Gender agreement with conjoined subjects in Serbian

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This paper discusses agreement with conjoined NPs in Serbian with respect to gender features on the conjuncts and their position in relation to the verb. It shows that gender on conjuncts and their position are important factors determining the result of the process of agreement. It also gives evidence that with nouns with interpretable gender features, agreement takes into account both formal and semantic features of the NPs. On the other hand, with NPs with uninterpretable gender, Agree may or may not take into consideration semantic features, depending on the variation between speakers' grammars.

Keywords: *agreement, conjunct phrase, interpretable features, uninterpretable features*

1 Introduction

This paper discusses the topic of subject-verb agreement applied to the cases of agreement where the subject consists of two nouns joined by a coordinating conjunction. The paper presents evidence from Serbian on why it is necessary to observe the conjunction as a single element, and not conjuncts as separate entities involved in agreement.[1] Moreover, it demonstrates that the process of agreement takes into account both formal and semantic features on the conjuncts. Agreement is viewed in terms of the operation Agree (Chomsky 2000), which applies to the conjunction as a whole, and not to one of the separate conjuncts. The proposal given on how to account for the different agreement patterns that surface on the participle in Serbian rests on the work of Bošković (2009), where conjunct agreement is viewed as the result of feature probing, matching and valuing. The purpose of this process is valuation of unvalued features on the participle, and deletion of the uninterpretable ones. Interpretability of features concerns the possibility of establishing a correlation between formal and semantic features of the noun in question, and it is confirmed to be an important factor in agreement. Following Rappaport (2006), if φ-features on the noun are interpretable, those features are assigned in accordance with the semantic features of the referent. The evidence from Serbian shows that in this case, the formal features of the lexeme correspond to the semantic ones, which causes the participle's unvalued features to be valued as interpretable. In this case, they are not deleted in the process of agreement. Additionally, if formal features are not identical on both conjuncts, default agreement applies. If φ-features are uninterpretable, they exist only formally on a noun and do not relate to the features on the referent. In this case, two patterns are distinguished in conjunct agreement. If the speaker employs only formal agreement, agreement targets only formal features. In some cases, however, an agreement mismatch occurs, which is

[1] The two noun phrases constituting the conjunction phrase will be marked as NP1 and NP2 with respect to their linear position within the phrase. The conjunction phrase is marked as BP (see Section 2). Other abbreviations include: M − *masculine gender,* F − *feminine gender,* N − *neuter gender,* SG − *singular number,* PL − *plural number.*

resolved by inserting default features. Gender features mostly follow the described pattern.

The following section of the paper defines and explains the notions of agreement, focusing on the agreement with conjoined NPs and the way in which they will be treated in the analysis. Section 3 provides an overview of syntactic accounts that have tried to capture this phenomenon. Section 4 presents the results of a survey conducted on conjunct agreement in Serbian, which are analysed in the following section. This section offers a proposal how to extend the existing theories in order to accommodate for the data found in Serbian.

2 Theoretical background

Agreement is a relationship between two elements that exhibit correlating morphology consistently whenever they co-occur (Lorimor 2007). One of the most basic definitions is proposed by Steele (1978), who views agreement as 'systematic covariance between a semantic or formal property of one element, and a formal property of another'. These properties of elements are referred to as *features*, and they have *values* (e.g. number feature can be valued as singular, plural, dual, etc.). The element which initiates and determines the agreement is called agreement *controller*, or *trigger*, and the element whose form depends on agreement is called agreement *target* or *goal* (Corbett 1998).

According to Pesetsky and Torrego (2007) (among others), features on lexical items can be differentiated according to two types of criteria: valued/unvalued and interpretable/uninterpretable. Dealing with valuation first, they notice that it seems that certain lexical items come from the lexicon with features that have no value, and they receive a value for those features from valued instances of the same features on another lexical item with which they establish syntactic connection. Looking at the interpretable/uninterpretable dimension on features, Pesetsky and Torrego (2007) explain that it is the distinction concerning semantics, i.e. 'whether or not a feature of a particular lexical item makes a semantic contribution to the interpretation of that item.' The interplay and interdependency of these features are important in the process of agreement.

Conjoined subjects are the subjects which, as the name implies, join two NPs together to make a whole. An example of such constructions can be found in (1).

(1) [Tom and George] have finished playing the game.

These subjects are specific in many ways, and their non-standard structure leads to non-standard behaviour. They are interesting primarily because of the fact that, instead of a single nominative noun interacting with the verb in the process of feature matching, valuing, and deletion, there are (at least) two nominative nouns requiring for the system to find a way to incorporate all of their features together in the process of agreement with the verb (Lorimor 2007). Cases of conjunct agreement can include different types. For the purpose of current discussion, a distinction will be made between first-conjunct agreement and last-conjunct agreement. First-conjunct agreement (FCA) appears when the subject conjunct phrase follows the verb, and the verb agrees with the first conjunct, as in (2a). Last-conjunct agreement (LCA) exists where the subject conjunct phrase precedes the verb, and the verb agrees with the last conjunct, as in (2b).

(2) a. *Predstavu su gledali dečaci i devojčice.* (Serbian)
Play are watched-MPL boys-MPL and girls-FPL
'Boys and girls were watching the play.'
b. *Deca i učiteljice su posmatrale priredbu.*
Children-NPL and teachers-FPL are watched-FPL play
'Children and teachers were watching the play.'

It is also important to point out that the conjuncts are not interpreted as two separate entities. Rather, they form a unit, incorporated within a higher element, a phrase termed Boolean Phrase (BP) (Munn 1999). By assumption, coordinating conjunctions (*and*, *or*, *but*) project their own phrase which hosts the conjuncts. This phrase, according to Marušič et al. (2007), computes its own number features, and thus, in Serbian, it is specified as plural, since two nouns of whatever number will give plural number on the whole conjunction.

3 Syntactic accounts

First attempts at explaining agreement were mostly descriptive. Agreement was seen as a relation between the *target* (the element that displays features that are the result of agreement) and *controller* (the element supplying the target with the missing features). There was no precise theory on how agreement happens, and it was considered to be just the reflection of the syntactic configuration established between the target and the controller. Chomsky (2000) introduced the core syntactic relation Agree, which is responsible for establishing agreement. Within Minimalist framework, agreement is not a reflection of other syntactic operations, but an operation in itself. Features on lexical items become the driving force of this operation. Movement depends on the need to check uninterpretable features. Thus, syntactic relation between a target and a controller is established as a result of the need to check uninterpretable features. Moreover, for agreement to happen, the elements do not have to be local, as unvalued features can be valued at a distance. The subsequent movement of a controller depends on whether the target projects a specifier and whether uninterpretable features have to be checked.

Drawing on Chomsky (2000), Bejar (2003) takes the AGR-head to be *v*, T or C head, all of which have unvalued person, number and gender features (φ-features). On the other hand, the elements that bear valued interpretable φ-features are N or D heads. The notion of interpretability is crucial in Chomsky's theory. All uninterpretable features that exist in the structure must be deleted in order for the derivation to converge. Agree is the operation driven by the need to eliminate uninterpretable features. In the process of this operation, interpretable φ-features on NPs (or DPs), provide values for uninterpretable unvalued φ-features on the target head. Once they are valued, uninterpretable features can be eliminated. The whole process shows that the morphological marking shown on lexical items as a result of agreement is actually the result of syntactic operations.

