

Individual differences in convergence and sound change

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Who leads language change?

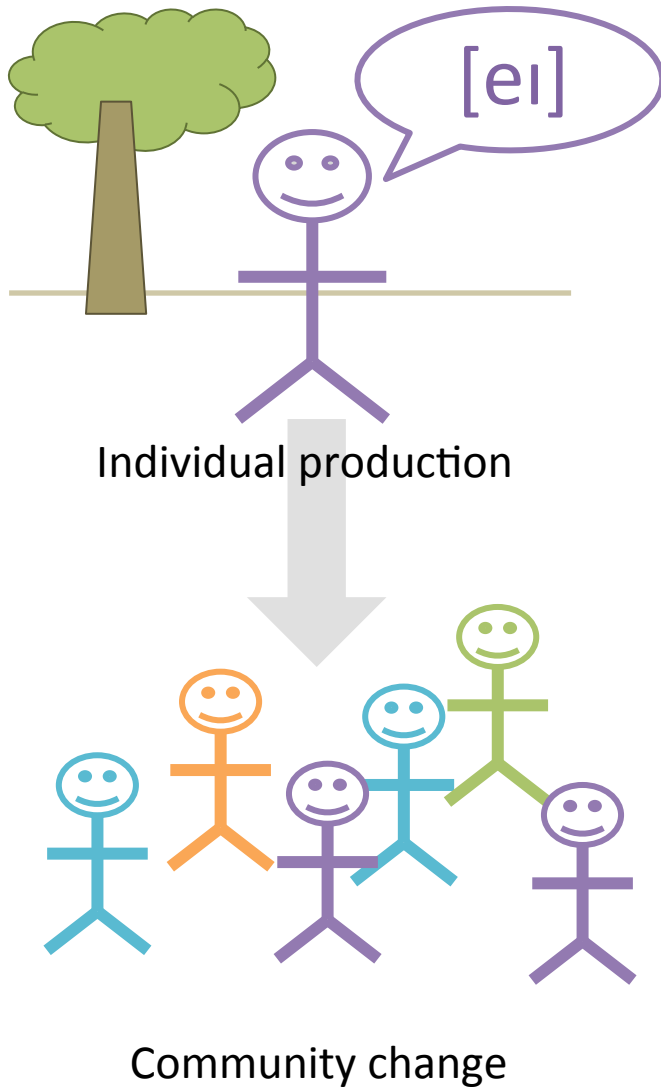
“The basic strategy of this pursuit of the causes of change is to identify the leaders of change in progress; in place of the question ‘why?’ I substituted the question ‘who?’.”

Labov 2001: 90

Who leads language change?

- Reflects relationship between the key role of the speaker-hearer as the agent of sound change and the need to identify change at the community level
- Empirical evidence on this relationship has come from both sociolinguistic fieldwork and laboratory experiments

