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In addition to first-conjunct agreement (FCA), which is quite frequent crosslinguistically, several languages have the rather rare phenomenon (for head-initial languages) of last-conjunct agreement (LCA).¹ One such language is Serbo-Croatian (SC). As shown in (1), with postverbal subjects, SC participles exhibit FCA (for gender), and with preverbal subjects LCA (also for gender).²

- (1) a. Juče su uništena sva sela i sve varošice.
yesterday are destroyed.pl.neut all villages.neut and all towns.fem
'All villages and all towns were destroyed yesterday.'
- b. Sva sela i sve varošice su (juče) uništene.
all villages.neut and all towns.fem are yesterday destroyed.pl.fem

To goal of this paper is to establish the empirical domain of conjunct-sensitive agreement in SC and provide a uniform account of FCA and LCA based on the operation Agree. We will see that the FCA/LCA paradigm in SC is rather complex. Furthermore, while the conditions on FCA and LCA for the most part mirror each other, there are contexts where the parallelism breaks down. I will show that the whole FCA/LCA paradigm, including the contexts where the parallelism between FCA and LCA breaks down, can be accounted for in an Agree-based system without postulating any arbitrary language-specific morphological mechanisms, which should be taken as a strong argument in favor of the operation Agree (and the assumption that agreement should be handled in the syntax by Agree), as well as the particular approach to Agree, and more generally feature checking, adopted in this paper. The system argued for in the paper allows one instance of uninterpretable features, namely valued uninterpretable features, not to undergo feature checking and does not require uninterpretable features in general to undergo feature checking with interpretable features.

The gist of the analysis proposed in the paper is that the probe that is responsible for participial agreement searches for a goal to value its number and gender features. Since Conjunction Phrase, henceforth &P, is specified only for number, the probe finds disjoint valuators, &P for number and the first conjunct for gender. This is all that happens in FCA cases. However, the existence of two potential valuators for a single ϕ -probe causes a problem in cases involving movement, i.e. pied-piping of a valuator, like (1b): since both goals noted above are in principle mobile in SC this results in ambiguous targeting for movement, which makes movement impossible and cancels the valuation in question. The participial probe then initiates a second probing operation within a larger search space that includes the second conjunct. Since the second conjunct, which can

¹For discussion of LCA, see Corbett (1983, 1991, 2002), Camacho (2003:122), and Marušič, Nevins, and Saksida (2007) (this paper was in fact inspired by Marušič, Nevins, and Saksida's work on conjunct-sensitive agreement in Slovenian). See also Polinsky's (2009) discussion of Tsez, a head-final language with both FCA and LCA.

²Note that the auxiliary *su*, which is inflected for number and person but not gender, is an enclitic, requiring a stressed element to precede it. SC has three genders, masculine, feminine, and neuter. Throughout the examples, number specification will be indicated only through translations, wherever this is possible. Notice that the participle must be plural in all examples with plural or conjoined subjects and that nominal modifiers like *all* agree with the noun in ϕ -features (the information is omitted from the glosses). To avoid potential processing difficulties due to the distance between individual conjuncts and gender-agreeing predicates I will be using relatively short conjuncts.

now value the gender feature of the probe, is in principle immobile, it is not a candidate for movement, which means that a pied-piping valuator can now be unambiguously determined, &P being the pied-piper. This then results in the LCA pattern. The crucial assumption for the above analysis is that the gender feature of SC nominals is valued and uninterpretable and that such features undergo deletion as soon as they are targeted by a probing operation. The problematic gender feature of the first conjunct is then deleted before the participial probe re-initiates search for an appropriate goal, so that the second probing operation can target the second conjunct for the gender feature.

The above is the gist of the analysis of the basic FCA/LCA paradigm illustrated in (1). Technical details of the account will be expanded on during the discussion below, and a great deal of additional data which considerably complicate the conjunct-sensitive agreement paradigm in SC will be introduced. It will be shown that with some additional assumptions, the analysis outlined above can accommodate the full paradigm regarding conjunct-sensitive agreement in SC.

The paper is organized as follows. In section 1, I will start by presenting the FCA/LCA paradigm in the contexts where individual conjuncts do not agree in gender specification. I will also discuss previous accounts of conjunct-sensitive agreement. In section 2 I summarize theoretical assumptions that will be employed in the analysis proposed in the paper; the analysis itself will be presented in section 3. In section 4 I discuss how the analysis developed in section 3 fares with respect to constructions where the conjuncts agree in gender. Section 5 briefly discusses crosslinguistic variation with respect to FCA. In sections 6 I discuss some theoretical consequences of the proposed analysis, which includes a simplification of Chomsky's (2000, 2001a) feature-checking mechanism as well as evidence that the current feature checking system is empirically superior to Chomsky's (1995, 2000, 2001a) feature checking systems. I also compare the current system to Pesetsky and Torrego (2007). Section 7 is the conclusion.

1. Agreement with conjuncts that do not agree in gender

1.1 The basic paradigm

Non-conjoined subjects in SC obligatorily agree with the verb, whether they are preverbal or postverbal. They agree with finite verbs (auxiliary and main verbs) in person and number, and with participles in number and gender. Plural and conjoined subjects always trigger plural agreement. All of this is illustrated for plural subjects in (2), which gives the only possible agreement patterns.

- (2) a. Te krave su juče prodane.
 those cows.fem are yesterday sold.pl.fem
 'Those cows were sold yesterday.'
- b. Juče su prodane te krave.
 yesterday are sold.pl.fem those cows.fem
 'Those cows were sold yesterday.'

Turning now to conjoined subjects, since FCA and LCA involve agreement in gender, which means we find it with participles, I will focus on auxiliary+participle constructions. When the conjuncts agree in gender, as in (3), the participle typically has the gender specification that the conjuncts have. (There are some exceptions to this which will be discussed in section 4. The reader should bear in mind that the participle must be plural in all examples with conjoined subjects.)³

³Default masculine gender, which is not possible with non-conjoined subjects, is also often (though not always, see footnote 29) possible with feminine+feminine and especially neuter+neuter coordinations (see Corbett 1983). The

- (3) Sva telad i sva pašćad su juće prodana.
 all calves.neut and all dogs.neut are yesterday sold.pl.neut
 ‘All calves and all dogs were sold yesterday.’

The interesting coordination cases are those in which there is a mismatch in the gender feature of the conjuncts. When one conjunct is feminine and one neuter, we get the FCA/LCA pattern. The FCA pattern is illustrated in (4) and the LCA pattern in (5).

- (4) a. Juće su uništena sva sela i sve varošice.
 yesterday are destroyed.pl.neut all villages.neut and all towns.fem
 b. Juće su uništene sve varošice i sva sela.
 yesterday are destroyed.pl.fem all towns.fem and all villages.neut
 c. *Juće su uništene sva sela i sve varošice.
 yesterday are destroyed.pl.fem all villages.neut and all towns.fem
 d. *Juće su uništena sve varošice i sva sela.
 yesterday are destroyed.pl.neut all towns.fem and all villages.neut
- (5) a. Sva sela i sve varošice su (juće) uništene.
 all villages.neut and all towns.fem are yesterday destroyed.pl.fem
 b. Sve varošice i sva sela su (juće) uništena.
 all towns.fem and all villages.neut are yesterday destroyed.pl.neut
 c. *Sva sela i sve varošice su (juće) uništena.
 all villages.neut and all towns.fem are yesterday destroyed.pl.neut
 d. *Sve varošice i sva sela su (juće) uništene.
 all towns.fem and all villages.neut are yesterday destroyed.pl.fem

The context in question also allows for default, masculine gender specification on the participle, as shown in (6) for FCA and (7) for LCA.⁴

- (6) a. ?Juće su uništeni sva sela i sve varošice.
 yesterday are destroyed.pl.masc all villages.neut and all towns.fem
 b. ?Juće su uništeni sve varošice i sva sela.
 yesterday are destroyed.pl.masc all towns.fem and all villages.neut
- (7) a. Sva sela i sve varošice su (juće) uništeni.
 all villages.neut and all towns.fem are yesterday destroyed.pl.masc
 b. Sve varošice i sva sela su (juće) uništeni.
 all towns.fem and all villages.neut are yesterday destroyed.pl.masc

When there are more than two conjuncts, as in (8), LCA is controlled by the last conjunct.

- (8) Sve banje, sve varošice, i sva sela su uništena/*uništene.
 all spas.fem all towns.fem and all villages.neut are destroyed.pl.neut/destroyed.pl.fem

option would yield *Sva telad i sva pašćad su juće prodani* for (3).

⁴As (6)-(7) show, not all defaults have the same status. The status of default gender specification in particular coordination examples does not simply correlate with the status of non-default gender specification. I leave examining comparative acceptability of default gender specification in different examples as well as the exact technical implementation of default feature assignment for future research.

‘All spas, all towns, and all villages, were destroyed.’

Furthermore, as noted by Marušič, Nevins, and Saksida (2007) with respect to Slovenian based on examples like (9), LCA is not controlled simply by the noun closest to the agreeing predicate (this time an adjective), but by the head of the last conjunct.

- (9) Sela i varošice, u kojima žive ta djeca, nisu lijepe/*lijepa.
villages.neut and towns.fem in which live those children.neut not+are beautiful.pl.fem/pl.neut
‘Villages and towns, in which those children live, are not beautiful.’

An interfering factor in examples like (9) may be that *djeca* is embedded within another clause. It is not easy to construct examples where this is not an issue, given that only nominative NPs undergo agreement in SC. However, the potentially interfering factor should be controlled for in (10), where the second nominal is nominative but cannot control agreement. (*Poljice* is a pluralia tantum village name; see below for the relevance of number for gender agreement.)

- (10) a. Sve Poljice su lijepe.
all Poljices.fem are beautiful.pl.fem
‘All Poljices are beautiful.’
b. Sva sela Poljice su lijepa/*lijepe.
all villages.neut Poljices.fem are beautiful.pl.neut/beautiful.pl.fem
‘All villages named Poljice are beautiful.’

Notice also that the coordinated LCA example (11) patterns with (10b) in the relevant respect.

- (11) Sve varošice i sva sela Poljice su lijepa/*lijepe.
all towns.fem and all villages.neut Poljices.fem are beautiful.pl.neut/beautiful.pl.fem
‘All towns and all villages named Poljice are beautiful.’

In the examples discussed so far FCA and LCA exhibit parallel behavior. However, when one conjunct is masculine and one feminine/neuter, we get a breakdown in the parallel behavior of FCA/LCA. An initial masculine conjunct leads to FCA and a final masculine conjunct leads to LCA.

- (12) a. Juče su uništeni svi gradovi i sve varošice/sva sela.
yesterday are destroyed.pl.masc all cities.masc and all towns.fem/all villages.neut
‘All cities and all towns/all villages were destroyed yesterday.’
b. Sve varošice/sva sela i svi gradovi su (juče) uništeni.
all towns.fem/all villages.neut and all cities.masc are yesterday destroyed.pl.masc

However, when the masculine conjunct is placed in a position that normally does not trigger agreement, FCA is still possible, but LCA is not: while the participle in (13) can be feminine/neuter, the one in (14) must bear masculine (i.e. default) specification.

- (13) a. Juče su uništene sve varošice i svi gradovi.
yesterday are destroyed.pl.fem all towns.fem and all cities.masc
b. Juče su uništena sva sela i svi gradovi.
yesterday are destroyed.pl.neut all villages.neut and all cities.masc

- (14) a. Svi gradovi i sve varošice/sva sela su (juče) uništeni.
 all cities.masc and all towns.fem/ all villages.neut are yesterday destroyed.pl.masc
- b. ?*Svi gradovi i sva sela su (juče) uništena.
 all cities.masc and all villages.neut are yesterday destroyed.pl.neut
- c. ?*Svi gradovi i sve varošice su (juče) uništene.
 all cities.masc and all towns.fem are yesterday destroyed.pl.fem

A masculine conjunct thus blocks LCA, but not FCA.

Number specification also matters. In all of the above cases involving LCA/FCA, the individual conjuncts are plural. When the individual conjuncts are singular, regardless of the gender specification of individual conjuncts the participle must be masculine.⁵ Thus, even a feminine+neuter combination requires default masculine gender on the participle, as shown in (15) for FCA and (16) for LCA.

- (15) a. *Juče su uništena jedno selo i jedna varošica.
 yesterday are destroyed.pl.neut one village.neut and one town.fem
- b. *Juče su uništene jedna varošica i jedno selo.
 yesterday are destroyed.pl.fem one town.fem and one village.neut
- c. Juče su uništeni jedno selo i jedna varošica.
 yesterday are destroyed.pl.masc one village.neut and one town.fem
- d. Juče su uništeni jedna varošica i jedno selo.
 yesterday are destroyed.pl.masc one town.fem and one village.neut
- (16) a. *Jedno selo i jedna varošica su (juče) uništene.
 one village.neut and one town.fem are yesterday destroyed.pl.fem
- b. *Jedna varošica i jedno selo su (juče) uništena.
 one town.fem and one village.neut are yesterday destroyed.pl.neut
- c. Jedno selo i jedna varošica su (juče) uništeni.
 one village.neut and one town.fem are yesterday destroyed.pl.masc
- d. Jedna varošica i jedno selo su (juče) uništeni.
 one town.fem and one village.neut are yesterday destroyed.pl.masc

Interestingly, as shown in (17), plural/singular combinations allow FCA but only if the initial conjunct is plural.