For the discussion on conjunct agreement below, from the analysis of Chomsky (2000), it is important to point out that Agree is not a simple operation, but in fact, it goes on in three stages – Probe, Match, and Value. Probing is the starting point of Agree, at which the target (probe) starts searching for a goal having a valued feature compatible with the uninterpretable unvalued feature on the probe. Match examines if the object found in the domain of the probe is a possible goal, whether it contains the necessary

feature(s) and can establish the relation of agreement. Value is the final phase, during which the goal is provided with a value. In order for Match to succeed, it is necessary that the goal is within the c-command domain of the probe (to be within the structure contained by the goal's sister). The matching feature on the goal is the one that is closest to the probe. Apart from matching, movement is also the result of agreement. Movement happens if the probe contains an EPP feature. This requires the goal to move obligatorily to the Spec position of the probe.

An important point Bejar's (2003) thesis makes is that there are a few types of probe. A probe searching for φ-features can be (among others) a single φ-probe and a split φ-probe.[2] A single φ-probe probes for all φ-features together. A split φ-probe, however, probes for different features separately. An example may be found in Georgian, where person agreement is only controlled by the subject if the direct object fails to match, and number agreement is controlled by the direct object if the subject fails to match. Another notion important for the purposes of this discussion is default agreement. Default agreement is, in essence, an attempt to save the derivation if regular agreement fails for some reason. Thus, it is possible that in some cases agreement can fail, but the derivation still converges, as it is saved by inserting default agreement features.

A number of accounts tried to resolve the puzzle of agreement with conjoined NPs and all the specificities related to this particular type of agreement. Some explanations were offered in Bahloul and Herbert (1993), Munn (1999), Citko (2004), Doron (2000), Johannessen (1998), Aoun, Benmamoun, and Sportiche (1994, 1999), among others. These accounts try to capture conjunct agreement based on examples from English, Arabic, Hebrew, and a number of other languages. Some recent accounts have looked into conjunct agreement in Slavic languages. Namely, Marušič, Nevins and Saskida (2007) analyzed agreement with the last conjunct in Slovene, and Marušič, Nevins and Badecker (2012) examined grammars of conjunct agreement in an experimental study. Bošković (2009) unifies mechanisms of agreement with the first conjunct and agreement with the last conjunct, and in Bošković (2010), this account is extended to Russian.

Bošković (2009) presents an account based on the operation Agree that unifies mechanisms of first-conjunct agreement (FCA) and last-conjunct agreement (LCA), but also explains some issues related to Agree itself. The account of a unique mechanism of FCA and LCA starts from the general distinction between interpretable/uninterpretable and valued/unvalued features. Number and gender features on the participle, which is the probe, are uninterpretable and unvalued, whereas those features are valued on the goal, but there they can be interpretable and uninterpretable (e.g. gender feature on nouns in Serbian is valued, but it can be uninterpretable to semantics if the grammatical gender does not match the biological gender of the referent). Agreement between the probe and the goal is established in the process of the operation Agree. As illustrated previously, Agree goes on in three stages: Probe (where the probe is searching for features), Match (which determines whether the goal has the kind of category the probe seeks), and Value (the process of giving value to unvalued features). If the probe has an EPP feature, Value is also followed by pied-piping (choosing the XP to be moved and merged as the Spec of the probe).

[2] Other types of φ that Bejar (2003) introduces are double-φ, triple-φ. For more information on these types of probes, see Bejar (2003).

Bošković (2009) applies this approach to both FCA and LCA. It is important to note that this account does not focus on full FCA or LCA with a single NP. This means that the participle does not target only one of the conjuncts independently for both number and gender ignoring the other one, but it targets BP for number and gender agreement, and the BP agrees as a whole. In Bošković (2009), this is illustrated by the examples of FCA and LCA failure given here in (3). The ungrammaticality of (3a) shows that the participle does not agree with the first conjunct in both number and gender, and (3b) confirms that the second conjunct cannot value the participle alone.[3]

(3) a. **Juče je uništena jedna varošica i sva sela/*
yesterday is destroyed-FSG one town-FSG and all villages-NPL
/jedno selo. (Serbian)
one village-NSG
'One town and all villages/one village was destroyed yesterday."

b. **Sva sela /Jedno selo i jedna varošica je*
all villages-NPL/one village-NPL and one town-FSG is
juče uništena.
yesterday destroyed-FSG
'All villages/one village and one town was destroyed yesterday.'

Turning now to the agreement process, in the case of LCA, the subject with conjoined nouns moves in front of the participle, i.e. the participle has an EPP feature requiring the subject to merge as its Spec. For this reason, Agree will involve pied-piping, as well. During the operation Agree, the participle probes for gender and number features. As claimed in Bošković (2009) (drawing on Marušič et al. 2007), BP[4] is inherently plural. The probe thus matches the inherent plural feature on the BP, and it receives gender from the structurally higher first element. Thus, both BP and the first conjunct are valuators. The standard assumption is that valuators are those that determine pied piping. If an element provides features for the probe, the maximal projection of that element will undergo pied-piping. The issue of pied-piping arises at this point, since both BP and the first conjunct, as valuators, can be pied-piped (Serbian allows for the extraction of NP1 from a conjunction, see Stjepanović 1998). This leads to ambiguity and makes pied-piping impossible. The impossibility of pied-piping blocks the valuation of the necessary features. At this point, in order to prevent a crash, the computation has the option of applying the default gender, or resorting to Secondary Agree. This operation starts from the assumption that uniterpretable features must be deleted. They are deleted after valuation, since only valued features can be deleted. Still, valued uninterpretable features, such as gender on the goal[5], are also deleted after Match.

[3] Anticipating further discussion, let us just note here that some speakers of Serbian find the examples in (3) grammatical.

[4] BP is the notation for "Boolean phrase". The term is taken from Munn (1993) to refer to the phrase projected by coordinating conjunctions (*and*, *or*, *but*) (see Section 2).

[5] Gender feature on nouns can be interpretable or uninterpretable, depending on whether gender on the noun corresponds to biological gender of the referent. In this sense, those nouns whose gender matches the biological gender on the referent bear interpretable gender feature, whereas nouns whose referent is inanimate bear uninterpretable gender feature. According to the account presented here, uninterpretable gender is deleted after Match, while interpretable gender cannot be deleted. This prediction is borne out according to the evidence from conjunct agreement in Serbian presented in the following section.

This would mean that the gender feature on the first conjunct is deleted after the first case of Match (after which Agree was unsuccessful due to the impossibility of pied-piping), which leaves the option for the BP to value the number feature (number on BP is interpretable, and thus is not deleted upon first Match), and the second conjunct to value the gender feature. This is what happens when the participle probes again for a second attempt of Agree. Since NP2 cannot be extracted out of a conjunction, and is thus not pied-pipeable, there is no choice, the whole BP undergoes movement to the Spec of the probe. On the other hand, in the cases of FCA, no movement of the conjuncts is required, hence no pied-piping, and nothing prevents NP1 from valuing the participle for gender.

