Models of Phonological Variation for Multi-dialectal Communities: the case of L'Aquila

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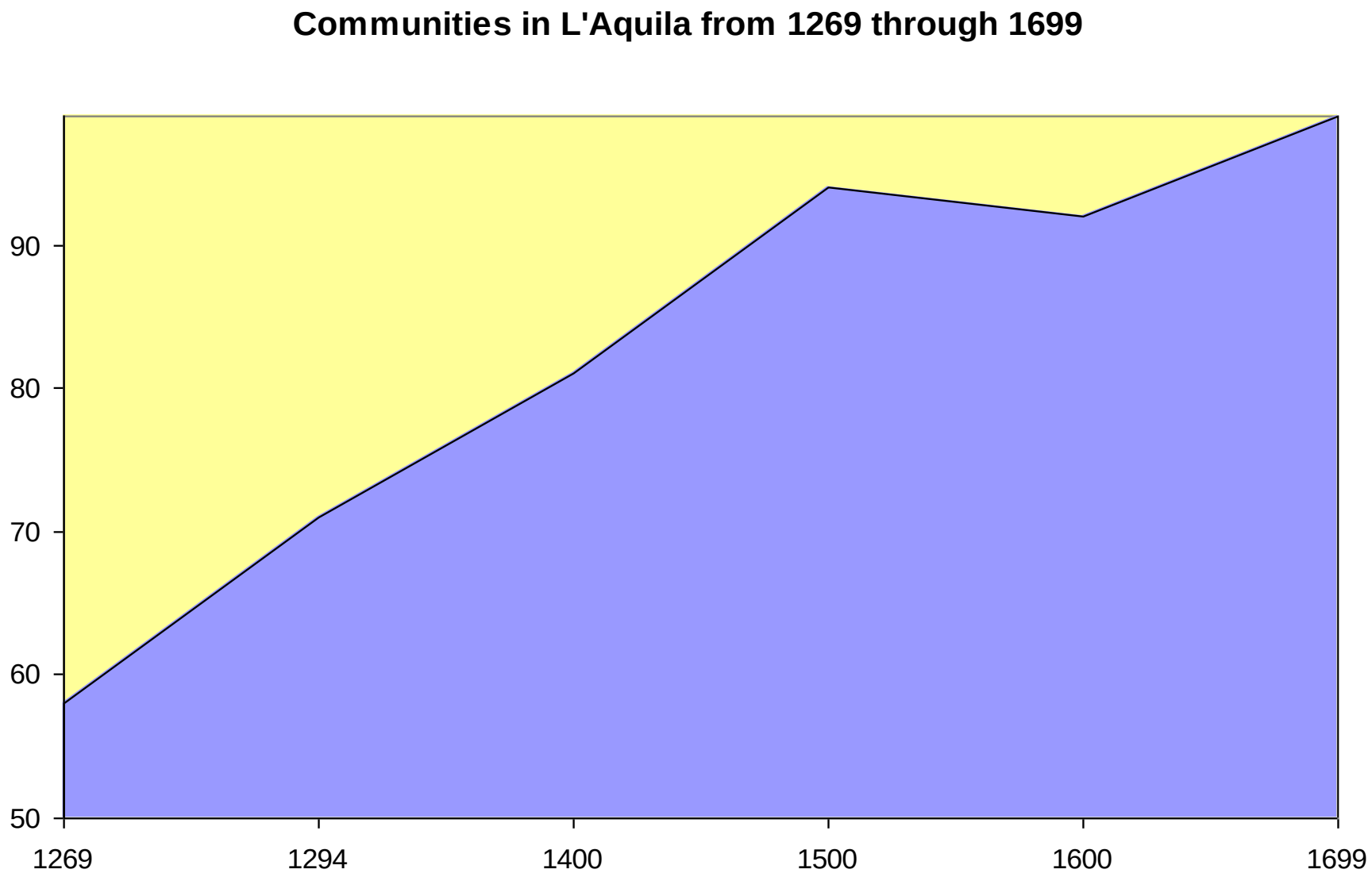
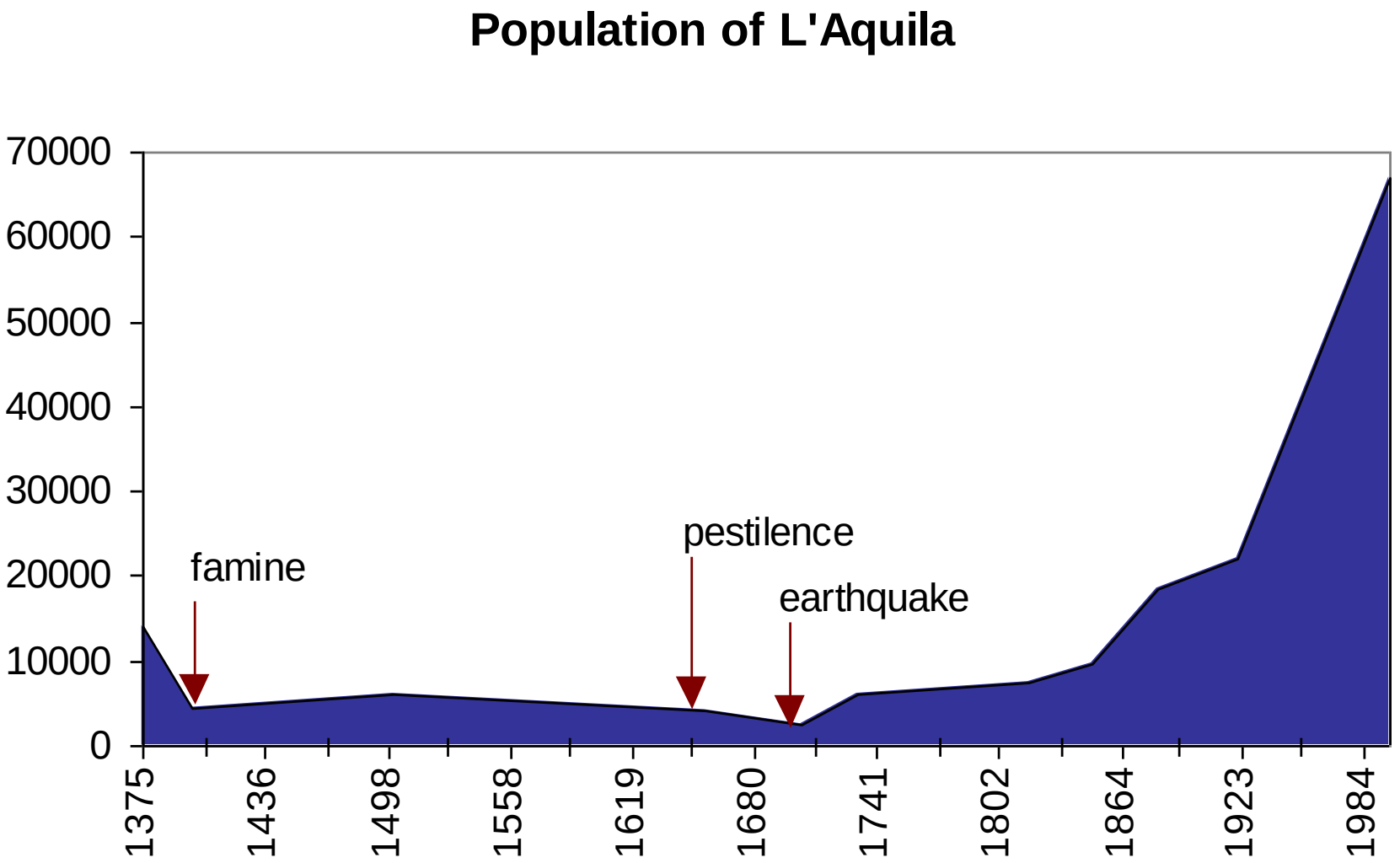
Population Movement



