

COHERENCE IN SPOKEN BELGIAN AND SURINAMESE DUTCH: AN EXPLORATORY STUDY

Anne-Sophie Ghyselen – 22.05.2023

WHICH SENTENCE IS REALLY ATTESTED (WEST-FLANDERS)?

- (1) Maar zou je geloven dat ik 't nu nie mee weten.
- (2) Maa zou je geloven da ke 't nu nie mee weten.
- (3) Maa zou je geloven da ke 't nu niet meer weten.

‘Maar zou je geloven dat ik het nu niet meer weet’

‘but would you believe that I don’t now it anymore now’

WHICH SENTENCE IS REALLY ATTESTED (WEST-FLANDERS)?

- (1) Maar zou je geloven dat ik 't nu nie mee weten.
- (2) Maa zou je geloven da ke 't nu nie mee weten.
- (3) Maa zou je geloven da ke 't nu niet meer weten.

‘Maar zou je geloven dat ik het nu niet meer weet’

‘but would you believe that I don’t now it anymore now’

Some language variants typically co-occur with other variants

COHERENCE

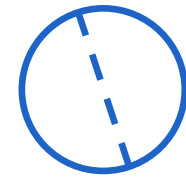
To which degree do communities differ in coherence?

Disclaimer:

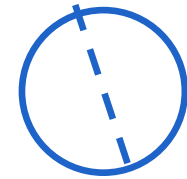
- No hard and fast answers will be given during this talk.
- Work-in-progress!
- 'Journey is as interesting as the result'



THEORETICAL BACKGROUND



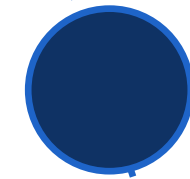
MY PROJECT



INITIAL RESULTS & CHALLENGES



TAKE-HOME MESSAGE



THEORETICAL BACKGROUND

MY PROJECT

INITIAL RESULTS & CHALLENGES

TAKE-HOME MESSAGE

COHERENCE

“[C]oherence concerns to what extent multiple co-existing linguistic variables have similar distributions, both internally and in the speech community at large.”

OF TOPICAL INTEREST TODAY

- Informalisation, democratisation/self-reflexivity (Giddens 1991) > impacting/jeopardising coherence of (standard) languages (cf. Kristiansen and Coupland 2011)
- Third wave sociolinguistics: emphasis on speaker agency and bricolage

How coherent is language variation?

NOT A NEW QUESTION

—‘Multivariate’ version of ‘old’ question of **orderly heterogeneity**

(Weinreich, Labov, and Herzog 1968)

—Important question:

- The ontological status of linguistic systems
- Can we say there is such thing as a ‘variety’, ‘a language system’ or a ‘lect’?

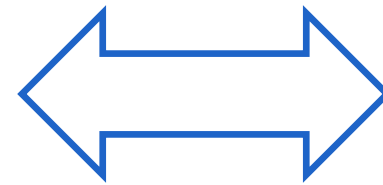
RECENTLY QUITE SOME RESEARCH INTO COHERENCE

- Geeraerts 2010
- Guy 2013
- Guy & Hinskens 2016 (volume)
- Ghyselen & De Vogelaer 2018
- Beaman & Guy 2022 (volume)
- ...

RESULTS INCONCLUSIVE

**Ghyselen (2016); Ghyselen & De
Vogelaer (2018)**

Tussentaal is not as chaotic as often assumed
> clear structures and covariance patterns



Gregersen & Pharao (2016)

Language variation in Denmark is not coherent

COHERENCE DEPENDS ON COMMUNITY/SOCIOLINGUISTIC CONTEXT UNDER STUDY?

Cf. Le Page & Tabouret-Keller (1985):

focused vs. *diffuse* communities

INTERESTING IDEA TO THINK ABOUT

- **Coherence seems inherently human** > needed for successful communication (cf. assumption usage-based approaches: coherence arises in interaction)
- But:
 - **Interaction patterns differ across communities**
 - **Cultural processes** of “progressive reification, totemization and institutionalization of a language”, Le Page, 1988, p. 31) can impact coherence

COHERENCE DEPENDS ON COMMUNITY/SOCIOLINGUISTIC CONTEXT UNDER STUDY

> NOT MUCH EMPIRICAL EVIDENCE YET

COMPARABILITY ISSUES

How do you turn abstract notion of *coherence* into an empirical one?

(A) Variation in incorporation of social dimension

1. Per linguistic variable:
correlation with social or
stylistic predictors
2. Compare correlations across
parameters

(Becker 2015; Gregersen & Phrao 2016)

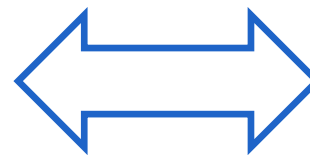
COMPARABILITY ISSUES

How do you turn abstract notion of *coherence* into an empirical one?

(A) Variation in incorporation of social dimension

1. Per linguistic variable:
correlation with social or
stylistic predictors
2. Compare correlations across
parameters

(Becker 2015; Gregersen & Pharao 2016)



Calculating and visualizing
distances between variants and
exploring correlation with social
and stylistic predictors post-hoc

(Ma & Herasimchuk 1972; Ghyselen & De
Vogelaer 2018)

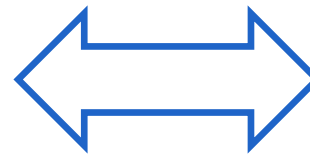
COMPARABILITY ISSUES

How do you turn abstract notion of *coherence* into an empirical one?

(B) Variation in degree to which variables are expected to co-vary in order to allow coherence interpretations

Linear correlation?

Guy 2013; Gregersen & Pharao
2016



Implicational patterning?

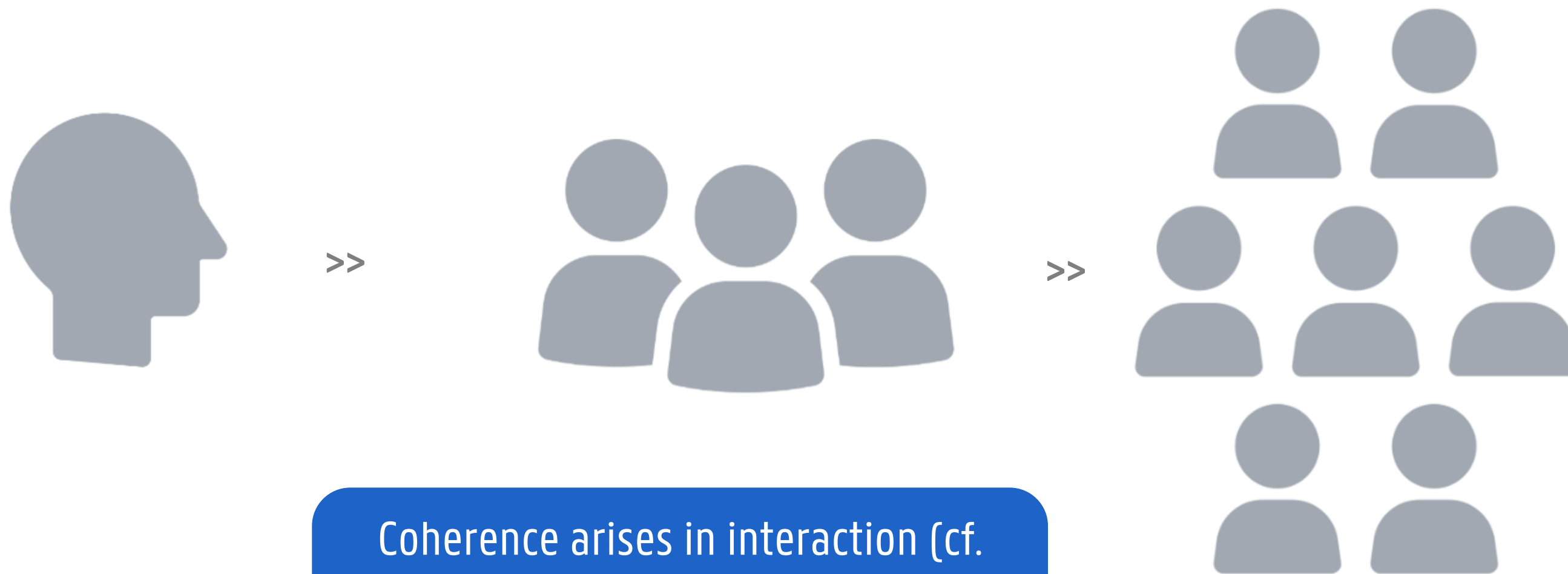
DeCamp 1971; Ghyselen & Van
Keymeulen 2016

Coherence is a matter of degree, not a yes-or-no phenomenon

COMPARABILITY ISSUES

How do you turn abstract notion of *coherence* into an empirical one?

(C) Variation in level of aggregation



Coherence arises in interaction (cf. Geeraerts 2010) > can be studied at different levels of abstraction

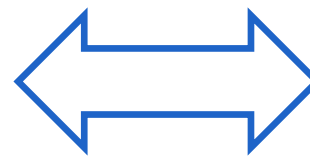
COMPARABILITY ISSUES

How do you turn abstract notion of *coherence* into an empirical one?

(C) Variation in level of aggregation

Ghyselen (2016)

Tussentaal is coherent and can be delineated



Plevoets (2008)

standard Dutch and colloquial Belgian Dutch
cannot be distinguished as separate linguistic
systems > no clear clusters of co-varying
features

COMPARABILITY ISSUES

How do you turn abstract notion of *coherence* into an empirical one?

(D) Matter of production or perception?

- Coherence as “an ideology at odds with production data but guiding both perception of varieties and lay discourse about lects” (Gregersen & Pharao 2016: 42, cf. Grondelaers & Van Hout 2016)?
- From a usage-based perspective: both
- But little reflection on impact of ‘culture’ on coherence > Same effect on production and perception?

COHERENCE DEPENDS ON COMMUNITY/SOCIOLINGUISTIC CONTEXT UNDER STUDY?

