



## **Francoprovençal: what a spatial analysis of 'partitive articles' reveals about number marking on nominals**

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Research project "Distribution and Function of 'Partitive Articles' in Romance (DiFuPaRo): a microvariation analysis," (<https://www.rose.uzh.ch/de/seminar/wersindwir/mitarbeitende/stark/DiFuPaRo.html>), directed by E. Stark and C. Poletto, funded by the Swiss National Science Foundation (project number 100012L\_172751) and the Deutsche Forschungsgemeinschaft (project number: PO1642/8-1).

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## 1. Introduction

### Objectives of the presentation

- Investigate whether the presence/absence of **partitive articles (PA)** correlates with phonologically overt number marking on the noun in **Francoprovençal (FrPr)**
- Show the spatial distribution of PAs/invariable DE and overt number marking on nouns in the Swiss and Aosta Valley (Italy) varieties of FrPr

### Main findings

- No general spatial correlation between the distribution of overt number marking on N and the availability of PAs
- Correlation between presence of *overt sigmatic* number marking and absence of PA in Evolène (Valais, Switzerland)

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## 2. State-of-the-art

### 2.1 Francoprovençal

#### Plural morphology on nouns

	Francoprovençal (in general)	Francoprovençal in Evolène (Valais)	Standard French	Spanish
<b>Masc. N</b>	<i>Uninflected:</i> 'dzor / 'dzor 'day/s'	<i>Phonologically realized sigmatic suffix:</i> 'zo / 'zoʃ 'day/s'	<i>Uninflected:</i> ʒur / ʒur 'day/s'	<i>Phonologically realized sigmatic suffix,</i> 'dia / 'días 'day/s'
<b>Fem. N</b>	<i>Phonologically realized non-sigmatic plural:</i> 'pom:a / 'pom:ə 'apple/s'	<i>Phonologically realized non-sigmatic plural:</i> mata / 'mate 'daughter/s'	<i>Uninflected:</i> fij / fij 'daughter/s'	<i>Phonologically realized sigmatic suffix;</i> niña / niñas 'daughter/s'
	<i>Also, uninflected:</i> 'ŋui / 'ŋui 'walnut/s'	<i>Also, uninflected:</i> 'ma:re / ma:re 'mother/s'		

Paciaroni/Ihsane/Stark, in prep.

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## 2. State-of-the-art

### 2.2 Overt number marking in NP in Romance

- On both, noun and determiner (e.g., Spanish, cf. Cyrino/Espinal 2020, a. o.):
  - (1) a. *el libro* / el 'liβro / 'the.sg book'
  - b. *los libros* / los\_ 'liβros / 'the.pl books'
- On the determiner (e.g., French, cf. Bouchard 2002, a.o.):
  - (2) a. *le livre* / le livr / 'the.sg book'
  - b. *les livres* / le livr / 'the.pl books'
- Why do we find PAs (e.g. in French)? One possibility in the literature: to compensate the absence of overt number marking on the noun (Delfitto/Schroten 1991, Stark 2006, Gerards/Stark 2020, Pinzin/Poletto, 2021, 2022, a.o.; for a diachronic perspective Mathieu 2009, Carlier/Lamiroy 2014).
- Francoprovençal, where PAs are found in a specific geographic zone (FrPr A, roughly in the north, Kristol 2016)?



## 2. State-of-the-art

### 2.3 Our hypotheses

- **Hypothesis 1 (weak)**

There is a spatial correlation of the distribution of overt number marking on nouns and the availability of PAs in our Francoprovençal data. (Delfitto/Schroten 1991, Stark 2006, Pinzin/Poletto, 2021, 2022, Mathieu 2009, Carlier/Lamiroy 2014)

- **Hypothesis 2 (strong)**

There is a spatial correlation of the distribution of overt *sigmatic* number marking on nouns and the availability of PAs in our Francoprovençal data. (Stark 2016, Gerards/Stark 2020)

- Hypothesis 1 and Hypothesis 2 represent the weak and strong versions of the same issue, respectively.



### 3. Data and Methods

#### 3.1 The data

**DiFuPaRo database** (<https://difuparo.linguistik.uzh.ch/>): 20'294 NPs

- structured around 'partitive nominal groups'
- tagging of 83 different morphosyntactic features (e.g., nominals marked by a PA, tagged for syntactic function, gender, number, case; occurring with a quantifier, with a sentential negation, etc.)
- Data from three existing databases: 16'308 noun phrases
  - ASIt (<http://svrims2.dei.unipd.it:8080/asit-enterprise/>) for the Northern Italian Dialects
  - ALAVAL (<http://alaval.unine.ch/>) for Francoprovençal
  - OFROM (<http://www11.unine.ch/>) for colloquial Swiss French
- Data from fieldwork, gathered with/in different methods/discourse types (e.g., free speech, grammaticality judgment tasks, and translations/questionnaires): 3'986 noun phrases
  - In Northern Italian Dialects
  - In Francoprovençal: 1'664 noun phrases:
    - in 2017 in the Aosta Valley (see Stark/Gerards 2020)
    - in 2019 in Evolène (see Davatz/Ihsane/Stark accepted)

