Biases From MAE-ToBI Intonational Transcription Conventions in the Intonational Analysis of African American English

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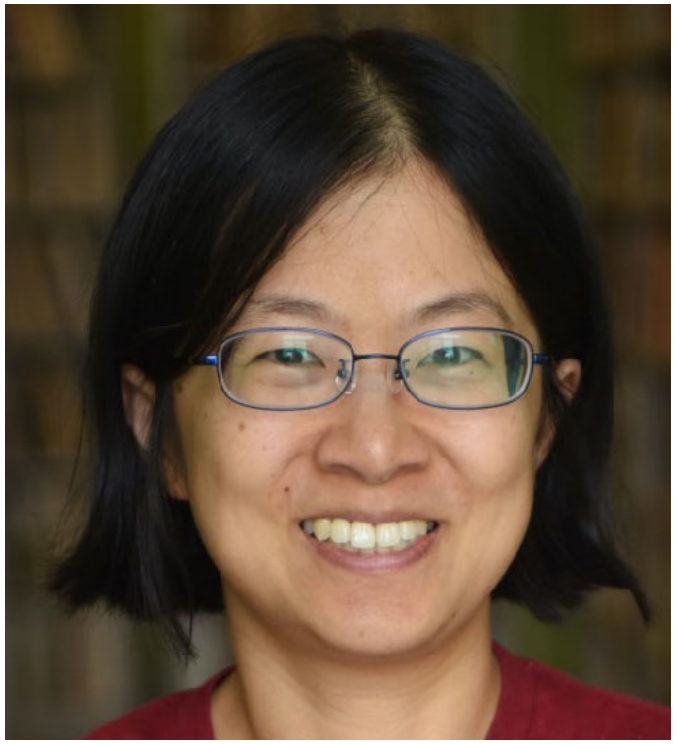

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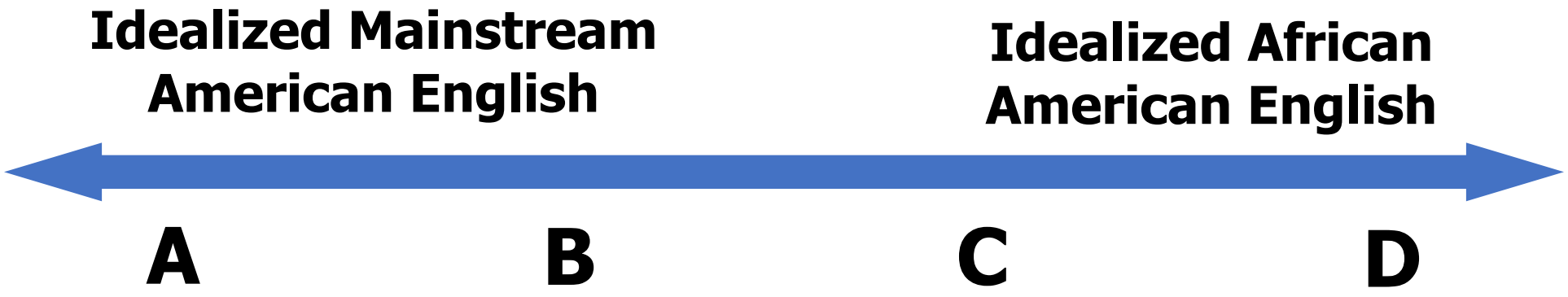
Goals of this talk

- Highlight 3 intonational patterns we've found in African American English (AAE)
- Show how they raise multiple hypotheses about the intonational phonology of AAE
- Open a discussion about the possibilities we might consider in the analysis of these patterns

Approach to study of AAE

We assume a systems and patterns approach, where AAE is characterized as an inherently variable linguistic variety that has set syntactic, phonological, semantic, pragmatic, and lexical patterns that are intertwined with structures of Mainstream American English (MAE)

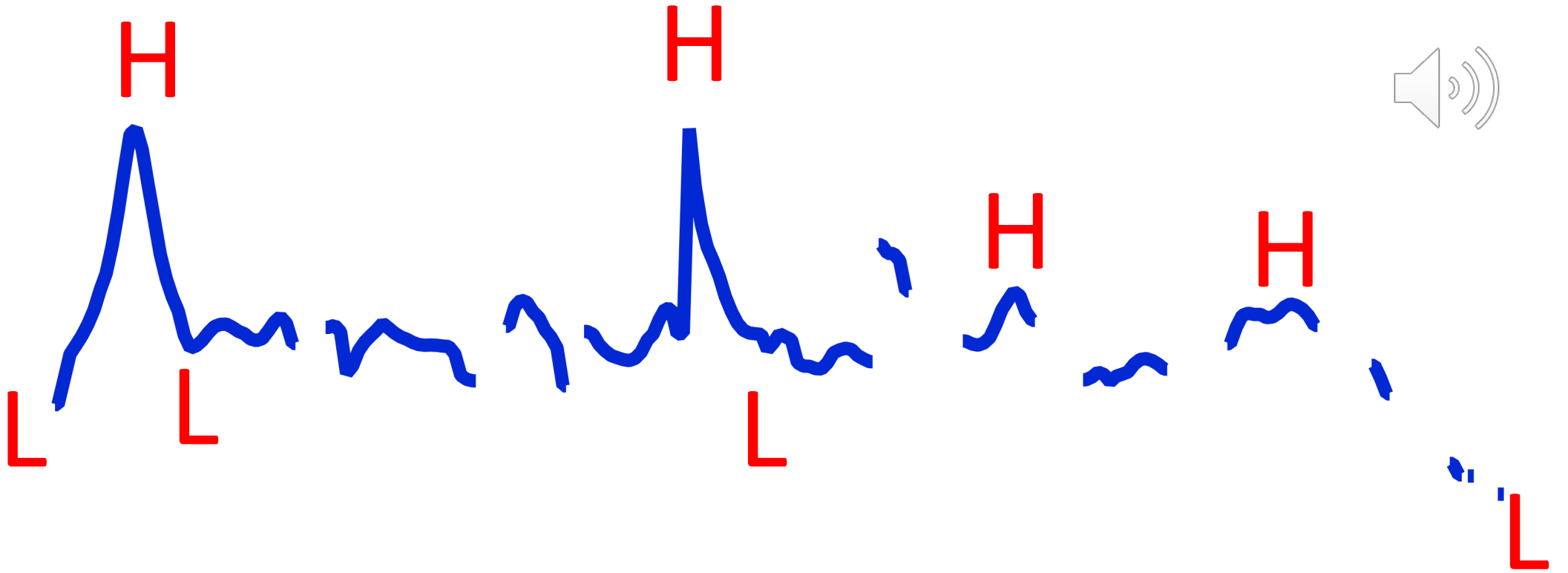


The terms African American Vernacular English (AAVE) and African American Language (AAL), among others, are also use
The terms Mainstream U.S. English (MUSE) and General American English (GAE), among others, are also used.

An AAE structure: embedded inversion

Rhonda wanted to know could the operator move the box a little closer

‘R. wanted to know if the operator could move the box a little closer’



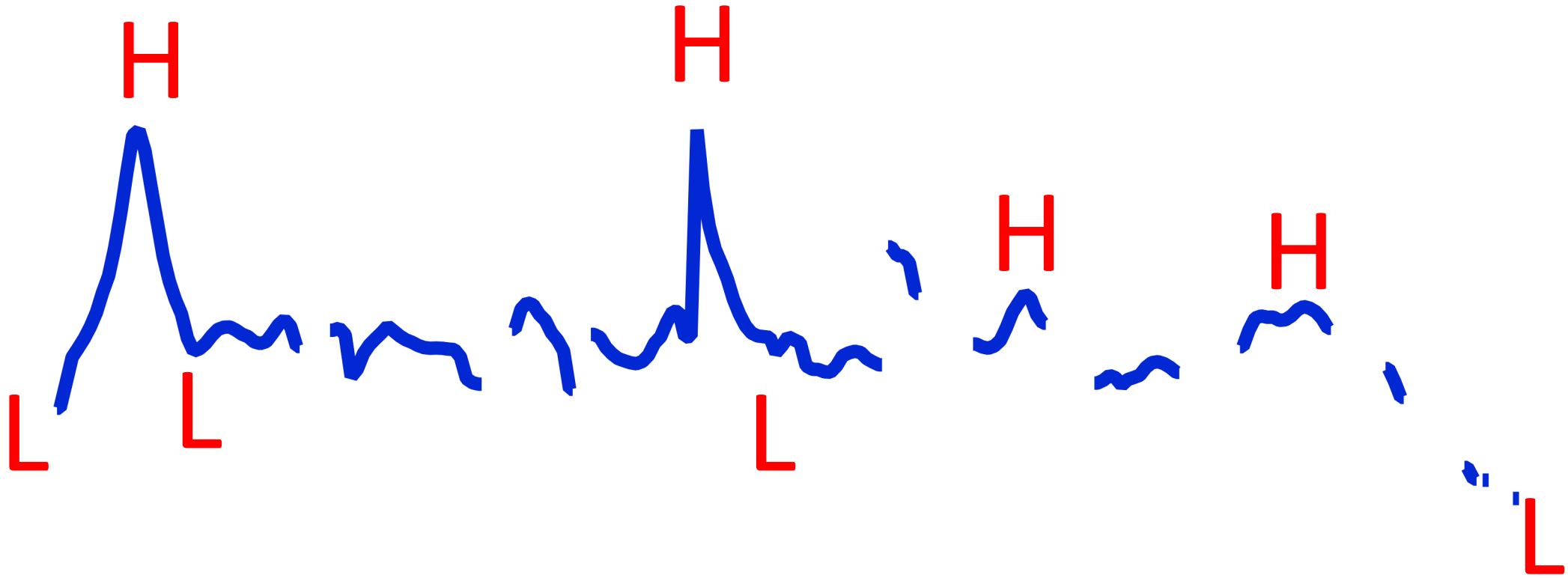
R. wanted to know could the operator move the box a little closer

