

# The impoverished bishop: Gender, number, and markedness in BCS

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## 1. Introduction

- Bosnian/Croatian/Serbian (BCS) has a set of nouns with an unusual gender agreement pattern:

- Uniform masculine agreement in the singular, (1-a)
- Variable feminine or masculine agreement in the plural, (1-b)

- (1) a. Nov-**i**/\*-**a** vladika je sazva-**o**/\*-**la** sastanak. **M Sg Agr**  
new-**M.SG**/\***F.SG** bishop AUX called-**M.SG**/\***F.SG** meeting  
'The new bishop called a meeting.'
- b. Nov-**i**-**e** vladike su sazval-**i**-**e** sastanak. **M/F Pl Agr**  
new-**M.PL**/**F.PL** bishops AUX.PL called-**M.PL**/**F.PL** meeting  
'The new bishops called a meeting.'

→ This set of nouns includes the noun *bishop* and we refer to them henceforth as *bishop* nouns<sup>1</sup>

- *Bishop* nouns have attracted a large amount of attention in the morphosyntactic literature (see e.g., Wechsler & Zlatić 2000, 2003, Corbett 2010, 2015; Despić 2017, Puškar 2018, i.a.).
- This work has yielded substantial insights, but many of the analyses require significant analytical machinery and sets of interlocked stipulations unique to *bishop* nouns
- Almost all previous analyses assume that *bishop* nouns are *hybrid* nouns, i.e., nouns that have both social and grammatical gender features

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<sup>1</sup>These nouns are also sometimes called *split hybrid* nouns because of their distinct agreement behavior in the singular vs. plural (see e.g., Corbett 1991, 2015, Puškar 2018).

- We develop a new analysis of *bishop* nouns, arguing that they have both [+FEM] and [+MASC] grammatical gender features:
  - In the singular, a **markedness-targeting** Impoverishment operation targets and deletes [+FEM], resulting in masculine agreement (see e.g., Noyer 1992, 1997, 2001, Nevins 2011, Arregi & Nevins 2012; see also Despić 2017 on BCS)
  - In the plural, a **markedness-triggered** Impoverishment operation deletes **either** [+MASC] **or** [+FEM], resulting in variability (see e.g., Nevins 2011, Arregi & Nevins 2012, Kramer 2016, 2019)
- We argue that this analysis is both simpler than previous approaches and has better empirical coverage in BCS
  - We bring to bear new evidence that *bishop* nouns are **not** in fact hybrid nouns, and the Impoverishment analysis allows them to have grammatical gender features only
  - The analysis also addresses a long-standing puzzle about the nature of gender features in three-gender languages (see e.g., Kramer 2015 vs. Despić 2016)

## Roadmap

- Section 2: Two puzzles: *bishop* nouns and the nature of gender features
- Section 3: The proposal: Impoverishment operations
- Section 4: Empirical ramifications and theoretical implications (incl. the evidence that *bishop* nouns are not hybrid)
- Section 5: Conclusion

## 2. The two puzzles

### 2.1. Bishop nouns

- In BCS, a relatively small subset of male-denoting nouns display the variable agreement pattern seen in (1): masculine in singular, masculine or feminine in plural
- *bishop* nouns include *tata* 'dad', *papa* 'pope', *vojvoda* 'duke', *kolega* 'colleague', *gazda* 'owner', *sluga* 'servant', *komšija* 'neighbor', *bekrija* 'boozer', etc.

- (2) a. Naš-**o**/\*-**a** vojvoda je bi-**o**/\*-**la** u pravu. **M Sg Agr**  
our-**M.SG**/\***F.SG** duke AUX was-**M.SG**/\***F.SG** in right  
'Our duke was in the right.'
- b. Naš-**i**-**e** vojvode su bil-**i**-**e** u pravu. **M/F Pl Agr**  
our-**M.PL**/**F.PL** dukes AUX.PL were-**M.PL**/**F.PL** in right  
'Our dukes were in the right.'

