

**The apple doesn't fall far from the
tree: Incremental change in
Philadelphia families**

Sabriya Fisher, Hilary Prichard, Betsy Sneller
University of Pennsylvania

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Outline

- Introduction
- Short-a systems
- Low back merger
- Discussion

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Parents vs. Peers

- Children initially acquire the vocalic system of their parents, but change to match peer input before adolescence (Payne 1980, Johnson 2010).
- Children's systems can be projections of their parents' systems (Sankoff 2008).

Higher Education

- Higher education affects individual language use (DeDecker 2006).
- Type of college attended affects whether local norms are maintained (Prichard & Tamminga 2012).

- How does the initial (parental) pattern acquired affect the transition to new (peer) grammatical systems?
- We examine parent-to-child transmission of the short-a system and low back merger in Philadelphia using the families of 3 undergraduate women at the University of Pennsylvania.

Variables

- Philadelphia short-a system
 - Recent work in Philadelphia describes a shift in the phonology of the short-a system: some native Philadelphia college students are abandoning the local split system in favor of the more geographically-widespread nasal system (Labov et al. 2013)
- Low-back distinction
 - Previous work has also noted a parallel weakening of the low-back vowel distinction (Prichard and Tamminga 2012).

Methods

- Data
 - IHELP (the Influence of Higher Education on Local Phonology)
 - Interview: modules on social networks, growing up in Philly, transition to college
 - Formal methods: semantic differential, wordlist, and minimal pairs conducted by trained interviewers.
 - 2,632 tokens were automatically extracted using the FAVE suite (Rosenfelder et al. 2014).
- Analysis
 - Pillai score

The Lyons Family

- **Penn interviewer: Christine, age 20**
- Dad: Antonio, age 55
- Mom: Theresa, age 55
- Brother: John, age 22
- Brother: Rocco, age 15

- Irish/Italian American

The Vos Family

- **Penn interviewer: Percia, age 19**
- Dad: Harry, age 53
- Brother: Nate, age 10

- Jewish/Persian American

The Chase Family

- **Penn interviewer: Athena, age 18**
- Mom: Farrah, age 41
- Sister: Fabiola, age 15
- Sister: Danielle, age 14

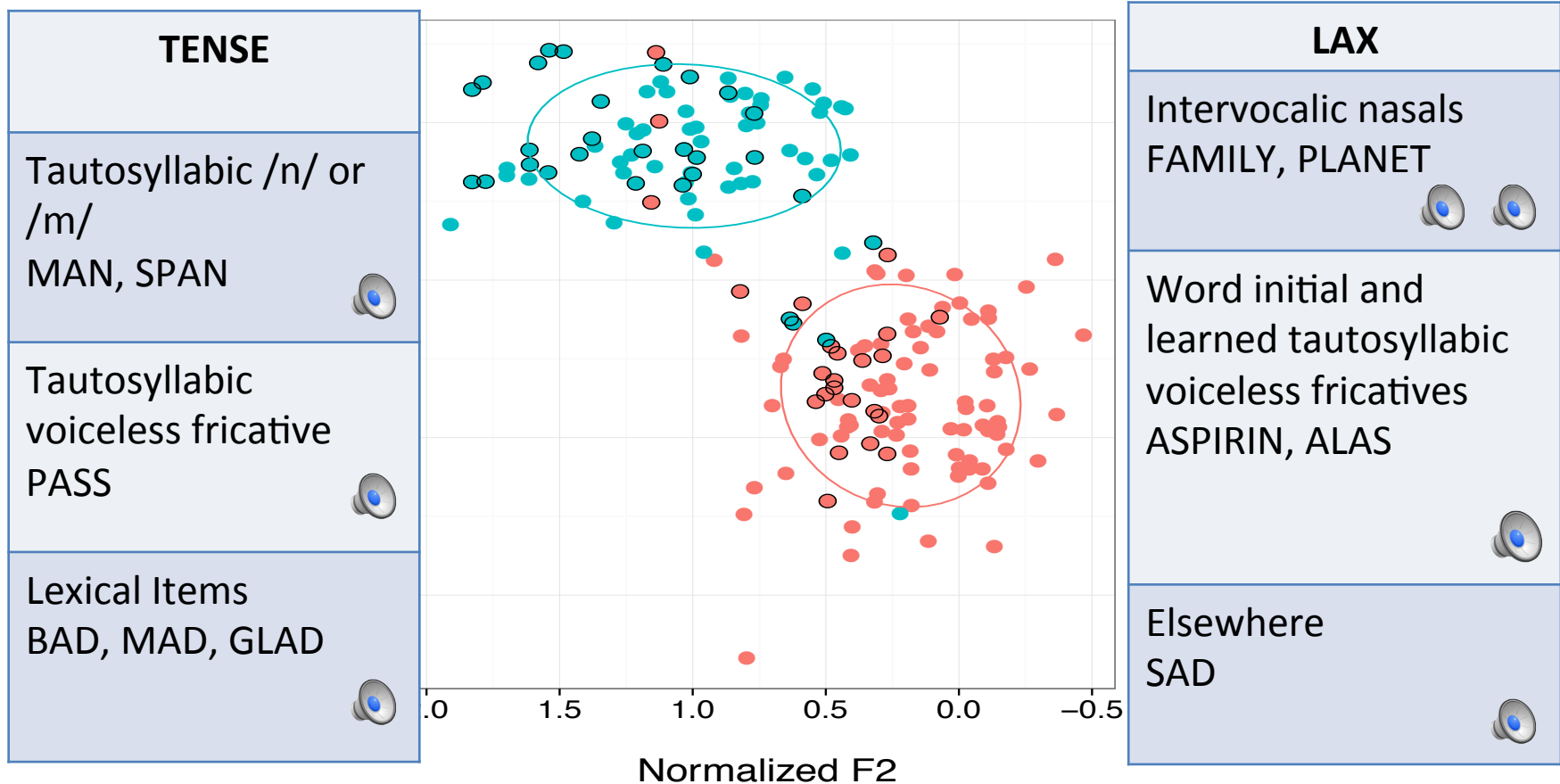
- African American

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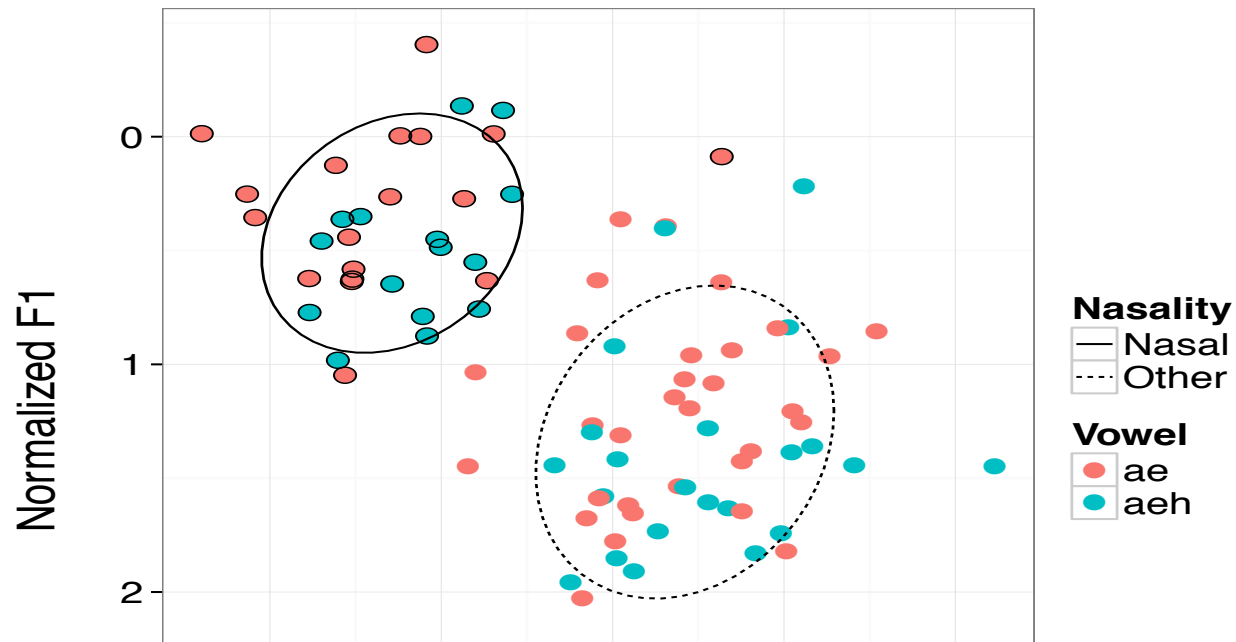
Traditional Philadelphia Short-a System

- Split between tense (aeh) and lax (ae)



Nasal Short-a System

- Split between tense (aeh) and lax (ae)



