



The STRUT vowel in urban and rural accents of the West Midlands

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introduction

pilot study

pilot study

by-product

pilot study

by-product

under-researched area

border

North

South

Wells (1982: 349)

border

North

FOOT–STRUT split

/ʌ/ – /ʊ/

South

Wells (1982: 349)

FOOT–STRUT split

North

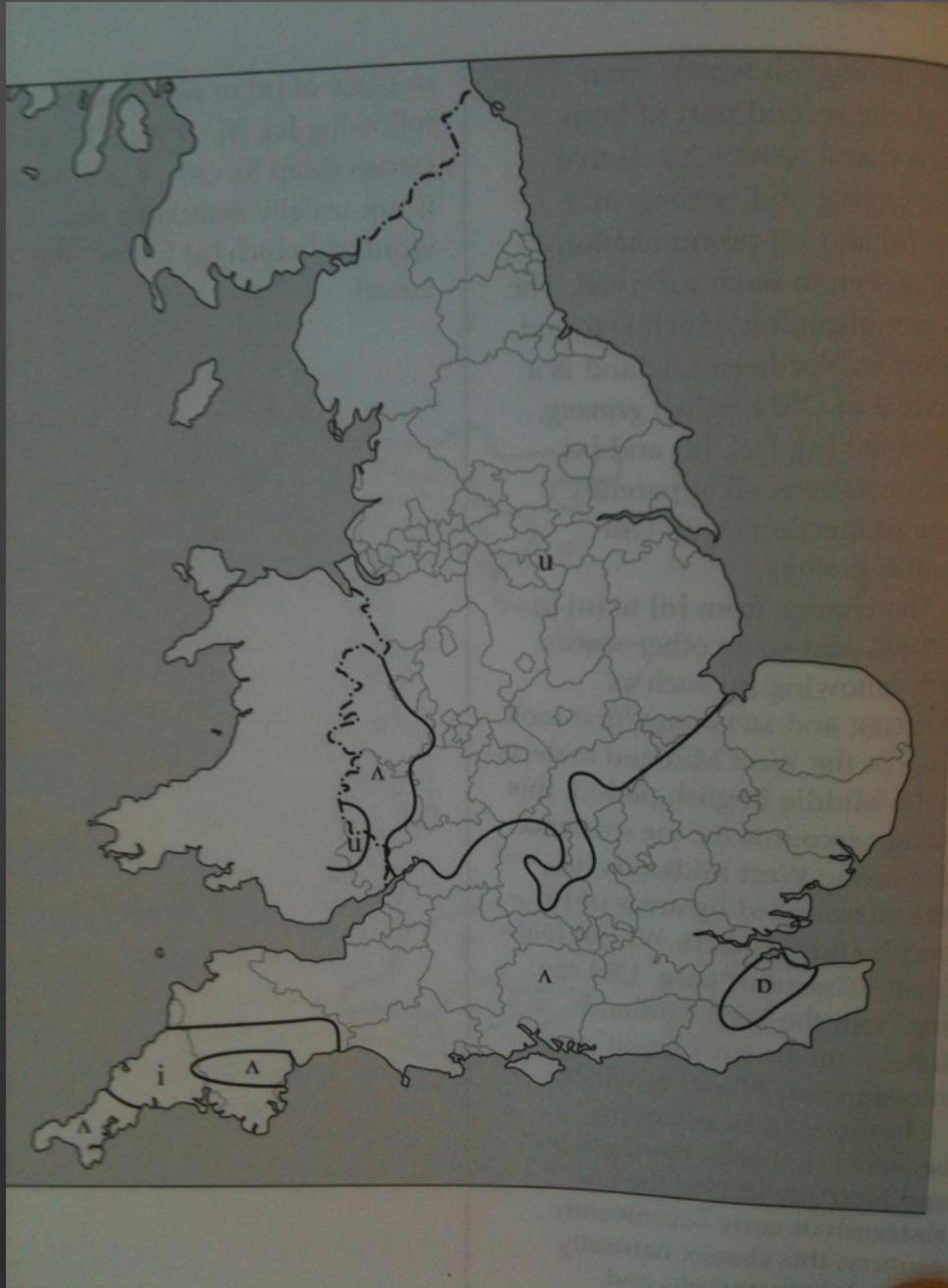
put /pʊt/

cut /kʊt/

South

put /pʊt/

cut /kʌt/



Upton and Widdowson 2006: 27

urban vs. rural



previous descriptions; expectations

Birmingham: [ʊ], [ɤ], [ə], [ʌ], [ɒ]

Wells 1982: 362-363, Lass 1987: 246, Clark 2008: 157, Trudgill 2004: 38

previous descriptions; expectations

Birmingham: [ʊ], [ɤ], [ə], [ʌ], [ɒ]

Stratford-upon-Avon: [ʌ]???

