IMPOVERISHMENT, GENDER, AND NUMBER: PREDICTING THE PATTERNS OF SYNCRETISM

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1 INTRODUCTION

There has been a recent surge of morphosyntactic research on gender, joining a large literature on number.


However, the big-picture interaction of gender and number is less well-studied.

- Even though it is a well-known area of cross-linguistic variation (Corbett 1991, Aikhenvald 2004)
- Even though gender and number are often claimed to be more closely related to each other than to person (Baker 2011)

Today: present the piece of an ongoing gender-number project that focuses on gender-number syncretisms

- Investigation conducted in the framework of Distributed Morphology (DM)
- Map out the variation in gender-number syncretisms, including new data
- Develop DM analyses that generate the patterns and predict the variation, mostly using Impoverishment
- Broader implications:
  - Progress towards a theory of (im)possible syncretisms (Carstairs 1987, Noyer 1998, among others)
  - Support for a Distributed Morphology approach
  - Better understanding of the relationship between gender and number

Quick Background: The gender inventory of a language is determined by looking at its agreement patterns.

(1) a. ya säw dägg nāw
    that.M man good [Amharic]
    “That man is good.”

b. yatʃʃ set dägg nat
    that.F woman good be.3FS
    “That woman is good.” (Leslau 1995:66, 67)

Conclusion: Amharic has two genders -- masculine and feminine.

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1 Many thanks to Nicoleta Bateman, Donka Farkas, Girma Halefom, Bryce Huebner, Alexandru Nicolae, Mary Paster, Masha Polinsky, Morgan Rood, Anbessa Teferra, Spyropoulos Vassiliou, Lindley Winchester, Amir Zeldes, and the audiences at the 43rd North American Conference on Afroasiatic Linguistics, Harvard University, Morphest 2015, and the University of Chicago for helpful questions, feedback, and assistance on (portions of) this work. Examples without a citation are from my own fieldwork, and heartfelt thanks to the consultants: Senayit Ghebrehiwet, Mehret Getachew Tadesse, Meriem Tikue, Girma Halefom, and Anbessa Teferra (Amharic), Donka Farkas and Paula Ganga (Romanian).


But these descriptions are usually done on the basis of singular nouns, like in (1).

- What gender distinctions are expressed via agreement with nouns in other numbers (e.g., plural, dual)?
- Not necessarily the same distinctions as are made for agreement with singular nouns (Heine 1982, Corbett 1991, Baerman et al. 2005)


- In a convergent gender system, plural/dual nouns make fewer gender distinctions than singular nouns, i.e., the mapping from singular genders to plural/dual genders is many-to-one for at least some nouns.
  - In other words, gender is syncretic in the plural/dual.

\[\text{(2)}\]

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine</td>
<td>Plural</td>
</tr>
<tr>
<td>Feminine</td>
<td></td>
</tr>
</tbody>
</table>

(Feminine = convergence/syncretism)

Table 1: Convergent Example: French Determiners

<table>
<thead>
<tr>
<th></th>
<th>Feminine</th>
<th>Masculine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular</td>
<td>la</td>
<td>le</td>
</tr>
<tr>
<td>Plural</td>
<td>les</td>
<td></td>
</tr>
</tbody>
</table>

- Plan:
  - Limitation: 2- or 3-gender languages (keeps variation manageable, more than enough empirical richness)
  - Languages where all genders syncretize in the plural = total convergence (Section 2)
    - Including some previously untreated patterns, all analyzed via Impoverishment
  - Syncretism of a subset of genders in the plural/dual = partial convergence (Section 3)
    - Predicted to occur given the analysis in Section 2, and attested in two varieties of Slovenian (Nevins 2011a)
      - An interesting prediction about an impossible type of partial convergence
      - Helps in solving an old problem in Romanian gender/number relations
  - The conclusion, followed by two interesting bonus questions and some speculation (Section 4)

2 TOTAL CONVERGENCE

- 2.1 = basic case: convergence to plural (Coptic)
- 2.2 = new data: convergence to a single gender (Maay)
- 2.3 = predictions of the analysis developed in 2.1 and 2.2 are confirmed (Amharic)

2.1. Convergence to Plural

**Gender and Number Agreement in Coptic**

Coptic is an Afroasiatic language in the Egyptian branch; spoken in Egypt from 4th to 14th cent. CE.
- Has two genders: masculine and feminine (Layton 2011:39).
- Has two numbers: singular and plural (Layton 2011:86-87).
All categories that inflect for gender agreement in the singular do not show gender distinctions in the plural (Layton 2011:36, 64).

<table>
<thead>
<tr>
<th>Table 2: Coptic Determiners (Layton 2011:44)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feminine</td>
</tr>
<tr>
<td>Singular</td>
</tr>
<tr>
<td>Plural</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 3: Coptic Proximal Demonstratives (Layton 2011:48)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feminine</td>
</tr>
<tr>
<td>Singular</td>
</tr>
<tr>
<td>Plural</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 4: Coptic Personal Prefixes of the Durative Sentence (Layton 2011:65)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st pers</td>
</tr>
<tr>
<td>Singular</td>
</tr>
<tr>
<td>ti-</td>
</tr>
<tr>
<td>3rd pers</td>
</tr>
<tr>
<td>1st pers</td>
</tr>
<tr>
<td>singular</td>
</tr>
<tr>
<td>3rd pers</td>
</tr>
<tr>
<td>Plural</td>
</tr>
<tr>
<td>tòw</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 5: Coptic Independent Personal Pronouns (Layton 2011:65)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st pers</td>
</tr>
<tr>
<td>singular</td>
</tr>
<tr>
<td>anok</td>
</tr>
<tr>
<td>3rd pers</td>
</tr>
<tr>
<td>Plural</td>
</tr>
<tr>
<td>anon</td>
</tr>
<tr>
<td>nts (f.)</td>
</tr>
</tbody>
</table>

In Coptic, the number of genders available in the plural is fewer than that in the singular (namely, zero), so it is convergent and gender is syncretic in the plural.

