additionally show that CA in Hindi-Urdu is limited to agreement with objects. Agreement with subjects is always resolved, (3).

(3) *Resolved agreement with subjects in Hindi-Urdu:*
    [*Ram*   *aur*   *Sita*   ]   *gaa*   {*rahe*   *hẼ*   /*rahii   *hai*   }
      Ram.M   and   Sita.F   sing   {PROG.M.PL   be.PRS.PL/   PROG.F   be.PRS.SG}

    'Ram and Sita are singing.'   (Bhatt & Walkow, t.a.)

The difference between agreement with subjects and objects shows that the availability of CA is tightly controlled by the grammar, and not just an effect of processing. Furthermore, the sensitivity in agreement with objects to linear proximity is also present in Right Node Raising. When a verbs undergoes Right Node Raising, it agrees with the object in the closest conjunct that it has been raised out of. Agreement with subjects in Right Node Raising on the other hand does not show closest agreement (see Walkow 2012, Bhatt & Walkow t.a. for further discussion). Agreement in right node raising shows that the sensitivity of agreement to linear proximity is not a fact about conjunctions of arguments, but a more general fact about agreement with objects in Hindi-Urdu. These facts lead Bhatt & Walkow to conclude that agreement is sensitive to linear proximity and not a structural correlate thereof. Following the idea that linear order is not present in the syntax, they argue that this shows an influence of post-syntactic phenomena on agreement. The difference between agreement with subjects and objects on the other hand shows that this influence is tightly limited.

    Within an analysis where the observed pattern of agreement is in part the effect of AGREE and in part the result of post-syntactic processes, the question arises whether common restrictions on CA are syntactic or post-syntactic. This paper discusses the restrictions imposed on CA by movement and the restriction of CA to only some agreement controllers or features in many languages. They are shown to follow from the way syntactic operations constrain post-syntactic ones. The remainder of the paper is organized as follows. Section 1.1 describes the restrictions on CA to be discussed and 1.2 the syntactic framework. Section 2 shows how different interactions of movement and CA can be derived. Section 3 shows how the need for Case restricts CA to only certain agreement relations. Section 4 concludes.

1.1. Limitations on Conjunct Agreement

    There are two common restrictions on CA: (i) It interacts with movement in various ways, and (ii) It is limited to particular agreement controllers or features. They will be discussed in turn.

    The discussion of Hindi-Urdu above showed that agreement can alternate between FCA and LCA as a function of word order. There are two other ways in which CA can interact with movement. Many languages allow FCA only when the conjunction follows the agreeing head. Aoun et al.'s (1994) well known paper documents this for varieties of Arabic, and it is also the case in Bavarian, (1) vs (4). FCA is possible when the subject follows the complementizer, (1), but not when the subject has moved to the left of the complementizer:

(4) [*Du   und d'Maria*]₂ₚₗ *glaub'e daß*{**-sd* / *-ds* } *an Hauptpreis gwunna habds*
    you.SG and the Maria   think.I that{ -2SG/ -2PL } the first prize   won   have.2PL

   You and Mary I think that have won the first prize'   (van Koppen, 2008:152)

This pattern has also been reported for C-agreement in Dutch (van Koppen, 2008) and verbal agreement in Biblical Hebrew (Doron, 2005) and Polish (Citko, 2004).

A third, rare pattern is the preservation of FCA under movement in orders where the conjunction precedes the agreeing head. This happens for example in Zulu, as shown in (5).[2]

(5) [*utshwala ne= wayin*] {*ku-* / *bu-*/ **li-*}*tholakele*   (Zulu)
    14-beer   and=5-wine   {DEF-/ 14-/ 5-}were.found

   'Beer and wine were found.'   (field notes by Alya Asarina)

The verb in (5) can show FCA in noun class 14 or default agreement, but not LCA in noun-class 5. I will call FCA that is not agreement with the closest conjunct *True-FCA*. An analysis where CA is the result of both syntactic and non-syntactic processes has to explain how movement can result in a change in CA that correlates with word order, the disappearance of CA or the appearance of True FCA.

