The start and end of it:
Prosodic marking of speech report boundaries in Dolakha Newar

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Typical Reported Speech Construction

(1)

āle ***gibi＝lān hār-mun*** ***chin*** *haŋ-an hat-ai*

then where=ABL bring-2sPR 2sERG say-PART say-3sPR

‘Then (she) said: “From where did you bring (this)?”’

(2) Second-Person Attraction (Evans 2013:96)

hāti ***hat-ai*** *haŋ-an* *hat-cu*

what say-3sPST COMP say-3sPST

‘He said: “What did he say?”

thae=ri ***chẽ=ku thi-mā mica dam*** *hat-ai*

2Hon.GEN=IND house=LOC one-CL daughter be say-3sPR

‘He said: “In your house there is a daughter.”

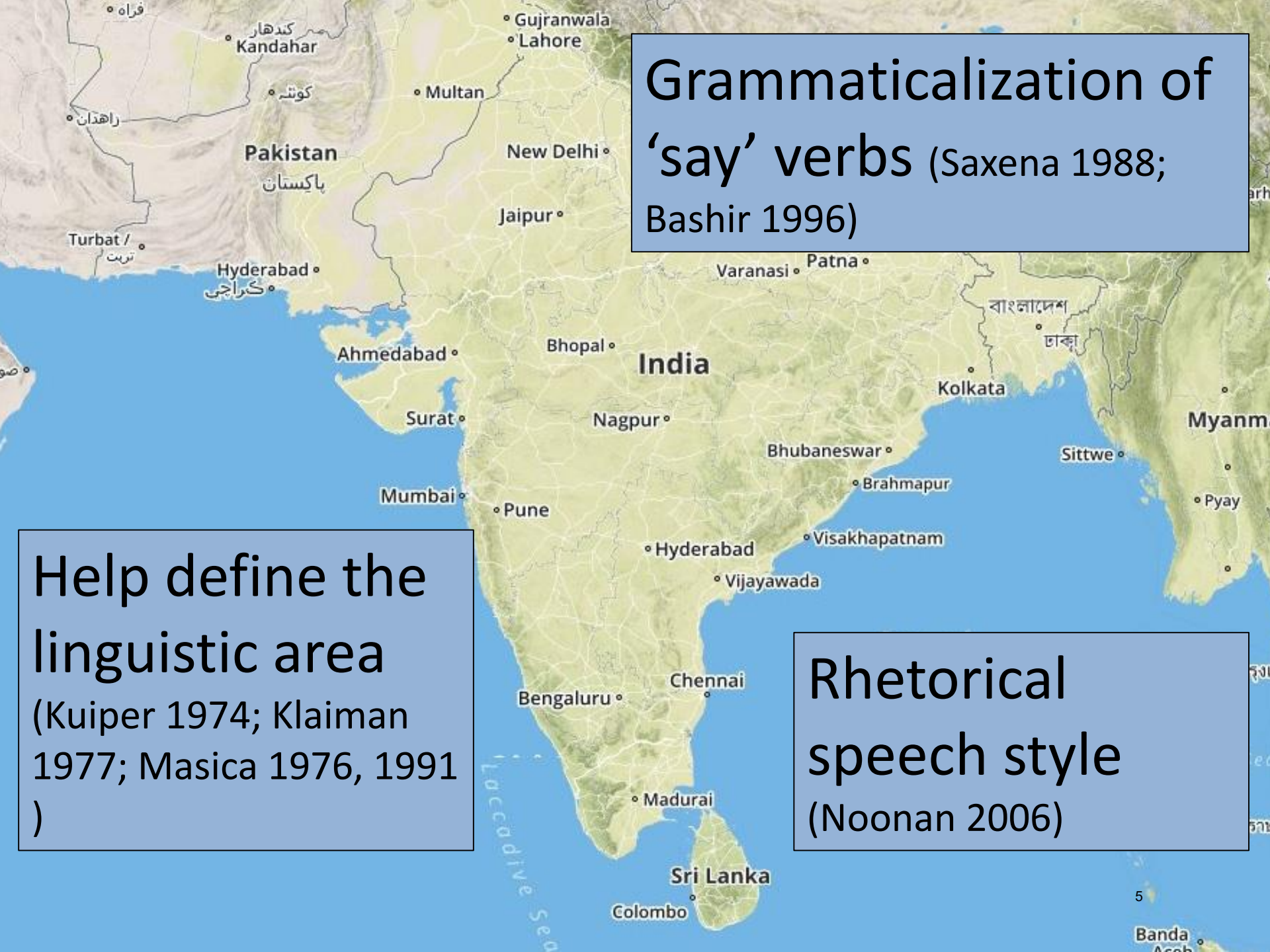
Alternative Structure

(3) Speech report follows quotative verb

āmun *hat-ai* *ki* ***janta chin*** ***da-syat***

3SERG say-3SPT COMP 1SDAT 2SERG PROH-kill

'He said: "Don't kill me!"'


Grammaticalization of ‘say’ verbs (Saxena 1988; Bashir 1996)
Help define the linguistic area (Kuiper 1974; Klaiman 1977; Masica 1976, 1991)
Rhetorical speech style (Noonan 2006)
Kandahar
Gujranwala
Lahore
Multan
Pakistan
New Delhi
Jaipur
Turbat /
Hyderabad
Varanasi
Patna
Ahmedabad
Bhopal
India
Kolkata
Surat
Nagpur
Bhubaneswar
Sittwe
Brahmapur
Mumbai
Pune
Hyderabad
Visakhapatnam
Vijayawada
Chennai
Bengaluru
Madurai
Sri Lanka
Colombo
Banda

PROSODIC MARKING OF DIRECT SPEECH REPORTS

Polyphony:
Layering of Voices

- Voice of the Speaker
- Voice of the Narrator
- Voice of the Character
- Voice of the Character as Narrator
- Voice of the Character as Character

“The question which the “voicing” of figures raises for a prosodist is whether and to what extent the speaker’s phonatory voice is instrumental in the process.”

-- Couper-Kuhlen (1998:3)

Prosodic features cited as marking speech report boundaries

- Noticeable shift of pitch register
- Greater reset in pitch range
- Changes in volume
- Shifts to perceptually isochronous timing
- Changes in register or voice quality
- Use of prosodic patterns typical of conversational speech
- Devoicing

"As with syntactic boundaries, the relationship between prosodic marking and discourse structure is not simple, and exhibits substantial variability. Speakers do not consistently produce prosodic cues that identify the beginning or end of a discourse unit…"

-- Cole 2014:14

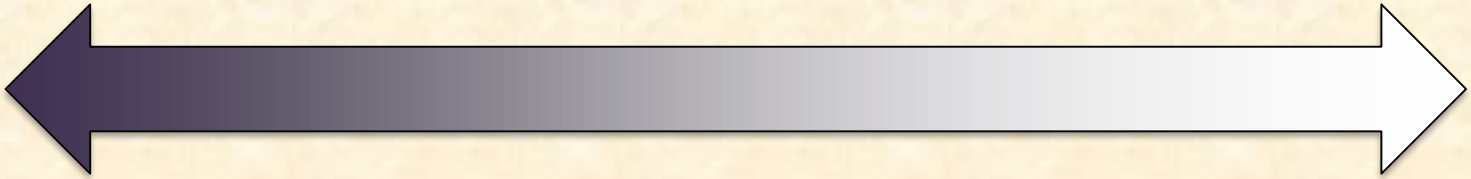
"[Direct speech reports] may be set off from the surrounding quotative frame by intonation-unit boundaries, variations in pitch or loudness, and/or the production of contours typical of conversational speech. … On the other hand, they may exhibit none of these prosodic characteristics and be prosodically integrated with respect to the quotative frame."

