



# Adnominal and pronominal agreement with neuter nouns in Belgian Dutch

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RU Quantitative Lexicology and Variational Linguistics

# Overview

- Background
- Methodology
- Results
- Conclusion

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- Background
  1. Standard Netherlandic Dutch
  2. Standard Belgian Dutch
  3. Substandard Belgian Dutch
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# Gender in Standard Netherlandic Dutch

	<b>masculine</b>	<b>feminine</b>	<b>neuter</b>
definite article	de	de	het
personal pronoun	hij ('ie, die)	zij (ze)	het ('t)
possessive pronoun	zijn (z'n, ze)	haar ('r, d'r)	zijn (z'n, ze)

# Gender in Standard Netherlandic Dutch

	<b>masculine</b>	<b>feminine</b>	<b>neuter</b>
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# Gender in Standard Netherlandic Dutch

- animate referents

Dat      lieve    kind,      het      speelt   altijd   zoo   zoet.

DEM.N    sweet    child(N)    3SG.N    plays    always   so   nicely

‘That sweet child, he/she is always playing so nicely.’  
(Royen 1932:158)’

# Gender in Standard Netherlandic Dutch

- animate referents: agreement with natural gender

Dat      lieve    kind,      het      speelt altijd    zoo    zoet.

hij

ze

DEM.N    sweet    child(N)    3SG.N    plays    always    so    nicely

3SG.M

3SG.F

‘That sweet child, he/she is always playing so nicely.’  
(Royen 1932:158)’

# Gender in Standard Netherlandic Dutch

- animate referents: agreement with natural gender
- inanimate referents:  
masculinization

resemanticization



# Gender in Standard Netherlandic Dutch

- animate referents: agreement with natural gender
- inanimate referents:

## masculinization

De presentatie, hij is eindelijk af.

DEF.C presentation(F) 3sg.M is finally finished

## resemanticization

# Gender in Standard Netherlandic Dutch

- animate referents: agreement with natural gender
- inanimate referents:

masculinization

De presentatie, hij is eindelijk af.

DEF.C presentation(F) 3sg.M is finally finished

resemanticization (Audring 2006, 2009)

Heb jij een fototoestel?

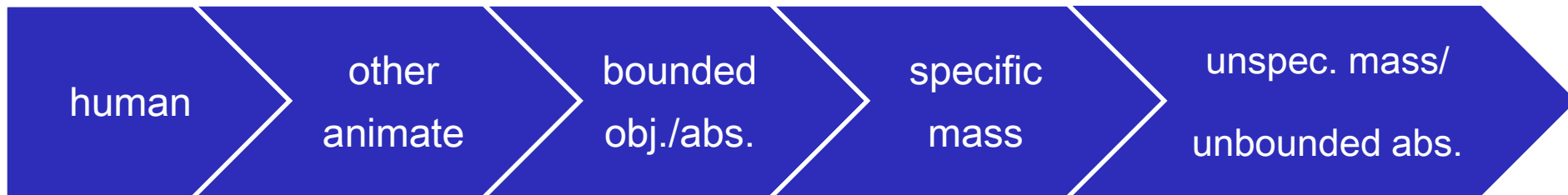
Have you a camera(N)

nee ik kan die van m'n broer wel lenen.

no I can DEM.C of my brother PRT borrow

# Resemanticization

= semantic agreement based on degree of individuation of antecedent (Audring 2006, 2009):



masc./fem.  
common

masc./  
common

neuter

*kind*  
'child'

*fototoestel*  
'camera'

*olijfolie*  
'olive oil'

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# Gender in Standard Belgian Dutch

- conservative gender system:

masculinization occurs as well (Geeraerts 1992; Geerts 1968, 1988)

resemanticization?