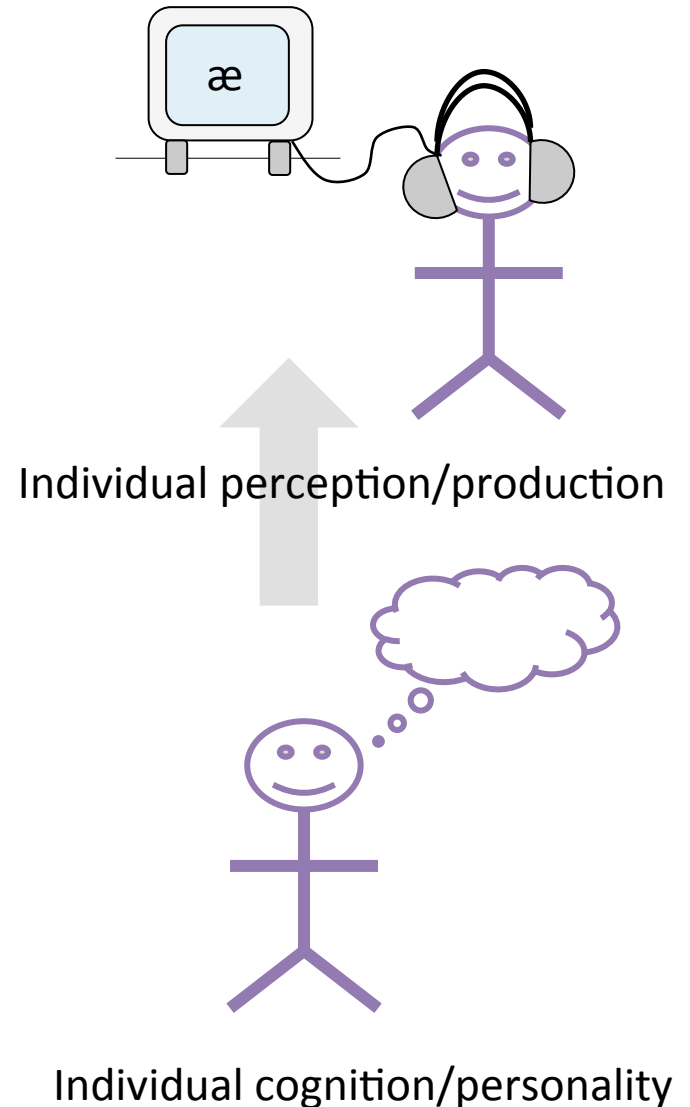
Sociolinguistic fieldwork



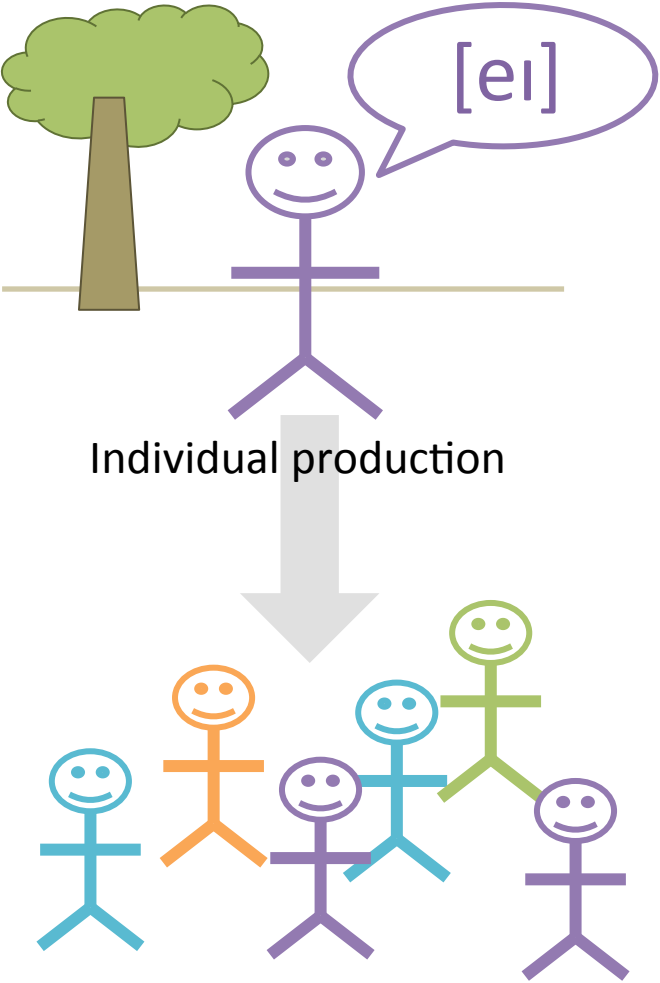
- Demographically, tends to be young women
- Martha's Vineyard, Labov 1972
- “exert more influence than they receive” Labov 2001: 410
- “burned-out burnouts” Eckert 2003
- Denis 2015 gregariousness index

- Stewart & Ota 2008 – inverse correlation between AQ and Ganong effect
- Yu 2010 – less perceptual compensation by low-AQ women
- See also Lev-Ari & Peperkamp 2014, Baese-Berk 2015, Turnbull 2015, Kingston et al. 2015...
- “minimal compensators who are superior empathizers” Yu 2013: 224

