

Changing factors in the rise of approximant *r* in Dutch

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Background: Dutch *r*

1. Dutch /r/ is highly variable phonetically [3,4]

- Varies in place, manner, and voicing
- Alveolar ~ uvular, trills ~ taps ~ fricatives ~ approximants
- Inter- and intra-speaker variation [3,5,7]
- Variation governed by **linguistic, geographical, social** factors e.g. syllable position; from city to city; age, gender

2. Innovative Netherlandic (NL) Dutch *r*-variant : coda [ɹ]

- Variable articulatorily
 - either retroflex or bunched pre-velar [2]
- On the rise as typical 'change from above'
 - highly prestigious, speakers are relatively aware [6]
- Speakers have complex systems of r-allophony
 - [ɹ] in coda is combined with alveolar trills/taps or uvular trills/fricatives in onsets

r realisations in Urban Dutch. Highlighted: the most common ones in onsets and codas [Se]

3. Dutch approximant [ɹ] is spreading in several ways [3]

- Geographically and socially
 - from western cities outwards, led by young women
- Linguistically
 - from 'true' coda to schwa-insertion context:

Two types of *r* codas in Dutch [1]

True coda: *r*-final / *r*C clusters where C=coronal obstruent

boer /bur/ [buɹ]
kaars /kars/ [kaɹs]

Potential coda: other *r*C clusters =schwa-insertion context

arm /arm/ [arəm]~[aɹm]
kerk /kerk/ [kerək]~[kɛɹk]

This study examines how the geographical, social and linguistic types of spreading interact.

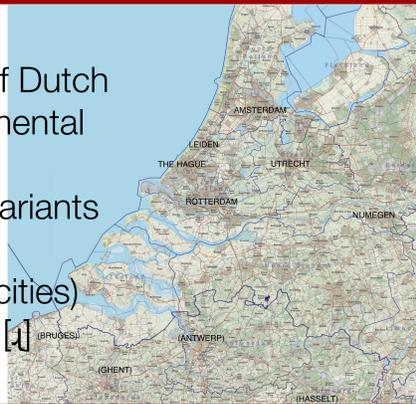
Corpus and method

Data: HEMA corpus [3]

- 408 speakers of 10 urban accents of Dutch
- 53 *r*-items, various syllabic and segmental contexts
- 21006 *r* tokens, auditory coding of variants

Analysis

- Linear mixed-effects regression (NL cities)
- Predicting incidence of approximant [ɹ]
- Interactions: city * age * gender