- (17) a. Juče su uništena sva sela i jedna varošica.
 yesterday are destroyed.pl.neut all villages.neut and one town.fem
- b. Juče su uništene sve varošice i jedno selo.
 yesterday are destroyed.pl.fem all towns.fem and one village.neut
- c. *Juče su uništena jedno selo i sve varošice.
 yesterday are destroyed.pl.neut one village.neut and all towns.fem
- d. *Juče su uništene jedna varošica i sva sela.
 yesterday are destroyed.pl.fem one town.fem and all villages.neut
- e. Juče su uništeni jedno selo i sve varošice.
 yesterday are destroyed.pl.masc one village.neut and all towns.fem

⁵See Corbett (1983); see also Marušič, Nevins, and Saksida (2007) for Slovenian. However, this is not the case in Russian (see Corbett 1983:98), a language where verbs have gender distinctions only in the singular, which may be relevant. I discuss conjunct-sensitive agreement in Russian in work in preparation.

- f. Juče su uništeni jedna varošica i sva sela.
yesterday are destroyed.pl.masc one town.fem and all villages.neut

On the other hand, LCA is quite generally impossible if one of the conjuncts is singular.

- (18) a. ?*Jedno selo i sve varošice su (juče) uništene.
one village.neut and all towns.fem are yesterday destroyed.fpl.em
b. ?*Jedna varošica i sva sela su (juče) uništena.
one town.fem and all villages.neut are yesterday destroyed.pl.neut
c. *Sve varošice i jedno selo su (juče) uništena.
all towns.fem and one village.neut are yesterday destroyed.pl.neut
d. *Sva sela i jedna varošica su (juče) uništene.
all villages.neut and one town.fem are yesterday destroyed.pl.fem
e. Jedno selo i sve varošice su (juče) uništeni.
one village.neut and all towns.fem are yesterday destroyed.pl.masc
f. Jedna varošica i sva sela su (juče) uništeni.
one town.fem and all villages.neut are yesterday destroyed.pl.masc
g. Sve varošice i jedno selo su (juče) uništeni.
all towns.fem and one village.neut are yesterday destroyed.pl.masc
h. Sva sela i jedna varošica su (juče) uništeni.
all villages.neut and one town.fem are yesterday destroyed.pl.masc

To summarize the data discussed so far, there is quite a bit of parallelism between LCA and FCA in SC: LCA is a mirror image of FCA in that it targets the last conjunct, while FCA targets the first conjunct. LCA and FCA are both found when the conjuncts are plural and of mixed feminine/neuter gender. The participle is always plural with both FCA and LCA. FCA and LCA are both blocked when the conjuncts are singular ((15)-(16)) and with singular+plural conjunct combinations ((17c-d)-(18a-b)). Both the LCA pattern and the FCA pattern alternate with the default masculine gender ((6)-(7)). There are, however, two contexts that allow FCA but not LCA: when the non-agreeing conjunct is masculine we still get FCA, but not LCA ((13)-(14)). Also, FCA is allowed with plural+singular combinations, while LCA is disallowed when one of the conjuncts is singular ((17a,b)-(18c-d)).

It is important to notice at this point that due to the above restrictions, we cannot simply assume that in the cases of conjunct-sensitive agreement in SC we are dealing with full (i.e. gender and number) first/last conjunct agreement with a single NP. Simply assuming full first/last conjunct agreement would leave the ungrammaticality of (19a) and (19b) unaccounted for. In other words, due to the ungrammaticality of such constructions we cannot simply assume that the same element, namely the first conjunct with FCA (as in (19a)) and the last conjunct with LCA (as in (19b)), controls both gender and number. Nevertheless, I will continue to use the terms first and last conjunct agreement for ease of exposition.

- (19) a. *Juče je uništena jedna varošica i sva sela/jedno selo.
yesterday is destroyed.sg.fem one town.fem and all villages.neut/one village.neut
'One town and all villages/one village were destroyed yesterday.'
b. *Sva sela/Jedno selo i jedna varošica je juče uništena.
all villages.neut/one village.neut and one town.fem is yesterday destroyed.sg.fem
'All villages/one village and one town were destroyed yesterday.'

1.2 Previous analyses

As noted above, while the FCA pattern is quite common, LCA is quite rare crosslinguistically (at least for head-initial languages). As a result, most of the accounts of conjunct-sensitive agreement confine themselves to attempting to capture FCA. It would be obviously desirable to have a uniform account of conjunct-sensitive agreement, which would capture both FCA and LCA. However, Marušič, Nevins, and Saksida (2007) quite convincingly show with respect to Slovenian that the existing accounts of FCA fail to extend to LCA.⁶ Thus, accounts of FCA (Benmamoun 1992, Bahloud and Harbert 1993, Bošković 1997, 2005b, Munn 1999, Citko 2004, and Doron 2000, among many others) that appeal to the well-established claim that the first conjunct is higher than the second conjunct (see Munn 1993) do not really have anything to say about LCA. Furthermore, the FCA paradigm displayed by SC is more restricted than the FCA paradigms discussed by the authors cited above. As noted above with respect to (19a), assuming simple first-conjunct agreement does not suffice for SC. Consequently, the existing accounts of FCA do not even readily extend to the SC FCA paradigm, let alone the LCA paradigm. I will return in section 5 in more detail to the question of how the crosslinguistic variation regarding FCA can be captured, the issue I will be interested in being how to prevent the analysis of more permissive FCA patterns found in other languages from extending to SC.

Johannessen (1998), who attempts to unify FCA/LCA patterns found in head-initial/head-final languages, claims that the former is found in head-initial languages, where she argues the first conjunct is structurally higher than the second conjunct, and the latter in head-final languages, where, according to Johannessen, the second conjunct is structurally higher than the first conjunct. The claim cannot be extended to SC and Slovenian, which are uncontroversially head-initial languages for all projections (see, e.g., Bright 1992).

Partial agreement has also been analyzed in terms of ellipsis (Aoun, Benmamoun, and Sportiche 1994, 1999; see also Camacho 2003 for a version of this analysis), whereby partial agreement constructions involve full agreement with predicate ellipsis in one conjunct. Thus, (1a) above would involve coordination “destroy all villages and destroy all towns”, with the second *destroy* elided. What is coordinated under this analysis are the clauses, not the traditional conjuncts. Marušič, Nevins, and Saksida (2007) show that the analysis of partial agreement in terms of ellipsis cannot be extended to the conjunct-sensitive agreement paradigm under consideration since it would fail to account for the fact that conjunct-sensitive agreement is also found with plural predicates such as *collided* and *together*. 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. The point made by Marušič, Nevins, and Saksida (2007) is illustrated in (20) by slightly modified SC counterparts of their Slovenian data.

- (20) a. Telad i krave su juče pasle zajedno.
calves.neut and cows.fem are yesterday grazed.pl.fem together
‘Calves and cows grazed together yesterday.’
b. Juče su pasle krave i telad zajedno.
yesterday are grazed.pl.fem cows.fem and calves.neut together
‘Calves and cows grazed together yesterday.’

⁶Marušič, Nevins, and Saksida do not discuss the full paradigm given above. However, they show that even the Slovenian paradigm they do discuss, which is also found in SC, cannot be captured by the existing accounts of FCA.

(20) shows both FCA and LCA are possible in the context in question. The ellipsis account cannot explain the joint interpretation of *calves and cows* as a single subject. The ungrammaticality of (19) is also problematic for this account (for additional arguments against extending Aoun, Benmamoun, and Sportiche's analysis to Slavic, see Marušič, Nevins, and Saksida 2007 and Citko 2004).

Soltan (2007) argues that conjunct-sensitive agreement is the result of Late Merge of the non-agreeing conjunct, the merger taking place after agreement occurs. Marušič, Nevins, and Saksida (2007) note that if the non-agreeing conjunct in the LCA pattern is indeed merged late after subject movement to SpecIP and preverbal agreement occur, the conjunct in question should not be able to participate in scope reconstruction below SpecIP, a prediction which is not borne out for Slovenian. (They show that the data in question are also problematic for the ellipsis analysis.)

Marušič, Nevins, and Saksida also observe that den Dikken's (2001) account of English examples like *The key to all the doors are missing*, where *all the doors* moves covertly to a position higher than *the key* from which it can trigger agreement and as a result of which it must take wide scope (this is not the case with *The key to all the doors is missing*) fails to extend to Slovenian LCA since it incorrectly predicts that an agreeing second conjunct in the LCA pattern would have to scope over the first conjunct.⁷

Marušič, Nevins, and Saksida (2007) do propose their own analysis of FCA/LCA based on the conditions in (21). (Note that they assume that &P has no specification for the gender feature.)

- (21) a. Projection-Sister Search: If the closest maximal projection MP lacks value for a probed feature F, search for F within the sister projection of M [which can be the sister of M' or M⁰]
b. In case more than one phrase qualifies as a projection sister to MP and more than one projection-sister bears a value for F, resolve the tie by agreeing with the closest projection-sister in terms of precedence.

However, the conditions really merely restate the facts to be accounted for. Moreover, they fail to capture the FCA/LCA breakdown in (13)-(14) and (17)-(18) (Marušič, Nevins, and Saksida actually do not discuss it), as well as the sensitivity of the LCA/FCA pattern to number specification.⁸

To summarize, with plural conjuncts, we get both LCA and FCA when the individual conjuncts are mixed feminine/neuter. When the non-agreeing conjunct is masculine, we still get FCA, but LCA is blocked. Both FCA and LCA are blocked when the individual conjuncts are singular. With mixed plural/singular conjuncts, FCA is allowed, but only with plural+singular combinations, while LCA is quite generally disallowed when one conjunct is singular. The previous analyses of conjunct-sensitive agreement cannot account for the paradigm in question.⁹

2. Theoretical background

Before turning to my analysis of conjunct-sensitive agreement, which treats FCA and LCA in the same way, I will briefly discuss the theoretical mechanisms which will be used in the analysis.

⁷I refer the reader to Marušič, Nevins, and Saksida for a more detailed discussion of the analyses of conjunct-sensitive agreement discussed above. I merely note here the direction of some of their arguments, which also apply to SC.

⁸It should, however, be noted that, as should become clear during the discussion below, the analysis proposed in this paper adopts some of Marušič, Nevins, and Saksida's theoretical assumptions.

⁹It is worth noting here that the LCA data also raise a problem for the otherwise rather interesting system developed in Koppen (2005), where a probe, i.e. the head responsible for verbal agreement, can agree only with the whole coordination if the coordinated phrase undergoes movement above the probing head, which is the case in SC LCA examples. However, the participle still agrees with one conjunct in such examples.

I will adopt the well-established semantically-based distinction between interpretable and uninterpretable features, where interpretable features are those that receive interpretation in the semantics (Chomsky 1995). I also adopt the valued/unvalued distinction, where feature F of a lexical item X can be lexically valued or not. If unvalued, it has to receive a value during syntactic computation, which is accomplished through the operation Agree, discussed below. Following Pesetsky and Torrego (2007) (and contra Chomsky 2000, 2001a), I assume that uninterpretable features can be valued or unvalued (see section 6 for conclusive empirical evidence to this effect). I also adopt the standard assumption that uninterpretable features have to be deleted so that they do not enter semantics, where they would induce a Full Interpretation violation (see Chomsky 1995, 2000, 2001a; whether or not such features are phonologically realized is irrelevant, see footnote 19). Furthermore, following Chomsky (2001a) I assume only valued features can be deleted (see also Pesetsky and Torrego 2007 for relevant discussion). This means that unvalued uninterpretable features need to be valued before deletion. (We can assume that they delete immediately after valuation.) On the other hand, valued uninterpretable features can be simply deleted (see section 6 for evidence to this effect), which I assume happens at the point of transfer to the interfaces, more precisely, semantics.¹⁰ What drives feature checking in syntax is then valuation, not interpretability.

Regarding number and gender features, I adopt the following assumptions: the number feature of the probe, which, as discussed below, corresponds to the number feature of the verb, is uninterpretable and unvalued, while the number feature of NPs is interpretable and valued. This simply captures the standard assumption that number is interpreted semantically on the noun, not on the verb. Thus, the subject NP in *A student likes French/Students like French* is interpreted differently depending on whether it is plural or singular, which is not the case with the verb (see also footnote 34 for evidence that the number feature of nouns, but not verbs, is valued). Regarding gender, the gender feature of the target (i.e. the probing head) is also uninterpretable and unvalued, while the gender feature of NPs in SC is valued and uninterpretable. As is well-known, SC nominals have a grammatical gender: (with a few exceptions; see section 3.3) they are assigned gender arbitrarily, gender being a grammatical feature without semantic import. Note, e.g., that the fact that ‘table’ is feminine in French and masculine in SC does not lead to a difference in the interpretation of the nominal in question in these languages. The same holds for three distinct words for ‘car’ in SC that have different gender (see section 6), which does not affect their interpretation (see also section 6 for evidence that the gender feature of nouns is valued, while the gender feature of verbs is unvalued.)

The central mechanism I will use in the analysis below is Chomsky’s (2000) operation Agree, where Agree for feature F consists of: probing, i.e. search for an element with valued F (goal), matching, and valuation. Not every match leads to valuation, i.e. results in Agree. Matching has a feature-identity (between a probe P and goal G) requirement as well as a locality requirement, stated in terms of closest c-command. However, Chomsky (2000, 2001a) argues that G has to be active to be able to value P; an inactive G cannot value P. To illustrate, the inherently Case-marked NP in Icelandic (22) (in bold) matches the matrix T for ϕ -features (see also Boeckx 2003). As a result, T is not allowed to look for a more deeply embedded goal. However, for Chomsky an active goal must have an uninterpretable feature. Since the intervening NP in (22) does not have it, it cannot value the ϕ -features of T, which then receive the default 3rd person singular value.¹¹

- (22) MÉR fannst/*fundust **henni** leiðast Þeir.
me.dat seems/seem her.dat bore they

¹⁰An exception discussed below involves a case when they undergo Match before the transfer.

