

# Question intonation in untutored L2 English learners: a cross-linguistic and longitudinal study

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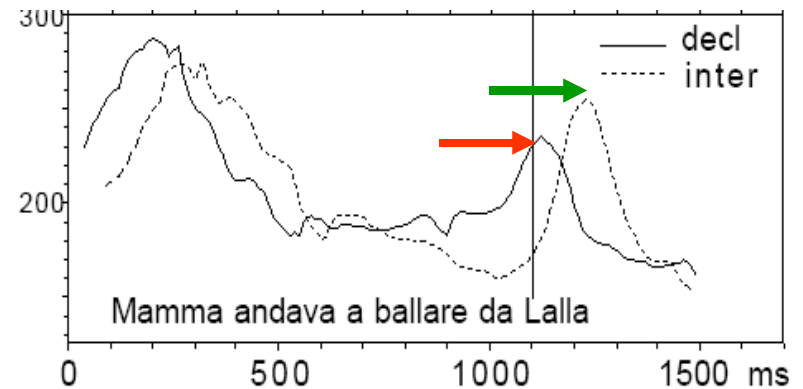
Learner Varieties project meeting  
Paris, 27-28 March, 2009

# Intonation in questions across languages

- Devices to express interrogativity
  - Syntax (i.e. inversion)
  - Lexical cues (i.e. wh-words, question particles – ‘ma’ in Chinese)
  - Intonation
- Question intonation characterised with high pitch (Haan 2001)
  - Hermann’s (1942) survey; Ultan’s (1969) survey; Bolinger’s (1978) survey
- Cross-linguistically attested question cues
  - Final rise
  - High peak in phrase final accent
  - Late peak alignment in phrase final accent

# Language-specificity in question intonation

- London English
  - Final Rise (Grabe 2004)
- Standard Italian (Tuscan)
  - Final Rise (D'Imperio 2002)
- Neapolitan Italian
  - Later peak in the phrase-final accent



D'Imperio & House (1997)

# Learner question intonation

- **Will** the learners use the question cues?
  - Final rise
  - High peak in the phrase-final accent
  - Late peak alignment in the phrase-final accent
- **To what extent** do learners use the question cues?
- If not, is there **transfer** from the Source Language (dialect) or approximation of the Target Language?
- Will we see evidence of this **at earliest stage** of learning or only at later stages?

# Learner question intonation (cont'd)

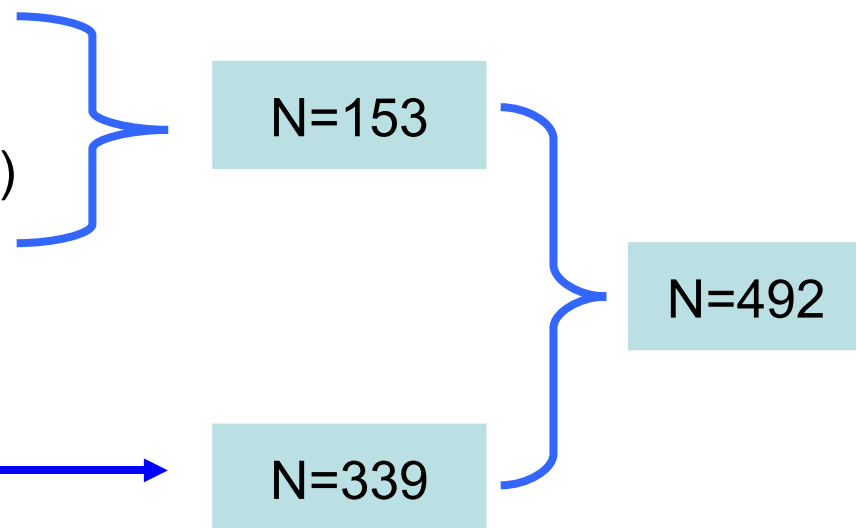
- The interplay between intonation and lexico-syntactic devices in marking questions
  - The Functional Hypothesis (Haan 2001)
    - less lexico-syntactic marking = more intonational marking
      - Statements < WH-questions < Yes/no questions < Declarative questions
  - Attested in Dutch and varieties of English for final rise
  - Is the Function Hypothesis applicable to learners' question marking?
    - The final rise occurs most frequently in the Declarative questions
    - The peak in the final accent is the highest and/or the latest in Declarative questions