➤ **For our study: 2'608 FrPr nominal phrases**

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### 3. Data and Methods

#### 3.1 The data

- Different (sub-)samples for spatial analyses (here only data from questionnaires)
  - All nominal groups (2'608 nominals)
  - Nominal groups in positive contexts, without quantifiers (1'744)
  - Nominal groups in positive contexts with quantifiers (420)
  - Nominal groups in negative contexts, without quantifiers (413)
  - Nominal groups in negative contexts with quantifiers (31)

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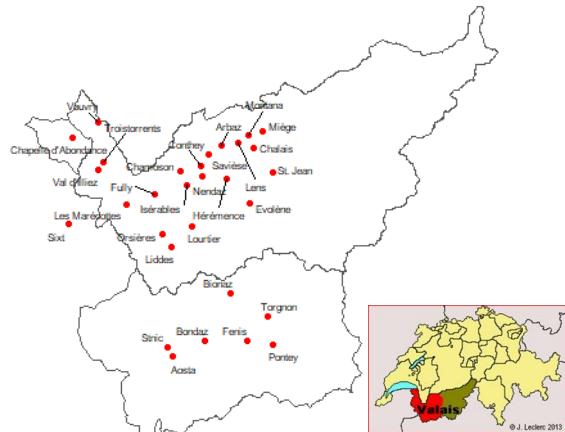


### 3. Data and Methods

#### 3.1 The data - locations

- 30 Francoprovençal varieties
  - Aosta Valley (I)
  - Auvergne-Rhône-Alpes (F)
  - Valais (CH)
- Different branches of Francoprovençal
  - Western Valais
  - Eastern Valais
  - Valdostean
- At least 2 speakers (M+F) per location

Francoprovençal varieties considered



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### 3. Data and Methods

#### 3.2 Methods - Spatial analyses

- Dependent variables
  - Absence/ presence of partitive article (relative frequency)
  - Phonologically overt number marking vs. null number marking on noun (relative frequency)
- Independent variables
  - Number (SG vs. PL)
  - Gender (M vs. F)
- Calculation
  - Mean of phenomena per location (mean of all speakers' mean)
- Graphic representation (in Rstudio)
  - Voronoi polygons
  - Grey (0%), tomato red (highest relative value)

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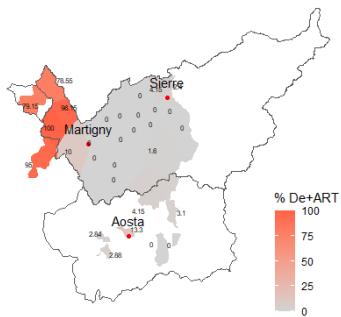
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## 4. Results and maps

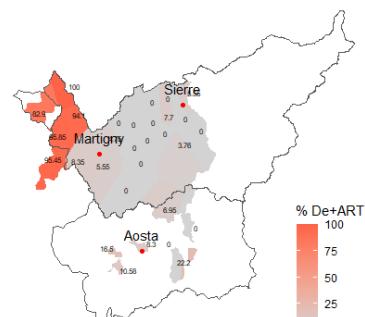
### Relative frequency of PA with M and F - dependent variable 1 (presence/absence of PAs)

Percentage of De+ART masculine - QUEST (POSIT)



Map 1. PA with M (SG + PL) (POS).

Percentage of De+ART feminine - QUEST (POSIT)



Map 2. PA with F (SG + PL) (POS).

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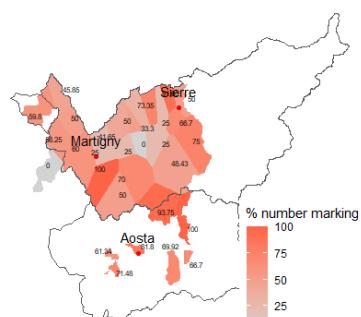
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## 4. Results and maps

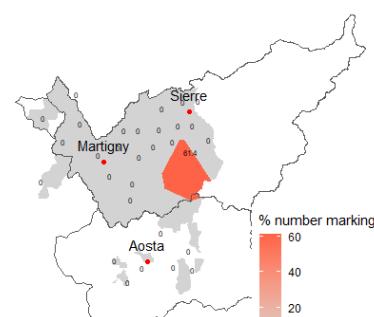
### Relative frequency of phonologically overt plural marking on N - dependent variable 2 (overt no overt number marking on N)

PL marking at N with F - QUEST (all)



Map 3. Phonologically overt F.PL marking.

Percentage of plural marking at N with M - QUEST (all)



Map 4. Phonologically overt M.PL marking.