¹¹See, however, Bobaljik (in press) for a critical discussion of Chomsky’s analysis.

‘I thought she was bored with them.’

(Boeckx 2003)

Bejar (2003), who provides probably the strongest arguments for the Match/Valuation distinction, shows that matching also fails to result in valuation, i.e. Agree, when the probe is more specified with respect to the matching feature than the goal, i.e. when the goal is relatively underspecified for the feature in question (a similar situation arises with respect to expletive *there* in Chomsky’s 2000 system). Below, I provide another case where Match fails to result in Valuation.

If the probe is specified with an EPP feature, which requires creation of a Spec, Agree is followed by movement to the specifier of the probe P.¹² Move is then a complex operation consisting of Match, which determines what kind of a category P seeks (G must have the matching feature F), Valuation (i.e. Agree, which establishes feature checking between P and G, where G values P), pied-piping, which chooses the XP to be merged as the Spec of a P with an EPP property (the XP must contain G), and re-merge, which merges XP in SpecP.

Chomsky (2000), Bejar (2003), and Rezac (2004) argue that a head X can probe more than once for feature(s) Y, a possibility which I also adopt here and which in fact cannot be prevented without additional assumptions. For ease of exposition, I will use the terms Primary and Secondary Agree to refer to such cases. Chomsky (2000) relies on this mechanism in his account of existential constructions, where in raising expletive constructions like (23a) matrix T first probes the expletive (at point (23b)) and then its associate *someone*, after *there* undergoes movement (at point (23a)).¹³

- (23) a. There T seems to be someone in the garden
b. T seems there to be someone in the garden.

While it is standardly assumed that ϕ -probing heads probe for all ϕ -features together, Bejar (2003) and Rezac (2004) quite convincingly argue that languages differ in this respect, some languages having split and some non-split ϕ -probes, where split ϕ -probes probe for different ϕ -features separately. Marušič, Nevins, and Saksida (2007) apply this proposal to FCA/LCA in Slovenian, treating the relevant ϕ -probing head in Slovenian as a split ϕ -probe. However, below I will crucially be assuming the standard non-split ϕ -probe in SC: ϕ -probing heads in SC probe for all ϕ -features, including number and gender, together, which means that gender and number are not probed for separately. This will enable us to capture a dependency between the number and the gender specification of the participle discussed briefly in section 1.1. and in more detail in section 3.4., which would otherwise remain unaccounted for.

Finally, Marušič, Nevins, and Saksida (2007) argue that &P mediates agreement for number, but not gender. &P clearly must be involved in computing number; thus, conjoined singular NPs and conjunctions of singular and plural NPs lead to plural agreement. I will therefore assume that the number feature is computed at the &P level, which means that &P has number specification. On the other hand, &P does not compute the gender value. As noted by Marušič, Nevins, and Saksida (2007), while the computation of the number feature at the &P level is well-motivated by semantic considerations (which means the &P’s number is interpretable), there is no well-founded theory of gender or empirical evidence that &P computes the gender feature on the basis of its conjuncts the

¹²Throughout the paper, the EPP diacritic will be used merely to indicate overt movement. I will not be concerned here with the question of whether Chomsky’s generalized EPP effect can be deduced from independent mechanisms (for relevant discussion see Bošković 2007 and references therein).

¹³For a number of additional cases, see Bejar (2003) and Rezac (2004). Bejar shows that in some cases Primary and Secondary Agree even have different morphological realization. Thus, she shows person agreement in Georgian has different morphological realization depending on whether it is licensed under Primary or Secondary Agree.

way it does the number feature. I will then assume that at least in the cases where individual conjuncts disagree in gender specification, which would require gender computation at the &P level (simple percolation would not suffice), &P does not have gender specification.¹⁴ Another possibility, explored in section 4, is that &P is specified only for interpretable features. The upshot of this would again be that &P has specification for number, but not gender.

3. Agree and conjunct sensitive agreement

3.1 Preliminaries

Before I turn to the analysis of conjunct-sensitive agreement, a word is in order regarding how SC auxiliary+participle constructions should be analyzed. As discussed above, regardless of word order the participle agrees in number and gender with the subject.

- (24) a. Te krave su prodane.
 those cows.fem are sold.fem.pl
 ‘Those cows were sold.’
 b. Prodane su te krave.
 sold.fem.pl are those cows.fem.pl

Bošković (1997) argues that in SC auxiliary+participle constructions, the participle adjoins to the auxiliary (either to the left or to the right), after which the auxiliary optionally excorporates to move to a higher head. The reason for this is a difference in the height of the auxiliary in participle+auxiliary constructions, where the auxiliary unambiguously stays in the low position (in fact, nothing can intervene between the participle and the auxiliary in this case), and the auxiliary+participle constructions, where the auxiliary can be either in the low position (if it stays in situ) or the high position (if it excorporates. Note that the auxiliary and the participle do not have to be adjacent in the auxiliary participle word order). Thus, in participle+auxiliary constructions, low, manner adverbs can follow the auxiliary, but high, sentential adverbs cannot. In auxiliary+participle constructions, both manner and sentential adverbs can follow the auxiliary. We thus have the following pattern. (I refer the reader to Bošković 1997 for a more detailed discussion of (25), including the exact positions of the relevant elements.)

- (25) a. [Y₀ Auxiliary+Participle]
 b. [X_P Auxiliary... [Y_P Participle]]
 c. [Y₀ Participle+Auxiliary]

I assume that in (25a) and (25c) the auxiliary and the participle are located in the head that is responsible for gender agreement, which I will refer to as Part (as discussed below, Part actually probes for number and gender). I assume Part has an EPP feature when the subject precedes it. (Notice that the subject-participle-auxiliary order is ruled out because the auxiliary is a second position clitic.)

There are then two possibilities for the example in (26).

¹⁴This holds for all the cases discussed in the next section, which all involve conjuncts that disagree in gender specification. We will see in section 4 that the situation is more complicated with conjuncts that agree in gender specification, where the gender feature could simply percolate to the &P level through individual conjuncts, which agree in gender. I will put aside such examples in the next section, focusing on gender non-agreeing conjuncts, where I assume conflicting gender specifications would block gender percolation to the &P level.

- (26) a. [PartP Oni su došli]
 they are left
 ‘They left.’
 b. [Agrs Oni su [TP došli]]

Under the analyses presented in Franks (1998) and Bošković (2001), which assume the possibility of lower copy pronunciation when this is required by PF conditions (see also Abels 2001, Bobaljik 2002, Bošković 2002b, 2004, Bošković and Nunes 2007, Hiramatsu 2000, Lambova 2002, 2004, Landau 2003, Nunes 2004, Reglero 2004, and Stjepanović 1999, 2003), we also may have (27), where the subject stays in PartP, and the auxiliary moves to Agrs.¹⁵ However, since the auxiliary is an enclitic, a lower copy of the auxiliary is pronounced to avoid violating a PF requirement, since the enclitic would otherwise not be properly supported in PF.¹⁶

- (27) [AgrsP ~~su~~ [PartP Oni su...]]

I will also assume that when a subject moves to SpecAgrsP/SpecTP it must move to SpecPartP on the way to SpecAgrsP/SpecTP as a reflex of successive cyclic movement, which in Chomsky’s (2000) system would mean that in such cases the Part head would have an EPP feature, just like the complementizer *that* in *What_i do you think t_i that John bought t_i* or the infinitival head in *The students_i seem t_i to be t_i smart* (see also Sportiche 1988 for successive cyclic A-movement). The upshot of the above discussion is that in all constructions where the subject precedes the participle, the Part head has an EPP property.

3.2 An Agree analysis of the basic paradigm

I now turn to the analysis of the paradigm from section 1, starting with LCA, an example of which is repeated below.

- (1b) Sva sela i sve varošice su (juče) uništene.
 all villages.neut and all towns.fem are yesterday destroyed.pl.fem
 ‘All villages and all towns were destroyed yesterday.’

Consider the abstract structure in (28), which, as discussed above, leads to LCA. (Recall that &P is specified for number, but not for gender. Following Munn 1993, NP1 asymmetrically c-commands NP2.)

- (28) Part[number, gender] [&P[number] NP1[gender] [... NP2[gender]]]
 EPP

As discussed in section 2, Part is a single ϕ -probe which probes for ϕ -features in (28), matching &P

¹⁵Under this analysis auxiliary movement may in fact be obligatory. Note also that I will interchangeably use AgrsP/TP and IP, since the resolution of the Split I issue does not affect the current discussion.

¹⁶Note also that the way the pronunciation of a lower copy algorithm works in Bošković (2001), a subject-participle-auxiliary sequence, which would violate the second position requirement (a PF requirement for Bošković 2001), would have to involve deletion of the higher copy of the participle, not the subject (to avoid violating the second position requirement. In such cases, the algorithm adopted in Bošković (2001) forces lower copy pronunciation of the element closest to the offending element, i.e. the auxiliary clitic.)

for number and NP1 for gender.¹⁷ Since Part has an EPP feature, a phrase must move to SpecPartP. The question is which element will undergo this movement.

Within Chomsky's system, where movement is decomposed into three operations, Match, Value and Pied-piping, we are dealing here with the issue of pied-piping. In a sentence like *John left*, *John* values all the ϕ -features of I and is then pied-piped to Spec, IP. It is in fact a standard assumption that the maximal projection of the valuator undergoes pied-piping. Let us then adopt (29).

(29) Valuators determine pied-piping.

Returning now to (28), the problem here is that there are two valuators, one requiring pied-piping of &P and the other one pied-piping of NP1. Notice also that, as noted by Stjepanović (1998) and shown in (30), SC in principle allows violations of the relevant part of the Coordinate Structure Constraint; more precisely, it allows extraction of the first conjunct of a coordinate structure.¹⁸

(30) ?Knjige_i je Marko [t_i i filmove] kupio.
books is Marko and movies bought
'Marko bought books and movies.'

This means that both &P and NP1 are in principle pied-pipable. I suggest that this kind of ambiguity prevents pied-piping (this could be considered an instance of McGinnis's 1998 lethal ambiguity, this time applied in a slightly different form to determining pied-piping rather than movement itself; the two in fact may need to be distinguished). Following Bejar's (2003) proposal that inability to pied-pipe leads to a failure to value, I furthermore suggest that since pied-piping cannot be performed on the basis of the valuation in question, the valuation itself is blocked. There are two possibilities at this point:

- default agreement for gender, which is realized in (7). This removes the problematic gender feature in Part, so that Part is now valued only by &P, hence &P undergoes pied-piping.
- Secondary Agree, which I suggest occurs in (1b).

Consider the second possibility more closely. Recall uninterpretable features must be deleted. They are deleted after undergoing valuation, given that only valued features can be deleted. What about valued uninterpretable features? I propose they are deleted when they undergo Match, as in (31).¹⁹

¹⁷Part also matches NP1 for number. Number match with individual conjuncts will become relevant only in section 3.4; pending the discussion in that section I will ignore it.

¹⁸(30) should not be analyzed in terms of ellipsis as in *Knjige je Marko kupio i filmove je pro kupio*, since then we would also expect **Marko je kupio knjige i Petar je/je kupio filmove* to be acceptable.

Stjepanović (1998) relates the possibility of Coordinate Structure Constraint violations in SC to the possibility of left-branch extraction, treating (30) in terms of left-branch extraction out of &P. (Left-branch extraction is extremely productive in the language; SC in fact allows even left-branch extraction of a name in examples like (i), see Bošković 2005a, 2008 for extensive discussion).

(i) Lava on Tolstoja čita.
Leo he Tolstoy reads
'He reads Leo Tolstoj.'

¹⁹If they never undergo Match they will also be eventually deleted when they are transferred to the semantic interface (see section 2). My point here is that if they do undergo Match, this will trigger their deletion.

Notice also that we can adopt Chomsky's (1995) deletion/erasure distinction to ensure that the features in question are accessible for PF after deletion in syntax (deleted elements are invisible only to the LF interface, see

(31) Valued uninterpretable features are deleted after Match.

What are the consequences of this for (28)? Recall that Part matches &P and NP1 for number and gender respectively. The match does not result in valuation, since the valuation in question fails to uniquely determine the pied-piping element. Pursuing the second possibility from above, given (31) the gender feature of NP1 is deleted, since it has already undergone Match. Secondary Agree then takes place, with Part matching &P for number and NP2 for gender. (After hitting &P, which is specified for number, Part is seeking only elements that have the gender feature, hence NP2, but not NP1.) The Agree operation is followed by movement of &P to SpecPartP.

Given that the features of the Part head are valued by &P and NP2 before movement to SpecPartP, a question arises if we would still have a problem with respect to pied-piping regarding movement to SpecPartP. The answer is no. Significantly, in contrast to the first conjunct, the second conjunct is not extractable (see (32)), which means that it is not a candidate for pied-piping. Since only &P is a candidate for pied-piping, &P is pied-piped to SpecPartP.

(32) *Filmove_i je Marko [knjige i t_i] kupio.
movies is Marko books and bought

We thus derive second conjunct agreement for constructions where the subject moves to SpecPartP.