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# Gender in substandard Belgian Dutch

- three-way flexion adnominal elements in dialects

e.g. Brabantic dialects:

	masculine	feminine	neuter
indefinite article	ne vader nen hoed	een/'n tante een aalbees	e bed een uur
definite article	de vader den hoed	de tante d'aalbees	het bed het uur

(Ooms & Van Keymeulen 2005: 50-53)

# Gender in substandard Belgian Dutch

- non-standard gender

Standard Dutch:

het boek

het bureau

substandard Belgian Dutch: den boek

den bureau



# Gender in substandard Belgian Dutch

- resemanticization in dialects
  - **inanimates**: large amount of deviations from grammatical gender are semantically motivated (but not all of them) (a.o. De Vos & De Vogelaer 2011)
  - influence of visibility of gender on adnominal elements (De Vogelaer & De Sutter 2011)

# Gender in substandard Belgian Dutch

- resemanticization in dialects
  - inanimates: large amount of deviations from grammatical gender are semantically motivated (but not all of them) (a.o. De Vos & De Vogelaer 2011)
  - influence of visibility of gender on adnominal elements (De Vogelaer & De Sutter 2011)

BUT:

- no corpus studies
- no studies on regiolect

# Research questions

1. Does the **degree of individuation** of the antecedent influence gender in spoken Belgian Dutch?
2. Is the gender of pronouns and determiners governed by the **same system**?

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# Data

*Corpus Gesproken Nederlands* ('corpus of spoken Dutch'):

- a: spontaneous face-to-face conversations
- b: interviews with teachers of Dutch
- f: interviews and discussions broadcast on radio and television
- h: recordings of lessons

Belgian data only

# Data

sentences containing:

- singular neuter noun
- target within span of 5 words left & right
- n = 11262

# Data

**dependent variable:** target **gender** (common/neuter)

determiners:

definite article

demonstrative determiner

pronouns:

demonstrative pronoun

relative pronoun

# Independent variables

- word class
- semantic class
- gender substandard Belgian Dutch
- register
- distance
- speaker information



# Independent variables

- word class *article, dem.det, dem.pron, rel.pron*
- semantic class
- gender substandard Belgian Dutch
- register
- distance
- speaker information

# Independent variables

- word class
- **semantic class**
- gender substandard Belgian Dutch
- register
- distance
- speaker information

# Semantic class

referent	corpus examples
animate	kind ('child')
collective	bezoek ('visitors'), geld ('money')
concrete count	boek ('book'),
concrete mass	water ('water')
abstract count	budget ('budget')
abstract mass	onderwijs ('education')

# Independent variables

- word class
- semantic class
- **gender substandard Belgian Dutch**
- register
- distance
- speaker information

# Gender in substandard Belgian Dutch

- *Nijhoffs Zuid-Nederlands Woordenboek*  
(‘Nijhoff’s Dictionary of Southern Dutch’, De Clerck 1981)
- explicitly states to provide information about gender when it differs from Standard Dutch
- common, neuter or unknown

# Independent variables

- word class
- semantic class
- gender substandard Belgian Dutch
- register                    *private* (face-to-face conversations)  
                                  *public* (interviews & lessons)
- distance
- speaker information

# Independent variables

- word class
- semantic class
- gender substandard Belgian Dutch
- register
- **distance**
- speaker information

# Distance

number of words between **antecedent** and **target**:

near:  $\leq 2$  words

het      boek      van Star Wars

far:  $> 2$  words

een **nichtje** van mij **die** gaat nog trouwen



# Independent variables

- word class
- semantic class
- gender substandard Belgian Dutch
- register
- distance
- **speaker information**

# Speaker information

395 speakers

- **age:** between 21 and 81  
mean = 43.98
- **sex:** male, female
- **region:** antfb, lim, eastf, westf
- **education level:** high, mid\_low
- **occupation level:** high, mid\_low
- **first language:** dialect, regiolect, SD, unknown  
→ influence of gender visibility