-- Genetti 2011:55

Cline of Prosodic Integration

Prosodically Integrated

Prosodically Independent



Malibert and Verhove (in press)

Variation in:

- Frequency of direct speech reports
- Degree and frequency of integration
- Whether the left or right boundary tends to be more significantly marked
- Degree of correlation with grammatical markers, especially complementizers

“In SOV languages where the quotative verb follows the speech reports, their onset is systematically set off from the previous intonation unit, a clear prosodic cue, marking the beginning of the speech report. In SVO languages it is the end of the speech report which is set off from the next IU.”

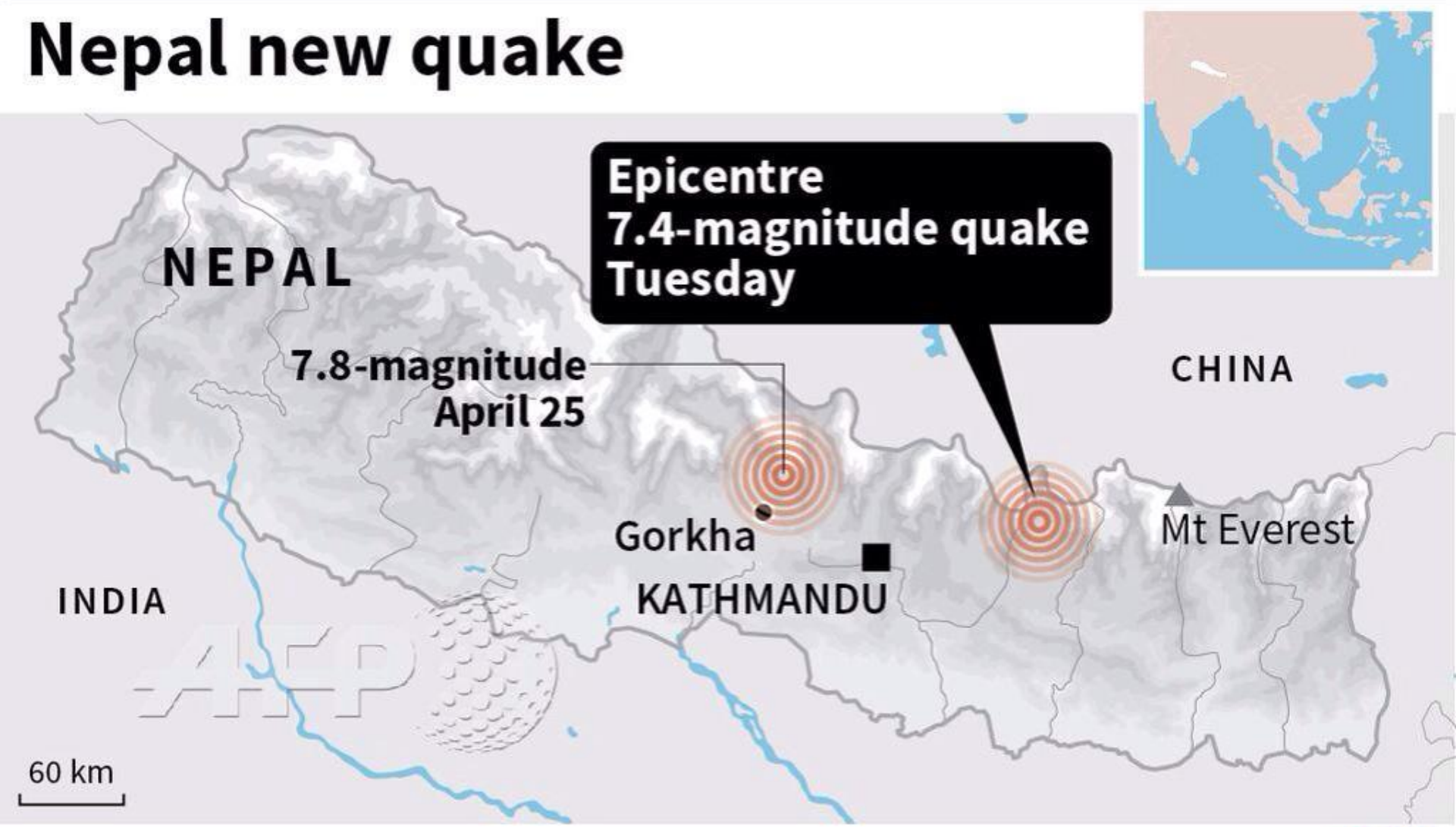
-- Malibert and Vanhove (in press:61)

Questions for Present Study

- Can we provide a detailed quantitative analysis of the prosodic features that mark speech-report boundaries in Dolakha Newar?
- Are there differences between how the beginnings of speech reports are marked as opposed to the ends?
- What are the implications for the Cline of Prosodic Integration?

DOLAKHA NEWAR

Nepal new quake



Source: USGS

PROSODY IN DOLAKHA NEWAR

Intonation Unit (IU)

- A cohesive stretch of speech uttered under a coherent intonation contour
- IU boundaries marked by some of the following:
  - pitch reset
  - pause
  - “lag-rush”: final lengthening followed by acceleration of new IU
  - occasionally changes in amplitude, voice quality
  - Final contour – distinctive pitch movement at the end of an IU

tyāgi barta=ku ũ-i doŋ-an-ˆli //

denial fasting=LOC go-INF finish-PART-after

ām ˆmāji=e mica makche=ri /

DEM boatman=GEN daughter Makche=IND

*chẽ ˆpul-en yer-a *

house return-PART come-3sPST

‘(He) having gone to a life of denial and fasting, the fisherman’s daughter Makche returned home’

Dolakha Newar: 6 Final Contours (boundary tones)