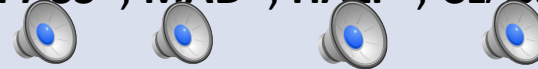
TENSE

Before ALL nasals
HAND, PLANET*, BANG*



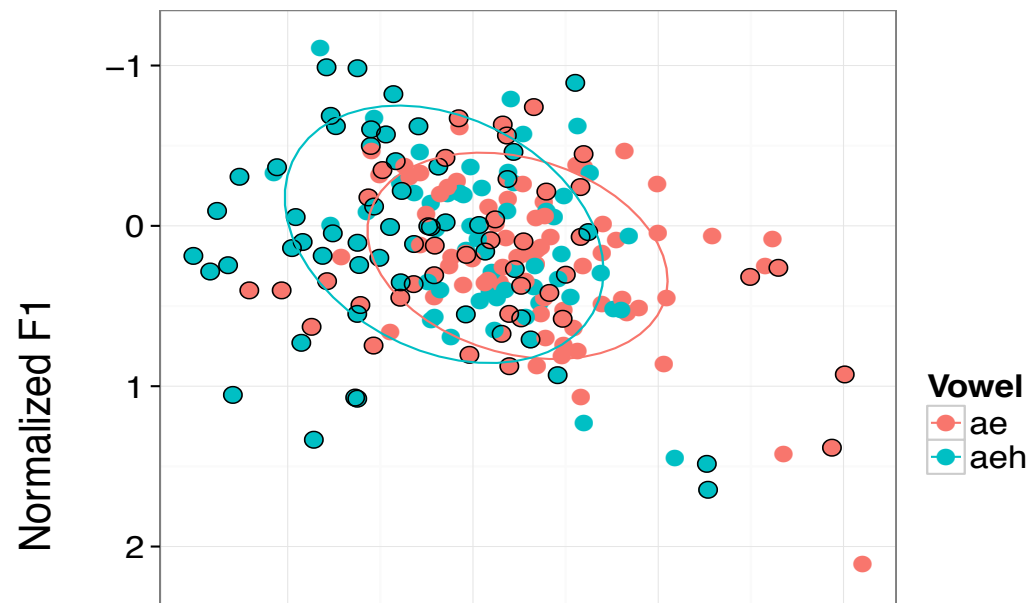
LAX

Elsewhere
PASS*, MAD*, HALF*, CLASSIC,



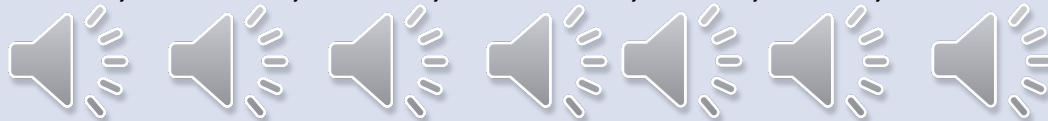
AAVE Short-a System

- Neutralized system



ALL

MAN, PLANET, CLASS, CLASSIFY, MAD, HALF, ASPIRIN

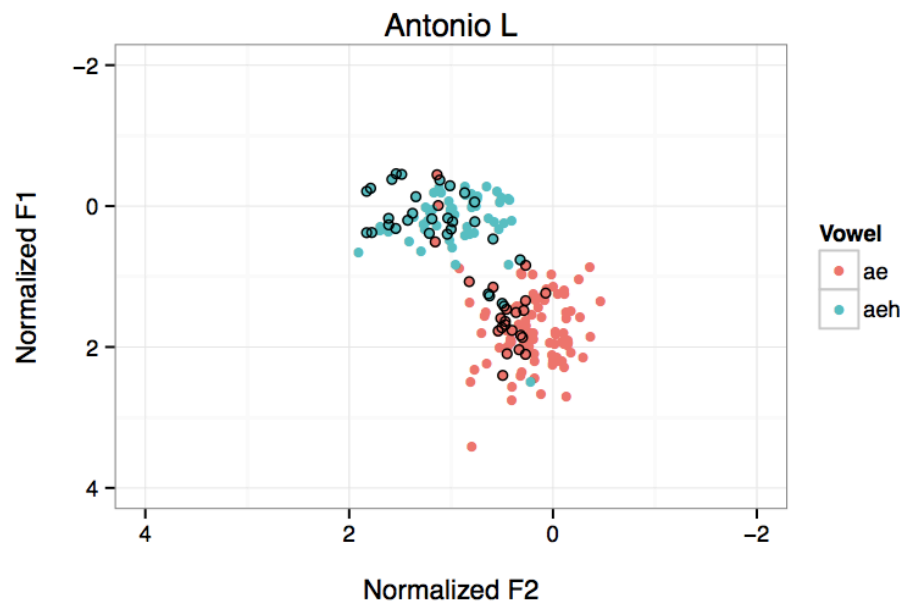


Normalized F2

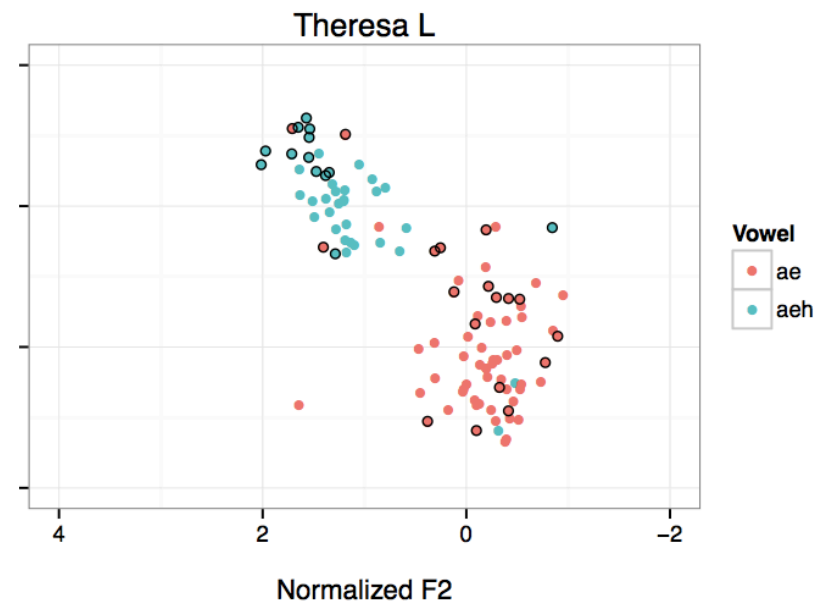
Lyons family

Lyons family – parents