Bošković (2009) provides a uniform non-language specific account incorporating conjunct agreement into an existing mechanism. However, there are some issues that require further attention as regards both number and gender agreement.

Concerning gender agreement, Bošković records some cases of FCA/LCA parallelism breakdown if the conjunct that does not determine the agreement is masculine. Namely, in that case, FCA is possible, but LCA is not, as demonstrated in (4) (example (34) in Bošković 2009).

(4) a. *Juče su uništena sva sela i svi gradovi.*
yesterday are destroyed-NPL all villages-NPL and all towns-MPL

b. *Juče su uništeni sva sela i svi gradovi.*
yesterday are destroyed-MPL all villages-NPL and all towns-MPL

c. **Svi gradovi i sva sela su juče uništena.*
all towns-MPL and all villages-NPL are yesterday destroyed-NPL

d. *Svi gradovi i sva sela su juče uništeni.*
all towns-MPL and all villages-NPL are yesterday destroyed-MPL
'All cities and all towns were destroyed yesterday.'

Within the account, this breakdown is explained by the fact that the masculine gender on the first conjunct in (4d) is also the default. Default values are ignored by semantics, thus if an element contains a default feature, LF interface can proceed with interpretation as if it were not there. Hence, if an element contains the default feature, it does not get deleted on that element in the process of Match, it is just treated as not being there. If the participle has its gender feature valued as masculine plural by a noun bearing that feature, it is the default at the same time, and for that reason the uninterpretable gender feature is not deleted on the participle. This leads to a problem, since a unique valuator for the probe cannot be determined, so the derivation should crash. The system still has the option to delete gender feature on the participle and replace it by default, and it is exactly what it does in (4d). The gender feature is thus deleted, and the only feature that remains on the participle is number, which is valued by the BP. Now the unique valuator exists, and the whole BP is moved.

Anticipating an overview of agreement patterns that speakers of Serbian employ in their active production, it can be noted that the problem with Bošković's (2009) analysis is that, for some speakers, Secondary Agree seems to be possible, and LCA is possible in examples like (4c). An example is given in (5).

(5) *Računari i mašine su upravljale fabrikom, te je*
Computers-MPL and machines-FPL are governed-FPL factory, so is
dosta radnika otpušteno.
a.lot.of workers fired
'Computers and machines governed the factory, so a lot of workers were fired.'

According to the previous account, this situation should be ruled out. This problem should be given an adequate solution.

Another problem concerning gender mismatches is the one where conjuncts involve feminine+feminine, or feminine+neuter combinations and the participle can take both feminine and default agreement under different circumstances. For example, as shown in (6) (example (36) in Bošković 2009), feminine gender on the first conjunct prevents LCA if the second conjunct is neuter. Default masculine agreement makes this sentence acceptable, as (6b) illustrates.

(6) a. **Sve žene i sva deca su došla.*
all women-FPL and all children-NPL are came-NPL
b. *Sve žene i sva djeca su došli.*
all women-FPL and all children-NPL are came-MPL
'All women and all children came.'

Bošković (2009) explains this by positing that gender feature on the NP1 is interpretable, as *žene* (women) is also female biologically. The same logic is applied whenever gender on a noun matches the biological gender of the referent. As this feature is valued, it is not deleted after Match. Once again, we have a situation where it is not possible to determine a unique valuator for the probe (number is valued by the BP, and gender by NP1). The system then resorts to default agreement, deleting the gender feature on the participle, and replacing it with default. Marušič et al. (2012) add an interesting point to this issue. Based on the research they conducted on Slovene, they concluded that the claim that interpretable gender on the first conjunct blocks LCA is not borne out in Slovene, as they managed to find a significant percentage of LCA in the cases where FPL and NPL nouns were conjoined.

The problem of interpretable gender extends to some further instances of FCA/LCA parallelism breakdown. At first glance, nothing should be strange with conjuncts with uniform number and/or gender specification. Indeed, with masculine conjuncts there are no problems with agreement either when both conjuncts are plural, or when only one of them is plural, as demonstrated in (7) (example (44) in Bošković 2009).

(7) a. *Juče su prodani svi magarci i svi psi.*
yesterday are sold-MPL all donkey-MPL and all dog-MPL
'All donkeys and all dogs were sold yesterday.'
b. *Svi magarci i svi psi su juče prodani.*
all donkey-MPL and all dog-MPL are yesterday sold-MPL
c. *Juče su prodati jedan magarac i svi psi.*
yesterday are sold-MPL one donkey-MSG and all dog-MPL
'One donkey and all dogs were sold yesterday.'
d. *Jedan magarac i svi psi su juče prodati.*
one donkey-MSG and all dog-MPL are yesterday sold-MPL

Neuter conjuncts behave differently. If both conjuncts are neuter plural, the participle agrees accordingly, yet if at least one of them is singular when they are preverbal, the derivation will crash. The situation found in practice is illustrated in (8) (example (45) in Bošković 2009). These examples are given for the purpose of comparison of neuter with masculine/feminine, while number issues are left aside.

(8) a. *Juče su prodana sva telad i sva paščad.*
yesterday are sold-NPL all calf-NPL and all dog-NPL
b. *Sva telad i sva paščad su juče prodana.*
All calf-NPL and all dog-NPL are yesterday sold-NPL
c. *Juče su prodana sva telad i jedno pašče.*
yesterday are sold-NPL all calf-NPL and one dog-NSG
d. **Juče su prodana jedno tele i sva paščad.*
yesterday are sold-NPL one calf-NSG and all dog-NPL
e. **Juče su prodana jedno tele i jedno pašče.*
yesterday are sold-NPL one calf-NSG and one dog-NPL
f. **Sva telad i jedno pašče su juče prodana.*
all calf-NPL and one dog-NSG are yesterday sold-NPL
g. ?*Jedno tele i sva paščad su juče prodana.*[6]
one calf-NSG and all dogs-NPL are yesterday sold-NPL
'All calves and all dogs were sold yesterday.'

(Bošković 2009)

A problem arises with feminine nouns. Apparently, feminine nouns can trigger feminine agreement regardless of the number on the conjuncts. Sentences in (9) (example (46) in Bošković 2009) provide just some of the examples of this phenomenon.

(9) a. *Juče su prodane jedna krava i sve ovce.*
yesterday are sold-FPL one cow-FSG and all sheep-FPL
'One cow and all sheep were sold yesterday.'
b. *Jedna krava i sve ovce su juče prodane.*
one cow-FSG and all sheep-FSG are yesterday sold-FPL
c. *Jedna krava i jedna ovca su juče prodane.*
one cow-FSG and one sheep-FSG are yesterday sold-FPL

In Bošković (2009), this phenomenon is explained by the assumption that feminine gender is capable of percolating to the BP level. In this case, the whole agreement process happens at the BP level and the result is always the same, feminine plural agreement on the participle. What makes feminine, unlike neuter, capable of percolating to the BP, by stipulation, is the fact that it can be interpretable, as it is semantically grounded.

