

# Accent boundaries and linguistic continua in the laryngeal subsystems of English

Katalin Balogné Bérces

Pázmány Péter Catholic University (PPKE), Budapest, Hungary

& Catholic University in Ružomberok (KU), Slovakia

[berces.katalin@btk.ppke.hu](mailto:berces.katalin@btk.ppke.hu)

# Overview & roadmap

- binary laryngeal obstruent systems, e.g., **b~p** (voiced~voiceless) and **p<sup>h</sup>~b** (aspirated~unaspirated) – *fortis vs lenis*
- **phonetic** properties (VOT) + **phonological** patterning (esp. spreading/RVA)
- certain North-of-England accents (Durham, Yorkshire): **hybrid** laryngeal systems
- parallel *in laryngeal phonology* between the northernmost regions of England and the **transition zone** Ouddeken (2016; 2018) identifies between voicing and aspiration languages in the Dutch–German dialect **continuum**
- model these northern E. accents as mixed/fudged lects (Scots – General English)

# Two-way laryngeal contrasts in obstruents

| Examples                                      | <b>p ~ ɸ</b> | <b>b</b> | <b>p<sup>h</sup></b> | <b>p<sup>ʰ</sup></b> |
|---|--------------|----------|----------------------|----------------------|
| English, German, Welsh,<br>Mandarin Chinese   | [ ]          |          | [sg]                 |                      |
| French, Spanish, Russian,<br>Hungarian, Dutch | [ ]          | [voice]  |                      |                      |
| K'ekchi (Q'eqchi'), Mam                       | [ ]          |          |                      | [cst gl]             |

# Two-way laryngeal contrasts in obstruents: VOT

| Examples                                      | <b>p ~ b</b> | <b>b</b> | <b>p<sup>h</sup></b> |  |
|---|--------------|----------|----------------------|--|
| English, German, Welsh,<br>Mandarin Chinese   | [ ]          |          | [sg]                 |  |
| French, Spanish, Russian,<br>Hungarian, Dutch | [ ]          | [voice]  |                      |  |
|   |              |          |                      |  |

# Two-way laryngeal contrasts in obstruents: VOT – Laryngeal Realism/Relativism

(Honeybone 2005, Iverson & Salmons 2008, etc.; Cyran 2014)

| Examples                                      | <b>p ~ ɸ</b> | <b>b</b> | <b>p<sup>h</sup></b> |
|---|--------------|----------|----------------------|
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| French, Spanish, Russian,<br>Hungarian, Dutch | [ ]          | [voice]  |                      |

- unmarked vs. marked
- voice languages vs aspiration languages

# Two-way laryngeal contrasts in obstruents: VOT – Laryngeal Realism/Relativism

(Honeybone 2005, Iverson & Salmons 2008, etc.; Cyran 2014)

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|---|--------------|----------|----------------------|
| English, German, Welsh,<br>Mandarin Chinese   | [ ]          |          | [sg]                 |
| French, Spanish, Russian,<br>Hungarian, Dutch | [ ]          | [voice]  |                      |

- [sg] = [asp] = H

- [voice] = L

- unmarked: passive voicing (in aspiration lang. only)

(this interpretation of H/L in Government Phonology/  
Element Theory since Harris 1994)

# Voice lang's vs aspiration lang's

- the difference is primarily **phonological**: two totally different phonological mechanisms
  - in voice lang's the [voice] feature is phonologically active (→ symmetrical (both voicing and devoicing) regressive voice assimilation (RVA))
  - in aspiration lang's no signs of any laryngeal activity are detectable [the prime cannot spread? no laryngeal prime at all? (cf. Huber & Balogné Bércecs 2010 and elsewhere)] – here: simply assume the inability of the prime to spread

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  - (further support from lang. acquisition research: in voicing lang's children acquire fortis > lenis plosives, while in aspiration lang's children acquire lenis > fortis plosives)



# The absence of laryngeal activity

- (true) aspiration languages like (Standard) English and German
- no laryngeal spreading
- the fortis set is stably voiceless (+ aspirated)
- the lenis series is voiceless unaspirated (unmarked) and undergoes (word-internal and cross-word) passive voicing

# The absence of laryngeal activity

|   |  |
|---|--|
| <i>ob<u>tain</u></i> [əb <sub>0</sub> 't <sup>h</sup> eɪn]        | <i>match<u>box</u></i> ['mætʃb <sub>0</sub> ɒks]             |
| <i>chees<u>ecake</u></i> ['tʃi:z <sub>0</sub> k <sup>h</sup> eɪk] | <i>base<u>ball</u></i> ['beɪsb <sub>0</sub> ɔ:ɪ]             |
| <i>big<u>foot</u></i> ['bɪg <sub>0</sub> fʊt]                     | <i>cook<u>book</u></i> ['k <sup>h</sup> ʊkb <sub>0</sub> ʊk] |
| <i>egg<u>head</u></i> ['eg <sub>0</sub> hed]                      | <i>life <u>gear</u></i> ['laɪfgɪə(r)]                        |
| <i>road<u>ster</u></i> ['rəʊd <sub>0</sub> stə(r)]                | <i>Shoot <u>back</u>!</i> ['ʃu:t 'bæk]                       |