- *Bishop* nouns are in Declension Class II, which mostly includes nouns with feminine grammatical gender (whereas masculine nouns are primarily found in class I)

(3) *BCS noun classes* (adapted from Mrazović & Vukadinović 1990 via Puškar 2018)

Class	Example	Ending	Gender
I <sub>M</sub>	<i>otac-Ø</i> ‘father’, <i>krov-Ø</i> ‘roof’, <i>aut-o</i> ‘car’, <i>Đorđ-e</i> ‘George’	Ø, -o, -e	M
I <sub>N</sub>	<i>sel-o</i> ‘village’, <i>mor-e</i> ‘sea’	-o, -e	N
II	<i>majk-a</i> ‘mother’, <i>kuć-a</i> ‘house’ <i>vladič-a</i> ‘bishop’, <i>vojvod-a</i> ‘duke’	-a	F ?
III	<i>ljubav-Ø</i> ‘love’, <i>čast-Ø</i> ‘honor’	Ø	F

- Class II membership and variable agreement behavior in the plural have formerly been taken as evidence that *bishop* nouns are grammatically feminine (with masculine social gender)

- This would fold them into a more familiar phenomenon: *hybrid* nouns
- A typical hybrid noun like *pedagog* ‘educator’ triggers masculine agreement when it refers to a man or woman, and feminine agreement when it refers to a woman (4)
- This is usually taken to mean that the noun *pedagog* ‘educator’ has masculine grammatical gender and optional feminine social gender

- (4) a. Pedagog nas je pozva-**o** na telefon. (male or female)  
educator us AUX called-M.SG on phone  
‘The educator called us on the phone.’
- b. Pedagog nas je pozva-**la** na telefon. (female only)  
educator us AUX called-F.SG on phone  
‘The educator called us on the phone.’

- However, *bishop* nouns do not behave like typical hybrid nouns, since agreement with hybrid nouns is not sensitive to number (see also Section 4)
- Capturing the variable agreement behavior of *bishop* nouns has so far required significant analytical machinery and many assumptions specific to *bishop* nouns

## 2.2. Gender representation in three-gender languages

- It is controversial how to properly characterize grammatical gender features in languages like BCS, which have a three-way gender system
- Some previous work has argued for (5), where each gender is identified by two binary gender features: [+/-MASC] and [+/-FEM] (e.g., Despić 2016, Opitz & Pechmann 2016, Despić & Murray 2018, Privizentseva 2023, Matushansky 2025, i.a.)

- (5) a. [+FEM][-MASC] = feminine                      c. [-FEM][-MASC] = neuter  
b. [-FEM][+MASC] = masculine                      d. [+FEM][+MASC] = ??

- As (5-d) indicates, one part of the typology is missing: it is said that [+FEM][+MASC] is unattested because it would lead to a feature conflict (e.g., Matushansky 2025:439)
- However, the explanation for the absence of (5-d) is odd:
  - The tacit assumption might be that there is some kind of ‘conflict’ between being both male and female...
  - But in these approaches, (5) is also assumed to hold for *grammatical* gender features, in addition to (and/or separately from) social gender
  - If there is some kind of conflict when both grammatical gender features have the same value, then neuter should be a problem as well, since it is doubly specified with [-]

### Our contribution

- The challenging gender/number agreement pattern of *bishop* nouns, and the mysterious empty cell in the typology in (5), can be solved at the same time!
- The key idea: *bishop* nouns have both [+FEM] and [+MASC] features = (5-d)
- The gender/number agreement patterns emerge from two familiar kinds of Impoverishment rules, which work in tandem in BCS

- Next section: we lay out the details of how to Impoverish a (singular or plural) bishop

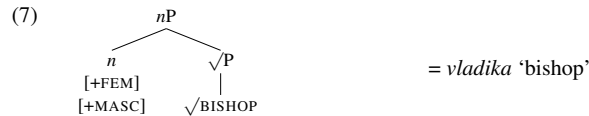
## 3. The proposal: Feature specification and Impoverishment

- Road map for this section
  - 3.1 The (gender) features of a bishop
  - 3.2 Bishop in the singular: markedness-targeting Impoverishment results in M agr
  - 3.3 Bishop in the plural: markedness-triggered Impoverishment results in M/F agr

### 3.1. The (gender) features of a bishop

- BCS has the gender system in (6):
 

(6) a. [+FEM][-MASC] = feminine, e.g., *majka* ‘mother,’ *kuća* ‘house’ ...  
b. [-FEM][+MASC] = masculine, e.g., *otac* ‘father,’ *krov* ‘roof’ ...  
c. [-FEM][-MASC] = neuter, e.g., *selo* ‘village,’ *more* ‘sea’ ...  
d. [+FEM][+MASC], e.g., *vladič-a* ‘bishop,’ *kolega* ‘colleague’ ...
- Hence, bishop nouns have [+MASC] [+FEM] *grammatical gender*, which is encoded on *n*:



- (6) allows for a straightforward analysis of gender and declension class in BCS
- We assume declension class is assigned via rule at PF (see e.g., Oltra-Massuet 1999, Embick & Halle 2005, Kramer 2015); such rules frequently reference grammatical gender

• Only three ordered rules are required for BCS declension classes:

- (8)
- [list of roots] → [III] (e.g., *stvar* 'thing', *ljubav* 'love', *smrt* 'death')
  - [+FEM] → [II] (e.g., *Marija* 'Mary', *lopta* 'ball', *vladika* 'bishop')
  - default → [I], e.g., (e.g., *Petar* 'Peter', *auto* 'car', *more* 'sea')

- Class III is assigned based on root identity
- Class II is assigned to nouns with [+FEM], including *bishop* nouns
- Class I is assigned by default to the remaining nouns (all masculine or neuter)

• Given the feature specification in (6) and the rules in (8) we successfully group *bishop* nouns in Class II and correctly assign declension class to the remaining nominals in BCS

• Declension class rules like (8) are attested in other languages, e.g., Spanish (Kramer 2015)

• (6) also allows for uncontroversial assumptions about the markedness of gender features:

- (9)
- The [+ ] value is marked; the [- ] value is unmarked.
  - [+FEM] is marked relative to [+MASC]. (see e.g., Jakobson 1984/1932, Despić 2017)

• (9) is the foundation for our Impoverishment analysis of gender agreement with *bishop* nouns

### 3.2. *Bishop in the singular: markedness-targeting Impoverishment*

• Impoverishment is a postsyntactic operation that deletes morphosyntactic features (originally proposed in Bonet 1991, see Keine & Müller to appear for a recent overview)

- It occurs before Vocabulary Insertion
- Because it deletes features, it leads to the insertion of less-specified exponents than indicated by the syntactic/semantic context (“retreat to the default”)

• One major motivation for Impoverishment is markedness, in two distinct senses (see e.g., Noyer 1992, 1997, 2001, Nevins 2011, Bobaljik 2001, Harley 2008, Arregi & Nevins 2012):

- An excess of markedness in a feature bundle causes a marked feature to delete = markedness-targeting Impoverishment (this section)

– An excess of markedness in a feature bundle causes some unrelated feature(s) to delete = markedness-triggered Impoverishment (Section 3.3)

• Example of markedness-targeting Impoverishment: dual in Classical Arabic

– Let us assume the number features [+/-SINGULAR] and [+/-AUGMENTED] (Noyer 1992, Harbour 2008, Nevins 2011, i.a.)

- (10)
- [+SG][-AUG] = singular
  - [-SG][+AUG] = plural
  - [-SG][-AUG] = dual
  - [+SG][+AUG] = impossible (Harbour, 2008, 113-4)

– [-AUG] is marked in the context of [-SG], reflecting the markedness of dual cross-linguistically (Nevins 2011)

– In Classical Arabic, first person dual is always realized in the same way as first person plural (Hewett, 2023, 152)

– Example: jussive prefix conjugation in (11)

(11) *Classical Arabic jussive prefix conjugation* (Hewett, 2023, 152, (40))

	SG	DU	PL
1	<b>ʔa</b> -fʔal	<b>na</b> -fʔal	<b>na</b> -fʔal
2M	<b>ta</b> -fʔal	<b>ta</b> -fʔal- <b>a</b>	<b>ta</b> -fʔal- <b>u</b>
2F	<b>ta</b> -fʔal- <b>i</b>	<b>ta</b> -fʔal- <b>a</b>	<b>ta</b> -fʔal- <b>na</b>
3M	<b>ya</b> -fʔal	<b>ya</b> -fʔal- <b>a</b>	<b>ya</b> -fʔal- <b>u</b>
3F	<b>ta</b> -fʔal	<b>ta</b> -fʔal- <b>a</b>	<b>ya</b> -fʔal- <b>na</b>

– Analysis: a markedness-targeting Impoverishment operation deletes the marked [-AUG] feature in non-singular 1st person contexts

(12) Markedness-Targeting Impoverishment for Dual in Classical Arabic

- SD: an Agr node specified as [+AUTHOR][-SG]
- SC: Delete [-AUG] in Agr (modified from Hewett, 2023, 153, (42))

– Result: only [-SG] remains available to determine insertion, so plural forms are predicted to be inserted<sup>2</sup>

• **Key proposal for BCS singular *bishop* nouns:** elements that agree with singular *bishop* nouns undergo markedness-targeting Impoverishment

– They have two marked gender features, [+MASC] and [+FEM], which is the most marked combination of gender features as per (9)

<sup>2</sup>Given certain plausible assumptions about the featural content of Vocabulary Items in Classical Arabic

– Impoverishment deletes the most marked feature of these two: [+FEM]