Cf. Le Page & Tabouret-Keller (1985):

diffuse vs. *focused* communities



THEORETICAL BACKGROUND

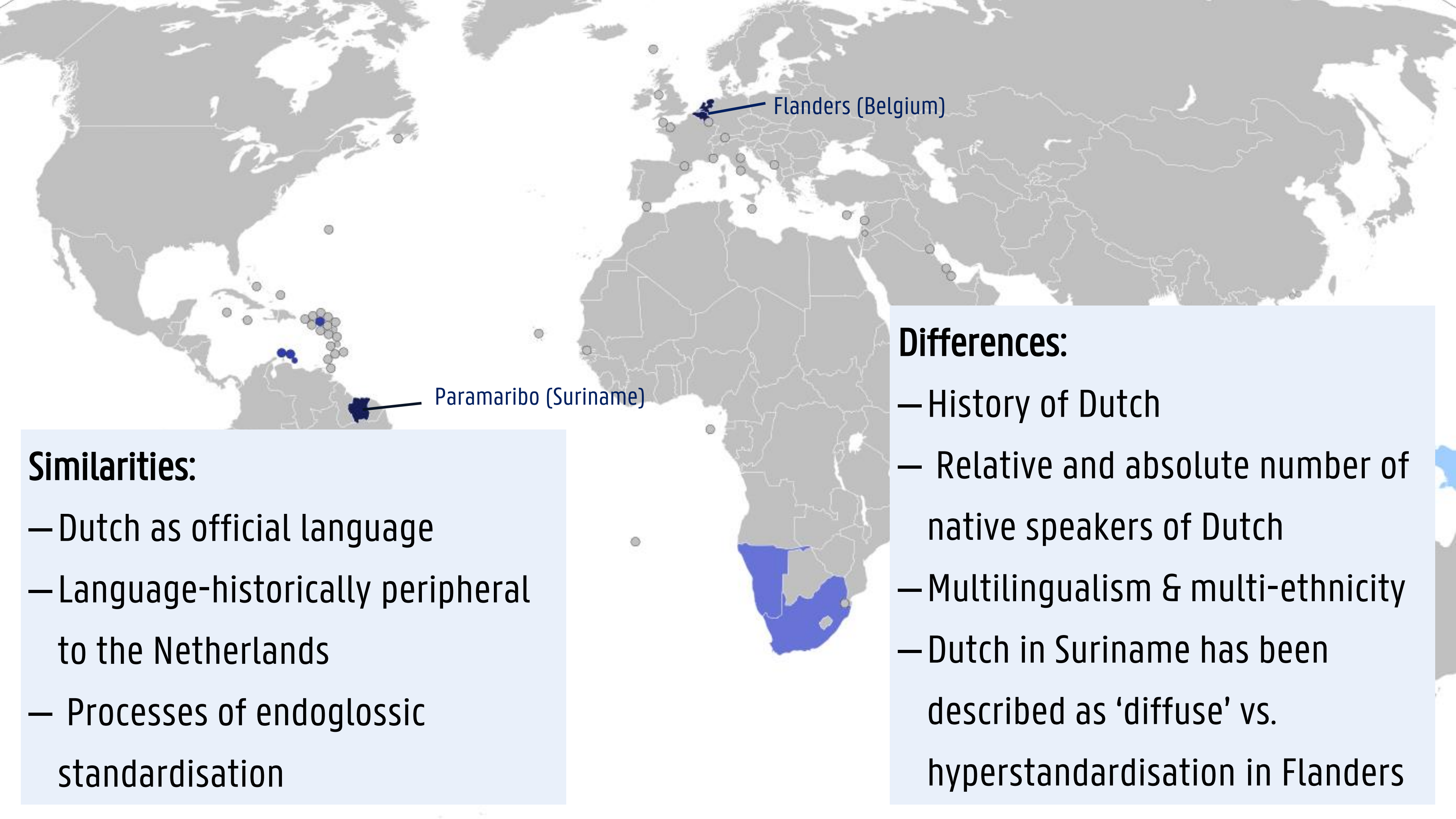
MY PROJECT

SOME INITIAL RESULTS & CHALLENGES

TAKE-HOME MESSAGE

“ON THE ONTOLOGICAL STATUS OF THE LINGUISTIC SYSTEM: AN EMPIRICAL STUDY ON COHERENCE IN SPOKEN SURINAMESE AND BELGIAN DUTCH”

- Funded by the Research Foundation Flanders (senior postdoctoral fellowship)
- Goal: **study coherence in 2 communities – Suriname and Flanders – at different levels of granularity (individual vs. group) using comparable datasets and tools of analysis**



Similarities:

- Dutch as official language
- Language-historically peripheral to the Netherlands
- Processes of endoglossic standardisation

Differences:

- History of Dutch
- Relative and absolute number of native speakers of Dutch
- Multilingualism & multi-ethnicity
- Dutch in Suriname has been described as 'diffuse' vs. hyperstandardisation in Flanders

THE PLAN

1. Collect comparable data in Flanders and Suriname
2. Analyse multiple variables per area
3. Compare coherence

DATA COLLECTION

See also **Ghyselen &
De Vogelaer (2018)**



DATA COLLECTION

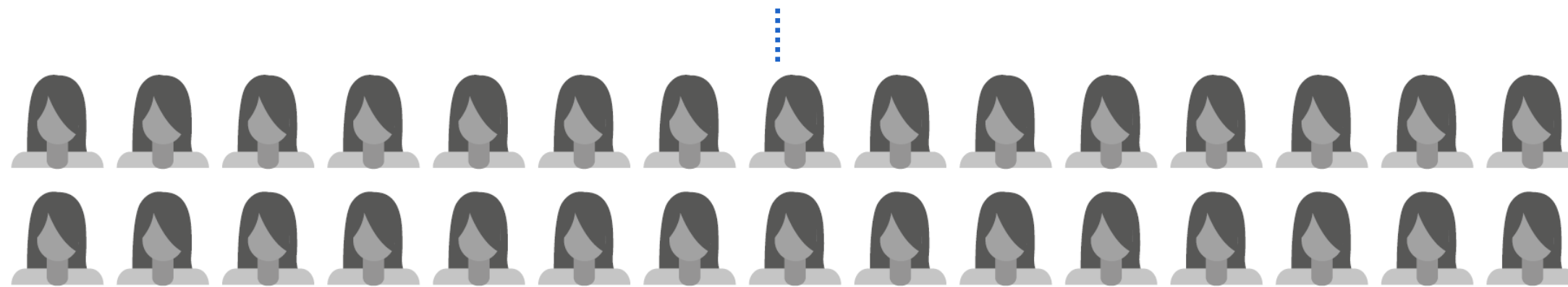
> Small-scale corpus of language use of 30 Flemish women



DATA COLLECTION

> Small-scale corpus of language use of 30 Flemish women

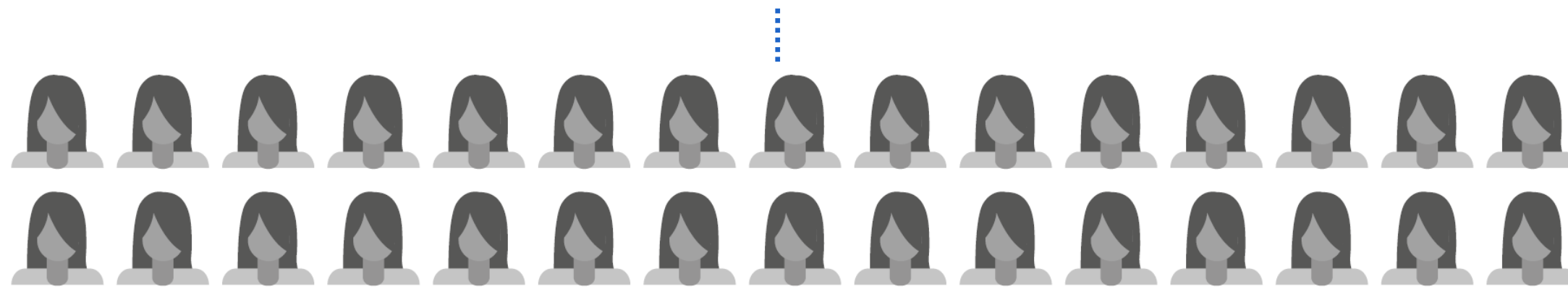
25-35 years old (n=15)



DATA COLLECTION

> Small-scale corpus of language use of 30 Flemish women

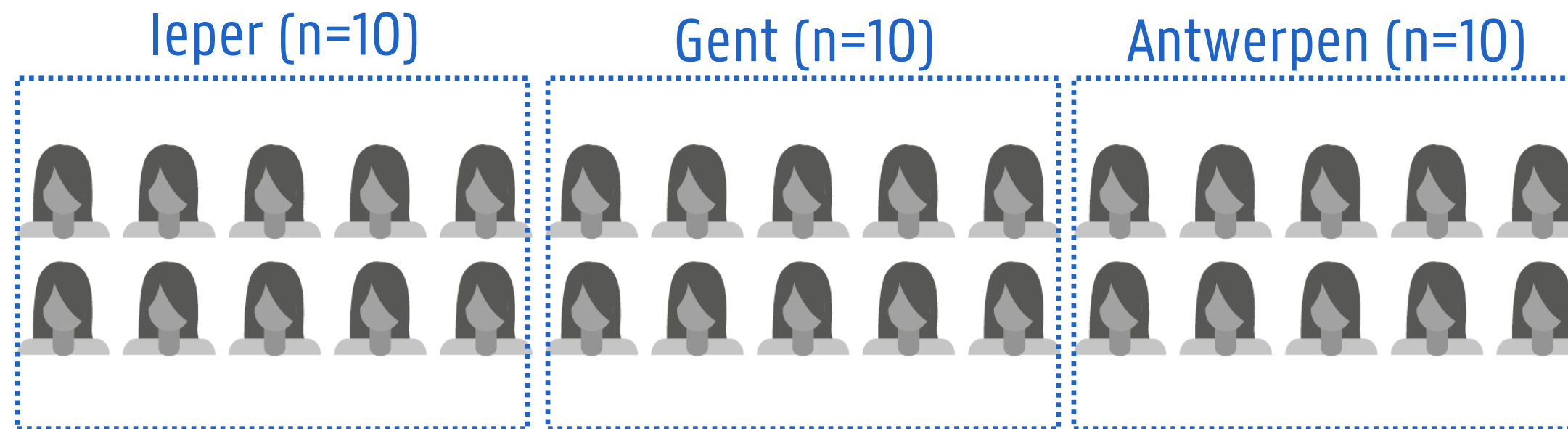
25-35 years old (n=15)



50-65 years old (n=15)