(3) **Coptic Gender and Number Agreement**

\[
\begin{array}{ccc}
\text{Singular} & \text{Plural} \\
\text{Masculine} & \hat{\eta} \\
\text{Feminine} & \hat{\eta} \\
\end{array}
\]

(based on Corbett 1991:155, Figure 6.7)

- More specifically, Coptic is **convergent-to-plural** (my term): plural forms use a morpheme that is specific to the plural and which does not express gender distinctions.

Crucially, gender syncretism in the plural holds across all the agreement paradigms in Coptic (definite determiners, subject agreement, etc.), regardless of the individual exponents in the paradigms.

- This is a **metasyncretism** (Williams 1994, Bobaljik 2002, Harley 2008).

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4 The transliteration of the Coptic data roughly follows the guidelines in Layton 2011:Chapter 1.
5 Variants omitted for ease of exposition.
Table 6: Metaparadigm of Gender-Number in Coptic

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine</td>
<td>A</td>
<td>C</td>
</tr>
<tr>
<td>Feminine</td>
<td>B</td>
<td></td>
</tr>
</tbody>
</table>

**Analysis**

Impoverishment (Bobaljik 2002, Harley 2008, Nevins 2011a)
- In DM, certain operations can operate over syntactic feature bundles before they are exponed (Halle and Marantz 1993, Embick and Noyer 2001, 2007, etc.).


(4) **Coptic Gender/Number Impoverishment (obligatory)**

\[
[+/-\text{FEM}] \rightarrow [+\text{PL}]
\]

(5) **Vocabulary Items for Coptic Definite Determiner**

a. [D], [DEF], [+FEM] ↔ t-

b. [D], [DEF], [-FEM] ↔ p-

c. [D], [DEF], [+PL] ↔ n-

- After (4) applies, a plural syntactic bundle cannot be exponed using a Vocabulary Item that has gender features like (5)a or (5)b since this would violate the Subset Principle.
- Therefore, no syntactic elements that have both plural number and gender features in the syntax expone their gender features morphologically, and this derives the metasyncretism.

- Certain features are disallowed in a marked context like the plural = markedness-triggered Impoverishment (Nevins 2011a)

(6) **Gender-Number Ban for Coptic**

\[
*[-/\text{FEM}] \text{ on the same agreement node as } [+\text{PL}]
\]

- The ban triggers Impoverishment as a repair operation.

**Interim Conclusion**

- Gender is metasyncretic in the plural in Coptic.
- The Impoverishment operation removes gender features from all plural feature bundles before Vocabulary Insertion, ensuring that plural feature bundles are never exponed with gender.

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6 Throughout this talk, I will assume that the “classic” mechanism of Impoverishment that deletes a feature (see e.g., Bonet 1991, Halle and Marantz 1993, Halle 1997, Frampton 2002). It is an open question whether the analyses here can /should be re-cast as feature value deletion followed by insertion of the unmarked value (see e.g., Noyer 1998, Harbour 2003, Calabrese 2011, Arregi and Nevins 2012) and/or as obliteration (Calabrese 2011, Arregi and Nevins 2012).
2.2 Convergence-to-Gender: Maay

Convergence-to-plural (= Coptic) is a well-attested pattern typologically…

- Dieri (Pama-Nyungan; Austin 2001:65)
- Taiap (isolate, Papua New Guinea; Kulick and Stroud 1998:208)
- Russian (Indo-European (Slavic); Corbett 1991:132)
- Krongo (Nilo-Saharan; Reh 1983:45-7)
- Avar (Caucasian; Corbett 1991:190)
- Hausa (Afroasiatic (Chadic); Newman 2000:216)

…and it has been treated before in the DM literature.

- …always with Impoverishment rules like (4).

In this section, I introduce a typologically rarer pattern: convergence-to-gender.

- It has not previously been analyzed in DM or any other theory (to the best of my knowledge)

*Gender and Number Agreement in Maay*

Convergence-to-gender is found in Maay (East Cushitic; Paster 2006, 2010, to appear).

- Maay has two genders: masculine and feminine (Paster 2006:91).
- Maay has two numbers: singular and plural (Paster 2006).

At first, Maay seems like Coptic: agreement targets do not express gender distinctions in the plural.

Table 7: Maay Simple Past Subject Agreement (Paster 2006:101)

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st pers</td>
<td>-i</td>
<td>-ni</td>
</tr>
<tr>
<td>2nd pers</td>
<td>-ti</td>
<td>-teena</td>
</tr>
<tr>
<td>3rd pers</td>
<td>-i (m.)</td>
<td>-eena</td>
</tr>
<tr>
<td></td>
<td>-ti (f.)</td>
<td></td>
</tr>
</tbody>
</table>

Table 8: Maay Future Potential Subject Agreement (Paster 2006:107)

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st pers</td>
<td>-aw</td>
<td>-aano</td>
</tr>
<tr>
<td>2nd pers</td>
<td>-aso</td>
<td>-aasona</td>
</tr>
<tr>
<td>3rd pers</td>
<td>-aw (m.)</td>
<td>-aayona</td>
</tr>
<tr>
<td></td>
<td>-aso (f.)</td>
<td></td>
</tr>
</tbody>
</table>

However, there is a different pattern for agreement targets within the noun phrase: definite determiners, demonstrative determiners, and possessive determiners (Paster 2006, to appear).7

Table 9: Maay Definite Determiners (Paster 2006:94)