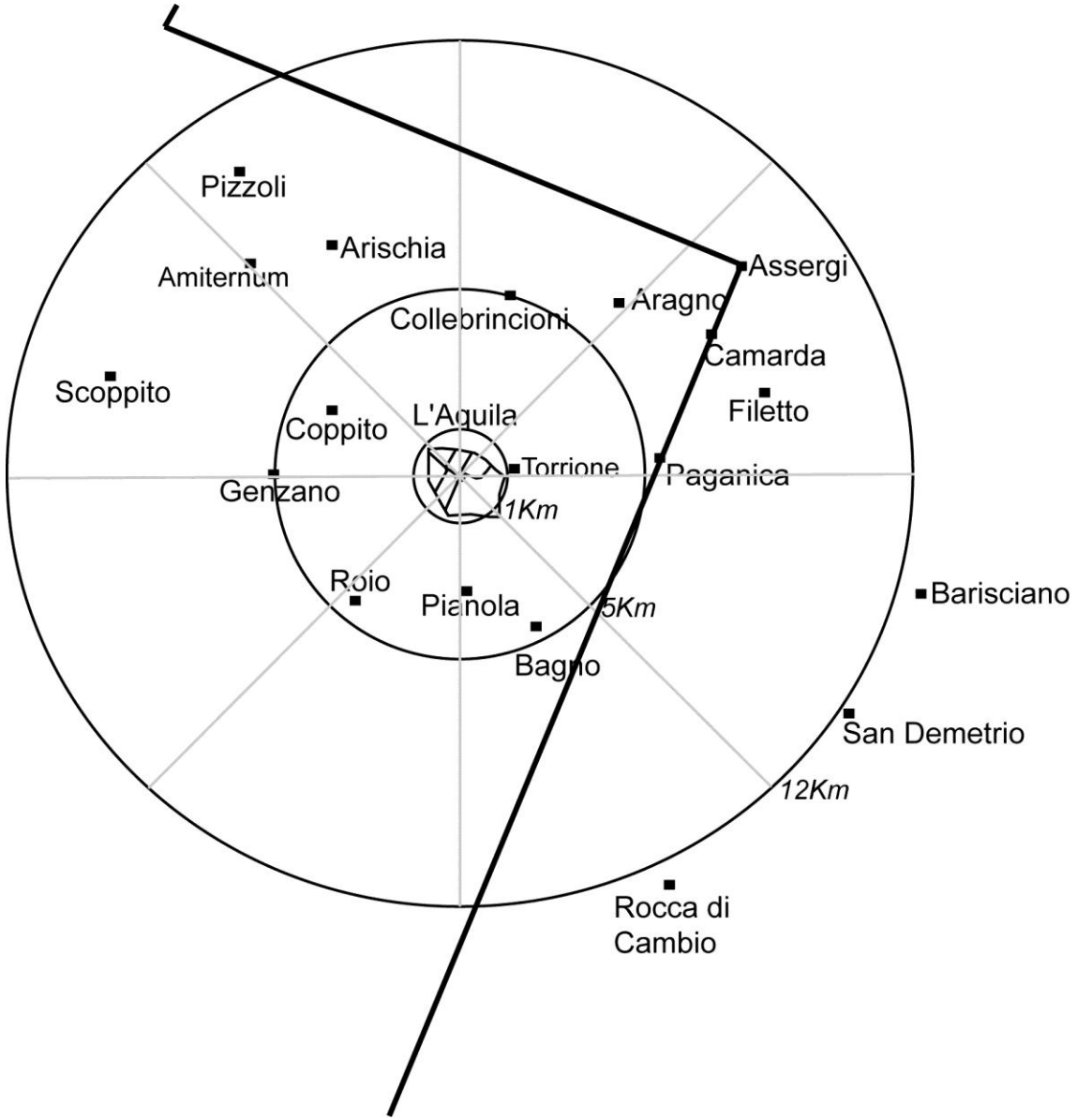
Population Movement



Approaches to Variation

- **Approaches to Variation**
  - **postulate an ideal, non-varying speaker-hearer**
  - **search for yet unknown factors conditioning invariant forms**
  - **acknowledge as free variation**
  - **acknowledge as result of dialect mixing or creolization**
  - **acknowledge that variation is inherent, modeling it directly**
- **In Italy**
  - **Standard Italian is commonest model but native language or few or none depending upon definition**
  - **Dialects continue in vigorous, if waning, use.**
  - **Regional Italians are the varieties in common use.**
  - **Italian studies of variation in Italian tend toward dialect-mixing models (Trumper 1993).**
- **The presence of multiple dialects in many Italian speech communities complicates the analysis of variation within any one.**
  - **Investigate variation in one variety in one speech community, Regional Italian in L'Aquila, Abruzzo.**