Falls	Rises
High fall	Marked Rise
Mid fall	Rise
Level	
Rise-Fall	

Phrasal Accent

Increased prosodic prominence assigned to (typically) one syllable of an IU

Normal

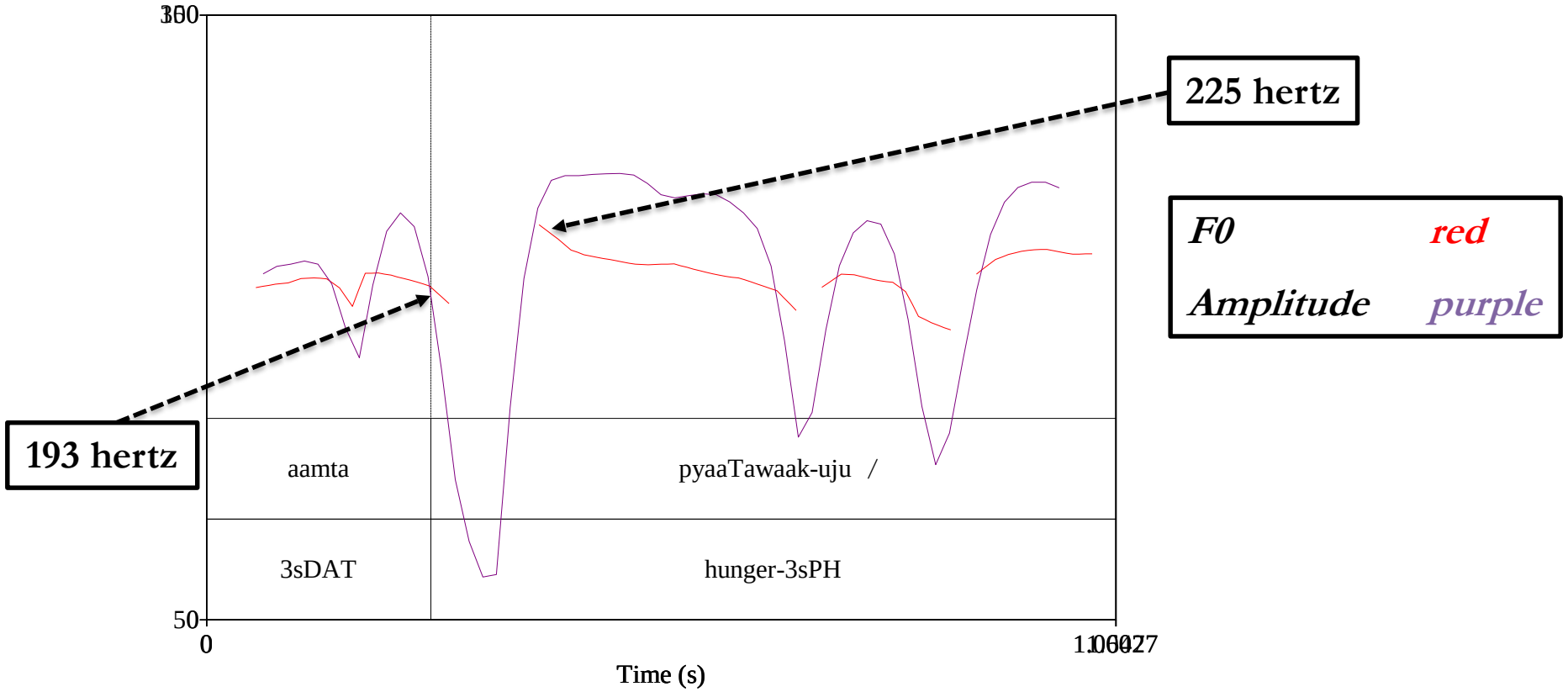
Emphatic

Overall shape of an intonation contour results from:

1. Type and position of phrasal accent

2. Type of final contour

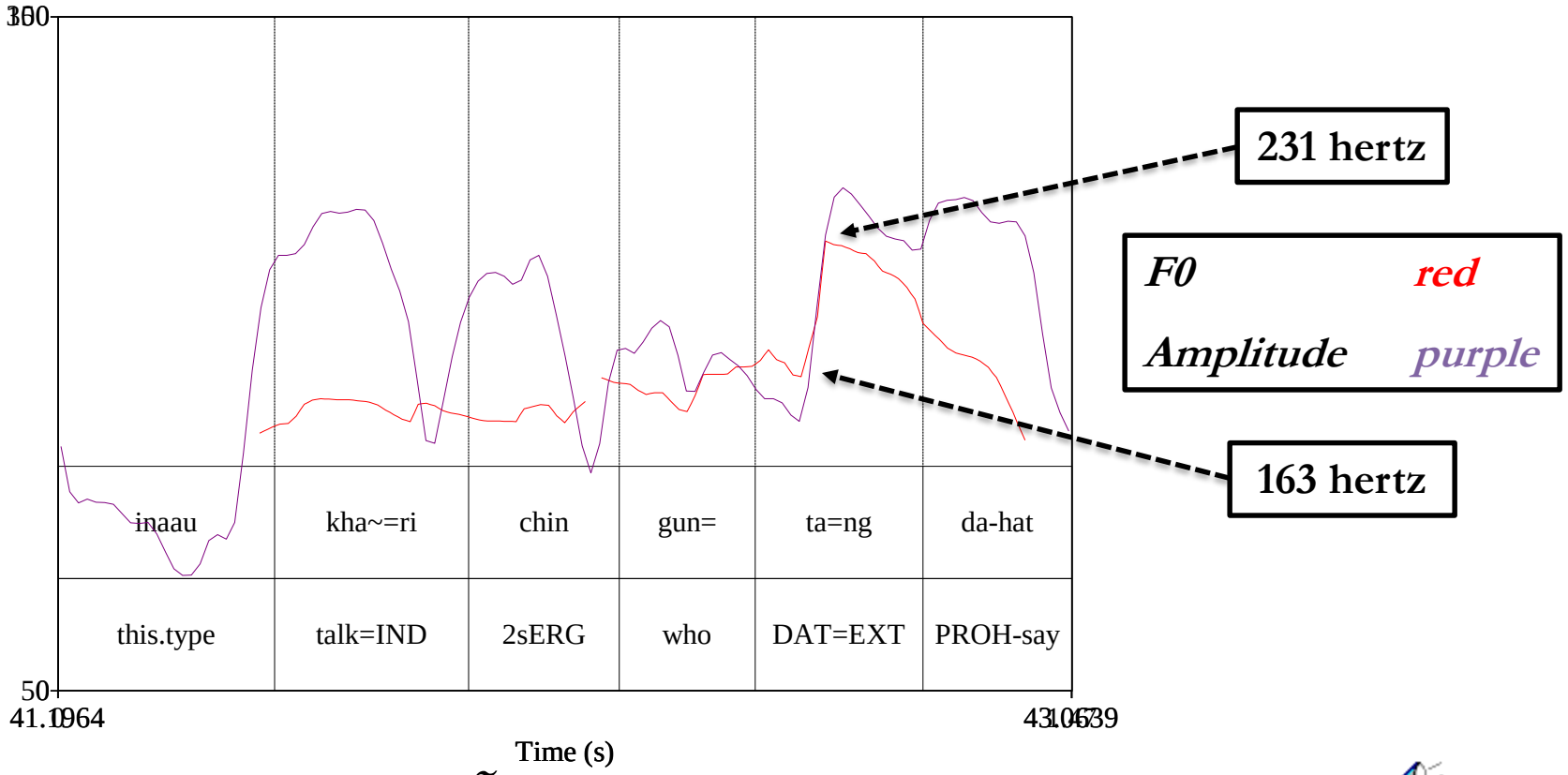
“Normal” phrasal accent and rising contour



(3) *āmta ˆpyāṭawāku-ju /*

‘She was always hungry’

“Emphatic” phrasal accent and marked fall contour



(4) *inā̃gu khã̃=ri chin gunta=ŋ da-hat* ||

‘Don’t tell this to **anyone**’

Data for current study

- Four folktale narratives
  - Mahabharata excerpt — Sanu Laxmi Joshi
  - Siru — Kalpana Shrestha
  - Orphan — Bisnu Laxmi Shrestha
  - 3 Kids — Kalam Maske

Data for current study

- Looked at :
  - All speech reports (n = 167)
  - All IUs in first 100 seconds of each text (n = 235)
- Total: 894 intonation units

Durations of Speech Reports

	Duration of Text (seconds)	Duration of SRs (seconds)	% of Text that is Quoted Speech
3 Kids	579.10	158.62	27.39 %
Maha.	558.19	148.91	26.68 %
Orphan	458.18	148.85	32.49 %
Siru	543.35	171.33	31.53 %
Total	**2,138.82**	**627.71**	**29.35 %**

EXPLORING STARTS AND ENDS OF SPEECH REPORTS

Question 1:

Do IU boundaries co-occur with speech-report boundaries?