**English:** *match* [-tʃ] + *box* [b<sub>0</sub>-] -> *matchbox* [-tʃb<sub>0</sub>-]

vs. **Hungarian:** *matchbox* [-dʒb-] 'small toy car'

**English** *obtain* [-b<sub>0</sub>t<sup>h</sup>-] vs. **French** *obtenir* [-pt-]

**English** *cheese* [-z<sub>0</sub>] vs. *cheesecake* [-z<sub>0</sub>-] vs. *cheeses* [-z-]

# “RVA languages” (Huszthy 2019)

*rabtól* ['rɒpto:l]  
*rézkarc* ['re:skɒrts]  
*hangfal* ['hɒŋkɒl]  
*éghez* ['e:khez]  
*roadshow* ['ro:tʃo:]  
 (glosses: 'from prisoner'  
 'copper etching'  
 'loudspeaker'  
 'to sky'  
 'ibid.')

*matchbox* ['mɛdʒbɒks]  
*baseball* ['be:zbɒ:l]  
*tökből* ['tøgbø:l]  
*afgán* ['ɒvga:n]  
*kertből* ['kɛrdbø:l]  
 (glosses: 'toy car'  
 'ibid.'  
 'from pumpkin'  
 'Afghan'  
 'from garden')

*brak* [brak] 'lack' (cf. *brak-u* [braku] 'lack, gen.sg.')

*obraz* [ɔbras] 'picture' (cf. *obraz-u* [ɔbrazu] 'picture, gen.sg.')

(Cyran 2014: 154)

|  | <i>WP</i> | <i>CP</i> |                   |
|--|-----------|-----------|-------------------|
| a. brak <u>o</u> ceny 'lack of mark'         | [k ɔ]     | [g ɔ]     | __ V              |
| b. brak <u>j</u> asności 'lack of clarity'   | [k j]     | [g j]     | __ S              |
| c. brak <u>v</u> ody 'lack of water'         | [g v]     | [g v]     | __ C <sup>+</sup> |
| d. brak <u>p</u> ieczątki 'lack of stamp'    | [k p]     | [k p]     | __ C <sup>+</sup> |
| e. obraz <u>a</u> niola 'picture of angel'   | [s a]     | [z a]     | __ V              |
| f. obraz <u>m</u> istrza 'picture of master' | [s m]     | [z m]     | __ S              |
| g. obraz <u>b</u> urzy 'picture of storm'    | [z b]     | [z b]     | __ C <sup>+</sup> |
| h. obraz <u>t</u> człowieka 'picture of man' | [s t̪]    | [s t̪]    | __ C <sup>+</sup> |

- pre-obstruent delaryngealisation (POD)/neutralisation
- producing unmarked obstruents in C1 + spreading from C2
- if C2 is unmarked, no spreading can happen -> both remain unmarked

# Historical changes can induce a switch from one category to another

- Within Germanic, North Germanic languages as well as most varieties of English and German, North-Eastern dialects of Dutch are **aspiration systems** – faithfully reflecting their **Germanic ancestry**
- a number of their sisters (and their descendants), **under the historical contact influence of Romance or Slavic**, replaced the original aspiration system with one resting on **voice** (even integrated **RVA** into their phonological systems) -> present-day Yiddish, (Western and Southern) Dutch, Afrikaans, (West) Frisian, Rhineland German are voice languages with RVA

Note. Dutch: frequently described as possessing a split obstruent system (fricatives behave as those of aspiration languages but plosives spread [voice]) BUT (st.) Dutch will be simply regarded as a voice system

# The transition zone of the Dutch-German dialect continuum

- **accent** (some sp)
- Ouddeks **initial** p clusters differ
- -> **inter** for forti