DATA COLLECTION

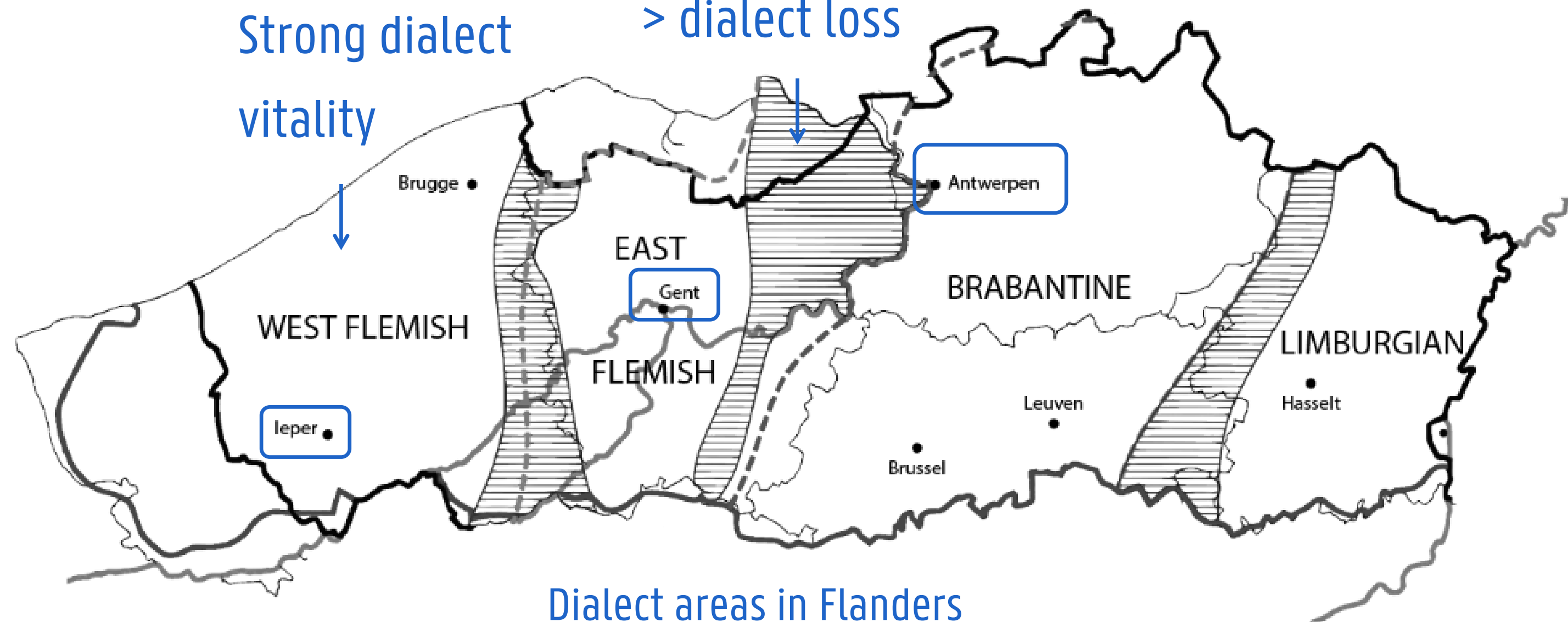
> Small-scale corpus of language use of 30 Flemish women



Diaglossic repertoires

> dialect loss

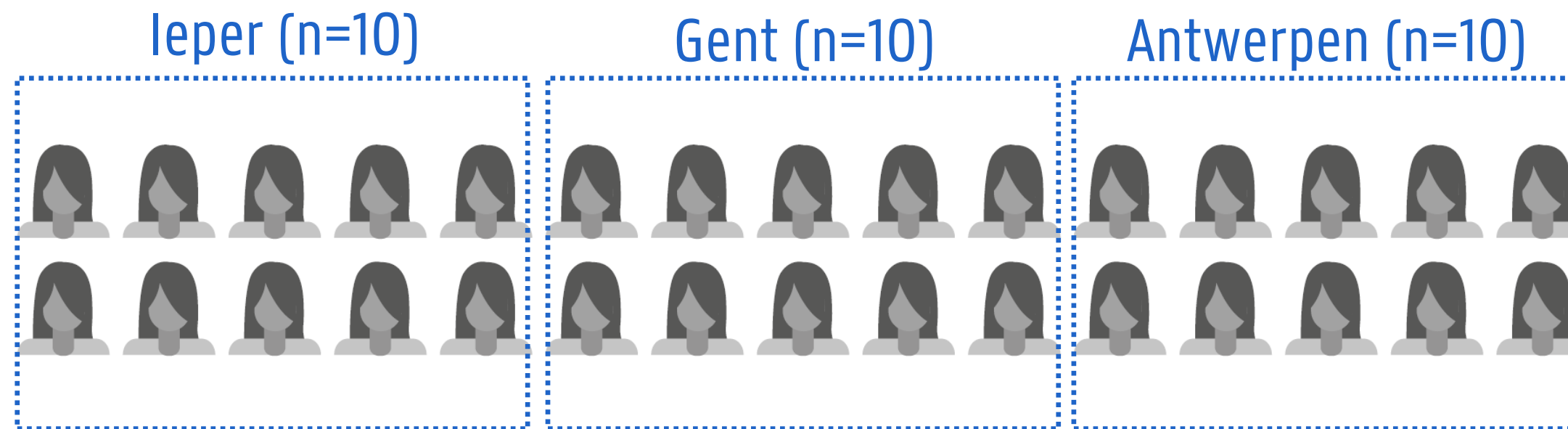
Strong dialect
vitality



Dialect areas in Flanders

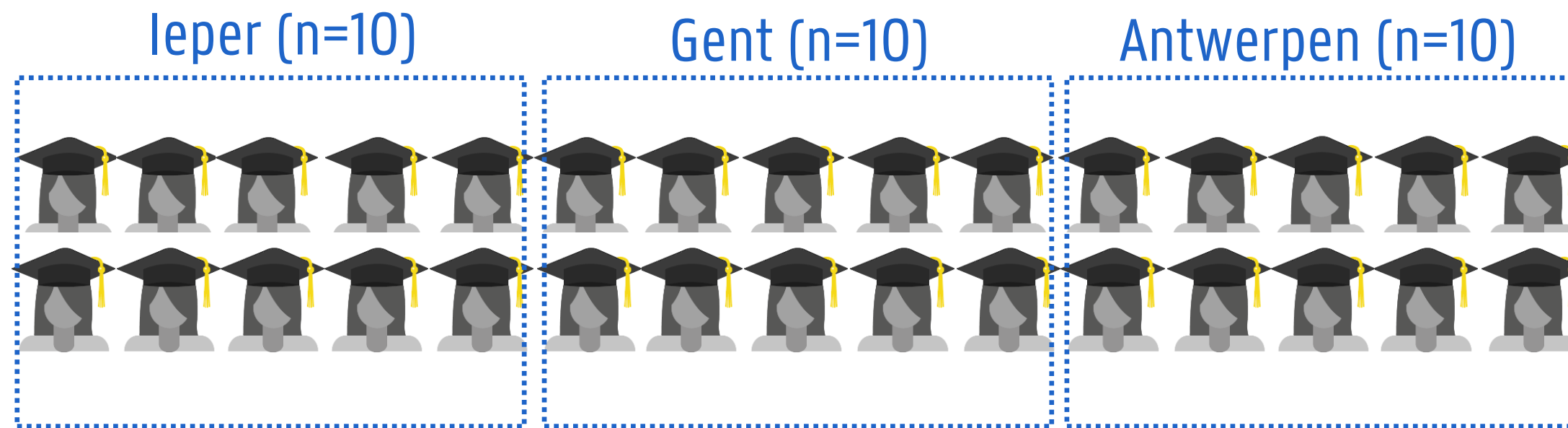
DATA COLLECTION

> Small-scale corpus of language use of 30 Flemish women



DATA COLLECTION

> Small-scale corpus of language use of 30 Flemish women



No language related training or job

DATA COLLECTION

> 5 speech settings

Conversation with a
friend of same city
(1h)



DATA COLLECTION

> 5 speech settings

Conversation with a
friend of same city
(1h)

Conversation with a
friend of different
dialect area (1h)



DATA COLLECTION

> 5 speech settings

Conversation with a
friend of same city
(1h)

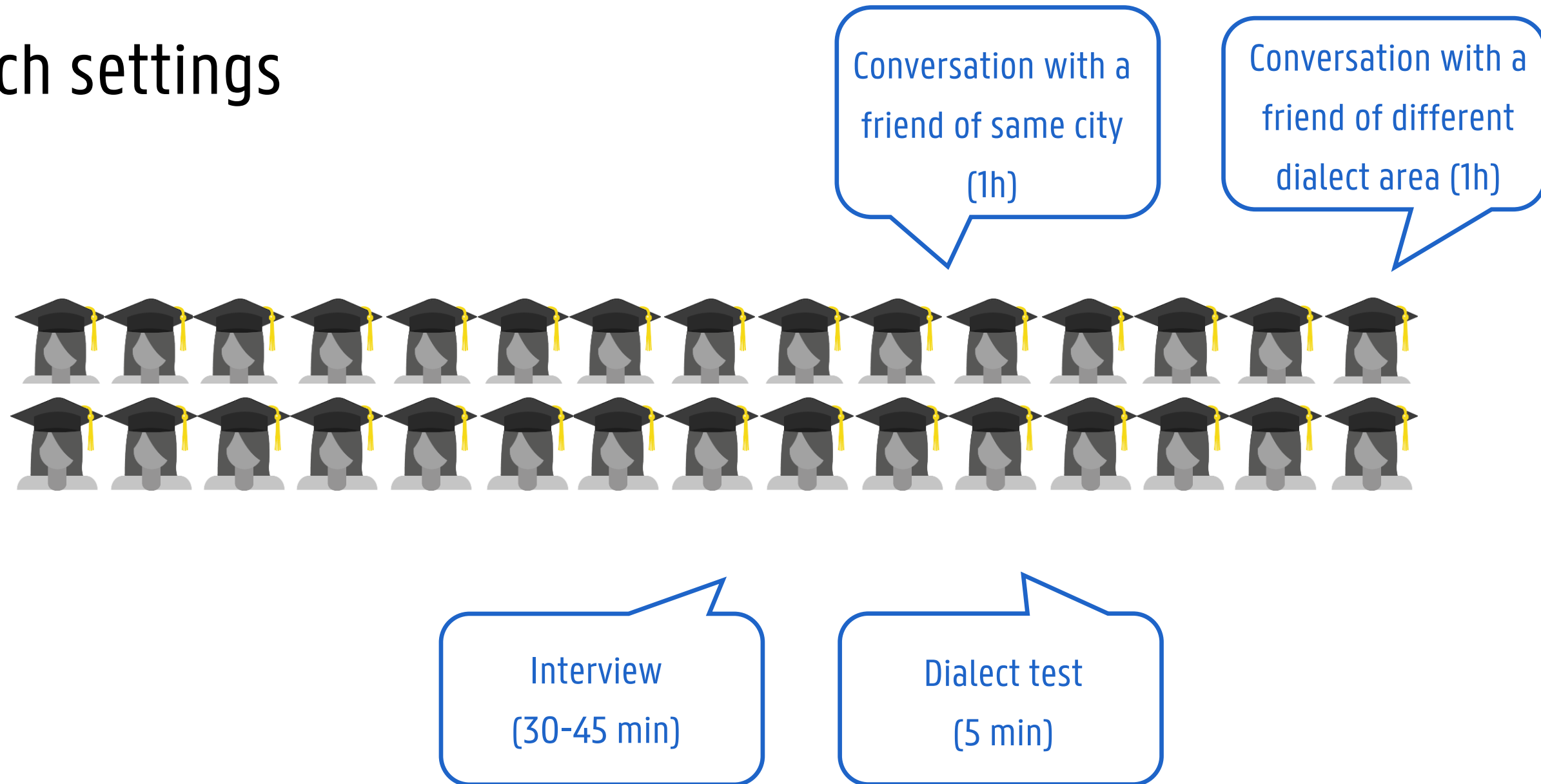
Conversation with a
friend of different
dialect area (1h)



