

## Co-variation and varieties in modern Dutch ethnolect(s)

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1

## Co-variation

- quantitative variation
- Between 3 of the largest groups in NL: 'white' Dutch, Turkish-Dutch and Moroccan-Dutch
- Two area's in NL: Amsterdam and Nijmegen
- Two age groups: 10-12-year olds and 18-20-year olds

2

## Co-variation

- How are linguistic variables related to the main social variables?
- Do they co-vary?
- If yes, does it suggest...
  - ... *one* ethnolect with two regional variants, i.e. 2 varieties with main division 'white' Dutch vs. ethnic Dutch?
  - ... *two* regional ethnolects, i.e. two varieties with a main division between Amsterdam and Nijmegen?
  - ... *two* ethnolects, i.e. two varieties with a main division between Moroccan-Dutch and Turkish-Dutch?

3

## Speakers (1)

- Male speakers with Turkish-Dutch, Moroccan-Dutch and 'white' Dutch backgrounds
- Two cities: Amsterdam (A) and Nijmegen (N)
- Born and raised in A and N respectively



4

## Speakers (2)

### ■ 10-12 year-olds

	Background			
	Moroccan-Dutch (M)	Turkish-Dutch (I)	'white' Dutch (D)	'white' Dutch (C)
Inter-ethnic ties?	yes	yes	yes	no
Amsterdam (A)	3	3	2	3
Nijmegen (N)	3	3	3	4

### ■ 18-20 year-olds

	Background			
	Moroccan-Dutch (M)	Turkish-Dutch (I)	'white' Dutch (D)	'white' Dutch (C)
Inter-ethnic ties?	yes	yes	yes	no
Amsterdam (A)	4	4	3	3
Nijmegen (N)	3	3	3	4

5

## Data-collection

- Spontaneous conversations
  - Between 2 speakers
  - 3 or 4 conversations: With 1 or 2 speakers of their own background and 1 speaker of each of the other backgrounds.
  - About 60 minutes per conversation
  - Free conversation, if needed with help of card games, newspapers, various magazines

6

### Variables (overview)

- variation in phonetic realization of:
  - /z/ at beginning of prosodic word
  - /ei/
  - /a/
  - /ɑ/
  - /ɛ/ in *heb je/ik* 'have you/I'
- 2 morpho-syntactic features:
  - marking neuter gender\*
  - *hun* 'them', subject 3 pl.

\* data /ɛ/ bij Isabel Smits, data gender by Ariën van Wijngaarden

### /z/ at beginning of prosodic word

#### Examples

Voiced ; 'Alveolar z' (Standard Dutch)

- maar je moet er ook wel **zin** in hebben hoor  
but you also have to feel like it

Voiced; 'Dental z' (non-Dutch variant)

- luister als ik uh **hartziektes** had  
listen, if I had heart diseases

Devoiced z (Amsterdam + Nijmegen urban dialects)

- 'k heb eigenlijk niet zoveel **zin**  
actually, I don't feel like it

### /z/ at beginning of prosodic word

#### Indexes

- Means were calculated

	0,00	...	1,00
/z/ voicing	all instances devoiced	...	all instances voiced
/z/ dentalization	only alveolar instances	...	only dental instances

### /ei/

#### Examples

Height of first element

*bij* 'he'

[ei] vs. [ai]

Monophthongization

*meisjes* 'girls'

[ei] vs. [ɛ:]

### /ei/

#### Indexes

- Means were calculated

	1,00	...	4,00
/ei/ height first element	only closed variants of first element (i.e. [e] or [ɪ])	...	only open variants of first element (i.e. [a])

	1,00	...	3,00
/ei/ Monophthongization	all instances are diphthongues	...	all instances monophthongized

### /a/ and /ɑ/

#### Examples

<b>/a/ and /ɑ/ Indexes</b>				
	1,00	2,00	3,00	4,00
/a/ Height (mean)		standard		
	1,00	2,00	3,00	4,00
/ɑ/ Height (mean)			standard	
	1,00	< 1	> 1	
Difference Height /a/ - /ɑ/	standard	non-standard	non-standard	
	value of sd			
/a/ Height (sd)	sd values			
/ɑ/ Height (sd)	sd values			

13

<b>/ε/ in heb je/ik Example</b>
<ul style="list-style-type: none"> <li>■ <b>Heb je</b> een broertje? 'Do you have a little brother?'</li> <li>■ <b>Heb je</b> pech. 'You were out of luck.'</li> <li>■ <b>Heb ik</b> dat gedaan? 'Did I do that?'</li> <li>■ Die <b>heb ik</b> nodig 'I need that one'</li> </ul>