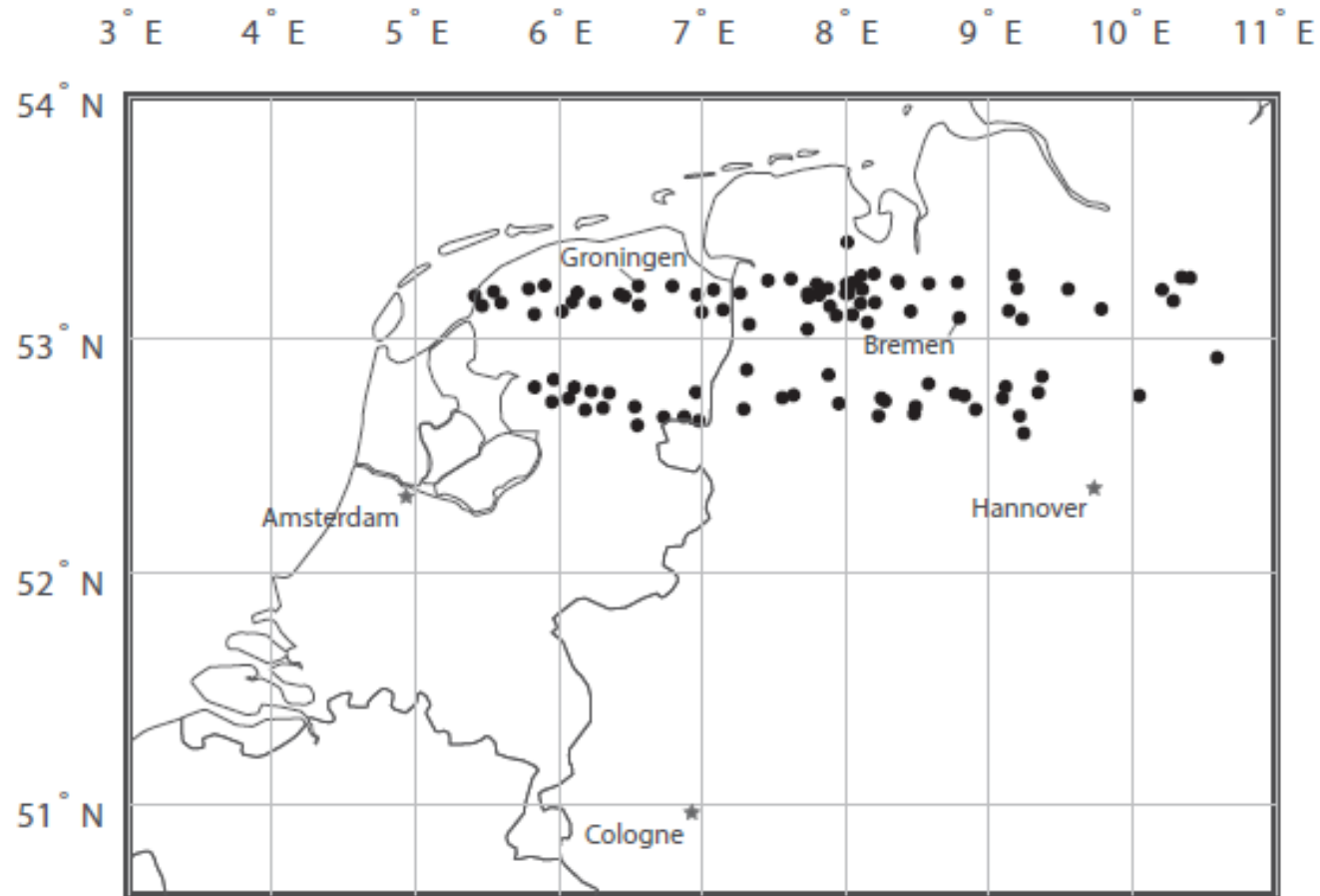


Figure 2.4: Test locations

language) for  
ers  
s of **word-**  
plosive  
om  
VOT values

# The transition zone of the Dutch-German dialect continuum

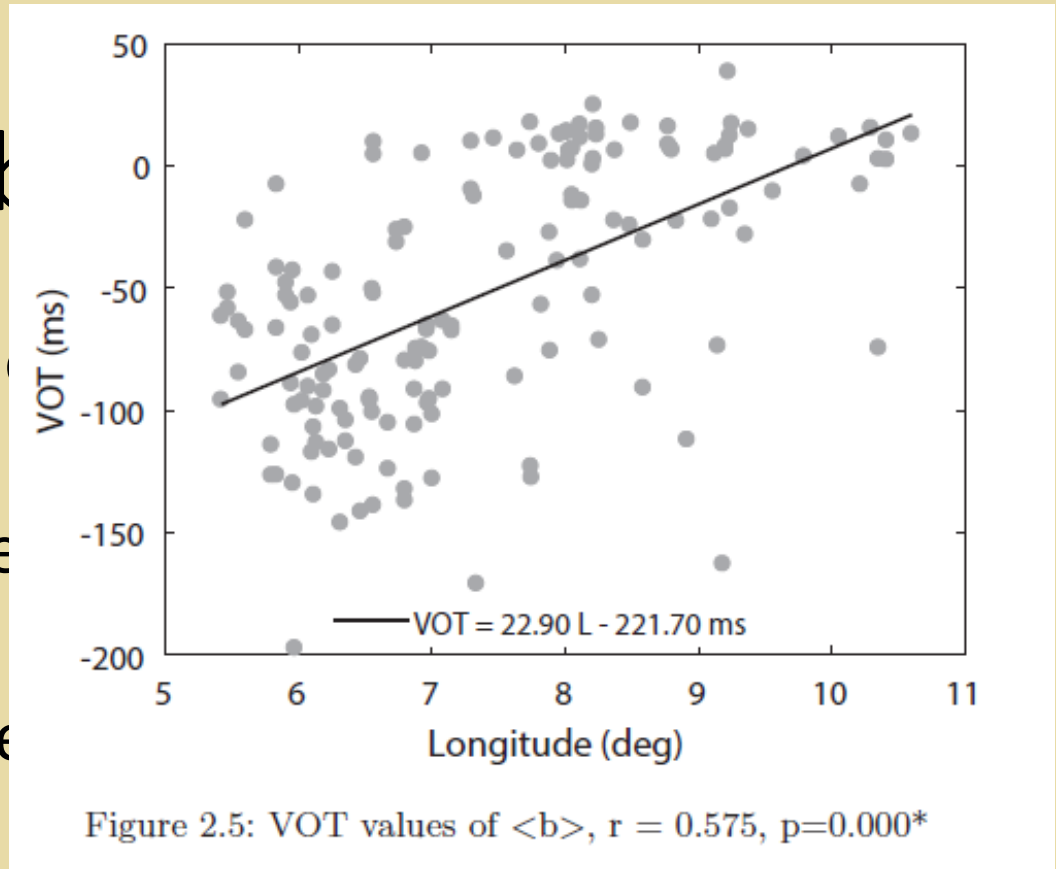
- **accent contact**: the standard language is **Dutch** (a voice language) for some speakers, and **German** (an aspiration system) for others
- Ouddeken (2016; 2018): 2 variables: (i) **VOT** measurements of **word-initial** plosives; (ii) percentages of voicing during closure in plosive clusters (i.e., in the **assimilation** context); data retrieved from different databases
- -> **intermediate systems** with a phonetic overlap between VOT values for fortis and lenis plosives