- Strong Philadelphia system

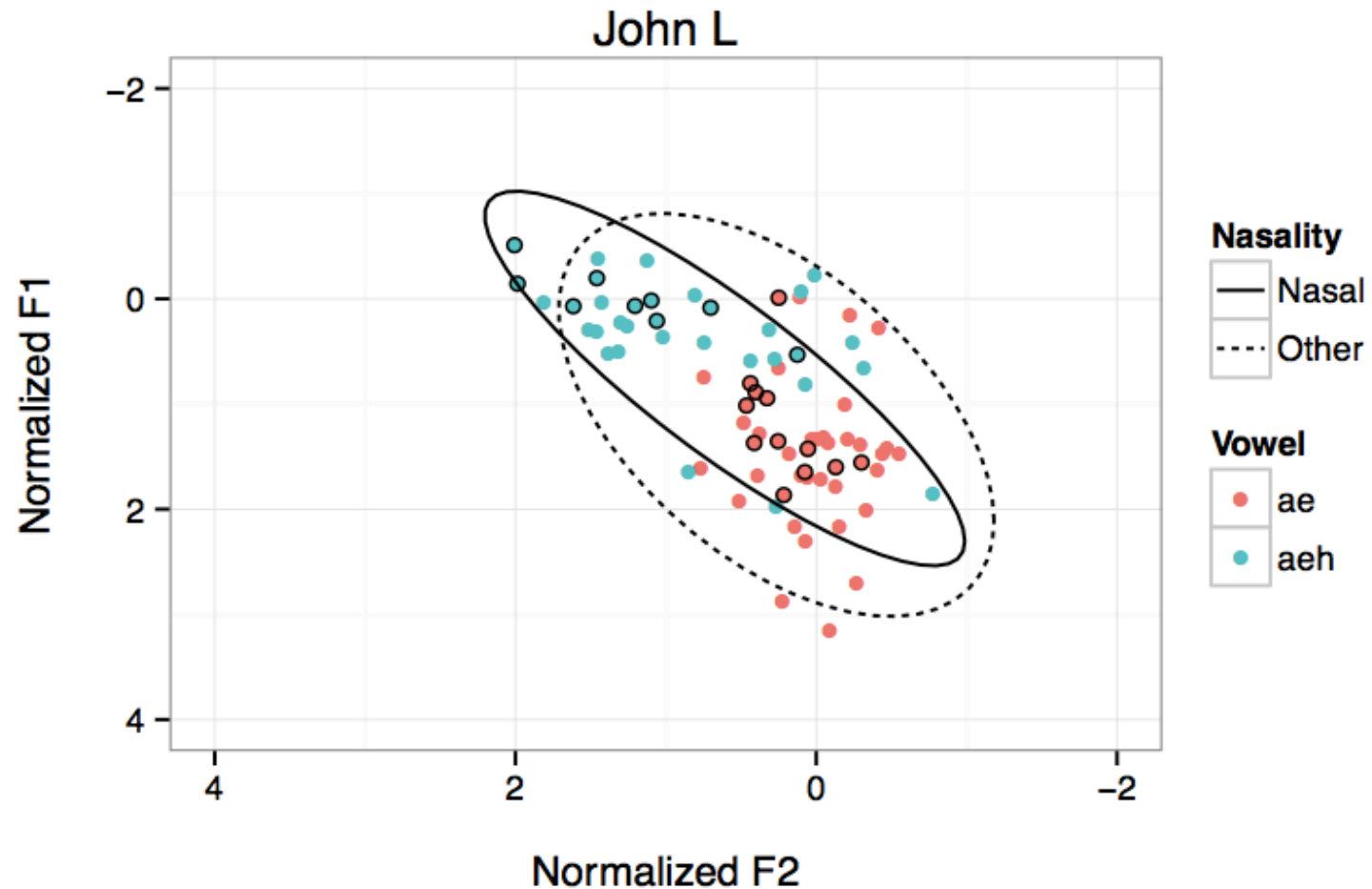


Pillai Philadelphia = 0.74
Pillai Nasal = 0.12



Pillai Philadelphia = 0.62
Pillai Nasal = 0.11

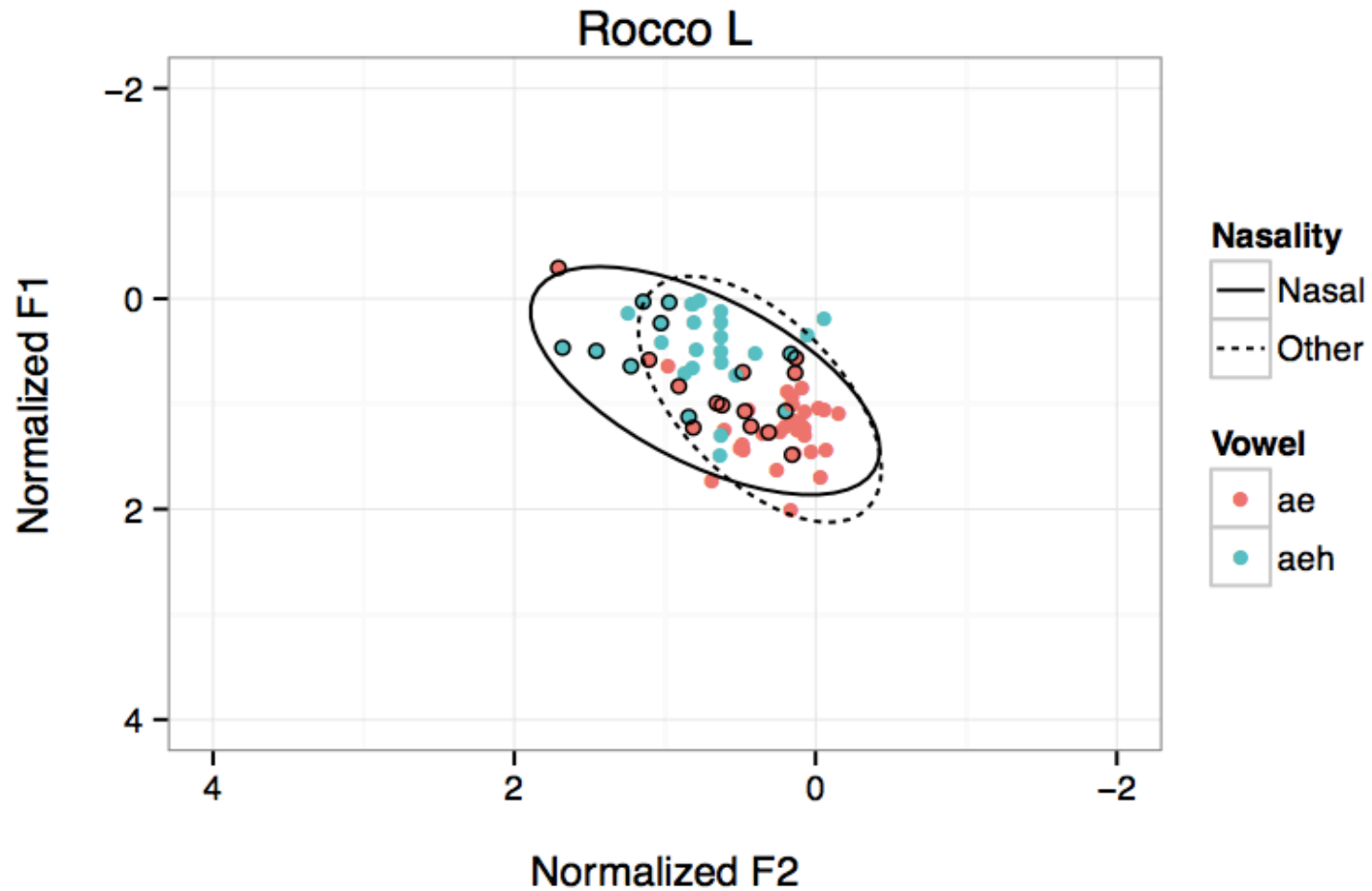
Lyons children – John (age 22)



Pillai Philadelphia = 0.51

Pillai Nasal = 0.06

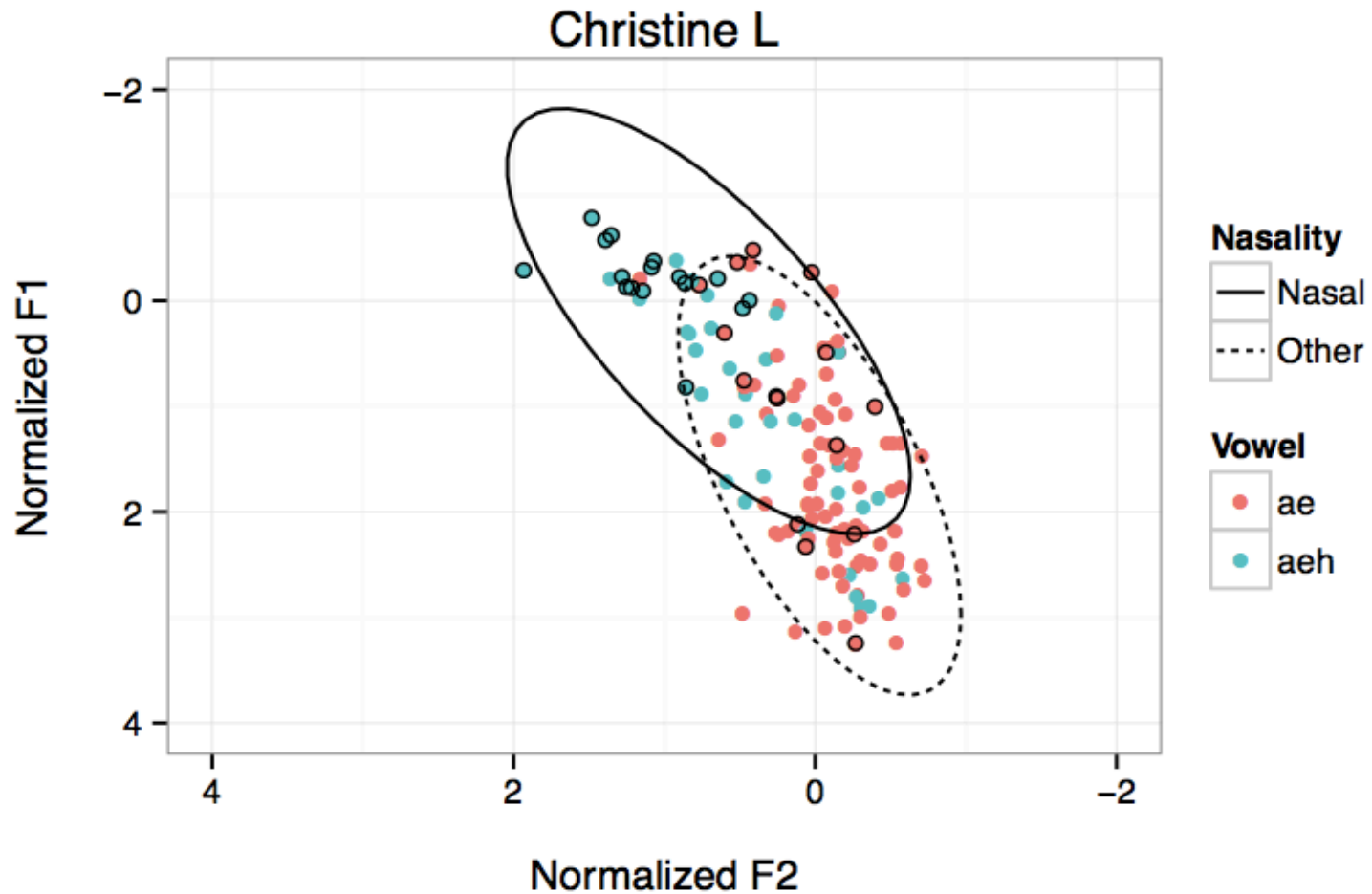
Lyons children – Rocco (age 15)



Pillai Philadelphia = 0.45

Pillai Nasal = 0.15

Lyons children – Christine (age 20)