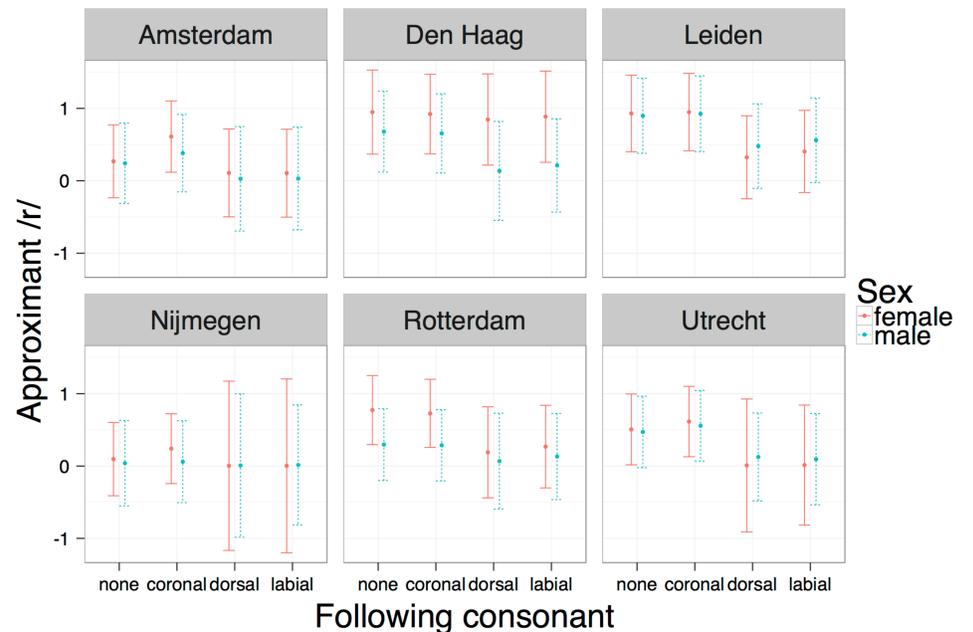
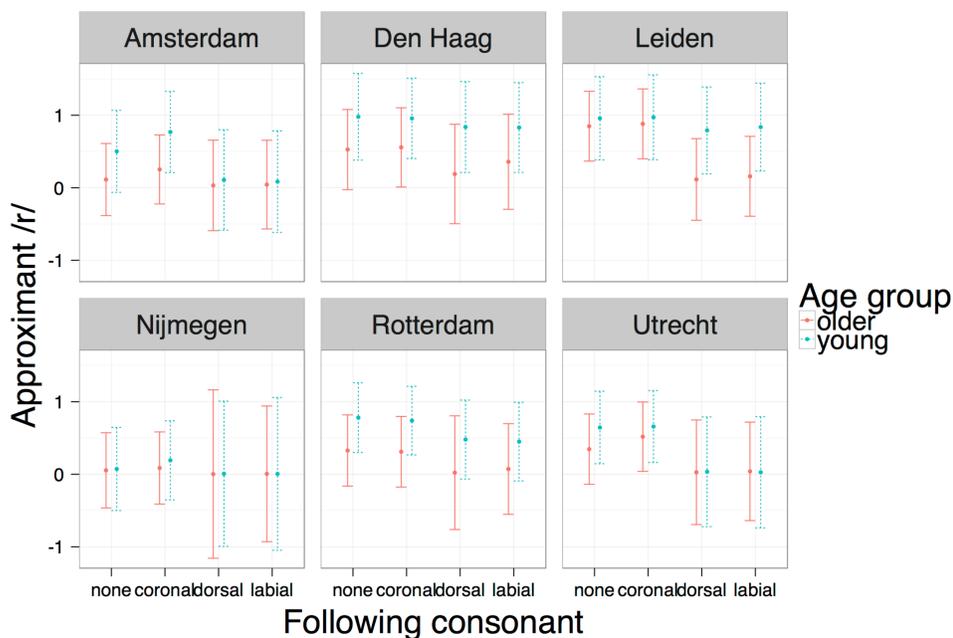
Results: descriptive statistics [ɹ]

- 52.5% of all speakers, 55% of all coda tokens in NL
- 63% in true coda, 31% in schwa-insertion context

True codas Approximant [ɹ] is most frequent in Leiden (84%) and The Hague (74%), followed by Rotterdam (53%), Utrecht (52%) and Amsterdam (42%). Less frequent in Nijmegen (20%).

Schwa-insertion context [ɹ] highest in The Hague (54%), followed by Leiden (45%), Rotterdam (30%) and Amsterdam (19%). Numbers are low in Utrecht (11%) and Nijmegen (2%).

Results Imer [ɹ]



Social effects

Effect of **age** Leiden, The Hague, Rotterdam: younger speakers treat true coda and schwa-insertion context as more similar than older speakers

Effect of **gender** The Hague: female speakers treat true codas and schwa-insertion context as more similar than male speakers

Rotterdam: male speakers treat true codas and schwa-insertion context as more similar than female speakers

No significant effects in Utrecht, Amsterdam, or Nijmegen

Conclusions

- Cities where [ɹ] has made the largest inroads into the schwa-insertion context also show strong effects of social factors
- Independent of token frequency: Rotterdam and Utrecht similar token frequencies, but different social **and** linguistic distributions
- In cities where [ɹ] is less of a social marker, it occurs in more restricted linguistic contexts

References

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