It is worth noting that a slightly different analysis is available under the Rezac (2004)/Bejar (2003) proposal that Secondary Agree has an expanded search domain. Rezac and Bejar argue that if YP is merged to the specifier of the probe P, the search domain for P in Secondary Agree also contains SpecP, a proposal which is based on Chomsky's (1995) assumption that the label of a phrase is the head of the phrase, which means that the maximal projection of the probing head P is in effect P. Under the Rezac/Bejar proposal that with Secondary Agree the probe can probe its Spec we can have the following derivation for (28): After Primary Agree fails and the gender feature of NP1 is deleted, &P first moves to SpecPartP (given that NP1 is no longer a candidate for movement after its gender feature deletion) and then Secondary Agree takes place, with Part probing its Spec. The Secondary Agree after movement analysis also yields the LCA pattern. I will not pursue this analysis further here because it raises an issue regarding the assumption that a full Agree operation is a prerequisite for movement, since the Primary Agree operation has technically failed in the case under consideration (though there may be technical ways out of this conundrum. Notice also that the discussion below can be easily restated under this analysis).²⁰

Regarding constructions like (1a), such constructions do not involve movement to SpecPartP. Since there is no movement there is no pied-piping, hence nothing goes wrong if the Primary Agree relation discussed above, where Part matches &P and NP1 for number and gender respectively, results in valuation, which yields first conjunct gender agreement. The Agree system

Chomsky 1995). The features would then be erased only after transfer to PF. This is, however, not necessary. Chomsky (1995) separates formal and phonological features. What we are dealing with here is deletion of formal features, not phonological features, hence the deletion does not affect pronunciation, which is determined by phonological features. (Deletion of formal features could affect pronunciation in the Distributive Morphology model, where the former essentially serve as a clue for the insertion of the latter. However, I do not adopt this model here.)

²⁰The Secondary Agree after movement analysis might be restatable within the Franck, Lassi, Frauenfelder, and Rizzi (2006) double checking system, which assumes Agree as well as Spec-Head agreement, the latter being a follow-up feature checking process that follows Agree and Move. (Under this analysis we would, however, need to allow Spec-Head agreement to look deeper into the Spec when higher phrases in the Spec do not have the relevant feature, which would make Spec-Head agreement similar to Agree.)

thus captures the basic FCA/LCA paradigm.²¹

What about constructions with more than two conjuncts, where, as shown in (8), we get agreement with the last conjunct under subject movement. Slightly updating Munn (1993), I assume that such constructions have the structure in (33), where non-final conjuncts are treated as multiple specifiers of &P.

(33) [_{&P} Spec-Conjunct [_{&P} Spec-Conjunct [_{&P} [_& &⁰ Compl-Conjunct]]]]

Since Spec&P is in principle extractable in SC, I assume that every NP in Spec&P in principle counts as a potential pied-piper. Agreement is then possible only with the final conjunct under the analysis developed above (see below regarding FCA).²²

There is also an alternative account, where the possibility of violating the Coordinate Structure Constraint in SC is irrelevant, i.e. where the data in (30) and (32) as well as the difference between lethal ambiguity applied to movement and to pied-piping from footnote 22 are irrelevant. Under this account, the difference between non-final and final conjuncts is that the former are equidistant with &P (and each other), assuming that XP and SpecXP (as well as multiple Specs of X) are equidistant (see McGinnis 1998). We can then simply assume, following the logic of McGinnis's lethal ambiguity, that when potential pied-pipers are equidistant from the target, none of them can be targeted for pied-piping. The lethal ambiguity problem does not arise with respect to &P and the complement of & given that XP and the complement of X are not equidistant.²³

²¹Split agreement examples like (i) are marginally possible in SC, though speakers generally try to avoid them (cf. Marušič, Nevins, and Saksida 2007 for similar examples in Slovenian). An additional problem in SC is that normally, nothing is allowed to intervene between the participles in double participle constructions (see Bošković 1997).

- (i) a. ???Juče su bile sve varošice i sva sela uništena.
yesterday are been.pl.fem all towns.fem and all villages.neut destroyed.pl.neut
'All towns and all villages had been destroyed yesterday.'
- b. ???Juče su bila sva sela i sve varošice uništene.
yesterday are been.pl.neut all villages.neut and all towns.fem destroyed.pl.fem

Assuming that this type of construction should be ruled in, which is by no means obvious, I suggest that we have two agreement heads here; the lower head has the EPP feature (the feature drives the movement of the subject, which precedes the low head), while the higher head does not have it (notice that the subject follows the auxiliary; the precise identity of these heads does not matter here). Matching/Valuation/Pied-piping for the lower head proceeds as discussed above. What about the higher head? I suggest that deleted valued features are inaccessible only for Secondary Agree, where the same head probes for the second time, i.e. they are accessible for Primary Agree, where a different probe is involved. (If we follow the logic of Chomsky 2001a, they would become completely inaccessible only when the next phase level is reached.) The higher head can then still be valued by NP1. Recall, however, that it is not clear that such constructions should be ruled in, so it may not be necessary to adopt the assumption made above.

²²It turns out that when there are more than two conjuncts, extraction of any conjunct is banned. The reason for this may lie in McGinnis's (1998) lethal ambiguity, which prevents movement of a Spec to target a higher head X in a multiple-Spec configuration in certain environments that are reminiscent of some constraints holding for coordinated elements (more precisely, the coordination of likes requirement). Basically, since Specs of the same head are equidistant, they all count as candidates for movement, a context which leads to unacceptability according to McGinnis (see also Bošković 2005a). I assume that this particular type of lethal ambiguity (more precisely, the impossibility of movement due to lethal ambiguity applied to movement) is not taken into consideration when determining potential pied-pipers, that is, condition (29) above.

²³An anonymous referee notes an interesting way of teasing apart the Coordinate Structure Constraint and the equidistance analysis. (Note also that the status of the Coordinate Structure Constraint in Slovenian is not completely clear.) Since the Coordinate Structure Constraint analysis ties LCA to the possibility of Coordinate Structure Constraint violations, if there are speakers who do not allow Coordinate Structure Constraint violations such speakers should not

It should be noted at this point that I assume that, as originally proposed, equidistance is relevant only to movement/pied-piping, not to Agree. This means that it is irrelevant for FCA, which involves only Agree (FCA then can target only the first conjunct, even in (33)). This is also natural in light of the arguments given in Bošković (2007) that Move and Agree behave quite differently with respect to locality, the only factor that is relevant to Agree being intervention effects defined in terms of strict c-command. (Chomsky 2001b also takes this position, eliminating equidistance for Agree.) It is also worth noting that all the convincing cases of equidistance from the literature in fact involve movement/pied-piping, not Agree.

Returning to the FCA/LCA comparison, recall now that there is a case where the parallelism between FCA and LCA breaks down even with plural conjuncts. When the conjunct that does not determine agreement is masculine, FCA is still possible, but LCA is not.

- (34) a. Juče su uništena sva sela i svi gradovi.
 yesterday are destroyed.pl.neut all villages.neut and all cities.masc
 b. ?*Svi gradovi i sva sela su (juče) uništena.
 all cities.masc and all villages.neut are yesterday destroyed.pl.neut
 c. cf. Svi gradovi i sva sela su (juče) uništeni.
 all cities.masc and all villages.neut are yesterday destroyed.pl.masc

How can this break-down in the FCA/LCA parallelism be accounted for? (34a) can be accounted for just like other cases of FCA. What about (34b)? What is relevant here, I believe, is that masculine is also the default gender. Recall the above account of LCA in (1b)/(28). Primary Agree of Part matches the gender feature of the first conjunct, but is not valued by it for reasons discussed above. The matched gender feature of NP1 is marked for deletion given (31) and the assumption that uninterpretable features must be deleted. Secondary Agree then takes place, matching and valuing the gender feature of Part against NP2, which is followed by movement to SpecPartP.

Turning to (34b-c), recall that NP1 in (34b-c), *gradovi*, has masculine gender, which is in fact the default gender. I make what seems to me to be a natural assumption that the LF interface can ignore default features/values, hence they do not need to be deleted. In principle, when semantics is faced with a semantically uninterpretable element this could either cause a crash, or semantics could simply ignore the element in question, proceeding with the computation as if it were not there. My suggestion here is that the second option is restricted to default features/values, which then do not need to be deleted. (This may in fact be the reason why default values do not cause a crash even if they are in a position in which they can never undergo checking, like, e.g. the Case feature of *John* in *John, I hate the bastard*.) Then, when Part in (34b-c) matches the gender of NP1 in Primary Agree, its gender feature is not deleted since it bears the default value, masculine. For ease of exposition we can assume that the masculine is flagged as default, as in (35).

allow LCA examples like (1b). Interestingly, they should still allow (5c-d), if Secondary Agree is available for them: after Part matches &P for number and NP1 for gender in (5c-d), the unique pied-piper for these speakers would be &P (NP1 would not be a candidate due to the impossibility of Coordinate Structure Constraint violations), so (5c-d) would converge without problems. On the other hand, under the equidistance analysis, we can never get FCA with preverbal subjects, a pattern illustrated by (5c-d). (Notice that if there are speakers who disallow standard LCA examples like (1b), under the equidistance analysis we would need to assume that such speakers do not allow for the Secondary Agree here.) The question is then whether there are speakers who allow FCA with preverbal subjects, a possibility that can be allowed only under the Coordinate Structure Constraint analysis (recall that such speakers should, however, disallow standard LCA examples like (1b)). I do not know at this point if there are such speakers.

- (35) Part[number, gender] [&P[plural]] NP1[masc-default]....]
EPP

As a result, it is impossible to determine which phrase will undergo pied-piping to SpecPartP, given (29) and the above discussion. The only way the derivation can then converge with movement is to pursue the possibility discussed above where the Part's gender feature is deleted and replaced by default: since on this option the only ϕ -feature on the probe to be valued is number, &P is uniquely determined as the pied-piping element for movement to SpecPartP.²⁴

The break-down between first and last conjunct agreement in (34) is thus accounted for. It is worth emphasizing here that although the current approach accounts for the FCA/LCA contrast in (34) it still treats first and last conjunct agreement in the same way, without positing conditions that would hold only for one of these two patterns, i.e. we have here a uniform account of the two, which has enabled us to account for the contexts where the two do behave in the same way.

A very interesting question that arises at this point is what is responsible for the crosslinguistic difference in the availability of LCA in head-initial languages that in principle allow conjunct-sensitive agreement. The question cannot be answered conclusively until we have detailed accounts of LCA in a number of languages. As discussed in footnote 23, the candidates for the LCA/non-LCA languages cut under the current analysis are the availability of Coordinate Structure Constraint violations (under the Coordinate Structure Constraint analysis; as noted in footnote 18, such violations may be relatable to the availability of a certain type of left-branch extraction) or the possibility of Secondary Agree (under the alternative equidistance analysis).²⁵ At any rate, the issue has to be put aside until we have detailed accounts of LCA in a number of languages.

3.3 Interpretable gender

I now turn to a surprising LCA breakdown which provides strong evidence for the important assumption of the current analysis that truly grammatical gender is an uninterpretable feature, which means that it is subject to deletion.

As noted above, gender specification in SC is largely arbitrary. Nevertheless, there are cases where gender specification can be considered to have real semantic motivation. Thus, nominal *muškarci* 'men' is masculine and *žene* 'women' feminine. Interestingly, exactly with this kind of nominals LCA fails. Thus, (36a) contrasts with (1b) and (5b) regarding the possibility of LCA.

- (36) a. ?*Sve žene i sva djeca su došla.
all women.fem and all children.neut are left.pl.neut

²⁴Alternatively, we could assume that default values can be ignored for (29), i.e. in determining pied-piping. Movement to SpecPartP could then take place in (34b-c) without deletion of the probe's gender feature. Part would match &P for number and NP1 for gender but if a Match with a default feature can be ignored for determining pied-piping &P would still be selected as a unique pied-piper, moving to SpecPartP without problems. This analysis and the analysis given in the text both predict that in a NP1 (non-masc), NP2 (masc), and NP3 (non-masc) coordination (in fact any coordination where a non-final conjunct is masculine), LCA will be impossible. The prediction is borne out.

(i) ?*Sve varošice, svi gradovi i sva sela su (juče) uništena.
all towns.fem all cities.masc and all villages.neut were yesterday destroyed.pl.neut
'All towns, all cities, and all villages were destroyed yesterday.'

²⁵Maria Polinsky (personal communication) notes that the relevant parametric difference could also be tied to the way the EPP is satisfied or different projections where agreement occurs (e.g. the presence of PartP in a language, if the LCA pattern is tied to a property of PartP).

- ‘All women and all children left.’
- b. *Sve žene i sva djeca su došle.
all women.fem and all children.neut are left.pl.fem
- c. cf. Sve žene i sva djeca su došli.
all women.fem and all children.neut are left.pl.masc

This can be easily accounted for if in this case the gender feature of the first conjunct, *žene*, is interpretable, which means it is not subject to deletion (see Chomsky 1995). Since, as a result of this, it is impossible to determine which phrase will undergo pied-piping to SpecPartP (due to (29)), the only way we can get a legitimate derivation is to pursue the default agreement option, on which the gender feature of the probe is deleted (and replaced by default). The contrast between (36b) and (1b) thus receives a principled explanation under the current analysis, where a difference in the (un)interpretability of the gender feature of the first conjunct is responsible for the contrast, the difference having strong semantic motivation.