Wells 1982: 362-363, Lass 1987: 246, Clark 2008: 157, Trudgill 2004: 38

previous descriptions; expectations

Birmingham: [ʊ], [ʌ], [ə], [ʌ], [ɒ]

Stratford-upon-Avon: [ʌ]???

Aldermminster and Wimpstone [ʌ~ə]?

Wells 1982: 362-363, Lass 1987: 246, Clark 2008: 157, Trudgill 2004: 38

study

sample

Speaker	Age
City1	25
City2	32
Town1	27
Town2	27
Village1	22
Village2	24
	mean: 26.6

fieldwork



interviews

middle-class respondents

interviews

middle-class respondents

in pairs / individually

interviews

middle-class respondents

in pairs / individually

c. 30 min each

interview structure

1. conversation

interview structure

1. conversation
2. reading

interview structure

1. conversation
2. reading
 - a) reading passage

interview structure

1. conversation
2. reading
 - a) reading passage
 - b) wordlist

tokens

240 overall

tokens

240 overall

120 reading style

tokens

240 overall

120 reading style

120 conversation style

tokens

240 overall

120 reading style

120 conversation style

right context alveolar

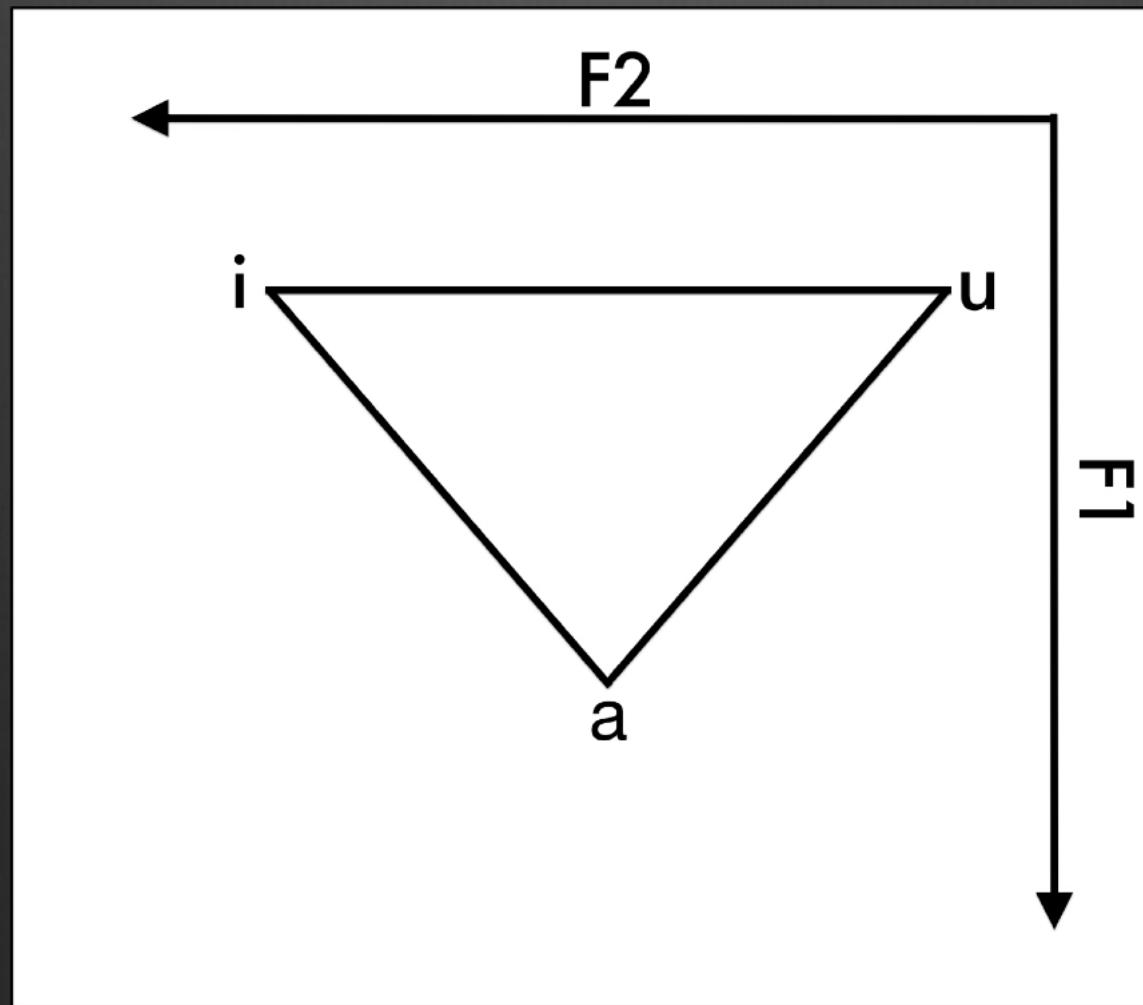
method

instrumental analysis

1. mean F1/F2

S-centroid normalisation

Fabricius et al. (2009)

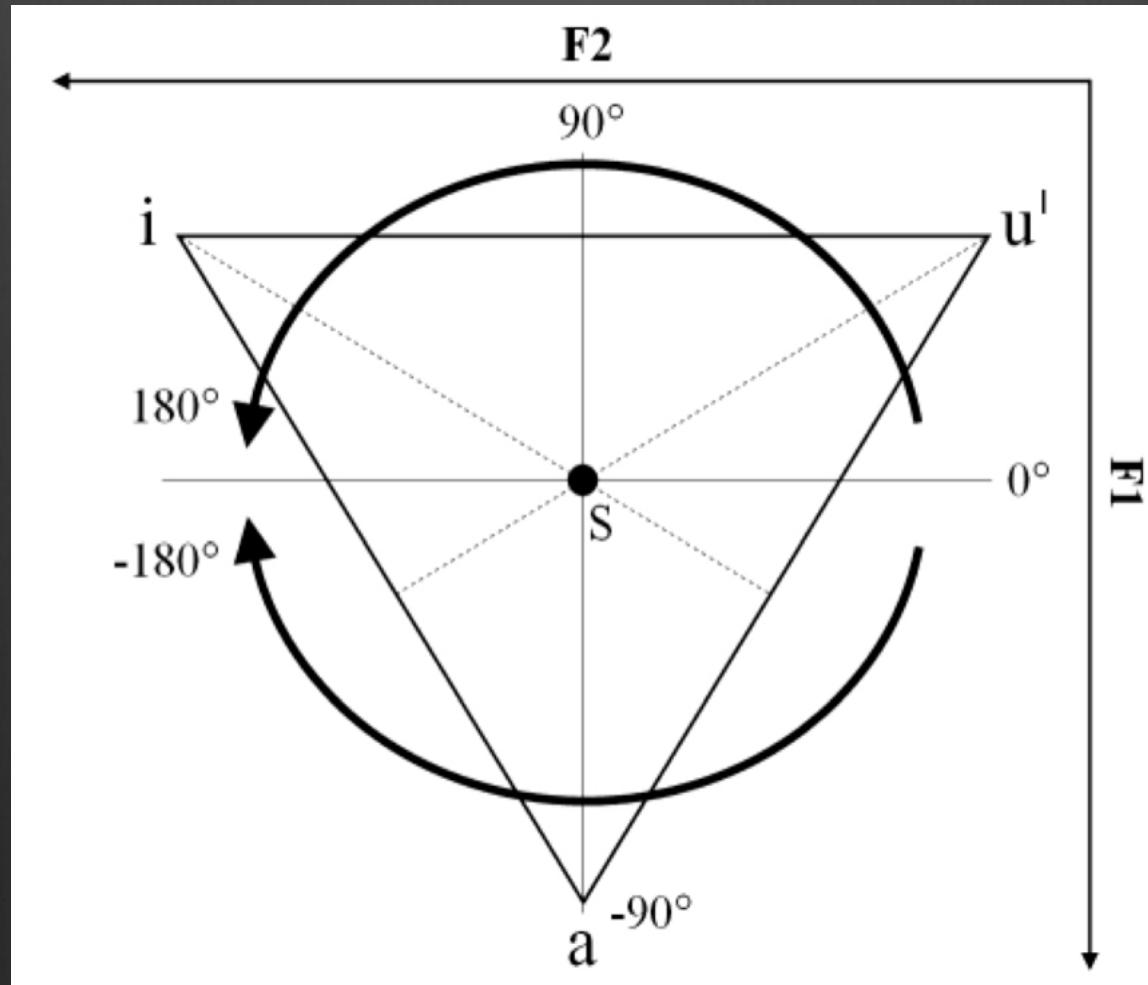


instrumental analysis

1. mean F1/F2
2. angles to *S*-centroid

angle relative to S

Watt and Fabricius (2011: 2104)

