

FACE values: variation in mid vowels in York

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1. Introduction

- part of larger ‘Northern Englishes’ project
 - comparative **cross-dialectal** investigation of variation in **phonology** and **morpho-syntax**
 - new data from Derby, Newcastle, York
 - real-time comparison with 1990s data (Docherty and Foulkes 1999; Watt and Milroy 1999; Tagliamonte 1998)
- current study
 - variation in **FACE/GOAT** (Wells 1982) in York English
 - FACE: *gate, made, may* etc.
 - GOAT: *boat, home, slow* etc.
 - applies use of **Euclidean Distance** measurements to analysis of diphthongs (Fabricius 2007)

2. Existing work on FACE/GOAT

- Northern Englishes: generally monophthong
 - **FACE** [e : ε :]
 - Newcastle Watt and Milroy (1999)
 - Hull Williams and Kerswill (1999)
 - Bradford Watt and Tillotson (2001)
 - Leeds Richards (2008)
 - GOAT** [o : ɔ :]
- GOAT-fronting also observed [ə :]
- levelling prediction: monophthongs in York

3. Research issues

- **Research questions**

- what patterns and constraints are present for FACE/GOAT in York English?
- what do findings tell us about supra-localism across Northern Englishes?

- **Methodological Implementations**

- how can Euclidean distance measurement help us?
- does ethnographic interview data tell us anything extra?

4.1 2008 York data

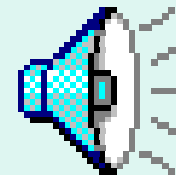
- 8 males, 8 females
- age 18-24
- network sample
- interviewed in self-selected, same-sex pairs
- casual conversation, ethnographic interview, word-list
- corpus size >120,000 words

FACE example:

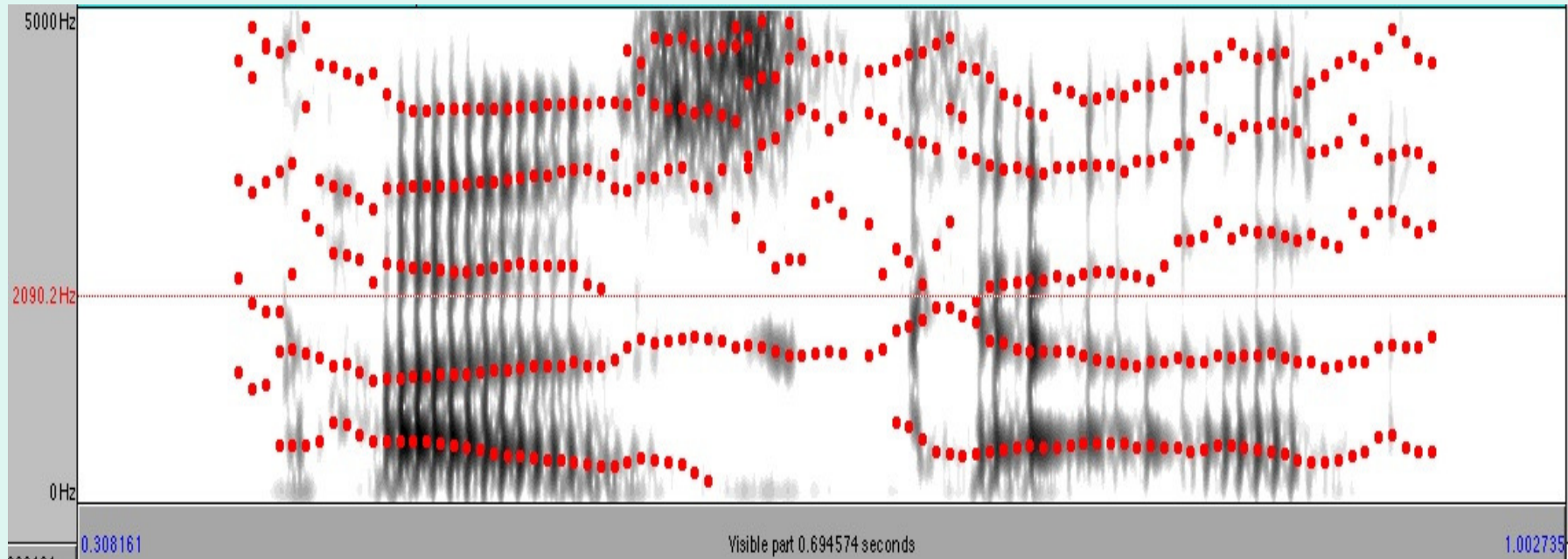
C: I remember doing like *baking* [eɪ] and stuff with my Nanna but I don't remember like the stories that they used to tell me.

S: Baking.

C: *Baking* [eɪ] with Nanna, it was well good.

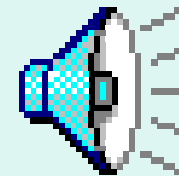


4.2 GOAT example



post
[eʌ]

code
[ə:]



4.3 Normalisation

- converted Hz to ERBS
- normalised using Lobanov method
 - individual items, speaker intrinsic
 - also speaker means
 - Thomas & Kendall (2007)