Interview
(30-45 min)

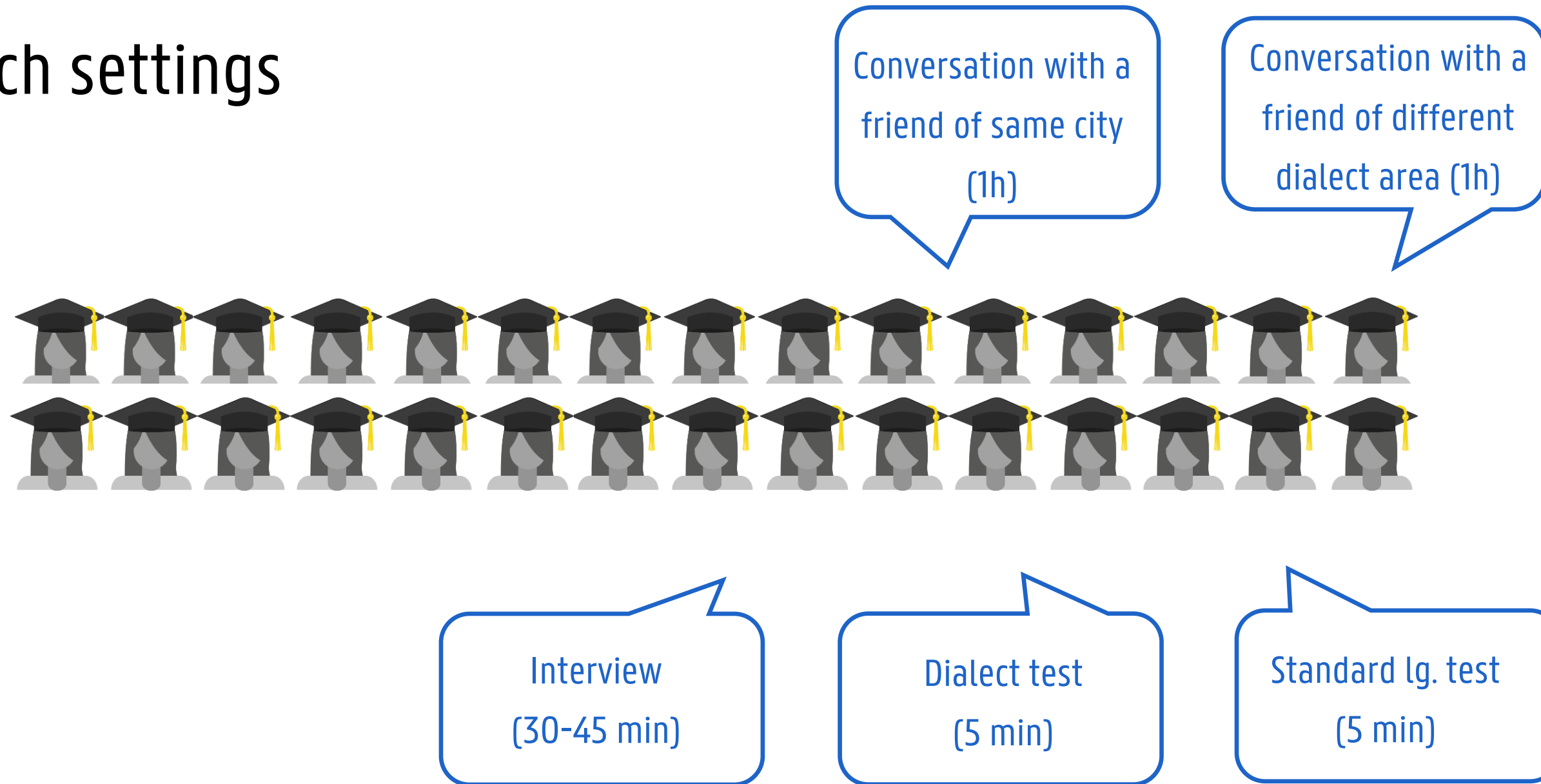
DATA COLLECTION

> 5 speech settings



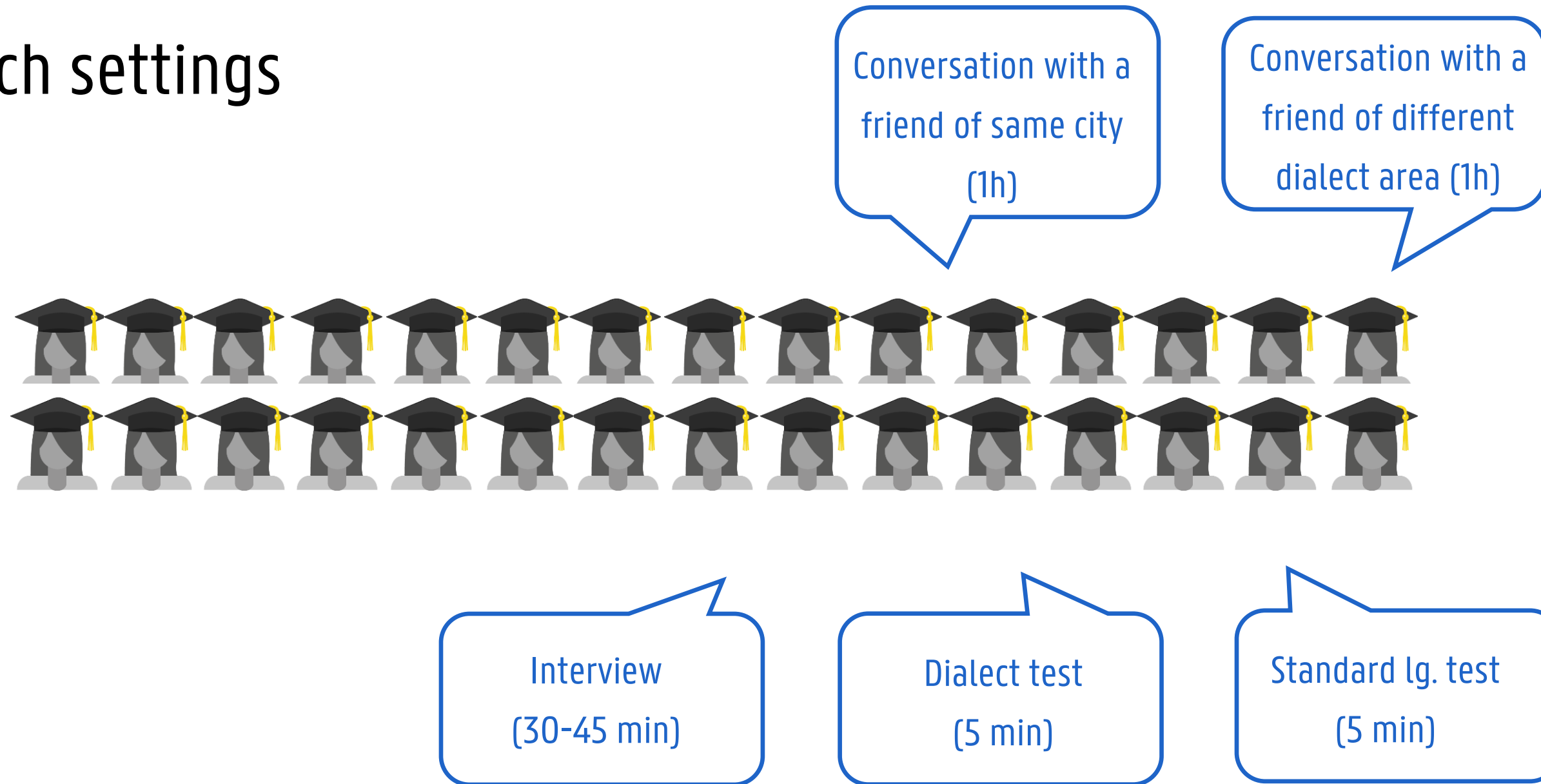
DATA COLLECTION

> 5 speech settings



DATA COLLECTION

> 5 speech settings



DATA COLLECTION

- 2019: Idea: new Surinamese data, modelled as strictly as feasible on the Belgian Dutch dataset
- However: also take into account fundamental socio-cultural differences between the two areas (e.g. concerning ethnicity)