Laboratory experiments



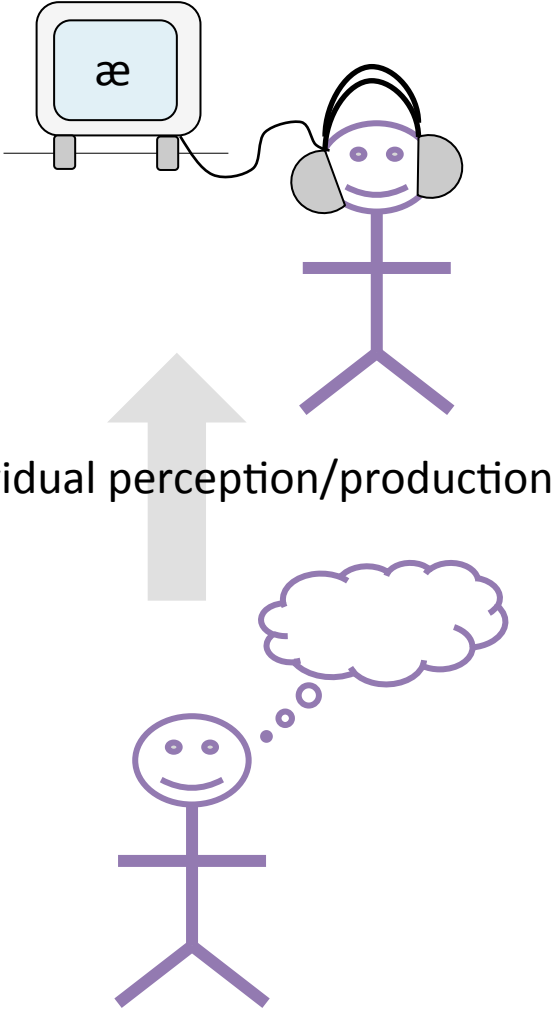
Sociolinguistic fieldwork



Individual production

Community change

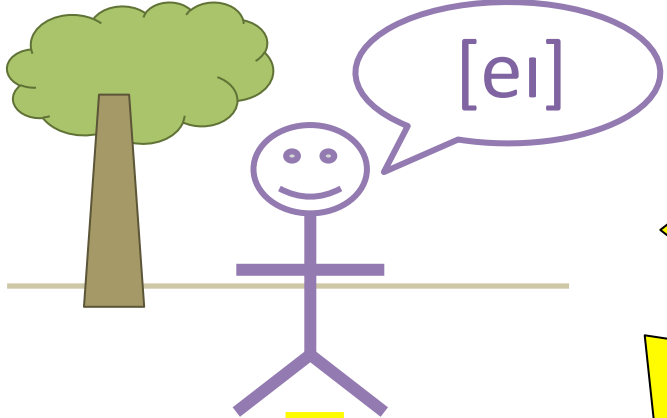
Laboratory experiments



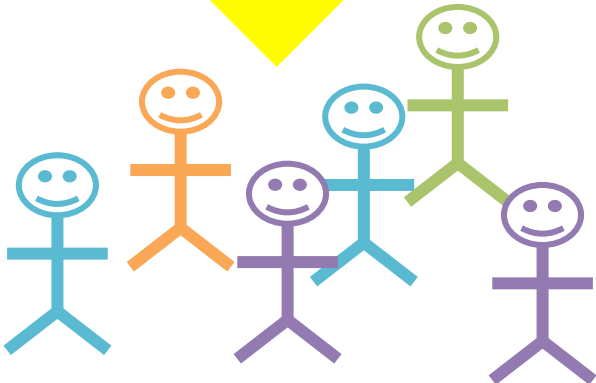
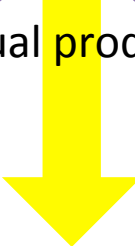
Individual perception/production

Individual cognition/personality

Sociolinguistic fieldwork

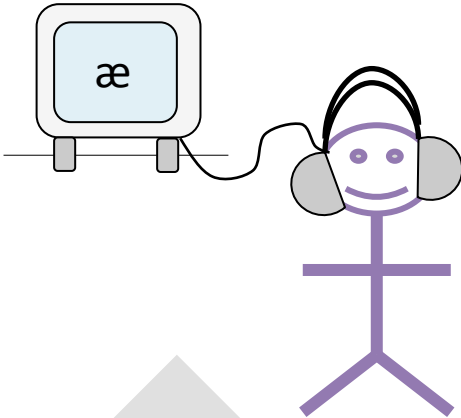


Individual production



Community change

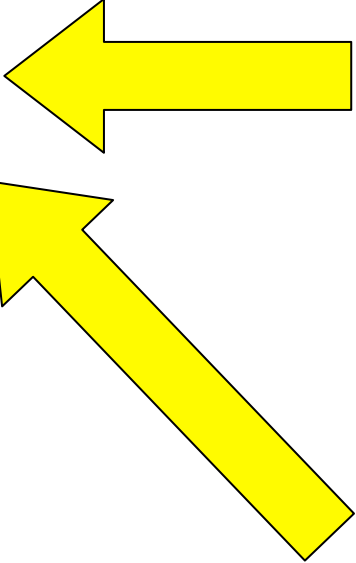
Laboratory experiments



Individual perception/production



Individual cognition/personality



Who leads language change?

- Need to connect what we know about leaders of language change from sociolinguistic fieldwork perspective and laboratory experimental perspective
- New project to combine data from spontaneous speech and experimental performance by same individuals
- Pilot: conversational speech plus individual differences battery (3 hour lab visit!)

Who leads language change?

- Today's agenda: look at some of the thorny problems that we encounter in trying to bridge these lines of research

(Where did the phonemic awareness effects go? Away, with more pilot data.)

Who leads...which change?

- Is there such a thing as a leader of language change, in general? Or is “leader” status relative to particular changes?
- Previous work suggests that covariation across variables is not as robust as might be expected

Who leads...which change?