# A continuum of both variables investigated

- the **western end** (geographical longitude of cca. 5-7°) constitutes an unambiguous case for a voice system
- the **eastern end** (geographical longitude of cca. 9-11°) exemplifies the aspiration system
- between these two ends, from west to east: **gradual transition for both variables**
- VOT values: a gradual increase for each plosive -> the middle area exhibits **hybrid systems with both prevoicing and positive VOT's** + a huge amount of **variation** -> this transition zone is characterised by phonetic overlap, but one in which most individual speakers still make a distinction between the two series

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# A continuum of both variables investigated

- assimilation: the same kind of continuum
- the same middle ground
  - both fortis-final and lenis (i.e., there are fortis and lenis)
  - but this is **inconsistent**
- -> in the transition from fortis to lenis, the two features seem to be phonologically independent
- -> for systems with fortis and lenis, it has to be assumed that there is a continuum of passive voicing of fortis

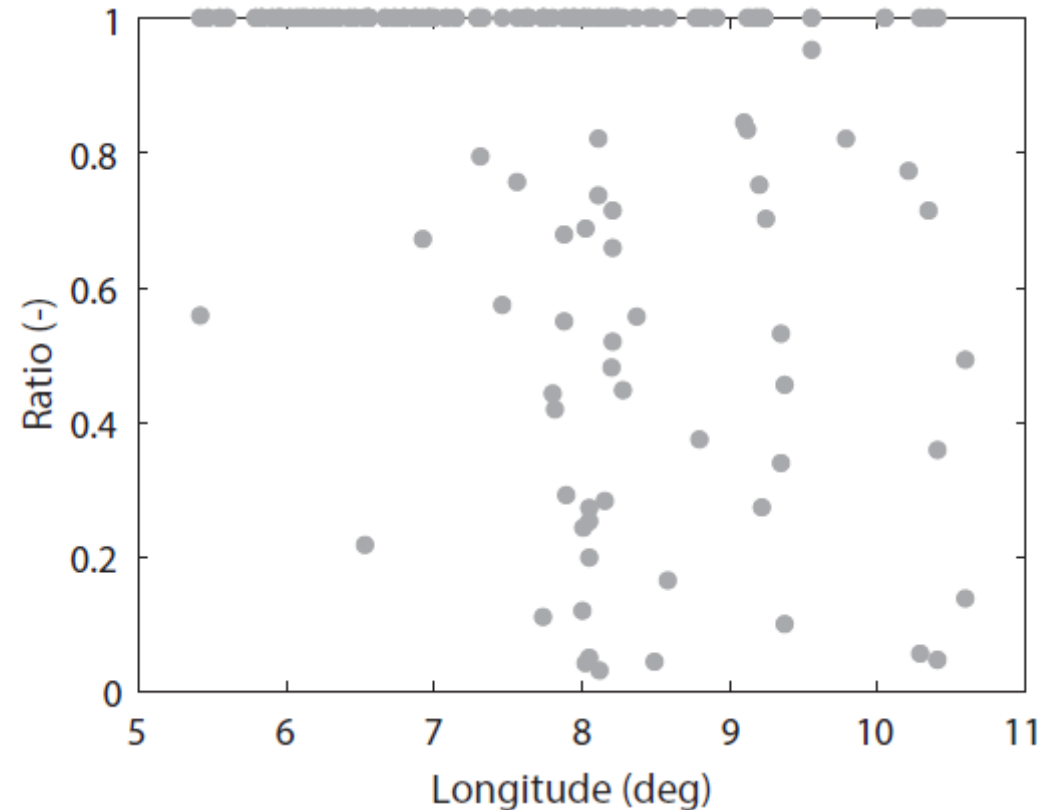


Figure 2.27: Voicing during closure in clusters - lenis C2

uvularic voicing  
(C2)

extensive

the feature

uvularic voicing,  
uvularic

# A continuum of both variables investigated

- assimilation: the same kind of continuum
- the same middle area with **a hybrid pattern of RVA:**
  - both fortis-final and lenis-final cluster types can show full intervocalic voicing (i.e., there are fully voiced clusters attested even with a fortis C2)
  - but this is **inconsistent** in both cases, and again, **variation** is extensive
- -> in the transition zone both the aspiration and the voice feature seem to be phonologically active
- -> for systems where plosive clusters undergo full intervocalic voicing, it has to be assumed that neither feature is present (intervocalic passive voicing of lexically unmarked obstruents)

in what follows we argue that a similar situation of transition has led to the emergence of **hybrid laryngeal systems in a middle area between the voice system of Scots in Scotland and the aspiration systems of English in England**, with variable phonetic realisations of obstruents, and voicedness and voicelessness being variably, asymmetrically active