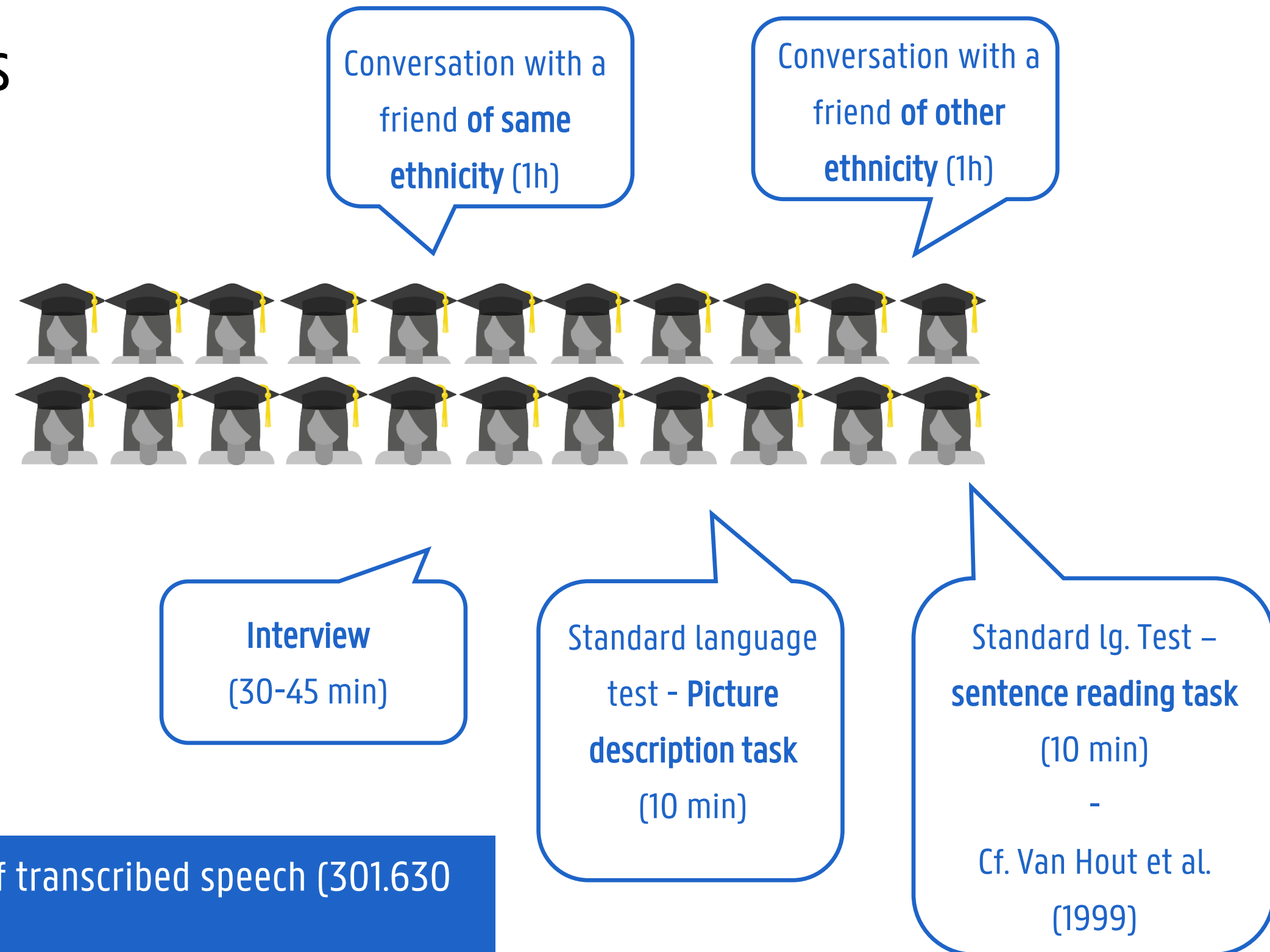
DATA COLLECTION

Suriname - 2020

- 22 highly educated Creole women
- District Paramaribo
- Dutch as 'the most important means of communication with at least one parent'
- 2 age groups (25-37 years old or 50-60 years old)
- Higher education, no language related job
- Not longer than one year in The Netherlands or Belgium

DATA COLLECTION

> 5 speech settings



Result: corpus of 48h of transcribed speech (301.630 words)

DATA ANALYSIS

- **Challenge (1): which linguistic variables???**
 - Comparability ideally achieved by operationalizing both the linguistic and social dimension in a similar vein in the two areas under comparison
 - But: every community has its own socially meaningful linguistic variables
 - Idea: compare specific ‘types of variables’ (e.g. noun phrase syntax/complementizer phenomena/...)
 - Selection criteria:
 - reported variability within Belgian/Surinamese context,
 - variable frequency
 - operationalisability in a profile-based approach (cf. Speelman et al. 2003),

DATA ANALYSIS

1. The use of *voor* and *van* vs. *om* as non-finite complementisers
2. The absence or presence of expletive *dat* after complementisers
3. The absence or presence of subject doubling
4. The inflection of attributive adjectives
5. The form of the indefinite determiner as used with male singular nouns



DATA ANALYSIS

1. The use of *voor* and *van* vs. *om* as non-finite complementisers
2. The absence or presence of expletive *dat* after complementisers
3. The absence or presence of subject doubling
4. The inflection of attributive adjectives
5. The form of the indefinite determiner as used with male singular nouns



1. Word order in clauses introduced by adverbials (verb-second vs. verb-third word order)
2. Place of the verb in subclauses (SVO vs. SOV)
3. Presence or absence of the conjunction *dat* in subordinate clauses
4. Use or absence of *te* in infinitivals
5. Conjunction in embedded yes/no-questions (*als* versus *of*)
6. Realisation vs. omission of articles in the noun phrase
7. Inflection of attributive adjectives modifying neuter indefinite nouns (with or without *e*-suffix),
8. Absence or presence of a suffix marking the plural in nouns
9. Use or omission of *het* ('it') as a referential element
10. Expression of passive semantics (active vs. passive construction)



DATA ANALYSIS

- **Challenge (2): measuring and comparing covariance**
 - **Per country**
 - Check implicational scaling using frequency-based approach described in Ghyselen & Van Keymeulen (2016)

t-deletion (4) > *h*-deletion (3) expl. *dat* (8) > [ɣ]-laryngalisation (2) > Subject doubling (7) > *ij* (1) > non-suffixal final [ə] (5) *n*-suffix in 1st sg pres (6) etw-lexemes (9)

Table 2: Implicational hierarchies of the studies language features based on the relative percentages in supraregional informal conversations.

	Most frequent							Least frequent		
All	4 _{1,2,3,5,6,7,9} 99%	> 8 _{1,2,3,1,5,7,6} 98%	> 3 _{1,2,4,5,6,7,8,9} 88%	> 2 _{1,3,4,5,6,8,9} 81%	> 7 _{1,3,4,5,6,8,9} 71%	> 1 _{2,3,4,5,6,7,8,9} 35%	> 9 _{1,2,3,4,5,7,8} 19%	> 6 _{1,2,3,4,7,8} 16%	> 5 _{1,2,3,4,7,8,9} 3%	
Wvl a1	8 _{1,5,6,9} & 4 _{1,3,5,6,9} 100%	> 2 _{1,5,6,9} 98%	> 3 _{1,4,5,6,9} 94%	> 7 _{5,6,9} 92%	> 1 _{2,3,4,5,6,8,9} 64%	> 6 _{1,2,3,4,7,8} 18%	> 5 _{1,2,3,4,7,8} 3%	> 9 _{1,2,3,4,7,8} 0%		
Wvl a2	4 _{1,3,5,6,9} & 7 & 8 100%	> 2 _{1,5,6} 95%	> 3 ₄ 88%	> 1 _{2,4} 71%	> 6 _{2,4} 50%'	> 5 _{2,4} 25%	> 9 ₄ 0%			
Wvl a3	8 _{1,2,5,6,7,9} & 4 _{1,2,5,6,7,9} 100%	> 3 _{1,2,5,6,7,9} 95%	> 7 _{1,3,4,6,8} 47%	> 2 _{1,3,4,6,8} 39%	> 6 _{2,3,4,7,8} 8%	> 1 _{2,3,4,7,8} 4%	> 5 _{3,4,8} & 9 _{3,4,8} 0%			
Wvl a4	8 _{1,2,5,6,9} > 4 _{1,2,3,5,6,7,9} 100%	> 3 _{1,2,4,5,6,9} 82%	> 7 _{1,2,3,4,6,9} 78%	> 2 _{1,3,4,6,7,8} 33%	> 1 _{2,3,4,7,8} 0%	> 5 _{3,4,8} & 6 _{2,3,4,7,8} & 9 _{3,4,7,8}				
Wvl a5	4 _{1,3,5,6,7,9} & 8 _{1,5,6,7,9} 100%	> 2 _{1,3,5,6,7,9} 96%	> 3 _{1,2,4,5,6,7,9} 77%	> 7 _{1,2,3,4,8} 29%	> 1 _{2,3,4,7,8} 0%	> 5 _{2,3,4,8} & 6 _{2,3,4,8} & 9 _{2,3,4,8}				
Wvl b1	4 ₉ & 6 & 8 100%	> 2 ₉ 97%	> 1 ₉ 92%	> 3 87%	> 7 83%	> 5 50%	> 9 _{1,2,4} 20%			
Wvl b2	8 _{1,5,6,9} > 4 _{1,6,9} > 3 _{1,5,6,9} 100%	> 2 _{1,5,6,9} 97%	> 7 _{1,5,6,9} 89%	> 1 _{2,3,4,7,8} 88%	> 5 _{2,3,4,7,8} & 6 _{2,3,4,7,8} & 9 _{2,3,4,7,8} 85%	> 6 _{2,3,4,7,8} & 9 _{2,3,4,7,8} 17%	> 5 0%			
Wvl b3	4 _{1,3,5,6,7,9} > 8 _{1,5,6,7,9} > 3 _{1,4,6} 99%	> 2 _{1,6,7} 94%	> 7 _{2,4,8} 81%	> 6 _{2,3,4,8} 79%	> 1 _{2,3,4,8} 37%	> 5 _{4,8} & 9 _{4,8} 9%	> 9 4%			
Wvl b4	8 > 4 _{1,2,6} > 1 _{3,4} 100%	> 3 _{1,6} 97%	> 7 ₆ 96%	> 9 ₆ 94%	> 2 _{4,6} 89%	> 6 _{2,3,4,7,9} > 5 83%	> 5 81%			
Wvl b5	8 _{1,5,6} > 4 _{1,2,5,6,7,9} > 3 _{1,5,6,9} 100%	> 7 _{1,4,6} 97%	> 9 _{2,3,4} 94%	> 2 _{1,4,5,6,9} 89%	> 1 _{2,3,4,7,8} 83%	> 6 _{2,3,4,7,8} > 5 _{2,3,4,8} 81%	> 5 69%			

1=*ij*, 2=[ɣ]-laryngalisation, 3=*h*-deletion, 4=*t*-deletion, 5=non-suffixal final [ə], 6=*n*-suffix in thematic verbs 1st sg, 7=subject doubling, 8=expletive *dat*, 9=etw-lexemes. The numbers in subscript represent the linguistic features with which the ranked feature contrasts significantly (Fisher Exact pairwise comparisons with Bonferroni corrections, $\alpha=0.05$).

DATA ANALYSIS

- **Challenge (2): measuring and comparing covariance**
 - **Per country**
 - Check implicational scaling using frequency-based approach described in Ghyselen & Van Keymeulen (2016)
 - distance-based multivariate techniques (correspondence regression and hierarchical cluster analysis)

DATA ANALYSIS

- **Challenge (2): measuring and comparing covariance**
 - **Per country**
 - Check implicational scaling using frequency-based approach described in Ghyselen & Van Keymeulen (2016)
 - distance-based multivariate techniques (correspondence regression and hierarchical cluster analysis)
 - Logistic regression (mixed effects: random effects per speaker)

DATA ANALYSIS

- **Challenge (2): measuring and comparing covariance**
 - **Per country**
 - Check implicational scaling using frequency-based approach described in Ghyselen & Van Keymeulen (2016)
 - distance-based multivariate techniques (correspondence regression and hierarchical cluster analysis)
 - Logistic regression (mixed effects: random effects per speaker)
 - **Comparison**
 - Logistic regression: Compare fixed effects and random effect sizes, amount of variation explained
 - Distance-based techniques: compare confidence intervals and number of splits



THEORETICAL BACKGROUND

MY PROJECT

INITIAL RESULTS & CHALLENGES

TAKE-AWAY MESSAGE

LITERATURE ON SURINAMESE DUTCH ≠ OUR RESPONDENTS

Many variables described as typically Surinamese Dutch: not variable among our respondents!

1. Place of the verb in subclauses (SV0 vs. SOV)
2. Use or absence of *te* in infinitivals
3. Realisation vs. omission of articles in the noun phrase > *56/4867 NPs*
4. Absence or presence of a suffix marking the plural in nouns
5. Expression of passive semantics (active vs. passive construction)

EXTENDED DESCRIPTIVE UNIVARIATE PHASE NEEDED

- STEP 1: In-depth analysis per variable of intra- and extra-linguistic predictors
- Questions:
 - Suitable for lectometric analysis? If yes: how to operationalize/delineate the variable?
 - Orderly heterogeneity?
- STEP 2: Explore correlation between variables in Surinamese data & compare with European data

EXAMPLE: CONJUNCTION EMBEDDED YES-/NO-QUESTIONS

IK WEET NIET als
of HIJ MORGEN WERKT.

