Agreement Strategies with Conjoined Subjects in Croatian[*]

Steven Franks[1] and Jana Willer-Gold[2]

[1] Indiana University, Bloomington, [2] University of Zagreb

1. Introduction

This paper is a contribution to the burgeoning literature on the mechanics of predicate agreement with conjoined subjects in Slavic. Given that a single conjunct sometimes allows for multiple agreement possibilities, with preferences varying across speakers and languages, we question the viability of a unified analysis and explore the factors motivating the various options in Croatian (Cr).[1] To that end, we analyze the agreement possibilities in Cr based on such data as in (1) and (2). In (1) neither conjunct is plural, hence the verb presumably agrees with the entire conjunct, labelled "&P." In (2), on the other hand, we see apparent instances of Closest Conjunct Agreement (CCA): (2a) has SV order and the verb agrees with the closest conjunct, whereas (2b) has VS order and the verb again agrees with the closest conjunct. While both demonstrate CCA, (2a) can be described as exemplifying Last Conjunct Agreement (LCA) and (2b) as First Conjunct Agreement (FCA).

(1) Žena   i   djevojka   su   stigle   prve.   *&P agreement*
    woman$_{F.SG}$ and   girl$_{F.SG}$ aux$_{PL}$ arrived$_{F.PL}$ first$_{F.PL}$
    'The woman and the girl arrived first'.

(2a) Gradovi   i   sela   su   opustošena.   *Closest conjunct agreement*
     towns$_{M.PL}$ and   villages$_{N.PL}$ aux$_{PL}$ devastated$_{N.PL}$
     'The towns and the villages are devastated'.

(2b) Opustošena   su   sela   i   gradovi.   *Closest conjunct agreement*
     devastated$_{N.PL}$ aux$_{PL}$ villages$_{N.PL}$ and towns$_{M.PL}$
     'The villages and the towns are devastated'.

[1] In this paper we will be referring specifically to Cr data, although there may well be significant differences between this language and Serbian or Bosnian worth exploring (beyond the variation in judgments among Cr speakers).

In what follows, we argue that the various agreement possibilities emerge through the interaction of three competing factors, propose a novel mechanism to handle conjoined subject agreement strategies, and offer a unified account of gender calculation under CCA. Section 2 provides some formal background and briefly describes existing approaches to conjoined subject agreement. Section 3 offers a systematic overview of the Cr data. Section 4 then presents our approach to agreement with conjoined subjects. Section 5 is a short summary of our conclusions.

2. Approaches to Conjoined Subject Agreement in South Slavic

The present study has been inspired by two important papers. Bošković (2009) considers data such as in (1) and (2) to provide a unified account of FCA and LCA, while Marušič et al. (in press) present an account of the Slovenian (Slvn) pattern which, in addition to CCA, allows for Long Distance Agreement (LDA) under SV order, i.e., "distant" FCA. Interestingly, both argue for a complex mechanism requiring extra principles for deriving CCA under SV order. This complexity is due to the assumption that &P computes its own number but not gender. We believe that any account which seeks unification of the various agreement patterns should resolve the issue of gender computing mechanics more efficiently, hence argue instead for a unified mechanics of gender calculation based on the structure of conjoined subjects.

    We start by comparing the standard X-bar compatible structure for coordination in (3a), "&" heads a Boolean phrase, with a flattened "structure" as in (3b).

(3a) $[_{\&P} NP_1 [_{\&'} \text{ and } NP_2]]$ *First pass at structures*
(3b) $[_{\&P} NP_1 \text{ and } NP_2]$

Although we will eventually revise both (3a) and (3b), let us first consider predicted agreement patterns assuming (3). Under SV order, one might expect (3b) to lead to agreement in φ-features between the participle and linearly closest NP_2, as in CCA (2a), whereas (3a) should lead to LDA, with the conjunct controlling agreement being the hierarchically closest NP_1. Under VS order, as in (2b), NP_1 is closest both hierarchically and linearly, whereas NP_2 is neither. This interplay between two types of proximity – one hierarchical and the other linear – is one of the main factors contributing to the complexity of agreement mechanisms and the messiness of agreement data. Turning to agreement with &P, whether the subject precedes or follows the verb should make no difference but the result should depend on how &P derives its features, presumably through some computation of the φ-features of the conjuncts.

With respect to the two structures in (3), in addition to the problem of how proximity is determined, the issue of the relationship between (3a) and (3b) is a second potentially confounding factor. It raises several important questions, such as whether they freely compete (or one somehow trumps the other, perhaps depending on context, interpretation, or language), whether one is derived from the other, and which (if any) φ-features &P in (3a) versus (3b) can bear and how these are computed. Marušič et al. (2007) account for agreement with the conjunct that is linearly closest to the verb under SV order by arguing for an operation of post-syntactic flattening which converts (3a) into (3b). If flattening applies before agreement, it facilitates CCA under linear proximity, and allows (3b) to have an effect on multiple agreement possibilities across speakers and languages.[2]

Bošković (2009) and Marušič et al. (in press) assume that the coordinated phrase only computes its *number* feature value based on the conjuncts. Hence, a third important factor contributing to the complexity of agreement mechanisms is the determination of *gender* features. We contend that &P bears all relevant φ-features and that gender valuation on &P is obtained either through a feature resolution mechanism based on the actual conjuncts or through default (masculine) gender insertion, in a way such that the gender feature value is assigned to the controller/goal rather than directly to the target/probe.[3] For them, however, under CCA the probe is argued to operate independently with respect to number and gender, as valuing *gender* on the target assumes probing twice inside &P (Bošković's "Secondary Agree") and/or probing different goals for number and gender (Marušič et al.'s "Split-Probe" or "No-Default"). Under both mechanisms, the probe searches for matching number features, and finds its number feature on &P and its gender feature on NP_1 or NP_2. These "secondary" and "split" agreement mechanisms imply that conjunct sensitive agreement should not exist, and they do not countenance agreement of the target with a unique controller – &P or $NP_{1/2}$ – with a full set of valued φ-features, i.e., number and gender.

To exemplify these issues we provide additional Cr data. (4) demonstrates the lack of distant FCA in Cr: agreement with the hierarchically closest conjunct NP_1

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2 Instead of flattening, Bošković employs Secondary-Agree. This involves an elaborate supplementary feature valuation system triggered by the ambiguity of valuators associated with pied-piping. For reasons of space, we do not recount the details of his system here.