# Scots/Scottish English

- Germanic languages faithfully reflecting their historical ancestry belong to the aspirating laryngeal type
- Scots: a surprising odd language out
- already in Older Scots, **voiceless stops** were **unaspirated** and **lenis plosives** were **(fully) voiced** (Johnston 1997)
- how it had developed into this system is unclear
- however, this is a firmly established, well-documented property of the language

# Scots/Scottish English

- **unaspirated** [p, t, k] and (**pre-voiced** [b, d, g])
- (except perhaps for speakers from the Central Belt – with the urban centres of Glasgow and Edinburgh – only, and perhaps with shorter fortis VOT in the east than in the west and for older and working-class speakers than for younger and middle-class speakers)
- **RVA**, e.g. *blackboard* [gb], *with them* and *birthday* [-ðd-] (Abercrombie 1967: 135–136)

“[...] found very commonly, though not universally, among speakers of educated Scots.”

# Scots/Scottish English

- Wells (1982: 412 (-413)):

One notices in Scottish English from time to time instances of Voicing Assimilation, thus **['moz 'valjəbl]** *most valuable*. (The Elision of the /t/ of *most* before a following consonant is found in virtually all accents of English; but the change from [s] to [z] under the influence of the following voiced /v/ would not happen in most places – perhaps only in Scotland, Trinidad, and Guyana. It is commonplace in the foreigner's English of French people, and there counted an error.) I do not know what phonological, social, or stylistic constraints there may be on the operation of this process.

# North-of-England varieties

- hybrid systems that may lack aspiration and have partial, asymmetrical voice assimilation
- “**Yorkshire Assimilation**”: a voicelessness-spreading RVA system
- the dialect of **Durham**: has fully voiced and voiceless unaspirated obstruents which engage in voicedness assimilation (voiced only)
- [+ other dialects: scarce in detail so they need to be corroborated: e.g., Black Country English voiced initial and final consonants are reported to be fully voiced, and there appears to be some written evidence for final devoicing in Birmingham]

# “Yorkshire assimilation”

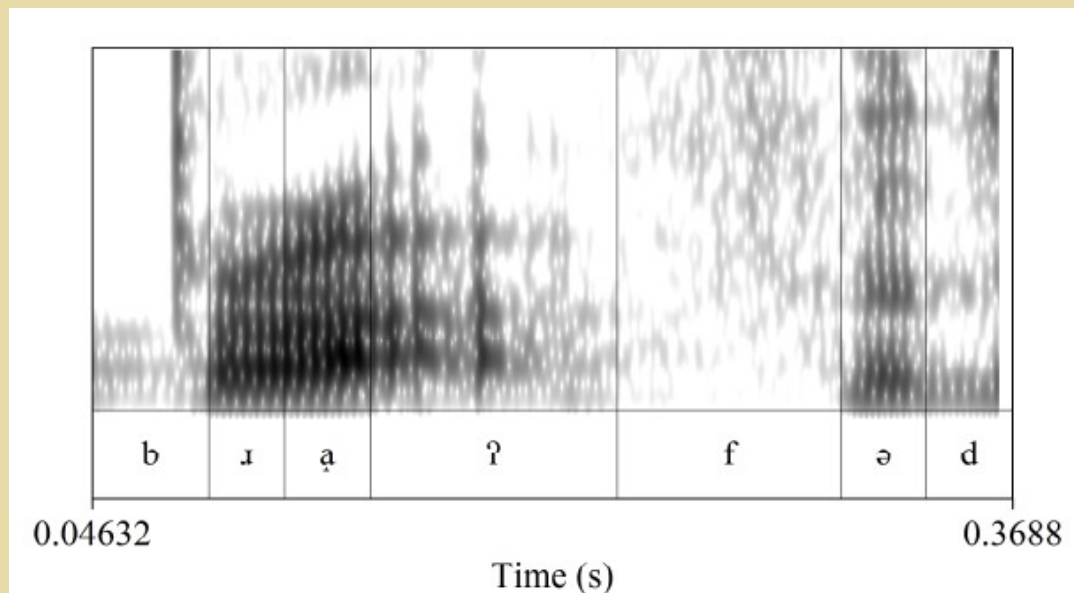
- certain North-of-England English varieties
- a “simple” devoicing assimilation system with (word-internal and cross-word) passive voicing of the lenis series
- Whisker-Taylor & Clark (2019) confirm that lenis obstruents like /b/ are realised in RVA contexts as [p] rather than [b] – they do not carry any voicing whatsoever, unlike obstruents in the same phonological environment in GE





t-glottalling further affecting  
the [t] that derives from  
underlying /d/

[*'braʔfəd*] for *Bradford*



(Zee, T. & Sebregts, K. 2016. Yorkshire assimilation at the interface. NEW7, 14.04.2016, Edinburgh. Slide 22)

**Bradford**

Bradford City Hall  
NEIL TURNER/FICKR

Citizens of this West Yorkshire city  
pronounce it 'brat-fud'.