# Corpus of learner utterances

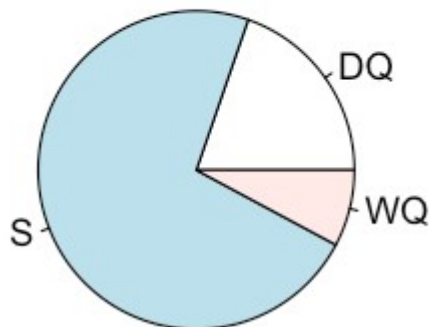
- Free conversation (from the ESF database)
- 4 learners: L1-Italian, L2-English (London variety)
  - Andrea (Northeast)
  - Lavinia (North)
  - Santo (Southwest, Neapolitan variety)
  - Vito (Southwest, Neapolitan variety)
- Two longitudinal points: 1<sup>st</sup> and 3<sup>rd</sup> ten month cycle
- Definition of questions
  - Seeking information (e.g. time, place, reason, missing argument, truth value of an assertion)
  - Rewarded with the sought information

# Corpus of learner utterances (cont'd)

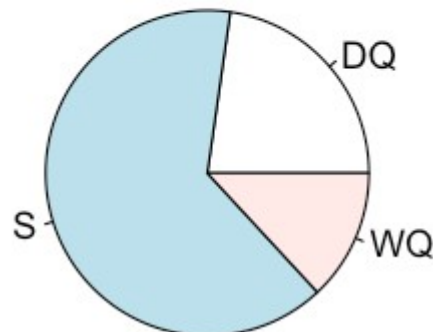
- WH-questions(N=69; 46/23)
  - e.g. Where you sleep?
- Declarative questions (N=107; 88/19)
  - e.g. You English?
- Yes-no questions (N=33; 27/6)
  - e.g. Are you English?
- Statements (N=339; 143/196)
  - e.g. I am that gentleman.