3.4 FCA and LCA with singular conjuncts

Recall that both FCA and LCA are blocked when individual conjuncts are specified as singular, as illustrated by (37a-b). In fact, more generally, both FCA and LCA are blocked when the first conjunct is specified as singular, regardless of the number specification of the second conjunct (see (37c-d), where the second conjunct is plural.)

- (37) a. *Juče su uništena jedno selo i jedna varošica.
yesterday are destroyed.pl.neut. one village.neut and one town.fem
‘One village and one town were destroyed yesterday.’
- b. *Jedna varošica i jedno selo su (juče) uništena.
one town.fem and one village.neut are yesterday destroyed.pl.neut.
- c. *Juče su uništena jedno selo i sve varošice.
yesterday are destroyed.pl.neut. one village.neut and all towns.fem
‘One village and all town were destroyed yesterday.’
- d. ?*Jedna varošica i sva sela su (juče) uništena.
one town.fem and all villages.neut are yesterday destroyed.pl.neut.

Notice that in all the examples in (37), &P, which, as discussed above, is specified as plural, controls number agreement on the participle, just as in the legitimate cases of FCA/LCA in (1). (Recall that the participle must be plural in all examples with conjoined subjects.) Given that &P controls number agreement, how can we make the number specification of the first conjunct relevant, enabling it to disrupt both FCA and LCA in (37)? This can actually be done quite straightforwardly in the current system, given that the ϕ -probing head is a single- ϕ probe, which probes for both the number and the gender feature together. In other words, it is crucial here that the ϕ -probe is not a split ϕ -probe, as in several languages discussed by Bejar (2003) and Rezac (2004) and applied to FCA/LCA in Slovenian by Marušič, Nevins, and Saksida (2007), which could probe for number and gender separately. Recall how ϕ -probing proceeds in an acceptable example like (1a) (see the structure in (28), repeated here without the EPP specification).

- (38) Part[number, gender] [&P[number] NP1[gender] [... NP2[gender]]]

The Part head probes for both the number and the gender feature. It does not stop when it matches &P for number, since &P is not specified for gender. When Part matches NP1, the probing stops due to Agree Closest since at this point both ϕ -features of Part have found a match. Part in (1a) thus basically undergoes Hiraiwa's (2005) Multiple Agree with &P and NP1. As discussed above, this results in FCA when the subject does not move to SpecPartP. When the subject is supposed to move to SpecPartP, as in (1b), a problem arises. Due to multiple valutors, &P and NP1, the pied-piper cannot be uniquely determined. As a result, the valuation itself fails. However, the gender feature of NP1 deletes, given condition (31). Secondary Agree then takes place but the probing now does not stop with NP1 (in fact, as noted above, it does not target NP1), which no longer has the gender feature. It proceeds to NP2, as a result of which we get LCA in (1b).

Returning to (37), consider first (37a). The relevant structure is given below.

(39) Part[number, gender] [_{&P[pl]} NP1[sg, neut] [... NP2[sg, fem]]]

The Part head probes here for number and gender, just as it does in (1a). As before, the Part head matches &P and NP1. Since both ϕ -features of the Part head have now found a match, the probing stops, given Agree Closest. However, we now have a problem. As discussed above, the Part head here is attempting to undergo Multiple Agree with &P and NP1. While the gender feature of the Part head can be valued, the valuation resulting in neuter gender specification, the number feature cannot be valued due to a valuation conflict: since one of the matching elements is plural (&P) and one singular (NP1), the number value of the probing head cannot be uniquely determined.²⁶ Still, locality does not allow the Part head to probe further down.

The above state of affairs is quite similar to what we have already seen with respect to (1b). Recall that in (1b) Primary Agree fails to value ϕ -features of Part. However, while in (1b) we can delete one of the trouble-makers, the gender feature of NP1, initiating Secondary Agree which eventually results in ϕ -valuation of Part (with the LCA pattern), this cannot be done in (37a). The problem here is that, in contrast to (1b), where the problematic feature, namely gender, is uninterpretable, in (37a) the problematic feature, namely number, is interpretable, hence cannot be deleted (see Chomsky 1995). The derivation in question then cannot yield a grammatical output.²⁷ The ungrammaticality of (37a) is thus accounted for. Notice furthermore that in the above account of (37a) it does not matter whether &P will move to SpecPartP or not and whether the second conjunct is specified as plural or singular. In other words, the above account of (37a) extends to all the examples in (37), a desirable result.²⁸

Notice also that the above analysis makes an interesting prediction regarding constructions with three conjuncts. While in an NP1 (pl), NP2 (sg), *and* NP3 (sg) coordination where the subject

²⁶As an alternative, we can simply assume that Multiple Agree with elements with conflicting features leads to unacceptability. Notice also that it is crucial here that gender and number are not probed for separately, as in Marušič, Nevins, and Saksida's (2007) account of Slovenian, since the probing for number would then stop with &P. In other words, Part cannot ignore the number feature of NP1, since ϕ -features cannot be separated in this respect in SC.

²⁷Following Corbett (2002), I assume default number assignment is not available here. The claim is not strange, since, as is well-known, default feature-value assignments are not freely available. E.g., across languages, default Case assignment is severely restricted, being confined to a couple of stipulated contexts (it cannot be used to quite generally void the Case Filter). It is also worth noting that Corbett (2002) actually argues that default number assignment in SC is not possible without default gender assignment. (This is a one-way, not a two-way correlation. His claim is stated in terms of number/gender resolution rules, whose results correspond to default values in the current system.)

²⁸(37d) is slightly better than other examples in (37) which may be a processing effect since *sva sela*, which agrees in both gender and number, is linearly closer to the verb than the trouble-making singular NP. The processing explanation would also extend to the contrast between (34b) and **Juče su uništena svi gradovi i sva sela* (and (4c)).

stays in situ valuation of Part should proceed without problems, with NP1 controlling the gender of Part, this is not the case with NP1 (sg), NP2 (pl), *and* NP3 (pl) coordinations, where the ϕ -valuation of Part should fail for the same reason as in (37a). As shown in (40), the prediction is borne out.

- (40) a. *Juče su uništene jedna varošica, sve kuće, i sva sela.
 yesterday are destroyed.pl.fem one town.fem all houses.fem and all villages.neut
 b. Juče su uništena sva sela, jedna varošica, i jedna kuća.
 yesterday are destroyed.pl.neut all villages.neut one town.fem and one house.fem

Recall now that while FCA and LCA behave in the same way with respect to plural+plural, singular+singular, and singular+plural coordinations, the latter two requiring default masculine gender on the probe regardless of the gender specification of the individual conjuncts, there is a breakdown in the FCA/LCA parallelism with plural+singular coordinations. As noted in section 1.1 and shown in (41), while a plural+singular coordination yields FCA, LCA is blocked in this context.

- (41) a. Juče su uništena sva sela i jedna varošica.
 yesterday were destroyed.pl.neut all villages.neut and one town.fem
 b. *Sve varošice i jedno selo su juče uništena.
 all town.fem and one village.neut were yesterday destroyed.pl.neut

We thus have another breakdown of the FCA/LCA parallelism. Can we capture it without positing mechanisms that would hold for only one of these agreement patterns, in line with the analysis pursued here? Example (41a) can be accounted for as discussed above. What about (41b), which has the abstract structure in (42)?

- (42) Part[number, gender] [&P[pl] NP1[pl, fem] [... NP2[sg, neut]]]
 EPP

Part in (41b)/(42) matches &P and NP1. If the subject were to stay in situ, the relevant elements would value the ϕ -features of Part, which would result in plural feminine ϕ -specification of Part, i.e. FCA. However, as discussed above, the Match in question cannot result in valuation of the ϕ -features of Part when the subject moves to SpecPartP, as in (41b)/(42), since it fails to uniquely identify the pied-piper, given (29). Instead, what happens in (41b)/(42) is that the gender feature of NP1 deletes, given (31), and then Secondary Agree is initiated. Secondary Agree reaches all the way to NP2, since neither &P nor NP1 bears the gender feature. But then we get a conflict in the number specification of the goals, just as in (37): while &P is plural, NP2 is singular. As in (37), the derivation then fails to yield a legitimate result since the number feature of the probe cannot be valued. The ungrammaticality of (41b) and (37) is thus accounted for in the same way. Most importantly, the FCA/LCA parallelism breakdown in (41) is captured without positing any mechanisms that would hold for only FCA or LCA. This was in fact accomplished by using the mechanisms that were intended to capture the FCA/LCA parallelism from (37).

Finally, let me again reiterate that, as noted above, we cannot simply assume that in the cases of conjunct-sensitive agreement we are dealing with full (i.e. gender and number) first/last conjunct agreement with a single NP. Simply assuming full first/last conjunct agreement cannot account for (43a) or (43b). We then cannot simply assume that the same element, namely the first conjunct with FCA and the last conjunct with LCA, controls both gender and number.

- (43) a. *Juče je uništena jedna varošica i sva sela/jedno selo.
 yesterday is destroyed.sg.fem one town.fem and all villages.neut/one village.neut
 b. *Sva sela/Jedno selo i jedna varošica je juče uništena.
 all villages.neut/one village.neut and one town.fem is yesterday destroyed.sg.fem

The reader can verify that such constructions can be easily captured under the current analysis, where &P, which is plural, is always involved in the relevant agreement process.

To sum up the analysis presented so far, I have argued that the probe responsible for participial agreement in SC is a non-split ϕ -probe. It searches for a goal to value its number and gender features. Since the coordination phrase, &P, is specified only for number, in coordination cases the probe matches disjoint valutors, &P for number and the first conjunct for gender. These elements value the probe's ϕ -features, yielding the FCA pattern. However, the existence of two potential valutors for a single ϕ -probe causes a problem in cases involving movement, i.e. pied-piping of a valutor. Since both of these goals are in principle mobile in SC this results in ambiguous targeting for pied-piping, which makes movement impossible and cancels the valuation in question; in other words, the Match here does not result in valuation. The participial probe then initiates Secondary Agree within a larger search space that includes the second conjunct. Since the second conjunct is in principle immobile, it is not a candidate for movement, which means that a pied-piping valutor can now be unambiguously determined, &P being the pied-piper. This results in the LCA pattern.

The crucial assumption for the above analysis is that the gender feature of SC nominals is valued and uninterpretable and that such features undergo deletion as soon as they undergo Match, i.e. as soon as they are targeted by a probing operation. The problematic gender feature of the first conjunct is then deleted before the participial probe re-initiates search for an appropriate goal, so that the second probing operation can target the second conjunct for the gender feature.

I have provided a uniform account of the contexts where only LCA is blocked. LCA fails in the cases where the gender feature of the first conjunct cannot be deleted, which makes it impossible for the probe to by-pass the gender of the first conjunct. This happens when the gender of the first conjunct is semantically motivated, which has been captured by treating semantically motivated gender features as interpretable features: being interpretable, such features do not undergo deletion. A breakdown in the FCA/LCA parallelism also happens when the conjunct that does not control agreement is masculine, which is also the default gender. I have argued that default features/values do not undergo deletion since they can be ignored by the semantics.

There are also contexts where both FCA and LCA are blocked. FCA and LCA are both blocked with singular conjuncts for the same reason: in such cases the non-split ϕ -probe cannot value its number feature due to the conflicting number specification of &P and NP1 (both of which serve as goals), the former being plural and NP1 being singular. Since the number feature is interpretable it cannot be deleted. While singular first conjunct blocks both FCA and LCA, only LCA is blocked when the second conjunct is singular. The reason for this is that the second conjunct is involved in valuation of the participial probe only with LCA.

On a more abstract level, the current analysis in fact provides a uniform account of all the contexts where FCA and/or LCA are blocked. One way or another, all such cases involve a conflicting valuation, either with respect to Agree or determining pied-piping. The fact that the proposed analysis has managed to unify all FCA/LCA failures should be interpreted as a strong argument in its favor.

4. Uniform conjuncts

I now turn to conjunctions where individual conjuncts agree in gender specification. Not surprisingly, with masculine conjuncts, the participle always has masculine specification, as in (44).

- (44) a. Juče su prodani svi magarci i svi psi.
 yesterday are sold.pl.masc all donkeys.masc and all dogs.masc
 ‘All donkeys and all dogs were sold yesterday.’
- b. Svi psi i svi magarci su juče prodani.
 all dogs.masc and all donkeys.masc are yesterday sold.pl.masc

Such examples are not very helpful since it is impossible to determine whether the participle’s gender comes from one of the conjuncts or whether we are dealing here with a default specification.

Before proceeding, the reader should note that the analysis developed above is not particularly tailored to coordinations of NPs with mixed gender specification. We may therefore expect that it would carry over to coordinations where conjuncts agree in gender specification, an expectation that at first sight may seem rather strange since the odd pattern of gender marking with mixed conjuncts intuitively seems to result from conflicts in the gender specification of individual conjuncts. Surprisingly, uniform neuter conjuncts exhibit behavior that is quite similar to mixed feminine/neuter conjuncts. In fact, apart from one example, the uniform neuter conjunct paradigm from (45) tracks perfectly the paradigm with mixed feminine+neuter/neuter+feminine conjuncts, henceforth mixed coordinations.

Examples (45a) and (45b) show for FCA and LCA contexts respectively that the participle can bear neuter gender with coordinations of plural neuter nouns. However, coordinations of singular neuter nouns require default masculine gender, neuter gender on the participle being unacceptable. This surprising fact is illustrated by (45e) for FCA and (45h) for LCA. Coordinations of singular neuter nouns in this respect pattern with mixed coordinations. Moreover, plural/singular and singular/plural neuter combinations also pattern with mixed coordinations in the postverbal position. The relevant data are given in (45c,d) for FCA and (45f) for LCA. The only departure concerns preverbal coordinations. While, as with mixed conjuncts, a plural/singular coordination requires masculine gender on the participle, (45f) being unacceptable, a singular/plural coordination, a context that also requires default gender with mixed coordinations, allows neuter gender (45g). (Masculine *prodani* is possible in all the examples in (45).)