Prosodic transcription

- Marking the Hs and Ls is the beginning of a prosodic transcription
- Helps us isolate the phonological units and start to analyze the intonational phonology of a language
- Prosodic transcription systems are language specific, based on knowledge/assumptions about the intonational phonology of the language
- Because of this, prosodic transcription is also a phonological analysis

MAE-ToBI

- Set of conventions for annotating MAE intonation, grew out of Pierrehumbert (1980) and Beckman & Pierrehumbert (1986)
- Original 1994/1997 guidelines for annotation (Beckman and Ayers)
- MAE-ToBI is just one of many prosodic transcription systems
    - Different systems for different languages, different varieties of English (e.g., GlaToBI for annotating Glasgow English (Mayo *et al.* 1997)), and even within the same variety of English (e.g., Gussenhoven 2016 for MAE)
    - Other annotation systems for MAE: PoLaR (Ahn, Veilleux, Shattuck-Hufnagel & Brugos 2019)
- Additions to ToBI:
    - Alt tier (Brugos, Veilleux, Breen, Shattuck-Hufnagel 2008)
    - Disfluency marking (Brugos, Langston, Shattuck-Hufnagel, Veilleux 2019)

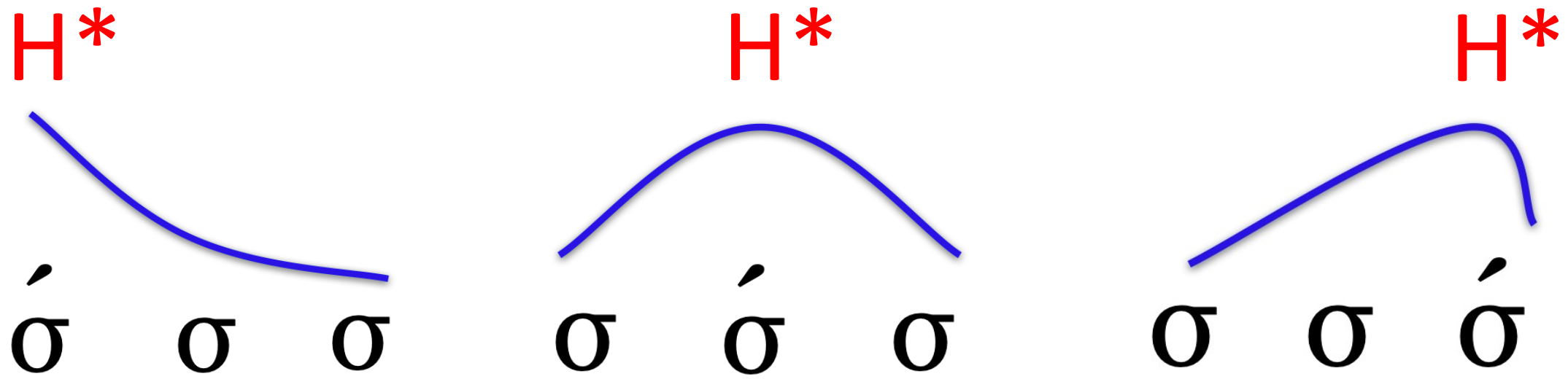


R. wanted to know could the operator move the box a little closer

2 types of tones

Pitch accents (T*)

- Associated with stressed syllables



Pitch accents in MAE-ToBI

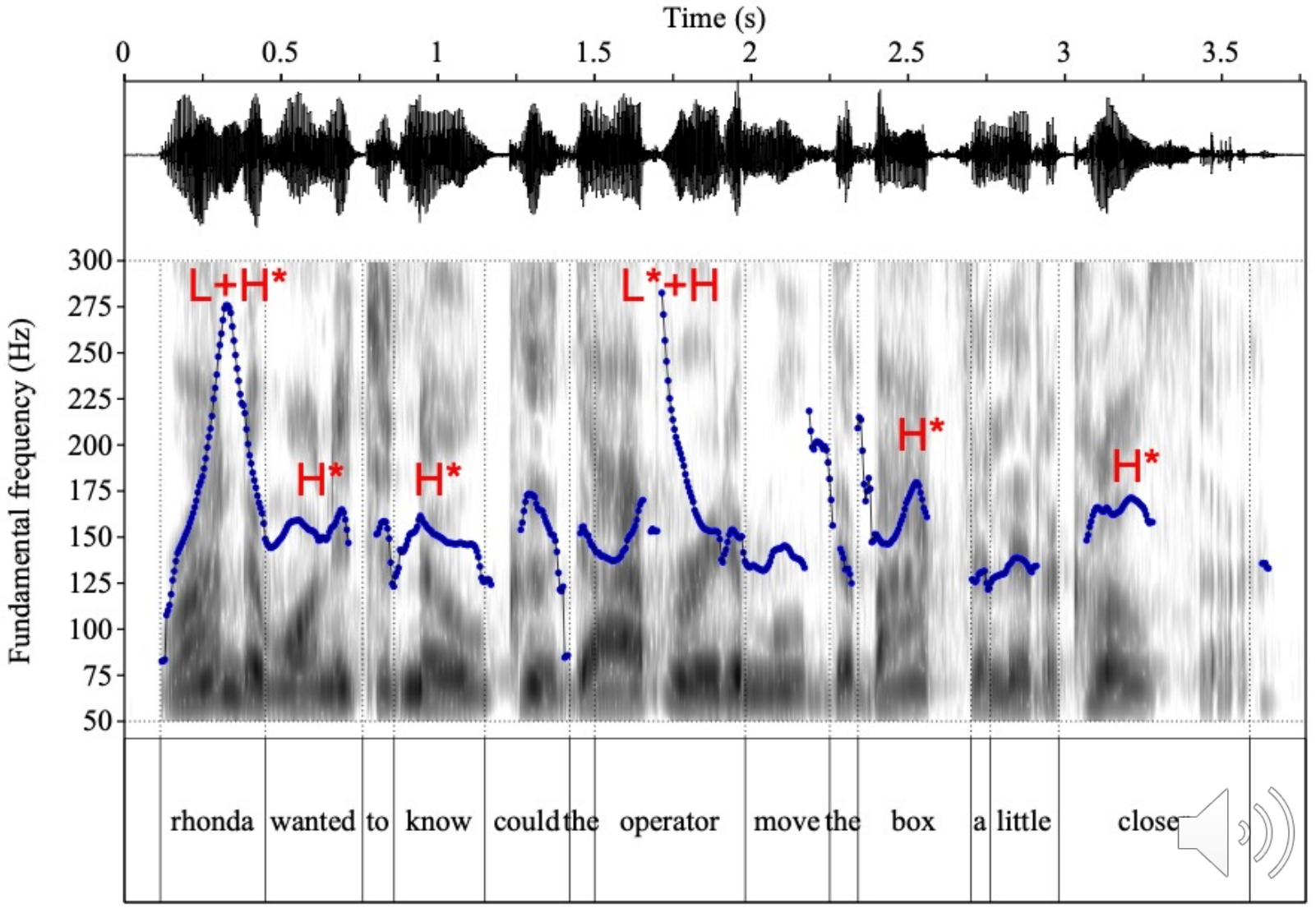
Pitch accents (T*)

Mark prominence

- L*
- H*
- L+H*
- L*+H

No falling tone in MAE-ToBI

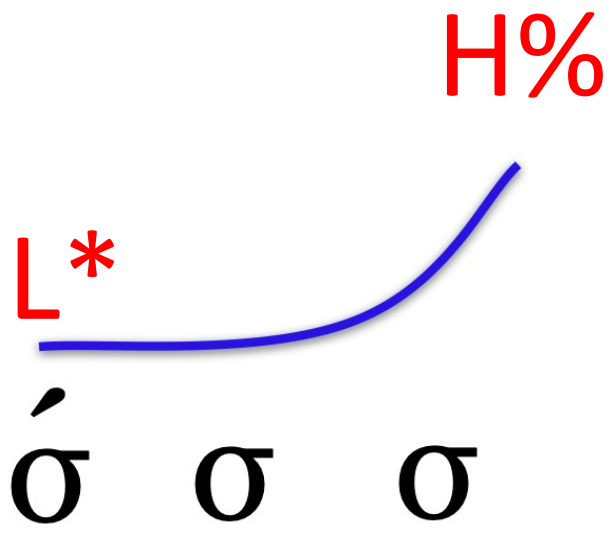
- H*+L
- H+L*

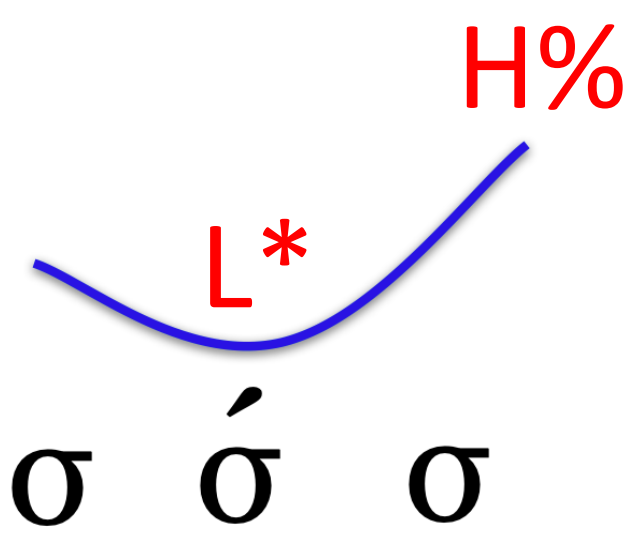


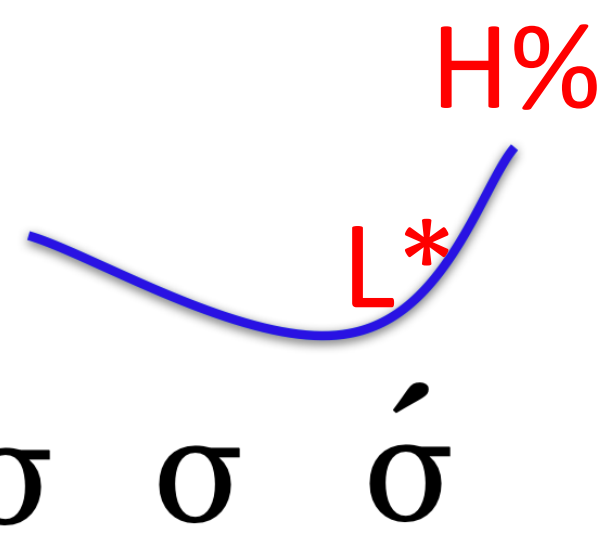
Edge tones

Edge tones (T-, %T, T%)