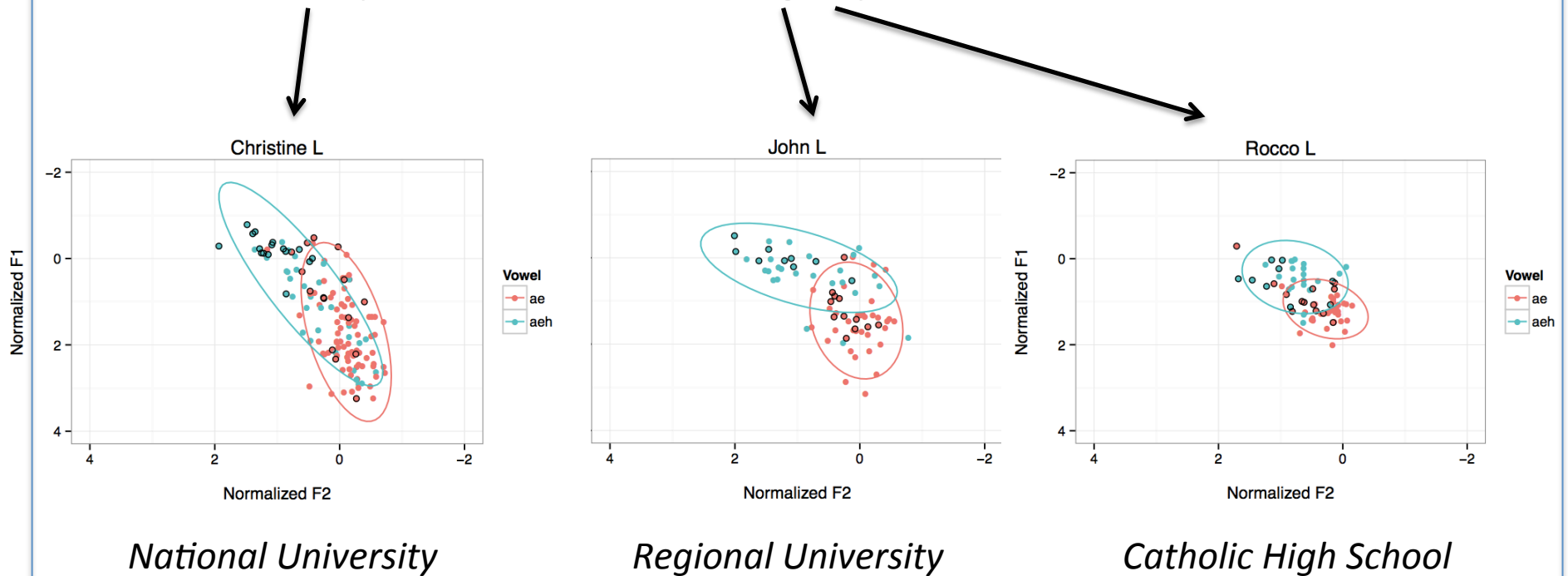


Pillai Philadelphia = 0.33

Pillai Nasal = 0.26

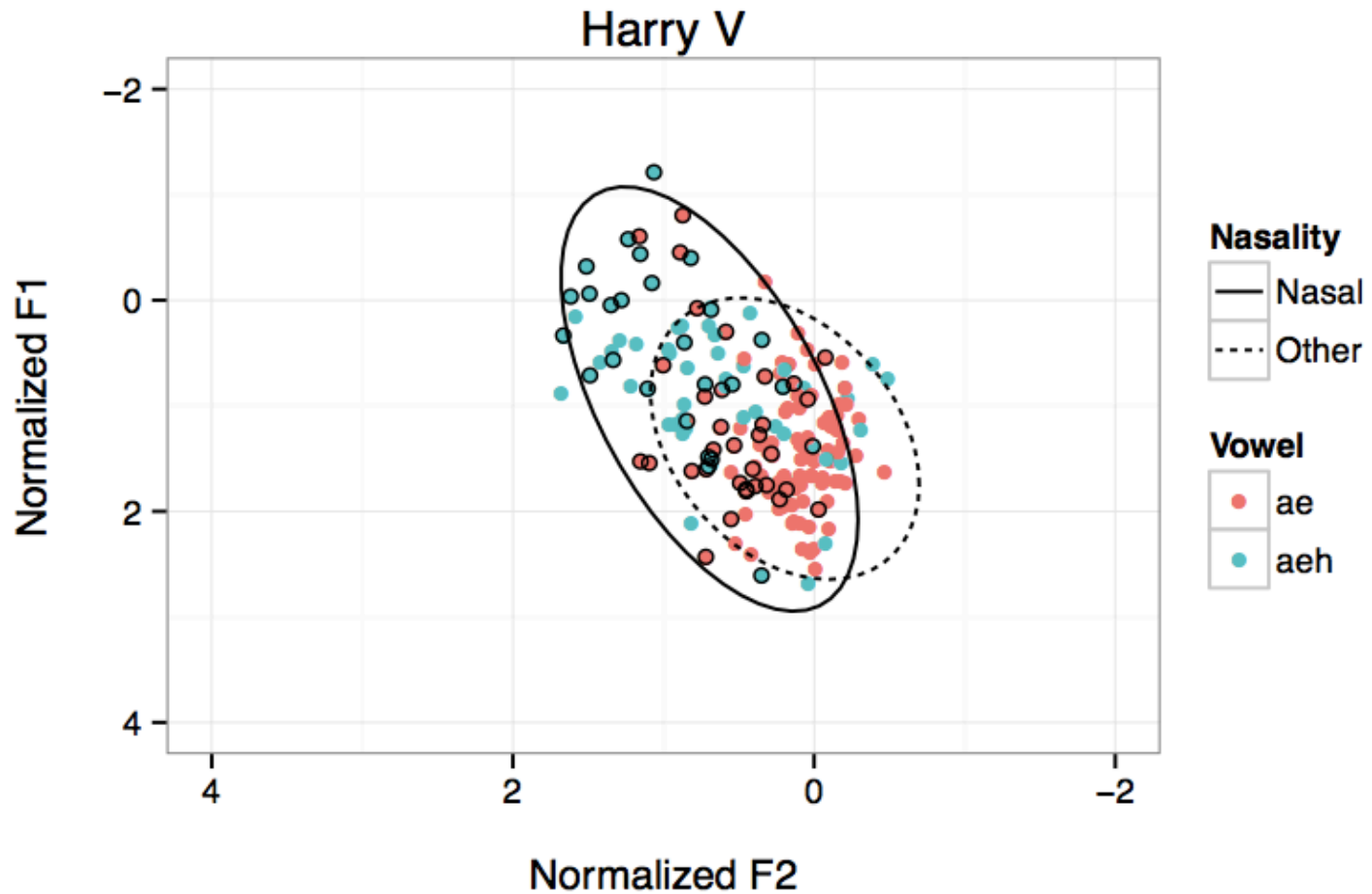
Lyons family – (ae)

- Parents give strong system as input
- Children have either weak system or strong system



Vos family

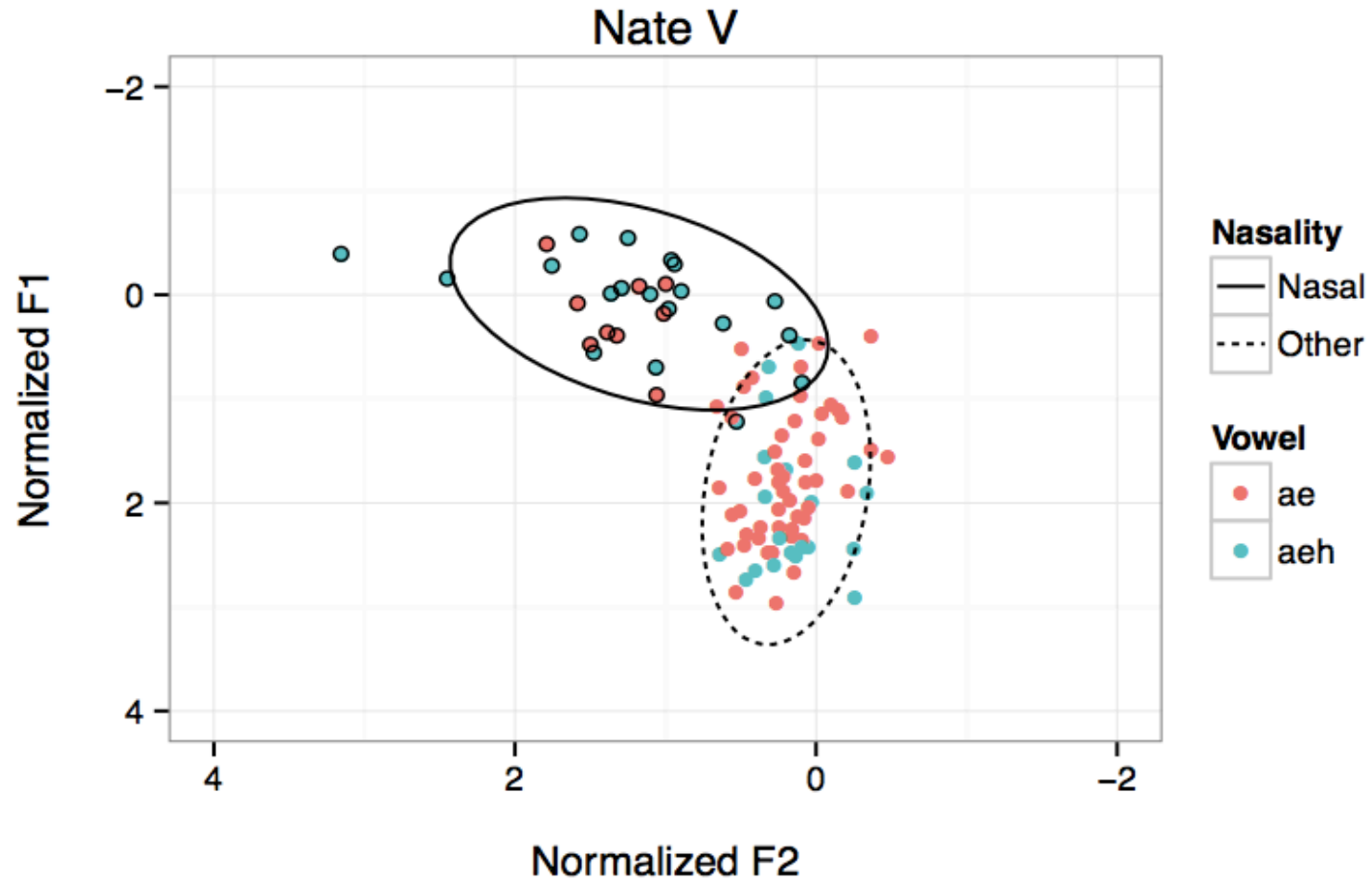
Vos family – Dad



Pillai Philadelphia = 0.29

Pillai Nasal = 0.20

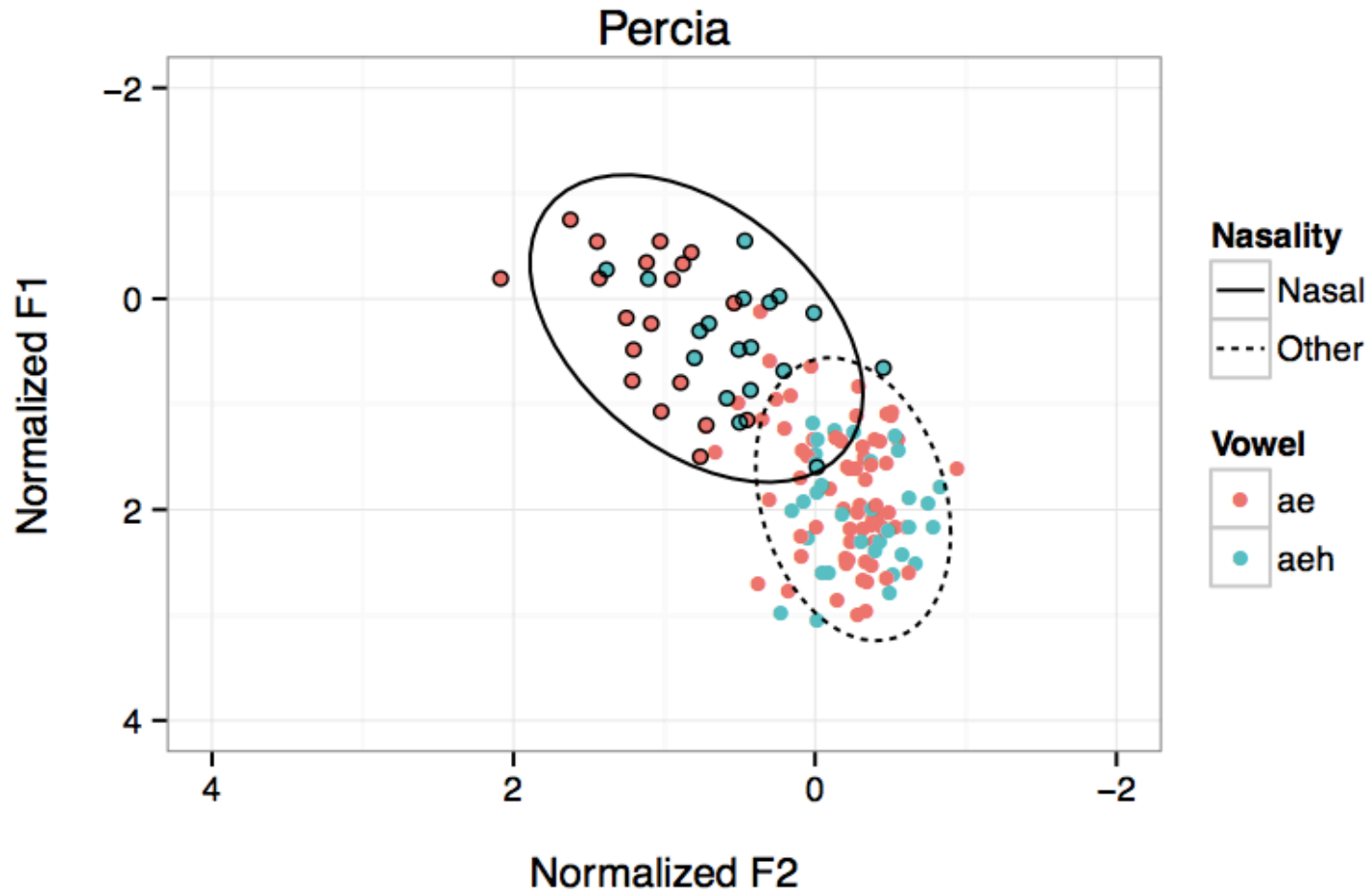
Vos children – Nate (age 10)



