YORKSHIRE ASSIMILATION AT THE INTERFACE

Tim Zee
Radboud University

Koen Sebregts
Utrecht University

NEW7
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YORKSHIRE ASSIMILATION

Devoicing of word-final obstruents before voiceless obstruents

bed-time	/bɛd taɪm/	[bɛt taɪm]
a big piece	/ə bɪg piːs/	[ə bɪk piːs]
live performance	/laɪv pəfɔːməns/	[laɪf pəfɔːməns]
Bradford	/brædfəd/	[bræʔfəd]

(Wells 1982:366-367)

YORKSHIRE ASSIMILATION

- Wells (1982)'s data often repeated, form the basis of phonological arguments (e.g. Wetzels & Mascaró 2001, Iverson & Salmons 2003 on binary vs. privative features)
- Hinge on the data being correct: the assimilation is categorical / phonological.

CONFLICTING DATA

- Wells' data are in accordance with that of some others, e.g. Hughes & Trudgill 1987
- But there is potentially conflicting data from an older source (Wright 1892)

bedstead	[bɛdsteɪd]			
red-faced	[rɛdfeəst]			
goes to	[gʊəz tə]	~	*clothes to*	[tlʊəs tə]
			is peace	[ɪs pɪəs]

- Final stops don't appear to show assimilation
- Variable in fricatives?

PHONOLOGY OR PHONETICS?

- If the data are actually more variable / gradient, the process may be phonetic instead of phonological
- Many processes recently reanalysed as fundamentally phonetic (Zsiga 1995), or showing variation between phonetic and phonological (Ellis & Hardcastle 2002)
- These are based on the idea that gradient = phonetic / categorical = phonological
- But the gradient / categorical distinction is not uncontroversially equated with phonetic / phonological (Pierrehumbert et al. 2000; Scobbie 2007)

DEFINING THE TERMS

- If voicing assimilation is complete: likely categorical
- If voicing assimilation is incomplete: gradient
- If elements of the process are phonetically unmotivated: phonological

- Assumption: what is *complete* / *incomplete* and *phonetically unmotivated* can be expressed in phonetic term

RESEARCH QUESTIONS

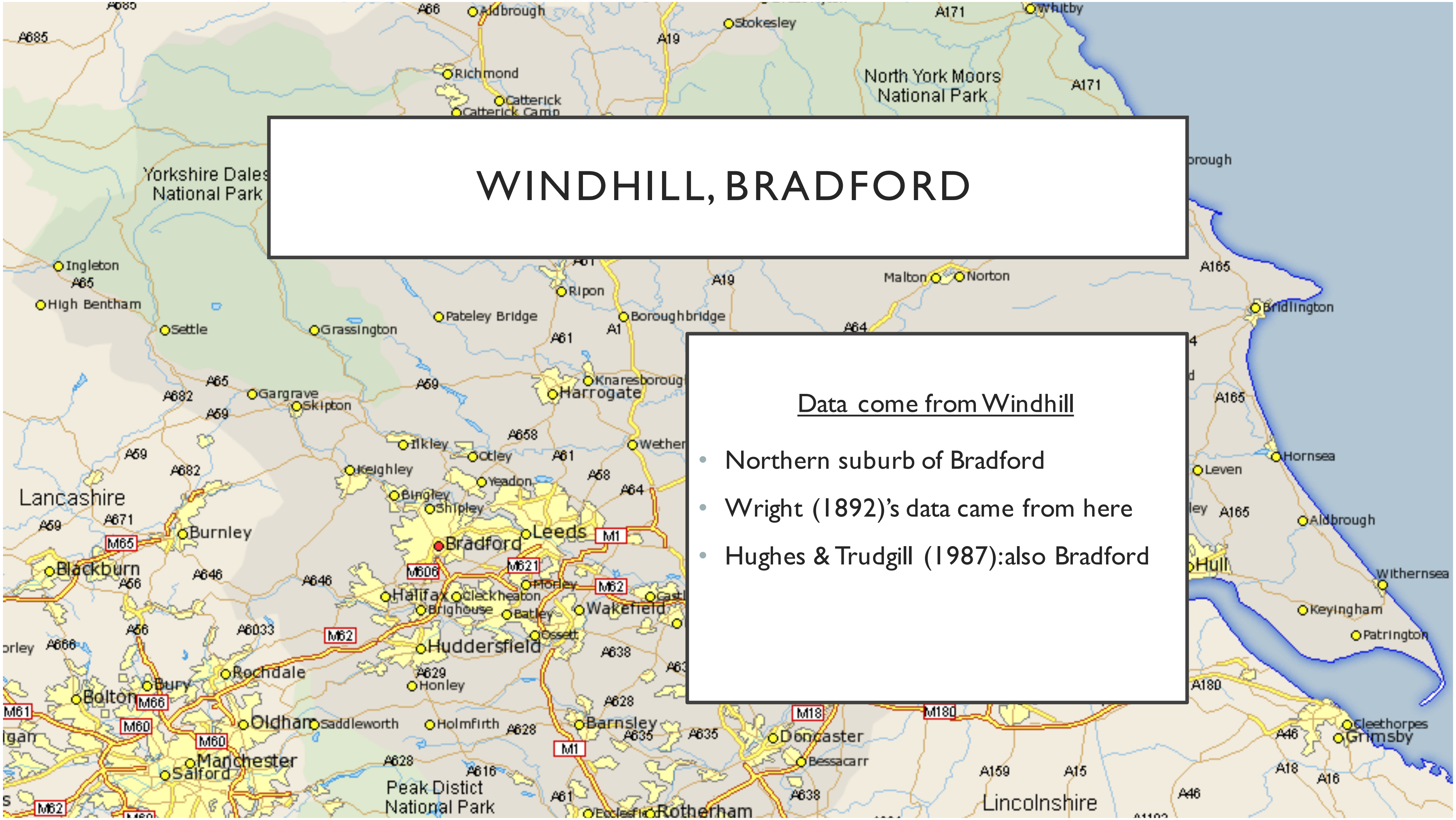
- Is Yorkshire Assimilation *categorical*?
- Is Yorkshire Assimilation *phonological*?
- Both questions addressed via C/V ratio:

  can tell us about incompleteness and phonetic naturalness

METHOD - PARTICIPANTS

- Pilot at University of York (N=3)
- Experiment in Windhill (N=14)
- All subjects native to West Yorkshire or long-term residents
- Mean age: 48.7

WINDHILL, BRADFORD



<u>Data come from Windhill</u>

- Northern suburb of Bradford
- Wright (1892)'s data came from here
- Hughes & Trudgill (1987):also Bradford

METHOD - MATERIAL

- Production experiment
- Participants read out sentences presented on a laptop

How do you spell _____ again?

food fight

maize plant

bed post

…

METHOD - MATERIAL

- Sets of similar compounds that differed in voicing at adjacent word boundaries

Condition	Combination C1 + C2	Example
Assimilation	voiced obstruent + voiceless obstruent	*food poisoning*
Voiced	voiced obstruent + voiced obstruent	*food bank*
Voiceless	voiceless obstruent + voiceless obstruent	*boot polish*
Sonorant	voiced obstruent + sonorant consonant	*food waste*

METHOD - MATERIAL

- Manner of Articulation

Condition	C1	C2	Possible Combinations
Assimilation	[d, z]	[p, f]	[d#p], [d#f], [z#p], [z#f]
Voiced	[d, z]	[b, v]	[d#b], [d#v], [z#b], [z#v]
Voiceless	[t, s]	[p, f]	[t#p], [t#f], [s#p], [s#f]
Sonorant	[d, z]	[Son]	2x [d#Son], 2x [z#Son]

METHOD - MATERIAL

Expectations:

C/V ratio (high is voiceless; low is voiced):

- Voiceless > Voiced — *boot polish* > *food bank*
- Assimilation > Voiced — *food poisoning* > *food bank*
- Assimilation ??? Voiceless — *food poisoning* ??? *boot polish*
- Voiced = Sonorant — *food bank* = *food waste*

METHOD - MATERIAL

- 80 compounds (20 sets)
- 40 distractor items (e.g. *rhyme scheme*)

- *Bradford* /brædfəd/ [bræʔfəd]
  - Most stereotypical example
  - Mentioned separately (Ward, 1945)

RESULTS – C/V RATIO

- Linear mixed-effects model
- Random variables: items, speakers
- Fixed variables: Vowel length, **Item condition**, C_1 Manner of Articulation