- Tagliamonte & Waters 2011: covariation across changes only for the newest changes
- Guy 2013: covariation with structurally-related variables, less so for unrelated ones
- Thorburn 2014: only one of 6 pairings of variables correlated
- Oushiro 2016: covariation primarily within dense social networks
- Compare same group of speakers across six ongoing sound changes in Philadelphia

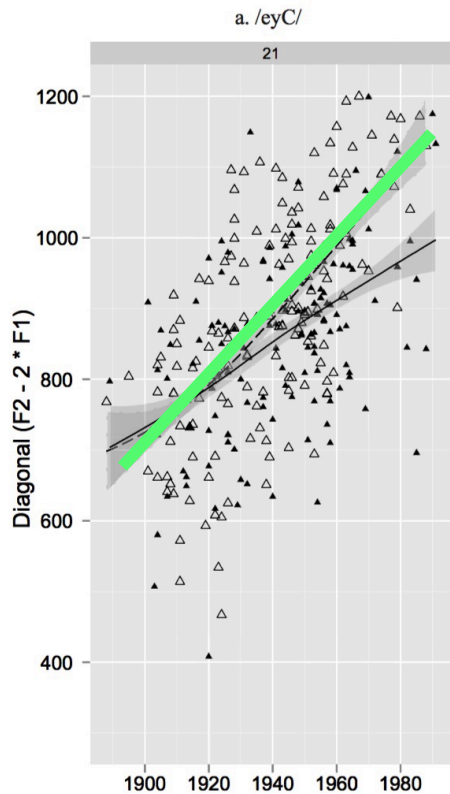


Fig 10

/eyC/ raising