5. A little maths revision...

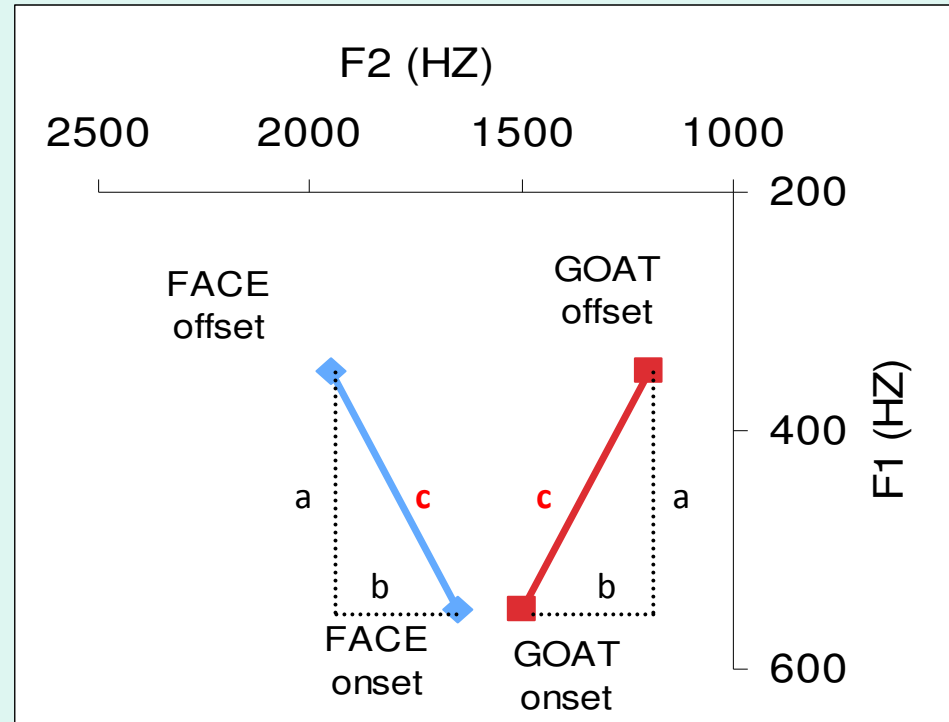
Euclidean distance

- Pythagoras' theorem
 - length of hypotenuse of a right-angled triangle (**c**) is equal to the square root of the sum of the squared lengths of the other two sides
- Or put another way...

$$C^2 = A^2 + B^2$$

∴

$$C = \sqrt{A^2 + B^2}$$



6.1 Ethnographic rating system

1. Do you like living here in York?
2. Do you plan to settle here in York?
3. What accent would you say you had?
4. Do you like the York accent?
5. Are you proud to be from York?

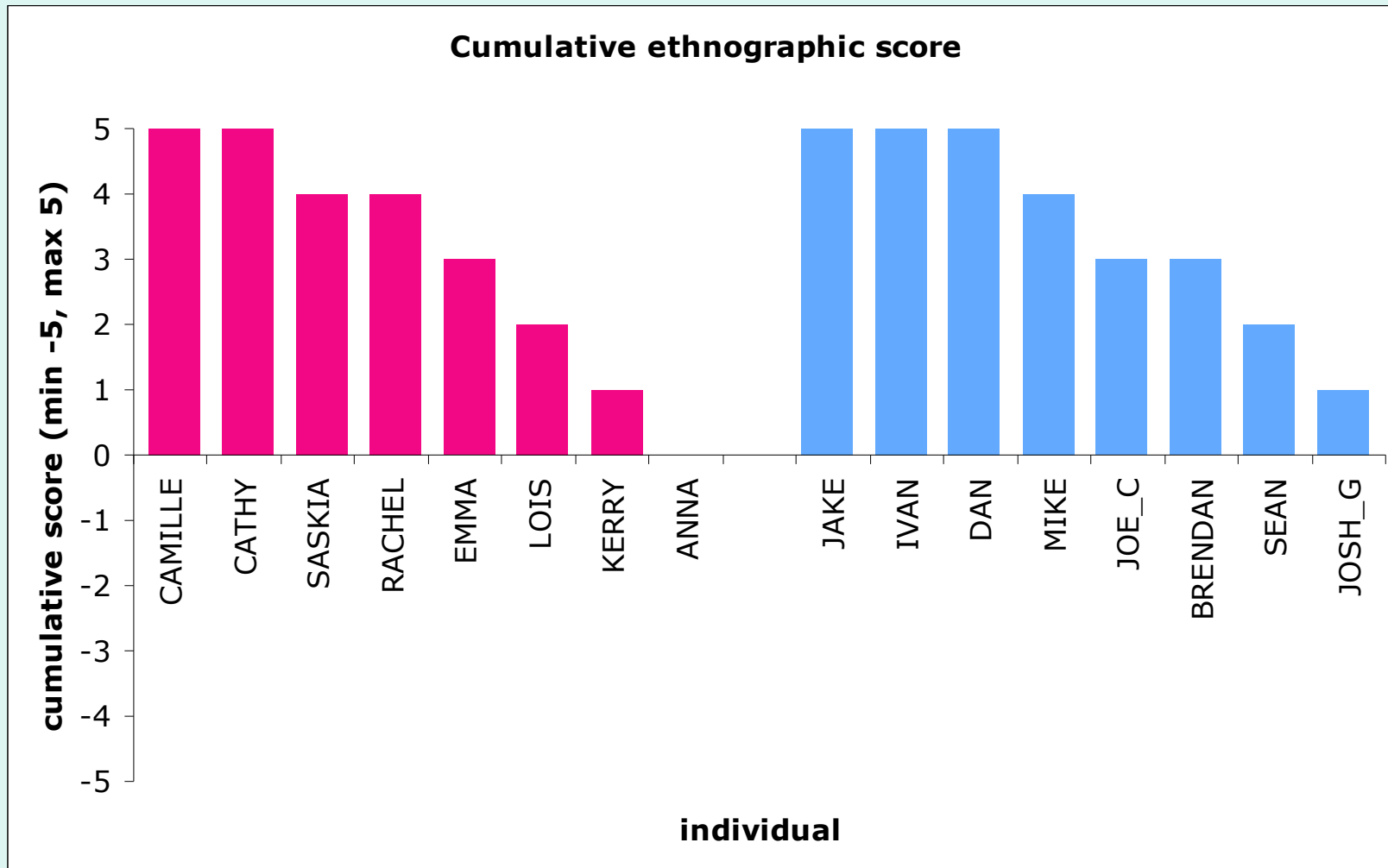
Questions 1,2,4,5

- Positive response +1
- Unsure/non-committal/neutral response 0
- Negative response -1