3 We use the traditional terms "target/controller" (cf. Corbett 2006) alongside the less perspicuous minimalist terms "probe /goal," noting that the two metaphors imply opposite directionality.

is never available under SV order in Cr.[4] This contrasts with Marušič et al.'s Slvn example in (5):

(4) Rijeke   i   sela   su   zagađeni/a/*e.   *NP$_1$ [=distant FCA]
    river$_{F.PL}$ and   village$_{N.PL}$ aux$_{PL}$ polluted$_{M.PL/N.PL/*F.PL}$
    'The rivers and the villages are polluted'.

(5) Radirke   in   peresa   so   se prodajali/a/e   najbolje.   √NP$_1$[=distant FCA]
    eraser$_{F.PL}$ and   pen$_{N.PL}$ aux$_{PL}$ refl sold$_{M.PL/N.PL/F.PL}$ best
    'The erasers and the pens sold the best'.

The three options in Slvn (5) reflect agreement with &P (supplied with default masculine), agreement with linearly closest NP$_2$ (neuter *peresa* 'pens') or agreement with hierarchically closest NP$_1$ (feminine *radirke* 'erasers'). As discussed below, this last option for agreement with a coordinated subject is not only absent in Cr but extremely rare in all languages.

Consider next the data in (6):

(6a) Selo   i   rijeka   su   zagađeni/*e/*a   √&P-default
     village$_{N.SG}$ and   river$_{F.SG}$ aux$_{PL}$ polluted$_{M.PL/*F.PL/*N.PL}$

(6b) Zagađeni/*e/*a   su   selo   i   rijeka.   √&P-default
     polluted$_{M.PL/*F.PL/*N.PL}$ aux$_{PL}$ village$_{N.SG}$ and   river$_{F.SG}$
     'The village and the river are polluted'.

The combination of neuter and feminine singular conjuncts in (6) is problematic for Split-Probe approaches to conjunct sensitive agreement, since neither neuter nor feminine from one of the conjuncts can ever be combined with the plural of &P.[5] Instead, they require agreement of the target with a unique controller (&P or NP$_{1/2}$) that bears a full set of valued φ-features. The only alternatives are thus default masculine, as indicated, or CCA (not shown). We approach this agreement pattern in terms of the three factors contributing to the multiple agreement possibilities. In accounting for the coexistence of &P and CCA in Cr, we argue for probing a single controller with a full set of valued φ-features (instead of

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4   The alternative LDA possibility of distant LCA does not exist either:
    (i) *Zagađena   su   rijeke   i   sela.   *LDA [=distant LCA]
        polluted$_{*N.PL}$ aux$_{PL}$ river$_{F.PL}$ and   village$_{N.PL}$
        'The rivers and the villages are polluted'.
    This is predicted to be unavailable since, with VS order, NP$_2$ does not meet either definition of proximity—it is neither hierarchically nor linearly closest to the verb. This is of course also true of Slvn. Indeed, no language has LDA under VS order, hence we disregard this possibility throughout the paper.

5   Bošković's (16a, b) similarly show that CCA in gender cannot combine with &P agreement in number. Marušič et al. also cite relevant Slvn examples.

a multiple probe system) and suggest an approach to proximity that does not require flattening.

In its details, our approach to agreement with conjoined subjects is then distinguished from others in maintaining that: (i) there is no such thing as "split" agreement; (ii) &P has gender (and not just number) features (computed &P internally, either as default masculine or through a mechanism of percolation/unification); (iii) default (masculine) gender features are assigned to &P (a controller) rather than the verb (a target); and (iv) there is no need to "flatten" coordinated structures post-syntactically to obtain (linearly) closest conjunct agreement.

The existence of the &P versus CCA asymmetry observed for Cr is derived through the availability of flat (3b) alongside binary branching (3a): a binary structure underlies &P agreement and a flat, purely linear organization of conjuncts underlies CCA. With gender (and not just number) computed on &P, the target agrees with a unique controller valued for a full set of φ-features. As a result, a unified account of proximity is possible without the need to resort to splitting agreement or flattening binary structures.

3. Conjoined subject agreement in Croatian

Compared to Slvn, which as seen above allows LDA (i.e., distant FCA), Cr presents a more constrained paradigm of agreement with conjoined subjects: it exhibits &P and CCA, but not LDA. In this section, we show that this pattern follows from the two competing structures in (3).

3.1. No LDA and linear proximity

Although, as Corbett (2006) observes, the possibility of distant FCA is typologically very rare, Marušič et al. (in press) demonstrate that it clearly exists in Slvn. Its rare appearance should be derivable from general proximity constraints on agreement, taking the active goal/controller to be the one *closest* to the probe/target. With SV order, LDA might be expected to be possible if, as Marušič et al. argue, NP_1 in structure (3a) is hierarchically the closest controller. But, unlike its Slvn counterpart in (5), Cr (4) is unacceptable: agreement is not possible between feminine plural NP_1 and the participle. With respect to CCA, on the other hand, the examples in (2) show that the conjunct which is linearly closest to the participle can control agreement regardless of word order.[6] Importantly,

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6   The CCA facts hold as well for masculine/neuter combinations; cf. Bošković's examples (14) and (19):

we see from the SV data that in Cr the linearly closest controller, NP_2, overrules the one which is presumably hierarchically closest one, NP_1.

There are several ways one might interpret this difference between Slvn and Cr, where linear order appears in Cr to trump hierarchical structure in determining agreement. It could mean, if (3a) and (3b) compete, that Cr simply prefers (3b). Alternatively, assuming a flattening operation as in Marušič et al. (2007), it could mean flattening is obligatory in Cr but only optional in Slvn, although it would still be necessary to block agreement with NP_1 before flattening and some mechanism to endow &P with computed (i.e., non-default) gender would be required.[7] Another possibility worth exploring is that in structure (3a), $[_{\&P} NP_1$ $[_\& [$and $NP_2]]$, although &P is always hierarchically closest to V, its properties differ in Slvn and Cr. Specifically, in Cr &P must calculate gender but in Slvn it can lack gender, which means the default masculine rule is optional, and when this happens the next closest goal is accessed, so the controller becomes NP_1. Note that this scenario crucially relies on our assumption that all gender and number features must be accessed on a unique controller, in that &P is overlooked precisely because it is defective. Finally, one could argue that Cr and Slvn actually involve different coordination structures, such that (3a), which renders NP_1 accessible to the target/probe, is only available in Slvn (and the Cr one would be as in (16) below).

3.2. CCA and no split agreement

CCA is widely attested cross-linguistically. However, it is not easy to come up with a uniform account of CCA. One main puzzle is finding a straightforward approach to gender feature valuation that would account for the data in (2) and also be compatible with general conditions on agreement and structure.