The second set of restrictions on CA controls where it is possible (relatedly Munn, 1999; Camacho, 2003; Bhatt & Walkow, t.a.). Even within languages that do allow CA, it is often limited to certain heads, arguments or features. For example Bavarian allows CA in C-agreement as in (1), but not in T-agreement (e.g. van Koppen, 2008). This pattern holds in a number of Germanic languages (e.g. van Koppen, 2005, 2008). Hindi-Urdu does allow CA on T, but only with objects, (2) vs (3). Several Balkan languages (Serbo-Croatian: Bošković 2009, Slovenian: Marušič et al. 2007, t.a.) allow CA on T, with subjects, but only in gender, not number, (6).[3]

(6) *Juče   su uništena   [sva sela   i   svi gradovi].*   (Serbo-Croatian)
    yesterday are destroyed.PL.N all villages.N and all cities.M

   'Yesterday, all villages and all cities were destroyed.'   (Bošković, 2009)

Finally, there are languages that allow CA on T in all features. This is illustrated for person and number agreement in Modern Standard Arabic (MSA) in (7).

(7) *qaraʔ-tu ʔal-kɪta:b-a   [ʔana: wa= zumala:ʔ =i:]*   (Modern Standard Arabic)
    read-1SG DEF-book-ACC I   and=colleagues=my

   'Me and my colleagues read the book'   (Soltan, 2007:86, gloss and translation adapted)

An analysis of CA has to explain what controls within each language which heads and which features participate in CA.

1.2. The Syntax and Post-Syntax of Conjunct Agreement

The two recent analyses of CA that have clearly articulated a division between syntax and post-syntax/PF in agreement (van Koppen 2005, 2008 and Bhatt & Walkow t.a.; Walkow 2012) build on distinguishing between the two parts of the operation AGREE proposed by Chomsky (2000, 2001): MATCHING and VALUATION. MATCHING (Chomsky, 2000:122) identifies possible goals for AGREE, based c-command and whether the goals have the same type of features as the probe. VALUATION is the transfer of values from the valued member of the probe-goal dependency to the unvalued one. Chomsky derives Case assignment via ϕ-AGREE as follows. Case assigners have unvalued ϕ-features ([$u\phi$]), but valued Case-features, while subjects or objects have valued ϕ-features and unvalued Case-

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[2]I thank Alya Asarina for providing me these data.

[3]CA in gender is additionally restricted by the number and gender specifications of the conjuncts (see Marušič et al., 2007, t.a.; Bošković, 2009).

Figure 1 van Koppen (2008): Conjunct agreement in Syntax and PF, example (1).

Syntax:	PF:
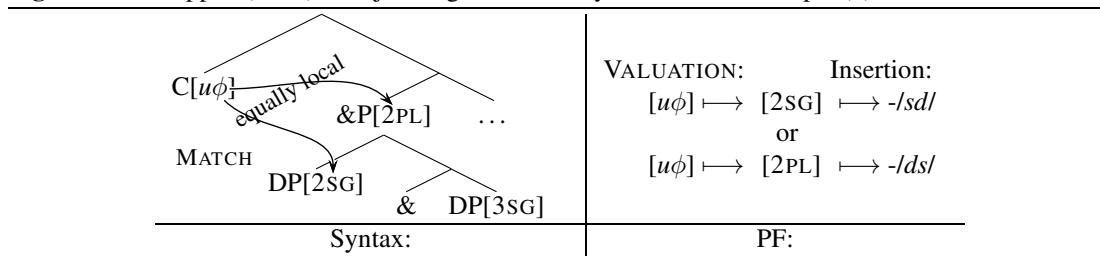
features ([*u*CASE]). MATCH establishes a relation between the valued and unvalued Case- and ϕ-features of the probe and the goal, and VALUATION will transfer the values. Probes and goals become *inactive* as the result of VALUATION, preventing them from participating in further VALUATION operations for the same feature later on.

The two proposals for CA maintain that syntactic MATCH identifies possible goals for agreement. They differ from the picture laid out above in allowing VALUATION to happen in the post-syntactic component. This is where non-syntactic factors like linear proximity enter agreement. Their respective proposals are described in turn.