RESULTS C/V RATIO

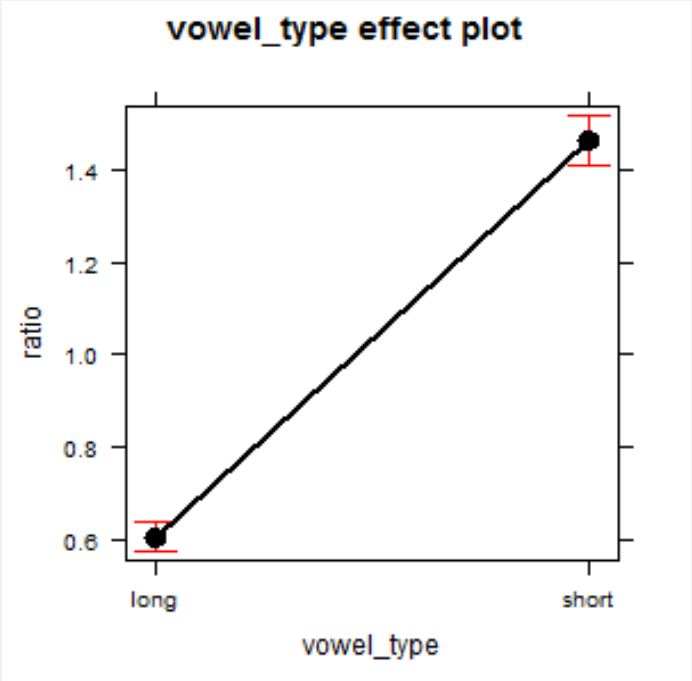
Model	df	Log Lik.	X^2	*df*	*p*
No predictors	4	117.20			
+ Vowel length	5	189.45	144.49	1	< .001
+ Item condition	8	227.58	76.27	3	< .001
+ C_1 Manner of Articulation	9	227.62	0.09	1	0.767
+ C_1 Manner of articulation x item condition	12	229.65	4.05	3	0.255

THE FINAL MODEL

Random effects	**Variance**	**Std. Dev.**	***N***	
Speaker	0.007	0.081	14	
Item	0.001	0.034	80	
Fixed effects	**Estimate**	**Std. Error**	***t***	***p***
(Intercept)	0.61	0.024	25.55	< .001
Vowel type (short)	0.85	0.027	31.380	< .001
Item condition (sonorant)	–0.10	0.030	–3.428	.001
Item condition (voiced)	–0.09	0.030	–2.81	.006
Item condition (voiceless)	0.20	0.031	6.359	<.001

THE FINAL MODEL

Random effects	Variance
Speaker	0.007
Item	0.001
Fixed effects	**Estimate**
(Intercept)	0.61
Vowel type (short)	0.85
Item condition (sonorant)	–0.10
Item condition (voiced)	–0.09
Item condition (voiceless)	0.20