- Associated with edges





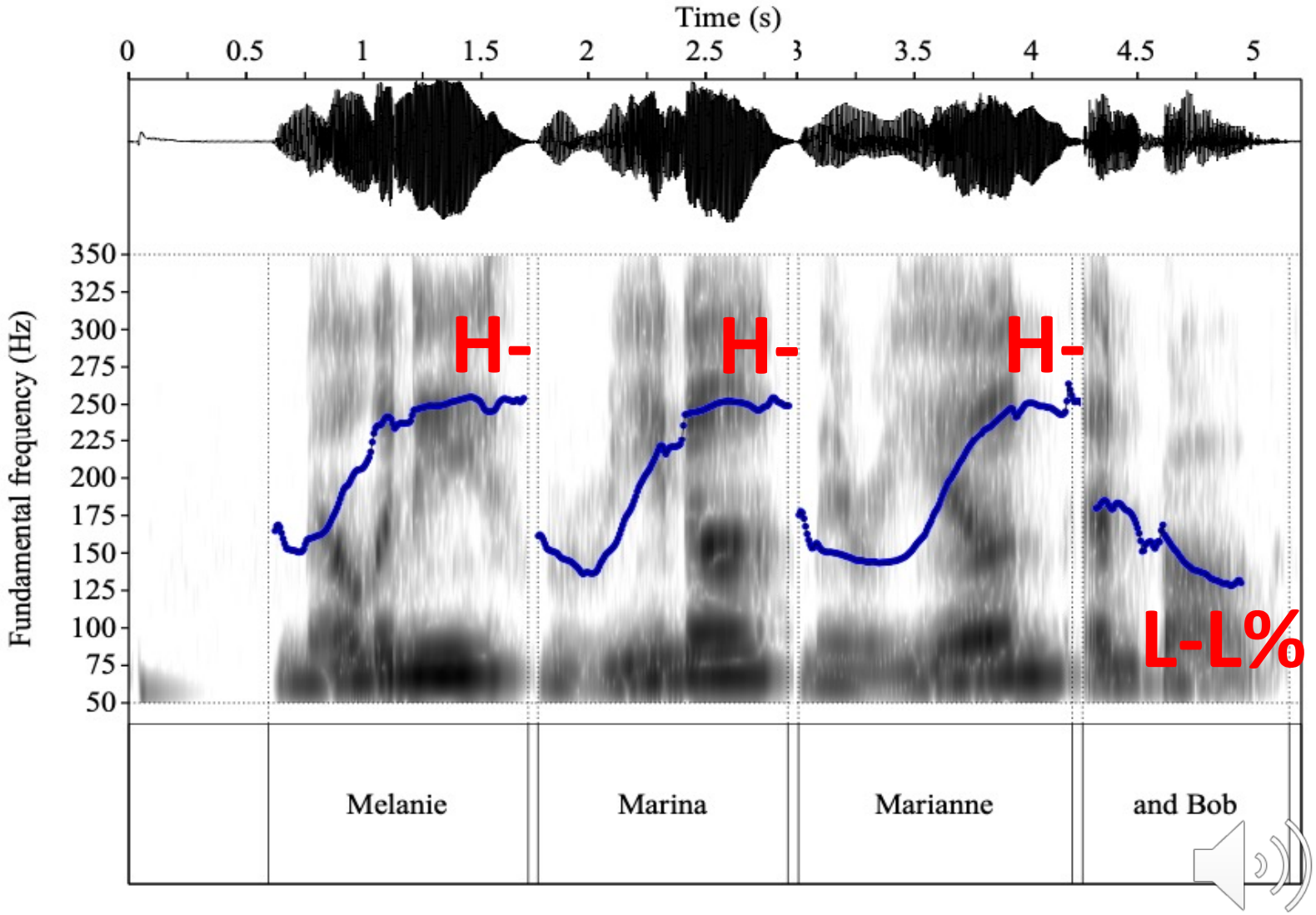


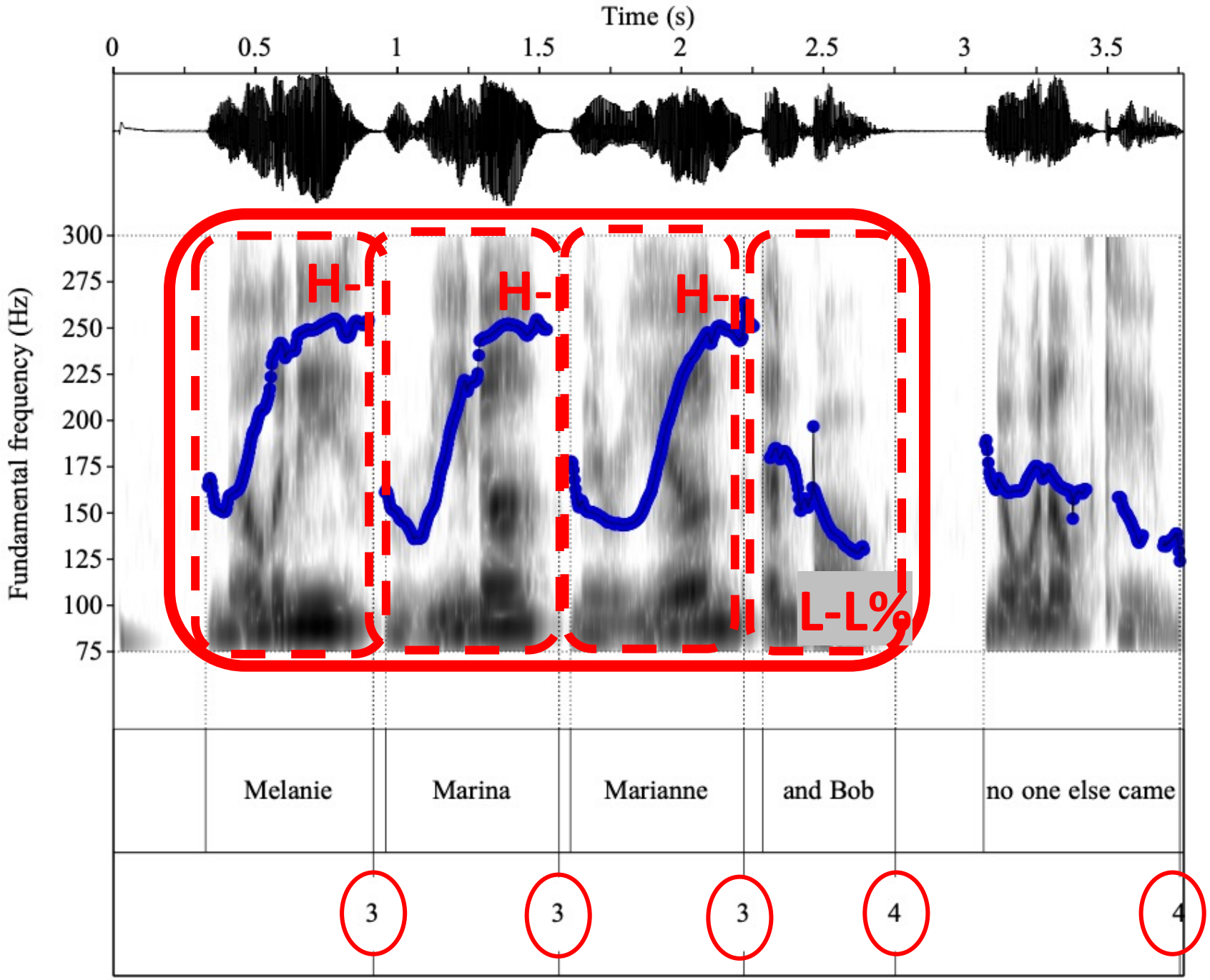
Edge tones in MAE-ToBI

Edge tones-

Mark constituent boundaries

- Phrase tones (T-)
  - L-
  - H-
- Boundary tones (T%)
  - L%
  - H%

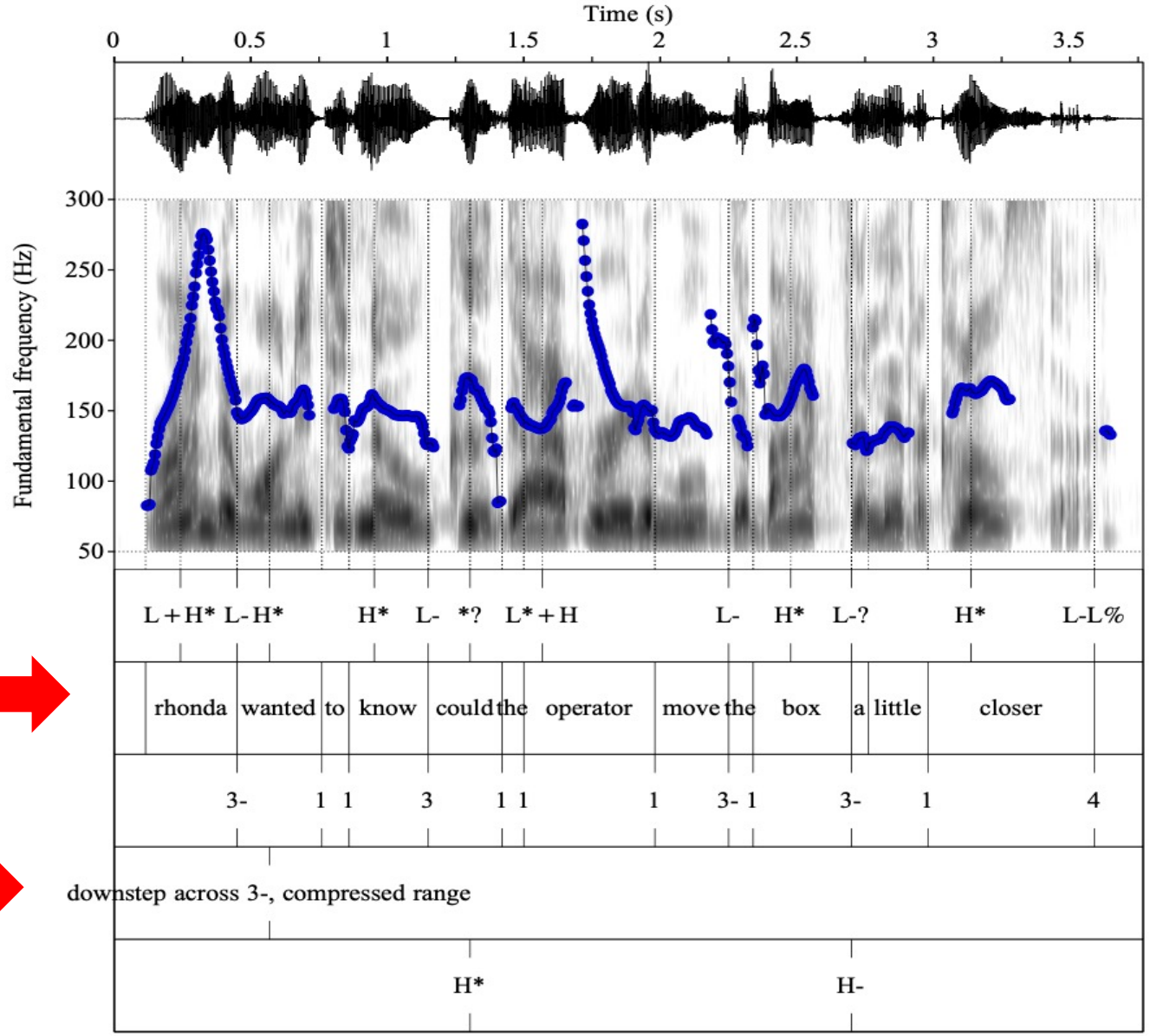




2 levels of prosodic constituency:

- Intermediate phrase (ip) (T-)
- Intonational phrase (IP) T%

MAE-ToBI



Waveform

Pitch contour

Tones

Words

Break index

Misc

Alt

AAE Intonation

- Some prosodic differences between African American English (AAE) and Mainstream American English (MAE):

  - **Greater pitch range** (Tarone 1973; Hudson and Holbrook 1981, 1982; Rickford 1999; Jun & Foreman 1996, a.o.)
  - **More pitch accents** (Wolfram & Thomas 2002; McLarty 2011, 2018, a.o.)
  - **Use of falsetto** (Loman 1975; Jun & Foreman 1996)
  - **More initial H tones** (Jun & Foreman 1996)
  - **More variability in boundary tones** (Jun & Foreman 1996; Holliday 2019)