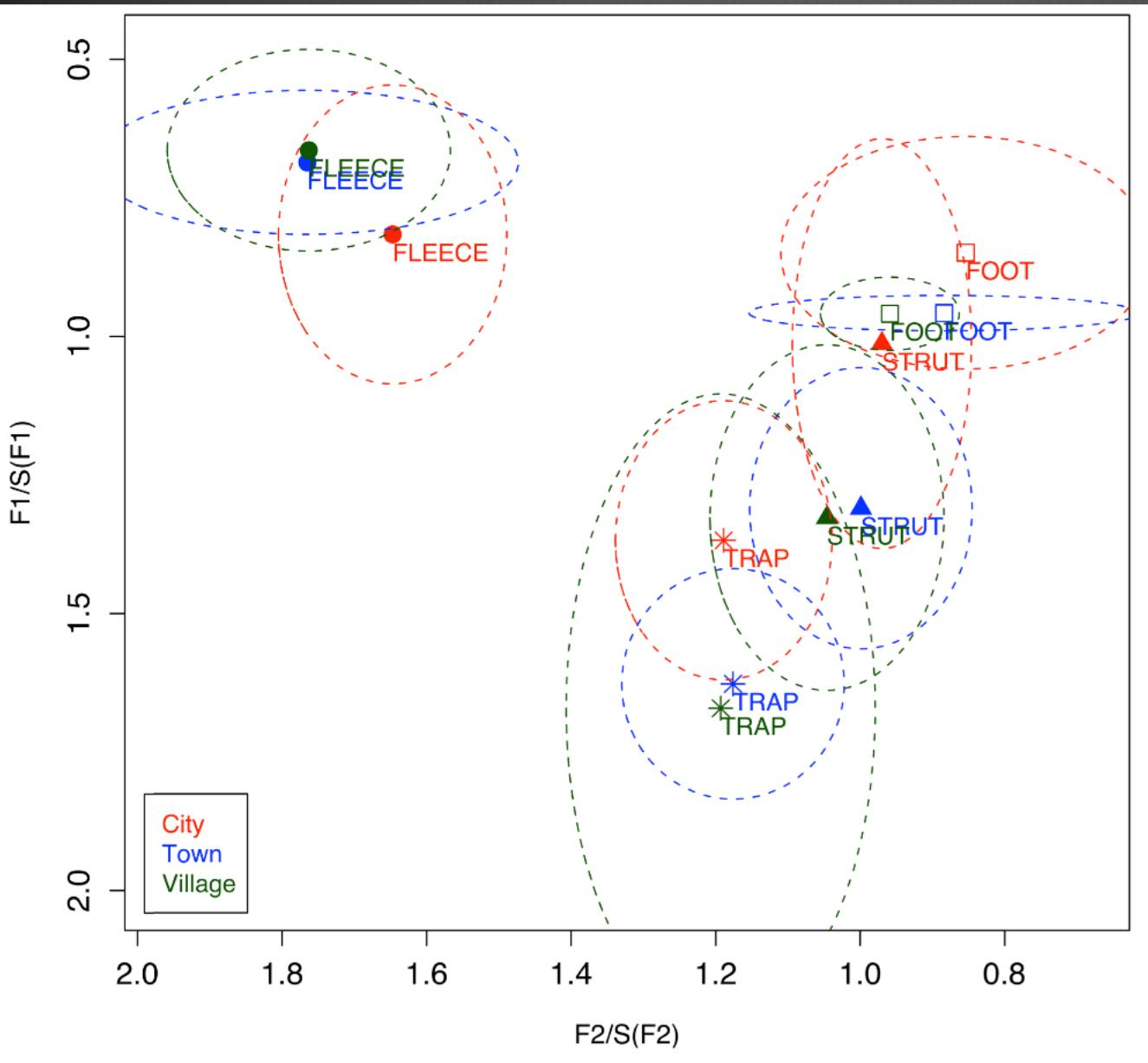


instrumental analysis

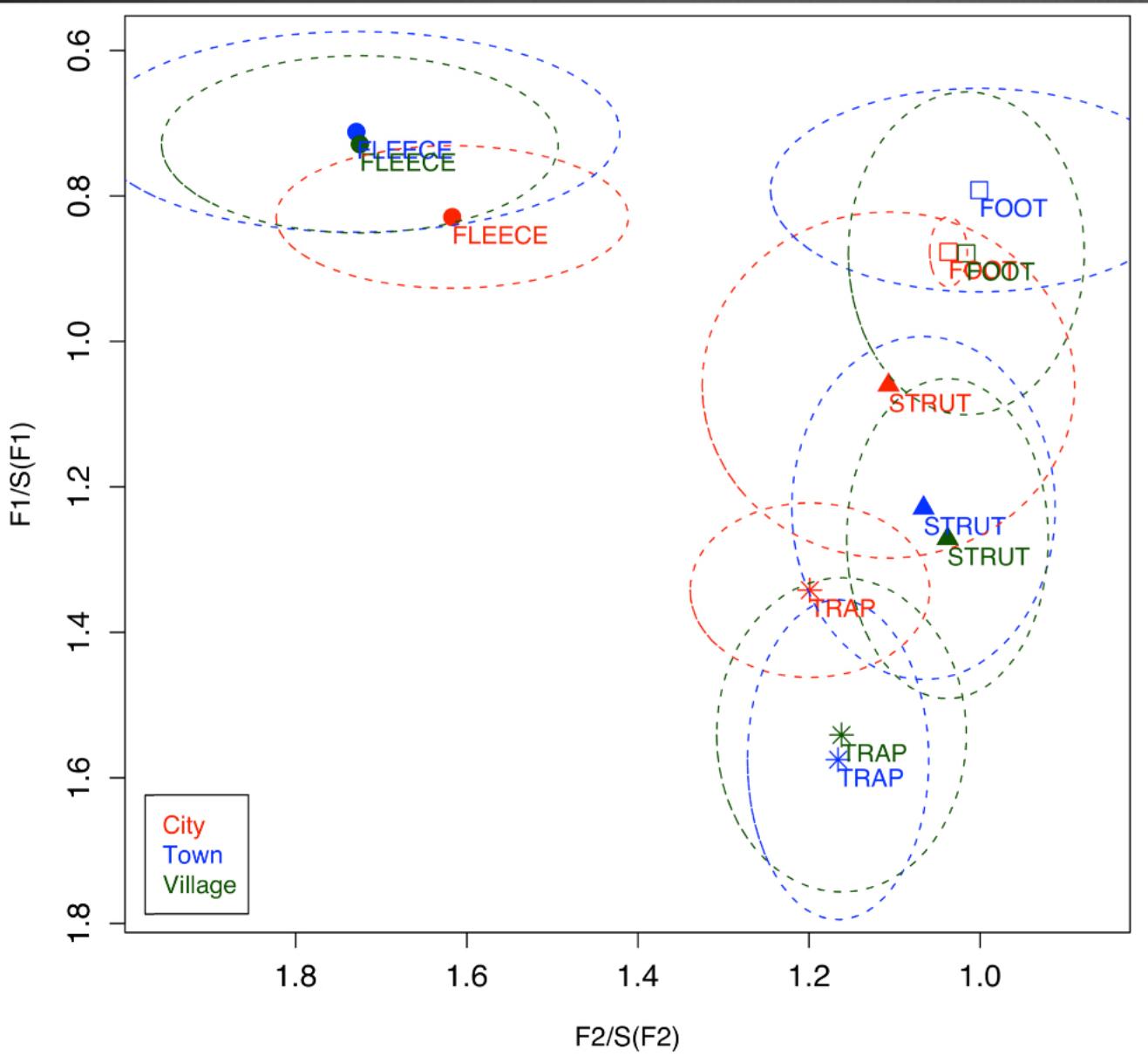
1. mean F1/F2
2. angles to *S*-centroid
3. Euclidean distance

results

reading – group means (2SD)