# Analyses

## logistic regression

forward stepwise selection

→ main effects

→ interaction effects

first model starts from hypothesis that **determiners & pronouns are governed by the same system**

overall **common gender infrequent: 299/11262**

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# Analysis full dataset

gender ~

semClass

+ substGender

+ wordClass

+ register

+ sprEduLevel

+ distance

+ sprOccLevel

+ substGender:register

+ substGender:wordClass

+ semClass:register

n = 11262

only 2.56%  
common

C = 0.787

# Analysis full dataset

gender ~

semClass

+ substGender

+ wordClass

+ register

+ sprEduLevel

+ distance

+ sprOccLevel

+ substGender:register

+ substGender:wordClass

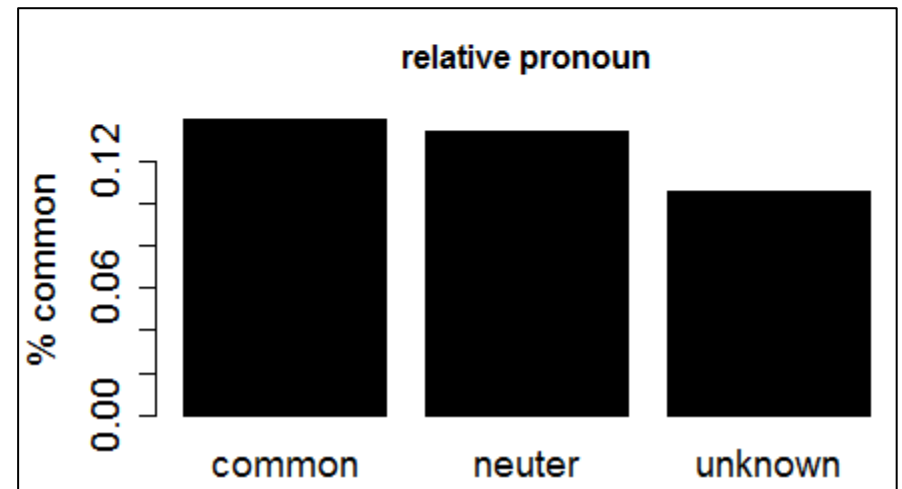
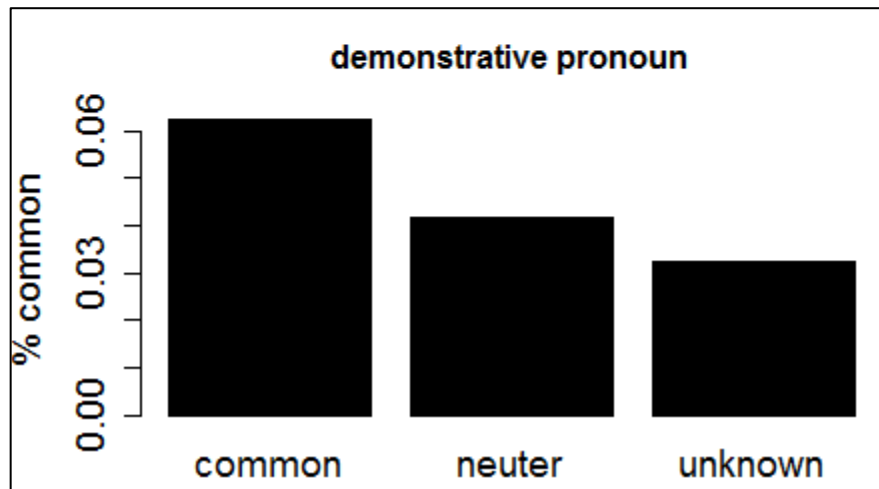
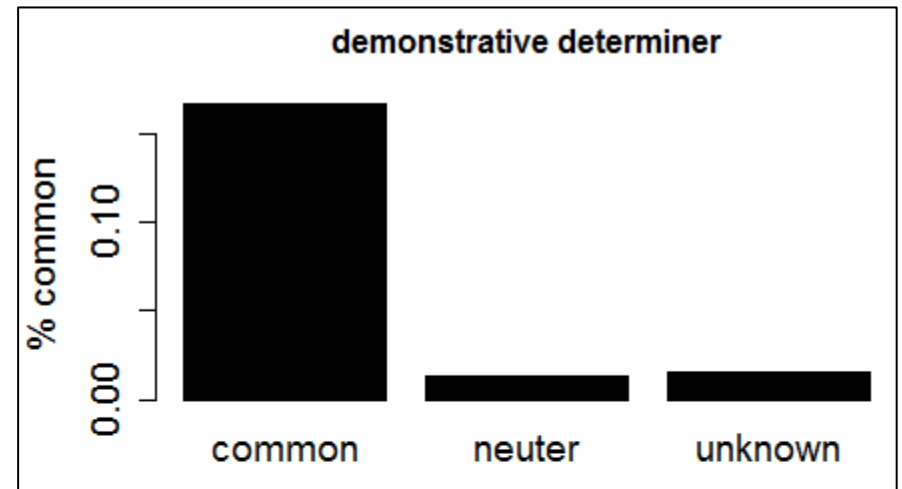
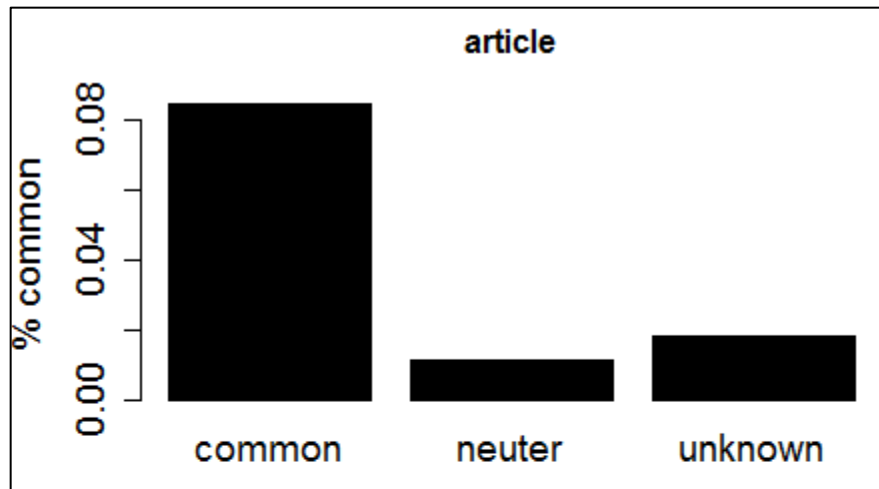
+ semClass:register