Before going into details about CA, a few words about the structure of conjunction are necessary. I adopt an asymmetric structure for conjunction, where the first conjunct c-commands the second (e.g. Munn, 1993; Kayne, 1994). In addition, I assume that the maximal projection of the conjunction (&P) bears ϕ-features that are computed from the ϕ-features of the conjunct and are morphologically expressed in resolved agreement.

van Koppen (2005, 2008) analyses complementizer agreement in several Germanic languages where either resolved agreement or CA are possible as illustrated in (1). She argues that &P and the first conjunct are equally local to a c-commanding probe and accordingly can both be MATCHED. This allows an account of the two agreement options in (1) as in Figure 1. In the syntax, C bears unvalued ϕ-features. The first conjunct and &P are equally local to C. As a result C's probe can MATCH both of them. Either one of these MATCHING relations can then be used at PF to value C's [$u\phi$], and lead to the insertion of either 2SG or 2PL morphology (see van Koppen 2005, 2008 for details on how PF chooses). Languages that use this system do not have *closest* conjunct agreement, but *highest* conjunct agreement. The grammar never refers to linear proximity, and PF choses only from the the two potential goals identified by MATCH.

Walkow (2012) and Bhatt & Walkow (t.a.) analyze the difference in agreement with subjects and objects in Hindi-Urdu. T can agree with morphologically unmarked subjects or objects, but while T-agreement with subjects is resolved, T-agreement with objects is CA. They relate this difference to the activity of the goal at the time that T-AGREES with it. Bhatt (2005) argues that T-agreement plays a different role in the Case licensing of subjects and objects. Subjects receive Case from T. When T probes them they are active and both MATCHING and VALUATION can proceed in the syntax as described above (see §3 for why this leads to resolved agreement). Direct objects receive case from *v*. When T probes an object, the object's Case is already valued and its ϕ-features therefore inactive. Bhatt & Walkow attribute the absence of resolved agreement with objects to this inactivity. T's probe can MATCH the object's ϕ-features, but this does not lead to VALUATION of T's probe. In this situation, VALUATION is postponed until PF, where the MATCH-relation between T and the &P of the object is used to access features in the conjuncts. Unlike in van Koppen's proposal, however, PF does not look narrowly the nodes that have been MATCHED to find features for valuing T's [$u\phi$], but instead looks at the features of all conjuncts and choses from them based on linear proximity.

I assume that these two proposals identify two different strategies that languages use to create the surface appearance of CA. They differ on whether PF is limited to considering the nodes that have been MATCHED for VALUATION or whether PF can search inside the MATCHED &P for possible valuators. How languages chose between using either or none of the two strategies is an open question at this point that will not be addressed here. Combing the two proposals about the relation of syntax and post-syntax in CA leads to the following picture. MATCH establishes a relationship between the probe and possible

Figure 2 Movement bleeds First Conjunct Agreement.

Step 1	Step 2
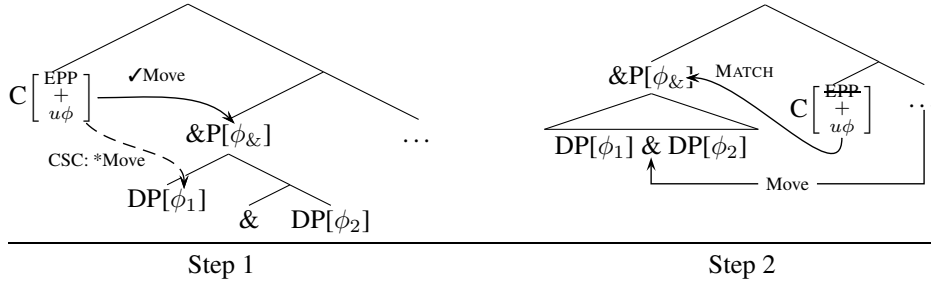
goals that could value the probe's features. Whether or not valuation happens in the syntax depends on whether the probe is active or not. CA can either arise as a function of the internal structure of conjunction, as shown by van Koppen (2005, 2008), or based on linear proximity in the post-syntax as proposed Bhatt & Walkow. The main proposal here is that the limitations on CA in Section 1.1 arise in the syntax. More specifically, the restrictions arise from the syntactic needs that probes and goals impose on the AGREE-relation between them. The interaction between movement and CA arises from restrictions imposed by the probe. When a ϕ-probe and the EPP are present on the same head restrictions on movement can impose restrictions on ϕ-Agreement (similar to Bošković, 2009). The restrictions on which heads or features show CA arise from restrictions imposed by the goal, specifically Case. The following two sections show how this type of analysis can account for the data introduced above and some apparent exceptions.
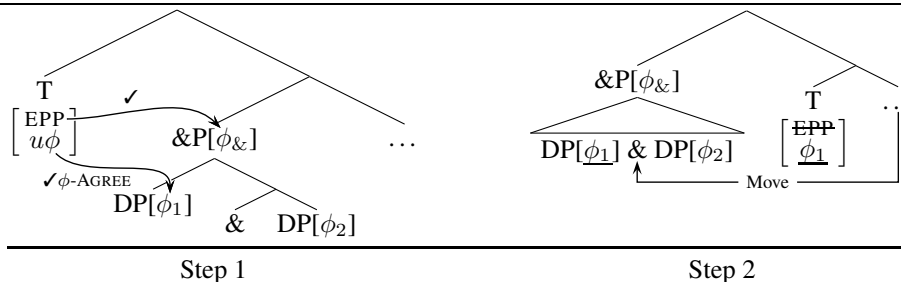
2. Movement