Giammarco Aquilano/Abruzzian Dialects



Abruzzian Vowel Systems

Classical Latin	Vulgar Latin	Standard Italian	Aquilano-Reatino	Western Abruzzian	Eastern Abruzzian	Teramano
Ī	I	i	i	i	i	i
Ĭ	ẹ	e	e	e/_# Ɛ/_C#	E	a
Ē						
Ĕ	Ę	E	E			
Ā	A	a	a	a	a	
Ă						
Ŏ	Ǫ	O	O	o/_# Ɔ/_C#	O	
Ō	ọ	o	o			
Ŭ						
Ū	U	u	u	u	u	u

Aquilano retains vowel distinctions (Giammarco 1985).

neva, eta, fredda, vedova

prEta pEkera, lEbbre

Dialects to the east show progressive simplification of the vowel system.

Variation in Dialects of Abruzzo

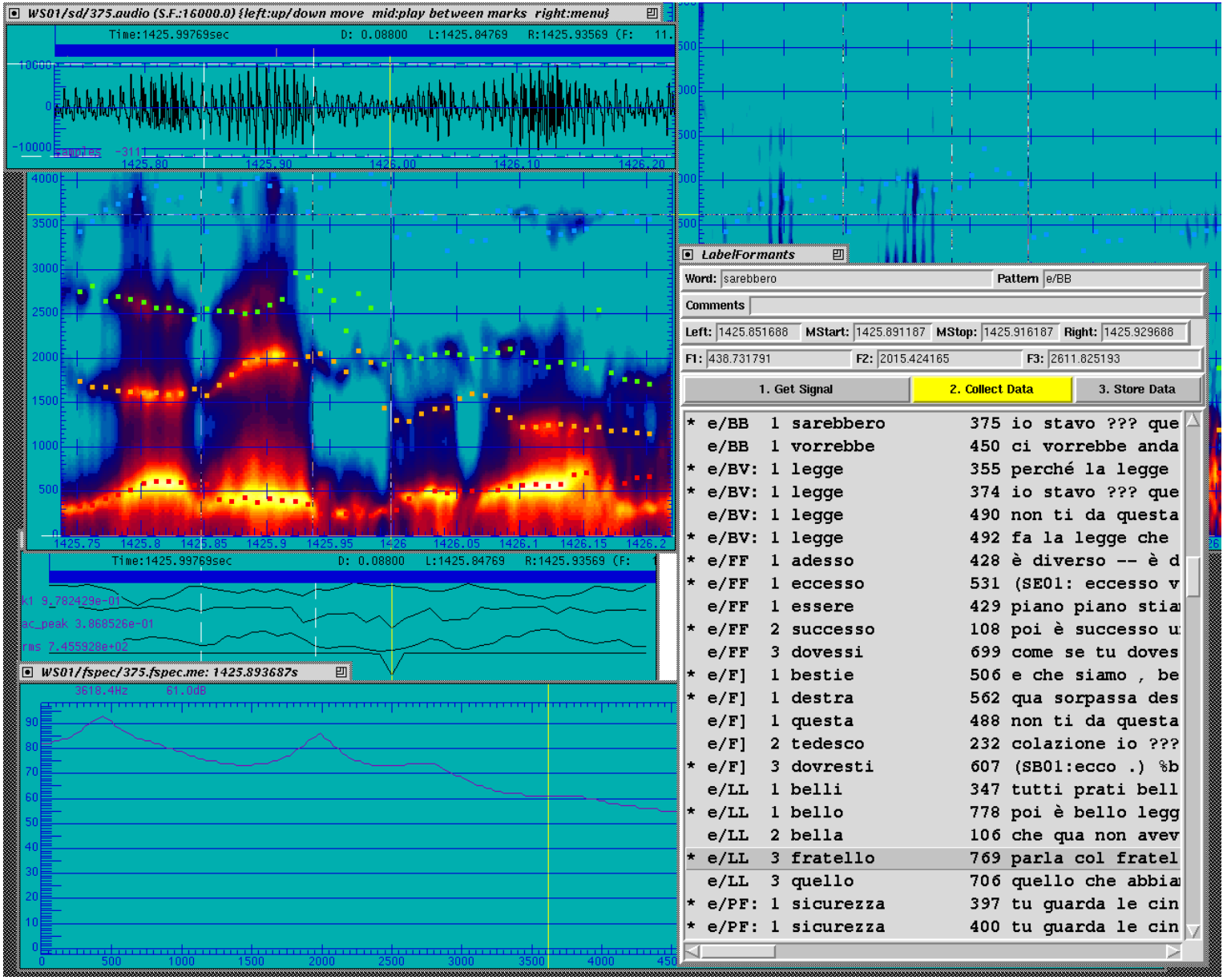
- **Avolio's Atlante Linguistico ed Etnografico Informatizzato della Conca Aquilana (ALEICA) confirms transitional band between central and southern Italian dialects passing inside the municipal territory of L'Aquila.**

- **The reinterpretation, previously unattested, of final /★/ as /e/ in Assergi and Bagno in the dialect of older women (Avolio 1995).**