n = 11262

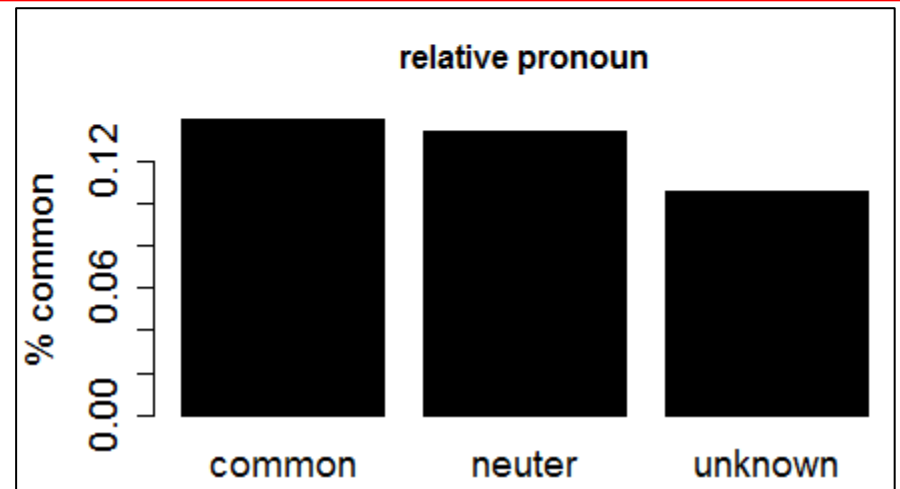
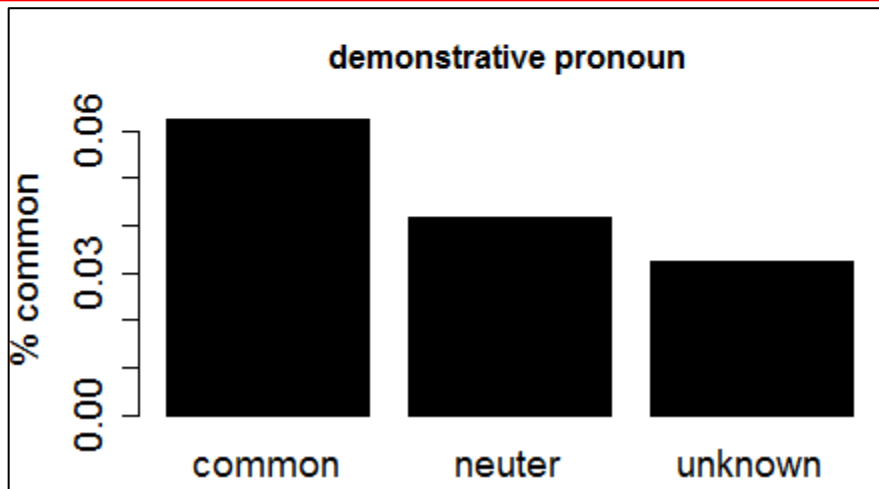
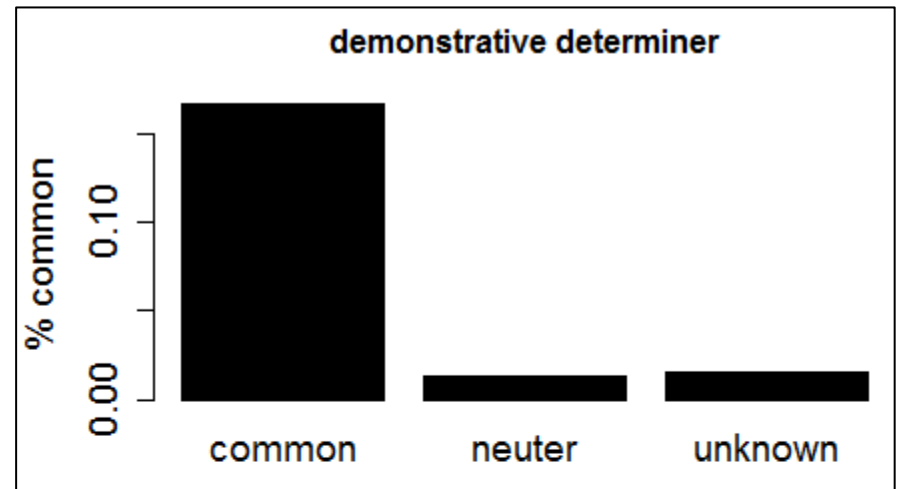
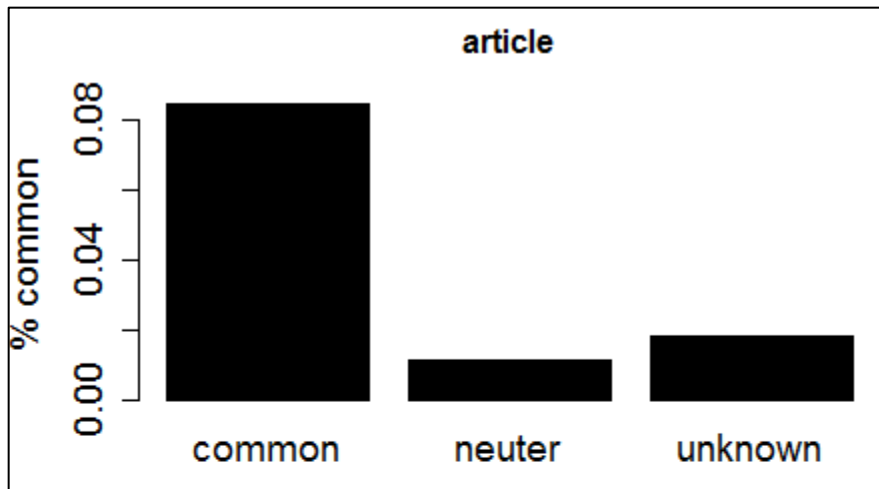
only 2.56%  
common