IU boundary here?

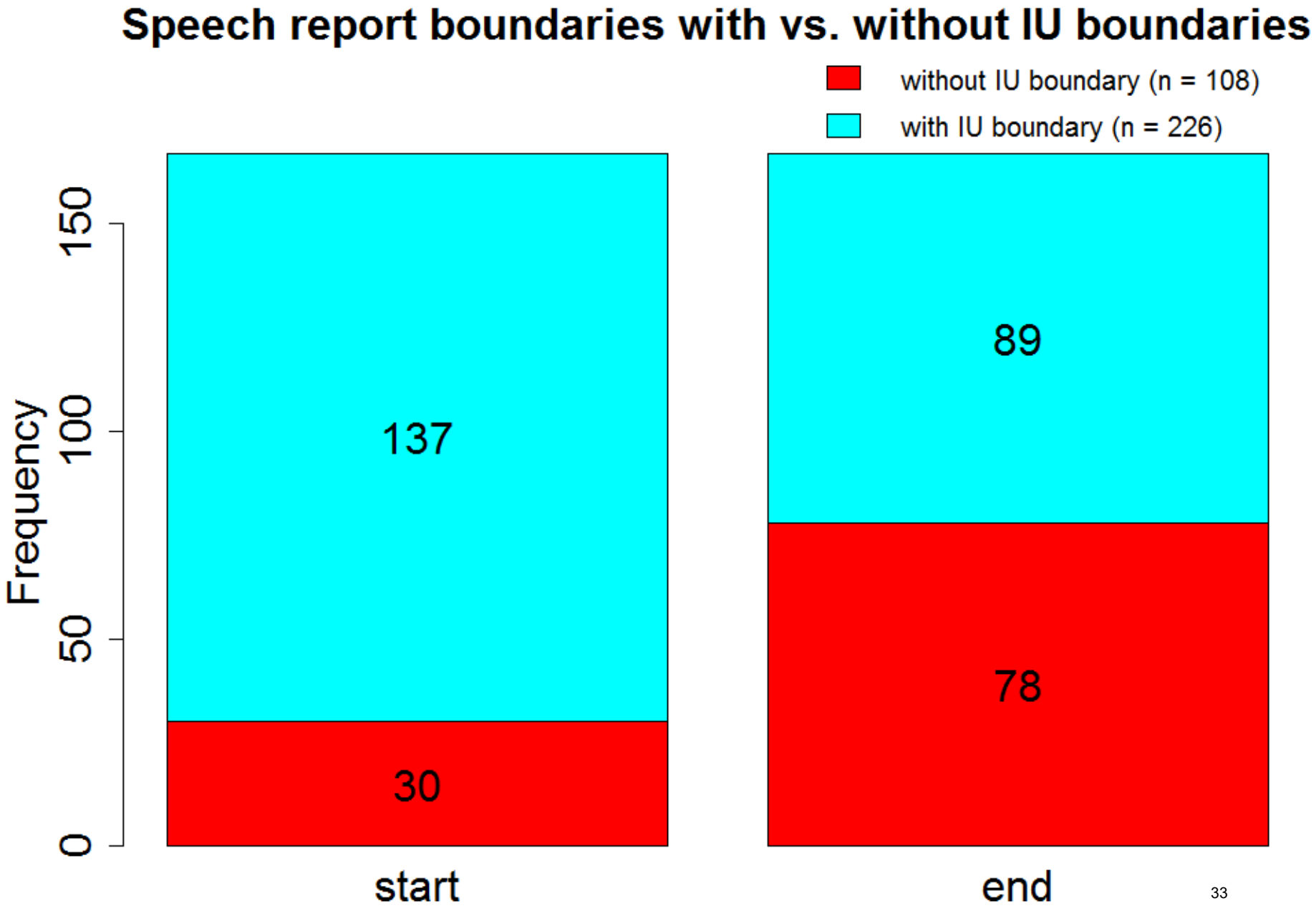
IU boundary here?

(1)

āle ***gibi＝lān hār-mun*** ***chin*** *haŋ-an hat-ai*

then where=ABL bring-2SPR 2SERG say-PART say-3SPR

‘Then (she) said: “From where did you bring (this)?”’


Speech report boundaries with vs. without IU boundaries
without IU boundary (n = 108)
with IU boundary (n = 226)
Frequency
0
50
100
150
137
30
89
78
start
end

Finding 1

- Speakers are more likely to place IU boundaries at the starts of speech reports than at the ends.
- Statistically highly significant

  $\chi^2=31.528$, df=1, $p<0.001$

EXPLORING STARTS AND ENDS OF SPEECH REPORTS

Question 2:

Are there any patterns with respect to pauses and speech-report boundaries?

tyāgi barta=ku ũ-i doŋ-an-ˆli //

denial fasting=LOC go-INF finish-PART-after

ām ˆmāji=e mica makche=ri /

DEM boatman=GEN daughter Makche=IND

*chẽ ˆpul-en yer-a *

house return-PART come-3sPST

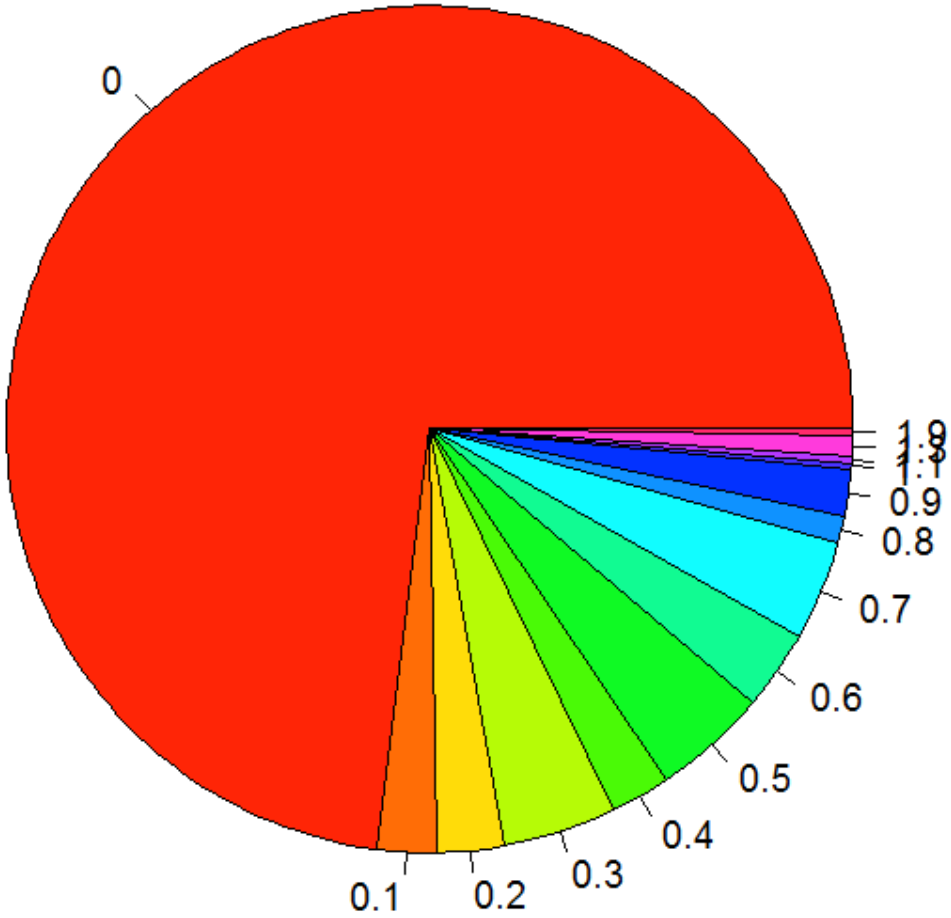
‘(He) having gone to a life of denial and fasting, the fisherman’s daughter Makche returned home’