14

<b>/ε/ in heb je/ik Index</b>			
<ul style="list-style-type: none"> <li>■ means were calculated</li> </ul>			
	1,00	2,00	3,00
/ε/ Height	Nijmegen urban dialect	standard	Amsterdam urban dialect

15

<b>hun 'them', subject 3 pl. Example</b>
<ul style="list-style-type: none"> <li>■ <u>standard</u>: of <b>zij</b> waren bang. 'or they were scared.'</li> <li>■ <u>non-standard</u>: of <b>hun</b> waren bang. 'or them were scared.'</li> </ul>

16

<b>hun 'them', subject 3 pl. Index</b>			
<ul style="list-style-type: none"> <li>■ proportions were calculated per speaker: number of <i>hun</i> ('them', subject 3 pl.) ----- total number of <i>hun+zij+die</i> ('them'+ 'they'+ 'those', all subject 3pl.)</li> </ul>			
	0,00	...	1,00
<i>hun</i> subject 3 pl.	no use of <i>hun</i>	...	all instances <i>hun</i>

17

<b>Neuter Gender Examples</b>			
	Standard Dutch	Non-Standard Dutch	English
article	<i>het</i> woord	<i>de</i> woord	'the word'
demonstrative	<i>dat</i> woord	<i>die</i> woord	'that word'
adnominal: adjectives	een <i>Engels</i> woord	een <i>Engelse</i> woord	'an English word'
adnominal: possessives	<i>ons</i> woord	<i>onze</i> woord	'our word'

18

### Neuter Gender Index

- means were calculated

	0,00	...	1,00
neuter gender	all instances non-standard	...	all instances standard

19

### Relation linguistic + social variables (1)

- significant main effects (ANOVA's with GLM, Univariate)

	B_speaker	City	Age
/z/ voicing after Obstruent	+	-	-
/z/ voicing after Sonorant	+	+	-
/z/ voicing after Vowel	+	-	-
/z/ dentalization	+	-	-

20

### Relation linguistic + social variables (2)

- ANOVA's (GLM, Univariate)

	B_speaker	City	Age
/ɛi/ Height first element	+	+	+
/ɛi/ Monophthongization	+	-	+

21

### Relation linguistic + social variables (3)

- ANOVA's (GLM, Univariate)

	B_speaker	City	Age
/a/ Height (mean)	+	+	-
/ɑ/ Height (mean)	-	+	-
Difference /a/ vs. /ɑ/	+	+	-
/a/ Height (sd)	+	-	-
/ɑ/ Height (sd)	+	+	-

22

### Relation linguistic + social variables (4)

- ANOVA's (GLM, Univariate)

	B_speaker	City	Age
/ɛ/ Height	-	+	+
hun subject 3 pl.	+	-	-
neuter gender: article	+	-	+
neuter gender: demonstrative	+	-	+
neuter gender: adnominal	+	-	-

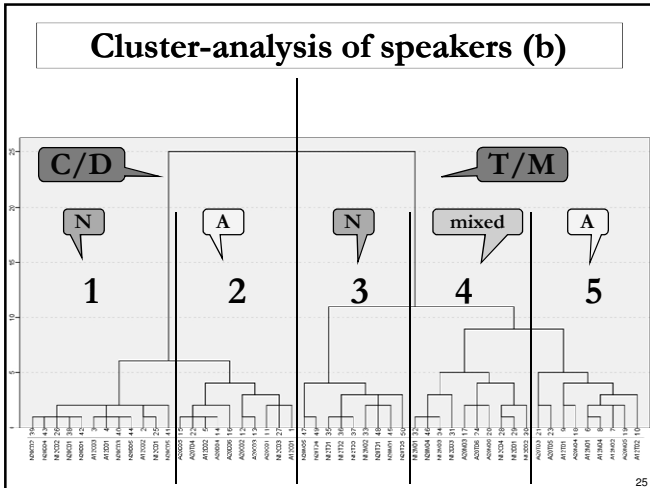
23

### Cluster-analysis of speakers (a)

Method

- Hierarchical Cluster Analysis
- Ward's method, Euclidean Distances
- Standardize: Range 0 to 1
- Cluster by Case