Pillai Philadelphia = 0.06

Pillai Nasal = 0.73

Vos children – Percia (age 19)

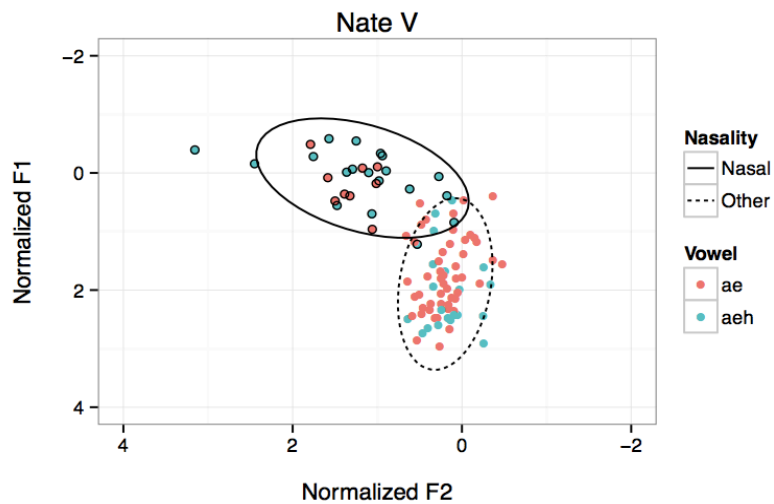


Pillai Philadelphia = 0.02

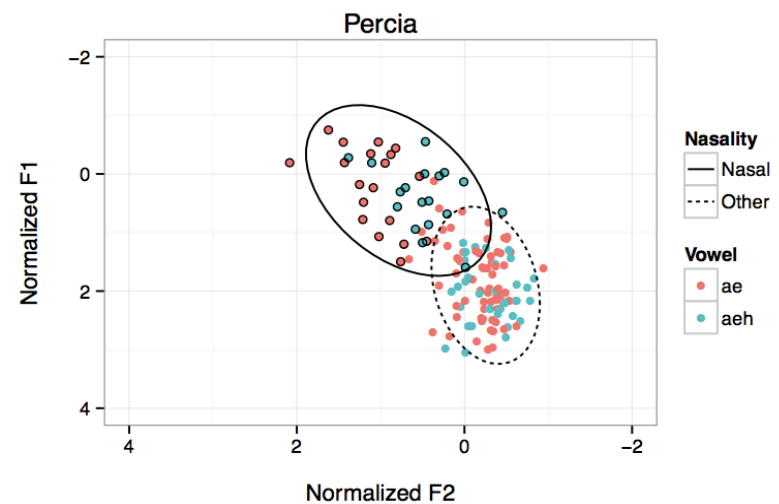
Pillai Nasal = 0.68

Vos family – (ae)

- Parents give weakened system as input
- Children have nasal system



Elite elementary school



National University

Chase family

Chase family - Mom

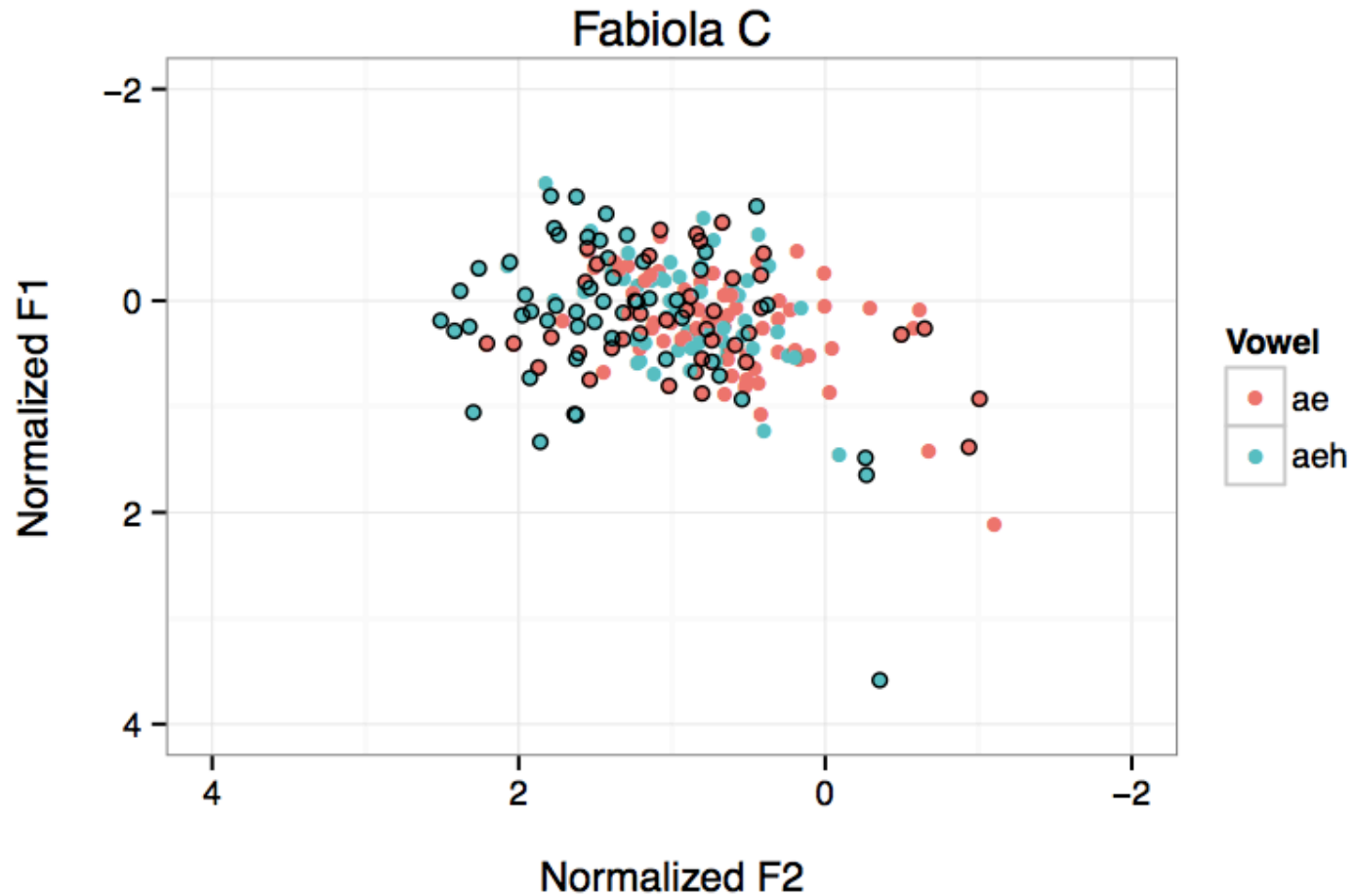
- Neutralized system

ALL

MAN, PLANET, CLASS, CLASSIFY, MAD, HALF, ASPIRIN



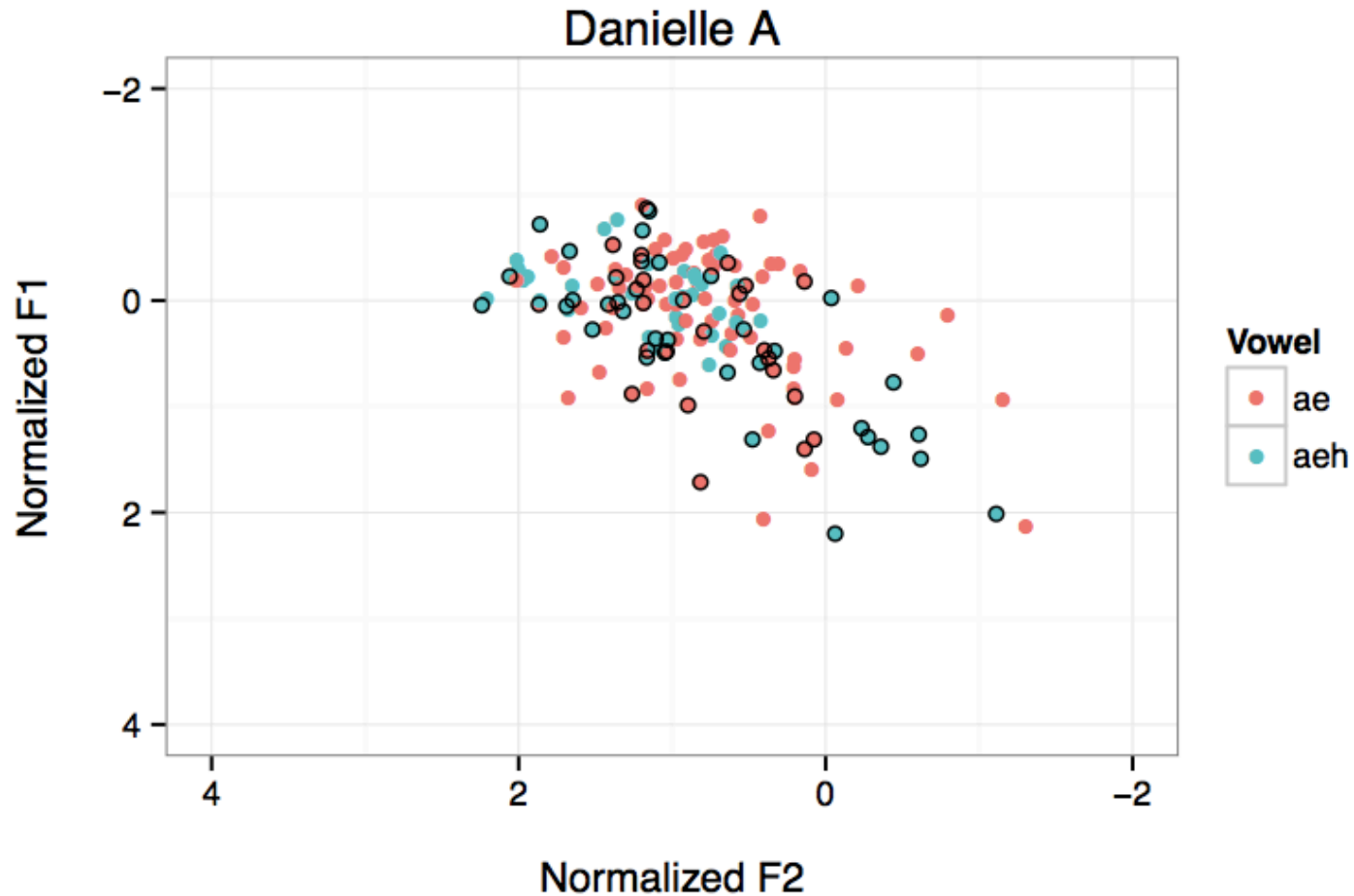
Chase children – Fabiola (age 15)