Typically Surinamese: *als*
Influence of Sranan*efi*?

Muysken (2017, 304-305), Sluisdom (1992) en Ventura
(2013)

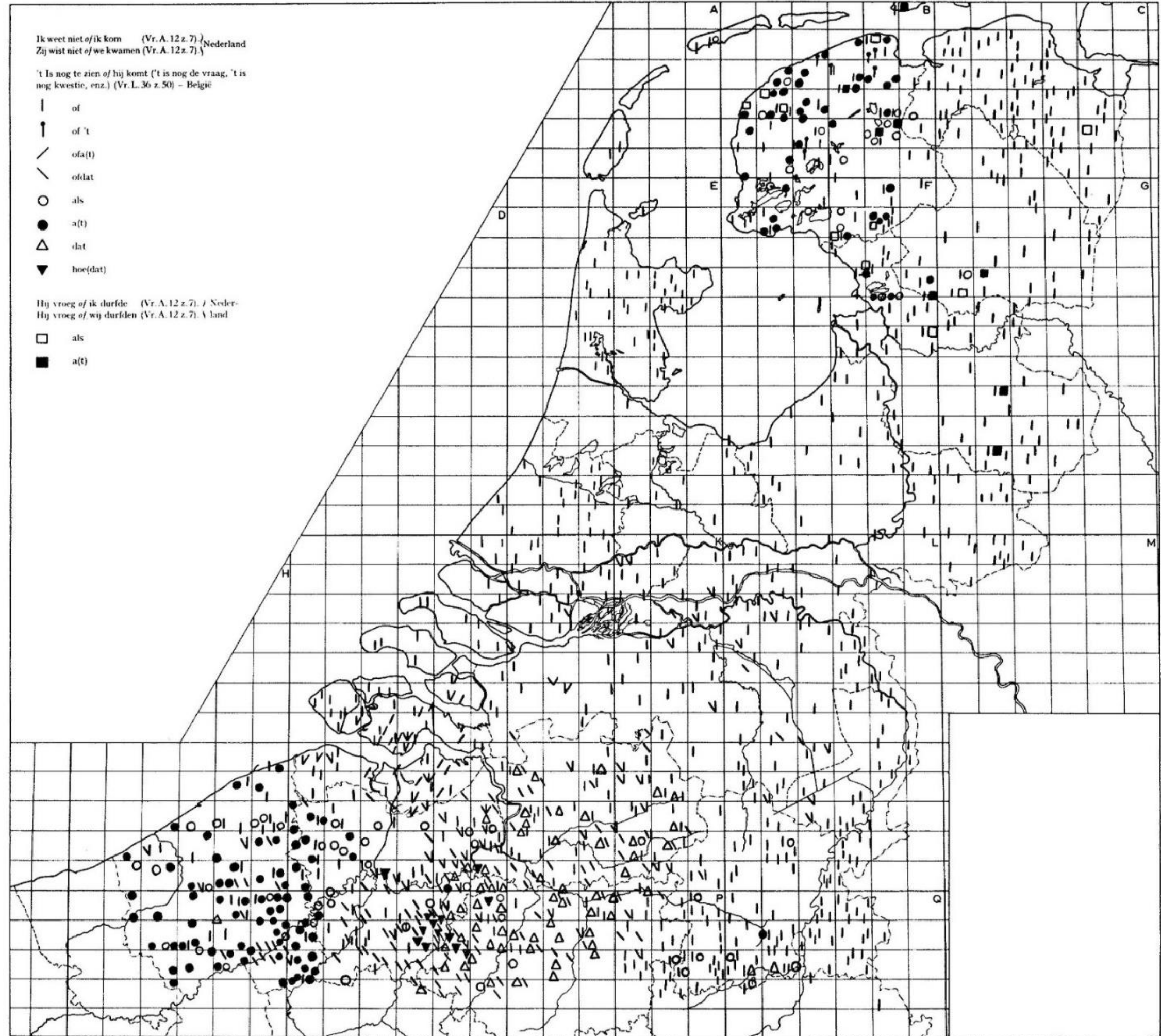
Ik weet niet *of* ik kom (Vr. A. 12 z. 7) Nederland
 Zij wist niet *of* we kwamen (Vr. A. 12 z. 7)

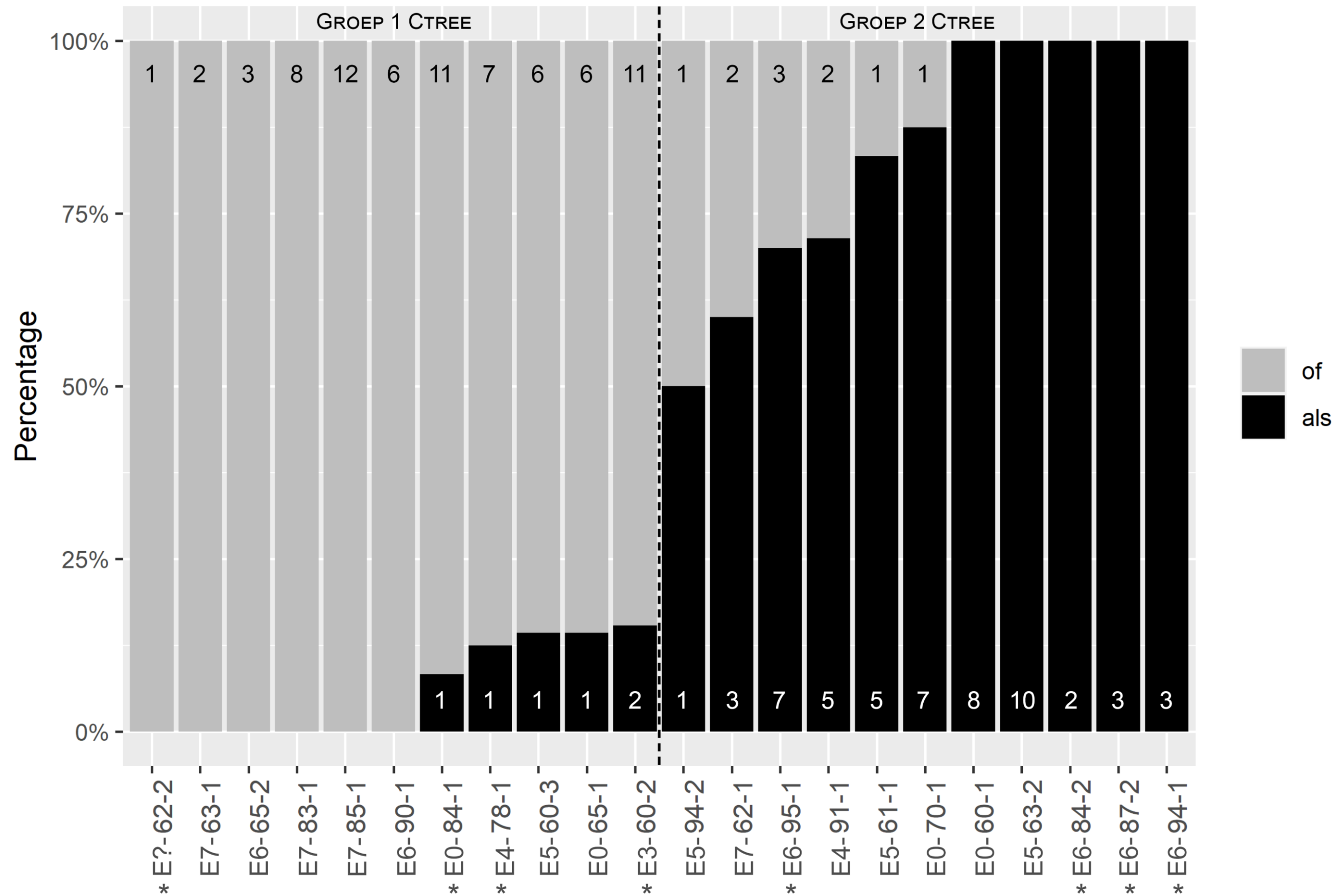
't Is nog te zien *of* hij komt ('t is nog de vraag, 't is
 nog kwestie, enz.) (Vr. L. 36 z. 50) - België

- | of
- ↑ of 't
- / ofa(t)
- \ ofdat
- als
- a(t)
- △ dat
- ▼ hoe(dat)

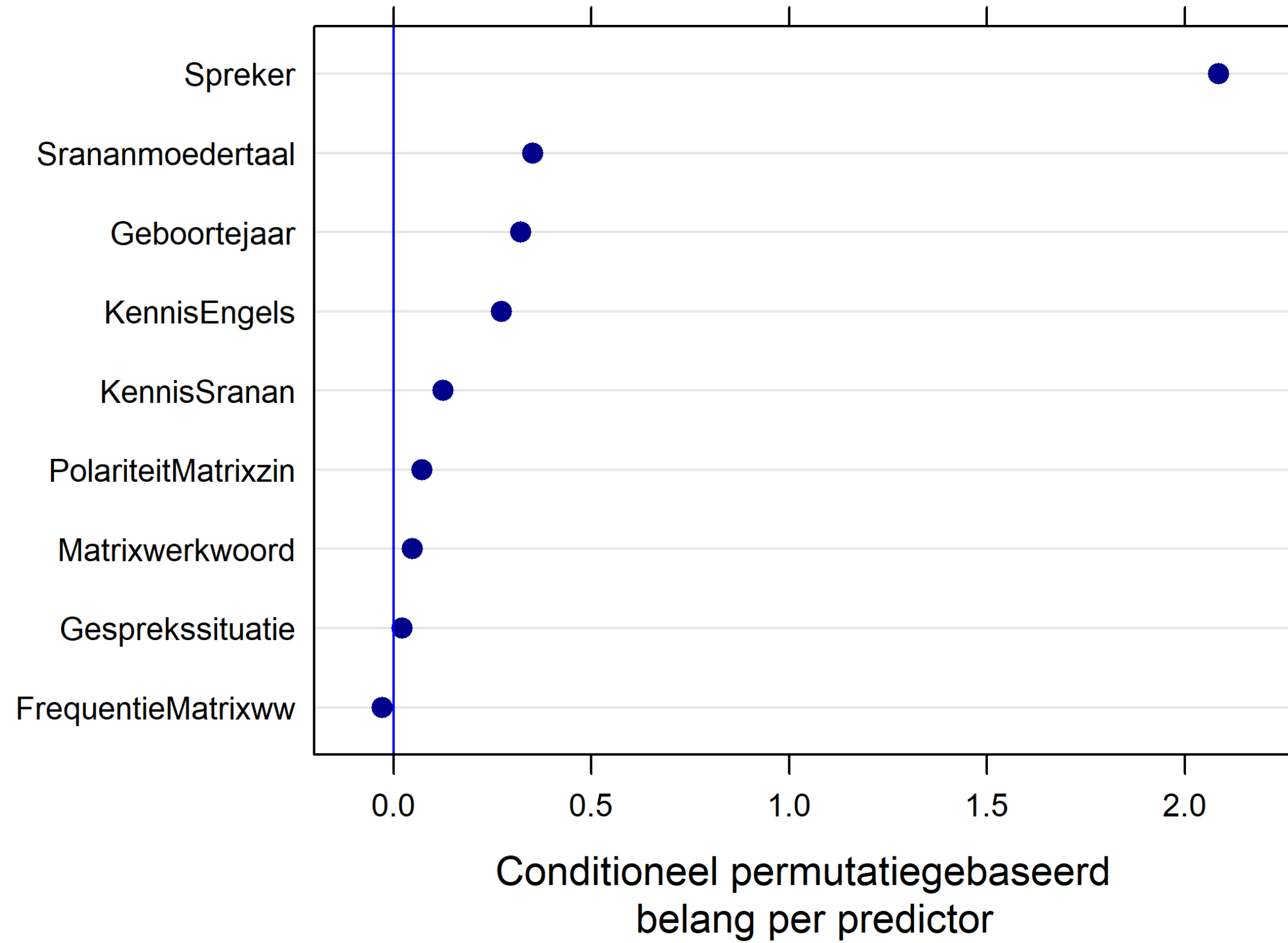
Hij vroeg *of* ik durfde (Vr. A. 12 z. 7) / Neder-
 Hij vroeg *of* wij durfden (Vr. A. 12 z. 7) / land