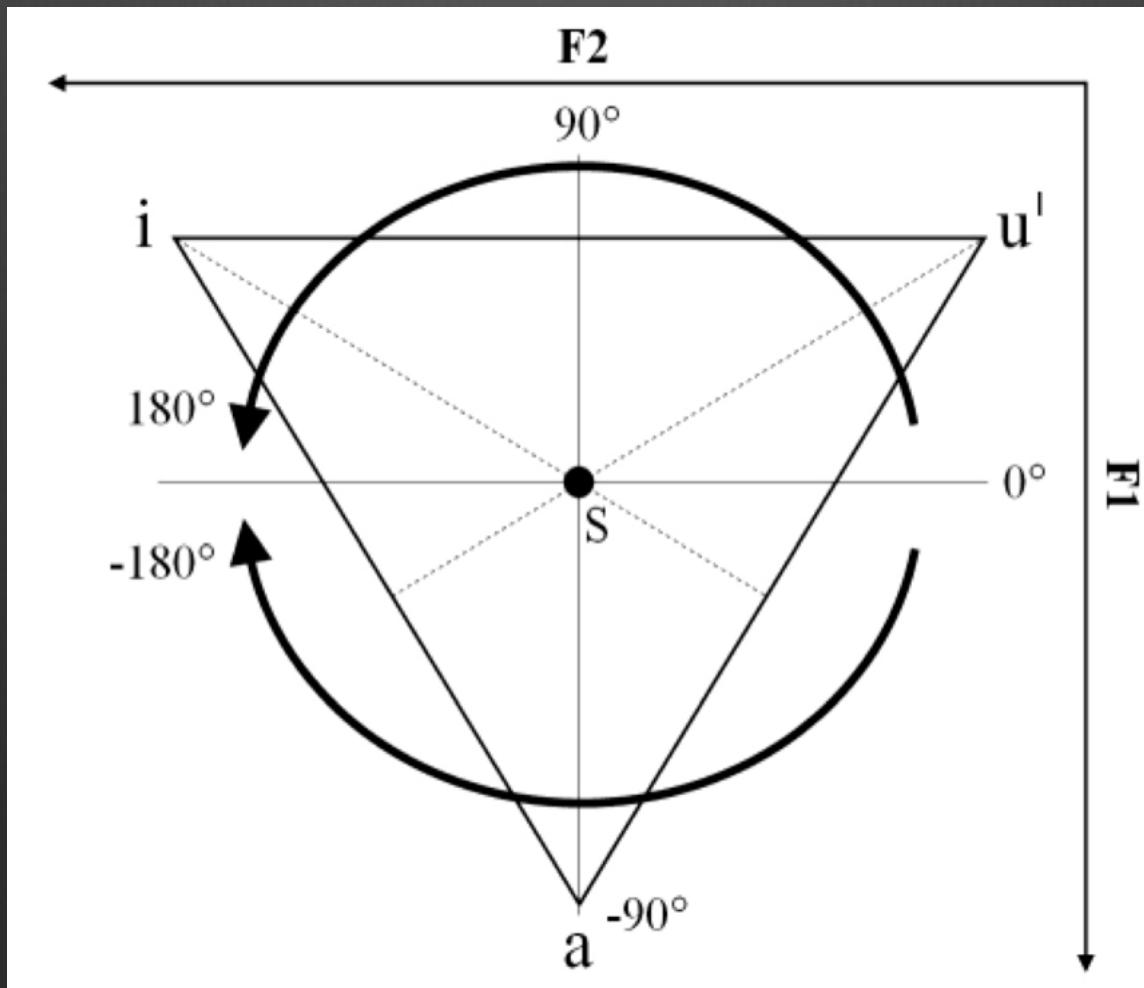


conversation – group means (2SD)