# “Yorkshire assimilation”

(Wells 1982: 366-367; Whisker-Taylor and Clark 2019; etc.; data from Honeybone 2011):

|                   |               |                   |           |
|-------------------|---------------|-------------------|-----------|
| <i>jazz</i>       | [dʒaz]        | <i>pass</i>       | [pas]     |
| <i>jazz music</i> | [dʒazmju:zɪk] | <i>pass Molly</i> | [pasmɒli] |
| <i>jazz band</i>  | [dʒazbænd]    | <i>pass Barry</i> | [pasbæri] |
| <i>jazz dance</i> | [dʒazdɑ:ns]   | <i>pass Dave</i>  | [pasdeɪv] |
| <i>jazz club</i>  | [dʒasklʊb]    | <i>pass Keith</i> | [paski:θ] |
| <i>jazz pub</i>   | [dʒaspub]     | <i>pass Pete</i>  | [paspi:t] |

*pass Barry*: YE = GE [-sɒ-]

(cf. [-zɒ-] in symmetrical RVA lang's)

*jazz club*: YE [-sk<sup>h</sup>-] vs. GE [-z<sup>h</sup>k<sup>h</sup>-]

# Durham English (more precisely: “the low-status Durham Vernacular” – Kerswill 1987: 42)

- fully voiced lenis and voiceless unaspirated (tenuis) fortis obstruents
- plus voicing (i.e., voicedness) assimilation (Kerswill 1987; Harris 1994; Cyran 2014)

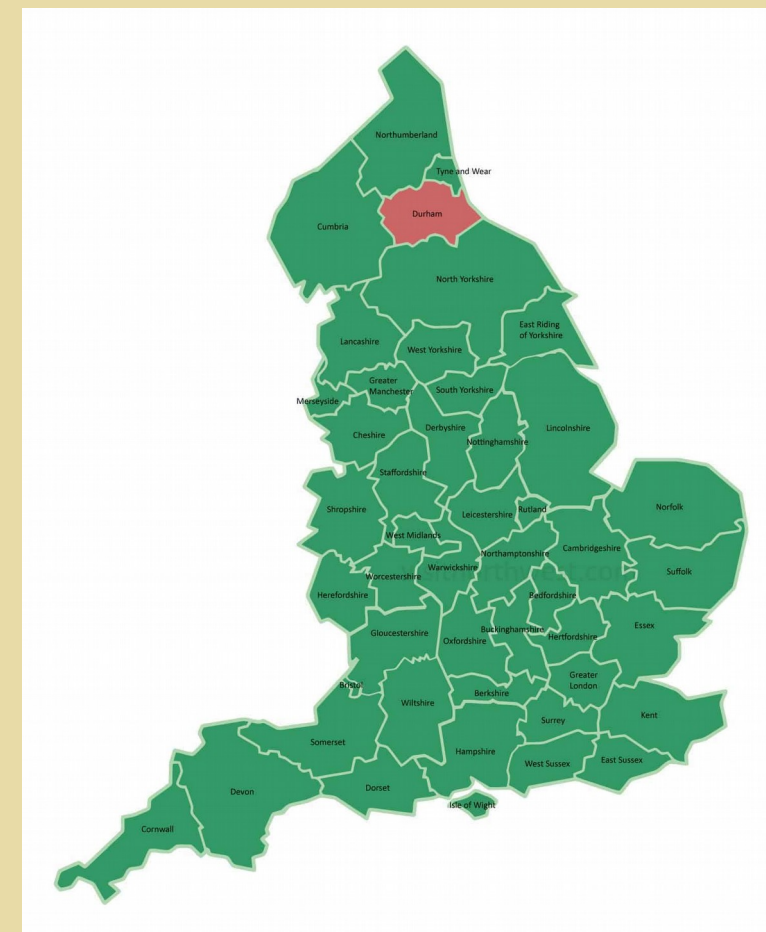
*top gun* [-bg-]  
*football* [-db-]  
*backbone* [-gb-]

*pitch black* [-dʒb-]  
*each deputy* [-dʒd-]  
*this village* [-zv-]

*scraped down* [-bdd-]  
*what's gone* [-dzg-]

*pass Barry*: DE [-zb-] (= voice lang.)

*jazz club*: DE [-zk-] ~ GE (cf. [-sk-] in a voice lang.)



# Modelling the laryngeal subsystems of English

parameters:

- voice/L-system vs aspiration/H-system
- ability to spread (right-to-left)
- pre-obstruent delaryngealisation (POD): in C1C2, C1 becomes unmarked (underspecified)

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|                    |  |
|--------------------|--|
| <b>L</b>           |  |
| <b>spreading</b>   |  |
| <b>POD</b>         |  |
| <b>voice lang.</b> |  |



|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |



|  |                     |
|--|---------------------|
|  | <b>H</b>            |
|  | <b>no spreading</b> |
|  | <b>no POD</b>       |
|  | <b>asp. lang.</b>   |

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|                    |                  |  |
|--------------------|------------------|--|
| <b>L</b>           | <b>L</b>         |  |
| <b>spreading</b>   | <b>spreading</b> |  |
| <b>POD</b>         | <b>no POD</b>    |  |
| <b>voice lang.</b> | <b>Durham</b>    |  |



|  |                     |  |
|--|---------------------|--|
|  | <b>H</b>            |  |
|  | <b>no spreading</b> |  |
|  | <b>no POD</b>       |  |
|  | <b>asp. lang.</b>   |  |