(13) **Markedness-Targeting Impoverishment for Agr with *bishop* Nouns**

- a. SD: an Agr node specified as [+MASC][+FEM]
- b. SC: Delete [+FEM] in Agr

– Result: only [+MASC] remains, so obligatory masculine agreement is predicted with *bishop* nouns, as in (14-a)<sup>3</sup>

- (14) a. Nov-**i/\*-a** vladika je sazva-**o/\*-la** sastanak. **M SgAgr**  
 new-**M.SG/\*F.SG** bishop AUX called-**M.SG/\*F.SG** meeting  
 ‘The new bishop called a meeting.’
- b. Nov-**i/-e** vladike su sazval-**i/-e** sastanak.**M/F PlAgr**  
 new-**M.PL/F.PL** bishops AUX.PL called-**M.PL/F.PL** meeting  
 ‘The new bishops called a meeting.’

• But what about the plural nouns, which trigger variable agreement, (14-b)? Next to the plate!

**3.3. Bishop in the plural: markedness-triggered Impoverishment**

• Since Greenberg 1966, it has been recognized that languages neutralize gender distinctions in the plural, i.e., languages have ‘fewer’ genders in the plural

- For example, Coptic (Egyptian (Afroasiatic)) does not distinguish between masculine and feminine gender in the plural (Kramer 2016, 2019)
- Example: definite determiners in (15)

(15) *Coptic Definite Determiners (Kramer, 2016, 100)*

	FEMININE	MASCULINE
SINGULAR	t-	p-
PLURAL		ŋ

– This generalization holds in Coptic across all feature bundles that show phi-agreement in a broad sense (agreement inflection, pronouns, etc.)

• Major line of analysis for this kind of generalization: markedness-triggered Impoverishment

- Coptic has two genders and two numbers so we assume simple gender/number features: [+/-FEM] and [+/-PL]
- Gender features are deleted from feature bundles that include a plural feature

(16) **Markedness-Triggered Impoverishment for Gender in Coptic**

- a. SD: an Agr node specified as [+PL]
- b. SC: Delete [+/-FEM] in Agr (modified from Kramer, 2016, 102, (7))

– Importantly, the plural feature itself is not deleted: the unrelated gender features are deleted due to the markedness of the plural

• BCS has an Impoverishment operation like (16), that deletes all gender features in certain plural contexts (see e.g., Despić, 2017, 272)

– For example, gender distinctions are neutralized in plural relative pronouns with oblique case (across Vocabulary Items)

(17) *Plural Relative Pronouns in BCS (Arsenijević & Gračanin-Yuksek, 2016, 7)*

	MASCULINE		FEMININE		NEUTER	
NOM	koj-i	stolovi	koj-e	jabuke	koj-a	sunca
	which-M.PL	tables.M	which-F.PL	apples.F	which-N.PL	suns.N.PL
ACC	koj-e	stolove	koj-e	jabuke	koj-a	sunca
GEN	koj- <b>ih</b>	stolova	koj- <b>ih</b>	jabuka	koj- <b>ih</b>	sunaca
INST	koj- <b>im</b>	stolovima	koj- <b>im</b>	jabukama	koj- <b>im</b>	suncima
DAT/LOC	koj- <b>im</b>	stolovima	koj- <b>im</b>	jabukama	koj- <b>im</b>	suncima

(18) **Markedness-Triggered Impoverishment for Both Gender Features in BCS<sup>4</sup>**

- a. SD: An oblique-case relative pronoun specified as [+PL]
- b. SC: Delete [+/-FEM] and [+/-MASC] in the pronoun

– If all the gender features are deleted, as in (18), then *bishop* nouns are predicted to trigger the same relative pronoun agreement as any other plural noun - borne out!

- (19) Vladike koj-**im** sam dao veliku donaciju su me zapamtile.  
 bishops who-DAT.PL AUX gave big donation AUX.PL me remembered  
 ‘The bishops to whom I gave a big donation remembered me.’

– However, BCS does **not** neutralize genders in other plural contexts

- (20) a. Ov-i stolovi su bil-i u hodniku.  
 these-M.PL tables.M AUX were-M.PL in hallway  
 ‘These tables were in the hallway.’

<sup>3</sup>Since [+FEM] is deleted, then the relevant masculine agreement Vocabulary Items in BCS must also lack [-FEM]; otherwise, the Subset Principle would prevent any Vocabulary Item from being inserted. As far as we can determine, nothing negative follows from this. Alternatively, Impoverishment might delete the marked value for [FEM] and then insert the unmarked value (-) (Noyer 2001, Harbour 2003), which nullifies the issue.