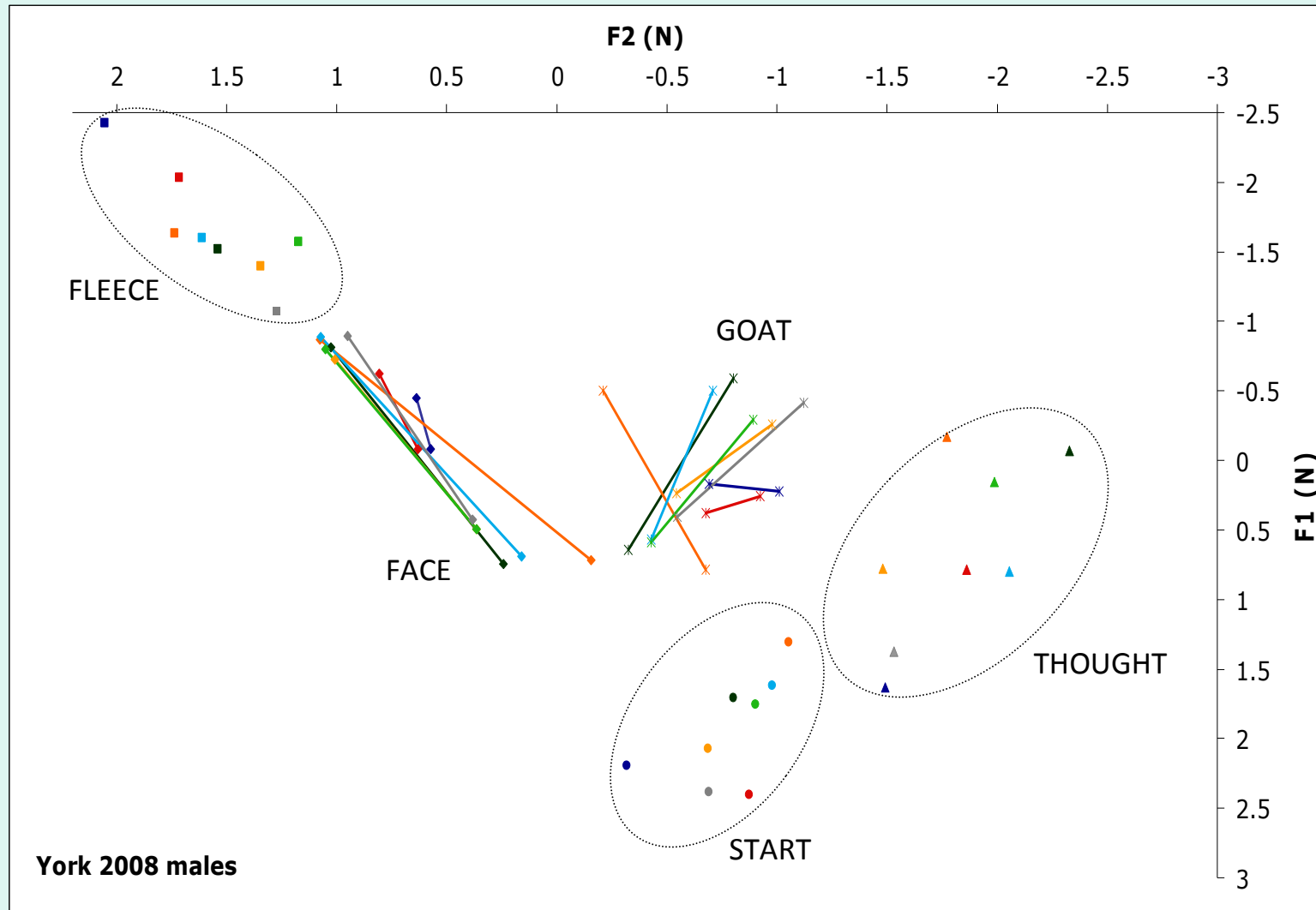
Question 3

- York/Yorkshire +1
- Northern 0
- None/neutral -1
- Miscellaneous answer -1

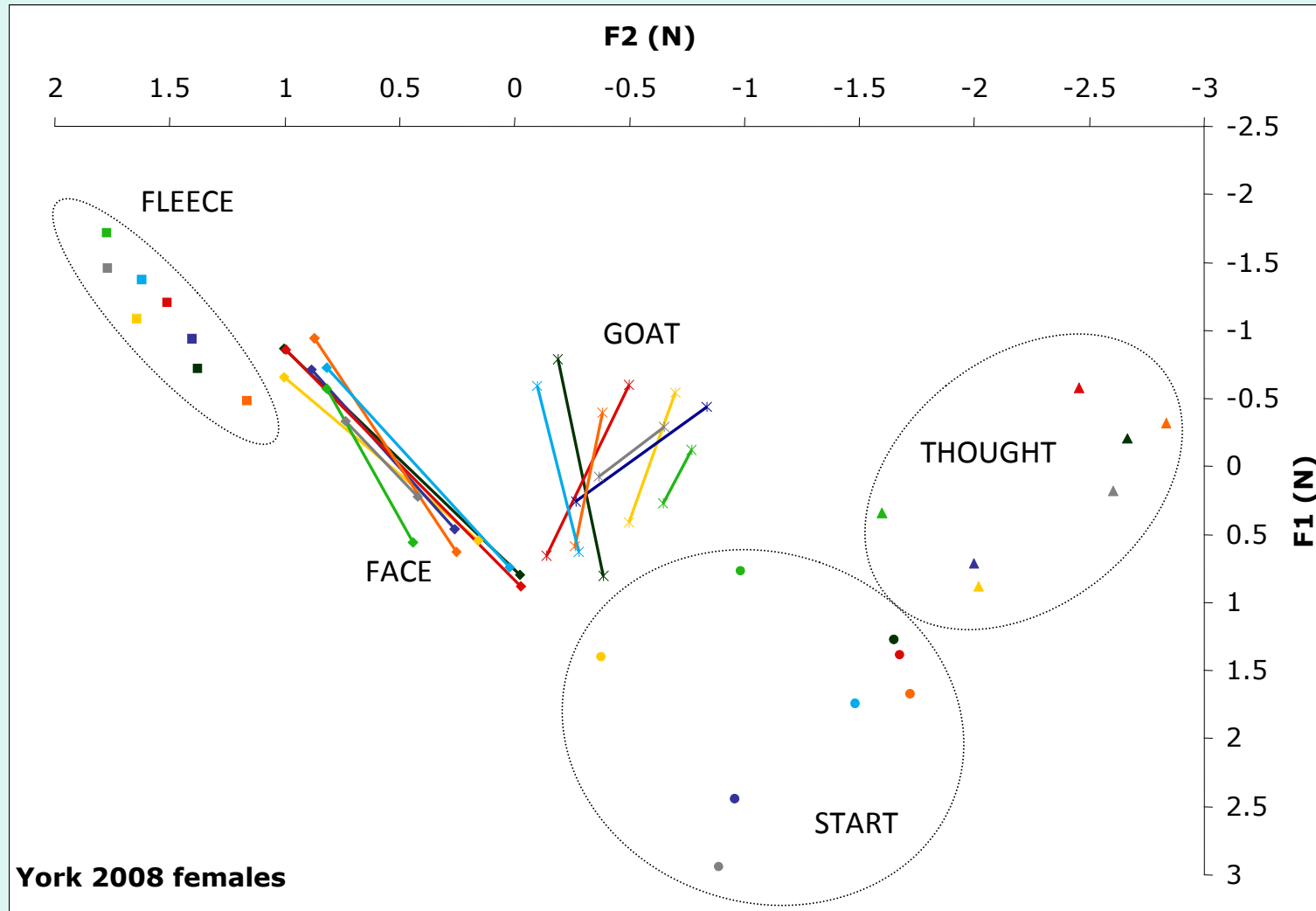
6.2 Ethnographic rating system



7.1 FACE/GOAT males 2008



7.2 FACE/GOAT females 2008

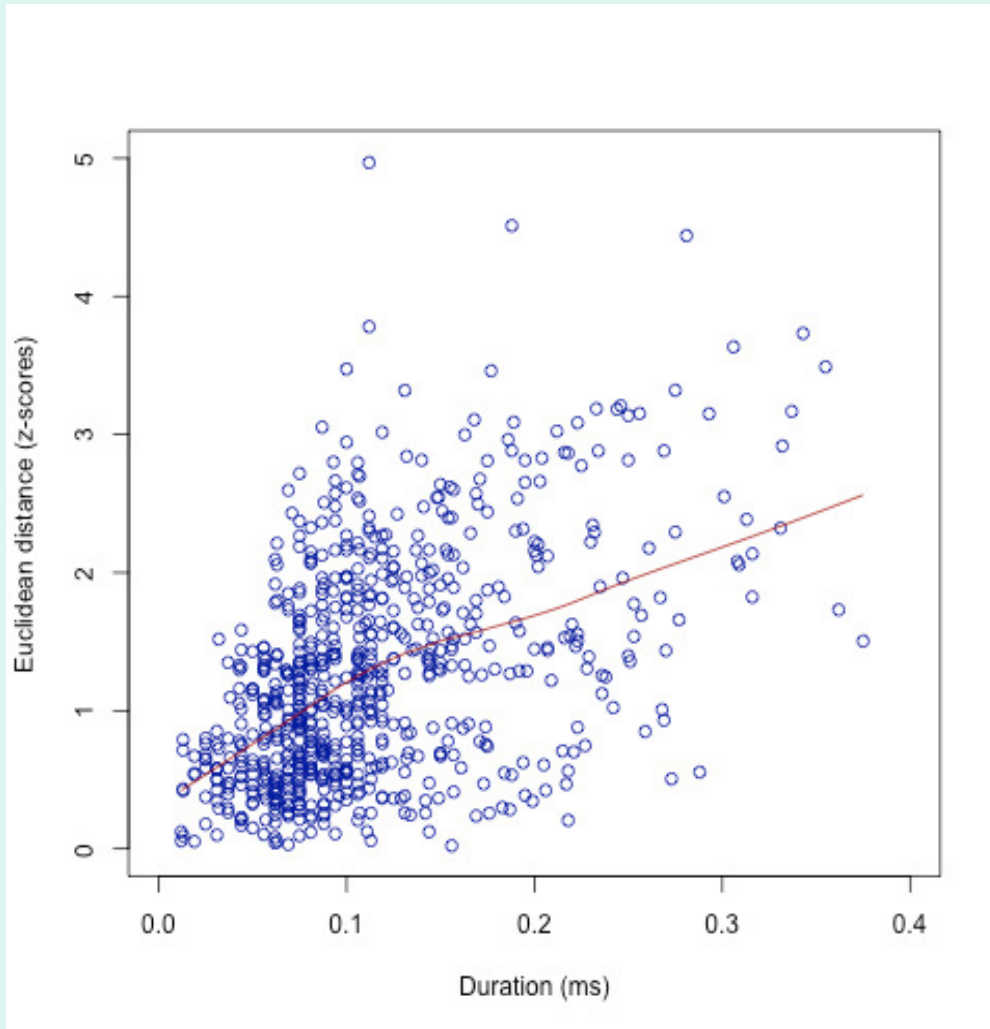


- Anna
- Camille
- Cathy
- Emma