Methodology

- **Rickford (1979) sets tone**
  - **"An important principle of the new approaches to variation is accountability to a corpus of empirical data"**
- **Data from**
  - **sociolinguistic interviews plus formal elicitation from**
  - **81 subjects of which 31 analyzed for this work**
  - **interviews completely transcribed with time-alignment**
  - **tokens selected and segmented at word and focus (vowel) level**
    - » **each vowel * each phonetic environment * each situation**
  - **F1-3 hand measured based on LPC, DFT, spectral slice, F0**
  - **additional QC for outliers, normal distribution**
  - **yielding 7016 tokens**
  - **Independent variables**
    - » **sex, age, SEC, domicile, distance/direction from city center, inside/outside wall, A/F axis, dialect type, dialect frequency, dialect attitude, preceding & following phonetic environment, situation, interviewer**

Formant Analysis



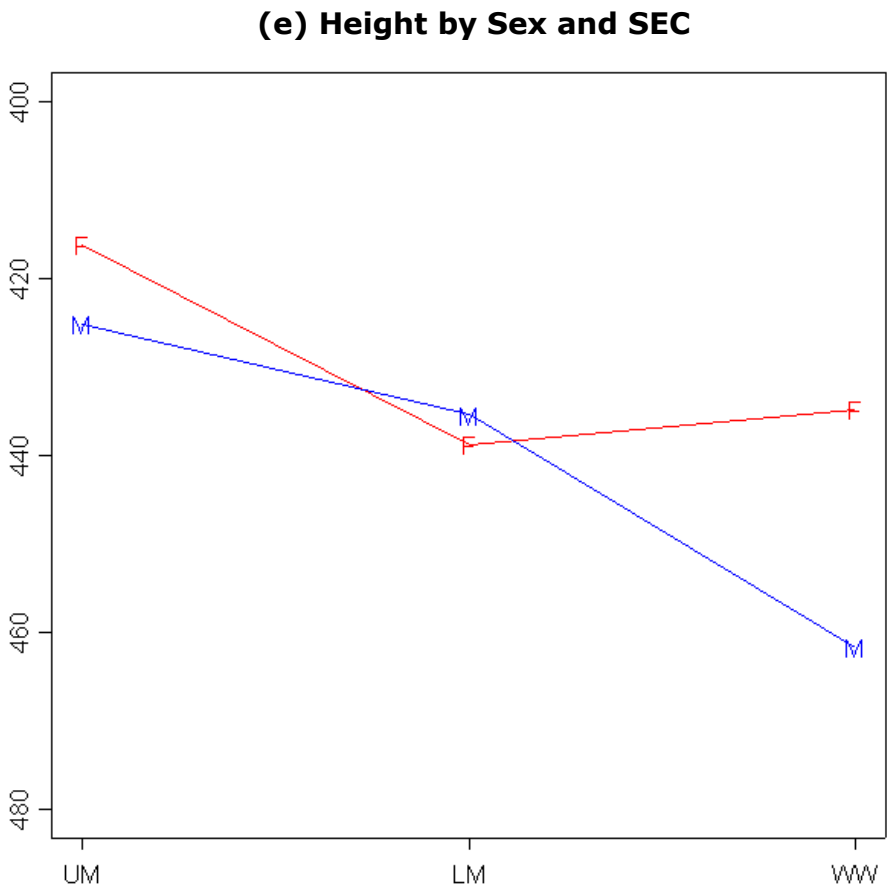
Token Selection

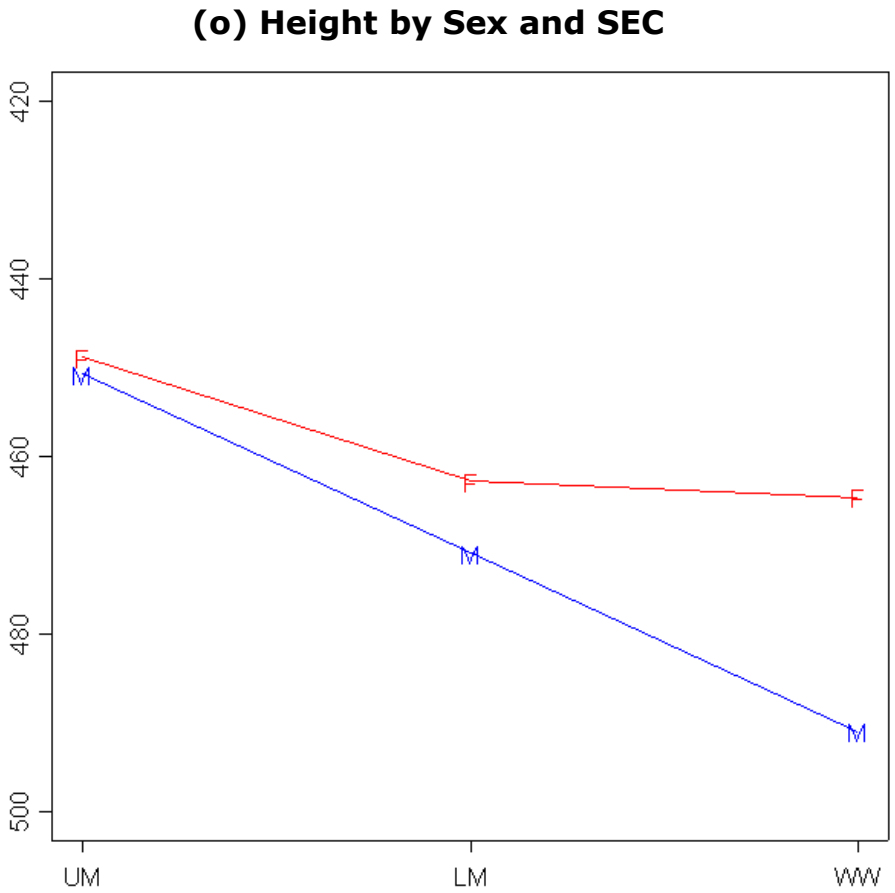
Vowel Segmentation

Identification of central tendency of word stressed vowel