(i) a. Jedan   grad   i   sva   sela   su   jučer   uništena.
         one   town$_{M.SG}$ and   every village$_{N.PL}$ aux$_{PL}$ yesterday destroyed$_{N.PL}$
         'One town and every village were destroyed yesterday'.

   b. Svi   gradovi   i   jedno selo   je   jučer   uništeno.
       every town$_{M.PL}$ and   one   village$_{N.SG}$ aux$_{SG}$ yesterday destroyed$_{N.SG}$
       'Every town and one village were destroyed yesterday.'

   c. Jučer   je   uništeno   jedno   selo   i   svi   gradovi.
       yesterday aux$_{SG}$ destroyed$_{N.SG}$ one   village$_{N.SG}$ and   every   town$_{M.PL}$
       'There was destroyed yesterday one village and every town'.

7   Depending on whether the controlling &P is the one in (3a) before flattening or (3b) after it, different assumptions about the timing of agreement and the competition between NP_1 and &P as structurally highest would be needed.

Split approaches are based on the assumption that &P has no gender features. However, as seen in Section 2, they call for the introduction of various complex probe and agreement mechanisms. The data in (2) confirm that in CCA the participle's gender feature matches that of the closest conjunct: in both, the participle appears in the neuter gender of its linearly closest potential controller. Considering solely plural conjunct data, it is hard to disprove the contention that the target can independently derive its gender and number from distinct controllers.[8] To see that this is incorrect and to demonstrate that the target derives its full set of φ-features from a single controller, it is necessary to consider singular and mixed number data as in (7) and (8), respectively:

(7a) Zagađeni/*e/*a   su   rijeka   i   selo.   √&P-default
      polluted$_{M.PL/*F.PL/*N.PL}$ aux$_{PL}$ river$_{F.SG}$ and   village$_{N.SG}$
      'The river and the village are polluted.'

(7b) Selo   i   rijeka   su   zagađeni/*e/*a.   √&P-default
      village$_{N.SG}$ and   river$_{F.SG}$ aux$_{PL}$ polluted$_{M.PL/*F.PL/*N.PL}$
      'The village and the river are polluted.'

(8)   Rijeke   i   selo   su   zagađeni/*a/*e.   √&P-default
      river$_{F.PL}$ and   village$_{N.SG}$ aux$_{PL}$ polluted$_{M.PL/*N.PL/*F.PL}$
      'The rivers and the village are polluted.'

Split agreement under VS order in (7a), in which the feminine gender feature ostensibly comes from one controller, NP$_1$ *rijeka* 'river', and the plural number feature ostensibly from another, &P, is ungrammatical. The same is true of SV order in (7b), where gender agreement cannot be feminine, as would be expected if the participle could split its agreement between linearly closest controller NP$_2$ *rijeka* and plural controller &P. Instead, the gender conflict is resolved by resorting to default *masculine* agreement. The problem of conjoining feminine plural *rijeke* 'rivers' and neuter singular *selo* 'village' in (8) is similarly resolved by resorting to default *masculine* agreement, visible on the participle. So here too there is a unique controller, &P, which must therefore be *both* plural *and* masculine. Clearly, then, &P must be able to bear gender features.

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8   Similarly with Slvn, where data involving the dual can be invoked:
     (i) a. Prišli/*Prišle   so   (dve)   sestri   in   brat.
            arrived$_{M.PL/*F.PL}$ aux$_{PL}$ two   sisters   and   brother
         b. Prišli   sta   (dve)   sestri   in   brat.
            arrived$_{F.DU}$ aux$_{DU}$ two   sisters   and   brother
     (ia) shows that the verb cannot derive plural number from &P but feminine gender from the closest conjunct. Instead, as (ib) shows, if it probes the feminine gender of NP$_1$ *sestri*, it must also probe NP$_1$'s dual number.

Note that the unique controller in these examples can also be determined through CCA, bypassing &P. Thus the singular is also conceivable in (7) and (8), as shown below:

(7a)' Zagađena   je   rijeka   i   selo.   √CCA
polluted$_{F.SG}$ aux$_{SG}$ river$_{F.SG}$ and village$_{N.SG}$

(7b)' Selo   i   rijeka   je   zagađena.   √CCA
village$_{N.SG}$ and river$_{F.SG}$ aux$_{SG}$ polluted$_{F.SG}$

(8)' Rijeke   i   selo   je   zagađeno.   √CCA
river$_{F.PL}$ and village$_{N.SG}$ aux$_{SG}$ polluted$_{N.SG}$

The point thus remains: whatever the factors affecting variation in determination of controller, that controller is invariably unique.[9] Further relevant examples are given in (9); note again these also allow for &P agreement, as indicated:[10]

(9a) Grad   i   sela   su   uništena/i.   √CCA/√&P-default
town$_{M.SG}$ and village$_{N.PL}$ aux$_{PL}$ destroyed$_{N.PL/M.PL}$
'The town and villages were destroyed'.

(9b) Gradovi   i   selo   je/su   uništeno/i.   √CCA/√&P-default
town$_{M.PL}$ and village$_{N.SG}$ aux$_{SG/PL}$ destroyed$_{N.SG/M.PL}$
'The towns and village was/were destroyed'.

(9c) Uništeno/i   je/su   selo   i   gradovi.   √CCA/√&P-default
destroyed$_{N.SG/M.PL}$ aux$_{SG/PL}$ village$_{N.SG}$ and town$_{M.PL}$
'There was/were destroyed a village and towns'.

In (9a), the neuter gender value of the participle *uništena* 'destroyed' is derived from the same NP$_2$ controller as is its plural number. Similarly in (9b, c), the value for number features on neuter singular *uništeno* must be derived from neuter singular NP$_2$, *selo*, not from plural &P, since that is also the source of its gender. Assuming as we do conjunct sensitive probe, these are the expected results. In short, under our account the target always derives its gender and number features from a unique controller, and not from any combination of them. In

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9   L. Marušič (p.c.) draws our attention however to the "multitasking" economy condition of van Urk and Richards (in press), which effectively rules out checking multiple phrases when just one of them would suffice.

10   The viability of CCA depends on the features of the closest conjunct in ways which we do not explore in this paper. Bošković (2009) observes that CCA with neuter singular NPs fails. However, Cr speakers we have polled accept CCA with neuter singular NP$_{1/2}$, easily under VS order and some less readily under SV order. This implies to our mind that CCA with NP$_1$ can exploit either structure in (3), but CCA with NP$_2$ reflects only (3b).