- als
- a(t)

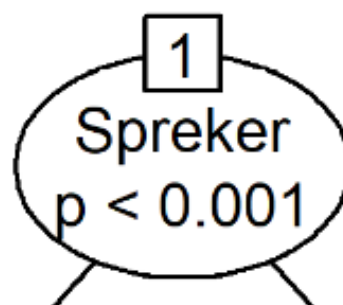




43,5%: *als*
 54,0% : *of*
 (n=161)

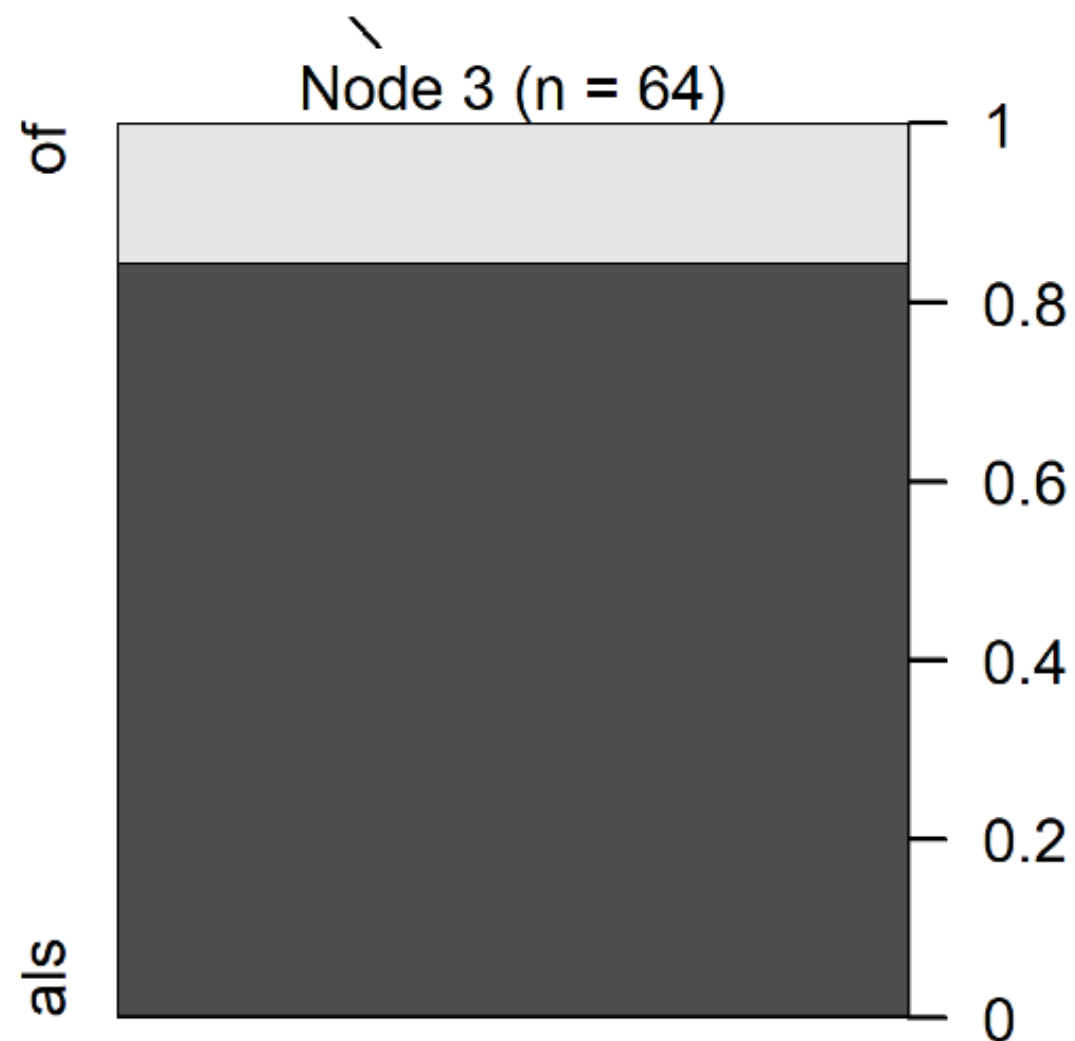
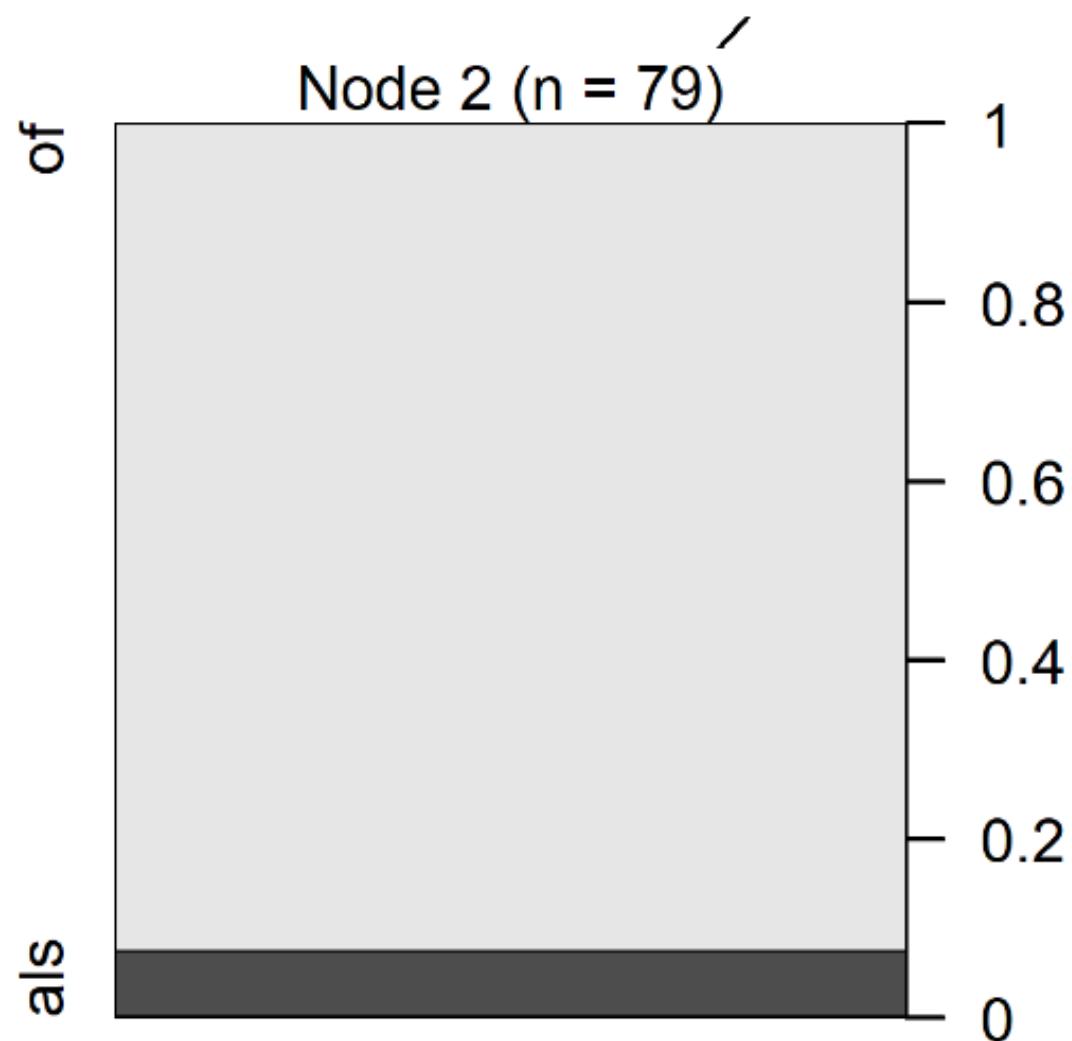


RANDOM FOREST
ANALYSIS
C-value of 0.97



E?-62-2, E7-63-1, E6-65-2, E7-83-1,
E7-85-1, E6-90-1, E0-84-1, E4-78-1,
E5-60-3, E0-65-1, E3-60-2

E5-94-2, E7-62-1, E6-95-1, E4-91-1,
E5-61-1, E0-70-1, E0-60-1, E5-63-2,
E6-84-2, E6-87-2, E6-94-1



CONDITIONAL
INFERENCE TREE
C-value of 0.89

EXAMPLE: CONJUNCTION EMBEDDED YES-/NO-QUESTIONS

- Variation seems random
- However: stylistically: implicational pattern
- Enough variation for coherence study, but problem: low token frequency
- Sidestep: conjunctions in Surinamese component of 'Corpus Hedendaags Nederlands'

7722 tokens:
- 547 (7.1%): *als*
- 7175 (92.9%): *of*

Models fail to predict! > lack of coherence

LOW TOKEN NUMBERS COMPLICATE ANALYSIS, BUT ALL IN ALL:
LITTLE COHERENCE

WORK-IN-PROGRESS

- Presence or absence of the conjunction *dat* in subordinate clauses
- Alternation *hen/hun* as indirect object
- Inflection of attributive adjectives modifying neuter indefinite nouns (with or without *e*-suffix),
- Word order in clauses introduced by adverbials (verb-second vs. verb-third word order)

Can correlations/implicational patterning be found?