Hand checking of formant tracker values for F1 and F2

e/o Height by Sex, SEC





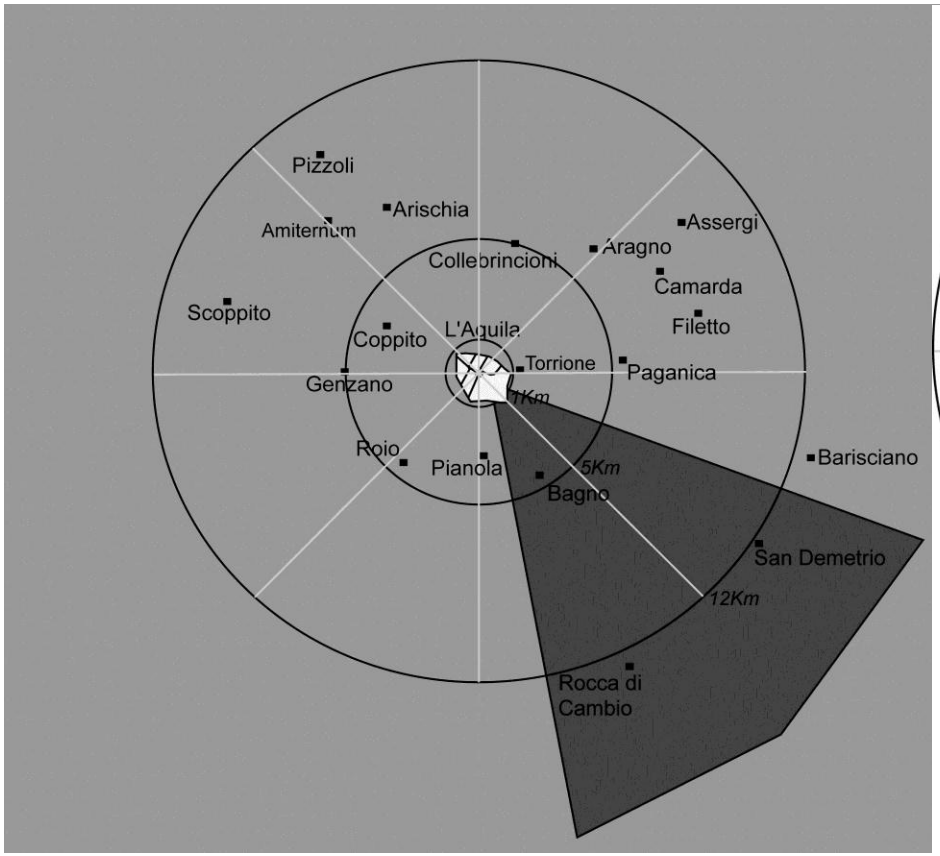
No significant phonetic effect

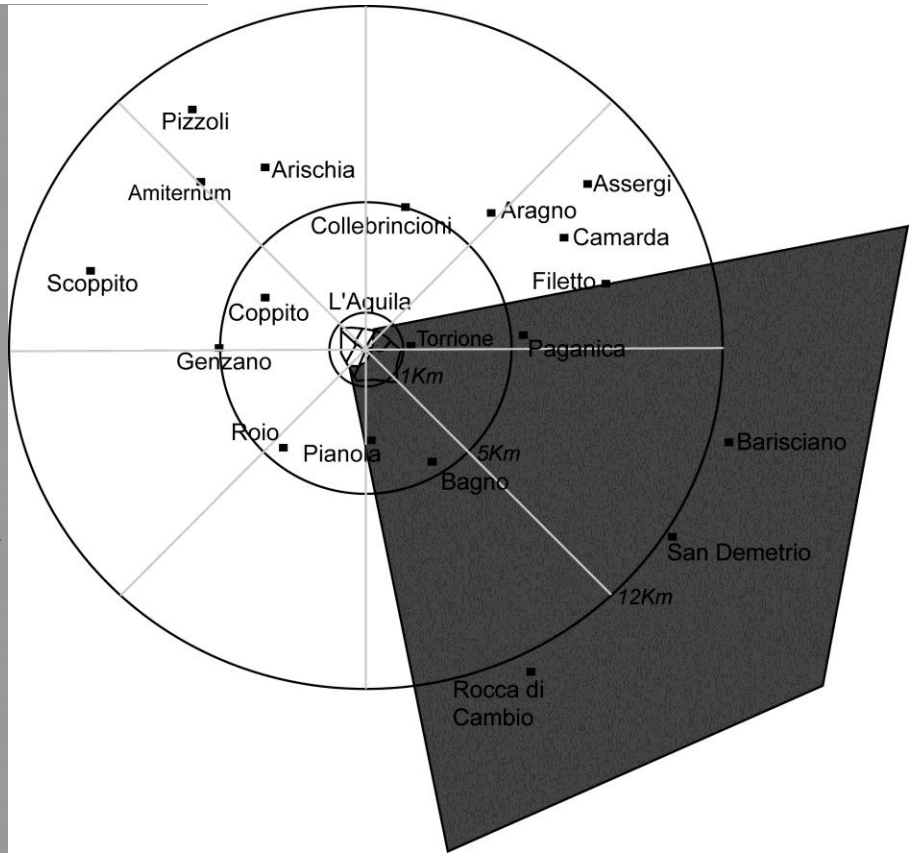
No effect for age or sex

Little effect for distance from city, wall

No effect for position on A-F axis

e/o Height by SEC, Domicile

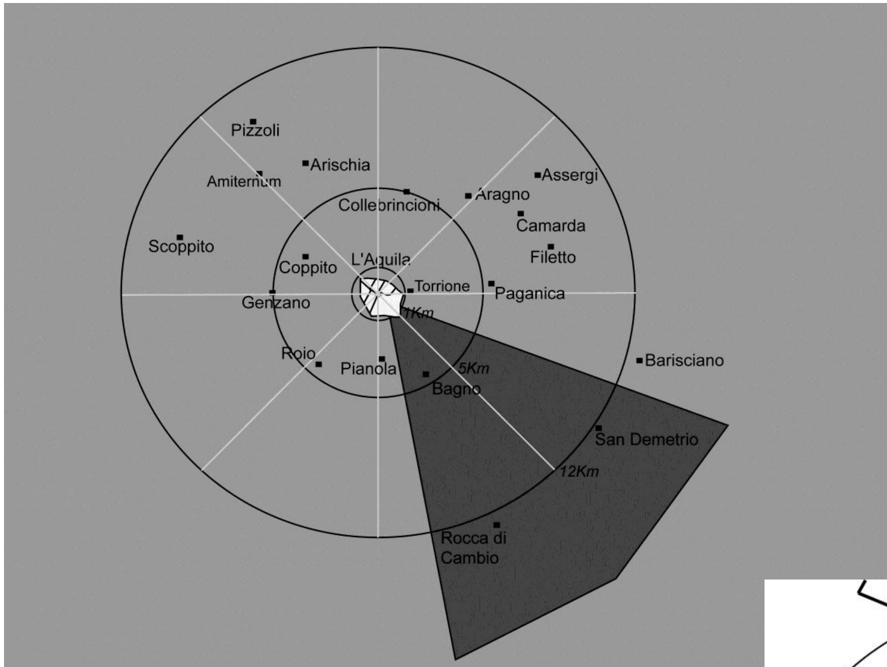


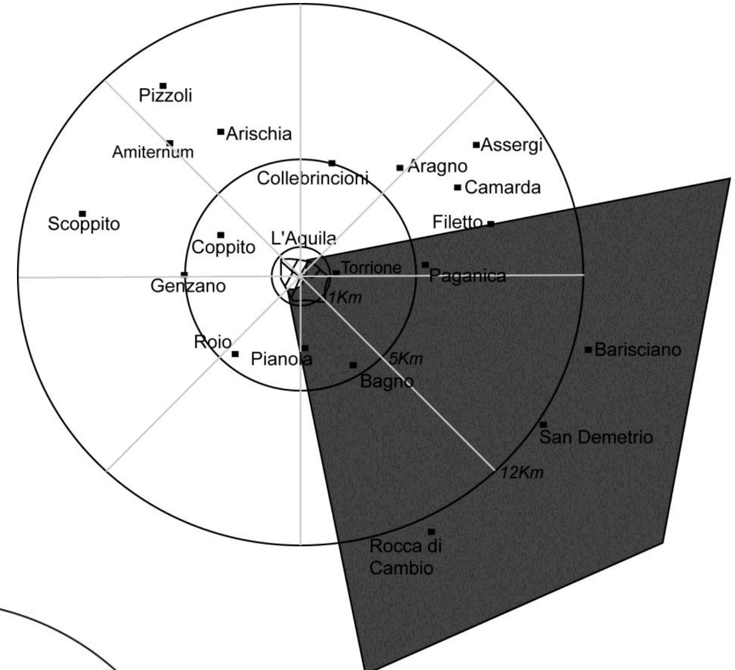


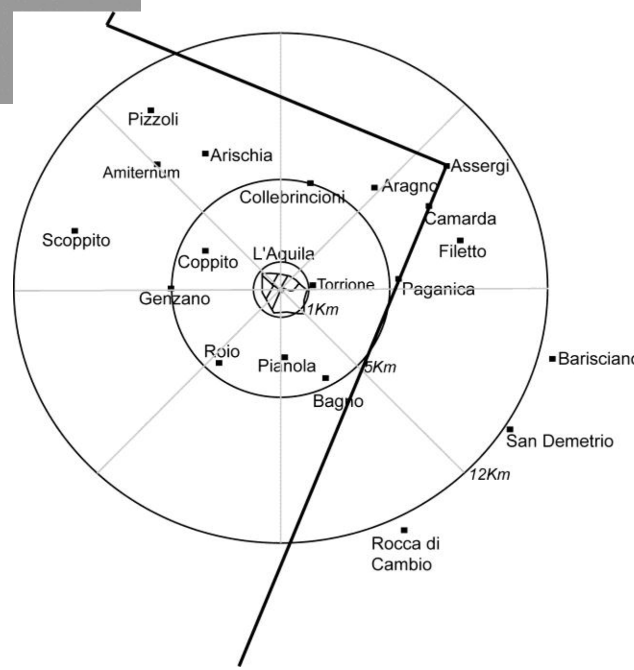
white = higher than average, dark = lower than average