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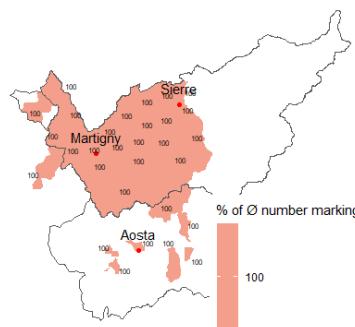
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## 4. Results and maps

**Relative frequency of 'singular null marking' (M) on N - dependent variable 2 (overt/ no overt number marking on N = no paradigm where singular form is clearly opposed to plural form)**

Null marking of singular at N with M - QUEST (all)



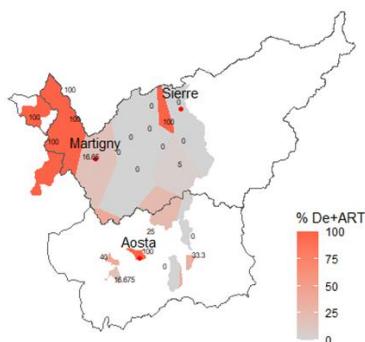
Map 5. Null M.SG marking.



## 4. Results and maps

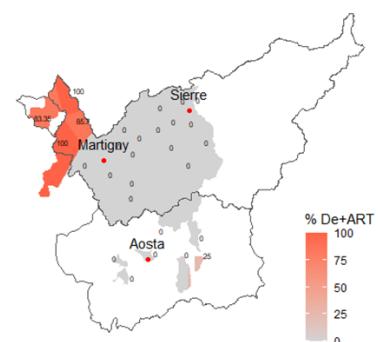
**Relative frequency of PA (with phonologically overt marking) - combination of the 2 dependent variables**

% of De+ART (with overt N SG) - QUEST (POSIT)



Map 6. PA with specific singular form.

% of De+ART (with overt N PL) - QUEST (POSIT)



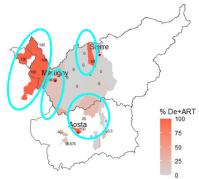
Map 7. PA with phonologically overt PL marking.



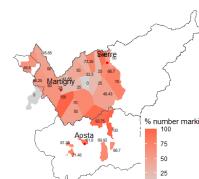
## 5. Discussion

### Hypotheses 1 and 2

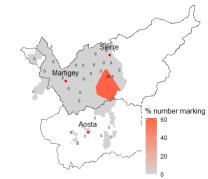
Presence/absence of PAs: PAs in 4 zones  
% De+ART (with overt N SG) - QUEST (POSIT)



Map 3. Overt F.PL marking.  
PL marking at N with F - QUEST (all)



Map 4. Overt M.PL marking.  
Percentage of plural marking at N with M - QUEST (all)



- With FEM Ns: the 4 logically possible options are available:

	+ overt PL	- overt PL
+ PA	yes	yes
- PA	yes	yes

➢ No correlation between presence/absence of PA and presence/absence of overt PL marking on N.

- With MASC Ns: overt PL marking only in Evolène, where there are no PAs.  
➢ The PL suffix does not cooccur with PAs, and no variety with PAs also has unambiguous sigmatic plural marking on nouns.

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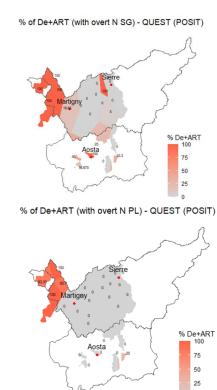


## 5. Discussion

### Combination of the two dependent variables

(Un-)availability of PAs in correlation with number marking on N (for BOTH genders)

- In general:** no complementary distribution of PAs and overt number marking on N.
- Ns with specific singular form:** use of PAs in 100% of the cases in some varieties but not in all. Having a dedicated **singular** form is probably not functionally linked to the existence of PAs: PAs indicate a **mass** reading.
- Ns marked for PL:** use of PAs in 100% of the cases in some varieties but not in all. I.e. DE is found in inverse proportions to PAs in FrPr A (+ FrPr B).  
➢ No spatial correlation between availability of PAs and distribution of overt number marking on N.



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## 5. Discussion

### Overt number marking in Noun phrases

In FrPr:

- Some NPs are overtly marked for number twice: on N and on the PA:
    - Double marking of PL: only with PA and FEM nouns.
    - Double marking of SG: only with PA and FEM nouns.
  - Some NPs are not overtly marked for number at all: typologically striking and semantically strongly marked
    - DE + unmarked Ns (fem or masc)
- PAs do not compensate the absence of number marking on the noun.



## 6. Conclusion

### Hypothesis 1 (weak)

There is a spatial correlation of the distribution of overt number marking on nouns and the availability of PAs in our Francoprovençal data.

- Overt plural marking on FEM N: 4 logically possible options → +/- PAs and +/- overt PL marking
  - Combination of our two dependent variables
- **No correlation: Hypothesis 1 has to be rejected.**

### Hypothesis 2 (strong)

There is a spatial correlation of the distribution of overt *sigmatic* number marking on nouns and the availability of PAs in our Francoprovençal data.

- Evolène, with overt sigmatic, unambiguous PL marking on (Masc) nouns: the PL suffix does not cooccur with PAs, and no variety with PAs also has unambiguous sigmatic plural marking on nouns.
- **Correlation in Evolène: Hypothesis 2 is confirmed.**



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