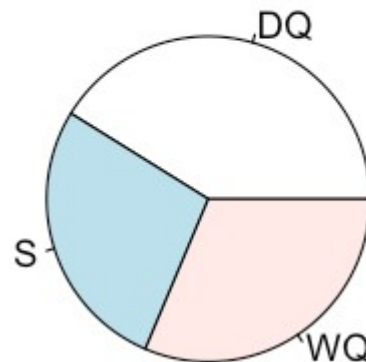
Andrea



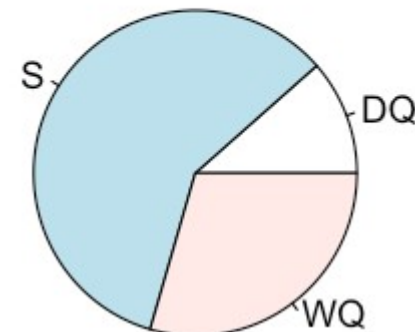
Lavinia



Santo

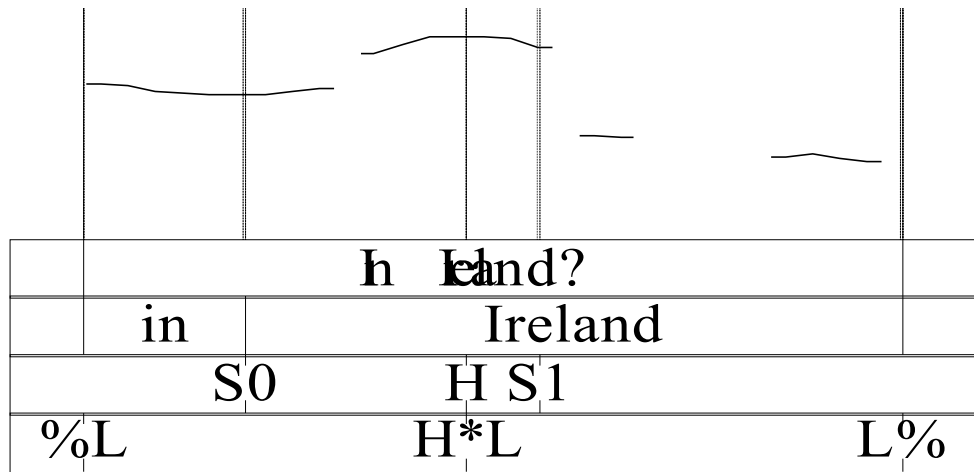
