

Regional variation in plosive realization in Danish

Rasmus Puggaard
 r.p.hansen@hum.leidenuniv.nl
 Leiden University Centre for Linguistics



Introduction

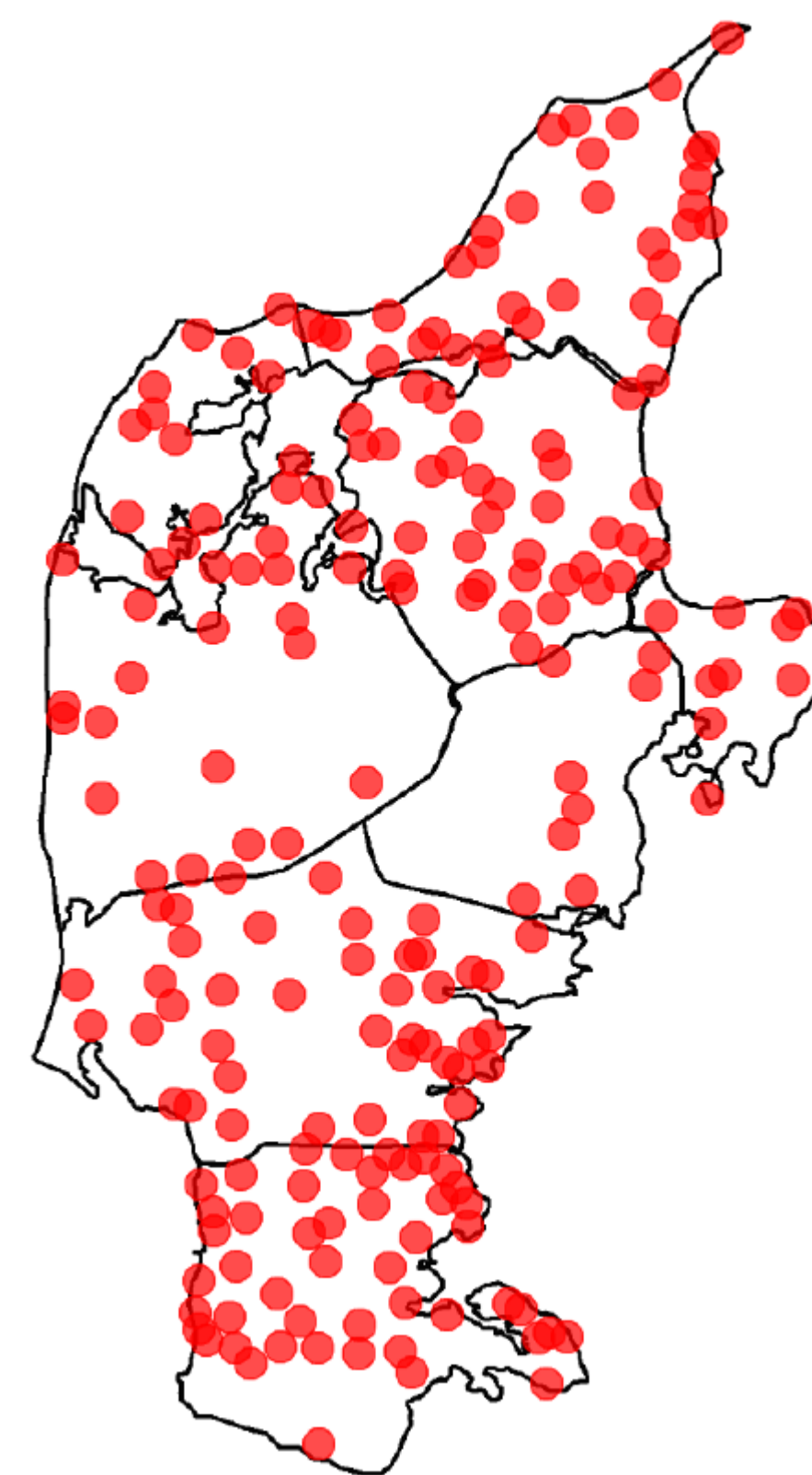
There's a well-known regional realization of /t/ in Northern Jutland known as the 'dry t' which has low affrication and low VOT.
 While well-known, the phenomenon has never been subject to serious study.
 Using data from speakers born around the turn of the century, this project looks into the extent of variation in plosive realization across the Jutland peninsula and asks the questions:
Is it just Northern Jutland? And is it just /t/?