Section 4 below, we show how all the facts can be accommodated by adopting this proposal, with the full set of valued φ-features copied onto the target from a unique controller, &P or NP$_{1/2}$.

3.3. &P has a valued set of φ-features.

Since true conjoined subject agreement is a relation that holds between the verb and the maximal projection &P, let us now consider how &P receives gender features. Under our account, the controller must be valued for gender (and not just number) for agreement to occur, either through feature resolution or set by default. These two ways of endowing &P with a full set of φ-features potentially compete, as in the following examples:

(10a) Rijeka   i   planina   su   zagađene/%i.[11]   √&P/%&P-default
       river$_{F.SG}$ and   mountain$_{F.SG}$ aux$_{PL}$ polluted$_{F.PL/\%M.PL}$
       'The river and the mountain are polluted'.

(10b) Rijeke   i   selo   su   zagađeni/*a/*e.   √&P-default (only)
       river$_{F.PL}$ and   village$_{N.SG}$ aux$_{PL}$ polluted$_{M.PL/*N.PL/*F.PL}$
       'The rivers and the village are polluted'.

In (10a), where both conjuncts are of the same (feminine) gender, the participle can either express resolved agreement with a feminine plural &P or prescriptive agreement with a masculine plural &P. In the former case, we cannot argue that the target looks for the gender value of NP$_1$ or NP$_2$, since these are singular and we have concluded that number and gender cannot come from distinct controllers. Rather, we take this to show that &P's gender feature is valued by the feminine gender feature percolating up from both conjuncts. (When this for some reason fails, as in the latter case, the gender of &P is set as default masculine, which then competes with CCA.) Moreover, mixed gender coordination, as in (10b) with a feminine and a neuter conjunct, shows that neither of the conjuncts can singlehandedly promote its own gender values. Resolution fails and &P has no choice but to become default masculine, which is the gender expressed by the masculine plural participle *zagađeni* agreeing with &P. Taken together, the facts suggest that gender feature values do not percolate freely to &P, but that they are somehow computed. In Section 4.2, we present additional relevant data to help fine-tune the mechanics of how gender is valued on &P.

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11 While the default masculine -*i* is a prescribed option, many Cr speakers either disprefer or disallow it.

3.4. Structures and meanings.

Before doing so, however, we turn to an issue we have thus far put aside. An anonymous reviewer asks whether Cr CCA can be framed within the clausal coordination and predicate ellipsis analysis of Aoun et al. (1994, 1999), which raises the question of the behavior of predicates which require plural subjects, such as *sudariti se* 'to collide'. It seems to us that consideration of relevant examples militate against such an analysis. In (11), with SV order, neuter plural CCA or masculine plural &P-default are both acceptable:[12]

(11) Krava   i   njezina telad   su   se   sudarila/i.   √CCA/√&P-default
     cow$_{F.SG}$ and   her   calf$_{N.PL}$ aux$_{PL}$ refl collided$_{N.PL/M.PL}$
     'A cow and her calves bumped into each other'.

Compare also the following, in which CCA under VS order is equally viable for an ordinary predicate such as *doći* 'to arrive' in (12a), which could in principle derive from clausal conjunction, and *sudariti se* in (12b), which cannot:

(12a) Došao   je   konj   i   krava.
      arrived$_{M.SG}$ aux$_{SG}$ horse$_{M.SG}$ and   cow$_{F.SG}$
      'A horse and a cow arrived'.

(12b) Sudario   se   konj   i   krava.
      collided$_{M.SG}$ refl horse$_{M.SG}$ and   cow$_{F.SG}$
      'A horse and a cow collided'.

In these examples, with *sudariti se* and a singular subject, there is no logically possible alternative reading. On the other hand, it does seem to us that there are underappreciated semantic nuances with conjoined plural subjects. Consider the following judgments:

(13a) Krave   i   bikovi   su   se   sudarili.
      cow$_{F.PL}$ and   bull$_{M.PL}$ aux$_{PL}$ refl collided$_{M.PL}$
      'The cows and the bulls bumped into each other'.

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12 Bošković (2009: 465) also argues against a clausal coordination account based on
    similar Serbian examples:
    (i) a. Telad   i   krave   su   juče   pasle   zajedno.   √CCA [=LCA]
           calf$_{N.PL}$ and   cow$_{F.PL}$ aux$_{PL}$ yesterday grazed$_{F.PL}$ together
           'Calves and cows grazed together yesterday'.
        b. Juče su pasle krave i telad zajedno.   √CCA [=FCA]
    In (i) CCA obtains between *pasle* 'grazed' and feminine plural *krave* 'cows' even
    though, as Bošković writes, "such predicates require distribution over the conjuncts
    together, which cannot be accomplished in the ellipsis analysis where each conjunct is
    placed in a separate clause." Marušič et al. (2007) also make this point for CCA in Slvn.

(13b) Bikovi   i   krave   su   se   sudarile.
      bull$_{M.PL}$ and   cow$_{F.PL}$ aux$_{PL}$ refl   collided$_{F.PL}$
      'The bulls and the cows collided'.

Here we can distinguish between multiple collisions among the various individuals belonging to a group consisting of both cows and bulls or a collision between two groups, one consisting of cows and the other of bulls.[13] (13b), in which the predicate agrees just with *krave* 'cows', suggests a reading in which the group of cows collided with the group of bulls, whereas (13a) does not admit this. (14) similarly constitutes a minimal pair:

(14a) Telad   i   krave   su   se   sudarile.
      calf$_{N.PL}$ and   cow$_{F.PL}$ aux$_{PL}$ refl   collided$_{F.P}$
      'The calves and the cows collided'.

(14b) Krave   i   telad   su   se   sudarila.
      cow$_{F.PL}$ and   calf$_{N.PL}$ aux$_{PL}$ refl   collided$_{N.PL}$
      'The cows and the calves collided'.

Here there is no default &P option. Instead, both dominant readings involve collisions of groups. But in (14a), in which the predicate agrees with feminine plural *krave*, the implication is that the cows bumped into a group of calves, whereas in (14b), in which the predicate agrees with neuter plural *telad*, the implication is that the calves bumped into a group of cows. In other words, the controller of agreement is the likely undergoer of motion.

Put together, the judgments associated with (13) and (14) imply that CCA can have some semantic import. This raises the enticing possibility that different agreement options may reflect different syntactic structures. This follows from the standard assumption that syntactic structure feeds semantic interpretation, so that different scopal readings imply different syntactic structures. Moreover, it creates a puzzle with respect to the hypothesized post-syntactic operation of flattening, since if CCA has anything to do with flattening, then it should not have interpretative consequences. We will therefore offer an alternative to Marušič et al.'s notion of flattening.