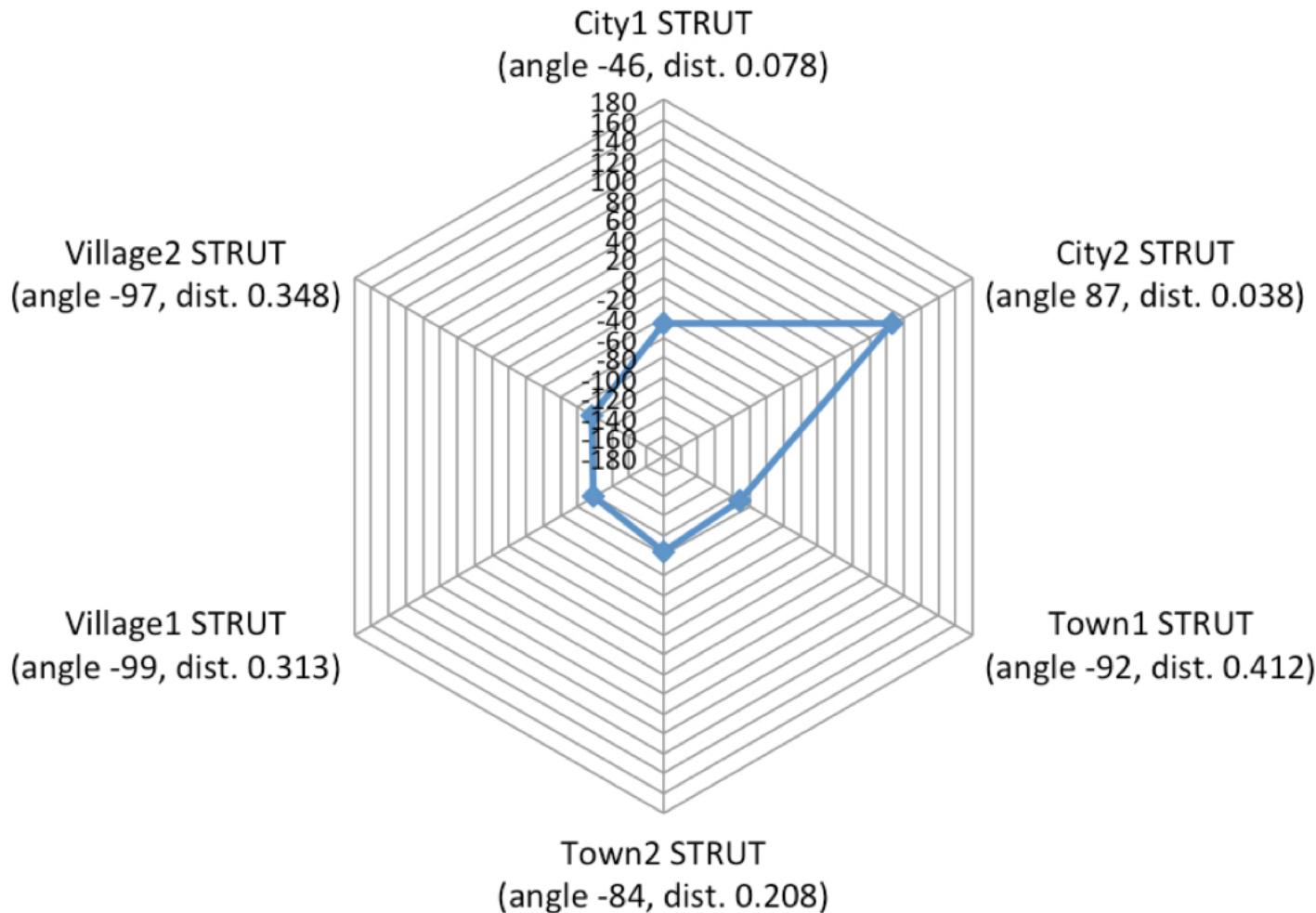


Group	F1/S	F2/S
City	1.06	1.107
Town	1.229	1.066
Village	1.271	1.038

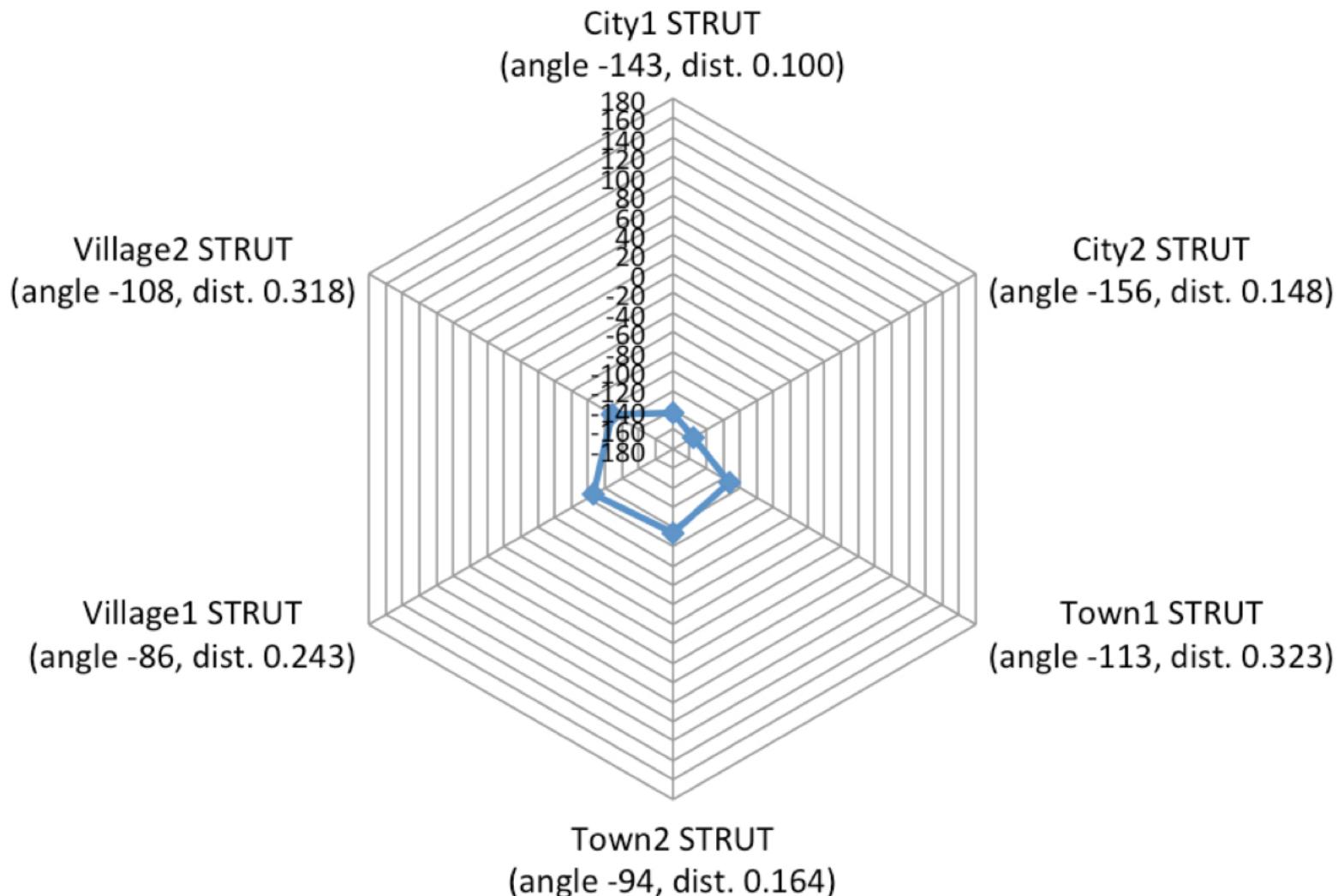
angle relative to S



reading – individual angles to S



conversation – individual angles to S



group comparison

☺ visible variation in angle relative to S

	F1/S	F2/S	angle to S	Euc. distance
City – reading	1.013	0.970	-23	0.033
City – conversation	1.060	1.107	-151	0.123
Town – reading	1.310	0.999	-90	0.310
Town – conversation	1.229	1.066	-106	0.238
Village – reading	1.327	1.046	-98	0.330
Village – conversation	1.271	1.038	-98	0.274

group comparison

- ☺ visible variation in angle relative to S
- ☹ little movement to/from S

	F1/S	F2/S	angle to S	Euc. distance
City – reading	1.013	0.970	-23	0.033
City – conversation	1.060	1.107	-151	0.123
Town – reading	1.310	0.999	-90	0.310
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conclusions

summary of results

STRUT and FOOT clearly distinguishable

summary of results

STRUT and FOOT clearly distinguishable
city [χ~θ]

summary of results

STRUT and FOOT clearly distinguishable

city [ɛ~ə]

town and villages [ʌ]

summary of results

STRUT and FOOT clearly distinguishable

city [ɛ~ə]

town and villages [ʌ]

little stylistic variation

further research

pilot; dedicated study needed

word classes

Boersma, P., Weenink, D. 2010. *Praat: Doing phonetics by computer*. Version 5.3.04.