IUs and pauses *external* to speech reports

392 total external IU boundaries:

- 286 (73%) have no pause
- 106 (27%) are followed by a pause of 100 ms. or greater

Durations of pauses at IU boundaries, excluding speech reports



When there is an IU boundary, is there a pause?

When there is an IU boundary, is there a pause?

(1)

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then where=ABL bring-2SPR 2SERG say-PART say-3SPR

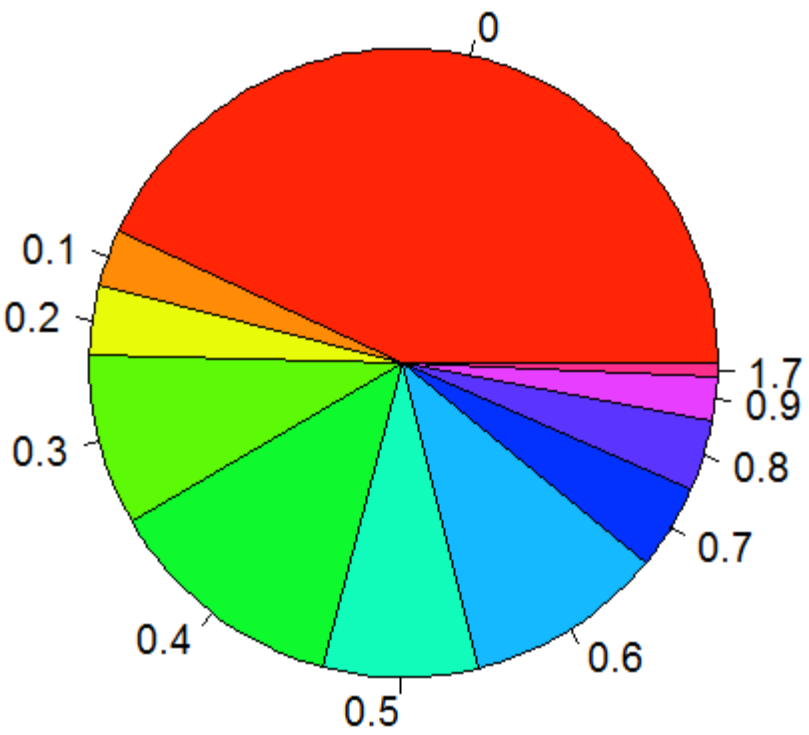
‘Then (she) said: “From where did you bring (this)?”’

Compare with IUs at starts and ends of speech reports

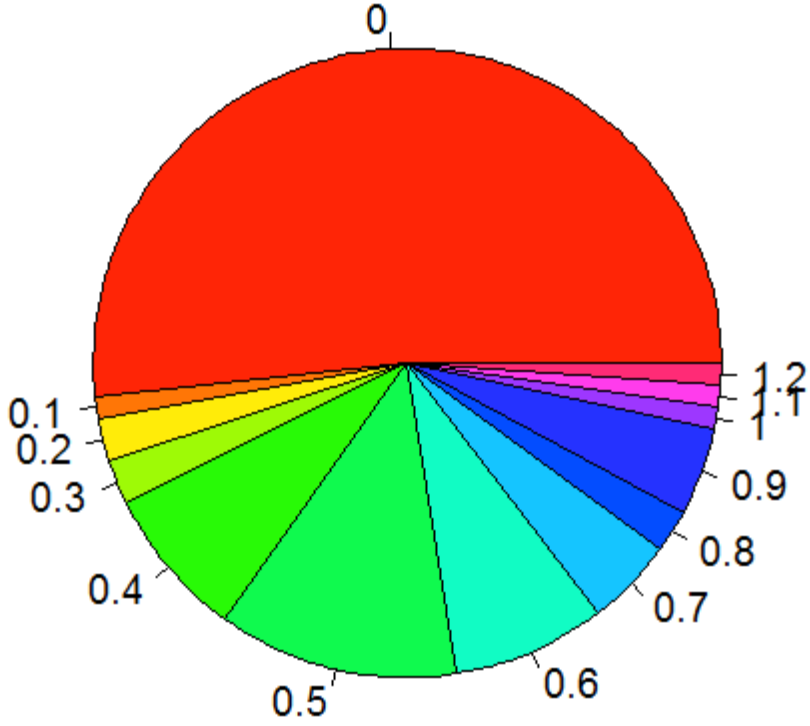
IU boundary is:	External to SR	Start of SR	End of SR
Zero Pause	286 (73%)	59 (43%)	46 (52%)
Pause	106 (27%)	78 (57%)	43 (48%)
TOTAL	**485**	**137**	**89**