<table>
<thead>
<tr>
<th></th>
<th>Feminine</th>
<th>Masculine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular</td>
<td>-ti</td>
<td></td>
</tr>
<tr>
<td>Plural</td>
<td>-ki</td>
<td></td>
</tr>
</tbody>
</table>

---

7 Abstracting away from allomorphic variations triggered by phonology.
Table 10: Maay Distal Demonstratives (Paster 2006:95-96)

<table>
<thead>
<tr>
<th>Feminine</th>
<th>Masculine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular</td>
<td>-tas</td>
</tr>
<tr>
<td>Plural</td>
<td>-kas</td>
</tr>
</tbody>
</table>

Table 11: Maay 1st Person Singular Possessive Determiners (Paster 2006:97)

<table>
<thead>
<tr>
<th>Feminine</th>
<th>Masculine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular</td>
<td>-tey</td>
</tr>
<tr>
<td>Plural</td>
<td>-key</td>
</tr>
</tbody>
</table>

- The “masculine singular” form is used for all plural nouns = gender and number are simultaneously syncretic (Cf. Dhaasanac, Elmolo; Mous 2008)

From the perspective of typology, Maay is convergent.
- The number of genders available in the plural is fewer than that in the singular = gender is syncretic.
- But it is convergent in two different ways:

(7) Maay Gender and Number Agreement: Verbal Agreement

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine</td>
<td>Plural</td>
</tr>
<tr>
<td>Feminine</td>
<td>Masculine</td>
</tr>
</tbody>
</table>

(8) Maay Gender and Number Agreement: Determiner Agreement

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine</td>
<td>Masculine</td>
</tr>
<tr>
<td>Feminine</td>
<td></td>
</tr>
</tbody>
</table>

Maay Analysis
- The Impoverishment operation proposed for Coptic in (4) is still necessary for Maay for the verbal agreement paradigms.

(9) Gender/Number Impoverishment (obligatory): holds in Coptic and Maay

\[ [+\text{PL}] \rightarrow [+\text{PL}] \]
\[ [+/-\text{FEM}] \]

- Importantly, all the determiners can be decomposed into a gender agreement marker and a remainder (Paster 2006).

Table 12: Decomposition of Maay Determiners

<table>
<thead>
<tr>
<th></th>
<th>Masculine</th>
<th>Feminine</th>
<th>Remainder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definite Determiner</td>
<td>k-</td>
<td>t-</td>
<td>-i</td>
</tr>
<tr>
<td>Distal Demonstrative Determiner</td>
<td>k-</td>
<td>t-</td>
<td>-as</td>
</tr>
<tr>
<td>1st sing Poss Determiner</td>
<td>k-</td>
<td>t-</td>
<td>-ey</td>
</tr>
</tbody>
</table>
The gender agreement markers are all the same.

- This is encoded by the same two Vocabulary Items are inserted to expone the gender agreement of all of these determiners.
  - Agr for agreement (used for concord in DM; see e.g., Norris 2014)
  - Det for determiner

(10)

a. [+FEM],[AGR] ↔ -t / __ Det
b. [AGR] ↔ -k / __ Det

- Assuming that determiner agreement feature bundles are Impoverished via (9), the only Vocabulary Item that can be inserted for plural agreement is (10)b --- (10)a has gender features!
  - Thus the same VI for masculine singular determiners is used for all plural determiners.
  - It is just a fact about Maay’s inventory of VI’s that it lacks a VI that expresses plural features for determiner agreement.

Predictions
The VI in (10)b lacks gender features, so it will be used as the ‘default gender.’

(11) Prediction 1: In a language where gender and number are simultaneously syncretic, the form used for plural agreement will be the same form used for the default gender.

Since this pattern depends on the configuration of individual Vocabulary Items…

(12) Prediction 2: A language is predicted to exist where only one paradigm has gender and number simultaneously syncretic.

Prediction 1 and Prediction 2 are borne out in Amharic.

2.3 Amharic

Amharic is an Ethiosemitic language spoken in Ethiopia (and D.C.)
- Amharic has two genders: masculine and feminine. (Leslau 1995:161)
- Amharic has two numbers: singular and plural. (Leslau 1995:169)

In most paradigms, Amharic has the same pattern as Coptic: no gender distinctions in plural

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st pers</td>
<td>-hu, -ku</td>
<td>-n</td>
</tr>
<tr>
<td>2nd pers</td>
<td>-h, -k (m.)</td>
<td>-atʃʃi</td>
</tr>
<tr>
<td>3rd pers</td>
<td>-ä (m.)</td>
<td>-u</td>
</tr>
<tr>
<td></td>
<td>-ätʃʃ (f.)</td>
<td></td>
</tr>
</tbody>
</table>
Table 14: Amharic Copula Agreement (Leslau 1995:271)

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st pers</td>
<td>näññ</td>
<td>nän</td>
</tr>
<tr>
<td>2nd pers</td>
<td>näh (m.)</td>
<td>natʃfňhu</td>
</tr>
<tr>
<td>3rd pers</td>
<td>nāʃ (f.)</td>
<td>natʃfaw</td>
</tr>
</tbody>
</table>

Table 15: Amharic Distal Demonstrative Agreement (Leslau 1995:66-67)

<table>
<thead>
<tr>
<th></th>
<th>Feminine</th>
<th>Masculine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular</td>
<td>yatʃf(i)</td>
<td>ya</td>
</tr>
<tr>
<td>Plural</td>
<td>innäzziya⁸</td>
<td></td>
</tr>
</tbody>
</table>

Table 16: Amharic Possessive Markers (Leslau 1995:50-51)