Pillai Philadelphia = 0.11

Pillai Nasal = 0.12

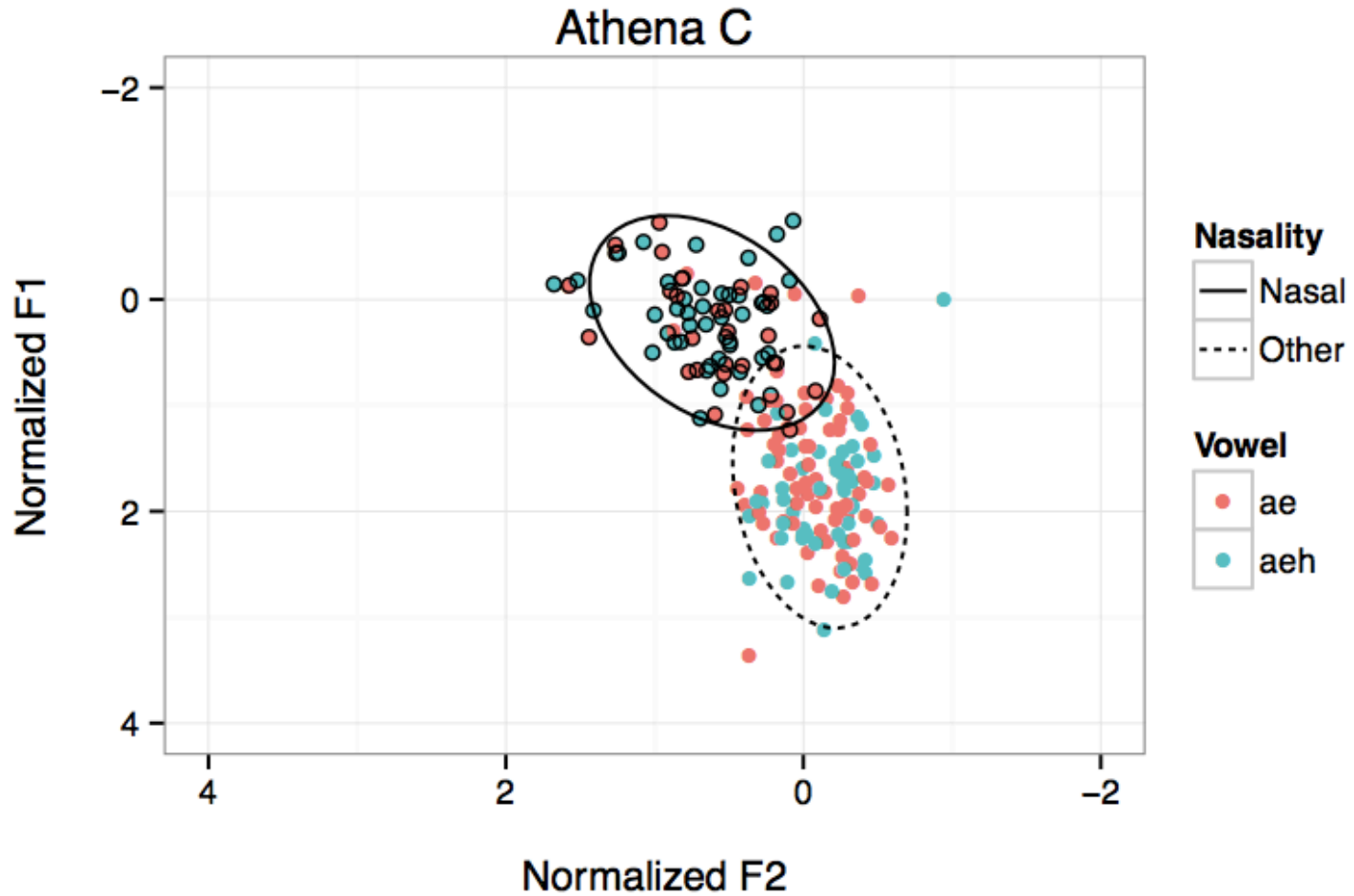
Chase children – Danielle (age 14)



Pillai Philadelphia = 0.03

Pillai Nasal = 0.06

Chase children – Athena (age 18)

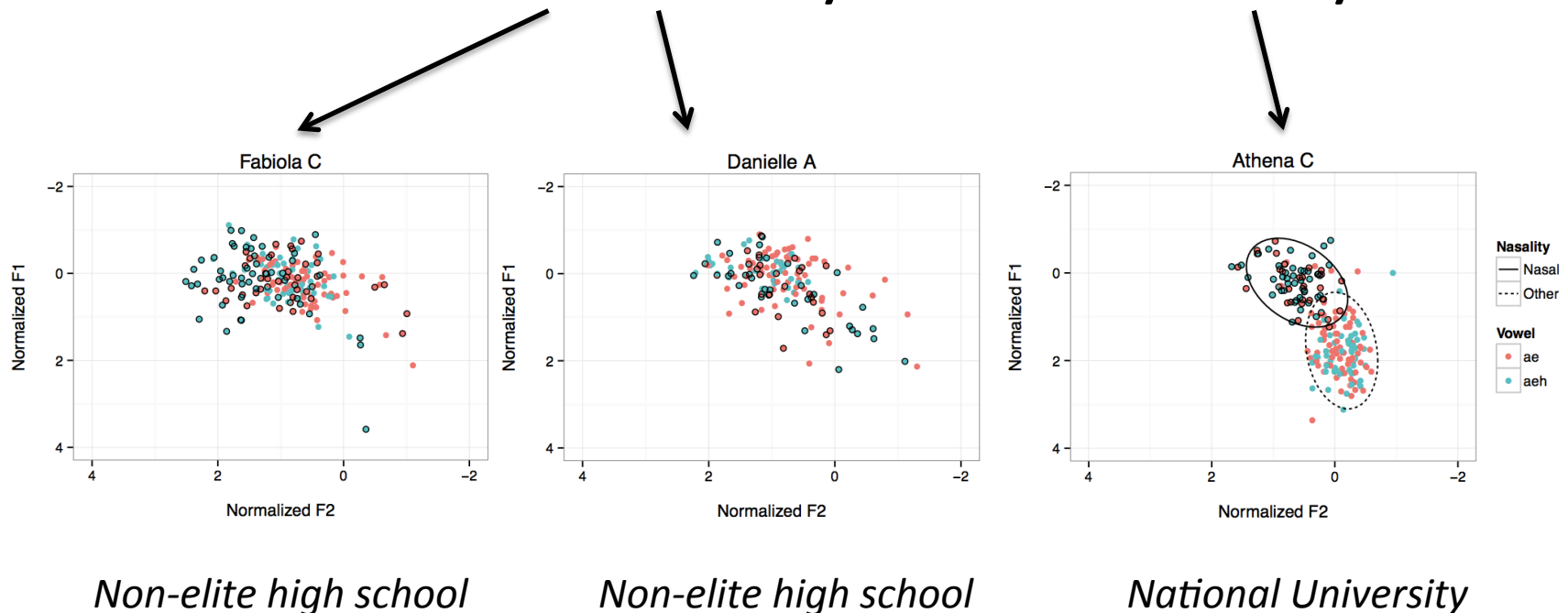


Pillai Philadelphia = 0.01

Pillai Nasal = 0.68

Chase family – (ae)

- Parents give neutral system as input
- Children have neutral system or nasal system