The need of a head to both AGREE with a phrase and move one imposes restrictions on the kind of agreement patterns for that head. Sections 2.1 and 2.2 show how the combination of EPP and a ϕ-probe on the same head leads to the disappearance of FCA as the result of movement, or to True FCA. Section 2.3 shows that the combination of the syntactic restrictions discussed in §2.1/2.2 and the post-syntactic operations discussed in §1.2 derive the cross-linguistic absence of True Last Conjunct Agreement.

2.1. Movement Bleeds First Conjunct Agreement

The interaction of movement and agreement arises when a ϕ-probe and an EPP feature are bundled on the same head. Though the first conjunct and &P are equidistant to a c-commanding probe, they are not equally available as movement targets (similarly Bošković, 2009). Extracting the first conjunct would lead to a Coordinate Structure Constraint violation. Only &P is a possible goal for both the ϕ-probe and EPP. This has the following effect on the PF-resolution of CA. In a language where conjunct agreement is resolved entirely by reference to the MATCH relations established in the syntax, only &P will be available for PF-valuation because it has been MATCHED and moved.

Figure 2 illustrates the derivation of the Bavarian example in (4), where the complementizer shows resolved agreement with a subject that has moved across it, and into the initial position of the main clause. In accordance with standard assumptions about successive cyclicity, I assume that this movement proceeds via the specifier of the downstairs CP. In the first step of the derivation, C probes while the subject is still in its complement. Both the first conjunct and &P are equidistant to the probe. The first conjunct, however, is not a possible goal for C, because extracting it would lead to a coordinate structure constraint violation. MATCHING the features of &P leads to movement, and in the post-movement structure, C's probe is only in a MATCH-dependency with &P's ϕ-features. At PF, this is the only dependency that can be used to VALUE C's [$u\phi$]-features and accordingly only resolved agreement is possible.

Modulo the category of the head, the same logic applies to other languages where movement bleeds CA. The proposal could also deliver the interaction between movement and agreement if ϕ-agreement were valued in the syntax, rather than at PF. As long as the EPP and ϕ-AGREE act as a unit, the Coordinate Structure Constraint will rule out the first conjunct as a goal, and force resolved agreement.

Figure 3 Movement derives True First Conjunct Agreement.

| Step 1 | Step 2 |

2.2. Movement Preserves Conjunct Agreement: True First Conjunct Agreement

Besides languages that show FCA-LCA-alternations, and languages where movement bleeds CA, there are languages that show True FCA, i.e. FCA with a conjunct that is not closest to the verb. This is illustrated in (5) for Zulu. True FCA arises when EPP and a ϕ-probe are present on the same head but can AGREE independently of one another.

Movement bleeds CA when EPP and a ϕ-probe act as a unit for AGREE. There are a variety of contexts though where EPP and ϕ-agreement of the same head can target different phrases. A well known example of this kind are dative-nominative constructions in Icelandic, illustrated in (8). In these constructions, T's EPP is satisfied by moving the dative subject, but ϕ-agreement, here in number, is with the nominative object (for discussion Anagnostopoulou 2003 and references therein).

(8) *Henni   leidd-**u**-st   þeir*   (Icelandic)
     she.DAT   was.bored.by-3PL they.NOM

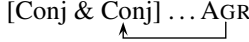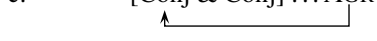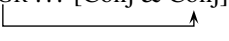   'She was bored with them'   (Taraldsen, 1995:307)

It appears then that EPP and ϕ-probes on one head can participate in AGREE either as single unit or as two independent units, possibly as a parametric option.[4] If EPP and [$u\phi$] AGREE independently of one another, the ϕ-probe can AGREE with the first conjunct while EPP moves &P without any violations of the Coordinate Structure Constraint. Under this analysis, True FCA is also the result of movement, but in a language with a different relations between ϕ-agreement and EPP.