Some facts noted for Serbian can present a potential problem to this analysis. Namely, in Serbian, it can be the case that inanimate nouns trigger both feminine and default agreement, as shown in example (10) (taken from Stevanović 1979).

[6] The acceptability of this example is left for future research in Bošković (2009).

(10) a. *Tuga i žalost zavladali su u razrušenom gradu.*
Sadness-FSG and grief-FSGr uled-MPL are in destroyed city
'Sadness and grief started ruling in the destroyed city.'
b. *Godine i starost dale su ovu noć.*
years-FPL and old-age-FPL gave-FPL are this night
'This night is the product of years and old age.'

It remains unclear what conditions feminine or default agreement in what circumstances, and what the potential restrictions can be. Based on the previous two examples, it can be assumed that the problem lies in the interpretability of features. Clearly, variation appears when gender feature appears on nouns which are not biologically specified for gender, demonstrating that formal and biological gender features do not always go hand in hand.

4 Agreement patterns with conjoined subjects in Serbian

In order to get a clearer picture of how speakers of Serbian actually employ conjunct agreement, a survey was conducted. It was partially based on the experiments described in Marušić, Nevins and Badecker (2012), with some modifications. This section provides a brief description of the aims of the survey, the issues explored, and the methodology employed.

The aim of the research was to test how gender, number, animacy and position affect participle agreement with subject conjunct phrases. Considering all the data presented above, the aim was to see how speakers of Serbian employ conjunct agreement and how the given factors influence the process of agreement, with respect to the factors identified as relevant. Three basic issues are tackled:

(11) *Issue 1*: FCA – LCA parallelism breakdown when one of the conjuncts is masculine
Issue 2: Gender agreement mismatches when feminine and neuter nouns are conjoined
Issue 3: Number mismatches

The exploration of Issue 1 is influenced by the account in Bošković (2009) presented in the previous section. There it was claimed that if the conjunct that does not determine the agreement is masculine, FCA can be found, but LCA is blocked and the participle will always take default agreement. The aim was to examine if there is a possibility of having feminine agreement and if so, under which circumstances this is available.

Issue 2 was also brought to attention by Bošković (2009). Apparently, if feminine and neuter nouns are conjoined, LCA is blocked, as opposed to FCA, which does not present a problem. This issue was tested to check which factors affect FCA-LCA parallelism breakdown. This breakdown was examined using combinations of feminine + neuter and neuter + feminine NPs, so as to test in which situations speakers of Serbian would employ feminine, neuter or default masculine agreement.

Finally, Issue 3 deals with number. It involves testing whether speakers of Serbian can employ singular agreement in language production and if so, whether it is agreement with the whole conjunct phrase (BP), or with only one conjunct. Additionally, the factors

possibly determining this choice are also tackled. The inspection if Issue 3 is not within the scope of this paper.

The research was conducted with 60 participants, all of whom were second-year university students. The participants were asked to do a production task. They were given sentences with missing suffixes for the participle, and (in the cases where number was the focus of testing) missing spots to be supplied with auxiliary verbs. Since both number and gender feature surface on the participle, all the test-examples were in past tense. The examples were modeled in the way presented in (12).

(12) *Pas* *i* *mačka*__ *preš*__ *put.*
dog-MSG and cat-FSG__ crossed_ road
'A dog and a cat crossed the road.'

In sum, 40 test-examples were presented to the participants. These examples attempted to tackle all of the 3 issues presented above. For Issue 1, a total of 8 test-examples was presented, with combinations of MSG+FSG, and MPL+FPL, involving 4 conditions: two sentences with preverbal conjuncts (both conjuncts animate or both conjuncts inanimate), and two sentences with postverbal conjuncts, with the same conditions. Further examples always involved 4 sentences for every combination of conjuncts, where two were preverbal (animate and inanimate) and two were postverbal (animate and inanimate). For Issue 2, there were 4 combinations of conjuncts, FPL+FPL, NPL+NPL, FPL+NPL, and NPL+FPL, with 4 sentences for each condition. Issue 3 was studied on the basis of 16 sentences involving combinations of feminine and neuter singular and plural. The order of the sentences was randomized, and in addition to these, there were 20 other sentences acting as fillers or distractors, having regular subjects with one NP.

4.1 Issue 1: Conjunct agreement when one of the conjuncts is masculine

Recall that Bošković (2009) makes the observation that masculine gender on the first conjunct blocks LCA when the conjunct phrase is preverbal, whereas FCA is allowed. This breakdown in the parallelism between FCA and LCA was explained by the fact that masculine is the default gender. Default values are ignored by semantics, and the uninterpretable gender feature is not deleted on the participle after Match, causing the computation to resort to default agreement.

The aim of the survey was to test whether LCA is possible if the conjuncts are M+F, and if so, under which circumstances this happens. Eight test-examples were used, with 2 conditions:

- MSG+FSG (Table 1-2) (two sentences with preverbal conjuncts (one with animate nouns and the other one with inanimate nouns), and two sentences with postverbal conjuncts (one with animate nouns and the other one with inanimate nouns),
- MPL+FPL (Table 3) (two sentences with preverbal conjuncts (one with animate nouns and the other one with inanimate nouns), and two sentences with postverbal conjuncts (one with animate nouns and the other one with inanimate nouns),

The results of the first condition are given in Table 1 and Table 2.

Number	Position	Animacy	Result	
plural	**preverbally**	animate	masculine	100%
			feminine	-
		inanimate	masculine	98.3%
			feminine	-
	postverbally	animate	masculine	98.3%
			feminine	-
		inanimate	masculine	75%
			feminine	-

Table 1: Results for MSG+FSG

Number	Position	Animacy	Result	
singular	**preverbally**	animate	masculine	-
			feminine	-
		inanimate	masculine	1.7%
			feminine	-
	postverbally	animate	masculine	-
			feminine	
		inanimate	masculine	21.7%
			feminine	3.3%

Table 2: Results for MSG+FSG

As the results show, preverbally, there is no feminine agreement whatsoever. It looks as if the speaker does not register the fact that there is a feminine noun present. It is still unclear whether this agreement is masculine, i.e. agreement with the first element, or default agreement.

With postverbal conjunct phrases, there should be no problem with agreement, as it is expected that the verb will agree with the first conjunct. What deserves some attention here are the cases of singular agreement. In the cases where the conjoined nouns are inanimate, 21.7% of the conjuncts trigger MSG agreement. This result can be taken as an indication to rethink the standpoint that conjunct agreement is necessarily plural. Unfortunately, such issues are beyond the scope of this paper.

The second condition (MPL+FPL) examines the number and gender features the participle surfaces with when there are no number issues to intervene. Both conjuncts are plural, and their animacy and position are varied. Table 3 presents the results of the survey.