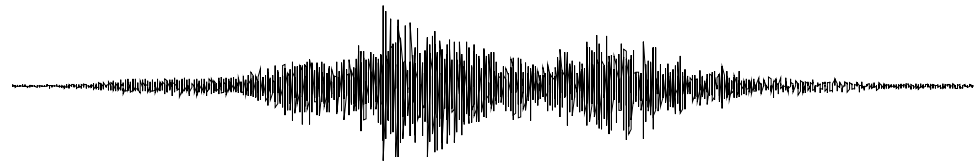


Vito



Types of utterances used in %

# Analyses



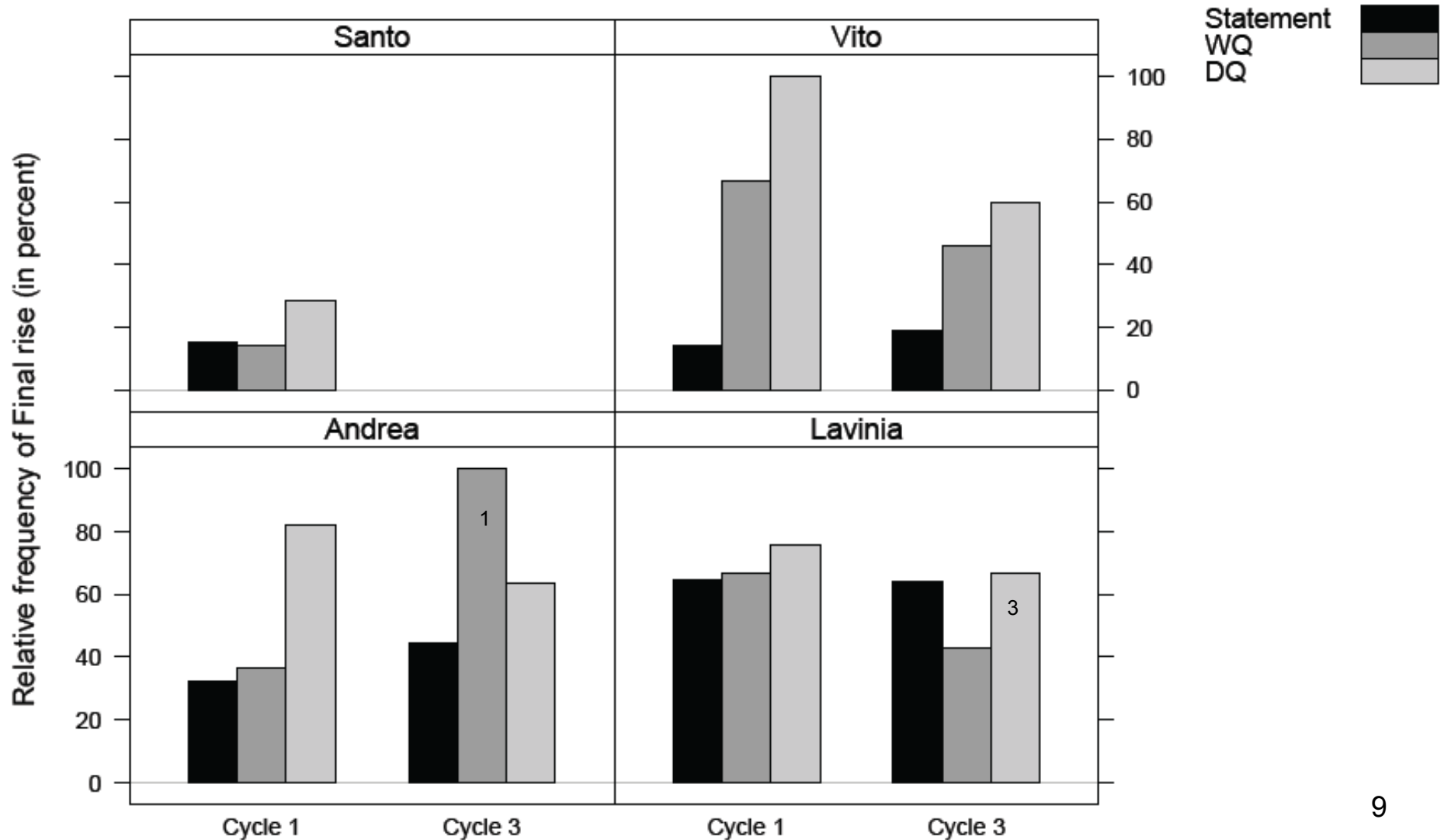
- question
- words
- Acoustic landmark
- intonation