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st pers</td>
<td>-e</td>
<td>-atʃfín</td>
</tr>
<tr>
<td>2nd pers</td>
<td>-ih (m.)</td>
<td>-atʃfĩhu</td>
</tr>
<tr>
<td></td>
<td>-iʃ (f.)</td>
<td></td>
</tr>
<tr>
<td>3rd pers</td>
<td>-u (m.)</td>
<td>-atʃfaw</td>
</tr>
<tr>
<td></td>
<td>-wa (f.)</td>
<td></td>
</tr>
</tbody>
</table>

But the definite marker in Amharic is like Maay determiners: “masculine singular” used for all plurals.⁹

Table 17: Amharic Definite Marker (Leslau 1995:156)

<table>
<thead>
<tr>
<th></th>
<th>Feminine</th>
<th>Masculine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular</td>
<td>-wa</td>
<td></td>
</tr>
<tr>
<td>Plural</td>
<td>-u</td>
<td></td>
</tr>
</tbody>
</table>

Analysis

- Typologically like Maay: some targets convergent-to-plural, one target convergent-to-gender (masculine)
- Same Impoverishment operation as Coptic and Maay

(13) Gender/Number Impoverishment (obligatory): holds in Coptic, Maay and Amharic

\[
[+PL] \quad \rightarrow \quad [+PL]
\]

\[
[+/-FEM]
\]

- Most paradigms have three Vocabulary Items for agreement (masc., fem., plural), but the definite marker only has two (feminine, all others).

(14) Vocabulary Items for Definite Marker in Amharic

a. \([D],[DEF],[+FEM] \leftrightarrow -wa\)

b. \([D],[DEF] \leftrightarrow -u\)

⁸ Variants omitted for ease of exposition.

⁹ Leslau (1995:171) reports that adjectives which are derived via the suffix –awi show gender distinctions in the plural, e.g., ityop’p’bär-awi-yat ‘Ethiopia-awi-F.PL’ ‘Ethiopian women.’ However, four out of five consultants find these forms ungrammatical, and I set them aside here.
• Thus, after Impoverishment, the only option is to insert (14)b -u since (14)a –wu will not match the features on the Impoverished feature bundle (it has a gender feature).

• This predicts that (14)b will also be inserted for singular nouns that lack gender features, e.g., a noun whose gender is unknown.
  o This is borne out! Masculine is the ‘default’ gender in Amharic.
  o NB: for animates, biological gender = grammatical gender in Amharic

(15) his’an-u wänd näw set?
    baby-DEF.M male be.3MS female?
    ‘Is the baby a he or a she?’ (Leslau 1995:164)

• Both predictions confirmed:
  o Only one paradigm uses masculine singular for the plural forms (gender and number both syncretic)
  o The form which Amharic uses when gender and number are syncretic is the form used for the default gender\(^\text{10}\)

Summary

• Maay exhibits convergence-to-gender (gender and number syncretic in the plural) = Impoverishment with fewer Vocabulary Items available
• The predictions of the analysis developed for Maay were confirmed in Amharic

Aside: Three Gender Languages

• What would convergence-to-gender look like for a three-gender language?
• If the default gender is neuter (Sauerland 2008, Kramer to appear), then there could exist languages that converge-to-neuter, but no three-gender languages that converge-to-masculine or converge-to-feminine.
• TBD whether this prediction is true, but there is at least one promising instance of convergence-to-neuter: Younger Speakers’ Laal (unclassified; Chad)

Table 18: Determiner Agreement in Younger Speakers’ Laal (Lionnet 2015:4\(^\text{11}\))

<table>
<thead>
<tr>
<th></th>
<th>Masculine</th>
<th>Feminine</th>
<th>Neuter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singular</td>
<td>já</td>
<td>ji</td>
<td></td>
</tr>
<tr>
<td>Plural</td>
<td></td>
<td></td>
<td>yí</td>
</tr>
</tbody>
</table>

• Future work: analyze Laal, push harder on this prediction

---

\(^{10}\) What about a language that has feminine as the default gender? It is predicted that such a language could have plural nouns trigger “feminine singular” agreement. Kala Lagaw Ya (Pama-Nyungan; Western Torres Strait Islands) has a feminine default gender (Bani 1987, Alpher 1987) and some plural nouns do trigger feminine singular agreement (Bani 1987, Alpher 1987). However, it remains to be confirmed whether this pattern is widespread in the language.

\(^{11}\) Abstracting away from a sub-gender of neuters for abstract nouns (Lionnet 2015).
3 PARTIAL CONVERGENCE

Partial convergence: subset of genders converge in a particular number i.e., a subset of genders are syncretic

(16) Partial Convergence

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender-1</td>
<td></td>
</tr>
<tr>
<td>Gender-2</td>
<td>Plural-A</td>
</tr>
<tr>
<td>Gender-3</td>
<td></td>
</tr>
</tbody>
</table>

o NB: only found in languages with more than two genders

Given some basic assumptions about gender features in three-gender languages, as well as the DM analysis in Section 2, partial convergence is predicted to occur in natural language.

- I assume that gender features are simple in three-gender languages (Kramer to appear; see Section 4)

(17) a. Feminine: [+FEM]
b. Masculine: [-FEM]
c. Neuter: No gender features

- Consider again the Impoverishment rule deployed in Coptic, Amharic and Maay:

(18) Gender/Number Impoverishment (obligatory): holds in Coptic, Maay and Amharic

\[ [+\text{PL}] \rightarrow [+\text{PL}] \]

\[ [+/-\text{FEM}] \]

- The rule eliminates any gender feature from a feature bundle, regardless of value.
- But nothing prevents a rule like this from being specific to particular gender values: impoverishing just masculine gender or just feminine gender.