24

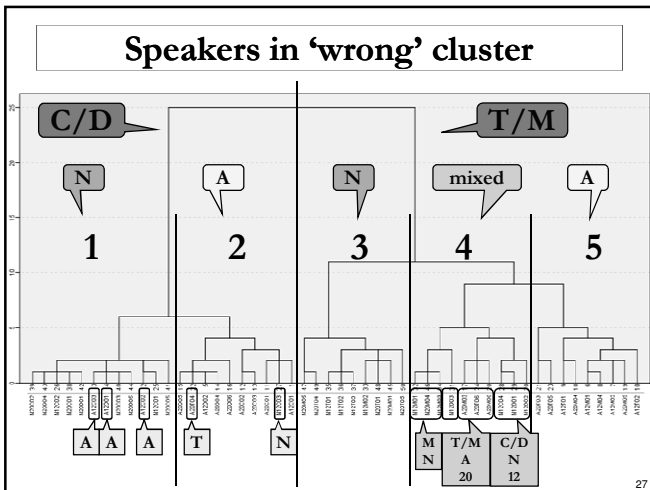


### Speaker cluster x Background

■ Number of speakers per speaker cluster:

		Cluster 1 "C/D - N"	Cluster 2 "C/D - A"	Cluster 3 "T/M - N"	Cluster 4 "mixed"	Cluster 5 "T/M - A"	Total
Background - City	C/D - N	9	1	0	4	0	14
	C/D - A	3	8	0	0	0	11
	T/M - N	0	0	9	3	0	12
	T/M - A	0	1	0	3	9	13
<b>Total</b>		12	10	9	10	9	50

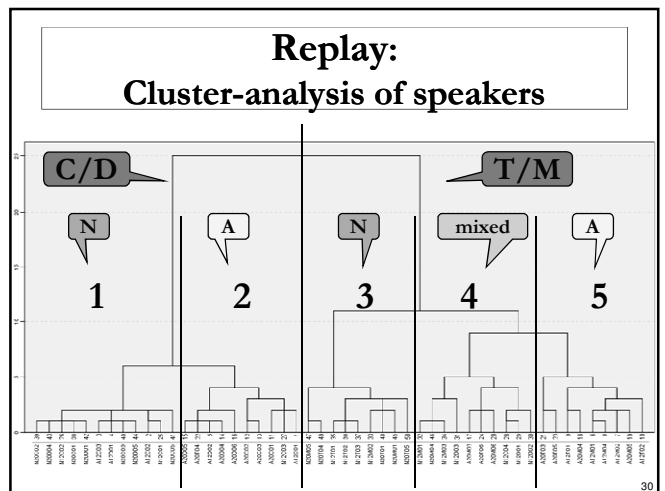
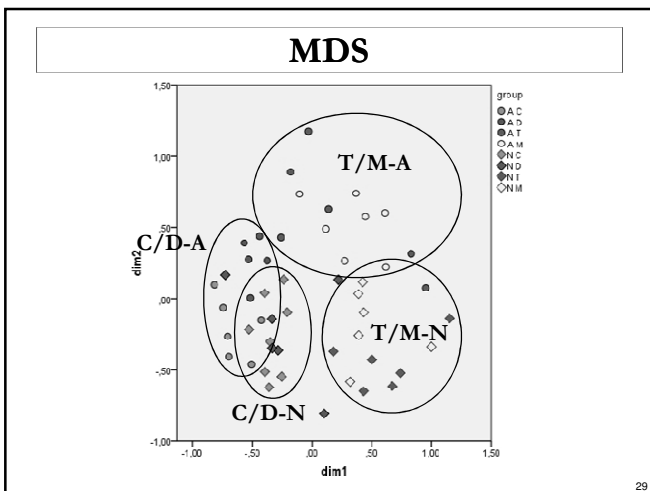
26

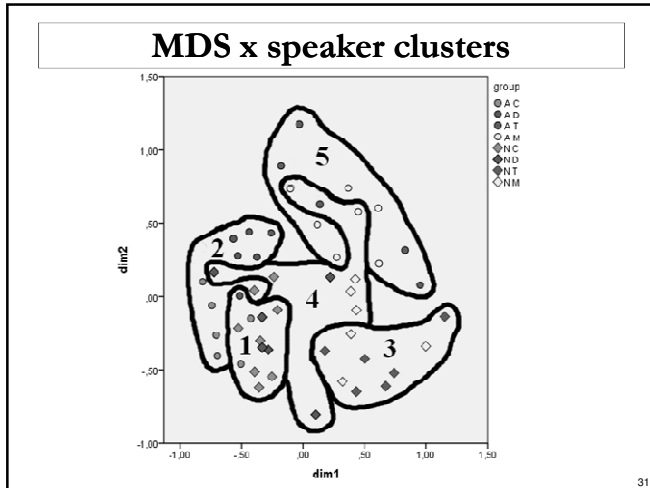


### MDS

- a PROXSCAL Multidimensional scaling procedure with two dimensions
- in order to find similarities between (groups of) speakers