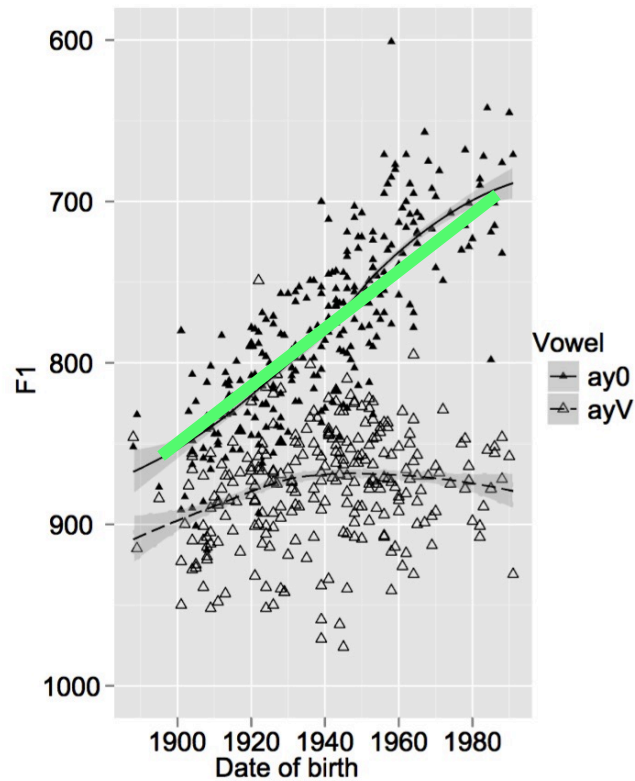


Fig 11

/ay0/ raising

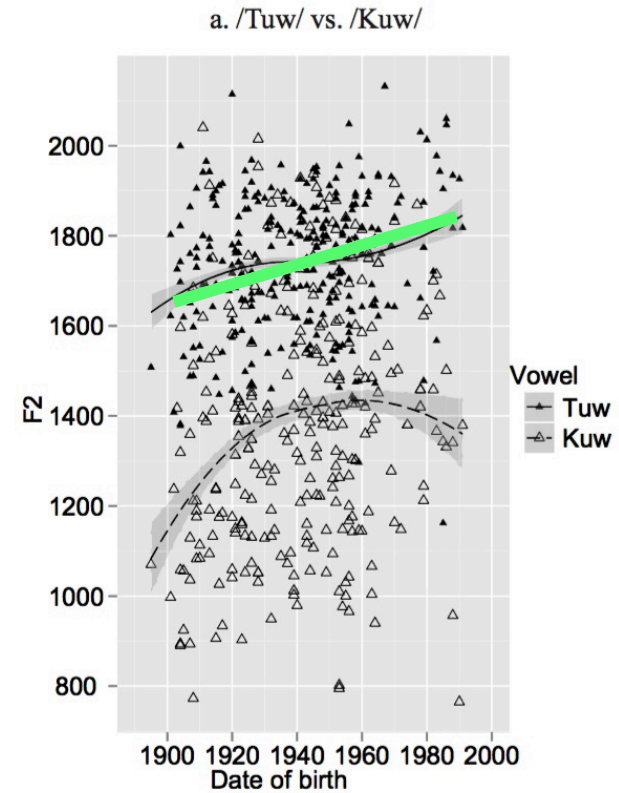


Fig 17

/Tuw/ fronting

Progressing changes from Labov, Rosenfelder & Fruehwald 2013

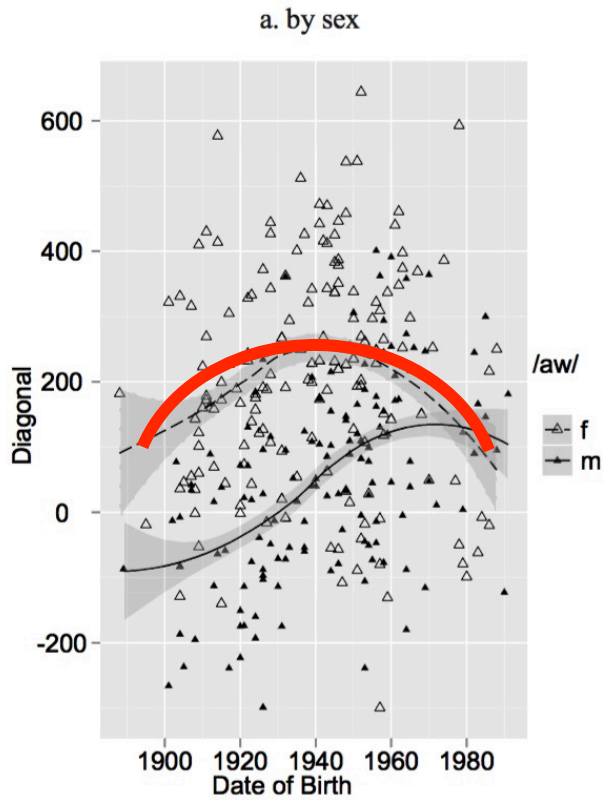


Fig 13

/aw/ raising →
/aw/ lowering

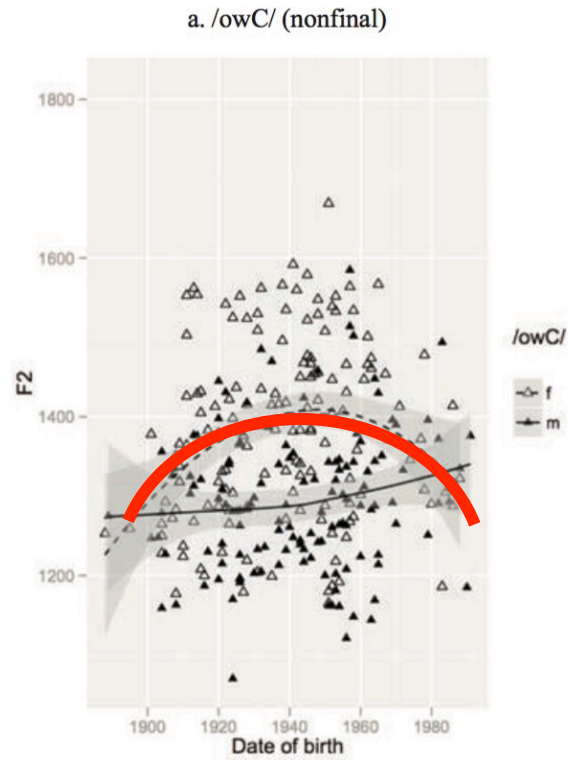


Fig 15

/ow/ fronting →
/ow/ backing

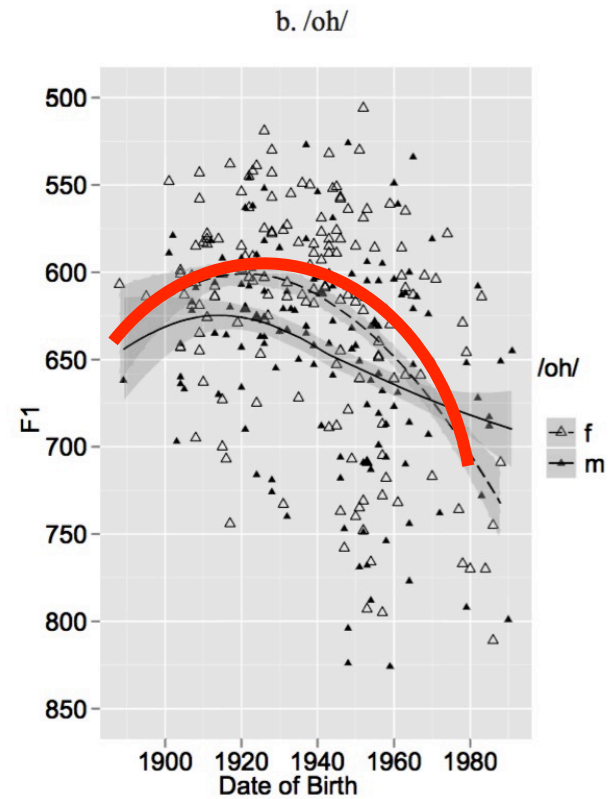


Fig 19

/oh/ raising →
/oh/ lowering

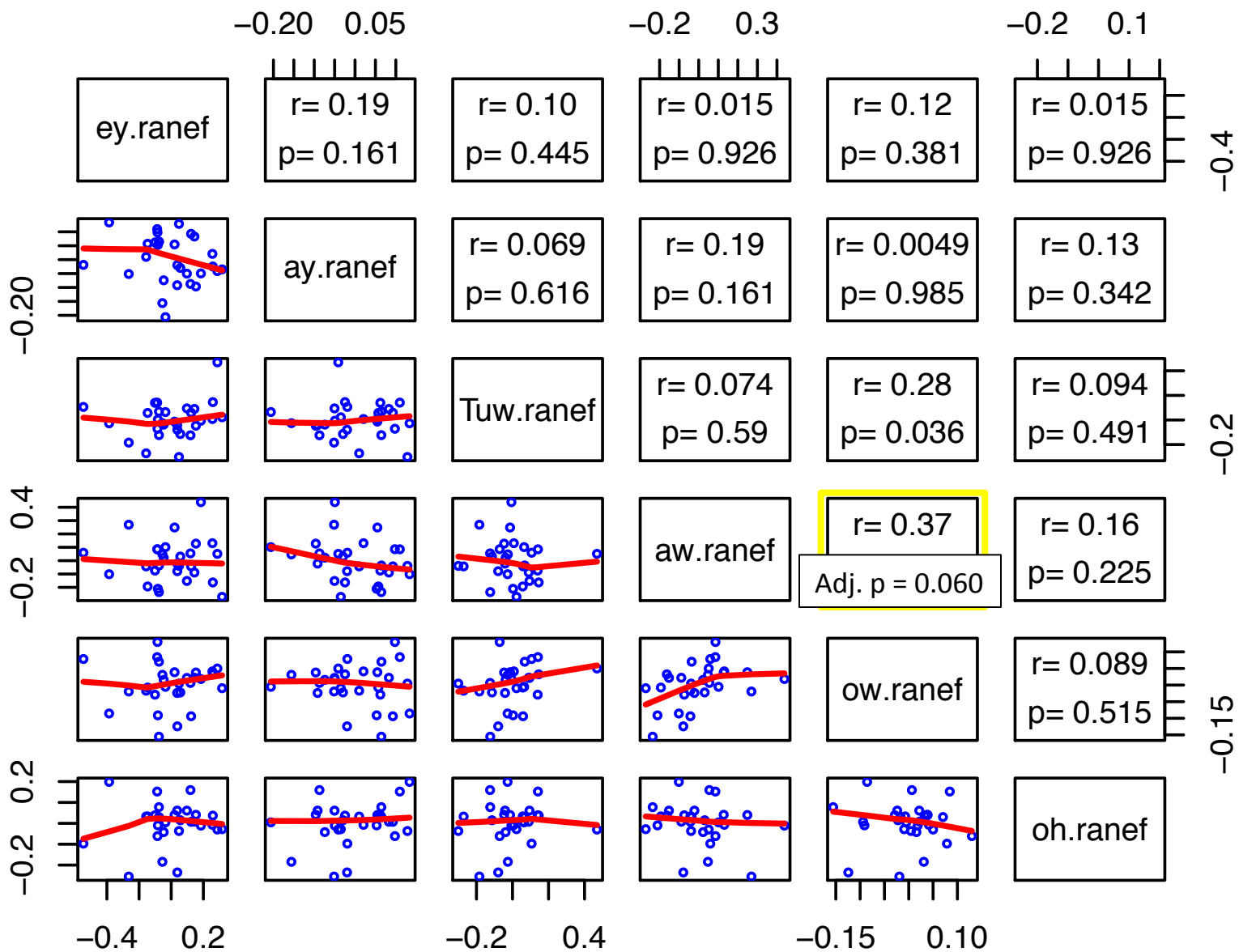
Reversing changes from Labov, Rosenfelder & Fruehwald 2013

Data and methods

- Dyadic conversation between pairs of friends
- 30 young white Philadelphian women 18-25
- Conversations transcribed and FAVE'd
- Separate regression models for each of the six sound changes
 - Lexical frequency
 - Vowel duration
 - Random intercepts for speaker and dyad
 - Preceding segment
 - Following segment

Progressing

Reversing



Who leads...which change?