<sup>4</sup>Similar patterns are found in other plural contexts (e.g., non-nominative personal pronouns), and we assume these contexts are listed out in the full SD for (18).

b. Ov-**e** jabuke su bil-**e** na suncu.  
these-**F.PL** apples.F AUX were-**F.PL** in sun  
'These apples were in the sun.'

c. Ov-**a** sunca su bil-**a** u našoj galaksiji.  
these-**N.PL** suns.N AUX were-**N.PL** in our galaxy  
'These suns were in our galaxy.'

– So, in certain contexts, BCS tolerates the co-occurrence of [+FEM] with a plural feature as well as the co-occurrence of [+MASC] with a plural feature

– However, it is in these contexts that the *bishop* nouns have variable agreement in gender

(21) Ov-**i/-e** vladike su bil-**i/-e** u Pečkoj patrijašiji.  
these-**M.PL/F.PL** bishops AUX.PL were-**M.PL/F.PL** in Peć patriarchate  
'These bishops were in the Patriarchate of Peć.'

\* We conclude that it is the **combination** of both [+FEM] and [+MASC] with [+PL] that the grammar cannot tolerate in these contexts

• **Key proposal:** elements that agree with plural *bishop* nouns undergo markedness-triggered Impoverishment

(22) **Markedness-Triggered Impoverishment for Agr with *bishop* Nouns**

- a. SD: an Agr node specified as [+MASC][+FEM][+PL]
- b. SC: Delete [+FEM] or [+MASC] in Agr

– If [+MASC] is deleted, then the result is feminine agreement

– If [+FEM] is deleted, then the result is masculine agreement

– Correct prediction = variable agreement

• Question: why aren't both gender features deleted in (22)?

– For economy reasons: this context is not as marked as the oblique-case plural context so there is no need to delete as many features to lower the markedness threshold

– Alternatively, they **are** in fact both deleted and a feature bundle with just [+PL] is realized with a 'masculine' agreement exponent (TBD if this is plausible in BCS!)

• Question: why doesn't plural agreement with *bishop* nouns trigger the markedness-targeting Impoverishment operation in (13)?

– We propose that (22) is ordered before (13) (see Noyer 2001, Arregi & Nevins 2012 on ordering Impoverishment operations)

– (22) bleeds (13) because (22) deletes a gender feature

#### Interim summary

- *bishop* nouns have both [+FEM] and [+MASC] features - the most marked kind of gender in BCS!
- In the singular, a markedness-targeting Impoverishment operation deletes the most marked feature of them all [+FEM] = masc agr
- In the plural, a markedness-triggered Impoverishment operation deletes either gender feature = masc/fem agr

#### 4. Empirical ramifications and theoretical implications

- Let's explore some broader consequences of an Impoverishment approach to *bishop* nouns:
  - 4.1 Agreement resolution with coordinated plurals (evidence that resolution precedes Impoverishment)
  - 4.2 Gender variation as an intra-speaker phenomenon (and initial evidence against treating *bishop* nouns as hybrid nouns)
  - 4.3 [+MASC] on *bishop* nouns behaves like grammatical gender, not social gender (further evidence that *bishop* nouns are not hybrid nouns)
  - 4.4 *bishop* nouns do not require special treatment (comparison to previous approaches)

##### 4.1. Agreement resolution with coordinated plurals

• In BCS, if any number of plural animate nouns are coordinated, masculine gender will surface if any of the conjuncts are masculine:

(23) Student-kinj-e i profesor-i su bil-**i** ispred učionice.  
student-F-PL and professor.M-PL AUX.PL were-**M.PL** in-front classroom  
'The female students and the professors were in front of the classroom.'

• Feminine and neuter agreement surface only if all conjuncts have feminine or neuter gender (e.g., Puškar 2013)

(24) Student-kinj-e i profesor-k-e su bil-**e** u prvim redovima.  
student-F-PL and professor-F-PL AUX.PL were-**F.PL** in first rows  
'The female students and the female professors were in the first rows.'

• Our analysis correctly predicts that only masculine agreement is possible when plural *bishop* nouns are coordinated with plural feminine nouns (25)

(25) Monahinje i vladike su sazval-**i/\*-e** sastanak.  
nuns.F and bishops AUX.PL called-**M.PL/\*F.PL** meeting  
'The nuns and the bishops called a meeting.'

- Since *bishop* nouns have both [+FEM] and [+MASC], the input to the coordination resolution mechanism in (25) will be the same as in the three-member mixed coordination in (26)

(26) Monahinje, sveštenici i igumanije su sazval-i/\*-e sastanak.  
 nuns.F priests.M and abbesses.F AUX.PL called-M.PL/\*F.PL meeting  
 ‘The nuns, priests, and abbesses called a meeting.’