# Modelling the laryngeal subsystems of English

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- ability to spread (right-to-left)
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| L                  | L                | H                | H                   |
|--------------------|------------------|------------------|---------------------|
| <b>spreading</b>   | <b>spreading</b> | <b>spreading</b> | <b>no spreading</b> |
| <b>POD</b>         | <b>no POD</b>    | <b>no POD</b>    | <b>no POD</b>       |
| <b>voice lang.</b> | <b>Durham</b>    | <b>Yorkshire</b> | <b>asp. lang.</b>   |

# Conclusion

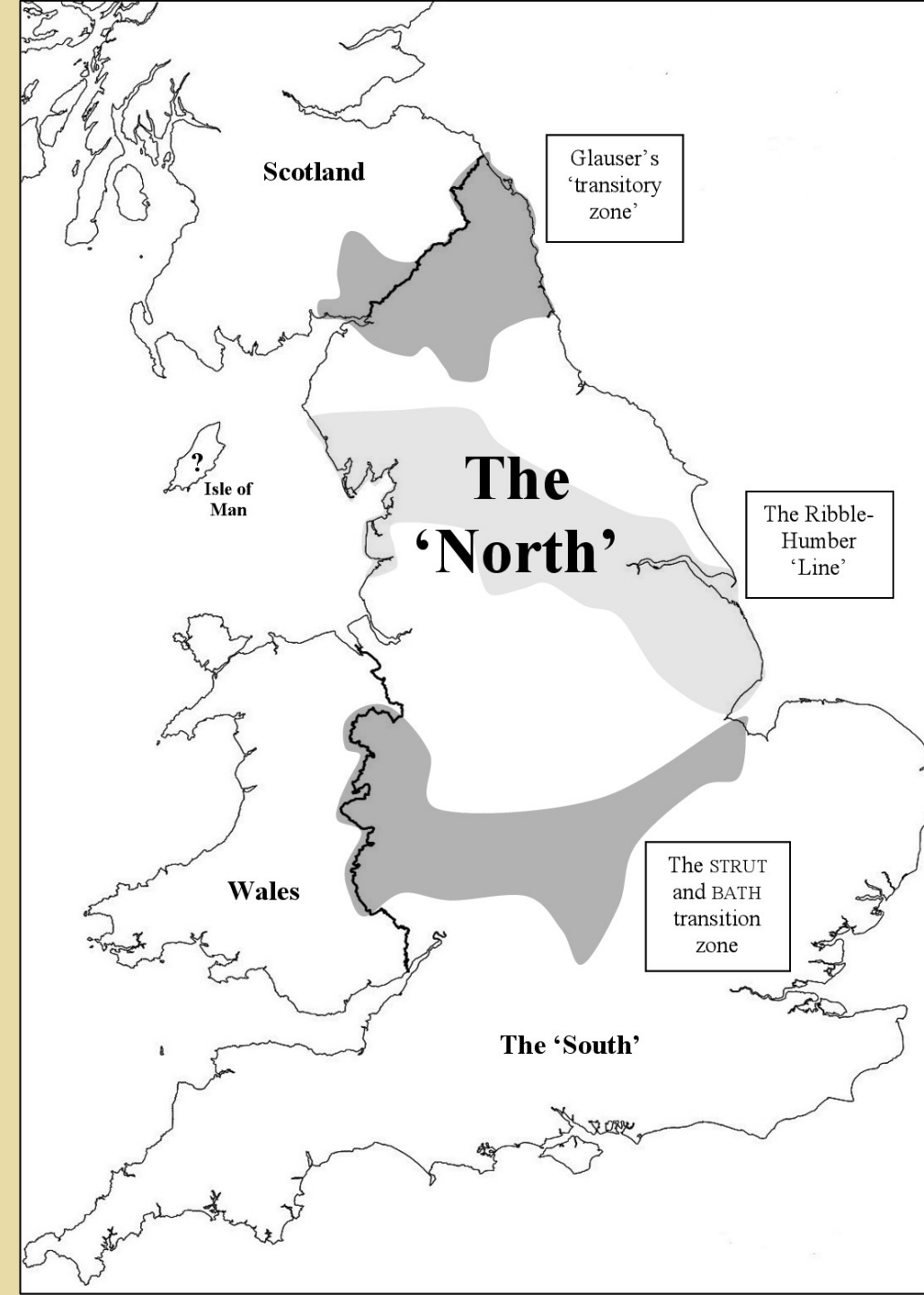
- linguistic links between Scots and (far) northern English: well-known and widely discussed (see esp. Maguire 2012: Section 6; Honeybone & Maguire 2020: Section 3)



# Other features shared by Scots/Scottish and N. English

- (Northumbrian OE, but here: later developments, diverged in ME)
- Aitken's Law (SVLR); pre-GVS vowels: *toon* and *neet* (esp. Geordie); FOOT-GOOSE merger; STRUT [ʌ]; /m/; etc.
- (rhoticity identified as an important distinguishing feature)
- [also in grammar and lexis, e.g., The Northern Subject Rule]

(Honeybone & Maguire 2020: 15)



# Conclusion

- linguistic links between Scots and (far) northern English: well-known and widely discussed (see esp. Maguire 2012: Section 6; Honeybone & Maguire 2020: Section 3)
- **but:** this case of laryngeal contact hasn't been proposed, and in fact, laryngeal phonology tends to be ignored altogether in the relevant literature
- previous work in Laryngeal Realism has also asserted that Scots is to be classified as a voice language, but made no closer examination of the dialectal variation in English English and the potential connection between the two phenomena
- + contribute to *Hierarchies, boundaries and continua in linguistics*

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# Thank you.