This allows an account of True FCA in Zulu along the following lines. The subject in (5) moves to a position associated subject-verb agreement. This has independently been argued to be the case (e.g. Carstens, 2005; Baker, 2008; Halpert, 2012a,b). EPP and ϕ-agreement are dissociated, such that ϕ-agreement can express the features of something other than the element that moves to the specifier of TP. Halpert (2012a:§6) shows that this is the case. This allows the derivation in Figure 3. The ϕ-features of the first conjunct and those of &P are equidistant to T. This allows T's ϕ-probe to probe the first conjunct, while the EPP probes &P. Since the two are independent, the ϕ-probe's relation to the first conjunct does not lead to a Coordinate Structure Constraint violation. The resulting structure, illustrated in Step 2, is one where the subject has moved into the specifier of TP and T's ϕ-probe has been valued by the first conjunct which not closest to verb in the surface order.

This analysis is compatible with both valuation of agreement in the syntax and, under certain assumptions, post-syntactic valuation. Syntactic valuation is straight forward. If the goal is active at the time of agreement, the first conjunct can value agreement on T. Halpert (2012a) argues that there is a derivation where subjects are active at the time of T-agreement.[5] This pattern could arise in post-syntactic valuation as long as c-command between the probe and the goal is not required. Pesetsky & Torrego's (2004) system where MATCHING is feature identification would allow this.

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[4]Alternatively, the independence of EPP and ϕ-agreement may be the result of the two probes being located on different heads. The analysis proposed below extends to that system, if the head with the ϕ-probe is below the one with EPP.

[5]I will return to this question in the discussion of Case in §3.

	FCA:		LCA:	
Closest:	a. AGR … [Conj & Conj]	b.		[Conj & Conj] … AGR
True:	c.	[Conj & Conj] … AGR	d. *AGR … [Conj & Conj]	

Table 1: Patterns of Conjunct agreement (arrows indicate agreement).

In conclusion, True FCA is predicted to be possible when a head has EPP and a ϕ-probe that AGREE independently. Zulu shows True FCA and does indeed have the properties predicted to be necessary for this agreement pattern to emerge.

2.3. No True Last Conjunct Agreement

The distribution of CA-patterns appears to have a gap: No language has been reported to show 'True Last Conjunct Agreement,' i.e. agreement with a last conjunct that is not closest to the agreeing head. This gap follows from the combination of syntactic and post-syntactic conditions on CA proposed here.

Table 1 summarizes the four possible options for agreement with peripheral conjuncts with either a preceding or a following head. Agreement can either be FCA or LCA, and it can be closest agreement or true FCA/LCA. Three of these four options are attested. Closest FCA, Table 1a., can either be the result of post-syntactic processes as argued for Hindi-Urdu, (2b), by Bhatt & Walkow, or the effect of the syntactic prominence of the first conjunct as argued for Germanic complementizer agreement by van Koppen (2005, 2008). Within the proposal here, closest LCA, Table 1b., can only be the result of post syntactic processes. True FCA, Table 1c., arises from the combination of movement and agreement. True LCA as in Table 1d. is unattested to my knowledge and its absence is predicted by the proposal here.

The absence of True LCA is derived as follows. CA arises either syntactically or post-syntactically. The syntactic derivation of CA relies on the syntactic prominence of the first conjunct. Accordingly, syntax can only derive FCA, not LCA. Combining agreement with movement either bleeds CA, §2.1, or maintains it, §2.2, but it will not derive LCA. LCA arises via a post-syntactic process that only refers to the surface word-order and only delivers closest agreement. By definition, it cannot deliver the patterns in the bottom row of Table 1. Taken together, no combination of the syntactic or post-syntactic operations proposed here delivers True LCA.

To conclude this section, restrictions imposed by the EPP on probe-goal dependencies that lead to agreement deliver a range of attested CA-patterns: (i) the absence of CA as the result of movement (§2.1), (ii) the possibility of True FCA (§2.2) and (iii) the absence of True LCA (§2.3).