If no: evidence for distinction between communities on basis of coherence.

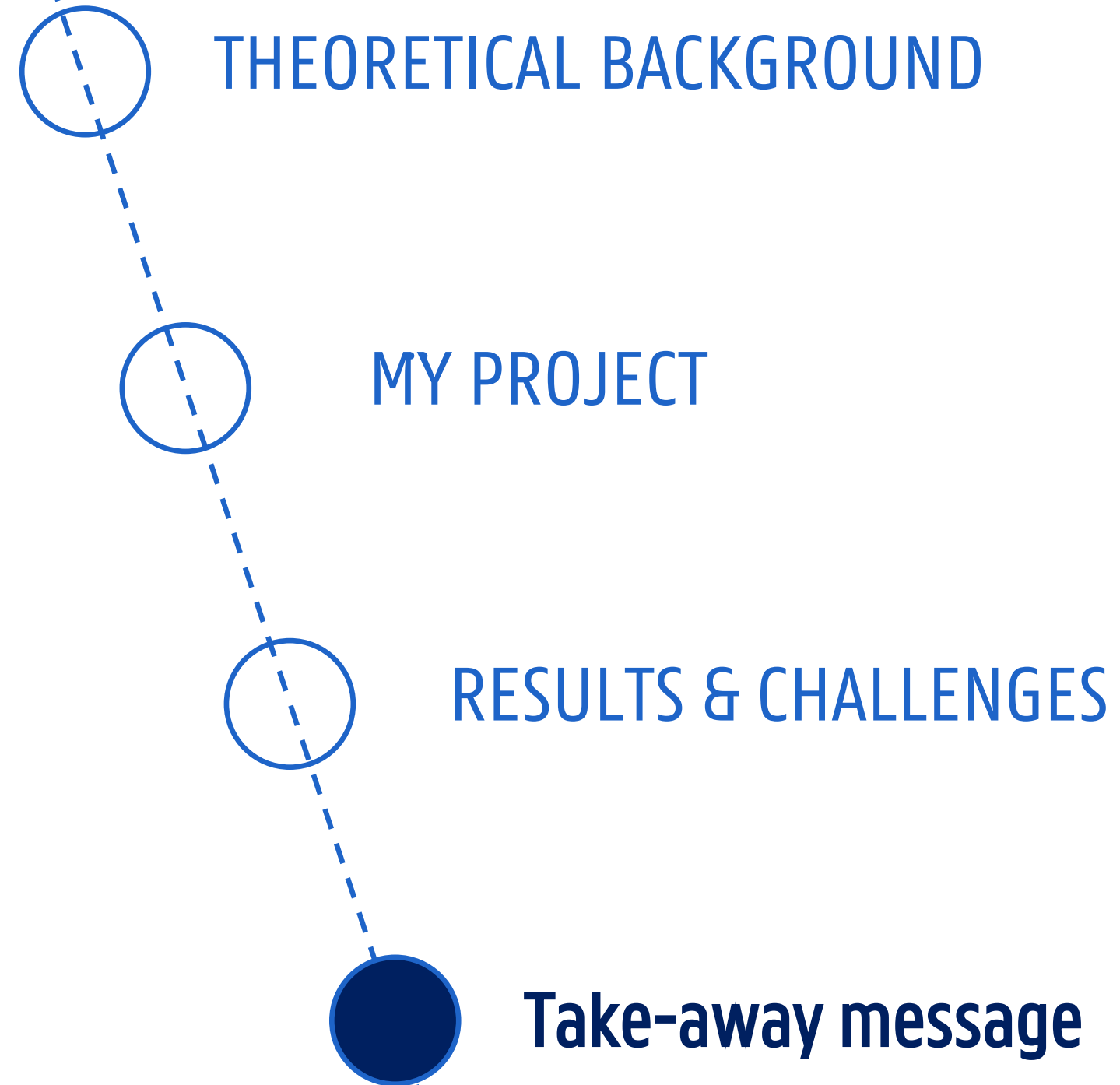
BIGGEST 'WORRY': SELECTION BIAS

- Everything depends on variables you select
- E.g. *T*-deletion (Vervaeke, Goeman & Ghyselen under review): nicely structured
- Selection still feels too 'random'
- How to avoid bias and avoid comparing apples to oranges?
- Follow-up research: more bottom-up approach:
 - Subdomains instead of variables: Inflection + pronominal variation
 - Map all variation > define variables and their entropy
 - Coherence research on the basis of variables with highest entropy?
 - Labour-intensive approach! 'Easier' solutions?

FOLLOW-UP RESEARCH

- Coherence in perceptions and attitudes
- E.g. acceptability judgements of *als/of*: coherent patterns?

STILL A LOT TO ANALYSE AND THINK ABOUT BUT...



(1) COHERENCE IS AN INTERESTING PHENOMENON, IN NEED OF MORE EMPIRICAL ATTENTION

- Claims about (non-)existence of varieties/language systems
- Claims about standardization/destandardization
- Comparative claims about norms in different nations

Need empirical evidence!

(2) FOR EMPIRICAL COMPARISON

- Think carefully about **ways of operationalizing coherence!**
- Need datasets that are **sufficiently comparable** (level of aggregation, speaker diversity etc.), contain enough **intraspeaker variation** and **metadata about individuals**
- **Need to think carefully about variable selection**

Anne-Sophie Ghyselen
Senior postdoctoral research fellow
Department of Linguistics
annesophie.ghyselen@ugent.be

THANKS FOR YOUR
ATTENTION!

REFERENCES

- Beaman, K., & Guy, G. R. (Eds.). (2022). *The Coherence of Linguistic Communities. Orderly Heterogeneity and Social Meaning*. Routledge.
- Becker, K. (2015). Linking community coherence, individual coherence, and bricolage: The co-occurrence of (r), raised BOUGHT and raised BAD in New York City English. *Lingua*, 172-173, 87-99.
- Coupland, N., & Kristiansen, T. (2011). SLICE: Critical perspectives on language (de)standardisation. In T. Kristiansen & N. Coupland (Eds.), *Standard Languages and Language Standards in a Changing Europe* (Vol. 1, pp. 11-35). Novus Press.
- DeCamp, D. (1971). Toward a generative analysis of a post-creole speech continuum. In D. Hymes (Ed.), *Pidginization and Creolization of Languages* (pp. 349-370). Cambridge University Press.
- Geeraerts, D. (2010). Schmidt redux: How systematic is the linguistic system if variation is rampant? In K. Boye & E. Engeberg-Pederson (Eds.), *Language Usage and Language Structure* (pp. 237-262). De Gruyter Mouton.
- Ghyselen, A.-S. (2016). *Verticale structuur en dynamiek van het gesproken Nederlands in Vlaanderen: een empirische studie in Ieper, Gent en Antwerpen* [Universiteit Gent]. Gent.
- Ghyselen, A.-S. (accepted). Of versus als ter inleiding van afhankelijke ja/nee-vragen in het Surinaams-Nederlands: een kwantitatieve verkenning. *Taal & Tongval*.
- Ghyselen, A.-S., & De Vogelaer, G. (2018). Seeking Systematicity in Variation: Theoretical and Methodological Considerations on the 'Variety' Concept. *Frontiers in Psychology*, 9 (art 385), 1-19.

- Ghyselen, A.-S., Speelman, D., & Plevvoets, K. (2020). Mapping the structure of language repertoires: on the use of sociolectometric methods. *Zeitschrift für Dialektologie und Linguistik. Special issue on lectometry*, 87(2), 202-249.
- Ghyselen, A.-S., & Van Keymeulen, J. (2016). Implicational scales in colloquial Belgian Dutch. *Dialectologia et Geolinguistica. Journal of the International Society for Dialectology and Geolinguistics*, 24(1), 62-82.
- Gregersen, F., & Pharao, N. (2016). Lects are perceptually invariant, productively variable: A coherent claim about Danish lects. *Lingua*, 172-173, 26-44.
- Grondelaers, S., & Van Hout, R. (2016). How (in)coherent can standard languages be? A perceptual perspective on co-variation. *Lingua*, 172-173, 62-71.
- Guy, G. R. (2013). The cognitive coherence of sociolects: How do speakers handle multiple sociolinguistic variables? *Journal of Pragmatics*, 52, 63-71.
- Guy, G. R., & Hinskens, F. (2016). Linguistic coherence: Systems, repertoires and speech communities. *Lingua*, 172-173, 1-9.
- Le Page, R. B. (1988). Some premises concerning the standardization of languages, with special reference to Caribbean Creole English. *International Journal of the Sociology of Language*, 71, 25-36.
- Le Page, R. B., & Tabouret-Keller, A. (1985). *Acts of identity. Creole-based approaches to language and ethnicity*. Cambridge University Press.
- Ma, R., & Herasimchuk, E. (1972). Speech styles in Puerto Rican bilingual speakers: a factor analysis of co-variation of phonological variables. In J. A. Fishman (Ed.), *Advances in the Sociology of Language* (Vol. 2, pp. 268-295). Mouton.

- Muysken, P. (2017). The transformation of a colonial language: Surinamese Dutch. In K. Yakpo & P. Muysken (Eds.), *Boundaries and Bridges: Language Contact in Multilingual Ecologies* (pp. 283-310). Walter de Gruyter.
- Plevvoets, K. (2008). *Tussen spreek-en standaardtaal. Een corpusgebaseerd onderzoek naar de situationele, regionale en sociale verspreiding van enkele morfosyntactische verschijnselen uit het gesproken Belgisch-Nederlands* [Katholieke Universiteit Leuven]. Leuven.
- Sluisdom, R. (1992). *Norm en standaard in Suriname* [Vrije Universiteit Amsterdam]. Amsterdam.
- Speelman, D., Grondelaers, S., & Geeraerts, D. (2003). Profile-Based Linguistic Uniformity as a Generic Method for Comparing Language Varieties. *Computers and the Humanities*, 37, 317-337.
- van Hout, R., De Schutter, G., De Crom, E., Huinck, W., Kloots, H., & Velde, H. V. d. (1999). De uitspraak van het Standaard-Nederlands. Variatie en varianten in Vlaanderen en Nederland. In E. Huls & B. Weltens (Eds.), *Artikelen van de Derde Sociolinguïstische Conferentie* (pp. 183-196).
- Ventura, W. (2013). ‘Wat gebeurt?’ - Interferenties en de syntaxis van het Surinaams-Nederlands. *Conferentie Neerlandistiek in het Caribisch Gebied, 2013*, 46-60.
- Weinreich, U., Labov, W., & Herzog, M. (1968). Empirical foundations for a theory of language change. In W. P. Lehmann & Y. Malkeil (Eds.), *Directions for historical linguistics: A symposium* (pp. 95-188). University of Texas Press.