Number	Position	Animacy	Result	
plural	**preverbally**	animate	masculine	100%
			feminine	-
		inanimate	masculine	56.7%
			feminine	43.3%
	postverbally	animate	masculine	100%
			feminine	-
		inanimate	masculine	100%
			feminine	-

Table 3: Results for MPL+FPL

No instances of singular agreement were found, as expected. Still, in preverbal contexts, all animate conjuncts triggered MPL agreement on the verb. An interesting point is that with inanimate conjuncts, when they occur preverbally, 56.7% of speakers used MPL agreement on the participle, and 43.7% used FPL agreement, thus resulting in LCA. This undoubtedly poses a problem to Bošković's (2009) account, where he claims that masculine on the first element prevents LCA. Still, the results show that LCA is still possible but on condition that the conjuncts are inanimate.

The results of the survey for the first condition within Issue 1 can fit into to the account in Bošković (2009), with some modifications. Looking at preverbal conjuncts first (Table 3 and 4), it can be observed that if two conjoined nouns with M+F gender combination are found in front of the participle, they trigger masculine agreement in almost all instances. The explanation offered for this situation is that M gender is the default at the same time, and default features are ignored by semantics. Thus, if an element bearing the default gender feature values the uninterpretable gender feature on the participle as M (default), the uninterpretable feature on the participle cannot be deleted, as it is ignored by semantics. The computation intervenes and saves the derivation by deleting the gender feature on the participle and inserting the default, as described in Bošković (2009) and presented in Section 5. According to the results of the survey, this happens regardless of the animacy specification of the noun, and thus regardless of the interpretability of the gender feature on the noun.

As Table 3 and Table 4 show, in postverbal environment, animate conjuncts produce the same result as their preverbal counterparts. Almost all participants use the default masculine agreement. Inanimate conjuncts trigger MPL agreement in the majority of instances, as well. A number of participants applied singular agreement, and by that they actually achieved full FCA for both features.

If M+F plural nouns are conjoined (Table 3), the results for animate conjuncts follow the scenario given above. Yet, the resulting agreement pattern for inanimate conjoined nouns is not predicted by Bošković's (2009) account. Roughly half of the participants find it grammatical to apply FPL agreement, and thus produce the unexpected LCA pattern. If we follow the account given above, this situation cannot receive an adequate explanation under the assumption that M on the first conjunct is the default. Still, if we assume that M gender is actually uninterpretable (as the referent of the noun is inanimate, and therefore not biologically masculine), the analysis can proceed according to the analysis of the basic FCA-LCA pattern presented in Bošković (2009). In that case, the participle receives number from the BP, and gender from NP1, in which case a unique valuator cannot be determined, which blocks pied-piping. Upon Secondary Agree, NP2 values the participle's uninterpretable gender feature as feminine, and the whole BP undergoes pied-piping, resulting in LCA. Under this assumption, it could be concluded that variability between speakers' grammars exists (which was also the conclusion of Marušič et al. (2012)). In the grammar of some speakers, M is marked as default on nouns, which makes it invisible to semantics. Other speakers have M gender characterized as interpretable or uninterpretable, depending on the animacy specification of the noun. This explanation still fails to determine reasons why some speakers would have their grammars differentiated in this way and what factors determine whether M feature would be characterized as either interpretable/uninterpretable or default. A more detailed account is necessary, and the one that would be able to include other agreement patterns, such as those that are under observation within the following issue.

4.2 Issue 2: Gender agreement when feminine and neuter nouns are conjoined

The part of the survey covering Issue 2 was concerned with conditions under which FCA, LCA or default agreement can be found with feminine and neuter conjuncts. As noted earlier, when conjoined, whether uniform or with mixed genders, feminine and neuter nouns can trigger either feminine, neuter or default agreement. Test examples for this issue were designed to check under which circumstances we get FCA, LCA or default agreement when feminine and neuter nouns are conjoined. Sixteen test-examples were used, covering 4 conditions:

- FPL+FPL (Table 4),
- NPL+NPL (Table 5),
- FPL+NPL (Table 6),
- NPL+FPL (Table 7).

For each of the conditions, speakers were given two sentences with preverbal conjuncts (one with animate nouns and the other one with inanimate nouns), and two sentences with postverbal conjuncts (one with animate nouns and the other one with inanimate nouns, as in Issue 1. Sentences with both feminine or both neuter conjuncts were used in order to test under which circumstances we can expect to have default agreement with uniform non-masculine conjuncts. The results of the survey for the first condition (FPL+FPL) are presented in Table 4.

Number	**Position**	**Animacy**	**Result**	
plural	**preverbally**	animate	masculine	-
			feminine	100%
		inanimate	masculine	11.7%
			feminine	88.3%
	postverbally	animate	masculine	10%
			feminine	90%
		inanimate	masculine	32.2%
			feminine	67.8%

Table 4: Results for FPL+FPL

Feminine agreement is observed in most of the cases. Still, preverbally, animate conjuncts trigger FPL agreement in 100% of the cases. Inanimate conjuncts give different patterns preverbally. Namely, feminine agreement is still found in the majority of cases, whereas in 11.7% default MPL agreement is found on the participle. Postverbally, the situation is more varied. Animate conjuncts trigger FPL agreement in most cases, but there are still a number of cases (10%) where default MPL is found with animate conjuncts. It is different with inanimate conjuncts, where 67.8% of the subjects use FPL, as opposed to 32.2% of them who opt for the default MPL.

A similar situation is found when two neuter plural nouns are conjoined. The results still differ in certain factors. Table 5 gives an overview of the resulting agreement patterns.

Number	Position	Animacy	Result	
plural	preverbally	animate	masculine	50%
			feminine	-
			neuter	50%
		inanimate	masculine	10.3%
			feminine	-
			neuter	89.66%
	postverbally	animate	masculine	37.5%
			feminine	-
			neuter	62.5%
		inanimate	masculine	3.57%
			feminine	-
			neuter	96.43%

Table 5: Results for NPL+NPL

Preverbally, the situation is equal, 50% of participants employed default agreement, and the other half assigned the participle the suffix for NPL agreement. Inanimate conjuncts trigger NPL agreement in 89.66% of instances, whereas a small number of speakers still employ masculine plural.

A similar pattern is found postverbally. Here animate conjuncts are taken to agree in MPL in a smaller percent of instances (37.5%), while the amount of those that agree in NPL is larger than in preverbal cases (62.5%). The situation with inanimate conjuncts is even more clear-cut than with preverbal cases, as here almost all subjects use NPL agreement on the participle.

Turning now to instances of agreement with mixed gender conjuncts, the following two conditions deal with agreement patterns with the combinations of FPL+NPL, and NPL+FPL. The results of the first condition are presented in Table 6, whereas Table 7 outlines the results of the second condition.

Number	Position	Animacy	Result	
plural	preverbally	animate	masculine	66.7%
			feminine	28.3%
			neuter	5%
		inanimate	masculine	38.3%
			feminine	1.7%
			neuter	60%
	postverbally	animate	masculine	18.3%
			feminine	81.7%
			neuter	-
		inanimate	masculine	26.9%
			feminine	67.31%
			neuter	5.77%

Table 6: Results for FPL+NPL

When feminine and neuter conjuncts are combined in preverbal position, the results are again quite varied. MPL agreement prevails with animate nouns. LCA, NPL agreement, is found only in 5% of the cases. With inanimate nouns, the situation is drastically different. Namely, inanimate conjuncts trigger NPL agreement in 60% of the cases, MPL is found in 38.3%, and FPL agreement is negligible (only one instance).