- (45) a. Juče su prodana sva telad i sva paščad.
 yesterday are sold.pl.neut all calves.neut and all dogs.neut
 ‘All calves and all dogs were sold yesterday.’
- b. Sva telad i sva paščad su juče prodana.
 all calves.neut and all dogs.neut are yesterday sold.pl.neut
- c. Juče su prodana sva telad i jedno pašče.
 yesterday are sold.pl.neut all calves.neut and one dog.neut
- d. *Juče su prodana jedno tele i sva paščad.
 yesterday are sold.pl.neut one calf.neut and all dogs.neut
- e. *Juče su prodana jedno tele i jedno pašče.
 yesterday are sold.pl.neut one calf.neut and one dog.neut
- f. *Sva telad i jedno pašče su juče prodana.
 all calves.neut and one dog.neut are yesterday sold.pl.neut
- g. ?Jedno tele i sva paščad su juče prodana.
 one calf.neut and all dogs.neut are yesterday sold.pl.neut

- h. *Jedno tele i jedno pašče su juče prodana.
 one calf.neut and one dog.neut are yesterday sold.pl.neut

To account for the dominant parallelism between mixed and neuter coordinations I suggest applying the analysis of mixed coordinations from section 3 to neuter coordinations. This way we can account for almost all of the data in (45), including the surprising impossibility of neuter gender on the participle in (45e,h). We are then left with (45g), which remains unaccounted for. I will have to leave accounting for this example for future research, merely pointing out that it is not out of question that we are dealing here with a processing effect, where the effect of an “intervener” is voided if the intervener is of the same gender as the agreeing NP, which agrees for *both* gender and number and is moreover linearly closer to the verb (see also footnote 28).)

Turning now to feminine coordinations, we find a very different situation here. The participle can always have feminine gender with uniform, feminine coordinations (see Corbett 1983).²⁹

- (46) a. Juče su prodane sve krave i sve ovce.
 yesterday are sold.pl.fem all cows.fem and all sheep.pl.fem
 ‘All cows and all sheep were sold yesterday.’
- b. Sve krave i sve ovce su juče prodane.
 all cows.fem and all sheep.pl.fem are yesterday sold.pl.fem
- c. Juče su prodane sve krave i jedna ovca.
 yesterday are sold.pl.fem all cows.fem and one sheep.sg.fem
- d. Juče su prodane jedna krava i sve ovce.
 yesterday are sold.pl.fem one cow.fem and all sheep.pl.fem
- e. Juče su prodane jedna krava i jedna ovca.
 yesterday are sold.pl.fem one cow.fem and one sheep.sg.fem
- f. Sve krave i jedna ovca su juče prodane.
 all cows.fem and one sheep.sg.fem are yesterday sold.pl.fem
- g. Jedna krava i sve ovce su juče prodane.
 one cow.fem and all sheep.pl.fem are yesterday sold.pl.fem
- h. Jedna krava i jedna ovca su juče prodane.
 one cow.fem and one sheep.sg.fem are yesterday sold.pl.fem

Feminine coordinations apparently need to be treated differently from neuter and mixed coordinations. This can be easily accomplished, and the above data accounted for, if we allow feminine gender of uniform feminine coordinations to percolate to the &P level. The &P in (46) would then be specified as plural, feminine in all the examples, as a result of which the participle

²⁹There are two broad classes of feminine nouns, those ending with *a*, and those with the zero ending. Default masculine is always possible with the latter, which are almost exclusively inanimate. With the former, sometimes it is acceptable (ib), and sometimes degraded (ia), a distinction that may reflect the possibility of interpreting gender as reflecting real world semantics (see Corbett 1983:204-205 for relevant discussion. Note that the participle can be feminine in both (ia) (*došle*) and (ib) (*posvećene*)).

- (i) a. ?*Njegova žena i njegova tetka su juče došli.
 his wife.fem and his aunt.fem are yesterday arrived.pl.masc
 ‘His wife and his aunt arrived yesterday.’
- b. Njegova snaga i njegova pažnja su posvećeni toj borbi.
 his strength.fem and his attention.fem are dedicated.pl.masc that fight
 ‘His strength and his attention are dedicated to that fight.’

would also bear plural, feminine specification. Notice that in all the examples above where conjunct gender agreement was blocked and default agreement forced, this happened because the probe attempted to agree for gender with one of the conjuncts. Under the analysis suggested above, this would never be the case with feminine coordinations, where the probe would agree with &P.

How can gender percolation with feminine conjuncts be implemented? I suggest that in all relevant examples &, the head of &P, gets feminine gender specification upon First Merge. More precisely, when & merges with a feminine NP, with & projecting, & in the resulting label of the merger may also be specified as feminine. This is shown below, using Chomsky's (1995) notation.

(47) {&(fem) {& NP(fem)}}

I assume that & can keep projecting feminine gender specification only if additional conjuncts it merges with do not have a different gender specification and that the projection is obligatory. This means that an addition of a non-feminine conjunct cannot yield a legitimate output if the option in (47) is chosen upon First Merge.

An important question that now needs to be answered is why feminine and neuter gender would differ rather radically in their behavior in coordinations, a difference which I have implemented above by positing a difference in the ability to percolate gender specification through &P. Intuitively, the answer to this important question is rather simple. Whereas neuter gender is always grammatical (i.e. arbitrary), feminine gender is sometimes semantically grounded, i.e. interpretable (cf. section 3.3). Assuming that only interpretable gender can percolate to the &P level, as a result of which &P would have gender specification, makes sense given that the number feature, which is clearly interpretable, also quite clearly has to be present at the &P level. It is then possible that only interpretable features can be present at the &P level.³⁰ The situation is, however, more complicated. It is not the case that only feminine NPs with a semantically-grounded gender specification percolate their gender feature (to the &P level); all feminine NPs do that. Apparently, a gender feature that is in principle interpretable can percolate. It is not clear to me how to capture this intuition formally without ugly stipulations.

To sum up, while uniform neuter coordinations almost perfectly track mixed coordinations, uniform feminine coordinations behave differently in that they always allow feminine gender on the participle. I have suggested a tentative way of capturing the exceptional behavior of feminine coordinations, leaving the search for a more principled explanation for future research.

5. Crosslinguistic variation with first conjunct agreement

A rather standard conjunct-sensitive agreement paradigm involves languages where FCA involves first conjunct number agreement, as in English/Spanish (48). I will refer to this pattern as the standard FCA below.

- (48) a. There is a woman and a man in the garden.
b. Llegó Juan y Miguel.
arrive.sg Juan and Miguel
'Juan and Miguel arrived.'

FCA in such languages is more permissive than in SC in that it is allowed even with singular

³⁰We would then expect masculine to pattern with feminine in the relevant respect, since masculine can also be interpretable. The prediction is, however, impossible to test because masculine is also the default gender.

conjuncts. If an existing account of such an FCA paradigm is adopted we would need to make sure that it does not incorrectly extend to SC FCA, ruling in the cases that are not allowed. I will offer here only a brief speculation regarding this issue, since a detailed analysis of the pattern in question is beyond the scope of this paper.

If an ellipsis analysis along the lines of Aoun, Benmamoun, and Sportiche (1994, 1999) is adopted for the standard FCA paradigm, all we would need to assume to prevent this pattern from extending to SC (see section 1 for arguments that the analysis should not be extended to SC) is that the relevant ellipsis operation is not available in the relevant contexts in SC, which is not that strange given that under this analysis we anyway need to assume that languages differ in this respect. Since the ellipsis analysis is controversial (see, e.g. Camacho 2003 and Doron 2000 for opposing views) I will make another suggestion that does not treat FCA in terms of ellipsis.

In her analysis of the standard FCA pattern Doron (2000) argues that the conjunction, i.e. &P in the current system, does not have morphosyntactic specification for the feature number. Adopting Doron's claim and the current analysis would mean that languages differ with respect to the number specification of &P (see also Badecker 2007 for some relevant discussion). Evidence for such a crosslinguistic difference is straightforward: In SC, agreement with a conjoined subject always results in plural, regardless of the position of the subject or the number specification of individual conjuncts. In fact, SC differs from English in that even in some cases where the denotation of a conjunction can be semantically viewed as an atomic individual, which typically allow singular in English, SC still requires plural.

- (49) a. Milan i Ana su/*je dobar par.
 Milan and Ana are/is good couple
 b. Jagode i šlag su/*je na jelovniku.
 strawberries and cream are/is on menu
 c. Jagode i šlag čine/*čini dobru kombinaciju.
 strawberries and cream make/makes good combination
- (50) a. John and Mary is a nice couple.
 b. Strawberries and cream is on the menu.
 c. Strawberries and cream makes a good combination.

The fact that &P always governs plural agreement in SC makes sense if &P itself is specified as plural. In English or Spanish, on the other hand, agreement with conjoined subjects does not always result in plural agreement. This would then suggest that &P should not be inherently specified as plural: if it were, we would always get plural agreement. When the ϕ -probe initiates Agree in Spanish/English (48) then, the closest element with the number feature is NP1, which results in first conjunct number agreement. This is in contrast to SC, where the closest element with the number feature is always &P.³¹

³¹First conjunct agreement is actually optional in Spanish (see Camacho 2003 and Doron 2000), which may indicate &P optionally has the number feature in Spanish. The situation is less clear in English, where it in fact appears first conjunct agreement is obligatory in existential constructions (see Sobin 1994, Bošković 1997, and Doron 2000).

An *NLLT* referee claims there is some variation regarding SC examples like (ia), some of his/her informants accepting it and some rejecting it. The referee also gives (ib) as acceptable for his/her informants.

- (i) a. (*)Juče je uništena jedna varošica i sva sela.
 yesterday is destroyed.sg.fem one town.fem and all villages.neut
 'One town and one village/all villages were destroyed yesterday.'
 b. (?*)Knjige, su bile [t_i časopisi] na istom stolu.

Now, what happens when the subject is moved in Spanish/English, where the only possibility is plural agreement, other options being unacceptable.

- (51) a. A woman and a man are in the garden.
b. *A woman and a man is in the garden.
c. *Juan y Miguel llegó.
d. Juan y Miguel llegaron.
Juan and Miguel arrived.pl

I suggest that since these languages do not allow Coordinate Structure Constraint violations, NP1 cannot determine the pied-piper since it cannot undergo movement. If there is an option where &P has number specification, which should be available for languages where FCA is optional (see footnote 31), this option will then be enforced, yielding plural agreement. If a language does not have this option, given the above discussion the derivation cannot converge via “regular” Agree. I suggest that what happens then is that &P is assigned default number, which, as noted by an anonymous referee and argued by Sauerland (2003, 2004), is plural crosslinguistically.³² &P then triggers plural on the verb.

Adopting as an alternative Citko’s (2004) proposal that standard FCA languages have at their disposal the standard &P structure, which yields singular agreement when the first conjunct is singular in the languages in question, as discussed above, as well as the structure where a null plural pronoun takes &P as its complement, which can only yield plural agreement, with movement contexts being compatible only with the null pronoun structure, would also work here and obviate the need for default number. If this analysis is adopted, a question arises whether the null pronoun coordination structure should be allowed as an option in SC. (Recall that, as discussed above, the

books were been.pl.fem and magazines on same table
'Books and magazines were on the same table.'

Interestingly, both (ia) and (ib) can be accounted for if for the speakers in question &P has the option of not having number specification. &P would then not prevent number agreement with the first conjunct in (ia), and would not cause a problem for determining the unique pied-piper in (ib): since the first conjunct would value both the number and the gender feature it would be the only candidate for pied-piping. I am, however, skeptical that this option is real. My informants find (i) unacceptable. It is in fact quite possible that there is no real speaker variation here--we may be dealing here merely with a different criterion for when a speaker calls an unnatural/degraded example unacceptable, such examples being unnatural/degraded for all speakers when compared to the base-line data. This issue often arises in free word order languages, where violations of many requirements typically yield sentences that are much less unacceptable than in English. Furthermore, it is also possible that the speakers who accept (ia) treat the second conjunct as an afterthought, which means the real subject for them would not be a coordination. Moreover, there is a requirement that the remnant of extraction out of coordinate structures precedes the verb, the reason for this being that the remnant must be focalized and focalized elements precede the verb. This condition is also not met in (ib) (this could also suggest an afterthought treatment for the second conjunct). At any rate, since my informants do not find (i) acceptable I am unable to verify further the suggestions made in this footnote.

It is worth noting here that examples like (ii), involving a disjunction, are acceptable for all speakers. This is not surprising; disjunctions clearly should not be inherently specified as plural given their semantics (I discuss agreement with SC disjunctions in more detail in work in preparation).

- (ii) Juče je uništeno jedno selo ili jedna varošica.
yesterday is destroyed.sg.neut one village.neut or one town.fem
'There was one village or one town destroyed yesterday.'

³²Sauerland argues for this on semantic grounds, and I assume that &P gets the semantically default number (given the semantic import of coordination). As shown by Sauerland, his approach also explains exceptional singulars with preverbal coordinations, such as those in (50).

standard &P structure yields plural agreement with SC conjunctions.) An intriguing possibility presents itself here that the option is available and that the pronoun is masculine, which could account for the fact that masculine gender is almost always available, even in the cases where nothing goes wrong with the non-masculine gender derivation.