Durations of pauses at IU boundaries before and after speech reports

Before



After



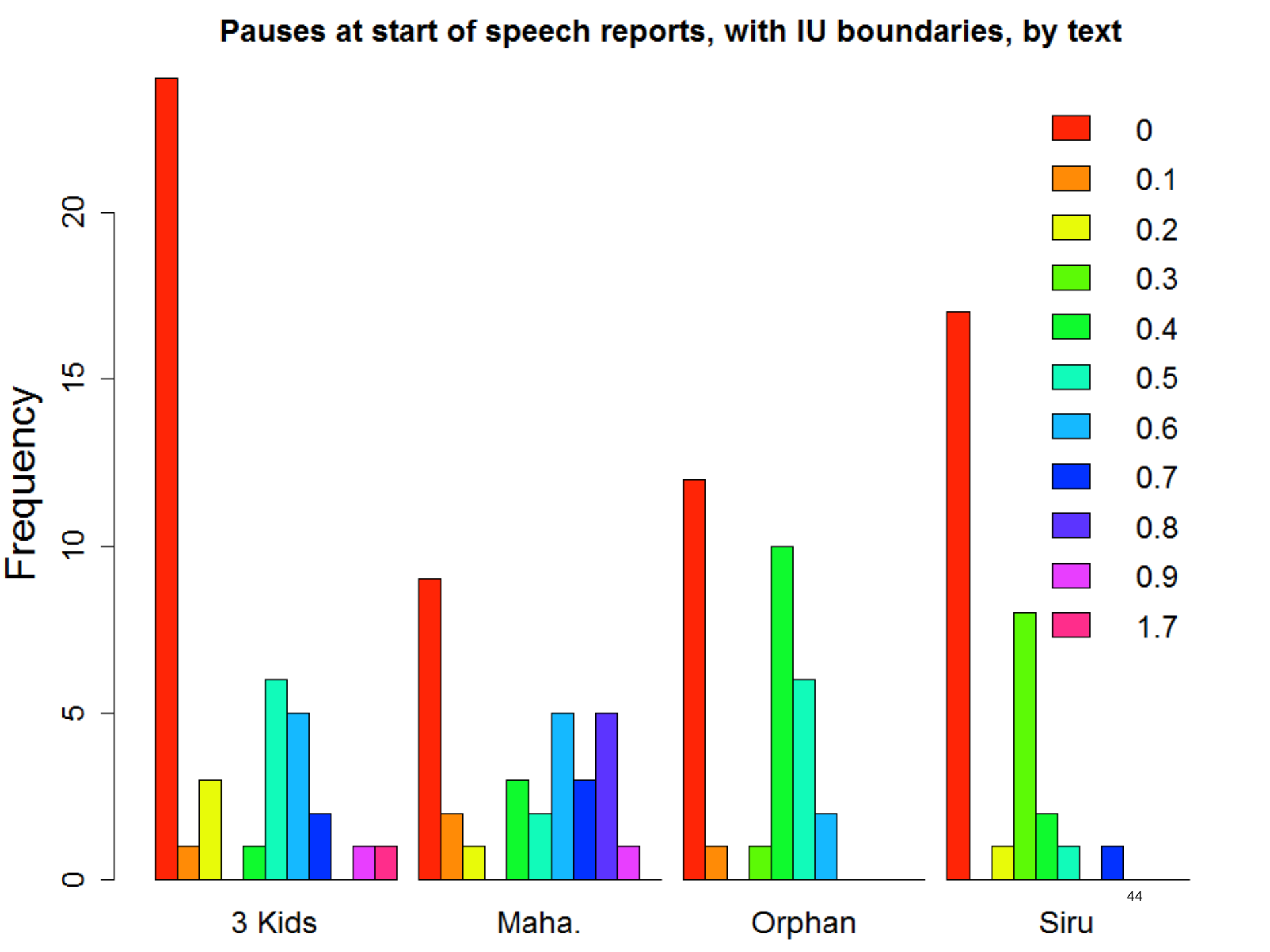
Statistical Analysis

Two-sample Kolmogorov-Smirnov test for independence:

- Non-SR boundaries vs. start boundaries:
  - D=0.2989, $p<0.001$ – highly significant
- Non-SR boundaries vs. end boundaries:
  - D=0.2484, $p<0.001$ – highly significant
- No statistical significance between the starts and the ends on this

Finding 2

- Speakers are more likely to pause at IU boundaries that are at boundaries of speech reports than at other IU boundaries.


Pauses at start of speech reports, with IU boundaries, by text
Frequency
0
5
10
15
20
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.7
3 Kids
Maha.
Orphan
Siru

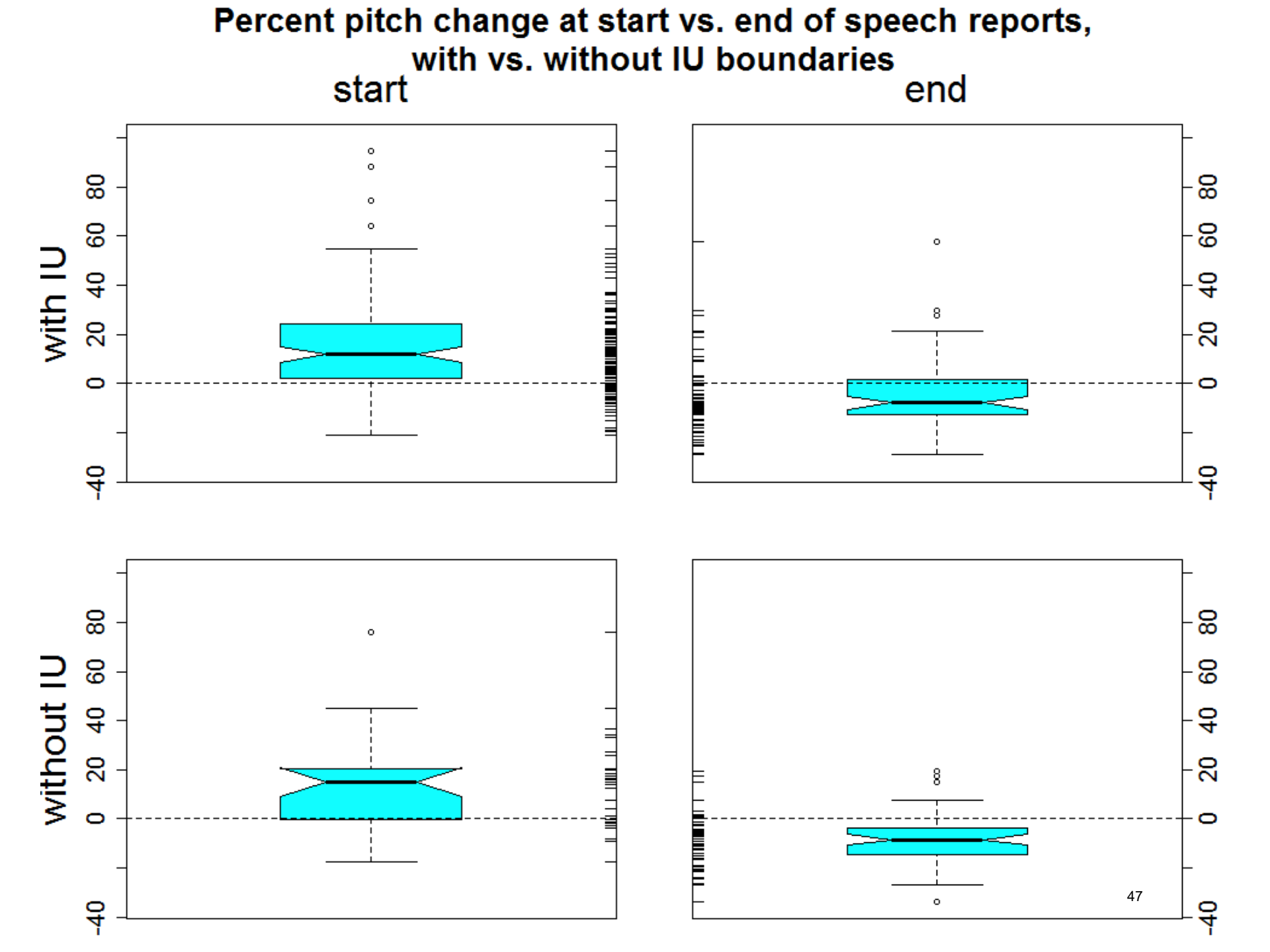
EXPLORING STARTS AND ENDS OF SPEECH REPORTS

Question 3:

Are there differences in how pitch patterns at the starts and ends of speech reports?