Postverbally, both with animate and inanimate nouns FPL agreement prevails. Thus FCA is the most common pattern. It is followed by the default MPL agreement, which is slightly more common with inanimate conjuncts. If the pattern of gender on the conjuncts is reverse, slightly different agreement patterns can be found, as presented in Table 7.

Number	**Position**	**Animacy**	**Result**	
plural	**preverbally**	animate	masculine	98.3%
			feminine	1.7%
			neuter	-
		inanimate	masculine	68.3%
			feminine	26.7%
			neuter	5%
	postverbally	animate	masculine	21.7%
			feminine	-
			neuter	78.3%
		inanimate	masculine	33.3%
			feminine	-
			neuter	66.7%

Table 7: Results for NPL+FPL

Preverbally, the great majority of participants employed default masculine agreement with this combination of conjuncts, especially when animate nouns are conjoined. In 26.7%, however, LCA was found.

In the cases where conjuncts are postverbal, default agreement gives way to FCA. Namely, default MPL agreement is recorded in 21.7% with animate conjuncts, and 33.33% with inanimate. The rest is FCA, i.e. NPL agreement.

To sum up the results presented for Issue 2, a few observations can be made and a few patterns recorded. When it comes to same-gender conjuncts, feminine conjuncts trigger feminine agreement always if they are animate and preverbal. If they are inanimate and preverbal, they can trigger masculine agreement, too. Even though masculine agreement is recorded with animate postverbal conjuncts, most of the informants opted for masculine agreement when the conjuncts are postverbal and inanimate. Neuter conjuncts trigger both neuter and masculine if they are animate and preverbal, and mostly neuter if they are inanimate and preverbal. If postverbal, neuter agreement is the most frequent type of agreement according to the results of this research. Most of the informants opted for masculine agreement when the conjuncts are postverbal and animate, as opposed to feminine agreement in the previous condition.

With mixed animate preverbal conjuncts, masculine agreement prevails. With mixed inanimate preverbal conjuncts, masculine agreement prevails in the NPL+FPL combinations, but it does not do so with FPL+NPL, where LCA is dominant.

Postverbally, with mixed conjuncts FCA prevails, and the percentage is higher with animate conjuncts.[7]

5 The analysis

As the results for Issue 2 suggest, agreement is highly dependent on the animacy specification of the nouns. Animacy features should thus be properly incorporated in the system and their interdependency with gender features and the subsequent agreement patterns should receive adequate explanation. Rappaport (2006) proposes a way to explain how the interplay of formal and semantic features of a noun affects the agreement process. Both agreement and concord (agreement between a noun and its modifiers) are taken to be the result of feature sharing (based on Frampton and Gutmann (2000)). Slavic languages exhibit concord in φ-features, i.e. adjectives and determiners within the nominal phrase agree with the noun in person, gender and number, as illustrated in (13).

(13) *Gledam* *zanimljivu* *emisiju.*
watch-PRES.1SG interesting-ACC.FSG show-ACC.FSG
'I'm watching an interesting show.'

It is assumed that the φ-features of the head noun are projected to the adjective, and that they are available on the adjective for spellout. The case feature is also available on both the noun and the adjective, and when one of the features is assigned a value, the other feature is automatically supplied with that value. It is thus enough for *v* to value only one of the case features, and it will be automatically distributed to the other one.

The feature sharing approach is applied to the cases of referential (semantic) and formal (grammatical) agreement. While formal agreement takes into account only the grammatical specification of a noun, semantic agreement goes beyond grammatical information and employs semantic information as well. Slavic languages exhibit both types of agreement, as (14) shows for Serbian.

(14) a. *Školski* *psiholog* *je* *održao* *zanimljivo* *predavanje.*
school-MSG psychologist-MSG is kept-MSG interesting lecture
b. *Školski* *psiholog* *je* *održala* *zanimljivo* *predavanje.*
school-MSG psychologist-MSG is kept-FSG interesting lecture
'The school psychologist gave an interesting lecture.'

In (14a) formal agreement is employed, as the participle agrees in MSG form, the form corresponding to the formal gender feature on the noun. In (14b), however,

[7] As pointed out by a reviewer, what is missing in the experiment, and consequently in the results, is the insight on the general status of the forms produced by the speakers. The question is whether the speakers who employ a particular agreement pattern would find other available patterns acceptable, or disprefered or completely ungrammatical, and to what extent. Unfortunately, I am not able to address this issue at the moment, as grammaticality judgments of the agreement patterns were not a part of the survey, thus any comment on them would be a speculation on my side. I leave this issue for further research.

semantic agreement in gender can be found. The participle agrees in FSG (regardless of the fact that the noun is grammatically masculine) since the referent is a female person.[8]

Rappaport (2006) distinguishes between grammatical features (f-features), those that come within the lexical specification of a noun, and referential features (r-features), those that reflect semantic properties of the noun. Animacy is a formal feature, and it is highly predictable. F-animacy is not obligatorily inherently specified on nouns as a part of lexical information, and in case that a noun does not contain this specification, a value for animacy can be supplied based on the value of r-animacy via a redundancy rule. For instance, if a noun has referential animacy specified as [r-animacy: +], this entails that its formal animacy receives the specification [f-animacy: +]. This situation is illustrated in (15).

(15) *girl*: [r-animacy: +] → [f-animacy: +]

The noun *girl* has its r-animacy specified as [r-animacy: +], whereupon the redundancy rule supplies its f-animacy feature with the same value. R-features are not redundant in the system and the existence of r-values is justified, as they are a part of the meaning of a noun, and they can also help provide a value for f-animacy. Gender is another feature that is predictable on animate nouns from the meaning of the lexeme. It is connected to the biological gender of the referent, and supplied on the noun by a redundancy rule. For instance, if a noun is listed with a referential feature specification [r-animacy: +, sex: male], its formal features will be specified as [f-animacy: +, gender: masculine] via a redundancy rule. A problem arises in the cases where formal features are not determined by referential features. Such are the cases where a noun has formal gender specification without any "justification" from referential features, i.e. when gender specification is found on inanimate nouns. An important note on formal features is that they do not need to be licensed by referential features, but can be inherently specified within the lexical value of a lexeme. In this sense, an inanimate noun can be specified as grammatically masculine, feminine or neuter despite the fact that it does not have semantic justification for this. Serbian (as most other Slavic languages) assigns formal gender to nouns based on their morphology. Gender is assigned according to the morphemes the nouns end in. According to Rappapport (2006), Agree sees only formal features, therefore the lack of semantic features should not present a problem. Sometimes it may also happen that r-features predict a certain value for f-features, but f-features are already inherently specified, and this specification overrides the redundancy rule. This can, for example, be observed with animate nouns which are specified as having neuter gender, instead of masculine or feminine which is predicted to appear according to r-features. Rappaport (2006) further applies this approach to explain the difference between agreement and concord in Slavic languages.