Both types of partial convergence are attested -- analyzed using Impoverishment in Nevins 2011a:

- Standard Slovenian: Impoverishment of the feminine
- Ljubljana Slovenian: Impoverishment of the masculine

3.1: Nevins 2011a: Syncretism in Slovenian

In this section: quickly sketch the analysis from Nevins 2011a, slightly re-cast with the gender features in (17), simplified for ease of exposition (no consideration of plural forms)\(^\text{12}\)

Slovenian (aka Slovene) is a Slavic language spoken in Slovenia.

- Three genders: masculine, feminine, neuter (Derganc 2003:166-167)
- Three numbers: singular, dual, plural (Derganc 2003:165)

In Standard Slovenian, the feminine and neuter genders converge in the dual number for…

- 3rd person nominative pronouns (Table 19)

\(^{12}\) Specifically, I am abstracting away from number syncretisms.
- nominative case suffixes (Table 20)
- adjectival agreement (Surrey Syncretisms Database: Slovene; henceforth SSD)
- the numeral ‘two’ (assuming that it is in the dual; Nevins 2011a:436)

Table 19: Standard Slovenian 3rd Person Dual Nominative Pronouns (SSD)

<table>
<thead>
<tr>
<th></th>
<th>Masculine</th>
<th>Feminine</th>
<th>Neuter</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd dual</td>
<td>onâdva</td>
<td></td>
<td>onêdve</td>
</tr>
</tbody>
</table>

Table 20: Standard Slovenian Dual Nominative Suffixes (Nevins 2011a:435)

<table>
<thead>
<tr>
<th></th>
<th>Masculine</th>
<th>Feminine</th>
<th>Neuter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual</td>
<td>stol-a</td>
<td>okn-i</td>
<td>knjig-i</td>
</tr>
<tr>
<td>‘table’</td>
<td>‘window’</td>
<td>‘book’</td>
<td></td>
</tr>
</tbody>
</table>

Since this is a metasynerctism, it is best treated via an Impoverishment rule…
- …impoverishment of feminine gender in the context of the dual.

(19) Number Features (used in this section, otherwise, simple +PL/-PL)
   a. Singular = [+SINGULAR, -AUGMENTED]
   b. Dual = [-SINGULAR, -AUGMENTED]
   c. Plural = [-SINGULAR, + AUGMENTED] (Nevins 2011a:421)

(20) Impoverishment of the Feminine in the Dual (cf. Nevins 2011a:56)
   [-SINGULAR] → [-SINGULAR]
   [-AUGMENTED] → [-AUGMENTED]
   [+FEM]

Table 21: Standard Slovenian Dual Nominative Suffixes after Impoverishment

<table>
<thead>
<tr>
<th></th>
<th>Masculine</th>
<th>Feminine</th>
<th>Neuter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual</td>
<td>[-FEM], [-SING], [-AUG]</td>
<td>[-SING], [-AUG]</td>
<td></td>
</tr>
</tbody>
</table>

(21) Vocabulary Items for Standard Slovenian Dual Nominative Suffixes
   a. [-FEM], [-SING], [-AUG], [NOM] ↔ -a
   b. [-SING], [-AUG], [NOM] ↔ -i

Mini-Summary: Standard Slovenian has impoverishment of the feminine gender.

Ljubljana Slovenian is the colloquial dialect of Slovenian spoken in Ljubljana, Slovenia.
- It has the same three genders and three numbers as Standard Slovenian
- But masculine and neuter have converged in all paradigms on which information is available.

Table 22: Ljubljana Slovenian Dual Nominative Suffixes (Nevins 2011a:436)

<table>
<thead>
<tr>
<th></th>
<th>Masculine</th>
<th>Neuter</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual</td>
<td>stol-a</td>
<td>okn-a</td>
<td>knjig-e</td>
</tr>
</tbody>
</table>

---

13 It is possible that the dual pronouns have a dual suffix –dva or –dve which is the numeral ‘two’ (Derganc 2003:171).
14 These VI’s vary from Nevins 2011 who also considers plural forms and has different gender features.
Table 23: Ljubljana Slovenian ‘two’ (Nevins 2011a:437)

<table>
<thead>
<tr>
<th></th>
<th>Masculine</th>
<th>Neuter</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd dual</td>
<td>dva</td>
<td></td>
<td>dve</td>
</tr>
</tbody>
</table>

Since this seems to be a metasyntacticism, it is best treated via an Impoverishment rule…

- …impoverishment of masculine gender in the context of the dual.

(22) **Impoverishment of the Masculine in the Dual (cf. Nevins 2011a:56)**

\[
[-\text{SINGULAR}] \rightarrow [-\text{SINGULAR}]
\]
\[
[-\text{AUGMENTED}] \rightarrow [-\text{AUGMENTED}]
\]
\[
[-\text{FEM}] \rightarrow [-\text{FEM}]
\]

Table 24: Ljubljana Slovenian Non-singular Nominative Suffixes after Impoverishment

<table>
<thead>
<tr>
<th></th>
<th>Masculine</th>
<th>Neuter</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dual</td>
<td>[-SING], [-AUG]</td>
<td>[+FEM], [-SING], [-AUG]</td>
<td></td>
</tr>
</tbody>
</table>

(23) **Vocabulary Items for Ljubljana Slovenian Non-Singular Nominative Suffixes**

a. \([+\text{FEM}], [-\text{SING}], [-\text{AUG}], \{\text{NOM}\} \leftrightarrow -e\]
b. \([-\text{SING}], [-\text{AUG}], \{\text{NOM}\} \leftrightarrow -a\]

**Summary:** An Impoverishment approach to gender syncretisms predicts masculine/neuter and feminine/neuter syncretisms in three-gender languages.

- Such syncretisms are attested – fem/neuter in Standard Slovenian, and masc/neuter in Ljubljana Slovenian.