- Not the case that the young women who have innovative targets for one vowel change are the same ones who have innovative targets for another vowel change...
...even when those changes pattern together diachronically in the community

Implications

- Any single change is not straightforwardly representative of “change” more generally
- Not even as simple as having different theories for different “types” of change
- Theories of what role personality and cognitive style play in sound change will need to be sensitive to different changes

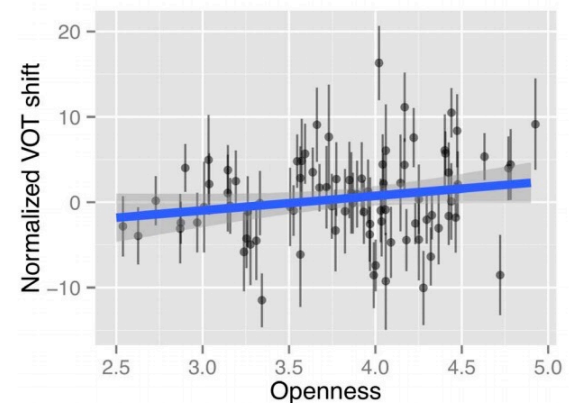
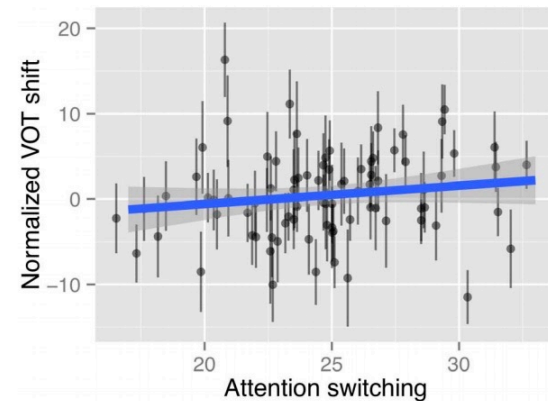
Implications

- Illustrate how this could play out by looking at one of the lab behaviors that is thought to feed into sound change: convergence

Convergence and change

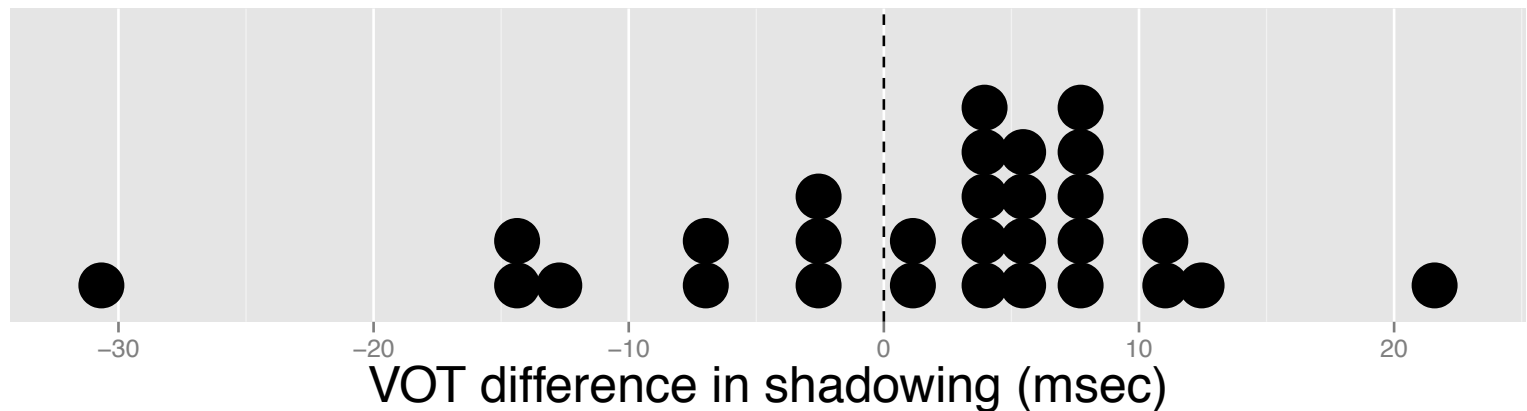
- Phonetic convergence – speaker becomes more similar to their interlocutor (Goldinger 1998, Babel 2009, Nielsen 2011, *inter alia*)
- Socially mediated (Namy 2002, Babel 2010, 2012, *inter alia*)
- Related to broader notion of communicative accommodation (Giles 1973, Coupland & Giles 1988)
- Possible mechanism for propagation of sound change (Trudgill 1986, Auer & Hinskens 2005, Pardo 2006, Sonderegger 2012, Babel et al. 2014, Nguyen & Delvaux 2015, *inter alia*)

- Yu, Abrego-Collier and Sonderegger 2013:
amount of convergence depends not just on
listener's attitudes toward model talker, but
also listener traits
 - Openness
 - Conscientiousness
 - Attention switching