3. Case

A second set of restrictions on CA arises from the goal's needs towards the probe-goal relation, specifically the goal's need for Case. Section 1.2 discussed Bhatt & Walkow's proposal that Case assignment prior to T-agreement feeds CCA with objects in Hindi-Urdu. This section shows how the need for Case can force resolved agreement and extends the original proposal for the subject-object asymmetry in Hindi-Urdu to limitations on CA in other languages,

Section 3.1 begins by showing how the need for Case can force resolved agreement. The general proposal is as follows: If an AGREE-relation assigns Case and Case spreading from &P to the conjuncts is the way the language allows conjuncts to comply with the Case Filter, only AGREE with &P allows a convergent derivation. In a language that regulates case in conjunction like this, only AGREE dependencies that do not involve Case assignment allow CA. The proposal will be illustrated for Bavarian in Section 3.1. Section 3.2 briefly sketches how this proposal may extend to Modern Standard Arabic and Slovenian/Serbo-Croatian where T shows CA with subjects, and to languages that do not use case spreading.

3.1. CCA with C but not T in Bavarian

The central contrast to be explained in Bavarian is illustrated in (1): while C-agreement can be either resolved or CA when the subject follows the complementizer, T-agreement is always resolved (van Koppen, 2005, 2008). Similar asymmetries are found in a number of Dutch and other southern German dialects (e.g. van Koppen, 2005, 2008). This difference correlates with a difference in Case assignment: While T assigns the subject case, C does not. In the following I will first lay out the assumptions about case in conjunctions and then discuss how they rule out CA with T.

Conjunctions create a tension between Case assignment via AGREE and the Case Filter. Case is assigned to phrases via AGREE. In a conjunction of DPs, the Case assigner will AGREE with &P, the maximal projection of the conjunction or only the first conjunct, and assign it Case. The Case Filter is typically conceived of as a restriction on DPs. In a conjunction of DPs, the individual conjuncts that have to comply with the Case Filter, not &P. Many languages seem to resolve this tension by a processes of case spreading whereby the Case assigned to &P is spread to the conjuncts. If this is the right conception of the Case Filter and the role of Case spreading in allowing compliance with it, we arrive at an explanation for why Case assigners like T only show resolved agreement with the arguments they assign case to. The conjuncts can comply with the Case Filter only if Case is assigned to &P and can spread from there to all conjuncts.

The difference between T- and C-agreement in Bavarian can then be attributed to the different role of Case. T assigns subjects Case, hence agreement can only be resolved. C does not assign Case and AGREES with an inactive goal. Valuation is delayed until PF and in the absence of movement will allow either resolved agreement or FCA. The difference between T- and C-agreement in Bavarian is essentially the same as that between T-agreement with subjects and objects in Hindi-Urdu.

3.2. Conjunct Agreement with T

The previous section established a connection between Case assignment, case spreading and the availability of CA. This section sketches two types of systematic exceptions to that pattern: (i) languages where T shows CA, and (ii) languages that do not use case spreading to allow conjuncts to comply with the Case Filter. The two will be discussed in turn.

I begin by discussing languages where T shows CA. The prediction about the relation between Case assignment and CA can be stated in a more general way: If a language uses case spreading to comply with the case filter, a probe that assigns Case shows resolved agreement. The first kind of exception are situations where a probe that can assign Case AGREES with a goal that has already been assigned Case. This is the situation described for Hindi-Urdu by Bhatt & Walkow, where T shows CA with objects but not subjects. A similar pattern of CA on T being fed by previous Case assignment may underly CA in Modern Standard Arabic. MSA has a multiple nominative constructions (Doron & Heycock, 1999) and compound tense/aspectual verb constructions where multiple verbs appear with full ϕ-morphology. Fassi Fehri (2003) argues that in these constructions the highest verb raises to T. Example (9) shows a structure with both multiple nominatives, *hæːʃɪmun*, 'Hashim,' and *ʔasːɪnːu*, 'years,' and multiple agreeing verbs, *ðˤalːa* 'keep,' and *taqadːamu*, 'progress.'