4. Our proposals

We have observed two agreement strategies with conjoined subjects in Cr, one probing the coordinated phrase and the other probing the closest conjunct. In

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13 There is a third, clausal reduction reading, in which there were two independent collision events, each with its own plural subject: the cows collided with each other and the bulls collided with each other. We put this interpretation aside.

both instances, we claim, the target agrees with a unique controller. This controller, being valued for both number and gender, makes it sufficient for the target to probe only once. When agreement identifies the linearly closest conjunct – NP_2 under SV order or NP_1 under VS order – its feature values are copied onto the target rather than the other way around. The same is true when agreement identifies the structurally most prominent candidate, &P. In this section, we examine the competition between the binary branching and flat coordination alternatives and the specifics of gender computation on &P.

4.1. Two types of proximity and two structures

The X-bar structure in (3a) generally assumed to be appropriate for coordination is repeated in (15a). This structure is generated by the operation of *projecting* merge, whereby the head & first merges with its complement NP_2 to project &', and this in turn merges with NP_1 as the specifier of the coordination phrase &P. This renders the maximal projection &P the structurally highest and closest potential goal/controller for the purposes of agreement. Depending on how proximity is defined for the purposes of probe, NP_1 might turn out to be an equally close goal or – in the spirit of Bošković's Secondary-Agree – the closest goal when &P for example fails to return a value for gender,[14] so that CCA might be produced from a branching structure at least as far as NP_1 is concerned.[15] As pointed out in Section 2, however, a binary branching structure cannot obtain CCA with NP_2: (15a) is not compatible with CCA to the extent that this must recognize purely linear relations. Accordingly, we also argued for a flat representation and tentatively adopted (3b), repeated in (15b).

(15a) $[_{\&P} NP_1 [_{\&'} \text{ and } NP_2]]$ (15b) $[_{\&P} NP_1 \text{ and } NP_2]$

Each, however, engender some conceptual problems, so here we suggest revisions to both. First, we argue below that to account for the Cr feature resolution data a more elaborated X-bar theoretic &P structure is needed, and adopt (16)

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14 K. Zanon (p.c.) draws our attention to the possibility that NP_1 could be adjoined to &P rather than in its specifier, i.e. $[_{\&P} NP_1 [_{\&P} \& NP_2]]$, and that as an adjunct it would not be viable controller. We put aside this possibility here, as well as the possibility that adjunction and specifier positions might be primitives, hence compete.

15 Even so, and contrary to Marušič et al. (in press), we believe that this can arise only when the probe searches *down* the tree, i.e., before the subject moves to SpecTP, hence under VS but not SV order.

instead of (15a).[16] The structure in (16) embodies some symmetry in that each conjunct merges with its own & head and each & projects its own &P. An asymmetrical relation is reintroduced, however, because $\&P_1$ serves as the specifier of $\&P_2$, with the head of the former typically unpronounced.

(16) $[_{\&P2} [_{\&P1} \&_1 NP_1] [_{\&'2} \&_2 NP_2]]$ *Final branching structure*

What this means is that each conjunct first combines with its own coordinator, and that these are subsequently put together. Because no precedence relations are established through syntactic merge, in the syntax only hierarchical proximity can drive agreement. That is why the features of &P in (16) will be crucial, as explained in Section 4.2. Hierarchical structures are later sent to PF for pronunciation. They are linearized in accordance with Kayne's (1994) Linear Correspondence Axiom (LCA) and only subsequently put together.

There are empirical advantages to iterating & and associating one occurrence with each conjunct. For example, as noted by Progovac (1998), many languages, including Serbian and Croatian, allow for one *and* before each conjunct, as in her (17):

(17) (I)   Marija, (i)   Milan, i   Petar studiraju lingvistiku.
     and   Mary   and   Milan   and   Peter study   linguistics
     'Mary (and) Milan and Peter are students of linguistics'.

The phrasing reflects the initiality of these languages, so the fact that *n(o)* 'and' appears also on each conjunct in head-final Tsez comes as no surprise, as shown by (18), from Benmamoun, Bhatia, and Polinsky (2009):

(18) kid-no   uži-n
     girl-and   boy-and

Also telling is CCA in head-final languages, where simply reversing one's coordination structure would appear to make the wrong predictions. If however, we adjust (16) to (16)' everything works out as required.[17]

(16)' $[_{\&P2} [_{\&P1} NP_1 \&_1] [_{\&'2} NP_2 \&_2]]$ *Branching structure in head-final language*

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16 (16) is one of the many alternatives entertained by Progovac (1998). Thanks to L. Marušič (p.c.) for drawing our attention to Progovac's excellent "State-of-the-Article" piece.

17 Our structure also provides a possible solution to the "puzzle" noted by Progovac (1998) that the conjunction tends to appear between the conjuncts even in OV languages, if the overt one in, say, Hindi *kelaa aur garii* 'banana and coconut' is actually $\&_1$ in (16)'.

As Benmamoun, Bhatia, and Polinsky (2009) show, not only are structural relations between NP_1 and NP_2 the same in the syntax of VO and OV languages, but CCA also targets the linearly closest NP. Hence the verb in Tsez (18) can either agree with &P, showing plural *b-ik'is* 'went' or singular *ik'is*.[18]

Note finally that (16) allows for two recursion options: specifier recursion as in (19a), which we tentatively assume, or iterated adjunction, as in (19b).[19]

(19a) $[_{\&P3} [_{\&P2} [_{\&P1} \&_1 NP_1] [_{\&'2} \&_2 NP_2]] [_{\&'3} \&_3 NP_3]]$
(19b) $[_{\&P3} [_{\&P1} \&_1 NP_1] [_{\&'3} [_{\&P2} \&_2 NP_2] [_{\&'3} \&_3 NP_3]]]$

Either way, it will be the final & head which projects (and is typically filled with lexical material, although all may be), as in (17) or head-final Japanese, where *to* 'and' appears after each conjunct: *Robin-to Kim-to Terry-to* '(and) Robin and Kim and Terry'.

Let us now turn to CCA and (15b). First of all, contra Bošković (1999) but in agreement with Marušič et al. (in press) among many others, we contend that CCA exists in that the phenomenon must be defined in terms of linear proximity, the crucial case being that of CCA under SV order. With respect to the issue of Marušič et al.'s "post-syntactic flattening," we observed that, if the operation is truly post-syntactic, then the judgments discussed in Section 3.4 are a mystery. We need conjunct sensitive agreement to be able to reflect syntactic structure

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18 Gender according to them is resolved in favor of class I (male).