There is also an alternative analysis based on a proposal made in Bošković (2005b). Following Lasnik (1995) and Bošković (1997), Bošković (2005b) assumes that agreement in the *there* existential construction is established via *there*, which is freely generated with any agreement features. *There* then establishes an agreement relation with both I and its associate (by probing both of them), which by transitivity end up agreeing with each other although there is no direct probe-goal relation between the two. Bošković (1997) argues that &P cannot serve as an associate of *there*, which requires the associate to be an NP (see Bošković 2005b for an account of this). Under this analysis we can allow &P to be specified as plural even in English, i.e. we do not need to posit a difference between SC and English in the relevant respect. We still get singular agreement in (48a) because &P is not a potential agreement target for *there*, which must target an NP. In movement constructions like (51), none of the above considerations is relevant, *there* not being present. In such constructions the agreement probe targets the closest element with the number feature, i.e. &P, which is specified as plural (even in English under this analysis). This analysis requires treating postverbal subject constructions such as Spanish (48b) as involving a null expletive in languages that exhibit the standard FCA pattern.

As noted above, I have confined myself here simply to making preliminary remarks regarding how the standard FCA pattern could be handled in a way that is not inconsistent with the analysis of the conjunct-sensitive agreement pattern examined in this work. A detailed analysis of the FCA pattern in question is beyond the scope of this paper.

6. Checking uninterpretable features

The analysis presented in this paper crucially relies on the assumption that gender of SC nouns is a valued uninterpretable feature. The assumption is well-motivated. Consider (52). (*Kola* is a pluralia tantum noun and the verb agrees with it in number in (52a).)

- (52) a Ta zelena kola su juče kupljena.
 that.fem green.fem car.fem are yesterday bought.pl.fem
 ‘That green car was bought yesterday.’
- b. To zeleno auto je juče kupljeno.
 that.neut green.neut car.neut is yesterday bought.sg.neut
- c. Taj zeleni automobil je juče kupljen.
 that.masc green.masc. car.masc is yesterday bought.sg.masc

The gender of the adjective, the demonstrative, and the verb clearly depends on the gender of the noun. The adjective *green* can be feminine, neuter, or masculine; which gender specification the adjective will have depends on the noun it modifies. As noted by Pesetsky and Torrego (2007), the dependence of the gender specification of adjectives, demonstratives, and verbs on the syntactic context in which these elements occur can be easily captured if they are lexically unvalued for gender: they receive their gender value after undergoing agreement with a noun that already has a valued gender specification. In contrast to the adjective, the demonstrative, and the verb in (52), nouns like *kola*, *auto*, and *automobil* (all of which mean ‘car’) have a fixed gender specification:

kola is always feminine, *auto* is always neuter, and *automobil* is always masculine.³³ As noted by Pesetsky and Torrego, the most straightforward way of capturing this state of affairs is to assume that the gender of nouns is lexically valued; nouns do not receive their gender value during syntactic derivation, hence their gender value does not depend on the syntactic context in which they are found, in contrast to adjectives, demonstratives, and participles.³⁴ SC gender is quite clearly grammatical/arbitrary (putting aside a few nouns where the gender is semantically predictable, discussed in section 3.3., whose distinct behavior in fact provides very strong evidence that the gender of other nouns is semantically uninterpretable)--it depends on the declension class a noun belongs to. We then have here evidence for the existence of valued uninterpretable features, a possibility that is disallowed in Chomsky's (2000, 2001a) system essentially by a stipulation. We have already seen that the possibility has to be allowed on strictly empirical grounds. Allowing for the existence of valued uninterpretable features also allows us to simplify the feature-checking process (see also Pesetsky and Torrego 2007; see this work, Bošković 2007, and Rodríguez-Mondoñedo 2007 for additional problems for Chomsky's position that uninterpretable features must be lexically unvalued).

Since in Chomsky's system uninterpretable features are always unvalued, the system does not allow feature checking between two uninterpretable features. Feature checking is supposed to result in valuation of unvalued features. If both the feature of the goal and the corresponding feature of the probe are unvalued, feature checking between the two cannot result in feature valuation. Disallowing the possibility of checking two uninterpretable features against one another forces Chomsky quite generally to tie checking of an uninterpretable feature F of a goal to checking of a different uninterpretable feature K of its probe (note that interpretable features, which are always valued for Chomsky, cannot serve as probes due to Last Resort; since there is no need for them to initiate probing they are not allowed to do it). This makes feature checking rather cumbersome and leads to a proliferation of features involved in checking. Thus, (53a) and (53b) cannot result in checking of the K feature of Y; (53a) because, being unvalued, the uninterpretable feature uK of X cannot value the uK of Y, and (53b) because X will not function as a probe due to the lack of uninterpretable features. As a result, Chomsky is forced to posit (53c), where the uK of Y is checked as a reflex of the F feature-checking relation. As noted above, this kind of reflex checking considerably complicates the feature-checking mechanism and leads to a significant proliferation of features involved in checking (we cannot simply have K-feature checking in (53); rather, we need to assume that an additional feature is involved in feature checking between X and Y.)

- (53) a. X Y
 uk uK
 b. X Y
 iK uK
 c. X Y
 uF iF
 uK

³³Actually, for some speakers *auto* (which may be a clipping from *automobil*) can be masculine or neuter.

³⁴Recall also that the noun in (52a) is a pluralia tantum noun, i.e. its number is plural although it is interpreted as singular. These kinds of lexical quirks also call for full lexical specification of ϕ -features of nouns (i.e. considering them to be lexically valued). As pointed out by Pesetsky and Torrego (2007), there are no pluralia tantum verbs or adjectives, which is not surprising if the ϕ -features of these elements are lexically unvalued: such treatment does not leave room for lexical quirks like the one exhibited by the number specification of the noun in (52a).

Allowing for the possibility of valued uninterpretable features enables us to simplify the feature checking relations from (53c). In particular, (53a) is now allowed, if one of the K features is valued. The option in (53a) was in fact taken advantage of above in the gender checking relation between Part and NP subjects, where the gender feature of both Part and the NP is uninterpretable. However, the feature is unvalued only on the Part head (for another relevant case, see footnote 36).

As noted in section 2, the current feature checking system is valuation driven. In Chomsky's (1995) system, what was driving feature checking was uninterpretability; all uninterpretable features had to undergo feature checking so that they can be eliminated from the derivation before reaching semantics, where they would cause a Full Interpretation violation. What drives feature checking in the current system is valuation; i.e. the need to value unvalued features. Uninterpretable features that are unvalued still need to undergo feature checking (so that they can get valued, which is a prerequisite for their deletion). However, valued uninterpretable features do not need to undergo feature checking since they can get deleted even without feature checking.³⁵ This is an important departure from Chomsky's (1995) system, where all uninterpretable features have to undergo feature checking (the same actually holds for Chomsky 2000, 2001a and Pesetsky and Torrego 2007). SC conjunct sensitive agreement provides strong evidence in favor of the current feature checking system, i.e. it provides evidence that valued uninterpretable features indeed do not need to undergo checking. Consider again the following example.

- (54) Juče su uništena sva sela i sve varošice.
 yesterday are destroyed.pl.neut all villages.neut and all towns.fem
 'All villages and all towns were destroyed yesterday.'

The participle in (54) agrees in gender (i.e. undergoes feature checking for gender) with the first conjunct, which means the second conjunct is not involved in gender feature checking. Notice also that the second conjunct does not have the default masculine gender. Its non-default gender feature simply goes unchecked in (54). This is exactly what is expected given the above discussion: the gender feature of the noun is uninterpretable, but valued. As a result, it can be deleted (so that it does not enter semantics, where it would cause a Full Interpretation violation) without checking. The SC gender paradigm thus provides evidence that one type of uninterpretable features, namely valued uninterpretable features, does not need to undergo feature checking.³⁶

Another relevant case concerns Case checking. Case is quite clearly uninterpretable on both the traditional Case assigner, e.g. finite Tense, and Case assignee. A particular Case assigner always governs the same Case, while the Case of an NP depends on its syntactic context. As a result, the Case of traditional Case assigners should be valued, and the NP's Case should be unvalued. Now, it has often been argued, both in the Government and Binding framework and within Minimalism, that just like NPs have to be assigned Case (I will refer to the requirement, which is stated in a somewhat different form within Minimalism, as the Case Filter), traditional Case assigners have to assign their Case, a requirement I will refer to as the Inverse Case Filter, following Bošković

³⁵This does not mean that they cannot undergo feature checking. The point here is narrower: if they do not undergo feature checking the derivation will not necessarily crash.

³⁶For some relevant discussion, see also Rezac (2004), who notes another potentially relevant case: the number of pluralia tantum nouns like *scissors* or SC *kola* 'car', which is not semantically motivated. Yet, it can appear in contexts where it is not checked (ia). Moreover, it can value the uninterpretable ϕ -features of I ((ib), (52a)), an Agree relation that represents another instantiation of (53a).

- (i) a. There is a pencil and scissors on the table.
 b. Scissors are on the table.

(1997). The valuation driven system makes an interesting prediction regarding the Case Filter and the Inverse Case Filter. Since the Case feature of traditional Case assigners is valued, which means it can be deleted even without checking, it does not have to undergo checking. This is in contrast to the Case feature of NPs, which is unvalued, hence needs to be checked. This amounts to saying that the traditional Case Filter holds, but the Inverse Case Filter does not hold. There is strong empirical evidence that this is indeed correct. It is pretty clear that the Case Filter holds. As for the Inverse Case Filter, all attempts to enforce it (see, e.g. Bošković 2002a and Epstein and Seely 1999 for recent minimalist attempts to do that) have come up short against facts, facing persistent empirical problems that quite clearly indicate that traditional Case assigners do not have to check their Case, which means the Inverse Case filter does not hold. E.g., the existence of verbs that assign Case only optionally, as in (55), goes against the spirit of the Inverse Case Filter.

- (55) a. John laughed.
 b. John laughed himself silly.
 c. Mary is dressing (herself).
 d. Peter is eating (apples).

Slavic genitive of quantification/negation also provides evidence against the Inverse Case Filter (see Franks 2002). In a number of Slavic languages verbs that assign structural accusative fail to assign it when their object is a higher numeral NP. (*Kola* in SC (56b), which must bear Genitive, receives its Case from the numeral.) The same happens when a verb is negated, as illustrated by Polish (57b), where genitive of negation is obligatory. (There are similar arguments against obligatory assignment of nominative as well as some lexical cases; see Franks 2002).

- (56) a. On kupuje kola. (SC)
 he buys car.acc
 b. On kupuje pet kola.
 he buys five cars.gen
- (57) a. Janek czytał książkę. (Polish)
 Janek read bohjkhkjoks.acc
 b. Janek nie czytał książki.
 Janek neg read books.gen

Like the SC conjunct-sensitive agreement paradigm, Case licensing relations thus provide evidence that valued uninterpretable features do not need to undergo feature checking. This represents an important departure from the earlier feature-checking system of Chomsky (1995), where all uninterpretable features had to undergo feature checking.

It is worth noting here that in this respect the current system also differs from Pesetsky and Torrego (2007), another valuation-driven system which decouples valuation and interpretability, allowing valued uninterpretable features. For Pesetsky and Torrego, all uninterpretable features, even valued ones, still need to undergo Agree with an interpretable instance of the same feature. This system allows (53a), but only as long as there is a follow-up checking with an interpretable instance of the K feature. The current system differs from Pesetsky and Torrego (2007) in that nothing else needs to happen in (53a) (provided one of the uKs is valued)—neither of the two uK features needs to undergo further Agree with an iK. The current system thus differs from both Chomsky (1995, 2000, 2001a) and Pesetsky and Torrego (2007) in allowing one instance of uninterpretable features (namely valued uninterpretable features) not to undergo feature checking at

all. It also differs from Chomsky (2000, 2001a) and Pesetsky and Torrego (2007) in not requiring uninterpretable features in general to undergo feature checking with interpretable features. Above, I have provided evidence in favor of the current system.

7. Conclusion

One of the goals of the paper was to establish the empirical domain of the phenomenon of FCA and LCA in SC, a language that exhibits a rather complex pattern of conjunct-sensitive gender agreement. We have seen that with plural conjuncts with mixed gender specification, we get both LCA and FCA when the individual conjuncts are mixed feminine/neuter. When a non-agreeing conjunct is masculine, we still get FCA, but LCA is blocked. Both FCA and LCA are blocked when the individual conjuncts are singular. While the LCA is also blocked with singular+plural/plural+singular combinations, FCA is allowed with plural+singular, though not with singular+plural combinations. Uniform neuter+neuter conjuncts for the most part behave like mixed feminine/neuter conjuncts, while uniform feminine conjuncts exhibit rather different behavior. (It is difficult to test masculine conjuncts in this respect since masculine is also the default.)

I have presented a uniform account of FCA/LCA which does not posit any mechanisms that would be specific to either FCA or LCA. The account captures both the contexts where FCA and LCA exhibit parallel behavior and the contexts where the parallelism between FCA and LCA breaks down. LCA has been argued to pattern with FCA in the cases where the relevant feature of the first conjunct can be deleted, voiding potential intervention effects. I have presented a uniform account of all the contexts where only LCA fails: in such contexts the relevant feature of the first conjunct cannot be deleted. More abstractly, the current analysis in fact offers a uniform account of all FCA/LCA failures; they are all ultimately due to a conflicting valuation, either with respect to Agree or determining pied-piping.