- Given the presence of [+MASC], masculine agreement will always win out in coordination resolution with plural *bishop* nouns
- If our analysis of *bishop* nouns is correct, (25) argues for a broader theoretical point:

\* **Agreement resolution happens before Impoverishment**

- If Impoverishment preceded resolution, [+MASC] could be deleted from the agreement target in (25), resulting in two [+FEM] features in (25), leading to feminine agr—contrary to fact
- Coordination resolution is then firmly within the purview of the grammar (contra Lyskawa 2021, 2024, who argues that resolution is *extra-grammatical*)

#### 4.2. Gender variation as an intra-speaker phenomenon

- Our approach captures the fact that variable gender agreement in the plural is an intra-speaker phenomenon (contra proposals that treat it as inter-speaker variation, e.g., Despić 2017)
- The Web corpus (SrWaC) contains many examples where agreement with *bishop* nouns is variable in the same text and even in the same sentence
- (27) illustrates mixed agreement with VP and clausal coordination; (28) with relative clauses; (29) with attributive vs. predicative agreement
- (30) illustrates (exceedingly rare) mixed agreement with multiple attributive adjectives

(27) a. Pape su **krunisal-e** germanske varvarske osvajače i  
 popes AUX.PL crowned-F.PL Germanic barbarian conquerors and  
**proglašaval-i** ih vladarima Rimskog carstva.  
 declared-M.PL CL emperors Roman empire  
 ‘The popes crowned Germanic barbarian conquerors and declared them  
 rulers of the Roman empire.’

b. Pape **su** **veroval-e** da je car Lav III jeretik kada je  
 popes AUX.PL believed-F.PL that AUX tsar Leo III heretic when AUX  
 zabranio ikone i **počel-i** **su** da sumnjaju...  
 forbade icons and started-M.PL AUX.PL DA doubt  
 ‘The popes believed that emperor Leo III was a heretic when he forbade icons  
 and they started to doubt...’

(28) a. Nego se pitam šta traže **pojedini-e** vladike **koj-i** prošle godine  
 but SE wonder what seek some-F.PL bishops who-M.PL last year  
 nisu **došli-i** da daju podršku pravoslavnom narodu...  
 didn’t come-M.PL to give support Orthodox people  
 ‘But I’m wondering what some bishops are seeking who last year did not come  
 to support the Orthodox people...’

b. Od tada su pravoslavni-e vladike **koj-i** su protiv posjete  
 from then AUX.PL Orthodox-F.PL bishops who-M.PL AUX.PL against visit  
 pontifeka progonjen-e od propapskih državnih i crkvenih kadrova.  
 pontifex persecuted-F.PL by pro-papal state and church personnel  
 ‘From then on, Orthodox bishops who were opposed to the visit of the pontifex  
 were persecuted by pro-papal state and church personnel.’

c. Nek-e vladike **koj-e** su **bil-e** za izbor novog  
 some-F.PL bishops who-F.PL AUX.PL were-F.PL for election new  
 patrijarha preko noći su promeni*l*-i stav...  
 patriarch over night AUX.PL changed-M.PL attitude  
 ‘Some bishops who were in favor of electing a new patriarch changed their  
 attitude over night...’

(29) a. A **mnog-e** vojvode su ranije **bil-i** hajduci i harambaše.  
 and many-F.PL dukes AUX.PL earlier were-M.PL hajduks and harambašas  
 ‘And many dukes had been hajduks and harambašas before.’

b. Čak i **pravoslavni-e** vladike, kao sv. Vasilije Ostroški, nisu se  
 even also Orthodox-F.PL bishops like st. Basil Ostrog didn’t SE  
**ustručaval-i** ući u veze s Rimom...  
 hesitate-M.PL get in link with Rome  
 ‘Even Orthodox bishops like Basil of Ostrog didn’t hesitate to connect to  
 Rome.’

(30) a. Čak su **mnog-e srpsk-i** ‘patriote’ kada više nisu  
 even AUX.PL many-F.PL Serbian-M.PL patriots when more didn’t  
 znal-e šta da lupetaju pričal-e kako...  
 know-F.PL what DA blather said-F.PL how  
 ‘Even many Serbian ‘patriots’, when they no longer knew what to blather  
 about, said how...’

b. Mogl-i su **t-i velik-e** patriote iz Dveri tada da ubace  
 could-M.PL AUX.PL those-M.PL big-F.PL patriots from Dveri then DA add  
 i KiM...  
 also KiM  
 ‘Those big patriots from the Dveri movement could have also added Kosovo...’