Data

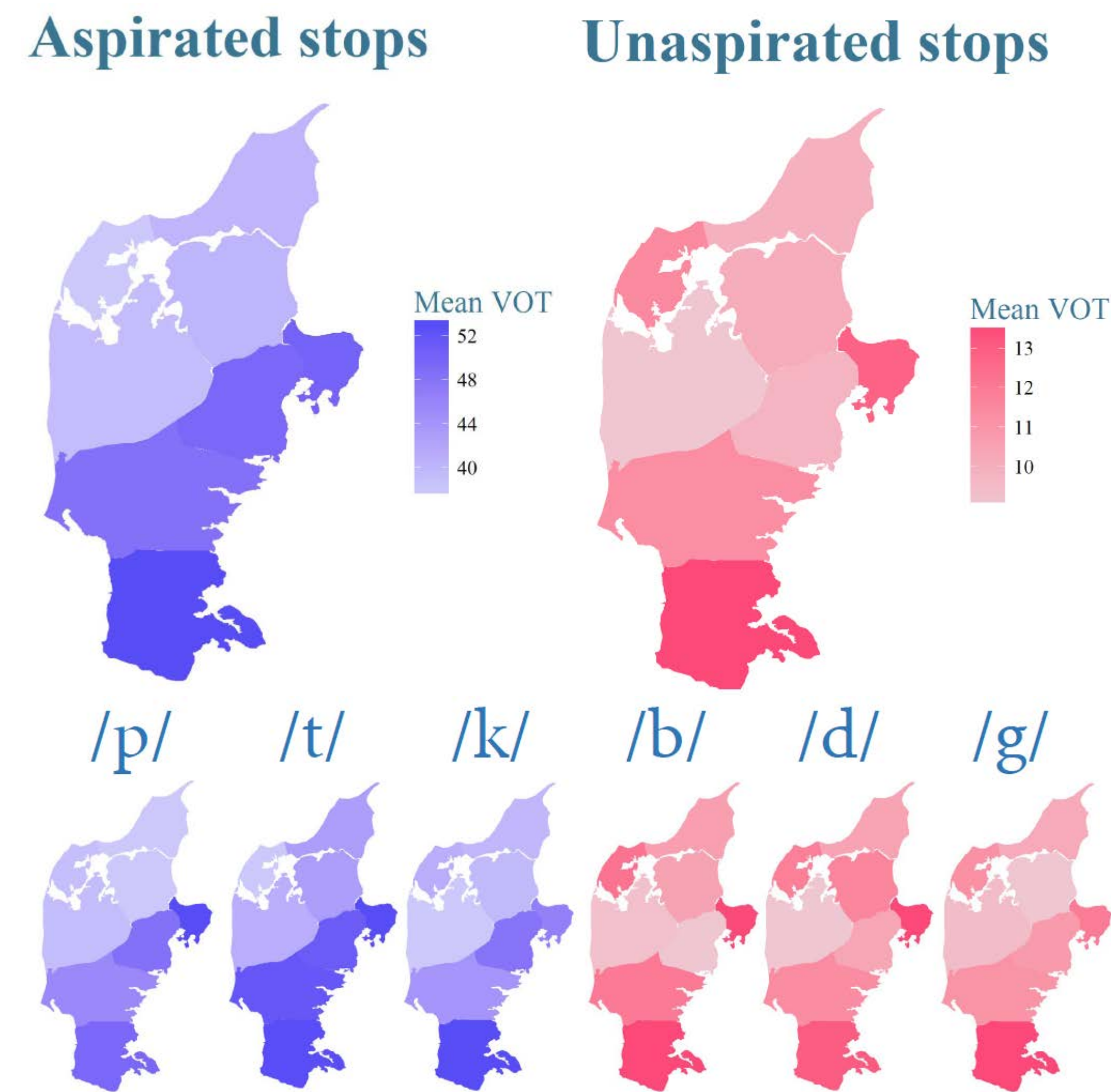
Recordings from the large legacy corpus of the Peter Skautrup Centre for Jutlandic Dialect Research are used. These are available from the Royal Danish Library.