3-step change of (ae) system

Attested:

strong → **weak**

weak → **nasal**

neutral → **nasal**

NOT attested:

strong → **nasal**

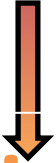
Conclusion:

strong → **weak** → **nasal**

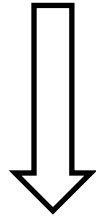
neutral → **nasal**

Antonio
Lyons

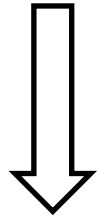
Strong



Christine
Lyons

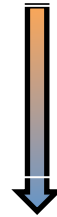


Weak



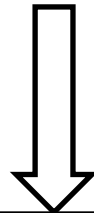
Nasal

Harry
Vos



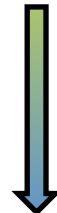
Percia
Vos

Neutral



Nasal

Farrah
Chase



Athena
Chase

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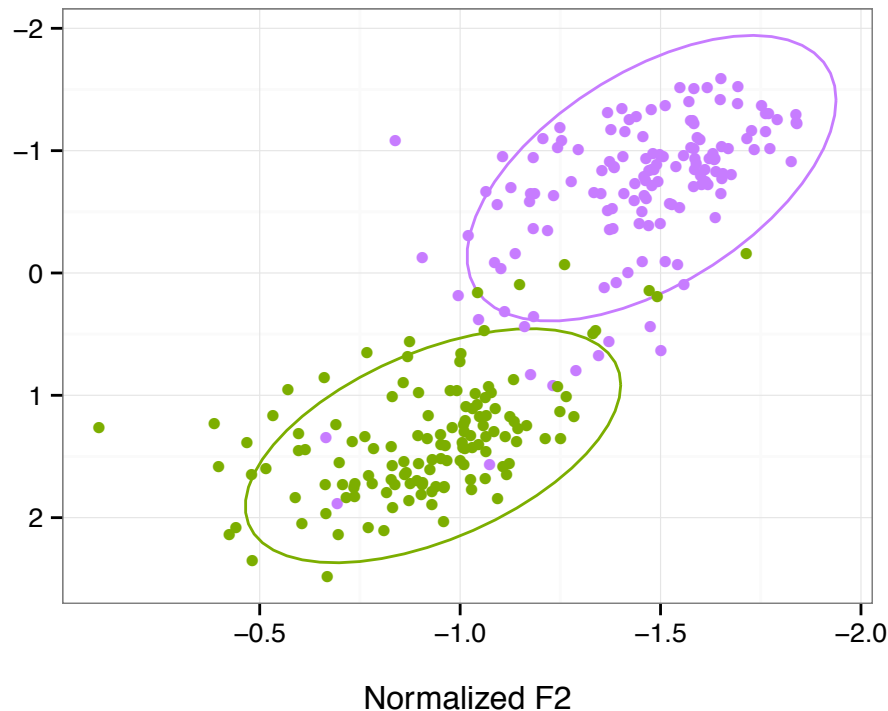
Low back merger

- Philadelphia traditionally maintains the phonemic distinction between LOT (o) and THOUGHT (oh)

(o)

LOT 

COT 



(oh)

THOUGHT 

LOST 

Lyons – united in metalinguistic judgment of cot/caught and hawk/hock pairs

- Antonio (dad)



- Theresa (mom)



- John (son)

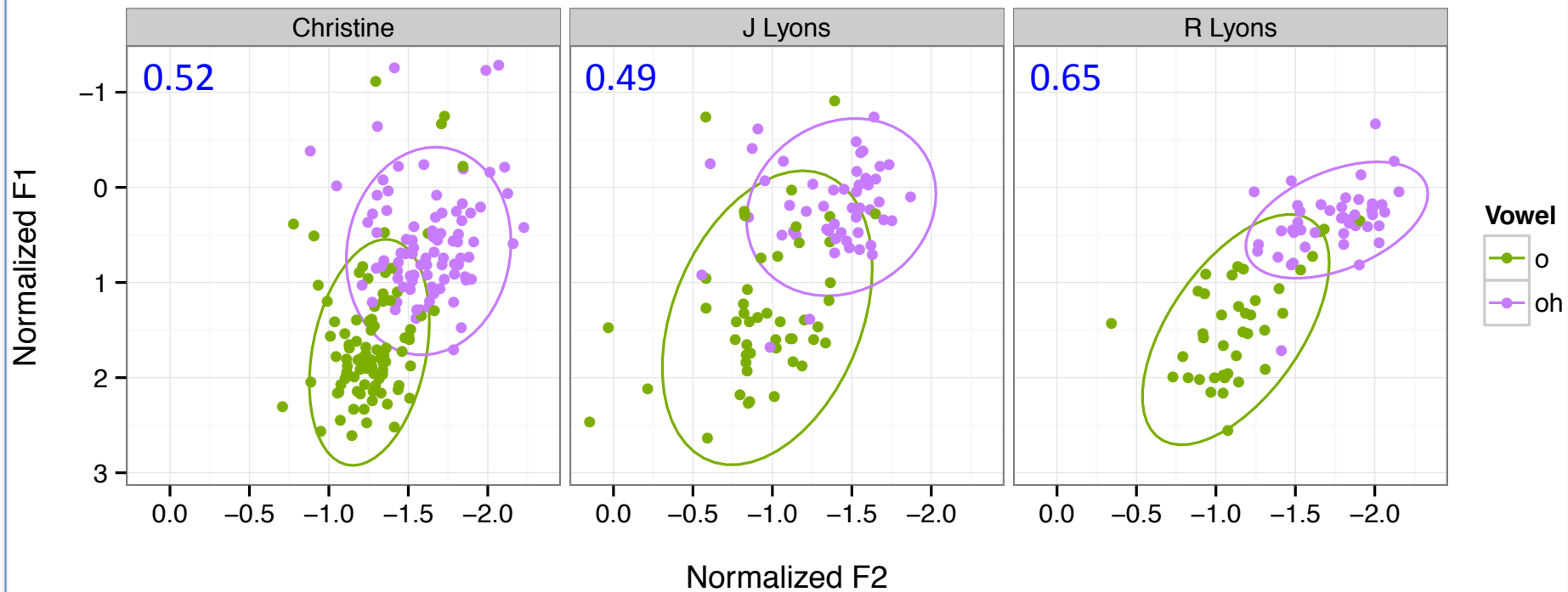
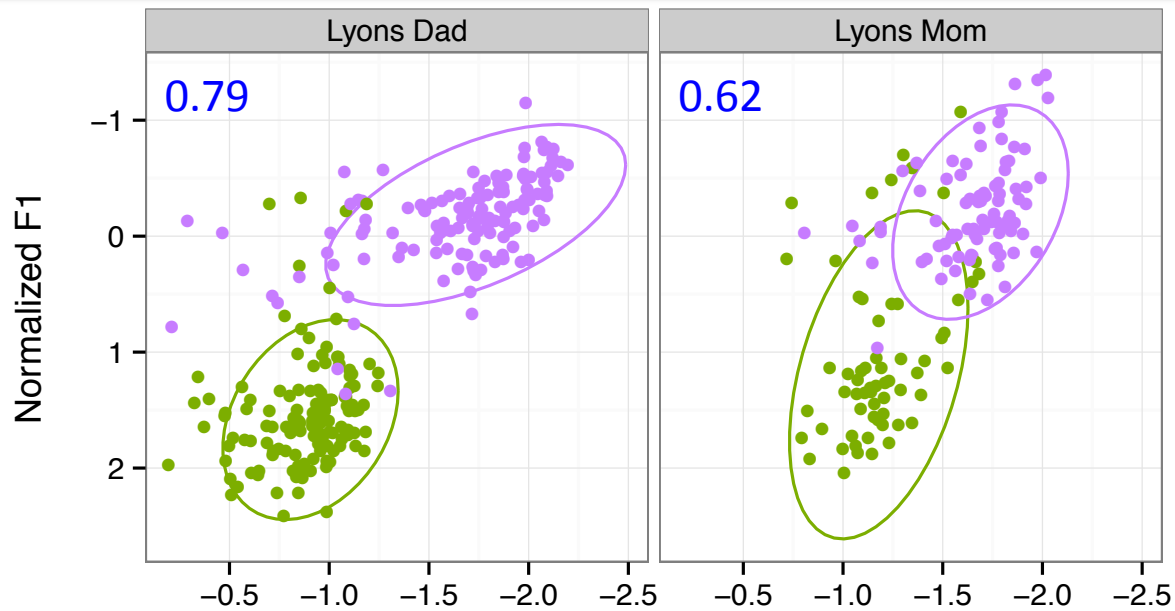


- Rocco (son)



- Christine (Penn daughter)





Vos – generational change?

- Harry (dad)

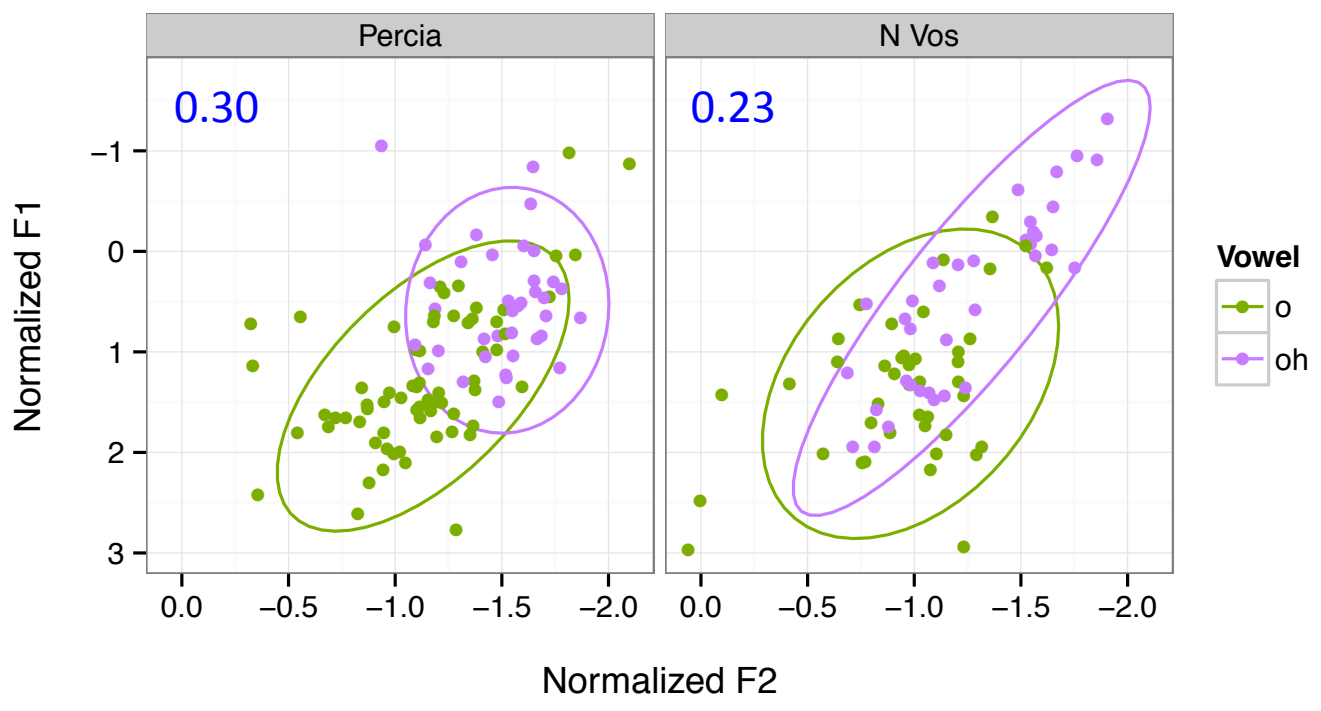
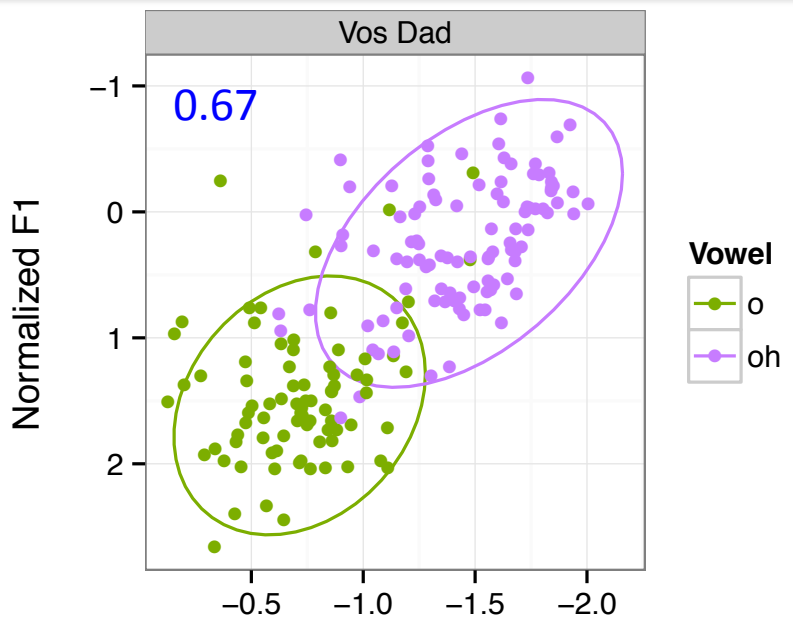