(9)   *ðˤalː.*{-*at*   / -*a*   }   *hæːʃɪm-un$_i$*   *ta-taqadːamu*   *bɪ =hɪ$_i$*   *ʔasːɪnː-u*   (MSA)
        kept{-3SG.F/ -3SG.M}   Hashim-NOM   3F-progress   on=him   DEF.years.F-NOM
      'Hashim was growing old' literally: 'Hashim, the years keep progressing on him'

(Cantarino, 1975:265)

The verb in T, *ðˤalː-*, can agree with either of the two nominatives. Feminine singular agreement with the lower nominative *ʔasːɪnːu* shows that the case of the higher nominative, *hæːʃɪmun*, is licensed independent of T-agreement (as argued by Doron & Heycock, 1999). Masculine singular agreement with the higher nominative *hæːʃɪmun* shows that T can agree with a nominative that does not receive case from it. This suggests that nominative in MSA can be licensed by means other than T-agreement, thus allowing T to show CA. In both MSA and Hindi-Urdu CA is fed by Case assignment prior to T-agreement. The languages differ on which kinds of arguments can receive Case independent of T-agreement.

A third variant of this configuration might be what is observed in Slovenian (Marušič et al., 2007,

t.a.) and Serbo-Croatian (Bošković, 2009). T-agreement in these languages is resolved for number but can be CA in gender (for details see cited works). Within the proposal here, this split between number and gender agreement would be taken to indicate a different role of the two features in Case assignment: Case is assigned by number agreement alone. If gender agreement is independent of Case assignment, it will not be constrained by the needs of the goal, and only be subject to constraints imposed by movement (as argued by Bošković, 2009). This requires a certain independence of the number and gender parts of the probe. Some such independence is also assumed by Marušič et al. (2007) and Bošković (2009), and it is independently a point of variation in CA patterns as proposed in Section 2. Like in Hindi-Urdu and MSA, the possibility of CA is fed by another AGREE-dependency satisfying the goal's need for Case. What is new is that the two features involved sit on the same head.

Most generally put, a feature can show CA with some goal if no restrictions are imposed on the AGREE-relation by the goal. This section looked at contexts where the relevant need of the goal is Case and showed that such an interpretation is consistent with facts in MSA and offers a possible line of analysis for the more complicated patterns of CA in Slovenian and Serbo-Croatian.

I now turn briefly to languages without case spreading. The proposal that Case constrains the availability of CA started from the assumption that Case spreading is the mechanism that the languages under discussion use to allow conjuncts to comply with the Case Filter. It is well known, however, that not all languages have Case spreading (e.g. Johannessen, 1998; Schütze, 2001). This is illustrated in (10) for Irish, where according to McCloskey (1986) only the first conjunct appears in nominative case, while non-initial conjuncts appear in accusative.

(10) *Chuaigh* [***se**-isean*   *agus **e**-isean*   ] *'na bhaile*   (Modern Irish)
     went   3SG.NOM-CONTR and   3SG.ACC-CONTR home

     'He and he went home'   (McCloskey, 1986:265)

Such languages have other ways to allow non-initial conjuncts to comply with the Case Filter (for discussion Schütze, 2001).

I leave a thorough exploration of such languages for future work. The proposal here makes the following prediction though: If a language has other ways of allowing non-initial conjuncts to comply with the Case Filter, Case imposes less of a restriction on possible AGREE relations and CA is expected to be more widely available. This expectation is bourn out in Modern Irish, where CA is indeed found (McCloskey, 1986).

4. Conclusions

Restrictions on CA arise from the needs of either the probe or the goal towards the AGREE-relation between them. Section 2 showed how the combination of EPP and a ϕ-probe on the same head lead to the absence of CA as the result of movement or to True FCA, depending on whether EPP and ϕ-probe can act independently of one another. The combination of the syntactic and post-syntactic processes proposed here and in previous work furthermore derives the absence of True LCA. Section 3 showed how the need of the goal for Case imposes further restrictions on CA. The need for Case was shown to derive the difference between T- and C-agreement in Bavarian, and extensions of the proposal to other languages where sketched. The picture of CA that emerges from these restrictions is that it often arises when ϕ-AGREE is not part of a dependency that serves some other purpose like movement or Case assignment. Put differently, the post-syntactic effect on the morphological realization of AGREE-dependencies revealed by CA patterns is limited to contexts where syntax underdetermines what the goal of an AGREE-relation is. This echoes the conclusion of Bhatt & Walkow (t.a.) and Walkow (2012) that the influence of post-syntactic processes in CA is tightly constrained by the syntax.

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