  - **Level endings in yes/no questions** (Tarone 1973; Green 2002)

Applying MAE-ToBI to AAE Intonation

- Recent phonological studies of AAE intonation use MAE-ToBI

(Jun & Foreman 1996; Cole et al. 2005; Holliday 2016; McLarty 2018)

- It's a starting point, but MAE-ToBI was not developed with data from AAE

- MAE-ToBI is a tool to help us make progress toward a phonological analysis of AAE

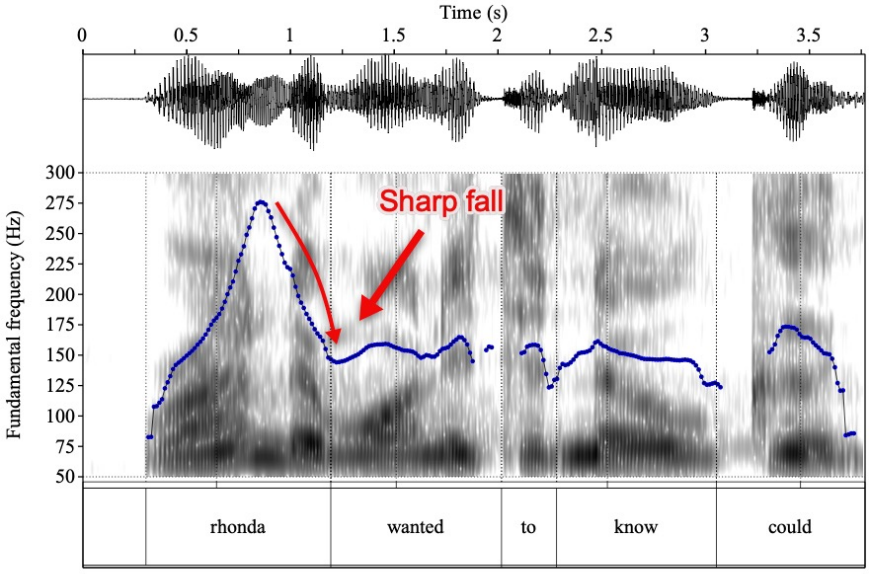
- Identifying places where there is a lot of uncertainty (heavy use of alt tier, comments in misc tier) provides clues to help develop a phonological analysis

Case studies

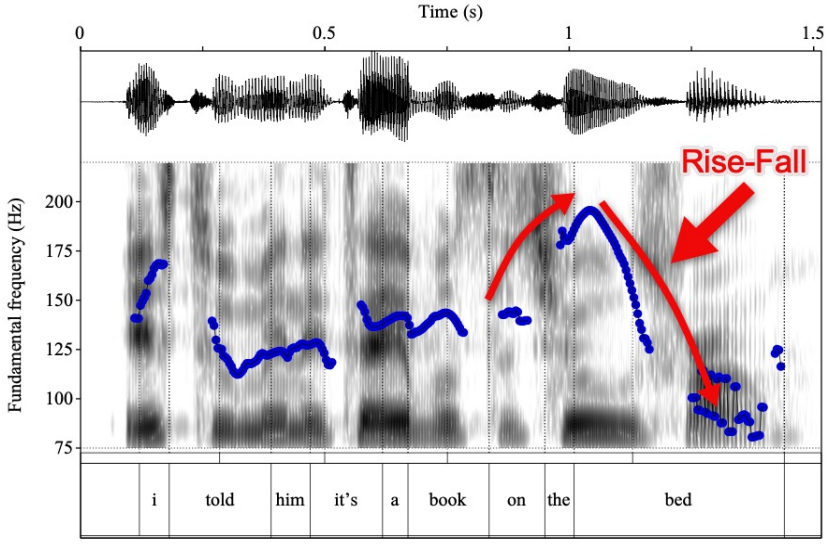
3 intonational patterns:

1. High pitch accent followed by sharp fall
2. Rise-fall pattern in declaratives
3. Initial high pitch followed by compressed pitch range

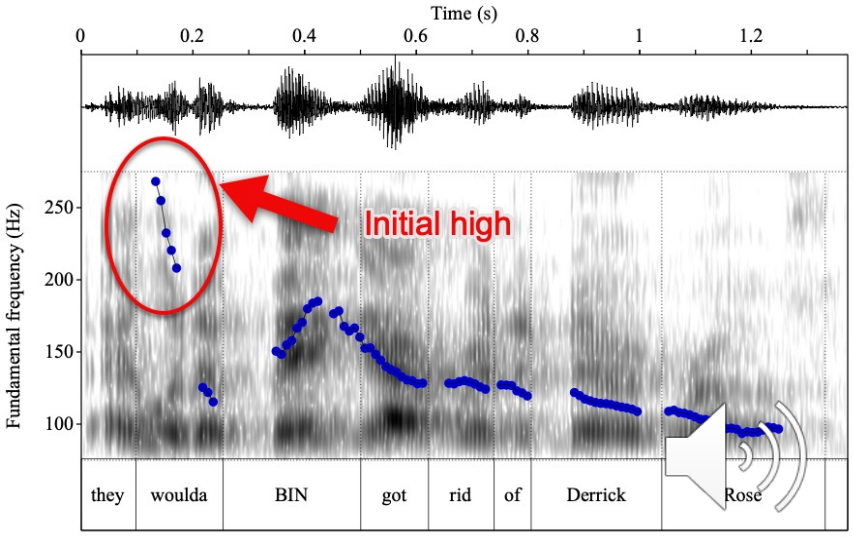
1)



2)



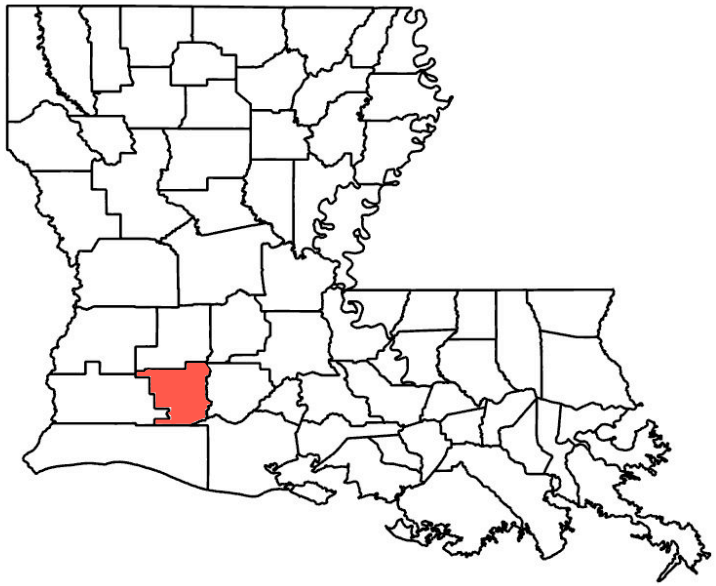
3)