Taking into account the proposal of Rappaport (2006) and the data from the research, an important connection between formal and semantic features may be established, attempting to explain their subsequent effects on agreement. A correlation between the theory of Rappaport (2006) and the account of Bošković (2009, 2011) can be established with respect to the treatment of features. What Bošković (2009, 2011)

[8] The possibility of semantic agreement is available only if the speaker uses the noun *psiholog*, which is grammatically masculine, to refer to a female person. However, for speakers of Serbian, there is a possibility to use the politically correct term *psihološkinja*, which is grammatically feminine, and thus avoid the semantic agreement which may sound awkward to some speakers.

treats as interpretable features are those formal features that are supplied on the noun via redundancy rules and that correspond to r-features. Uninterpretable features are formal features supplied inherently on the noun, without semantic ground and the possibility of semantic interpretation.

Starting from the nouns with uniform gender specification, two patterns are observed when the combination of FPL+FPL nouns occurs preverbally. In the case where the functional features correspond to the semantic ones, speakers unanimously employ feminine agreement. Here formal features are supplied on nouns via redundancy rules (F [r-animacy: +, sex: female] → [f-animacy: +, gender: feminine]). If a noun denotes an animate female entity, the gender feature is supplied according to r-features, and is thus interpretable on the noun. According to Bošković (2009), if the feature of the probe is valued as interpretable, it is not deleted after Match. In this case, when Secondary Agree is initiated, the gender feature on NP2 matches the one already assigned to the participle, and agreement may proceed according to the regular LCA pattern.

On the other hand, if nouns are inanimate there is a possibility of having default masculine agreement apart from the regular and expected feminine. In this case, the F feature on the noun is specified inherently according to the lexical specification of the noun. Redundancy rules for gender assignment do not apply, as an inanimate noun does not have referential gender features. The resulting situation is that now a formal feature, which has the possibility of being interpretable, does not have semantic ground. This mismatch between formal and referential features leads to problems with agreement, resolved by inserting the default feature. For the speakers that treat the gender feature on the noun as uninterpretable and do not refer to r-features, agreement can proceed with the normal LCA pattern given in Bošković (2009). Yet, there are still a number of speakers who opt for default agreement. They apply default features precisely in the environment in which the formally assigned feminine feature is not provided by a redundancy rule, and thus has no referential feature to support it. At this point, it can be assumed that only those speakers that have a problem relating a formally assigned feature that is in principle interpretable to its corresponding referential feature may have a problem in assigning these features to the participle, and this problem is resolved by default agreement. The problem results from the absence of redundancy rules or their failure to apply and establish relation between formal and referential features.

Regarding agreement with postverbal conjuncts, a problem again arises in the case where a formal feature is assigned without semantic backup. When gender on the nouns is uninterpretable and assigned inherently, there is a problem in valuing the participle's unvalued gender feature. This again results in employing the default MPL agreement.

With neuter preverbal conjuncts, the situation is different. Neuter gender is always uninterpretable, as it does not exist biologically. Thus, the feature specification of an animate N noun may include [r-animacy: +, sex: female/male] → [f-animacy: +, gender: neuter]. The mismatch between grammatical and biological gender leads to the assignment of the default to the participle with half of the speakers, while the other half assigns neuter despite the conflicting features. It can again be concluded that those speakers who take into consideration the interplay between formal and semantic feature specification of the nouns have a problem assigning a purely formal feature to an animate entity. Those speakers resolve the problem by resorting to default. For those speakers that do not take semantic features into consideration, regular LCA applies. If, on the other hand, the nouns denote inanimate entities, there is no mismatch between f-features and r-features simply because there is no biological gender on the noun and the gender feature is supplied on the noun inherently and lexically. Therefore, if we take that regular

LCA is at play here, we may use it to explain how agreement functions on inanimate neuter nouns for both groups of speakers.

In postverbal position, the prevailing pattern of agreement is NPL, as predicted in Bošković (2009). However, as opposed to feminine, the majority of default agreement is actually found with animate neuter nouns. This goes in line with the data presented so far. The conflict that exists between formal and referential features and the failure of redundancy rules to apply forces default gender assignment.

Agreement with conjuncts with different gender follows the pattern proposed above. If nouns of different gender specification are conjoined, problems with agreement usually appear in the places where there is a mismatch between formal and referential features. Starting from the combination of FPL+NPL, with animate nouns the majority of speakers employ MPL agreement. The results of the survey fit into the account of Bošković (2009) with the modifications proposed here. As the gender feature on NP1 is interpretable, it is valued on the probe as such, and therefore not deleted after Match. When Secondary Agree is initiated after the inability to pied-pipe due to the impossibility of determining a unique valuator for all unvalued φ-features, the probe matches NP2, which does not have the corresponding gender feature, leading to a crash. The derivation is saved by inserting the default masculine gender. Yet, if the nouns denote inanimate referents, the majority agreement pattern is NPL, i.e. LCA. This is also expected in the system so far, as the gender feature on the first noun is uninterpretable. Agreement then proceeds according to the regular FCA pattern for the speakers that do not take into account r-features. For those speakers that do consider both formal and referential features, the lack of biological gender specification on the first conjunct triggers MPL agreement on the participle, and prevents LCA.

Postverbally, the majority of participants applied FCA. Still, a greater percentage of FPL appears where this gender feature is supplied on the basis of referential features. If the feminine gender feature is uninterpretable, supplied inherently, the percentage of default agreement increases. The mismatch between formal and semantic features is again the cause of this state of affairs. Feminine gender is a feature that can be semantically justified, but under these circumstances, it is not provided by redundancy rules, and it does not have support from r-features.

Combining NPL+FPL preverbally yields mostly masculine plural agreement with both animate and inanimate nouns. Starting from animate nouns, since neuter is always uninterpretable and supplied lexically, and in this case its r-gender does not correspond to the f-gender features, there is a mismatch leading to an inability to assign neuter to the participle. At this point, the derivation is saved by inserting the default masculine gender feature. On the other hand, if both nouns are inanimate, and the regular LCA pattern is supposed to apply, this should result in FPL agreement. Although for a number of speakers this pattern is functional, it is not found in a great number of instances. Instead, the majority of participants employ the default. This may again be due to a mismatch between formal and referential features. Feminine gender feature on the second conjunct is supplied lexically, without any matching referential features. When conjuncts are placed after the verb, FCA prevails. This goes in line with the data above.

The conclusions reached according to the results within Issue 2 can be extended to include Issue 1 as well. With animate MPL+FPL nouns agreement is always MPL. This is expected, as NP1 bears interpretable gender. Interpretable gender is not deleted upon first Match, and it prevents gender assignment upon Secondary Agree, which forces default feature assignment. On the other hand, agreement with inanimate preverbal nouns results in two patterns. If the speaker takes into consideration both r-features and

f-features, a problem will arise during agreement with NP1, which is formally masculine, but with no referential gender specification. The conflict is resolved by default feature assignment. For those speakers who employ only f-features, regular LCA applies, resulting in FPL agreement.