19 Either could also be cast instead as recursion/adjunction to the right. Note that these options suggest a prospect for LDA and the variation between Slvn and Cr. Consider how (16) is built up through successive applications of merge, as in (i):

(i) a. $\&_1 + NP_1 => [_{\&P1} \&_1 NP_1]$
     b. $\&_2 + NP_2 => [_{\&P2} \&_2 NP_2]$

Each & head merges with its complement NP in a separate workspace. These projections subsequently combine, one adjoining to the other. Potentially, then, either could project further: in (iia) &P_1 attaches to &P_2 and becomes the specifier with &P_2 projecting, whereas in (iib) it is the other way around. That is, if $[\&_1 + NP_1]$ projected instead of $[\&_2 + NP_2]$, then the resulting phrase would be &P_1, possibly with the features of NP_1.

(ii) a. $[_{\&P2} [_{\&P1} \&_1 NP_1] [_{\&'} \&_2 NP_2]]$
      b. $[_{\&P1} [_{\&'} \&_1 NP_1] [_{\&P2} \&_2 NP_2]]$

We do not think such reasoning is sound, for two reasons. First, the essence of feature *resolution* as a mechanism for computing gender on &P is that all conjuncts are examined; one does not simply percolate up ignoring the others. Second, there is no basis for linearization, however it is calculated from hierarchical structure, to distinguish (iib) from (iia), so all the two variants really do is swap the NPs.

in order to connect to interpretation.[20] We also do not really want an &P to be projected at all, unlike in (15a) or (16), otherwise we might expect it to be possible controller of agreement. This reasoning brings us back to our claim that something like (15b) must be available in the syntax. There is, however, a serious problem with applying CCA to (15b) in the syntax:[21] if linear order remains undefined in the syntax, then it makes no sense to invoke linear proximity for the purposes of CCA. And more to the point, by what principles could (15b) even be linearized (since the LCA is clearly inapplicable)?

We know of no linearization algorithm in the literature other than the LCA, which relies on asymmetric c-command. One might imagine "free" linearization, except that this would predict "$NP_1 \, NP_2 \, and$" and "$and \, NP_1 \, NP_2$" alongside "$NP_1 \, and \, NP_2$" and "$NP_2 \, and \, NP_1$"; while it does not matter which in a list comes first, it does matter where the conjunctions are. To resolve this, we propose (15b) be replaced with a totally symmetrical merge, as in (20):[22]

(20) $[NP_1 \, NP_2]$ *Final symmetrical structure*

That is, any number of phrases can merge symmetrically to create a flat unlabeled structure. In the flat structure, we thus claim that there is no conjunction

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20 It also strikes us that proposing flattening *per se* may be unnecessary given that all CCA requires is a linear order to have been imposed on the conjuncts. That is, once branching structures have been sent to PF for pronunciation, they have been linearized—precedence is available and can be used to determine the controller of agreement. Post-syntactic flattening presumably means the removal of dominance relations, not the addition of precedence ones, which are provided by the LCA as part of the mapping to PF. This means CCA can avail itself of linear proximity, rendering for example NP_2 closest under SV order; it does not imply that other information, such as hierarchical proximity, should confuse the matter unless removed through flattening. On the contrary, it seems to us that PF surely needs hierarchical information as well, to determine for example prosodic phrasing and intonation.

21 We thank L. Marušič (p.c.) for helpful discussion of this problem.

22 Symmetrical merge has been employed to handle small clauses and copular construction, as well as to motivate movement; cf. e.g. Moro (2000) or Pereltsvaig (2008). The idea that the coordinator is not initially present but rather added in the mapping to PF (or linearization) goes back at least to Lakoff and Peters (1969), as does the idea that this coordinator somehow "spreads" (has multiple occurrences) across the conjuncts. Various implementations exist, such as three-dimensional approaches originally deriving from Goodall (1987) or the &P shell approach due to Zoerner (1995); cf. the overview in Progovac (1998) and discussion in Zhang (2010). For early arguments for symmetrical coordination see Lakoff and Peters (1979), and for some relevant recent conceptual reasoning see Lasnik and Uriagereka (2012).

in the syntax. As Winter (2005) comments, citing Payne (1985), there are many languages which lack an overt conjunction, either obligatorily (e.g., Samoyedic, Pacoh, Old Turkic) or optionally (e.g., Vietnamese, Tatar, or Turkish, which borrowed *ve* from Arabic/Persian *ve/va* 'and').[23] Since the members of this set are equal, they can be ordered freely. CCA can then apply, since linear relations have been established, with the controller of the verb also semantically privileged, as shown by (14). Under this scenario, the conjunction itself is only subsequently introduced.[24] We thus contend that (16) and (20) coexist. Both involve selection of conjuncts, but in the former each conjunct first merges with &, which projects, whereas in the latter the conjuncts themselves all merge, symmetrically. And for us, both structures are available in the syntax, in competition,[25] as opposed to the post-syntactic flattening analysis of Marušič et al. (2007). For them, (15b) is derived through a last resort operation which transforms (15a) into flat (15b) to facilitate CCA. For us, (15b) is really symmetrical merge as in (20), whereas asymmetric merge respects traditional X-bar structure and

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23 We thank Tom Grano (p.c.) for drawing our attention to Winter (2005), whose approach to the semantics of conjunction is compatible with our syntax. Winter argues that "there is no special virtue to the assumption that *and* [and its crosslinguistic equivalents] conveys conjunction: the conjunctive interpretation is available also if and is meaningless," because, as he convincingly demonstrates, there is a "free process" of conjunction. This is not true of disjunction: "There are no languages with zero disjunction because expressions with the function of or are semantically necessary (there is no operation of disjunction in the grammar)." As Grano notes, this "would seem to mesh well with [our] idea that each conjunct takes its own *and*." Crucially, disjunction works differently and the Cr facts seem to be that CCA is the only option with *ili*: there is neither a resolution nor a default option.

24 The conjunction serves to demarcate the end of the list and thus typically appears before the final conjunct: W, X, Y, *and* Z. An alternative possibility we think likely is for it to appear between all conjuncts: W *and* X *and* Y *and* Z.