Clark, Urszula. 2008. "The English West Midlands: Phonology", in: Kortmann, Bernd and Clive Upton (eds.).
A Handbook of Varieties of English. Berlin: Mouton de Gruyter, 145-177.

Fabricius, Anne H., Dominic Watt and Daniel Ezra Johnson. 2009. "A comparison of three speaker-intrinsic vowel formant frequency normalization algorithms for sociophonetics", *Language Variation and Change* 21:413-35.

Johnson, Daniel Ezra. 2010. *R algorithm for calculating planar locations*. (<http://akira.ruc.dk/~fabri/centroid-script.R>)
(date of access: 14 May 2012).

Plichta, Bartłomiej. 2004. *Akustyk for Praat*. Version 1.9.2. East Lansing: Michigan State University.

R Development Core Team. 2011. *R: A Language and environment for statistical computing*. Version 2.15.0.

Thomas, Erik R. and Tyler Kendall. 2007. *NORM: The vowel normalization and plotting suite*.
(<http://ncslaap.lib.ncsu.edu/tools/norm>)

Trudgill, Peter. 2004. *Dialects*. (2nd edition.) London: Routledge.

Upton, Clive and and J. D. A. Widdowson. 2006. *An atlas of English dialects*.

Watt, Dominic and Anne H. Fabricius. 2011. "A measure of variable planar locations anchored on the centroid of the vowel space: a sociophonetic research tool", *Proceedings of the International Congress of Phonetic Sciences* 17.
(<http://www.icphs2011.hk/resources/OnlineProceedings/RegularSession/Watt/Watt.pdf>) (date of access: 20 Mar. 2012).

Wells, J.C. 1982. Accents of English. Vol. 2. Cambridge: Cambridge University Press.