213 different parishes, recorded 1971-1976

Consonant	VOT	Affrication
/b/	2,212	-
/d/	2,369	-
/g/	2,273	-
/p/	1,386	1,128
/t/	5,169	5,037
/k/	4,095	3,866
Total	17,504	10,031



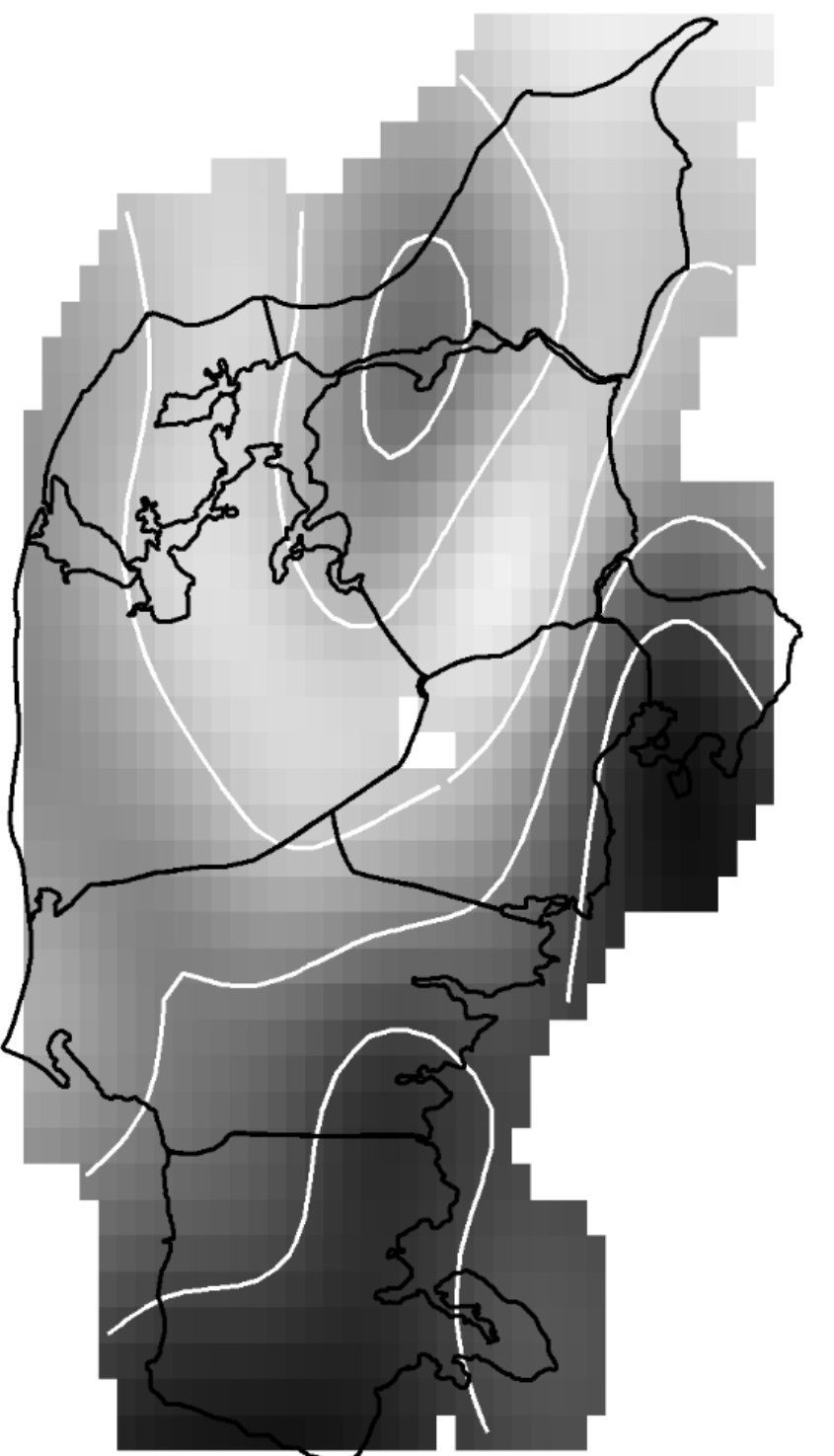
Voice onset time



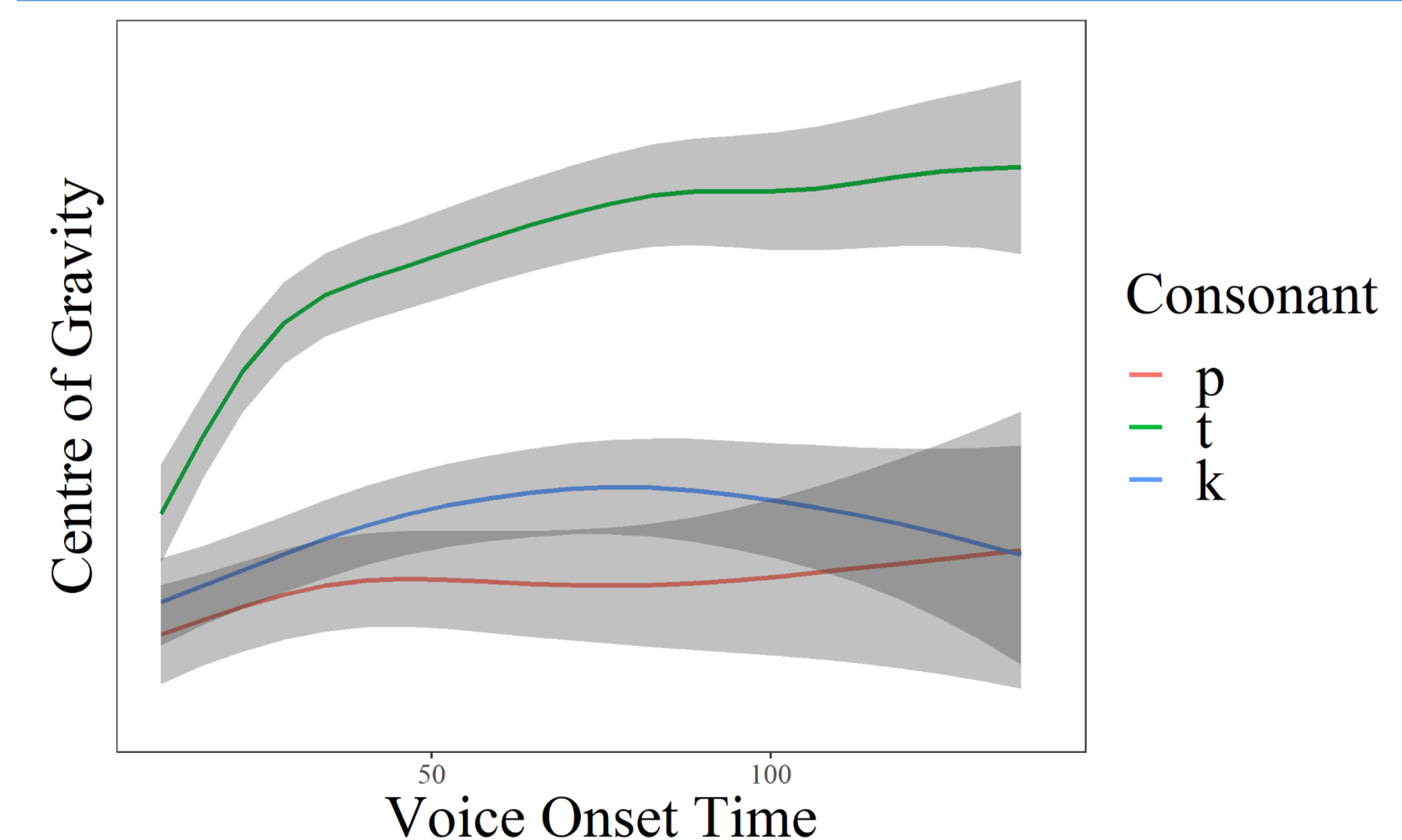
Normalizing VOT values by traditional dialect areas indicates that there are relatively stable patterns for all fortis stops.
 A generalized additive mixed model was run to test how modeling geography directly would have any influence on the results.

Fixed effects: *height of following V*; *rounding of following V*; *backness of following V*; *palatalization*; *stress*; *speaker gender*; *place of articulation*
 All significant at $p < .001$ level in expected direction

Random: Parish (=speaker)
 Smooth: lon, lat, by=stop (/g, p, t, k/, $p < .01$)



Affrication



Average COG throughout the stop release is taken as a measure of affrication. This is modeled with the same effects structure as above, with the addition of VOT as a non-linear predictor.

Some degree of length is a necessary but not sufficient criterion for affrication. Very long VOT does not necessarily lead to similarly high degrees of affrication.

All fixed effects significant at $p < .01$ level in expected direction.

Smooth: VOT, by=stop (all sign. at $p < .05$ level)
 Smooth: lon, lat, by=stop (all sign. at $p < .001$ level)