UM ~ Center, LW ~ SE, LW-F ~ UW-F

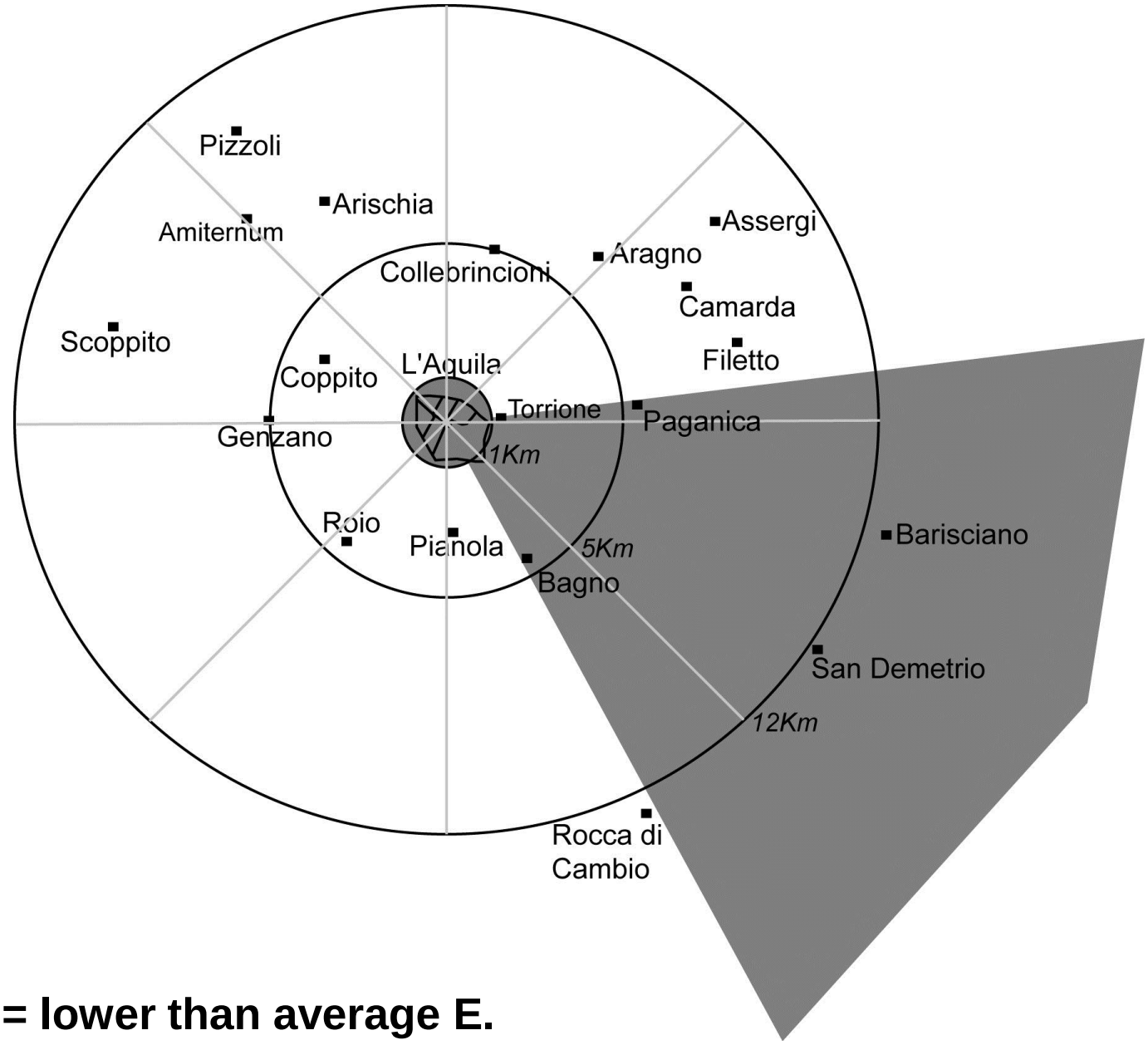
e Height by SEC, Domicile







E Lowering by Local, Interlocutor

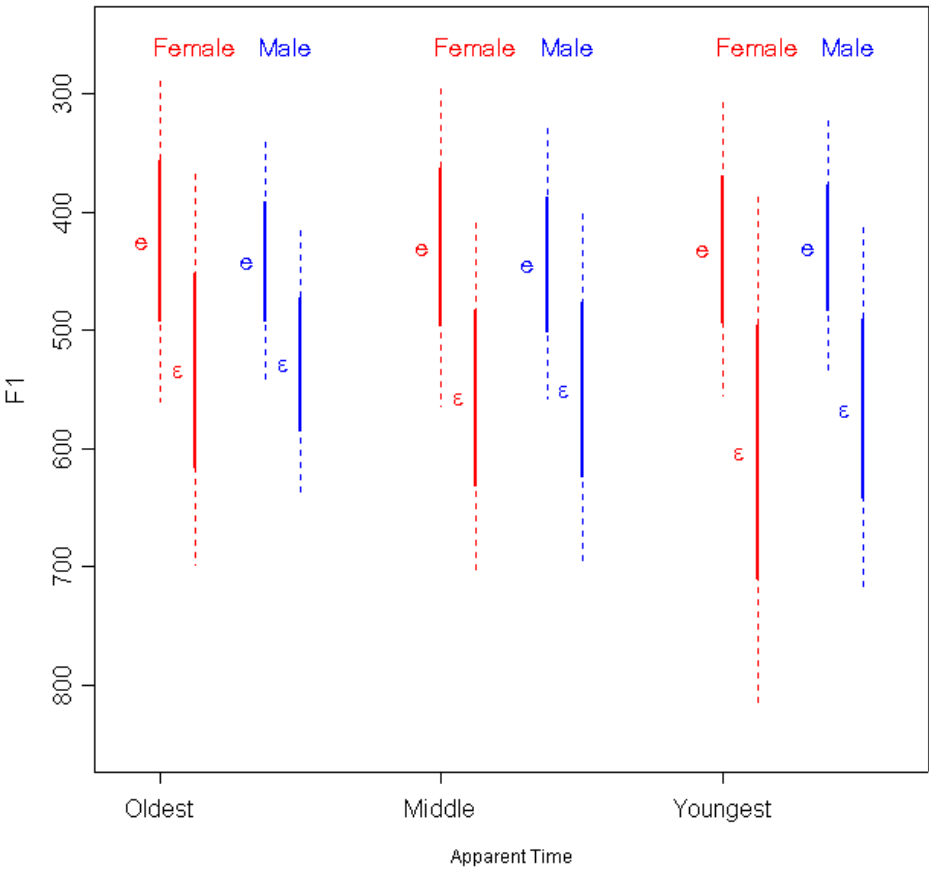


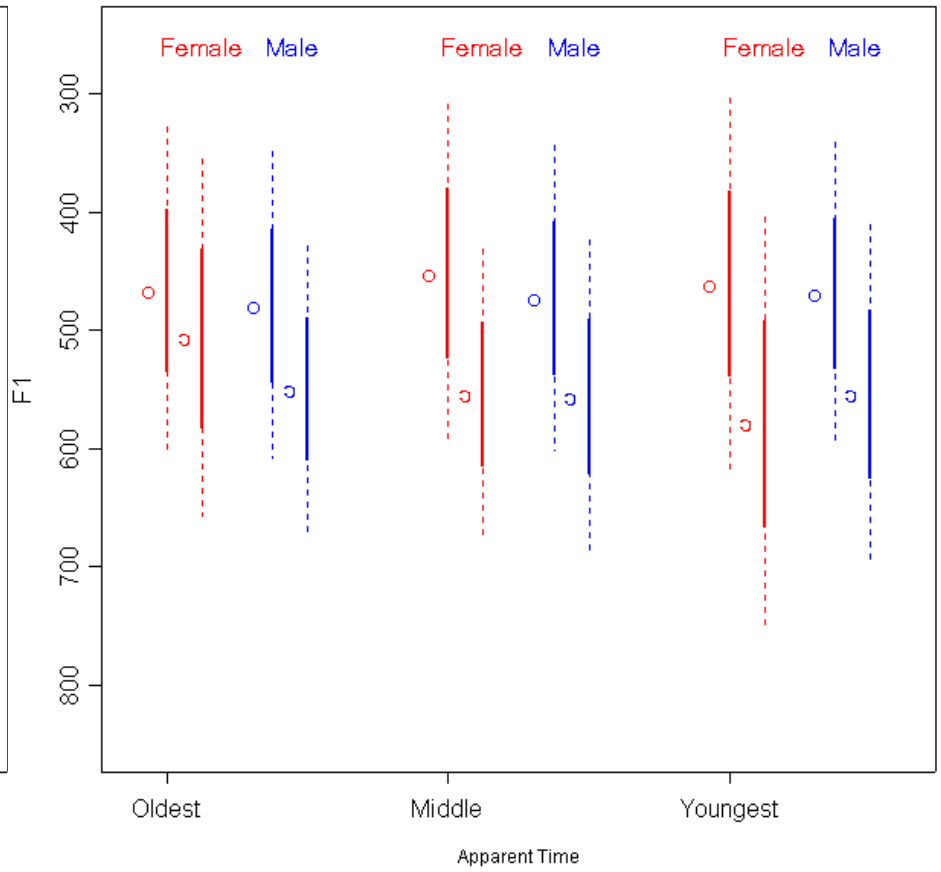
- **Dark gray area = lower than average E.**

E/O Lowering by Interviewer

Interviewer	F1 of /E/	F1 of /O/
CC	570	564
Patrizia M.	529	523

Overall Effect





- **(c)**
  - **realization of ci or ce as [ʃ] instead of [t ʃ]**
  - **Significant: PreEnv, Sex**
  - **Not: FolEnv, Age, SEC, Age*SEC, Situation, Interviewer, Distance, Wall, A-F Axis, Center-SE-West**

PreEnv	#	C	G	V
	16%	2%	2%	91%
Sex	**Female**	**Male**		
	47%	55%		

(c)

```
Call:
lm(formula = Code ~ PreEnv + Sex)

Residuals:
     Min       1Q   Median       3Q      Max
-0.95277 -0.13770  0.04723  0.11680  1.00740

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept)  0.13770    0.01910   7.211 1.15e-12 ***
PreEnvC     -0.14510    0.02662  -5.451 6.41e-08 ***
PreEnvV      0.74551    0.02213  33.691  < 2e-16 ***
SexM         0.06957    0.01904   3.654 0.000273 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.2875 on 932 degrees of freedom
Multiple R-squared: 0.6707,     Adjusted R-squared: 0.6696
F-statistic: 632.8 on 3 and 932 DF,  p-value: < 2.2e-16
```

(sCC)

- **(sCC)**
  - **realization of str, spr or scr as [ʃ] instead of [s]**
  - **Significant: PreEnv, AgeGroup, Sex, SEC**
  - **Not: FolEnv, Situation, Interviewer, Distance, Wall, A-F Axis, Center-SE-West**

PreEnv	#	V	
	7%	19%	
AgeGroup	Youngest	Middle	Oldest
	5%	5%	42%
Sex	Female	Male	
	3%	25%	
SEC	UM	LM	WW
	1%	15%	38%

(sCC)

```
Call:
lm(formula = Code ~ PreEnv + AgeGroup + Sex + SEC)

Residuals:
     Min       1Q   Median       3Q      Max
-0.53156 -0.15537 -0.04286  0.06542  0.90580

Coefficients:
            Estimate Std. Error t value Pr(>|t|)
(Intercept) -0.23655    0.07177  -3.296 0.001099 **
PreEnvV      0.12244    0.03516   3.482 0.000573 ***
AgeGroup     0.10829    0.02770   3.909 0.000115 ***