- Our approach handles such variability straightforwardly:

– *Bishop* nouns have [+FEM] [+MASC] on *n*

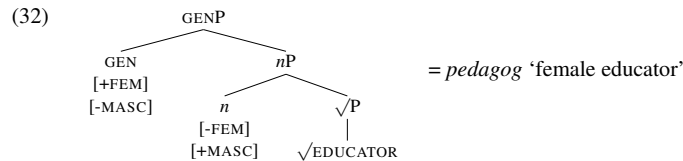
- Both features are copied onto agreement targets
- Impoverishment can delete either gender feature in the plural

\* **A note on the Agreement Hierarchy (and attempts to derive it):**

- Our examples are mostly in line with Corbett’s *Agreement Hierarchy*, which states that the likelihood of semantic agreement increases monotonically from left to right in (31)

(31) *attributive — predicate — relative pronoun — personal pronoun* (Corbett 1979)

- However, they cannot straightforwardly be subsumed under analyses that derive the hierarchy effects from a two-tier gender structure (e.g., Pesetsky 2013, Matushansky 2013)



- (32) is an example of a hybrid noun
- A two-tier gender structure for hybrid nouns is supposed to ensure that once social gender is introduced, it becomes the target for any future agreement operations:
- If we adopted a two-tier, hybrid noun analysis for *bishop* nouns, we could not explain the pattern in (30-a), for which the following description would be necessary:<sup>5</sup>
  - Social gender on the (structurally lower) subjective adjective
  - Grammatical gender on the (structurally higher) intersective adjective
  - Grammatical gender on the predicate
- In contrast, an Impoverishment analysis is very much compatible with the corpus examples
  - Both gender features on *bishop* nouns are available for agreement and Impoverishment
  - It is left open which (potentially extra-grammatical) factors favor Impoverishment of one feature over the other in a given context<sup>6</sup>
- Thus, we have some initial evidence that *bishop* nouns are not hybrid nouns

<sup>5</sup>This pattern can be accounted for under the idea that social gender is lower on the nominal spine than grammatical gender for *bishop* nouns, as argued in Puškar 2018. However, the data in (30-b) is problematic for such an approach.

<sup>6</sup>We find that linear order plays a more significant role in the mixing of gender agreement with *bishop* nouns than expected based on the Agreement hierarchy or the two-tier gender approach. While the pattern in (27) is attested regularly (F>M), the reverse pattern (M>F) does not appear in the corpus even once, despite both of them involving predicate agreement. Also, while (29) is not unusual, such patterns basically disappear if the subject is postverbal.

4.3. [+MASC] *on bishop nouns behaves like grammatical gender, not social gender*

- Gender on Slavic nouns is generally analyzed with the two-tier structure in (32), where social gender is optional and higher on the nominal spine than grammatical gender (see e.g., Steriopo & Wiltschko 2010, Matushansky 2013, Pesetsky 2013, Landau 2016)
- If gender agreement is governed by Agree, only the higher social gender features should be available for probing from the outside when both are present in (32)
- **Here, we demonstrate that social gender agreement behaves as expected with hybrid nouns, but not with *bishop* nouns**
- We argue this is because *bishop* nouns do not instantiate a two-tier gender structure (contra previous work, e.g., Wechsler & Zlatić 2000, 2003, Despić 2017, Puškar 2018)
- Instead, both gender features are on the same *n* head; they instantiate grammatical [+FEM][+MASC]
- BCS has two types of hybrid nouns:

- grammatically masculine with optional feminine social gender (33)
- grammatically feminine with optional masculine social gender (34)

(33) a. *Pedagog nas je pozva-o na telefon.* (male or female)  
 educator us AUX invited-M.SG on phone  
 ‘The educator called us on the phone.’

b. *Pedagog nas je pozva-la na telefon.* (female only)  
 educator us AUX called-F.SG on phone  
 ‘The educator called us on the phone.’

(34) a. *Pijanica nas je pozva-la na telefon.* (male or female)  
 drunk us AUX invited-F.SG on phone  
 ‘The drunk called us on the phone.’

b. *Pijanica nas je pozva-o na telefon.* (male only)  
 drunk us AUX called-M.SG on phone  
 ‘The drunk called us on the phone.’

- Agreement works as expected, assuming that only the (b) examples are specified for social gender—have GENP on our analysis (see Matushansky 2013 for discussion)
- A way to force social gender agreement in BCS is to use gender-specific epithets (35)

(35) a. *Pedagog, žena u tridesetim, pozva-la/\*-o nas je na telefon.*  
 educator woman in thirties, called-F.SG/\*M.SG us AUX on phone  
 ‘The educator, a woman in (her) thirties, called us on the phone.’