25 An anonymous reviewer raises the important question of independent diagnostics for these asymmetrical and symmetrical structures, and in particular asks whether they show distinct c-command effects. Unfortunately, this is too vexed an issue for us to deal with in this short paper. In general, however, we concur with Progovac (1998), who concludes that evidence that the first conjunct c-commands the rest of the coordination is not forthcoming, despite traditional literature to the contrary. See also Stroik and Putnam's (2013: §4.5) detailed discussion of the (lack of) c-command effects in coordinate structures. Note that, for us, even under the asymmetric structure (16) NP_1 does not c-command NP_2; those c-command effects which do exist are created through Quantifier Raising.

projects an &P. As shown in Section 3, there is a choice in Cr, with default masculine but one option:

(21a) Rijeke   i   sela   su   zagađena/zagađeni.   √CCA/√&P-default
      river$_{F.PL}$ and   village$_{N.PL}$ aux$_{PL}$ polluted$_{N.PL/M.PL}$
      'The rivers and the villages are polluted'.

(21b) Zagađeni/zagađene   su   rijeke   i   sela.   √CCA/√&P-default
      polluted$_{M.PL/F.PL}$ aux$_{PL}$ river$_{F.PL}$ and   village$_{N.PL}$
      'The rivers and the villages are polluted'.

In (21), neuter/feminine CCA gender and &P-default agreement are equally available and equally grammatical, reflecting (20) and (16), respectively. We therefore assume that both structures are generated, not that (15b) is a last resort PF solution to a non-viable (15a).[26]

4.2. &P agreement and feature unification

We now turn to the specifics of the percolation mechanism which applies in (16). The standard assumption in the coordination literature is that &P computes its own number but not gender. Number is calculated in a straightforward additive way, based on the sum of the cardinalities of the conjuncts. In this section, we show how gender on &P is also computed, either by resolution (based on examination of the gender features on the conjuncts) or by defaulting to masculine.

In order to be able to spell out the workings of gender computation, the facts need to be examined in more detail. We saw in (10a) that two feminine singulars can be resolved as feminine plural. A similar example is given in (22a), and (22b) offers two masculines, which unsurprisingly are resolved as masculine.[27]

(22a) Knjiga   i   olovka   su   prodane/%prodani.   √&P/%&P-default
      book$_{F.SG}$ and   pencil$_{F.SG}$ aux$_{PL}$ sold$_{F.PL}$/sold$_{\%M.PL}$
      'The book and the pencil are sold'.

(22b) Papir   i   stol   su   prodani.   √&P [or &P-default]
      paper$_{M.SG}$ and   table$_{M.SG}$ aux$_{PL}$ sold$_{M.PL}$
      'The paper and the table are sold'.

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26 To be fair, the way Marušič et al. (in press) implement last resort post-syntactic flattening respects the variation in agreement possibilities they observe for Slvn, in that certain syntactic operations for them are optional and can lead to failure of syntactic agreement. When this happens, flattening applies to enable post-syntactic agreement.

27 (22b) could also be interpreted as default masculine. An informal survey of Cr speakers however indicates that most strongly prefer resolution (i.e., feminine plural) in (22a), despite prescriptive norms.

Technically, we imagine percolation to be a matter of unification, where & has no φ-features hence is non-distinct from both masculine and feminine. Since the genders matches in (22), &P has no problem taking on the gender of whatever conjuncts it dominates.

When the conjuncts are mismatched for gender, no resolution is ever possible. Consider the examples in (23):

(23a) Papir/Ravnalo   i   knjiga   su   *prodane/prodani. *&P/√&P-default
       paper$_{M.SG}$/ruler$_{N.SG}$ and   book$_{F.SG}$ aux$_{PL}$ sold$_{*F.PL}$/sold$_{M.PL}$
       'The paper/ruler and the book are sold'.

(23b) Knjiga/Papir   i   ravnalo   su   *prodana/prodani. *&P/√&P-default
       book$_{F.SG}$/paper$_{M.SG}$ and   ruler$_{N.SG}$ aux$_{PL}$ sold$_{*N.PL}$/sold$_{M.PL}$
       'The book/paper and the ruler are sold'.

The fact that only the default masculine is acceptable shows that masculine or neuter gender conflicts with feminine in (23a) and feminine or masculine conflicts with neuter in (23b). This suggests that all three classes have distinct gender features, so that when they are different a clash ensues and unification/percolation is blocked, inducing the default masculine on &P.

A closer inspection of the facts, however, reveals this idea to be too simplistic. Most interesting is what happens when two neuter singulars are conjoined. A well-known but poorly understood puzzle is that the result is *not* neuter plural, but rather default masculine:[28]

(24) Drvo   i   selo   su   zagađeni/*a.   √&P-default
      tree$_{N.SG}$ and   village$_{N.SG}$ aux$_{PL}$ polluted$_{M.PL/*N.PL}$
      'The tree and the village are polluted'.

We believe that this follows from the properties of &(P) combined with the mechanics of unification and the timing of the default masculine rule. Unification is not motivated by the matching gender features on the conjuncts, but rather by the conjunction head & in its attempt to compute φ-features for &P. & has no features beyond being a Boolean operator (and may not even have that, if Winter's proposal in fn. 23 is adopted), hence it is able to coordinate any category and takes on the properties of whatever it combines with.

We now describe a system that exploits this idea to derive the observed patterns. Assume that neuter is the absence of a value for [Gen:], as follows:

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28 Note that CCA in Cr (24) is also possible, giving rise to neuter singular: *Drvo i selo je zagađeno*. The failure of neuters to resolve has also been observed for Slvn; cf. Corbett (2006) for discussion. According to L. Marušič (p.c.), however, neuter resolution also exists in Slvn, a fact which might necessitate treating neuter differently.

(25) SG [–pl]   PL [+pl]
      MASC   /ø/ = [Gen:M]   /i/ = [Gen:M]
      FEM   /a/ = [Gen:F]   /e/ = [Gen:F]
      NEUT   /o/ = [Gen:]   /a/ = [Gen:]

Also assume the general structure for coordination in (16), repeated in (26):

(26) $[_{\&P2} [_{\&P1} \&_1 NP_1] [_{\&'2} \&_2 NP_2]]$

The feature resolution system is a bottom-up one such that, whenever the gender feature values of two merged nodes contrast, percolation is blocked and the dominating projection of & bears an unvalued gender feature ([Gen:]). The default rule then applies, with the result that [Gen:] defaults to masculine, [Gen:M] (i.e., [–fem], taking feminine [+fem] to be the marked value for gender). Thus, under our account, if & merges with an element with [Gen:], its projection will also have [Gen:], which is valued through unification. It is easy to see that this works in the cases of matching in (22), but the mismatches in (23) raise considerable complexity as does the problem posed by conjoining in two neuters in (24).