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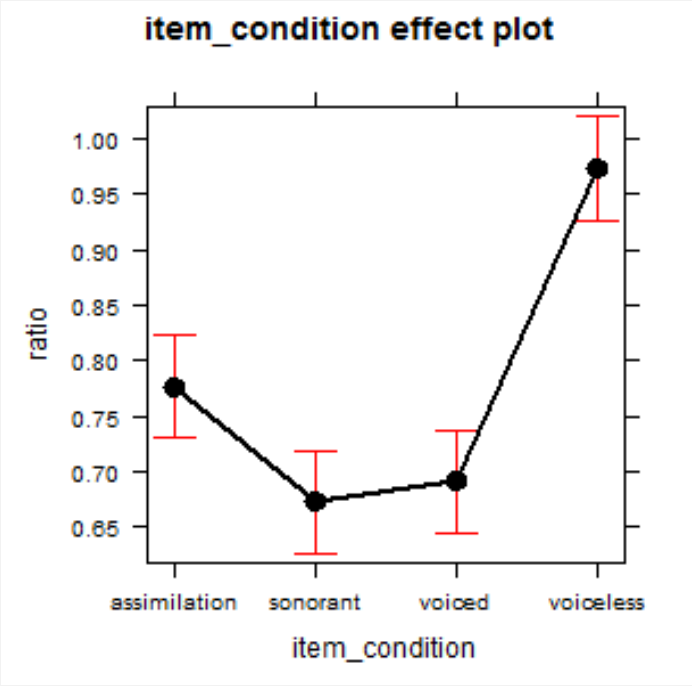
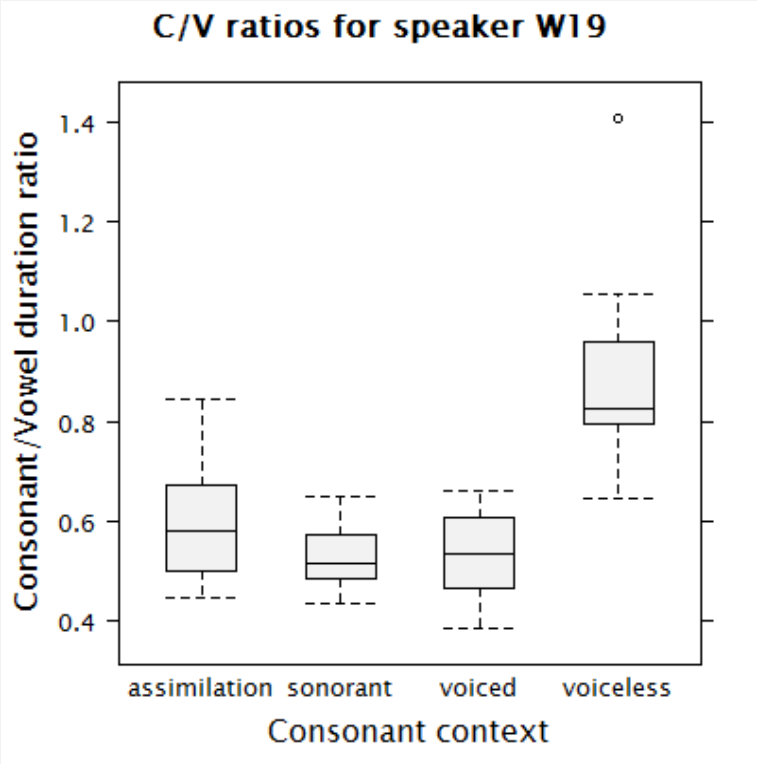
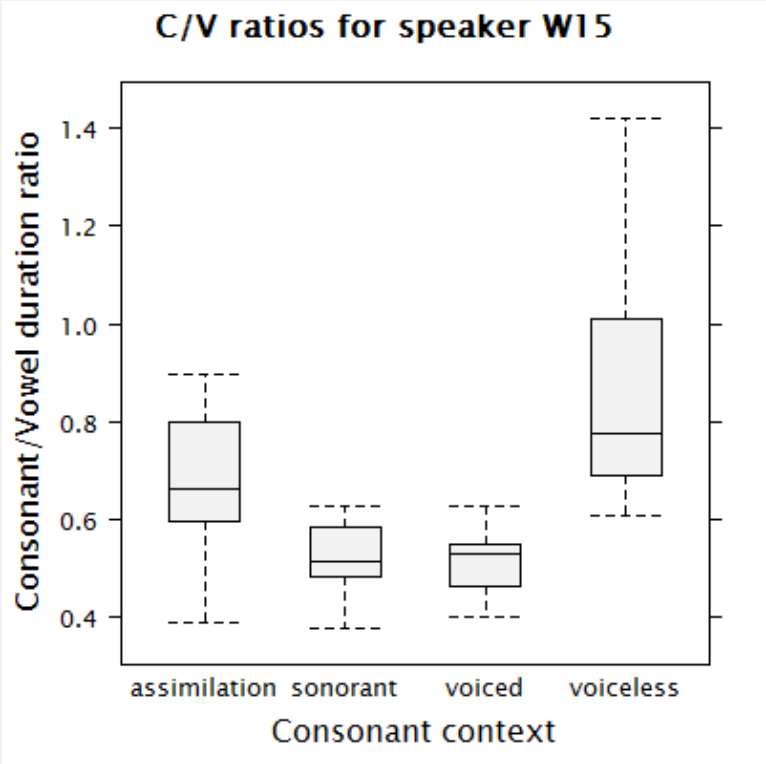
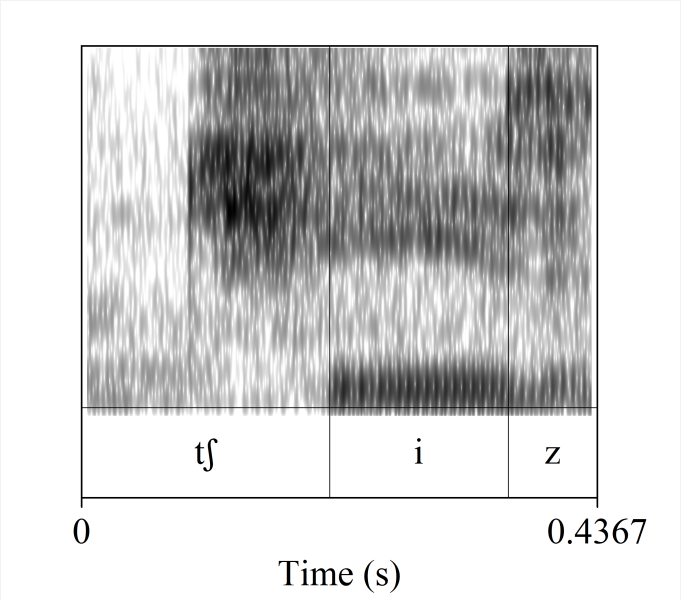