The main ingredient of the proposed analysis was the operation Agree. To the extent that Agree successfully accounts for the rather complex conjunct-sensitive agreement paradigm in SC, this paper can be interpreted as providing strong evidence for the mechanism of Agree in general, as well as the particular approach to Agree adopted here. Furthermore, since Agree applies in the syntax, the paper also provides evidence that agreement should be handled in the syntax.³⁷

The current approach to Agree preserves Chomsky's match/valuation distinction and allows head X to probe more than once for feature(s) Y (as in Bejar 2003; however, the ϕ -probing head in SC is not a split- ϕ probe--it is in fact crucial that it probes for all ϕ -features together). The current approach is based on a particular view of gender, where grammatical gender is a valued, but uninterpretable feature of nominals (though in a few cases where it is semantically motivated it is interpretable). I have argued that valued uninterpretable features are deleted after Match, a condition which has played an important role in the proposed analysis by neutralizing potential intervention effects of the first conjunct with LCA. We have also seen that allowing for the possibility of valued uninterpretable features makes possible feature-checking relations between two uninterpretable features, which in turn enables us to simplify the feature-checking mechanism. I have also shown that valued uninterpretable features do not have to undergo feature checking, which represents a

³⁷See Bobaljik (in press) for an alternative view; see also Polinsky (2009) for a mixed syntax/post-syntax approach to Tsez, where conjunct-sensitive agreement behaves differently from SC. (Polinsky argues that an aspect of agreement in Tsez must be placed outside of the syntax mainly because conjunct-sensitive agreement in Tsez requires adjacency with the verb. It may be that the reason for this is that the agreement probing head, where the verb is located, must either agree with the whole &P, or get affixed to it under adjacency in PF, hence the adjacency effect when the agreement is with an NP within &P rather than the &P itself.)

departure from Chomsky's (1995) feature checking system (as well as Chomsky 2000, 2001a and Pesetsky and Torrego 2007), where all uninterpretable features have to undergo feature checking. The system developed in the paper also differs from Chomsky (2000, 2001a) and Pesetsky and Torrego (2007) in that it does not require uninterpretable features in general to undergo feature checking with interpretable features.

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References

- Abels, Klaus. 2001. The predicate cleft construction in Russian. In *Formal Approaches to Slavic Linguistics: The Indiana Meeting 2000*, eds. Steven Franks, Tracy Holloway King, and Michael Yadroff, 1-19. Ann Arbor: Michigan Slavic Publications.
- Aoun, Joseph, Elabbas Benmamoun, and Dominique Sportiche. 1994. Agreement, word order and conjunction in some varieties of Arabic. *Linguistic Inquiry* 25: 195-220.
- Aoun, Joseph, Elabbas Benmamoun, and Dominique Sportiche. 1999. Further remarks on first conjunct agreement. *Linguistic Inquiry* 30: 669-681.
- Badecker, William. 2007. A feature principle for partial agreement. *Lingua* 117: 1541-1565.
- Bahloud, Maher, and Wayne Herbert. 1993. Agreement asymmetries in Arabic. In *Proceedings of the West Coast Conference on Formal Linguistics* 11, ed. Jonathan Mead, 15-31. Stanford, CA.: CSLI Publications.
- Bejar, Susana. 2003. Phi-syntax: A theory of agreement. Phd dissertation, University of Toronto, Toronto.
- Benmamoun, Elabbas. 1992. Functional and inflectional morphology: Problems of projection, representation, and derivation. Phd dissertation, University of Southern California.
- Bobaljik, Jonathan. 2002. A-chains at the PF interface: Copies and "covert" movement. *Natural Language and Linguistic Theory* 20: 197-267.
- Bobaljik, Jonathan. 2008. Where's ϕ ? Agreement as a post-syntactic operation. In *Phi-Theory: Phi-Features Across Modules and Interfaces*, eds. Daniel Harbour, David Adger and Susana Béjar, 295-328. Oxford: Oxford University Press.
- Boeckx, Cedric. 2003. Intricacies of Icelandic agreement. Manuscript, University of Maryland and Harvard University.
- Bošković, Željko. 1997. *The syntax of nonfinite complementation: An economy approach*. Cambridge: MIT Press.
- Bošković, Željko. 2001. *On the nature of the syntax-phonology interface: Cliticization and related phenomena*. Amsterdam: Elsevier Science.
- Bošković, Željko. 2002a. A-movement and the EPP. *Syntax* 5: 167-218.
- Bošković, Željko. 2002b. On multiple wh-fronting. *Linguistic Inquiry* 33: 351-383.
- Bošković, Željko. 2004. On the clitic switch in Greek imperatives. In *Balkan syntax and semantics*, ed. Olga Mišeska Tomić, 269-291. Amsterdam: John Benjamins.
- Bošković, Željko. 2005a. On the locality of left branch extraction and the structure of NP. *Studia Linguistica* 59: 1-45.
- Bošković, Željko. 2005b. On the locality of Move and Agree: Eliminating the Activation Condition, Generalized EPP, Inverse Case Filter, and the Phase-Impenetrability Condition. *UConn*

- Occasional Papers in Linguistics* 3. [Distributed by MIT Working Papers, Department of Linguistics and Philosophy, MIT, Cambridge, Mass.]
- Bošković, Željko. 2007. On the locality and motivation of Move and Agree: An even more minimal theory. *Linguistic Inquiry* 38: 589-644.
- Bošković, Željko. 2008. On Leo Tolstoy, its structure, case, left-branch extraction, and Prosodic Inversion. Manuscript, University of Connecticut.
- Bošković, Željko, and Jairo Nunes. 2007. The copy theory of movement: A view from PF. In *The copy theory of movement on the PF side*, eds. Norbert Corver and Jairo Nunes, 13–74. Amsterdam: John Benjamins.
- Bright, William. 1992. *International encyclopedia of linguistics*. Oxford: Oxford University Press.
- Camacho, José. 2003. *The structure of coordination: conjunction and agreement phenomena in Spanish and other languages*. Dordrecht: Kluwer.
- Chomsky, Noam. 1995. *The minimalist program*. Cambridge: MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, eds. Roger Martin, David Michaels, and Juan Uriagereka, 89-155. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 2001a. Derivation by phase. In *Ken Hale: a life in language*, ed. Michael Kenstowicz, 1-52. Cambridge: MIT Press.
- Chomsky, Noam. 2001b. Beyond explanatory adequacy. In *MIT Working Papers in Linguistics* 20, 1-28. MITWPL, Department of Linguistics and Philosophy, MIT, Cambridge, Mass.
- Citko, Barbara. 2004. Agreement Asymmetries in Coordinate Structures. In *Formal Approaches to Slavic Linguistics: The Ottawa Meeting 2003*, eds. Olga Arnaudova, Wayles Browne, Maria Luisa Rivero, and Danijela Stojanović, 91-108. Ann Arbor: Michigan Slavic Publications, Ann Arbor.
- Corbett, Greville G. 1983. *Hierarchies, targets and controllers: Agreement patterns in Slavic*. University Park: Pennsylvania University Press.
- Corbett, Greville G. 1991. *Gender*. Cambridge: Cambridge University Press.
- Corbett, Greville G. 2002. Types of typology, illustrated from gender systems. In *Noun Phrase structure in the languages of Europe*, ed. Frans Plank, 289-334. Berlin: Mouton de Gruyter.
- Doron, Edit. 2000. VSO and left-conjunct agreement: Biblical Hebrew vs Modern Hebrew. In *The syntax of verb initial languages*, eds. Andrew Carnie and Eithne Guilfoyle, 75-95. Oxford: Oxford University Press.
- Dikken, Marcel den. 2001. “Plurilinguals”, pronouns and quirky agreement. *The Linguistic Review* 18: 19–41.
- Epstein, Samuel D. and T. Daniel Seely. 1999. SPEC-ifying the GF “subject”; eliminating A-chains and the EPP within a derivational model. Manuscript, University of Michigan and Eastern Michigan.
- Franck, Julie, Glenda Lassi, Ulrich H. Frauenfelder, and Luigi Rizzi 2006. Agreement and movement: A syntactic analysis of attraction. *Cognition* 101: 173-216.
- Franks, Steven. 1998. Clitics in Slavic. Presented at the Comparative Slavic Morphosyntax Workshop, Spencer, Indiana, June 1998.
- Franks, Steven. 2002. A Jakobsonian feature based analysis of the Slavic numeric quantifier genitive. *Journal of Slavic Linguistics* 10: 141-182.
- Hiraiwa, Ken. 2005. Dimensions of symmetry in syntax: Agreement and clausal architecture. Phd dissertation, MIT.
- Hiramatsu, Kazuko. 2000. Accessing linguistic competence: Evidence from children’s and adults’ acceptability judgments. Phd dissertation, University of Connecticut.
- Johannessen, Janne Bondi. 1998. *Coordination*. New York: Oxford University Press.

- Koppen, Marjo van. 2005. One Probe - Two Goals: Aspects of agreement in Dutch dialects, Phd Dissertation, Utrecht University, Utrecht.
- Lambova, Mariana. 2002. On A'-movements in Bulgarian and their interaction. *The Linguistic Review* 18:327-374.
- Lambova, Mariana. 2004. On information structure and clausal architecture: Evidence from Bulgarian. Phd dissertation, University of Connecticut.
- Landau, Idan. 2003. Modular recoverability: Chain resolution in Hebrew V(P)-fronting. Manuscript, Beer-Sheva, Israel.
- Lasnik, Howard. 1995. Case and expletives revisited: On Greed and other human failings. *Linguistic Inquiry* 26: 615-633.
- Marušič, Franc, Andrew Nevins, and Amanda Saksida. 2007. Last-conjunct agreement in Slovenian. In *Proceedings of Formal Approaches to Slavic Linguistics: The Toronto Meeting 2006*, eds. Richard Compton, Magdalena Goledzinowska, Ulyana Savchenko, 210 - 227. Ann Arbor: Michigan Slavic Publications.
- McGinnis, Martha. 1998. *Locality in A-movement*. Phd dissertation, MIT.
- Munn, Alan. 1993. *Topics in the syntax and semantics of coordinate structures*. Phd dissertation, University of Maryland.
- Munn, Alan. 1999. First conjunct agreement: Against a clausal analysis. *Linguistic Inquiry* 30:669-682
- Nunes, Jairo, 2004. *Linearization of chains and sideward movement*. Cambridge: MIT Press.
- Pesetsky, David, and Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In *Phrasal and clausal architecture: Syntactic derivation and interpretation. In honor of Joseph E. Emonds*, eds. Simin Karimi, Vida Samiian, and Wendy Wilkins, 262–294. Amsterdam: John Benjamins.
- Polinsky, Maria. 2009. What agreement can do for you: First and last conjunct agreement in Tsez. Presented at the special session on Languages of the Caucasus at the Annual LSA meeting, San Francisco.
- Reglero, Lara. 2004. On A' dependencies in Spanish and Basque. Phd dissertation, University of Connecticut.
- Rezac, Milan. 2004. Elements of cyclic Agree. Phd dissertation, University of Toronto.
- Rodríguez-Mondoñedo, Miguel. 2007. The syntax of objects: Agree and differential object marking. Phd dissertation, University of Connecticut.
- Sauerland, Uli. 2003. A new semantics for number. In *Proceedings of SALT 13*, 258-275. Cornell University, CLC Publications, Ithaca, New York.
- Sauerland, Uli. 2004. A comprehensive semantics for agreement. Manuscript, Universität Tübingen.
- Sobin, Nicholas. 1994. Non-local agreement. Manuscript, University of Arkansas at Little Rock.
- Soltan, Usama. 2007. On agree and postcyclic merge in syntactic derivations: First conjunct agreement in Standard Arabic. In *Perspectives on Arabic Linguistics XIX: Papers from the Nineteenth Annual Symposium on Arabic Linguistics, Urbana, Illinois, April 2005*, ed. Elabbas Benmamoun, 175-189. Amsterdam: John Benjamins.
- Sportiche, Dominique. 1988. A theory of floating quantifiers and its corollaries for constituent structure. *Linguistic Inquiry* 19: 425-449.
- Stjepanović, Sandra. 1998. Scrambling in Serbo-Croatian. Manuscript, University of Connecticut.
- Stjepanović, Sandra. 1999. What do second position cliticization, scrambling, and multiple wh-fronting have in common. Phd dissertation, University of Connecticut, Storrs.
- Stjepanović, Sandra. 2003. A word-order paradox resolved by copy deletion at PF. *Linguistic Variation Yearbook* 3: 139-177.

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Abstract The paper investigates first and last conjunct agreement in Serbo-Croatian, the latter being a rather rare phenomenon for head initial languages. The paper gives a uniform account of first and last conjunct agreement based on the operation Agree (Chomsky 2000). The account captures both the contexts where first and last conjunct agreement exhibit parallel behavior and the contexts where the parallelism between the two breaks down. The analysis also captures interaction between gender and number agreement. Given the complexity of the first/last conjunct agreement paradigm in Serbo-Croatian, to the extent that it is successful the analysis presented in the paper provides strong evidence in favor of the operation Agree in general, as well as the particular approach to Agree adopted in the paper. The system developed in the paper allows one instance of uninterpretable features, namely valued uninterpretable features, not to undergo feature checking and does not require uninterpretable features in general to undergo feature checking with interpretable features, differing in these respects from Chomsky (2000, 2001a) and Pesetsky and Torrego 2007).

Keywords Agree(ment) · coordination · gender · number · valuation · interpretability · pied-piping