3.2 A Negative Prediction

- So far an Impoverishment approach has made positive predictions, and these have been borne out…
- …but does it make any negative predictions about what we should not see in language? Yes.

(24) **No Masculine/Feminine Metasyntcretism**

There is no three-gender language with masculine, feminine and neuter gender such that masculine gender and feminine gender undergo partial convergence in some number as a metasyntcretism.

Why is this so? Recall the features that I assume for three-gender languages.

(25) a. Feminine: \([+\text{FEM}]\]
b. Masculine: \([-\text{FEM}]\]
c. Neuter: No gender features

If masculine and feminine undergo partial convergence, then both \([+\text{FEM}]\) and \([-\text{FEM}]\) features will have to be deleted in the context of e.g., dual number.

(26) **Impoverishment of Masculine and Feminine in the Dual**

\[
[-\text{SINGULAR}] \rightarrow [-\text{SINGULAR}]
\]
\[
[-\text{AUGMENTED}] \rightarrow [-\text{AUGMENTED}]
\]
\[
[+/\text{FEM}] \rightarrow [+/\text{FEM}]
\]

This will result in all dual feature bundles lacking gender features altogether, i.e., all three will be realized by the same Vocabulary Item, \textit{ceteris paribus}.

---

15 These VI’s vary from Nevins 2011 who also considers plural forms and has different gender features.
VI expresses dual features = convergence-to-dual
VI has no gender/number features = convergence-to-neuter

Therefore, it would be impossible to detect that a three-gender language has converged masculine and feminine via an Impoverishment rule to the exclusion of the neuter.

Interestingly, it seems likely that this prediction will be borne out.

Future work: tested across a wide range of three gender languages.

Baerman et al. 2005 characterize masc/fem syncretisms in the plural as “common” (p. 84) when discussing three-gender languages, but the examples they provide are only putative counterexamples to (24).

Putative counterexample: Older Speakers’ Laal (unclassified; Chad)

Table 25: Possessive Pronouns in Older Speakers’ Laal (Boyeldieu 1982:14)

<table>
<thead>
<tr>
<th></th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine</td>
<td>δā:r</td>
<td>δè:rí</td>
</tr>
<tr>
<td>Feminine</td>
<td>δō:g</td>
<td></td>
</tr>
<tr>
<td>Neuter</td>
<td>δā:ná</td>
<td>δu:ā:ná</td>
</tr>
</tbody>
</table>

This is a metasyncretism: occurs for all types of pronouns and determiners (Boyeldieu 1982:9)

But gender assignment in Laal is based partially on human-ness (Boyeldieu 1982:8, 2015):

(27) Gender Assignment in Laal
   a. Human males are masculine.
   b. Human females are feminine.
   c. All others (animate or inanimate) are neuter.

So, masc/fem have a semantic feature in common ([+HUMAN]) that conditions insertion of plural VIs.

(28) Vocabulary Items for Plural Possessive Pronouns in Laal
   a. [D], [POSS], [+HUMAN], [+PL] ↔ δè:rí
   b. [D], [POSS], [+PL] ↔ δu:ā:ná

I submit that all the cases of masc/fem syncretism cited in Baerman et al. 2005 are either:

…a human-based three-gender system
   o Karata (Dagestani; Baerman et al. 2005:82; Corbett 1991:9 on the gender system)
   o Telugu plural nouns (Dravidian; Baerman et al. 2005:95)

---

16 In the SSD, all gender pairs like fem/masc (e.g., fem/male) were checked, and none of the attested hits were true counterexamples. The attested hits were either from languages with two genders (Classical Arabic, Kashmiri, Somali), from languages where gender assignment is determined by human-ness (see below), or from languages where the syncretisms are not metasyncretic (e.g., Slovenian). A few examples from Slovenian are potentially partial metasyncretisms in that they hold across several paradigms but not in all paradigms. Determining whether these partial metasyncretisms are true metasyncretisms or are the same VI repeated in a few paradigms requires a more detailed investigation of Slovenian inflection than can be attempted here.
Major goal of future work: investigate this prediction systematically across a range of three-gender languages, but signs are promising.

- Moral 1: the predictions of a particular morphological analysis can lead to finer-grained typological generalizations (e.g., masc/fem metasyncretism only licit in a human-based gender system)
- Moral 2: some types of syncretism may be impossible due to properties of the grammar (pace Baerman et al. 2005, Albright and Fuß 2012; cf. Müller 2008)

3.3 Partial Convergence in Both Numbers aka How Many Genders are There in Romanian?

All the Impoverishment rules seen so far have been markedness-triggered Impoverishment (Nevins 2011a).

(29) **Markedness-Triggered Impoverishment**

In a marked context (e.g., dual, plural), a feature or features is/are deleted (e.g., gender).

But there is another type: markedness-targeted Impoverishment (Nevins 2011a).

(30) **Markedness-Targeted Impoverishment**

Delete a marked feature (e.g., dual) in a particular context (e.g., in certain agreement paradigms).

Recall I assume that neuter is the unmarked/default gender in three-gender languages.

- Could markedness-targeted Impoverishment delete the marked gender (masculine or feminine) in a particular (not necessarily marked) context?
- Answer: yes, and this solves an old puzzle about gender and number in Romanian.

Romanian (Romance, Romania; main source Dobrovie-Sorin and Giurgea 2013 – DSG)

- Number of genders is disputed – definitely at least masculine and feminine
- Two numbers: singular and plural (DSG 2013:2, Dindelegan 2013:258)
- Gender agreement on indefinite determiners, demonstratives, adjectives, certain verbal forms, etc. (DSG 2013:2, Maurice 2001:231, Dindelegan 2013:Ch. 12).