- b. Pijanica, muškarac sa ulice, pozva-**o**/\*-**la** nas je na telefon.  
 drunk man from street called-**M.SG**/\***F.SG** us AUX on phone  
 ‘The drunk, a man from the street, called us on the phone.’

- The agreement pattern in (35) is not due to the gender of the noun inside the epithet, cf. (36)

- (36) Moja prijatelj-ica, strašni genijal-ac, zadivi-**la**/\*-**o** je sve prisutne.  
 my friend-F.SG epic genius-M.SG impressed-**F.SG**/\***M.SG** AUX all present  
 ‘My female friend, an epic genius, impressed everyone present.’

- Crucially, the same pattern obtains for hybrid nouns in the plural:

- (37) a. Pedagozi, žene u tridesetim, pozval-**e**/\*-**i** su nas na telefon.  
 educators women in thirties, called-**F.PL**/\***M.PL** AUX.PL us on phone  
 ‘The educators, women in (their) thirties, called us on the phone.’

- b. Pijanice, muškarcu sa ulice, pozval-**i**/\*-**e** su nas na telefon.  
 drunk men from street called-**M.PL**/\***F.PL** AUX.PL us on phone  
 ‘The drunks, men from the street, called us on the phone.’

- We do not observe the same with plural *bishop* nouns; agreement is still optionally feminine:

- (38) Vladike, starci u osamdesetim, došli-**e**/\*-**i** su u sukob.  
 bishops old-men in eighties came-**F.PL**/\***M.PL** AUX.PL in conflict  
 ‘The bishops, old men in (their) eighties, came into conflict.’

- This pattern is predicted if both genders on *bishop* nouns instantiate grammatical gender on *n*, but not if [+MASC] is social gender

#### 4.4. *Bishop* nouns do not require special treatment

- Previous approaches to *bishop* nouns are (we argue) less successful than the Impoverishment analysis in certain ways
  - Puškar 2018 requires that grammatical gender be higher than social gender in the nominal spine, *pace* almost all previous work (see e.g., Steriopoło & Wiltschko 2010, Pestscky 2013, Matushansky 2013)
  - Other approaches do not explain why *bishop* nouns do not behave like more familiar hybrid nouns, as shown in Sections 4.2 and 4.3 (e.g., Despić 2017)
- The Impoverishment analysis developed here addresses these issues
  - It relies on familiar, uncontroversial assumptions (e.g., feminine is marked relative to masculine, languages neutralize gender distinctions in the plural)

- It predicts that *bishop* nouns do not behave like hybrid nouns because they do not have social gender features

- The Impoverishment analysis also paves the way for a unified treatment of *bishop* nouns with similar gender agreement patterns in other languages:

- There are other languages where certain nouns seem to trigger agreement in one gender in the singular and another in the plural

- \* neuter nouns in Romanian (Farkas 1990, Matushansky 2022, many more)
- \* certain nouns in Guébie (Kru; Sande 2019)

- Insofar as such changes have no effects on interpretation, they can be productively modeled using Impoverishment, as in Matushansky 2022 and Kramer & Sande 2023

- Future work: a more detailed comparison of these patterns

## 5. Conclusion

- Our proposal has three planks:
  - *bishop* nouns have [+MASC] [+FEM] gender features
  - Markedness-targeting Impoverishment deletes the (very marked) [+FEM] feature on singular agreement targets
  - Markedness-triggered Impoverishment deletes either gender feature on plural agreement targets
- This proposal not only captures the previously-challenging agreement patterns but also:
  - Correctly models intra-speaker variation in agreement with *bishop* nouns
  - Correctly predicts declension class for *bishop* nouns
  - Correctly predicts coordination resolution patterns for *bishop* nouns
  - Is compatible with the evidence showing that *bishop* nouns are not hybrid nouns
- Taking these results together, (we argue that) an Impoverishment analysis is more successful than previous approaches to *bishop* nouns.
- Additional theoretical implications include:
  - Evidence about the nature of gender features in three-gender languages - filling in the mysterious gap

- Support for Impoverishment approaches to changes in gender agreement across number (Kramer & Teferra 2020, Matushansky 2022, Kramer & Sande 2023)
- Evidence that agreement resolution precedes Impoverishment
- Many open questions remain:
  - Why are all the *bishop* nouns human-denoting?
  - Are there examples in other languages of markedness-triggered Impoverishment deleting either of two gender features?

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