Let us examine the various possibilities for computing the gender of $\&P_2$. Consider first the case in which both conjuncts are masculine or feminine. If NP_1 is [Gen:M] or [Gen:F], then $\&P_1$ is also [Gen:M] or [Gen:F]. The same is true for $\&'_2$ with respect to NP_2. When $\&P_1$ merges with $\&'_2$, the possibilities are as follows: mismatch leaves $\&P_2$ as [Gen:] and its value is assigned by default as masculine, or they match and $\&P_2$ is [Gen:M] or [Gen:F] because both of its daughters are. This gets the desired result that if either one of the arguments is masculine, then &P is also masculine.

Consider next the situation with neuter conjuncts. The facts, as we have seen, are that if either of the two conjuncts is neuter, then $\&P_2$ necessarily defaults to masculine. To obtain this result, it is crucial that neuter have no value for [Gen:] and that [Gen:] be projected whenever a neuter NP merges with &, so that &' is assigned a [–fem] value on-line. Hence, $\&P_2$ will always end up as [Gen:M]. In (23b), when [Gen:] *ravnalo* merges with *i,* &' will be [Gen:] and the default rule will insert the [–fem] value, which eventually causes $\&P_2$ also to be [–fem]. The same is true of (24). The case of (23a) is more complicated, and it is this which requires (26) instead of more traditional (3a). We need to block feminine plural in (23a), repeated as (27):

(27) Ravnalo   i   knjiga   su   prodani/*prodane.
      ruler_{N.SG}   and   book_{F.SG}   aux_{PL}   sold_{M.PL}/sold_{*F.PL}
      'The ruler and the book are sold'.

If neuter ([Gen:]) *ravnalo* merged directly with feminine ([Gen:F]) $\&'_2$ (which is feminine because *kniga* is), then feminine would be wrongly predicted to unify

and be expressed also on &P$_2$. Instead, what happens is that &P$_1$ ends up as mas-
culine because, when &$_1$ merges with [Gen:] *ravnalo*, the resulting projection
will bear an unvalued [Gen:] feature which must then be assigned masculine
by default. When [Gen:M] &P$_1$ in turn merges with [Gen:F] &$'_2$, the mismatch
reintroduces an unvalued [Gen:] on &P$_2$, which as always defaults to [Gen:M].

This system is able to accommodate other agreement paradigms which
involve neuter. In (28), the preferred neuter plural reflects agreement with the
closest conjunct, *sela* 'villages':

(28) Drveća   i   sela   su   zagađena/i.[29]   √CCA/√&P-default
      trees$_{N.PL}$ and   village$_{N.PL}$ aux$_{PL}$ polluted$_{N.PL/M.PL}$
      'The trees and the villages are polluted'.

Crucially, just as with the singular in (24), two neuter plurals do not unify to
neuter plural. We know that neuter plural *zagađena* in (28) is an instance of
CCA, not agreement with &P, because of what happens when we make one of
the conjuncts neuter singular:

(29a) Drvo   i   sela   su   uništena/i.[30]   √CCA/√&P-default
       tree$_{N.SG}$ and   village$_{N.PL}$ aux$_{PL}$ destroyed$_{N.PL/M.PL}$
       'The tree and villages were destroyed'.
(29b) Sela   i   drvo   je/su   uništeno/i/*a.[31]   √CCA/√&P-default /*&P
       village$_{N.PL}$ and   tree$_{N.SG}$ aux$_{SG/PL}$ destroyed$_{N.SG/M.PL/*N.PL}$
       'The villages and a tree were destroyed'.

The contrast in (29) shows that the neuter plural in (28) must really be the result
of CCA.

We come finally to the question of when in the derivation the default rule
applies. The problem is of course that neuter morphology exists. So, if neuter is
technically [Gen:], with no value specified, how does CCA agreement apply in
(28), (29), or even just in (30)?

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29 Of 18 speakers interviewed, 6 [33%] accepted masculine plural *-i*, while 12 [66%] cor-
    rected it to neuter plural *-a*. Note that technically, in (27) and (28) our analysis implies
    that each neuter conjunct must default to masculine after merger with &, hence the
    masculine on &P is the result of gender unification.
30 Of 22 speakers interviewed, 12 [54%] preferred the CCA plural *-a* and 10 [45%] the
    &P-default masculine *-i*.
31 Actually, of 16 speakers interviewed, 4 [25%] accepted neuter plural *–a*. As our
    account currently stands, this appears to be an instance of LDA (as testified for Slvn).
    Interestingly, those same speakers did not correct other examples of LDA, suggesting
    that some Cr speakers have LDA grammars, however analyzed.

(30) Jedno   selo   je   uništeno.
     one$_{N.SG}$ village$_{N.SG}$ aux$_{SG}$ destroyed$_{N.SG}$
     'One village is destroyed'.

This is not a simple problem, for both the adjective *jedno* and the participle *uništeno* show neuter agreement. We need to assume [Gen:] is mapped into -*o* before the default masculine rule would apply to specify it as [–fem]. It thus appears that there is something about merging & and projecting it with [Gen:] which forces [Gen:] to become specified. Otherwise, we do not want default masculine to kick in.

We thus tentatively propose that default only applies when unification causes a feature without any interpretable value to be passed up to a new category. We have assumed that this happens upon merge of &, otherwise the &' *i ravnalo* 'and the ruler' in (23b) could conjoin with feminine *knjiga* 'the book' and let feminine project to &P. This conclusion, however, seems inescapable if the default rule applies on-line and structure is built from the bottom up: at the point when & merges with an NP and labels the projection [$_{&P}$ & NP], that projection is maximal. Whether it continues to project and thus turns out to be intermediate like &$_2$ in (26) or does not project hence turns out to be maximal like &$_1$ in (26) is immaterial.

5. Conclusion

This paper examines the Croatian instantiation of the &P versus CCA asymmetry observed for other Slavic languages. Arguing against existing approaches of agreement with conjoined subjects, we provide an analysis based on controller proximity and feature unification. The account is supported by two main claims: (i) a flat or list "structure" is available alongside a hierarchical structure and (ii) &P has valued number and *gender* features, allowing it to serve as a controller/goal for agreement just as NP$_{1/2}$ can under CCA. We have also argued for a hierarchical structure for coordination in which each NP is contained within an &P of its own. It is our hope that the ideas entertained in this study will encourage future research into the remarkably complex area of coordination.[32]

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32 Although our survey of the vast coordination literature has been cursory at best, it strikes us that virtually every logical possibility for the structure of coordination has been entertained at some point by someone or other. In her 1998 review Progovac catalogs perhaps a dozen of them.

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