- Kerry
- Lois
- Rachel
- Saskia

8.1 Statistical analyses

- FACE and GOAT analysed separately
- linear regression using *R* software package
 - **dependent variable**: Euclidean distance (normalised)
 - **independent variables**:
 - speech style conversation/wordlist
 - **vowel duration** distance btw onset/offset measures
 - position in word initial/medial/final
 - **ethnographic cumulative score** range -5 to 5
 - speaker sex male/female
 - following **voicing** voiced/voiceless/pause
 - following place of articulation bilabial/labiodental/alveolar etc

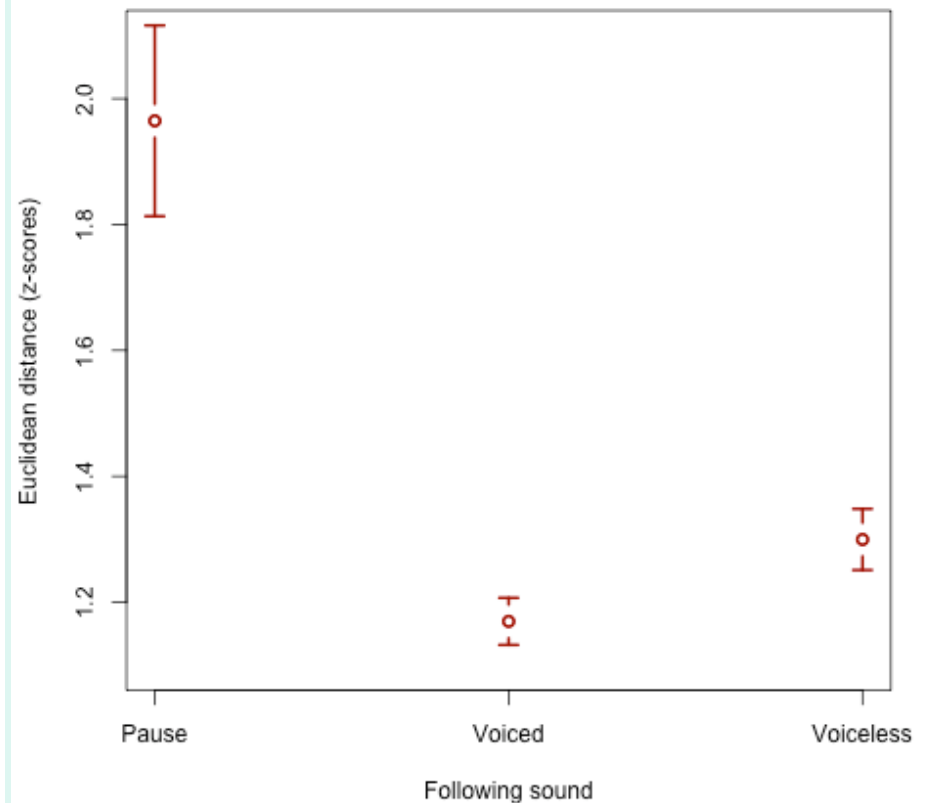
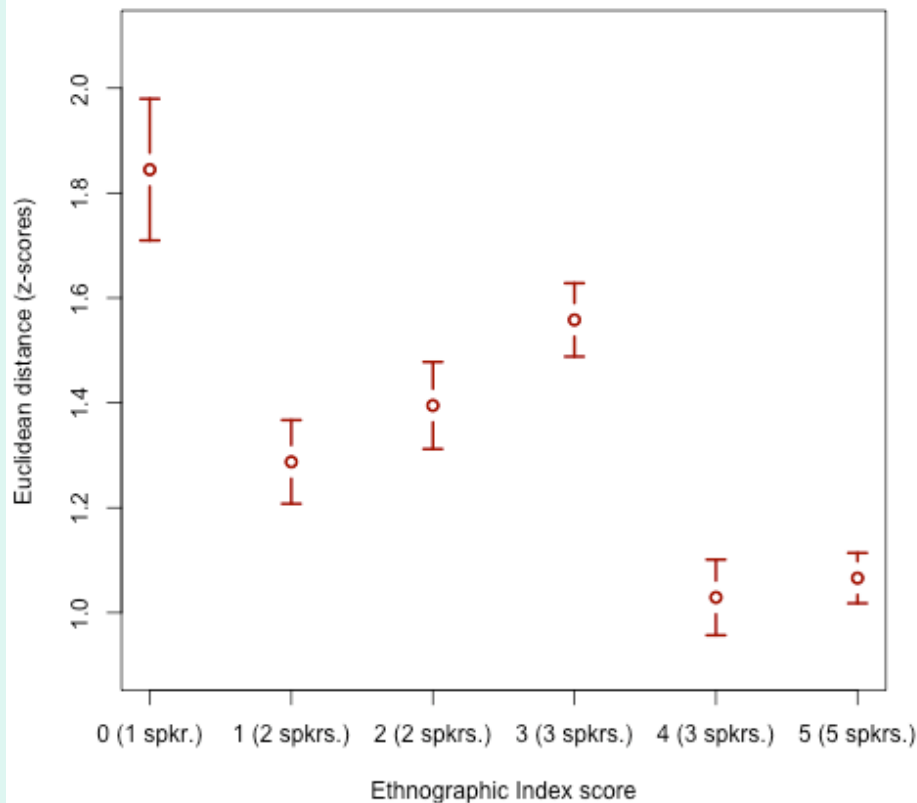
8.2 GOAT duration