C = 0.787

# Interaction substandard gender & wordClass



# Interaction substandard gender & wordClass





# Determiners versus pronouns

## **determiners**

semantic class

education level

substandard gender

register

occupation level

substandard gender:register

## **pronouns**

semantic class

education level

region

(word class)

semantic class:word class

word class:education level

# Determiners versus pronouns

## **determiners**

semantic class ←————→

education level

substandard gender

register

occupation level

substandard gender:register

## **pronouns**

semantic class

education level

region

(word class)

semantic class:word class

word class:education level

# Determiners versus pronouns

## **determiners**

semantic class

education level

substandard gender

register

occupation level

substandard gender:register

## **pronouns**

semantic class

education level

region

(word class)

semantic class:word class

word class:education level

# Determiners versus pronouns

## **determiners**

semantic class

education level

substandard gender

register

occupation level

substandard gender:register

## **pronouns**

semantic class

education level

region

(word class)

semantic class:word class

word class:education level

# Analysis determiners

## variables

	estimate	p-value
(Intercept)	-1.5340	<0.01
substGender neuter	-3.6050	<0.001
substGender unknown	-2.7533	<0.001
semClass collective	-0.7205	not sign
semClass conc+count+	0.4069	not sign
semClass conc+count-	1.7220	<0.01
semClass conc-count+	-0.4326	not sign
semClass conc-count-	0.9160	<0.1
register public	-2.3325	<0.001
sprEduLevel mid_low	1.8654	<0.05
sprOccLevel mid_low	0.4728	<0.01
distance far	0.8563	<0.1
substGender neuter:register public	1.9105	<0.01
substGender unknown:register public	1.9254	<0.001
sprEduLevel mid_low:sprOccLevel mid_low	-1.4121	<0.1

n = 10179

only 2.16%  
common

C = 0.756

## Estimate

+ sign: more  
common gender

- sign: less common  
gender



# Analysis determiners

variables	estimate	p-value
(Intercept)	-1.5340	<0.01
substGender neuter	-3.6050	<0.001
substGender unknown	-2.7533	<0.001
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sprEduLevel mid_low:sprOccLevel mid_low	-1.4121	<0.1

- gender in substandard Belgian Dutch highly significant
- effect neutralized in public conversations



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degree of  
individuation not  
important



# Analysis determiners

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(Intercept)	-1.5340	<0.01
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influence lower  
level of education  
or occupation





# Determiners versus pronouns

## **determiners**

semantic class

education level

substandard gender

register

occupation level

substandard gender:register

## **pronouns**

semantic class

education level

region

(word class)

semantic class:word class

word class:education level

# Analysis pronouns

variables	estimate	p-value
(Intercept)	-1.2439	<0.01
semClass collective	-2.1188	<0.01
semClass inanimate	-3.9440	<0.001
wordClass rel.pron	0.3288	not sign
sprRegion wfl	-0.1360	not sign
sprRegion lim	0.5643	not sign
sprRegion eastf	0.7267	<0.05
sprEduLevel mid_low	2.2078	<0.01
semClass collective:wordClass rel.pron	0.8119	not sign
semClass inanimate:wordClass rel.pron	1.9834	<0.01
wordClass rel.pron:sprEduLevel mid_low	-1.6562	<0.5

n = 1083

only 7.76%  
common

C = 0.837

**Estimate**

+ sign: more  
common gender

- sign: less common  
gender

# Analysis pronouns

variables	estimate	p-value
(Intercept)	-1.2439	<0.01
semClass collective	-2.1188	<0.01
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- degree of individuation
- random variation relative pronouns

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- more common gender in East Flanders

# Analysis pronouns

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- more common gender in East Flanders
- influence lower education level
- effect larger for demonstrative pronouns

# Analysis pronouns

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- more common gender in East Flanders
- influence lower education level
- effect larger for demonstrative pronouns

no interaction with semantic class

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# Conclusion

different mechanisms:

- common gender definite articles & determiners:  
grammatical agreement with substandard gender



- common gender demonstrative & relative pronouns:  
semantic agreement with referential properties of antecedent



# Conclusion

different mechanisms:

only in private  
conversations

- common gender definite articles & determiners:  
grammatical agreement with substandard gender



- common gender demonstrative & relative pronouns:  
semantic agreement with referential properties of  
antecedent

# Conclusion

different mechanisms:

only in private  
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- common gender definite articles & determiners:  
grammatical agreement with substandard gender



- common gender demonstrative & relative pronouns:  
semantic agreement with referential properties of  
antecedent

random variation

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