Data

- 9 adult members of an AAE-speaking community in southwest Louisiana

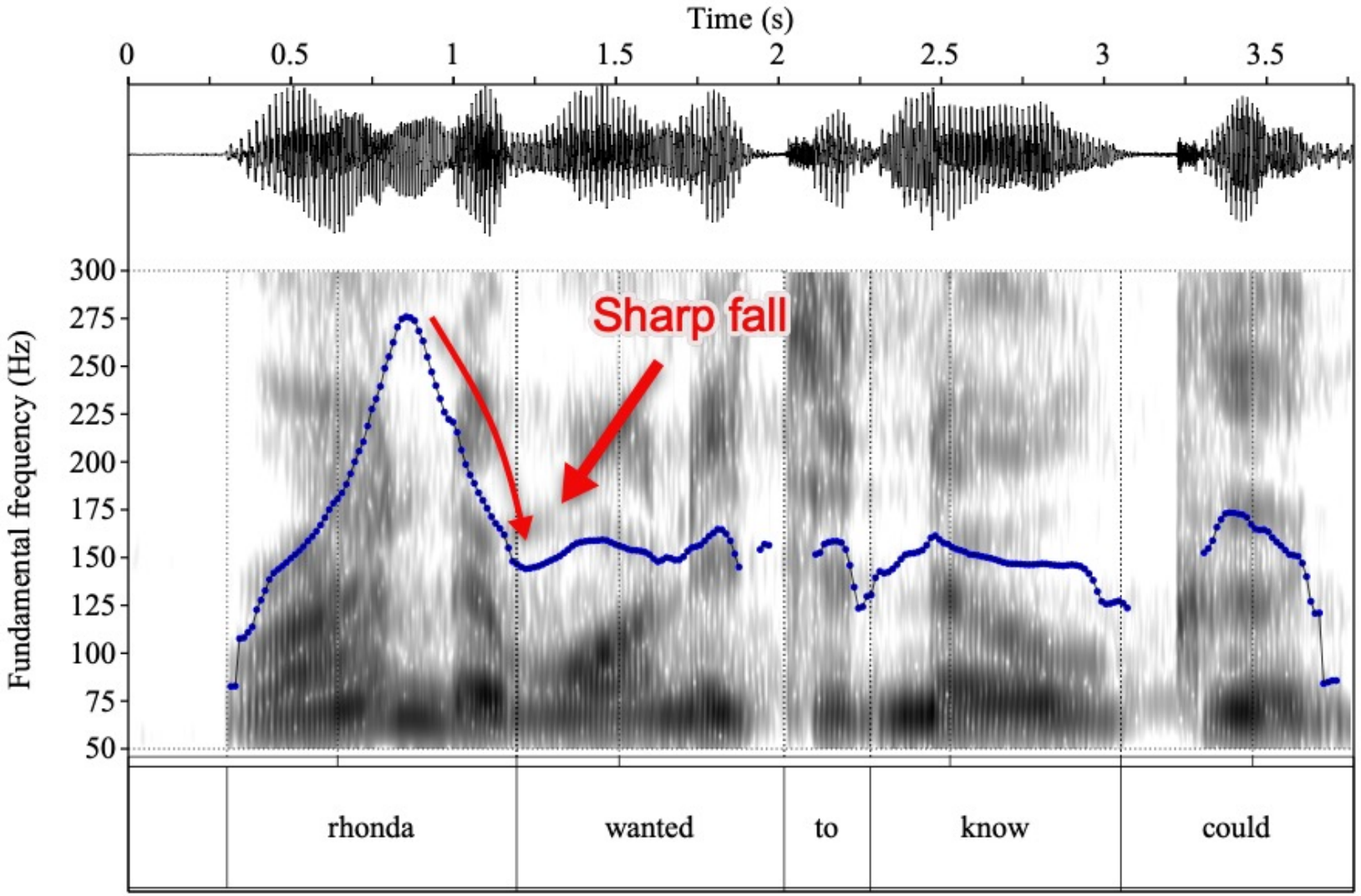
- Utterances were elicited with written prompts, with situational context presented auditorily and visually (NWAV 48: Green, et al. 2019, Neal et al. 2020, Green et al. submitted)



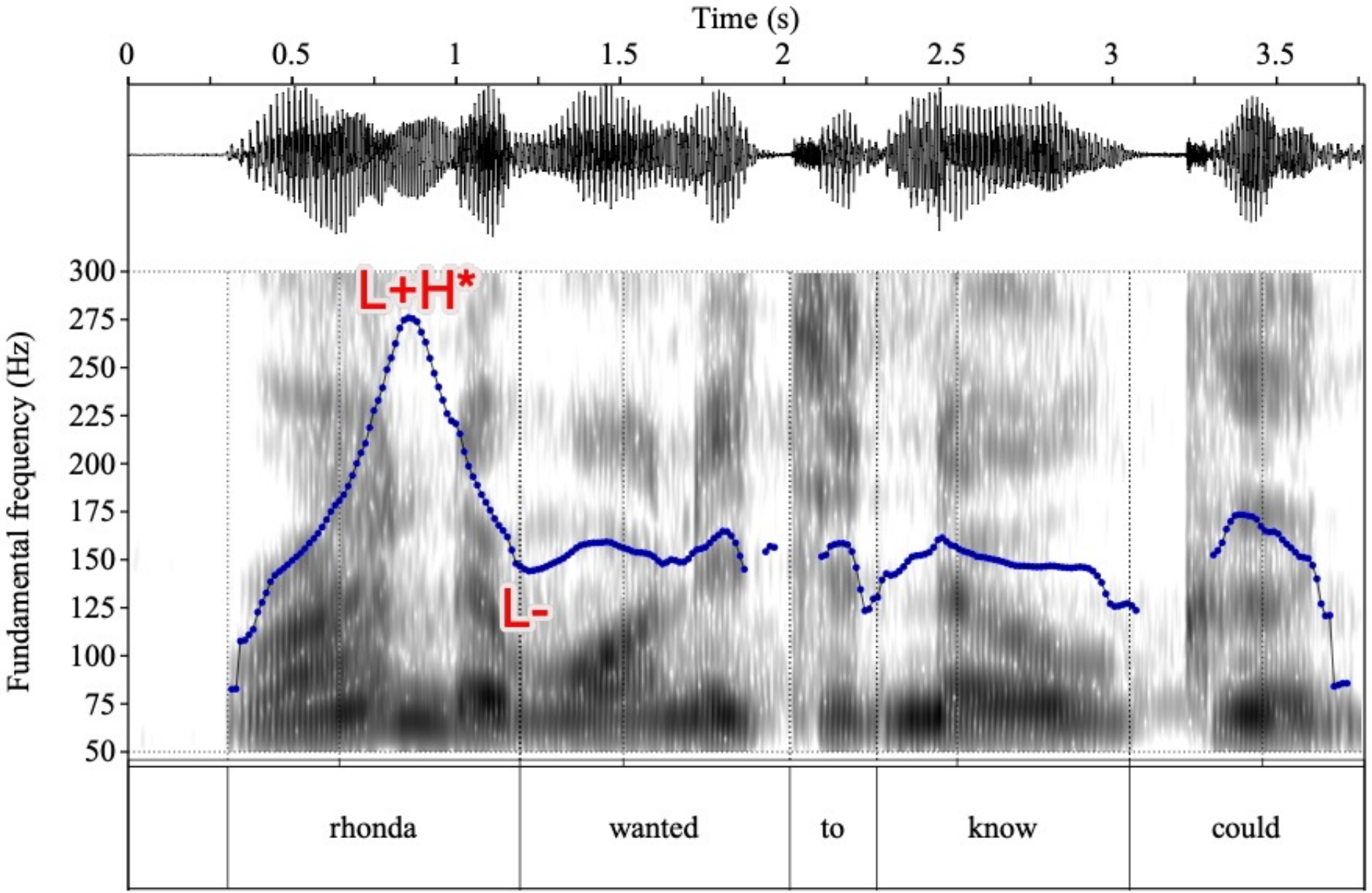
- ~800 total tokens

- Recordings segmented and forced aligned, then transcribed following the MAE ToBI conventions by one transcriber with extensive training in MAE-ToBI