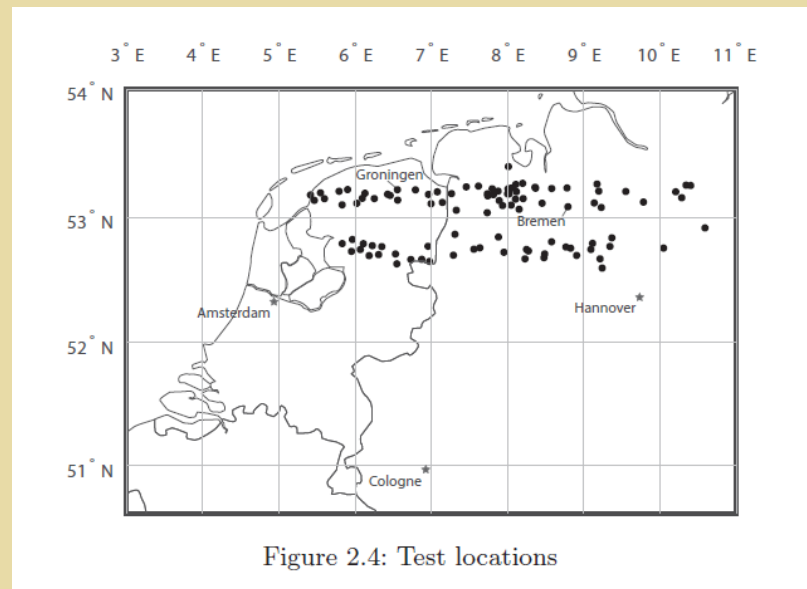
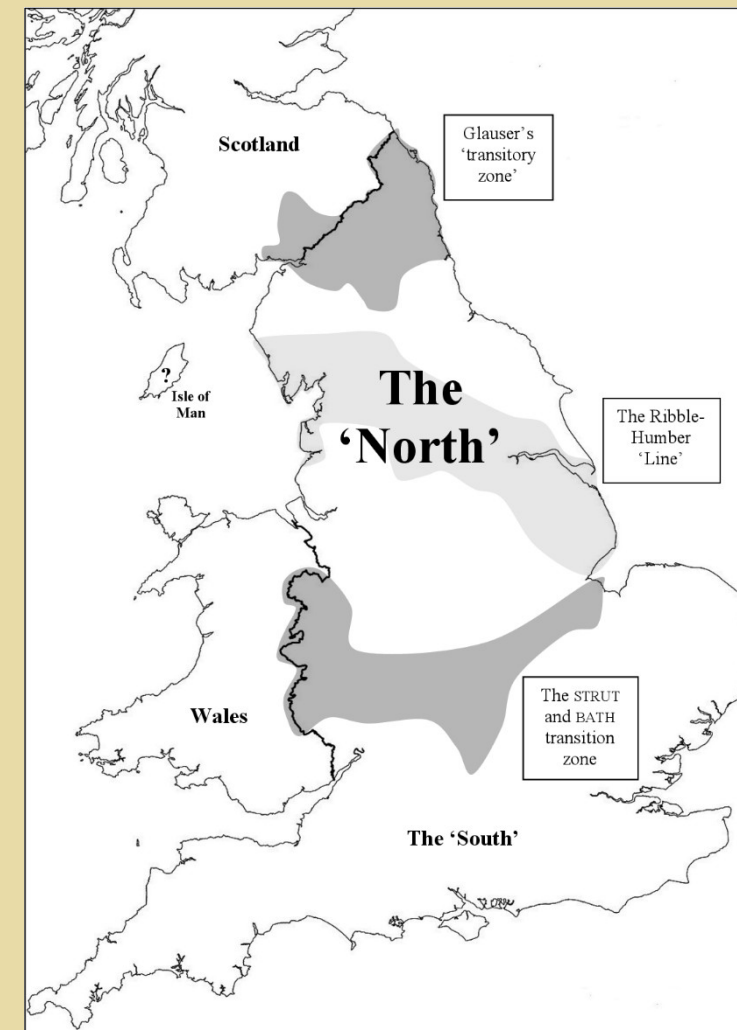


Figure 2.4: Test locations



*pass Barry*: YE = GE [-sb̥-] (cf. [-zb-] in a voice lang.)

*jazz club*: YE [-sk<sup>h</sup>-] vs. GE [-z̥k<sup>h</sup>-]

*pass Barry*: DE [-zb-] (= voice lang.)

*jazz club*: DE [-zk-] ~ GE (cf. [-sk-] in a voice lang.)

|                    |                  |                  |                     |
|--------------------|------------------|------------------|---------------------|
| <b>L</b>           | <b>L</b>         | <b>H</b>         | <b>H</b>            |
| <b>spreading</b>   | <b>spreading</b> | <b>spreading</b> | <b>no spreading</b> |
| <b>POD</b>         | <b>no POD</b>    | <b>no POD</b>    | <b>no POD</b>       |
| <b>voice lang.</b> | <b>Durham</b>    | <b>Yorkshire</b> | <b>asp. lang.</b>   |