INDIVIDUAL DIFFERENCES

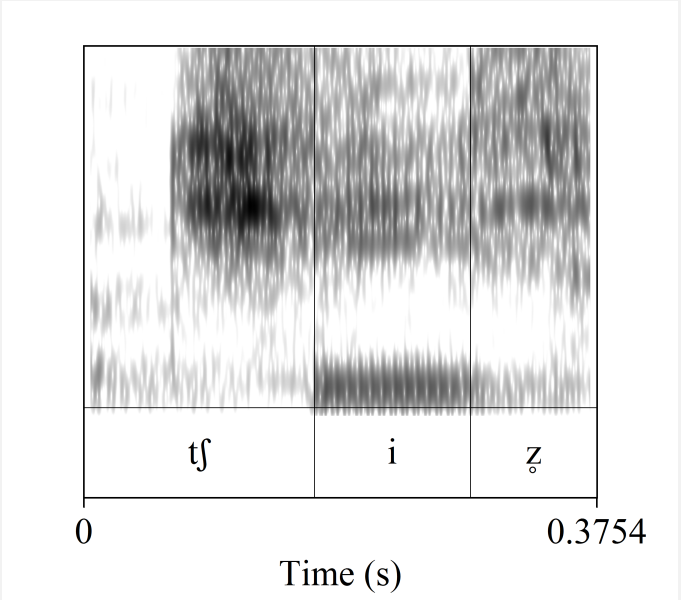




EXAMPLES



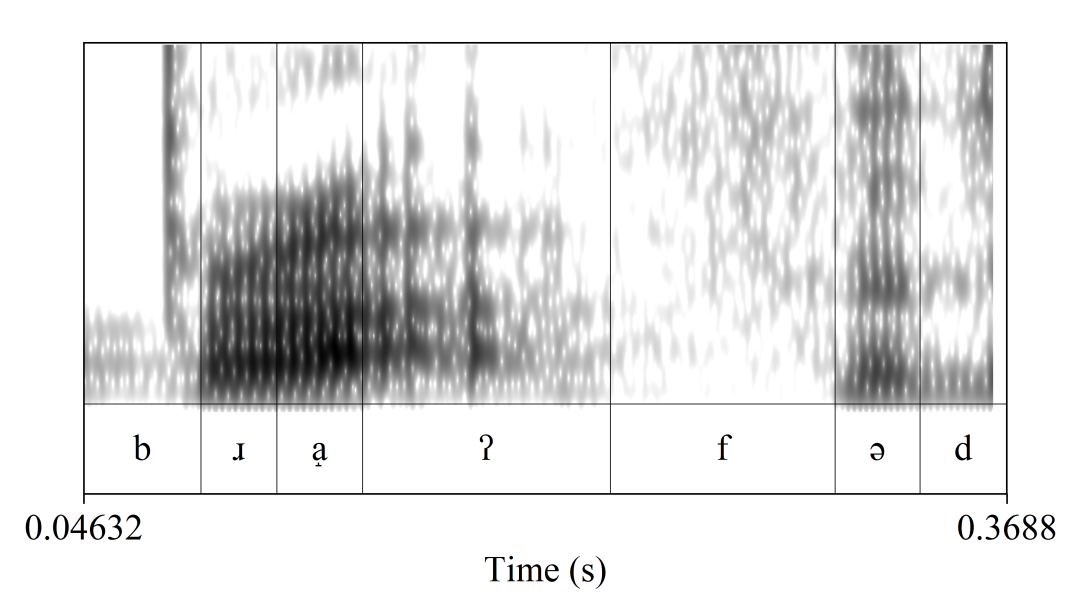
cheese vat



cheese fingers

GLOTTALISATION

- Only 2 tokens with clear glottalisation
- Both for *Bradford*



LESSONS FROM EXPERIMENT

- Yorkshire Assimilation does manifest itself in durational cues (cf. Jansen 2007)
- Gradient! (cf. Wells 1982)
- No clear difference between final obstruents and final fricatives (cf. Wright 1892)
- Glottalisation seems limited to certain lexical items (cf. Akamatsu 2009)

PHONOLOGICAL IMPLICATIONS

- Overall the assimilation context shows an *intermediate* C/V ratio between those of the voiced and voiceless contexts
- This demonstrates at least some form of *phonological* assimilation
- But also that the assimilation is *incomplete*, i.e. *gradient*

- Alternative: third *category* is created
- But note difficulties in most phonological theories

PHONOLOGICAL IMPLICATIONS

- There is individual variation

- Some speakers do not assimilate
- One participant appeared to show optional complete assimilation
- Speakers vary in degrees of overlap between contexts

CAVEATS / OPEN QUESTIONS

- Small number of participants
- Low ecological validity; artificial task
- Only looked at compounds
- Role of other cues to voicing → trading relations

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