To sum up the data presented above, a general pattern can be established. Preverbal conjuncts with interpretable gender mostly trigger default agreement, unless NP2 bears the same gender feature as NP1. In this case, the gender feature on the probe corresponds to the one on the conjuncts. The reason for this is that interpretable features are not deleted after Match. During Secondary Agree, it is necessary for the gender on NP2 to match the one already assigned to the participle. If it does not do so, the system intervenes by the insertion of the default. When nouns with uninterpretable gender are looked into, two kinds of grammars can be distinguished among speakers. Some speakers do not associate formal to semantic features, while others take into consideration the semantic specification on the noun. For those speakers that consider only formal features, agreement targets f-features only, and agreement patterns correspond to those predicted in Bošković (2009). Those speakers that associate formal to semantic features experience problems with agreement in the cases where redundancy rules for feature assignment fail to apply. Agreement takes into account both f-features and r-features. Thus, if a feature is assigned formally, and does not correspond to the one that was supposed to be assigned by the redundancy rule, the noun will trigger default agreement on the probe. Conversely, if a feature that can be interpretable is assigned only formally, and the corresponding semantic feature does not exist (therefore no redundancy rule can apply), the probe can be assigned default gender.

6 Conclusion

The survey on conjunct agreement in Serbian recorded patterns that go in line with Bošković (2009, 2011), with some modifications concerning the interpretability of features. Namely, if both conjuncts bear interpretable features, the unvalued gender feature on the probe is valued as interpretable, and therefore not deleted after Match. When Secondary Agree is initiated, the gender feature on the second conjunct must match the gender feature already supplied on the participle. If the feature is identical, the participle surfaces with the form corresponding to both conjuncts (F or M). If the features on conjuncts are interpretable but with different specification, in the course of Secondary Agree, NP2 is supposed to match the gender feature already assigned to the participle by NP1 in Primary Agree. Since this does not happen, the derivation is saved by inserting the default.

When the account is extended to conjuncts with uninterpretable gender, two patterns with two groups of speakers can be distinguished. Some speakers do not associate formal to semantic features and do not need to apply redundancy rules. Other speakers search for semantic justification of formal features. For the former, agreement patterns with conjoined nouns with uniterpretable gender follow the account of Bošković (2009). The latter experience problems with agreement whenever a formal feature that can be interpretable does not have semantic ground, or when a formal feature is assigned inherently, despite the existing semantic feature, in which case redundancy rule fails to apply. In both cases, the derivation is saved by introducing default gender features.

References

Aoun, Joseph, Elabbas Benmamoun & Dominique Sportiche. 1994. Agreement, word order and conjunction in some varieties of Arabic. *Linguistic Inquiry* 25. 195−220.

Aoun, Joseph, Elabbas Benmamoun & Dominique Sportiche. 1999. Further remarks on first conjunct agreement. *Linguistic Inquiry* 30. 669−681.

Bahloul, Maher & Wayne Herbert. 1993. Agreement asymmetries in Arabic. In: Jonathan Mead (ed.), *Proceedings of the West Coast Conference on Formal Linguistics 11*, 15−31. Stanford, CA.: CSLI Publications.

Bejar, Susan. 2003. Phi-syntax: A theory of agreement. University of Toronto, Toronto, PhD dissertation.

Bošković, Željko. 2009. Unifying first and last conjunct agreement. *Natural Language & Linguistic Theory* 27/3. 455−496.

Bošković, Željko. 2010. Conjunct-Sensitive Agreement: Serbo-Croatian vs Russian. In Zybatow, Gerhild, Philip Dudchuk, Serge Minor & Ekaterina Pschehotskaya (eds.), *FSSL. Proceedings of FDSL 7.5*, 31−48. Frankfurt am Main: P. Lang.

Bošković, Željko. 2011. On unvalued uninterpretable features. In *Proceedings of the North East Linguistic Society 39*. GLSA, University of Massachusetts, Amherst.

Citko, Barbara. 2004. Agreement Asymmetries in Coordinate Structures. In: Arnaudova, Olga, Wayles Browne, Maria Luisa Rivero & Danijela Stojanovic (eds.), *Formal Approaches to Slavic Linguistics: The Ottawa Meeting 2003,* 91−108. Ann Arbor: Michigan Slavic Publications, Ann Arbor.

Chomsky, Noam. 2000. Minimalist inquiries. In Roger, Martin, David Michaels & Juan Uriagereka (eds.), *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, 89−156. Cambridge, Mass.: MIT Press.

Corbett, Greville. 1983. *Slaganje predikata sa više subjekata u srpskohrvatskom jeziku* [Agreement of predicates with multiple subjects in Serbo-Croatian], *Naučni Sastanak Slavista u Vukove Dane: Referati i saopštenja* 12. 193−102.

Doron, Edit. 2000. VSO and left-conjunct agreement: Biblical Hebrew vs Modern Hebrew. In Carnie, Andrew & Eithne Guilfoyle (eds.), *The syntax of verb initial languages*, Oxford: Oxford University Press. 75−95.

Johannessen, Jeanne Bondi. 1998. *Coordination*. New York: Oxford University Press.

Lorimor, Heidi. 2007. Conjunctions and grammatical agreement. University of Illinois, PhD dissertation.

Marušič, Franc, Andrew Nevins, & Amanda Saksida. 2007. Last-conjunct agreement in Slovenian. In Compton, Richard, Magdalena Goledzinowska & Ulyana Savchenko (eds.), *Proceedings of Formal Approaches to Slavic Linguistics: The Toronto Meeting 2006*, 210−227. Ann Arbor: Michigan Slavic Publications.

Marušič, Franc, Andrew Nevins, & William Badecker. 2012. The Grammars of Conjunction Agreement in Slovenian. *Syntax: a journal of theoretical, experimental and interdisciplinary research*. University of Nova Gorica, UCL & University of Arizona.

Munn, Alan. 1999. First conjunct agreement: Against a clausal analysis. *Linguistic Inquiry* 30. 669−682.

Pesetsky, David & Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In Karimi, Simin, Vida Samiian & Wendy Wilkins (eds.), *Phrasal and clausal architecture: Syntactic derivation and interpretation. In honor of Joseph E. Emonds*, 262−294. Amsterdam: John Benjamins.

Rappaport, Gilbert. 2006. Towards a theory of the grammatical use of lexical information. In Filip, Hana, Steven Franks, James Lavine & Mila Tasseva-Kurktchieva (eds.), *Fourteenth Meeting on Formal Approaches to Slavic Linguistics: The Princeton Meeting*. Ann Arbor: Michigan Slavic Publications.

Steele, Susan. 1978. Word order variation: a typological study. In Greenberg, Joseph H. (ed.), *Universals of human language, volume 4. Syntax*, 585−623. Stanford: Stanford University Press.

Stjepanović, Sandra. 1998. *Scrambling in Serbo-Croatian.* Manuscript, University of Connecticut.