Methodology

- Took the average pitch of the three syllables preceding the SR boundary
- Compared it to the average pitch of the three syllables following the SR boundary
- Represented the difference in terms of a percent change from the syllables preceding the boundary

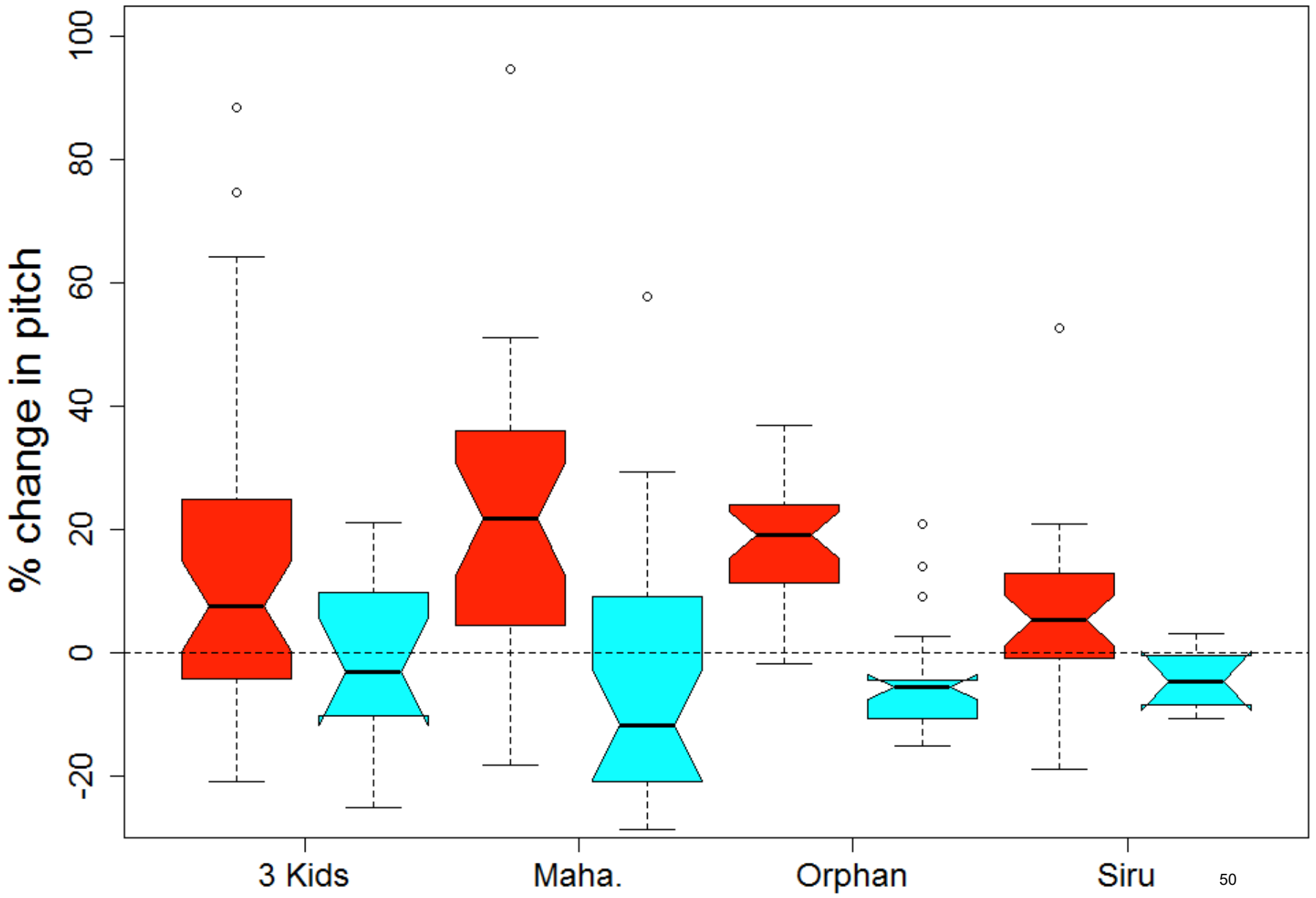

Percent pitch change at start vs. end of speech reports,
with vs. without IU boundaries
start
end
with IU
without IU
-40
0
20
40
60
80
47

Statistical Analysis

- With IU Boundaries: Highly significant
  - Two-sample Kolmogorov-Smirnov test for independence: $D=0.5102$, $p<0.001$.
- Without IU Boundaries: Highly significant
  - Two-sample Kolmogorov-Smirnov test for independence: $D=0.6466$, $p<0.001$.

Finding 3

- Speakers are more likely to increase pitch at starts of speech reports and to decrease pitch at ends of speech reports.


Percent pitch change at start vs. end of speech reports, with IU boundary (by text)
% change in pitch
100
80
60
40
20
0
-20
3 Kids
Maha.
Orphan
Siru

EXPLORING STARTS AND ENDS OF SPEECH REPORTS

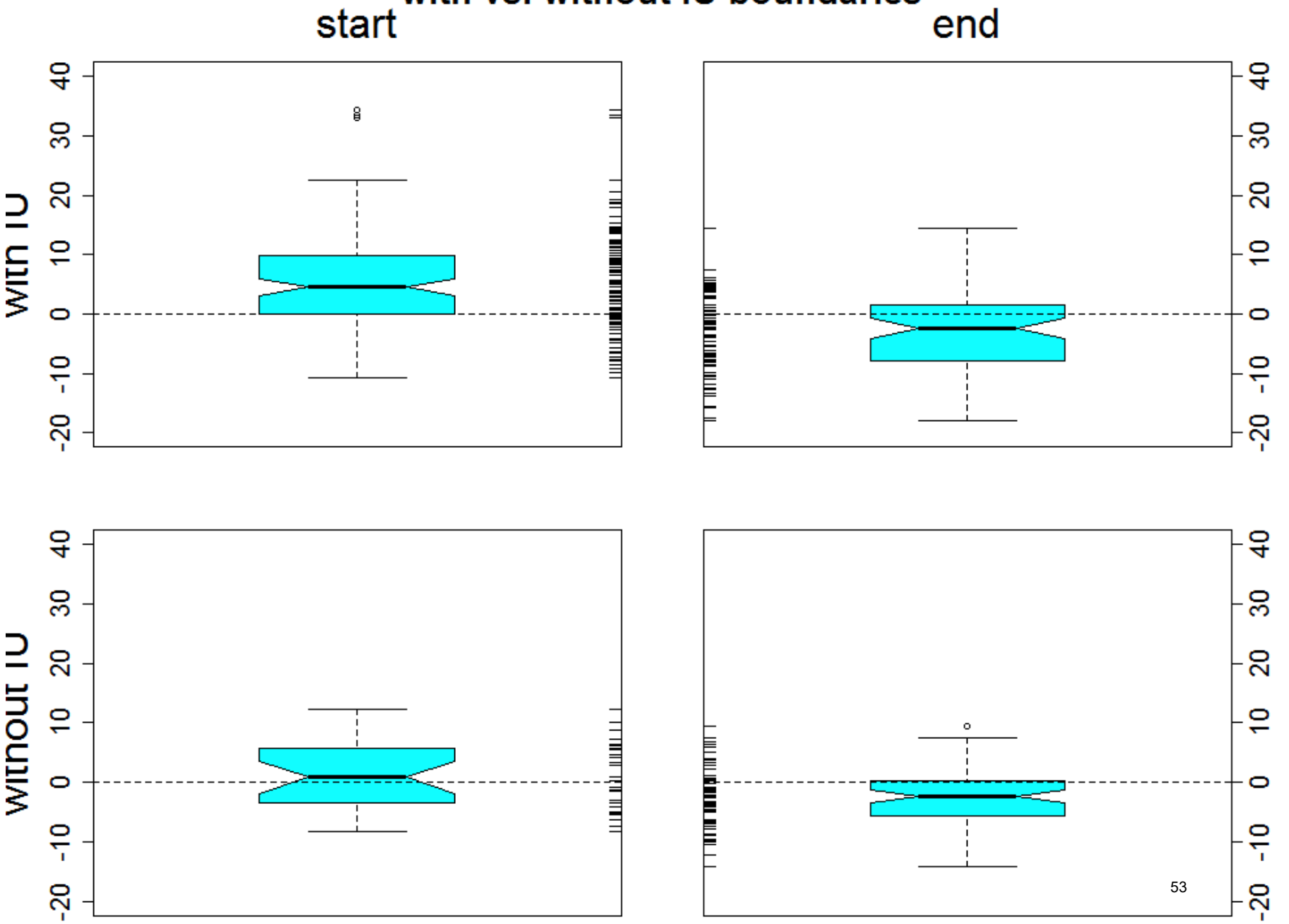
Question 4:

Are there differences in how intensity patterns at the starts and ends of speech reports?

Methodology

- Took the average intensity of the three syllables preceding the SR boundary
- Compared it to the average intensity of the three syllables following the SR boundary
- Represented the difference in terms of a percent change from the syllables preceding the boundary

Percent intensity change at start vs. end of speech reports, with vs. without IU boundaries



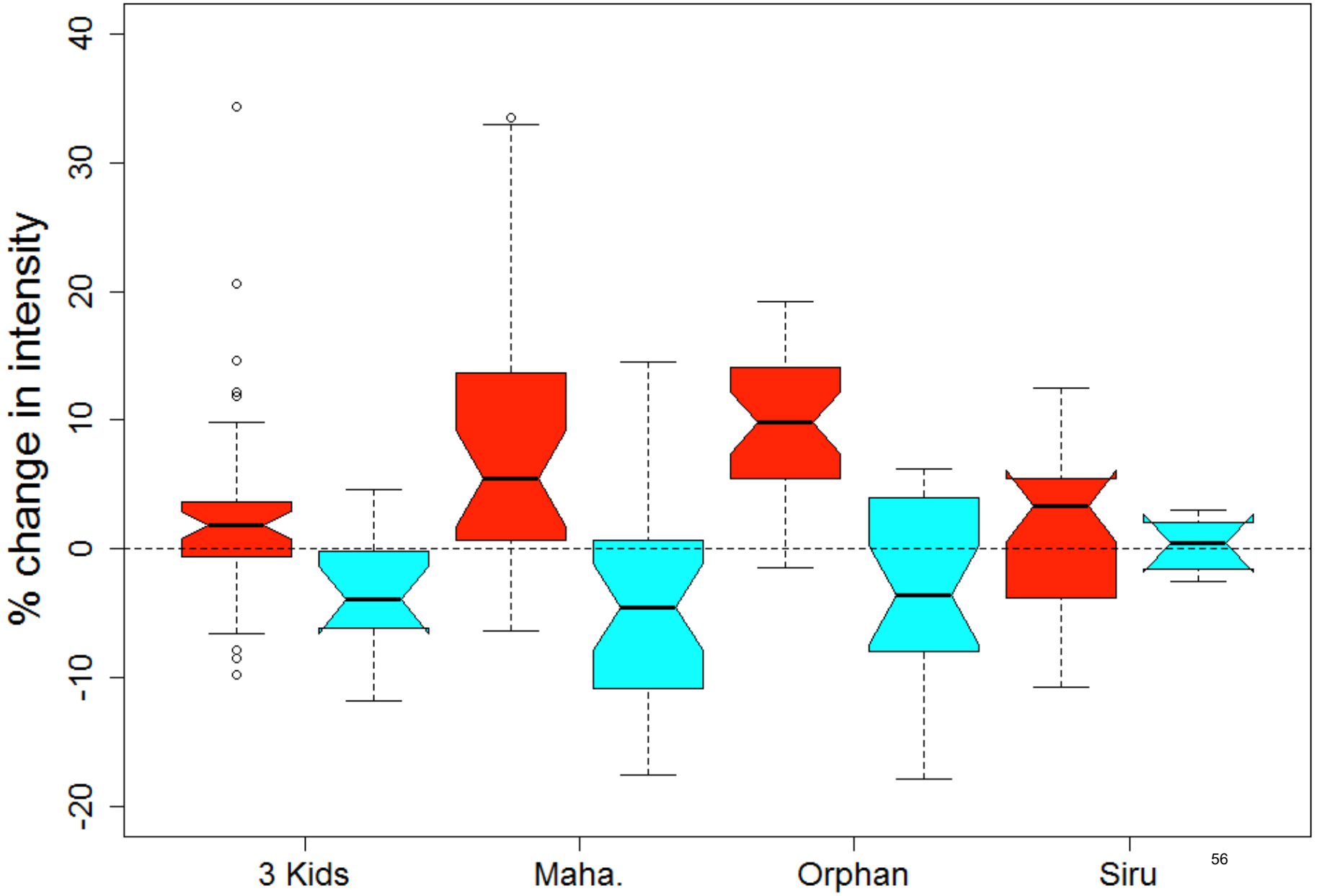
Statistical Analysis

- With IU Boundaries: Highly significant
  - Two-sample Kolmogorov-Smirnov test for independence: $D=0.4315$, $p<0.001$.
- Without IU boundaries: Significant
  - Two-sample Kolmogorov-Smirnov test for independence: $D=0.3335$, $p=0.0162$

Finding 4

- Speakers are more likely to increase loudness at the starts of speech reports and to decrease loudness at ends of speech reports.

Percent intensity change at start vs. end of speech reports, with IU boundary (by text)



CONCLUSIONS

For starts *and* ends

- Speakers are more likely to pause at an IU boundary that is at the beginning or end of a speech report than at an IU boundary elsewhere.

At STARTS of speech reports we are more likely to find …

- IU boundaries
- Increased pitch
- Increased intensity

- 160 of 167 speech reports had at least one of these features and/or a pause

At ENDS of speech reports we are more likely to find …

- No IU boundary
- Lowered pitch
- Lowered intensity

Confirms Malibert and Vanhove's prediction

- SOV language
- Starts are systematically set off from the previous intonation unit with a clear prosodic cue, marking the beginning of the speech report
- Ends can be set off, but it is less likely
- *Starts show more prosodic separation and ends show more prosodic integration*

Evidence of Variability across Speakers

- “Prosodic style”
- More likely idiolectal than sociolinguistic
- Other genres?

Cline of Prosodic Integration?

- Clear evidence of a scale from prosodically integrated to prosodically separated
- Starts differ from ends: put these on a cline, rather than whole speech reports
- The distribution of feature values across the cline is not even
- Prosodic features cluster at particular values and in particular patterns