Case study #1: High, sharp fall



Female, age 66


Time (s)
0
0.5
1
1.5
2
2.5
3
3.5
Fundamental frequency (Hz)
300
275
250
225
200
175
150
125
100
75
50
L+H*
L-
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wanted
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know
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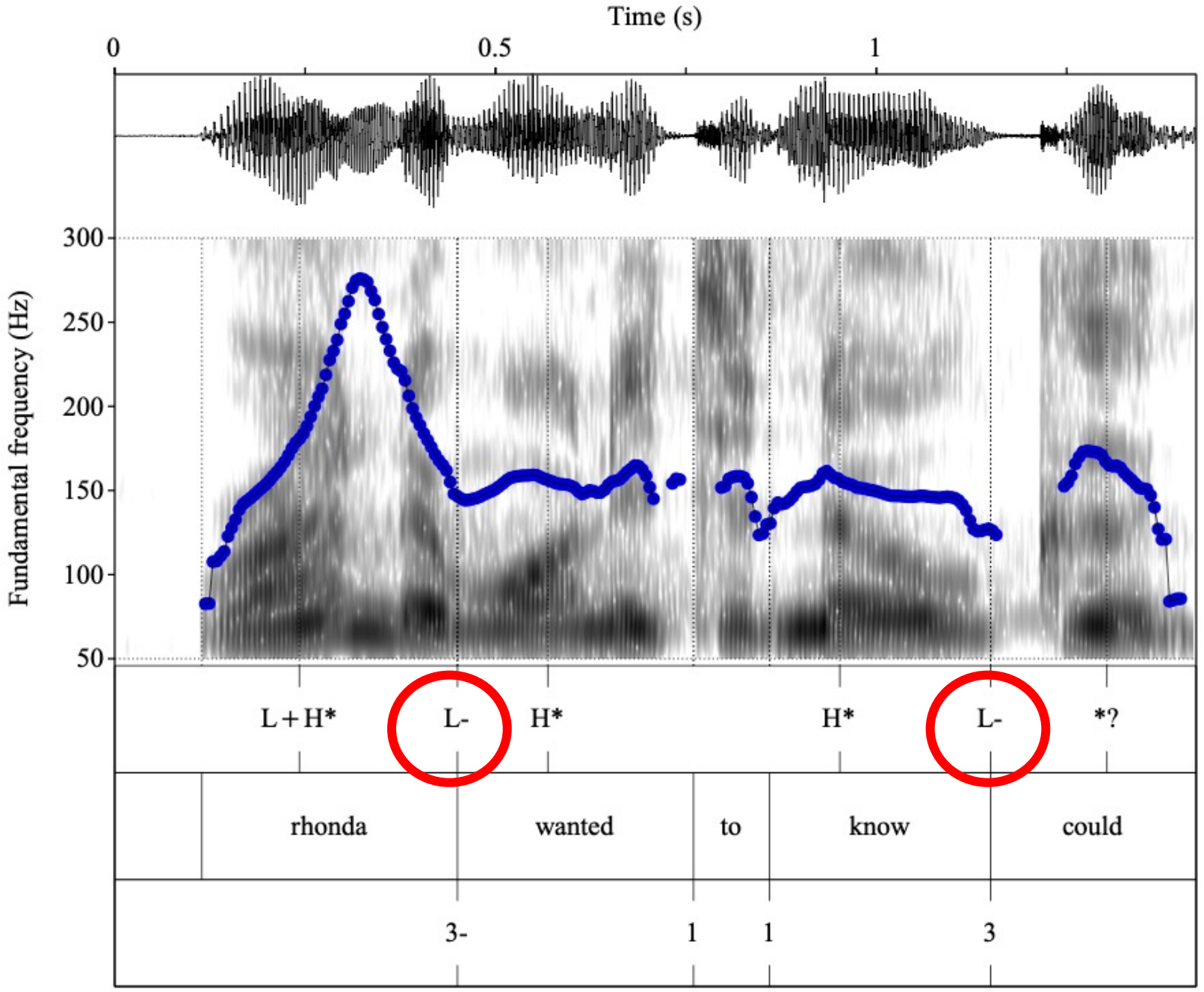
Time (s)
0
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Fundamental frequency (Hz)
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100
50
L+H*
L-
H*
H*
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*?
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to
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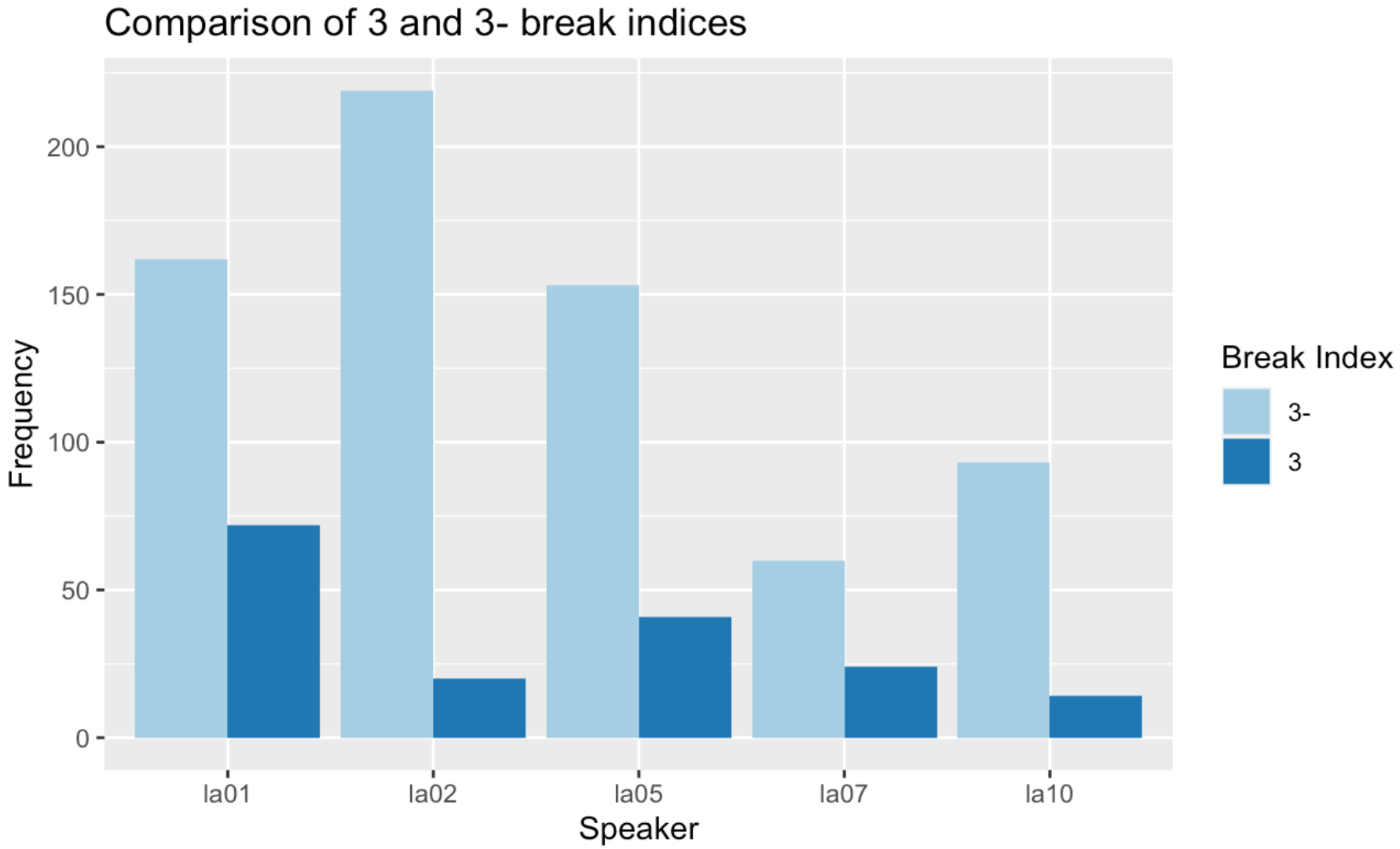
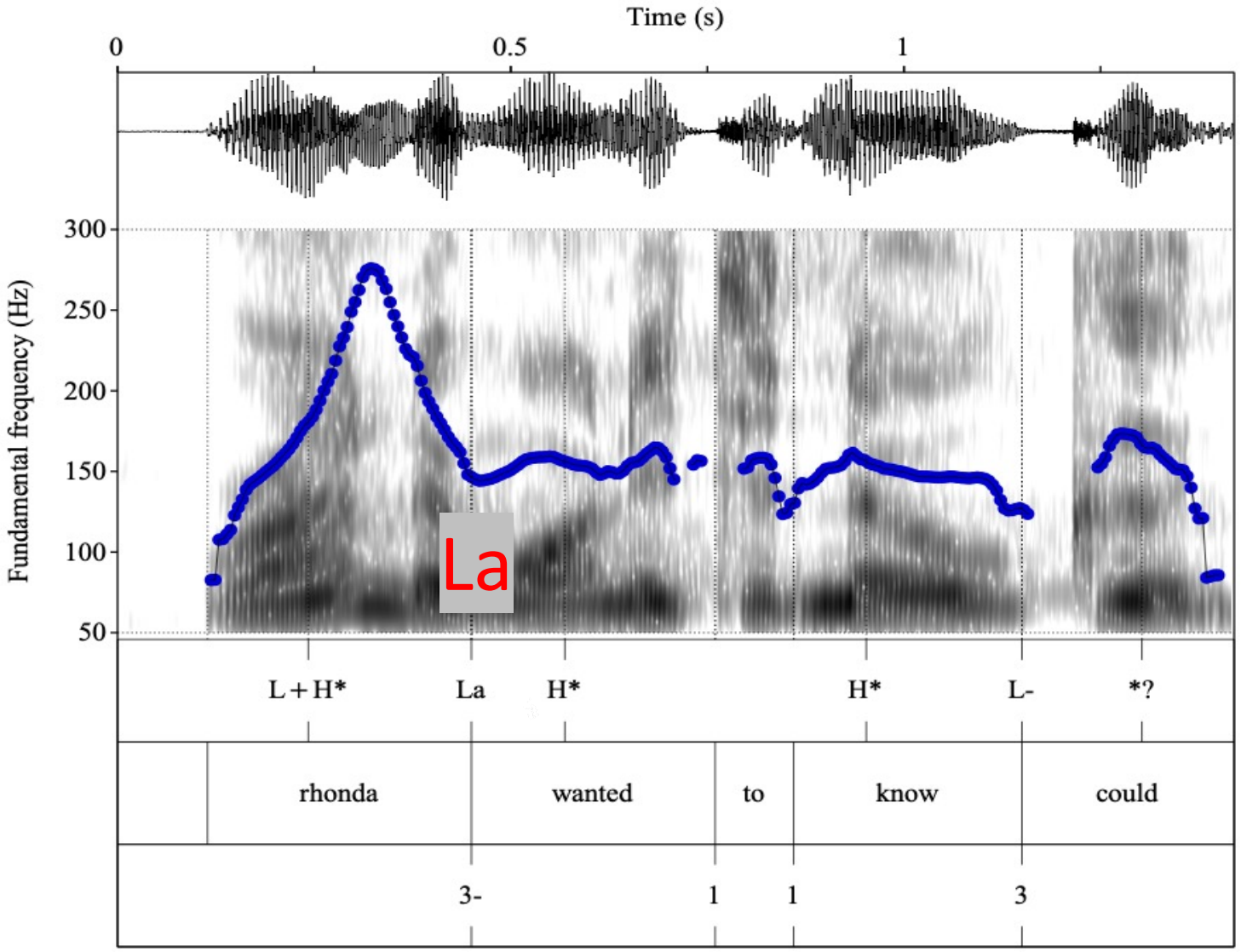
3-
1
1
3