(31) a. o femeie
   a.FS woman
   ‘a woman’
   b. două femei
   two.FPL woman.FPL
   ‘two women’

(32) a. un bărbat
   a.MS man
   ‘a man’
   b. doi bărbați
   two.MPL man.MPL
   ‘two men’

(33) a. un glas
   a.MS voice
   ‘a voice’
   b. două glas-uri
   two.FPL voice-PL
   ‘two voices’
   (Maurice 2001:231)

- Neuter nouns agree like masculine nouns when singular, but like feminine nouns when plural
**Key Question:** are there two genders where a subset of nouns behave strangely, or are there three genders (= three agreement patterns)?

- Answer argued for here: three genders in the morphosyntax, two in the morphology due to systematic partial convergence of genders post-syntactically

**Analysis:** The most prevalent generative analysis treats the neuter nouns as lacking gender features (Farkas 1990, Farkas and Zec 1995, Croitor and Giurgea 2009 (in part), DSG 2013, Giurgea 2014)

- The neuter nouns receive default gender.
- Default gender is masculine in the singular, and feminine in the plural.

These analyses are mostly lexicalist, but the insights are cashed out in the DM approach to gender in Kramer to appear.

- Treating Romanian neuter nouns as lacking gender features harmonizes with the approach to neuter nouns in typical three-gender languages in Kramer to appear (and see above).

**Gender Features for Romanian**

- Feminine: [+FEM]
- Masculine: [-FEM]
- Neuter: No gender features

However, Romanian is different from a typical three-gender language in that it systematically lacks Vocabulary Items for neuter-specific agreement.

- In other words, neuter gender is syncretic with masculine gender in the singular, and with feminine gender in the plural (cf. Noyer 1998\(^\text{17}\), Baerman et al. 2005:85-86).

### Table 26: Agreement on Indefinite Article and Numeral ‘Two’ in Romanian

<table>
<thead>
<tr>
<th>Indefinite Article (sing)</th>
<th>Masculine</th>
<th>Neuter</th>
<th>Feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numeral ‘two’ (plural)</td>
<td>doi</td>
<td>două</td>
<td></td>
</tr>
</tbody>
</table>

- How to capture this in DM: Impoverishment (since this is a metasyncretism)

  - In the singular, this is the predicted markedness-targeted Impoverishment: removes the masculine (marked) feature in a context (singular).

**Romanian: Impoverishment of the Masculine in the Singular**

\([-\text{PL}] \rightarrow [-\text{PL}] \quad [\text{-FEM}]\]

### Table 27: Post-Impoverishment Gender Features for Indefinite Article Agreement

<table>
<thead>
<tr>
<th>Indefinite Article (sing)</th>
<th>Masculine</th>
<th>Neuter</th>
<th>Feminine</th>
</tr>
</thead>
</table>

\(^{17}\) Noyer 1998 only treats adjectival inflection, and hinges on an Impoverishment rule where [NEUTER] is deleted in adjectival contexts. The VI’s for adjectival agreement are then configured such that the “masculine” one is the default in the singular (i.e. lacks gender features), and the “feminine” one the default in the plural. However, this approach is less viable than the analysis proposed here since it is unable to generalize across all of the syncretisms in Romanian inflection – even if the Impoverishment rule that deletes the neuter were generalized to all contexts, it would be coincidental that in all the paradigms, the masculine form is the default in the singular and the feminine is the default in the plural.
(36) **Vocabulary Items for Indefinite Article**
   a. \([D], [-\text{DEF}], [+\text{FEM}] \leftrightarrow -o\)
   b. \([D], [-\text{DEF}] \leftrightarrow -un\)

- In the plural, it is not as clear whether this is markedness-targeted Impoverishment or markedness-triggered Impoverishment. Either way, it removes the feminine feature in plural contexts as in (37):

(37) **Romanian: Impoverishment of the Feminine in the Plural**

\[ [+\text{PL}] \rightarrow [+\text{PL}]\]
\[ [+\text{FEM}] \]

<table>
<thead>
<tr>
<th>Table 28: Post-Impoverishment Gender Features for ‘Two’</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Masculine</strong></td>
</tr>
<tr>
<td><strong>Numeral ‘two’ (plural)</strong></td>
</tr>
</tbody>
</table>

(38) **Vocabulary Items for ‘Two’**
   a. \([\text{TWO}], [-\text{FEM}] \leftrightarrow \text{doi}\)
   b. \([\text{TWO}] \leftrightarrow \text{două}\)

Thus, Romanian confirms the existence of markedness-targeted Impoverishment for gender features.

- Romanian has the syntactic feature inventory of a three-gender language, but the Vocabulary Item inventory of a two-gender language (cf. Farkas and Zec 1995).

**Further Support for a Syncretism Analysis**

This analysis predicts that masculine is the default gender generally in the singular, which is borne out (Dindelegan 2013:526).

(39) **E noros afară**
    is cloudy.**MS**
    ‘It is cloudy outside.’ (Farkas 1990:543)

(40) **[A-ți iubi dușmanii] e imposibil**
    to-you.DAT love.INF enemies.DEF is impossible.**MS**
    ‘To love one’s enemies is impossible.’ (Croitor and Giurgea 2009:(6))

(41) **Vorbește cu cineva priceput**
    talk.IMP.2S to somebody skillful.**MS**
    ‘Talk to someone skillful.’ (DSG 2013:6)

The analysis predicts that feminine is the default gender in the plural, which is also largely borne out.

- Agreement with coordinated subjects is always plural in Romanian (Farkas and Zec 1990)
- When inanimate-denoting, singular DPs with clashing gender features are coordinated, the agreement is always feminine (Farkas and Zec 1995, Dindelegan 2013:533-54).