- Intonation transcription
  - Accents and boundary tones
- Acoustic annotation (in final falling accents only)
  - S0 (begin of stressed syllable), H (peak)
  - Pitch height at landmark H
  - Peak alignment: duration from S0 to H



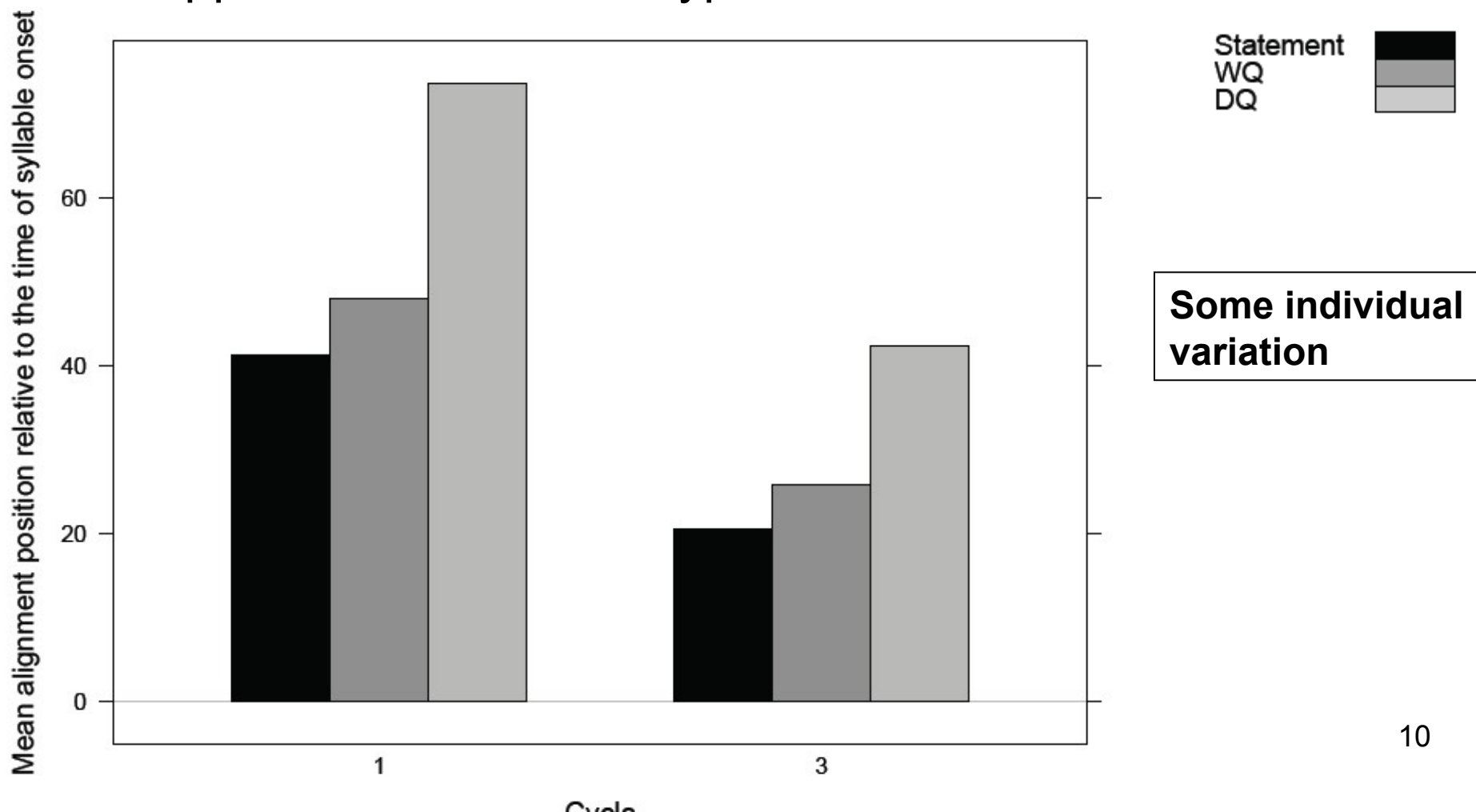
# Distribution of final rise

- The Functional hypothesis is largely borne out:  $S < WQ < DQ$

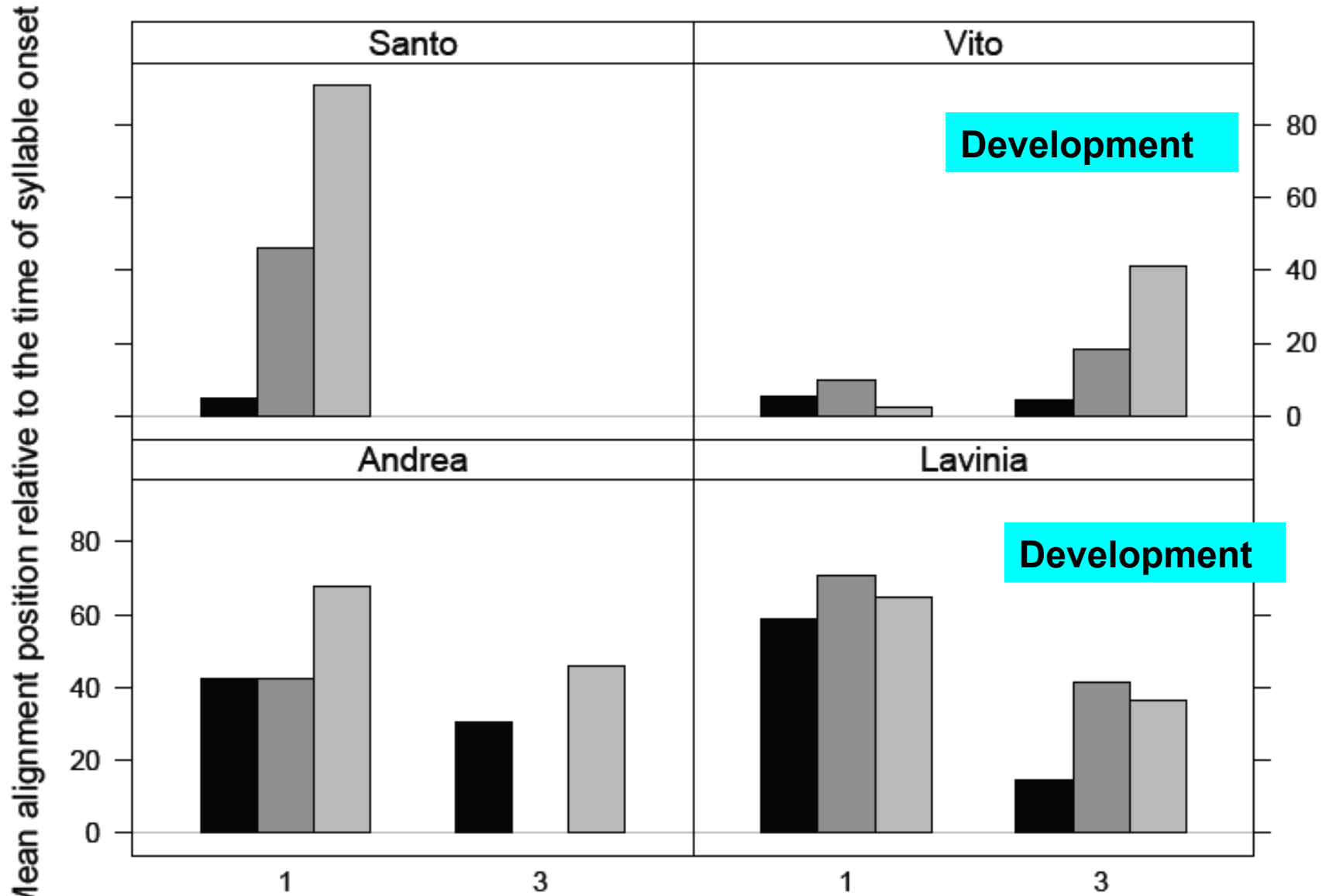
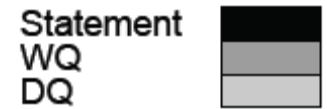