- Nate (son)



- Percia (Penn daughter)

– *Not recorded, but judged pairs as “same”*



Chase – united in metalinguistic judgment

- Farrah (mom)



- Fabiola (daughter)



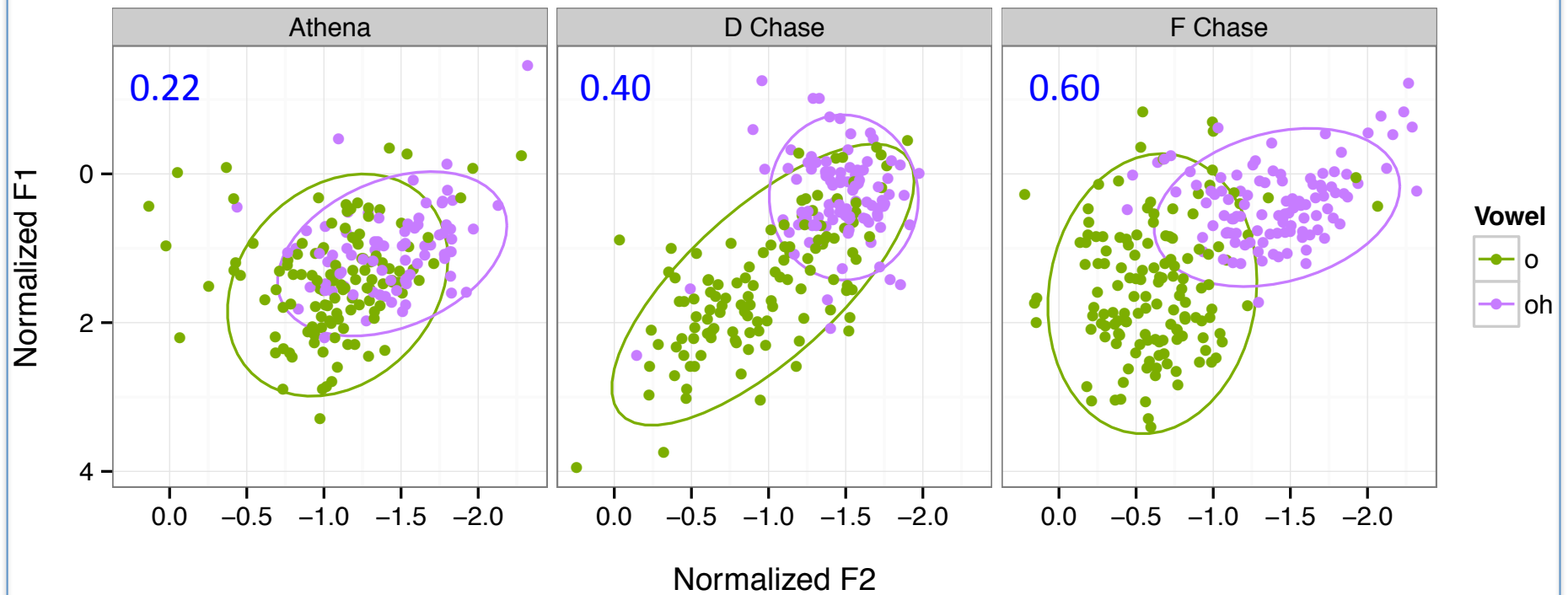
- Danielle (daughter)



- Athena (Penn daughter)



*Chase Mom produces and identifies
a difference in caught/cot and hawk/hock*



3-stage development of merger?

- Strong → weak → ...merged?
- So far only “weak” stage attested:
 - Percia & Nate don’t identify a difference, but produce slight differences
 - Labov et al. 2006 found that perception often leads production in the low-back merger
 - Athena perceives a difference but has inconsistent production and lower (oh)
 - Phonetic correction away from stigmatized variant?

Outline

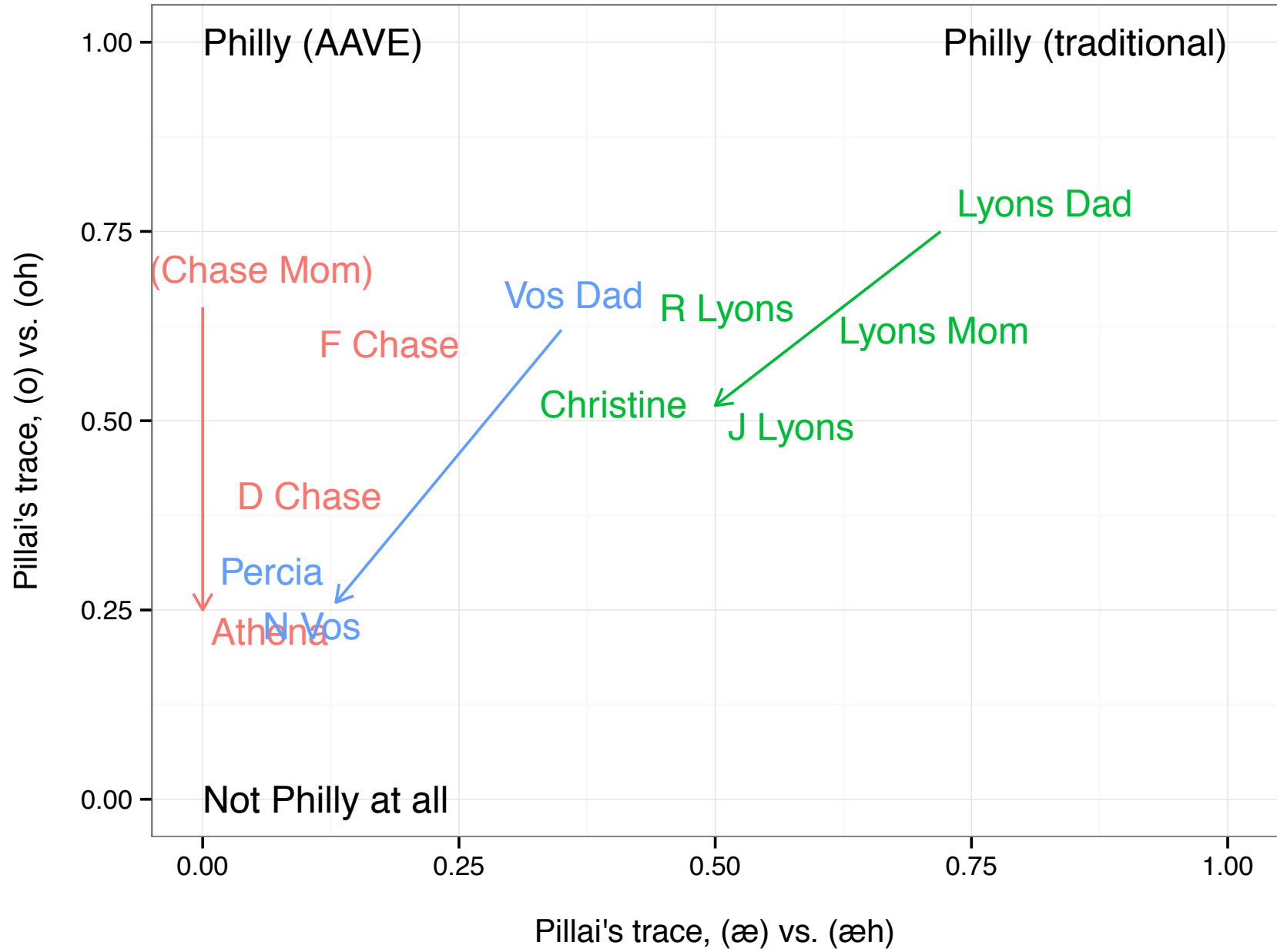
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Short-*a* and low-back parallels?

Not really. Short-*a* seems to be changing between generations in identifiable steps, but the low-back change is more gradient.

Is that the result of:

- (a): different peer influence (peers are doing different things with these variables)
- (b): a deeper difference between the way that phonemic collapse happens vs. allophonic restructuring?



Conclusions

- Input from parents is important: social aspirations / higher education can only work with what children have been given – to push them toward the new system but not past a certain threshold
- Input from peers is also important: children will not move away from their parents' system unless socially-motivated (see Lyons kids)

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Percent Secondary stress of Future Marker *bai* by adults and children in Tok Pisin, 1971 (Children connected with respective parents)