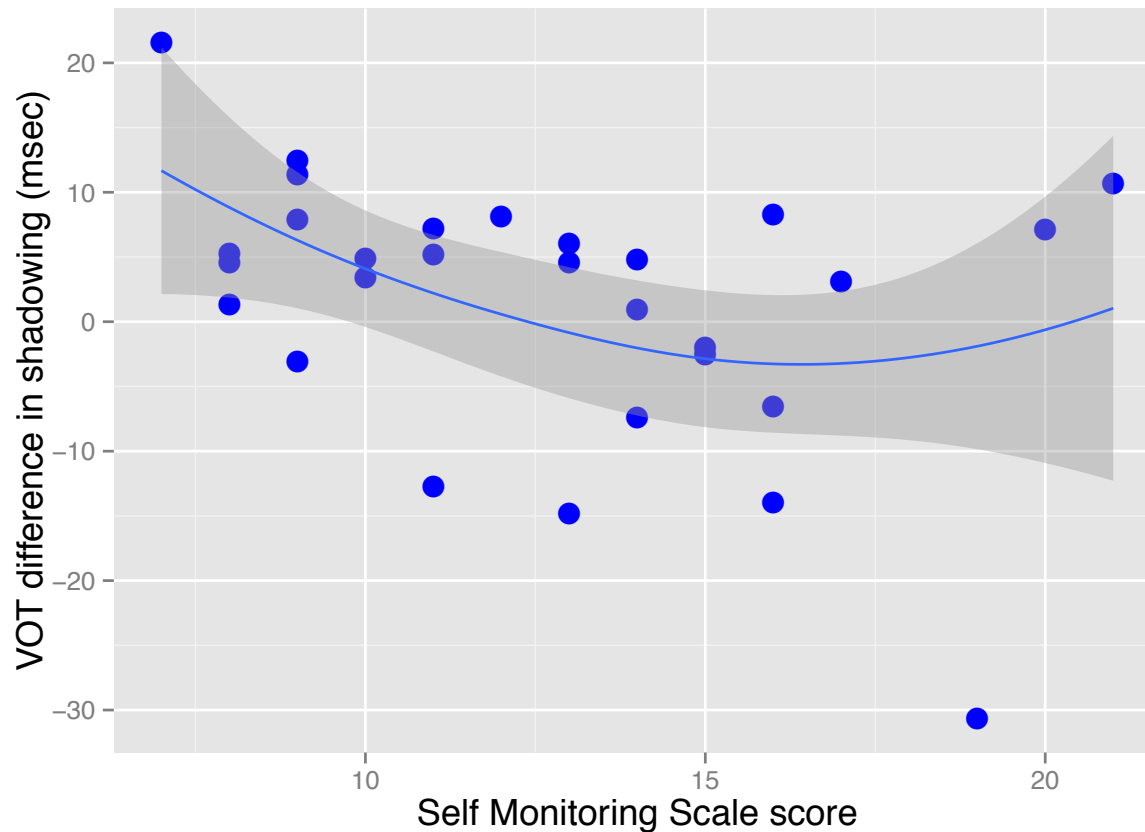
from Fig 2

- Shadowing task with model talker's word-initial voiceless stop VOT extended 100%
 - Natural mean = 57 msec, manip. mean = 114 msec
- Replication of Shockley, Sabadini & Fowler 2004, Experiment 2
- Participant baseline from reading condition



- Linear regression on convergence amount, with other predictors from the individual differences battery
- Personality scales included:
 - **Interpersonal Reactivity Index** (Davis 1983) – Empathic Concern for less fortunate others
 - **Iowa-Netherlands Comparison Orientation Measure** (Gibbons & Buunk 1999) – tendency to evaluate self in relationship to others
 - **Self-Monitoring Scale** (Snyder 1974) – social restraint, conformity to social norms

- Only significant predictor of convergence in shadowing is SMS score (social restraint)
- Speakers with lower SMS scores converge more



A possible story

- Maybe social restraint inhibits adoption of other people's speech features
- So maybe low-SMS individuals should lead change because they impose their speech on high-SMS others

Do SMS/convergence correlate with change?

- Residualized convergence on SMS
- Included both convergence' and SMS in vowel-wise linear regressions on the vowel-wise speaker random intercepts

Do SMS/convergence correlate with change?

- Significant effect of convergence only for /ow/
- Direction: participants who converge more are more advanced in the /ow/ retraction change
- Not the predicted direction
- No particular reason to expect that change alone to be related to convergence

Further issues

- *We know* that listener attitudes towards the model talker strongly affect convergence
 - How much is an individual prone to converge in circumstances where they like their interlocutor?
- *We don't know* whether tendency to converge is a stable property of individuals
 - Working on a test-retest study

Conclusions

- Theories of sound change from the laboratory should be tested against spontaneous speech data on change in progress in speech community
- But doing so is really complicated!
- These complications are not merely logistical – they are at the heart of the relationships that we are interested in

Thank you!

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Slides will be on my website:

www.meredithtamminga.com

Special thanks to Elisha Cooper, John McGahay,
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Other battery components

- Perceptual compensation
- Forward digit span (verbal working memory)
- Gaze cueing (joint attention sensitivity)
- Repetition priming
- Phonemic awareness
- ING matched guise