SexM         0.15962    0.03535   4.516  9.1e-06 ***
SECUM       -0.05960    0.04212  -1.415 0.158100
SECWW        0.16119    0.04776   3.375 0.000836 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.2976 on 297 degrees of freedom
Multiple R-squared: 0.287,      Adjusted R-squared: 0.275
F-statistic: 23.91 on 5 and 297 DF,  p-value: < 2.2e-16
```

Conclusions

- **e/o Height**
  - **stable sociolinguistic marker, no evidence of change in progress**
  - **lower SECs, less formal situations produce lower variants**
  - **sex effect limited to WC women who seem to hypercorrect**
  - **center of L'Aquila produces > outside city center > the South and East**
  - **frequent dialect speakers produce lower e**
  - **correlation of higher forms with higher SEC, formality, domicile in city center and less frequent dialect speech and hypercorrection of WC women suggest that Height associated with urbanity and class.**
- **E/O Lowering**
  - **E change in progress, younger subjects produce lower E than older**
  - **women, subjects living in center/SE, lower SECs also tend to produce lower E**
    - » **except WW class women seem to hypercorrect to a higher E**
  - **lower E appears in less formal situations**
  - **subjects interviewed by native accommodate to her higher E**
- **c**
  - **Stable, unconscious, linked to phonetic environment and sex**
- **sCC**
  - **conscious**
  - **change nearly finished?**
  - **Still present among oldest, WW males**

Conclusions

- **Variationist method seems appropriate if applied carefully.**
  - **no correlation of vowels to suggest variation results from dialect switching**
  - **consider new variables to account for data**
  - **each variable behaves differently though similarities between e/o and E/O**

	e	o	ɛ	ɔ	c	sCC
PhEnv		✓	✓		✓	✓
Age			✓	✓		✓
Sex		✓	✓	✓	✓	✓
SEC	✓	✓	✓	✓		✓
Age*SEC	✓	✓	✓	✓		
Situation	✓	✓	✓	✓		
Interviewer			✓	✓		
Distance	✓	✓				
Wall	✓	✓		✓		
A-F Axis						
Center-SE-West	✓	✓	✓	✓		