Microvariation in stop realization as a regional feature in Danish

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Introduction

In addition to hosting interesting syntactic, morphological, and phonological variation, **regional varieties also often host a stunning amount of phonetic variation.**
A pilot study (Puggaard 2018) showed this to be the case for /t/ in Jutlandic varieties of Danish with regards to **Voice Onset Time** and extent of **affricated release**.
This poster reports on preliminary results of a subsequent **large scale study on stop realization in Jutlandic varieties**, so far focusing on differences in **Voice Onset Time**.

Conclusion & future directions

In spite of individual variation, there are clear patterns of **VOT being regionally bound**

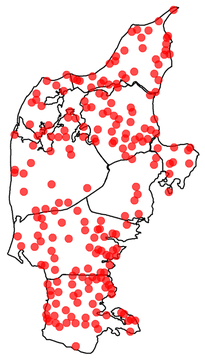
Further work will include analyzing

- the **interplay between VOT and affricated release**
- how different stops are targeted by **lenition** in different dialects, and how this correlates with VOT

Data

Recordings are from the corpora of the Peter Skautrup Centre for Jutlandic Dialect Research, and the Copenhagen Department of Dialect Research.
Recordings from **213 different parishes** are used, **recorded between 1971-1976**.
Restored recordings available from the **Royal Danish Library**.

50 aspirated stops / parish
Mean **32.2 unasp.** stops / parish
(unstr. function words excluded)



/p/ = 1,386
/t/ = 5,169
/k/ = 4,095
/b/ = 2,212
/d/ = 2,369
/g/ = 2,273

Gender

- 164 male, 49 female

Year of birth

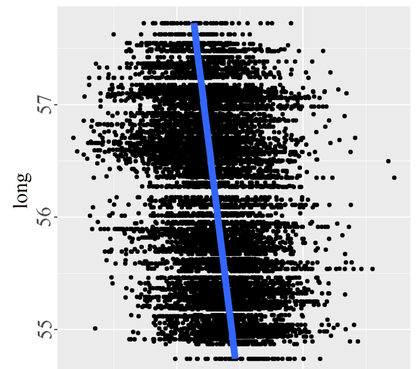
- 1871-1927, median=1896

Age at time of recording

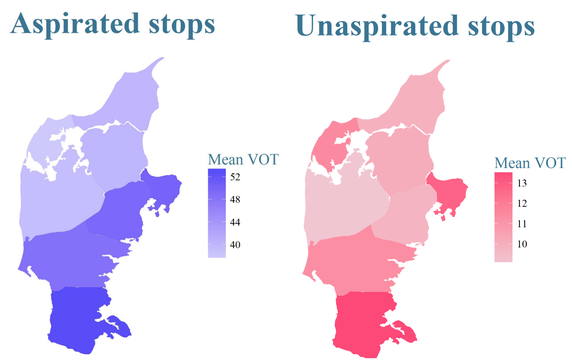
- 45-101 years, mean=77.4 years

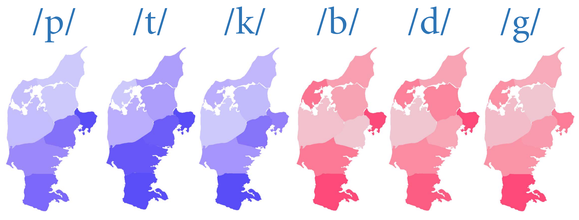
Findings

There is a clear trend of **VOT decreasing from South to North:**

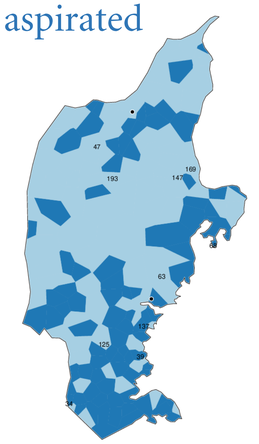


A more complex pattern emerges when looking at mean VOT in traditional dialect areas:





Gabmap to a large extent finds the same two-way split for aspirated stops, but individual variation obscures further clustering



In addition to VOT, each token was coded for vocalic context, stress, palatalization

The data was fitted to a linear mixed effects model with the fixed effects **dialect area, gender, vowel height, vowel roundedness, vowel backness, palatalization, stress, and stop**, and the random effect **parish (=speaker) with random slopes for [±aspiration]**

All factors except gender had a significant influence on VOT at the $p<.001$ level.
Post hoc testing with Tukey's HSD shows that the **contrasts between the Southernmost dialect and the Northern dialects** is particularly influential