- longer duration \approx greater Euc. distance

$F(1,713) = 106.40$,
 $p < .0001$

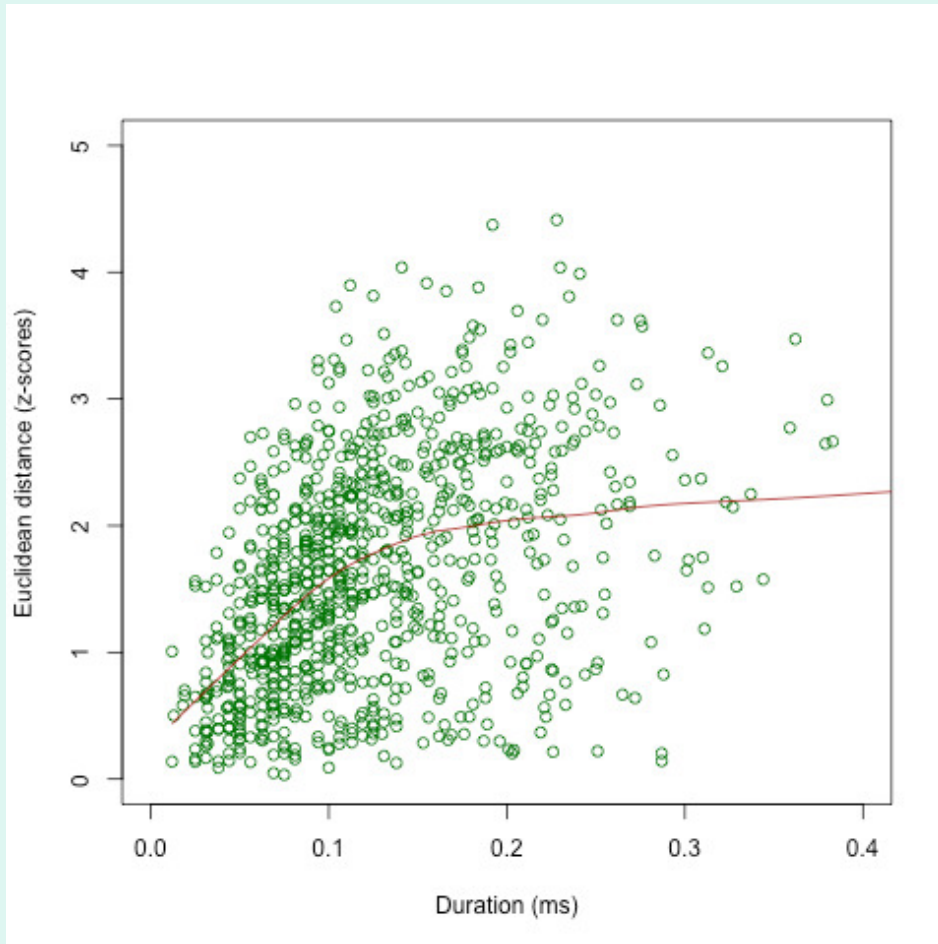
8.3 GOAT factors



- high ethno score \approx smaller Euc. dist.