28



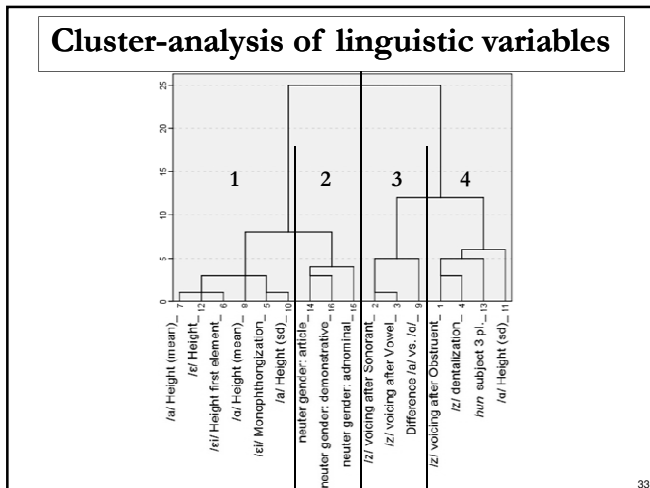


**Co-variation linguistic variables**

Method

- Hierarchical Cluster Analysis
- Ward's method, Euclidean Distances
- Standardize: Range 0 to 1
- Cluster by Variables

32



**Co-variation**

Of the 5 speaker clusters, this cluster is ... compared to the other clusters.

- ... relatively the most standard-near ...
- ... less standard-near / more non-standard-like ...
- ... relatively most non-standard-like ...

	Cluster 1 "C/D - N"	Cluster 2 "C/D - A"	Cluster 3 "T/M - N"	Cluster 4 "T/M - mix"	Cluster 5 "T/M - A"
/a/ Height (mean)					
/e/ Height					
/ei/ Height first element					
1 /a/ Height (mean)					
/si/ Monophthongization					
/a/ Height (sd)					
2 neuter gender: article					
neuter gender: demonstrative					
neuter gender: adnominal					
3 /z/ voicing after Sonorant					
/z/ voicing after Vowel					
Difference /a/ vs. /a/					
4 /z/ voicing after Obstruent					
/z/ dentalization					
hun subject 3 pl.					
/a/ Height (sd)					

34

**Conclusions (1)**

- How are 16 linguistic variables related to the 3 main social variables?
  - All but 2 linguistic variables show a significant main effect of Background of the speaker
  - Main effect of City for 7 linguistic variables
  - Main effect of Age only for 5 linguistic variables

35

**Conclusions (2a)**

- If there is co-variation, does it suggest...
  - ... *one* ethnolect with two regional varieties, i.e. 2 varieties with main division 'white' Dutch vs. ethnic Dutch?
  - ... *two* regional ethnolects, i.e. two varieties with a main division between Amsterdam and Nijmegen?
  - ... *two* ethnolects, i.e. two varieties with a main division between Moroccan-Dutch and Turkish-Dutch?

36

## Conclusions (2b)

- Background speaker important effect
- Visible in ANOVA's
- Also shows up at the cluster-analysis of the speakers and MDS
  - A main division between the 'white' Dutch (C+D) and the ethnic Dutch (T+M)
- Also, but less clear, visible at the cluster-analysis of the linguistic variables
  - Quite sharp division for feature clusters 2 and 4; considerably less sharp for feature cluster 1
- There seems to be a common ethnolect (i.e. variety of T+M)
  - with shared features in both Amsterdam and Nijmegen

37

## Conclusions (2c)

- a common ethnolect (i.e. variety of T+M)
- which, speaker-wise, can be divided in 2 groups:
  - Nijmegen vs. Amsterdam
- although one ethnolect, there are regional influences

38

- Thank you.
- Questions / comments / suggestions?
  
- This research is part of the project: Roots of Ethnolects
- Mainly funded by the Netherlands Organisation for Scientific Research (NWO).
- More info about the project, as well as a handout of today's presentation can be found on

**[www.rootsofethnolects.nl](http://www.rootsofethnolects.nl)**

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39