Frequency of 3- break indices in the data



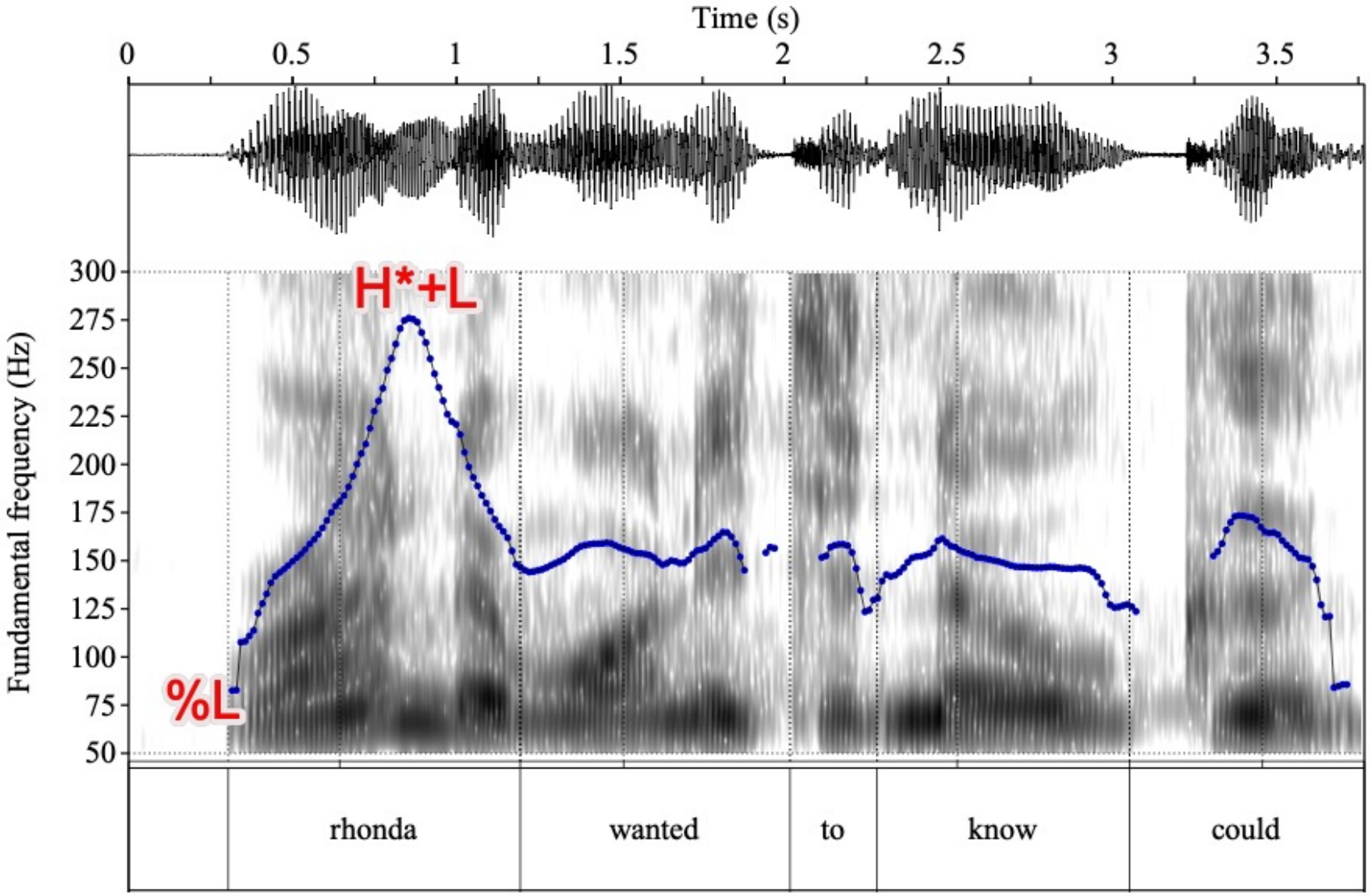
The Accentual Phrase (AP) (Cole, Thomas, Britt, & Cogshall (2005) NWAV 34)



AAE has a smaller constituent below the ip- the AP

La mark AP boundaries, we don't expect the same cues to a juncture here

H*+L falling tone (Gussenhoven 2004; 2016)



2 potential implications:

1. AAE has a different tonal inventory than MAE (suggested by Thomas 2015)

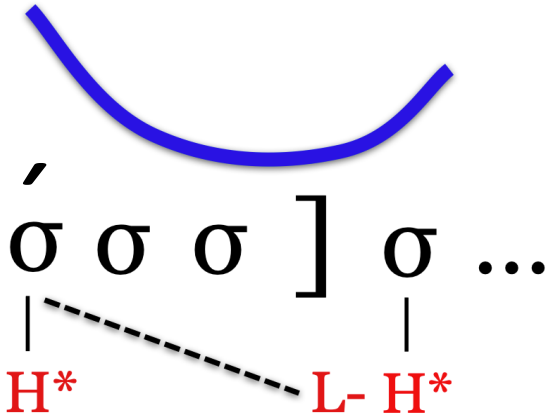
2. AAE makes a case for an H*+L pitch accent in American Englishes

H* L- vs. H*+L

Expectations:

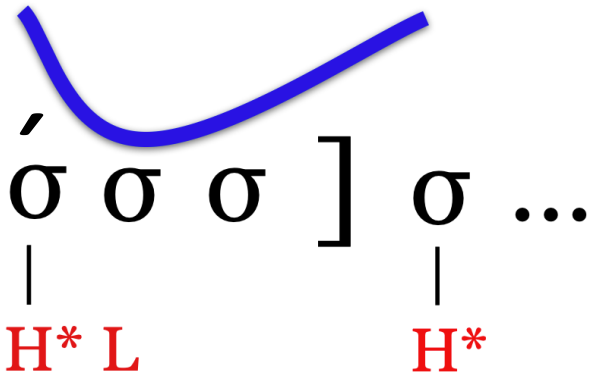
H* L-:

- Rise to H after the right edge of the word



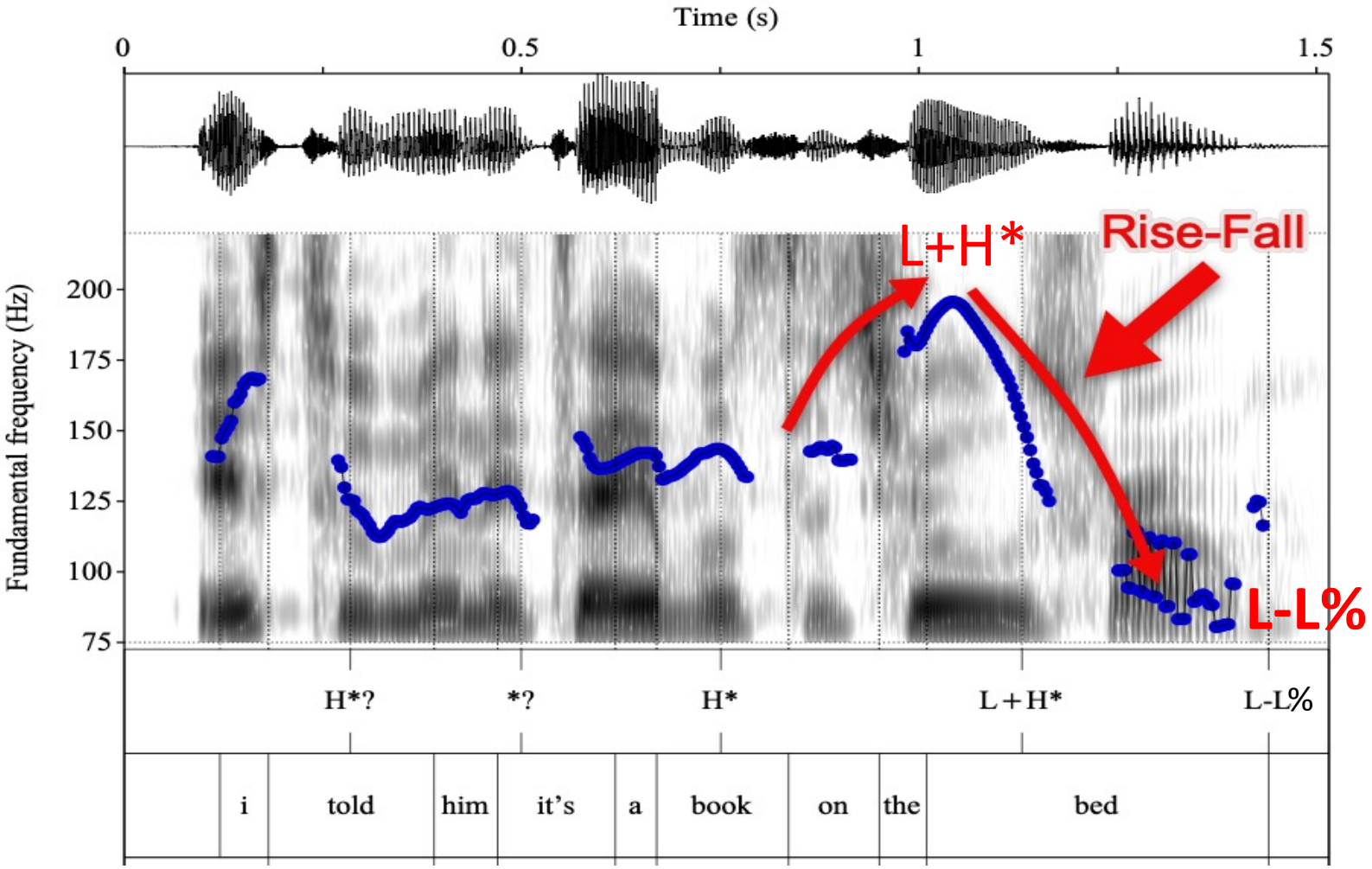
H*+L:

- Rise to H after the syllable following the stressed syllable



Case Study #2: Rise fall ending

Existential *It*: I told him it's a book on the bed
'I told him there's a book on the bed'

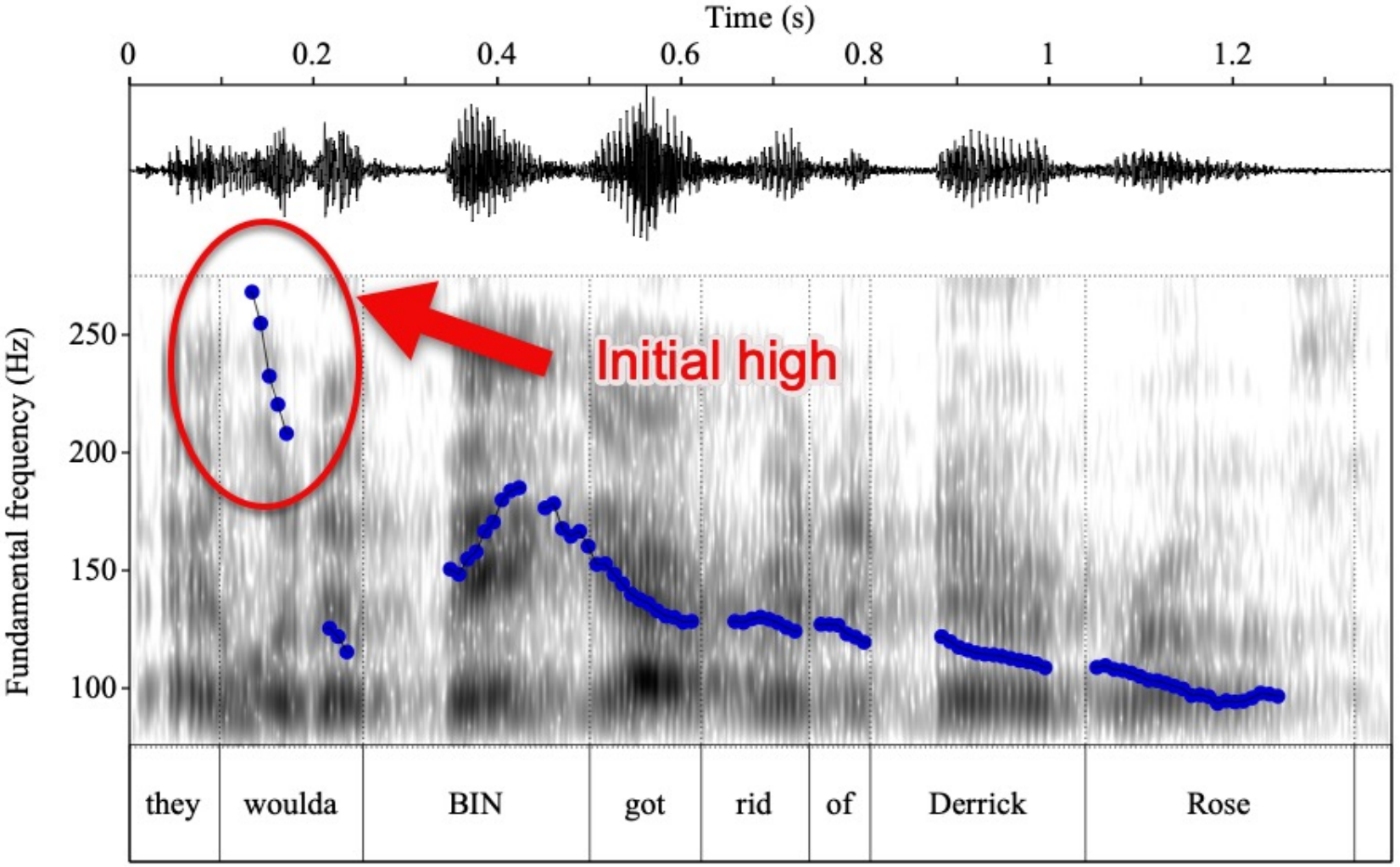


- L+H*: Often used for contrastive focus in MAE
- Holliday (2016), McLarty (2018): greater frequency of L+H* among AAE speakers

Male, age 57

Case study #3: Initial high tone

They woulda BIN got rid of Derrick Rose

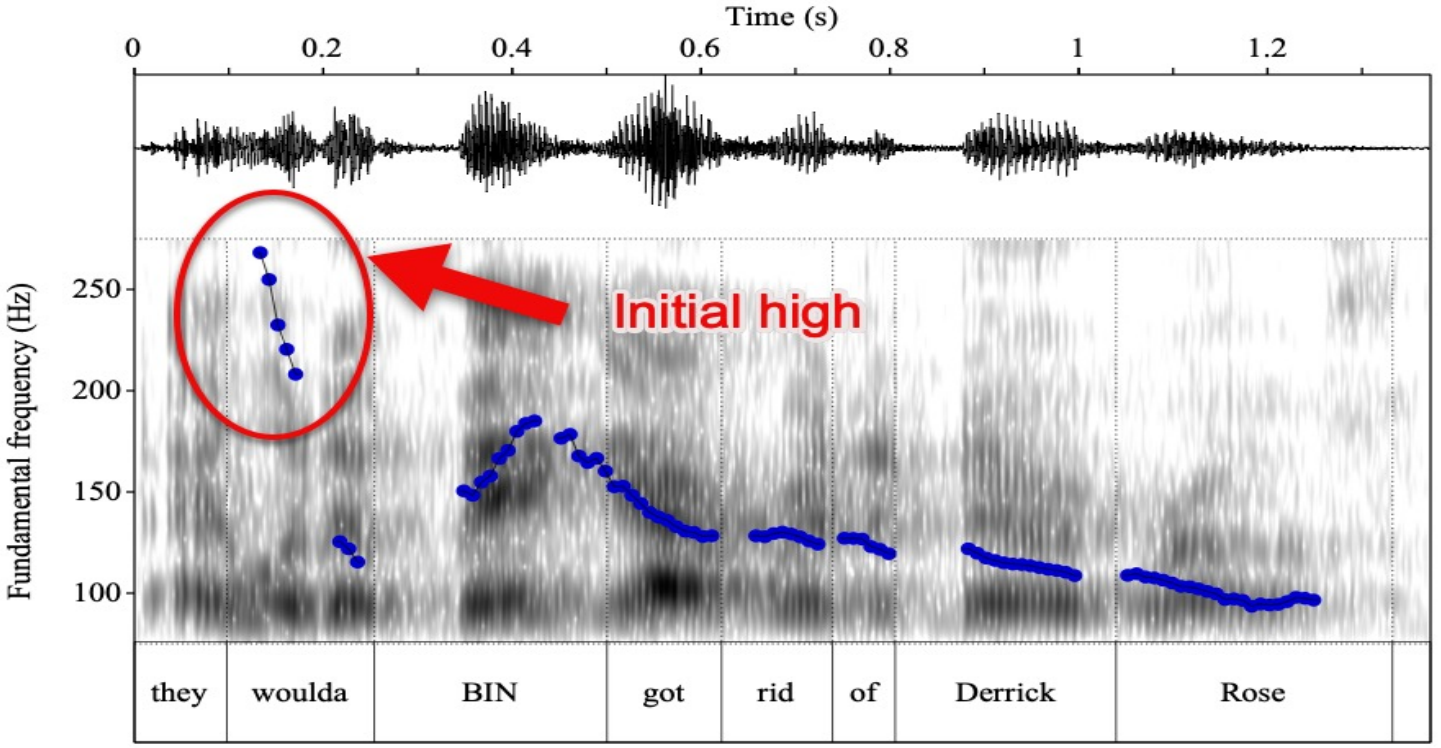


CORAAL:
DCB_se1_ag2_m_01_1, utterance 1629

Male, b. 1989

Initial H boundary tone

- Initial %H is possible, but an "analysis of last resort" in the 1997 MAE-ToBI labeling conventions
- This could be H*, but is "they" perceived as prominent by listeners?
- Possible %H is a feature of intonational phonology of AAE (Jun & Foreman '96)



Pitch accent or boundary tone?

- Larger issue in research on intonational phonology is a question about the separation of tones into pitch accents and edge tones (see Grice 2021 for overview)
- Several researchers are questioning the assumption that pitch accents always mark prominence and edge tones remain at boundaries
- The data presented here can be brought to bear on these larger issues and help us evaluate our theories
- Theoretical linguistics and work on less well-studied varieties (in terms of intonation), like AAE, can inform each other

Conclusions

- MAE-ToBI useful for capturing generalizations about intonation in AAE
- Can help us find patterns, and identifying the places where the analysis is not so straightforward can help us make progress in the study of the intonational phonology of AAE
- Places where there's uncertainty highlight potential intonational differences between MAE and AAE
- Prosodic transcription is also a phonological analysis, and varieties of a language may differ in their intonational phonology
- This type of work on AAE has the potential to shed light on a current calling into question of fundamental issues in intonational phonology (i.e., divide between pitch accents and edge tones)

Thank you!

And thanks to...

Our southwest Louisiana speakers

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