# Peak alignment of final H\*L (falling) accents

- Measured from syllable onset to peak in ms
- Support for Functional Hypothesis from outset:  $S < WQ < DQ$

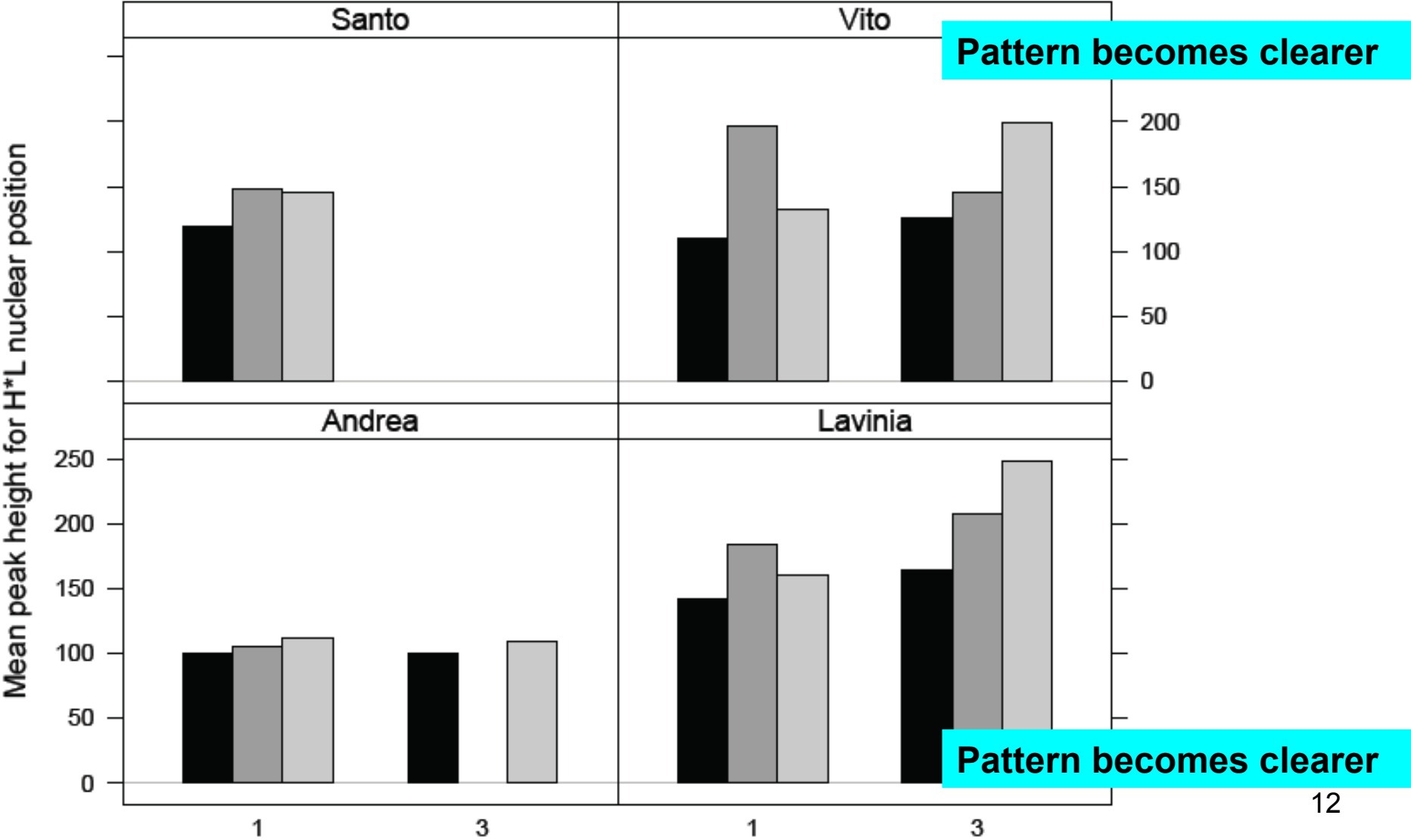


# Peak alignment (cont'd)



# Peak height of final H\*L (falling) accents

Statement  
WQ  
DQ

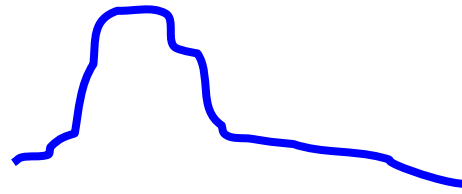


# Conclusions

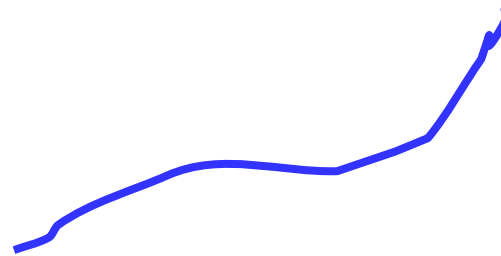
- Italian learners of English make use of all three question cues to express interrogativity
- Largely in line with Functional Hypothesis
- Reliance on particular question cues differs across speakers
  - Santo and Vito use all three cues
  - Andrea only uses final rises and peak alignment
  - Lavinia only uses peak alignment and peak height
- Evidence of some longitudinal development in use of question cues
  - Vito and Lavinia do not use peak alignment in Cycle 1, but they do so in Cycle 3
- No direct influence of either source language or source dialect observed, but approximation of target language in Cycle 3

# Next steps

- Analysis, at various longitudinal points, of
  - Learners with different source language (Punjabi learners of English)
  - Learners with different target language (Italian learners of German)
- Investigation of other dimensions of intonational system:
  - Inventory of structural elements, e.g.
    - What type of intonation patterns do the learners use?
    - Do they use the full range of intonation patterns of the target language?
  - The way these elements are phonetically realised, e.g.
    - Do learners make shorter intonational phrases?
    - How many rises and falls do they have per intonation phrase?
  - Their distribution, e.g.
    - What is the most common pitch accent they use?



Thank you!



Questions?