---

18 With one exception: singular demonstrative pronouns are feminine when they refer to an entity of unclear gender or when they refer to a non-nominal entity like a clause. I tentatively follow Giurgea 2014 in assuming that demonstrative pronouns in these cases are numberless, and that numberless pronouns and feminine pronouns are accidentally homophonous. See Kramer to appear.
Overall, the syncretisms analysis correctly predicts the morphological patterns, captures the simultaneously two- and three-gender nature of the system, and makes correct predictions about defaults.

- See Kramer to appear for arguments against a syntactic (non-syncretism-based) analysis of these facts.

5 CONCLUSION AND TWO OPEN ISSUES

Recap/Conclusion:

- Gender-number syncretism explained via Impoverishment: remove gender features in the context of plural/dual
- Convergent-to-gender: fewer VIs to express distinctions, gender form that is “re-used” is always the default gender
- Partial convergence: Impoverishment can remove a singly-valued gender feature (Slovenian, Romanian)
- But it is predicted that masculine and feminine gender will never be metasyncretic; likely to be true
- From a big picture perspective, this talk has hopefully:
  - Led to better understanding of empirical depth/breadth of gender-number syncretisms
  - Demonstrated support for an Impoverishment-based approach to gender-number syncretisms across a range of languages/phenomena (Coptic, Maay, Amharic, Slovenian, Laal, Romanian)
  - Generated falsifiable predictions about impossible/possible syncretisms that show promise in being borne out across a range of languages

Open Question 1: what is the nature of gender features?

- Following my previous work (Kramer to appear), I have been assuming that languages with three genders have these gender features:

  (45) No Features on Neuter, One Gender Feature
  a. Feminine: [+FEM]
  b. Masculine: [-FEM]
  c. Neuter: No gender features

- But some assume that languages with three genders have a more complex set of features (e.g., Hamann 2010, Nevins 2011a):

  (46) Features Present on Neuter, Two Gender Features
  a. Feminine: [+FEM], [-MASC]
  b. Masculine: [-FEM], [+MASC]
  c. Neuter: [-FEM], [-MASC]

- Each of these approaches has advantages.
(46) allows for Impoverishment of some feature \( F \) in the context of neuter nouns, and metasyncretisms that apply only to neuter nouns are attested.\(^{19}\)

(47) In Latin, nominative and accusative are metasyncretic for neuter nouns. (Calabrese 2008:167)

- (45) does not allow for this since there are no neuter features for an Impoverishment rule to refer to.

- (45) is a simpler set of features, and it allows for an explicit connection between gender semantics and gender morphology: all types of nouns generated via interpretable and uninterpretable versions of the same feature \([FEM]\). TABLE 29: Gender Features in German

<table>
<thead>
<tr>
<th>Gender Feature</th>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>die Mutter</em> ‘the FS mother’</td>
<td>( i \ [+FEM] )</td>
<td></td>
</tr>
<tr>
<td><em>die Wand</em> ‘the FS wall’</td>
<td>( n \ [+FEM] )</td>
<td></td>
</tr>
<tr>
<td><em>der Vater</em> ‘the MS father’</td>
<td>( i \ [-FEM] )</td>
<td></td>
</tr>
<tr>
<td><em>der Tisch</em> ‘the MS table’</td>
<td>( n \ [-FEM] )</td>
<td></td>
</tr>
<tr>
<td><em>das Fenster</em> ‘the NS window’</td>
<td>No gender features(^{20})</td>
<td></td>
</tr>
</tbody>
</table>

- The interpretability/semantic effects of the gender features in (46) are unclear.

- Tentative proposal: perhaps (45) are the gender features in the syntax (and feed LF) whereas (46) are the gender features in the morphology (and can be referred to by Impoverishment).
  - Feature-manipulating rules would provide the neuter with gender features…
  - …and add the masculine feature to other nouns in a predictable way \([FEM] \rightarrow [MASC], [+FEM] \rightarrow [-MASC]\).
  - Cf. Nevins 2011b on redundancy rules that translate the privative number feature in the syntax into the binary number feature which the morphology needs.\(^{21}\)

Open Question 2: why are there no languages which make more gender distinctions in the plural?

(48) Greenberg’s (1966:95) Universal 37

A language never has more gender categories in nonsingular numbers than in the singular.

(49) Impossible Gender-Number System according to (48)

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masculine</td>
<td>Masculine</td>
</tr>
</tbody>
</table>

Feminine

- Does this universal truly hold (not quite: Plank and Schellinger 1997, Baerman et al. 2005)?
- Markedness-targeted Impoverishment could generate the system in (49) through an Impoverishment rule like “delete \([+FEM]\) in the context of \([-PL]\).”

---

\(^{19}\) It also allows for certain syncretisms that occurs in masculine/neuter contexts since masculine and neuter share the feature \([FEM]\), e.g., dual/plural syncretism in Standard Slovenian (Nevins 2011).

\(^{20}\) What about the classic example *Mädchen* ‘young girl NEUTER’? Briefly, I propose that the root *MAD* combines with a \( n \) with an interpretable \([+FEM]\) feature, and then the resulting \(nP \) combine with the diminutive suffix –chen which is also a \( n \). The highest gender features (or lack thereof) determine the gender of the nominal as a whole due to cyclicity, so the complex \(nP \) is treated as neuter for any later processes. Feel free to ask about this.

\(^{21}\) Even if (46) are the gender features in the morphology, I believe the prediction in (24) still holds.
REFERENCES
Baker, Mark C. 2011. When agreement is for number and gender but not person. *Natural Language and Linguistic Theory* 29. 875-915.


Nevins, Andrew. 2011a. Marked targets versus marked triggers and impoverishment of the dual. Linguistic Inquiry 42. 413-444.