 $F(1,713) = 47.81, p < .0001$

- diphthongs: pause $>$ voiceless/voiced
 $F(4,713) = 2.87, p < .05$

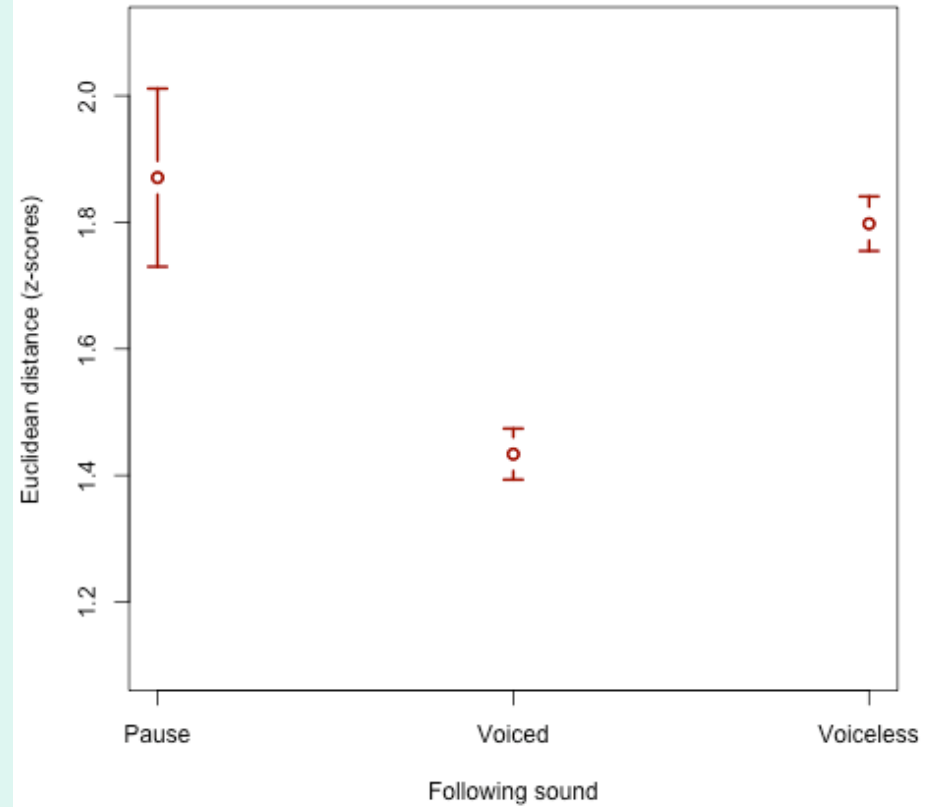
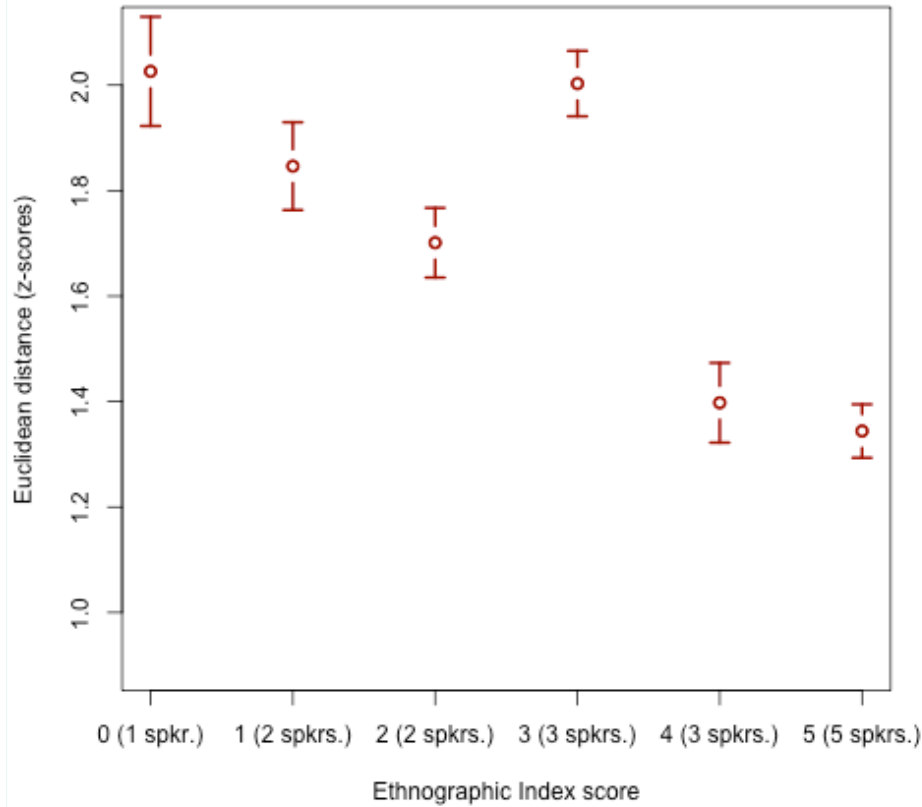
8.4 FACE duration



- longer Euc. dist \approx
longer duration

$$F(1,890) = 85.84, p < .0001$$

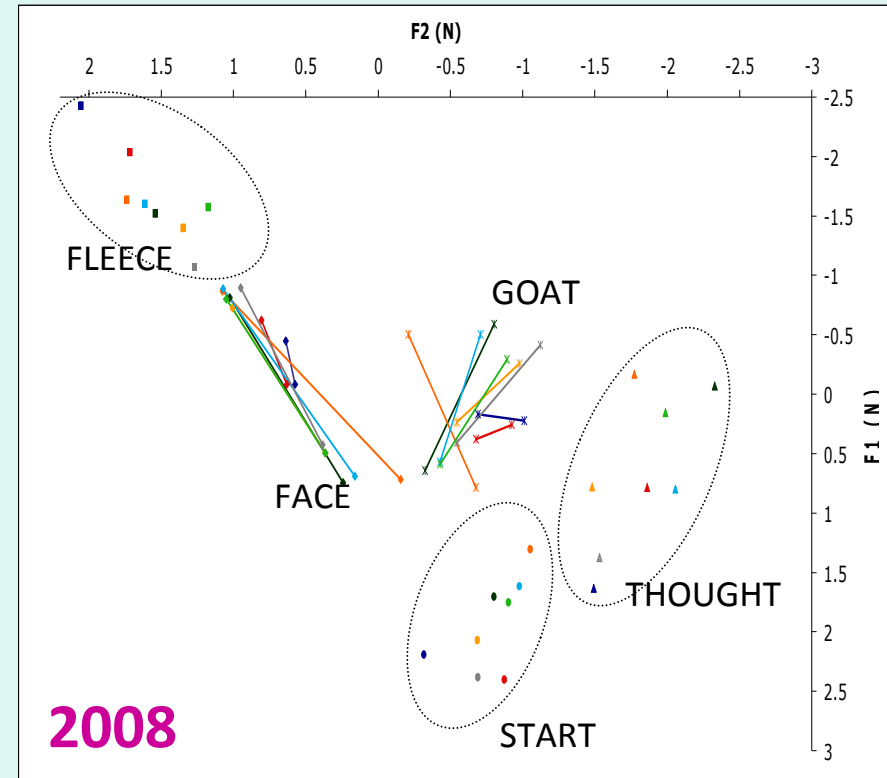
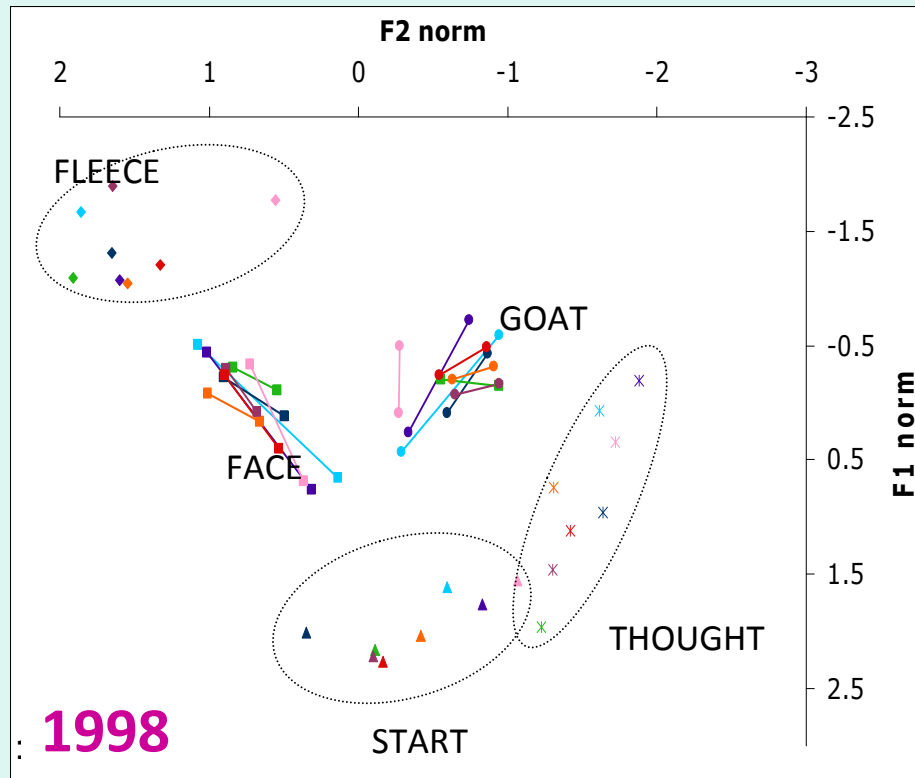
8.5 FACE factors



- high ethno score \approx smaller Euc. dist
 $F(1, 890) = 68.43, p < .0001$

- diphthongs: pause > voiceless > voiced
 $F(2, 890) = 26.25, p < .0001$

9. 1998 FACE/GOAT



Chris
Mark
Nick
Paul

Karen
Nancy
Sandra
Sophie

10. Methodological implementations

- does ethnographic interview data tell us anything extra?
 - yes: speakers who use most monophthongs typically have high ethnographic cumulative score
 - suggests that using monophthongs is linked to stronger sense of local identity?
- how can Euclidean distance measurement help us?
 - helps normalise the data
 - provides a way of quantifying diphthong width
 - removes need to rely on subjective auditory judgments

11. Research questions revisited

- patterns and constraints for FACE/GOAT in York English?
 - predominantly diphthongal
 - few speakers show consistent use of monophthongs
- supra-localism across Northern Englishes?
 - York speakers mainly not participating in supra-localism of Northern English: monophthong variants not widely adopted
 - speakers who do use monophthongs typically have stronger positive associations to York/Yorkshire

12. And finally...

I: Ok. What accent would you say that you had? How would you describe it?

C: Broad Yorkshire [*laughs*].

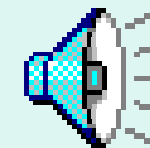
K: You're a lot broader than I am.

C: Yeah.

K: You've got your 'post'. [o:]

C: Yeah.

K: And your 'coat' [o:]. I never thought I had an accent until I went down south and everyone was like, "oh, you've got such an accent." [*laughs*] I just- I never noticed [eu] it before.



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References

- Docherty, G. and P. Foulkes (1999) Derby and Newcastle: instrumental phonetics and variationist studies. In Foulkes and Docherty (eds) pp. 47-71.
- Fabricius, A. (2007) Variation and change in the TRAP and STRUT vowels of RP: a real time comparison of five acoustic data sets. *Journal of the International Phonetic Association* 37: 293-320.
- Foulkes, P. and G. Docherty (eds.)(1999) *Urban Voices*. London: Arnold.
- Llamas, C. (2007) 'A place between places': language and identity in a border town. *Language in Society* 36: 579-604.
- Richards, H. (2008) *Mechanisms, motivations and outcomes of change in Morley (Leeds) English*. Unpublished PhD thesis: University of York.
- Tagliamonte, S. (1996-1998) *Roots of identity: Variation and grammaticalization in contemporary British English*. ESRC grant R000221842.
- Tagliamonte, S. (1998) Was/Were Variations across the generations: view from the city of York. *Language Variation and Change* 10: 153-191.
- Thomas, E.R. and T. Kendall (2007) NORM: The vowel normalization and plotting suite. Online resource.
- Watt, D. and L. Milroy (1999) Patterns of variation and change in three Newcastle vowels: is this dialect levelling? In Foulkes and Docherty (eds) pp. 25-46.
- Watt, D. and J. Tillotson (2001) A spectrographic analysis of vowel fronting in Bradford English. *English World-Wide* 22: 269-302.
- Wells, John C. (1982) *Accents of English*. Cambridge: CUP.
- Williams, A. and P. Kerswill (1999) Dialect levelling: continuity vs. change in Milton Keynes, Reading and Hull. In Foulkes and Docherty (eds) pp. 141-162.