



# SOCKS

The Science of Online Corpora,  
Knowledge, and Stories

Annual All-Hands Meeting  
March 30, 2026

## Yeah, yeah, yeah: Representation of meaning and common ground in conversational transcripts

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# “meaningful conversation with a friend or loved one”

**StoryCorps ARCHIVE**

A mission to preserve and share humanity's stories

**Memory Loss (n=866)**

**Reference (n= 41,024)**

<https://archive.storycorps.org/>

Research agreement established with StoryCorps

Downloaded audio interviews

- English
- 2 speakers

Transcribed with WhisperX

(Bain et al., 2023)

Organized available demographics

- Age
- Sex
- Race and ethnicity

Dialog act segmentation & classification

(Želasko et al., 2021)

**Automated Pipeline**



# Turn-segmented transcript

A: You know, it was against the rules of our religion to marry someone who had been married or divorced and so it was nice that he was, quote, available because I too was looking for someone to spend the rest of my life with. We were, I think it was 37, and uh... 37....

B: I was 45 or 44.

A: [It was] years ago, so...

B: **Yeah, yeah.**

A: **Yeah, yeah.**

B: **Yeah.**

A: So we were older, and I was enjoying a very exciting single life for a while.

B: What was the year?

A: 1971, dear.

B: 1971. Alright.

A: **Yeah**, so we were married shortly after we met. Isn't that so, **yeah**?

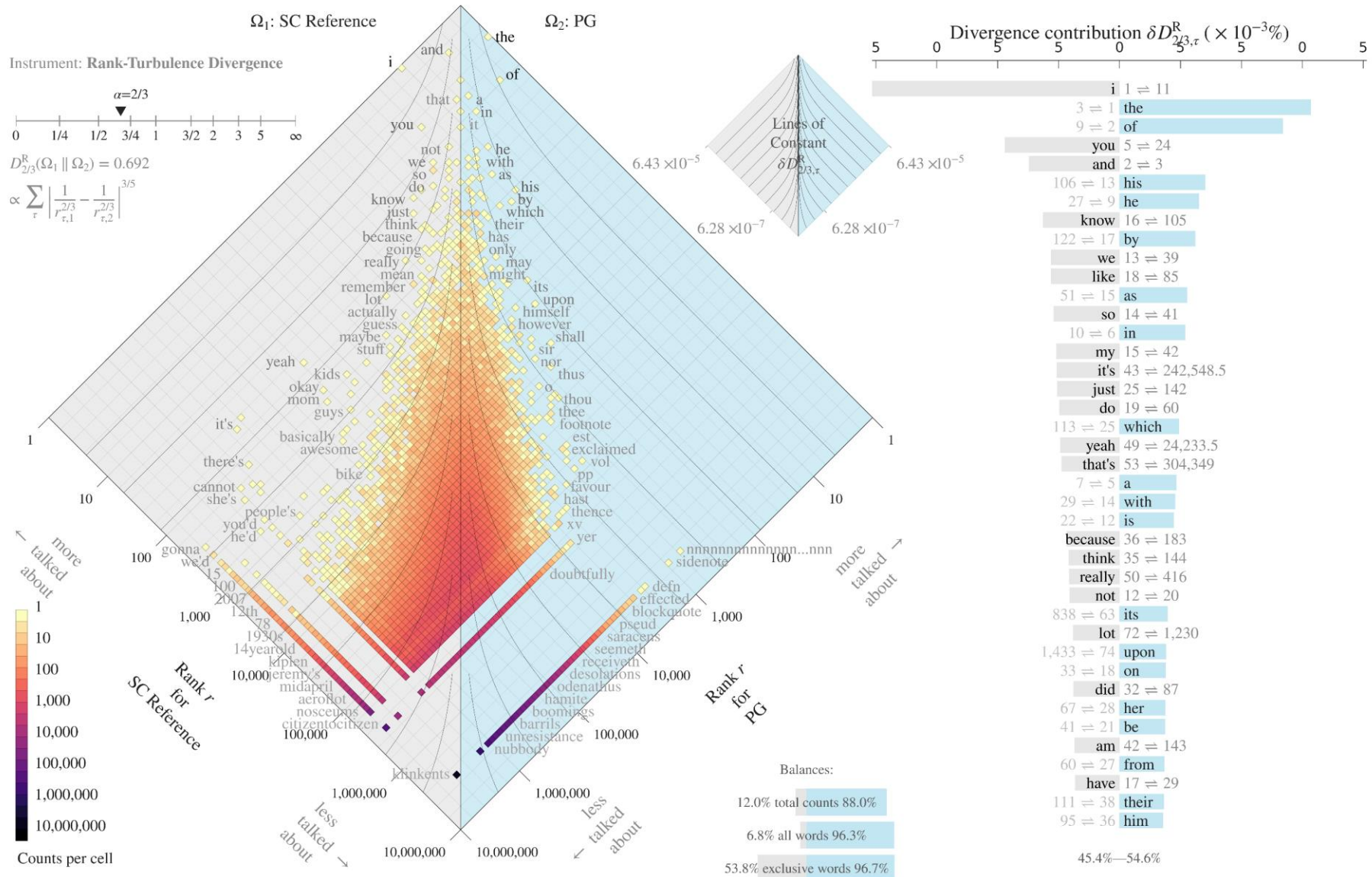
B: Yes.

B: **Yeah**, right.

A: Was it a good decision, honey?

B: Oh **yeah**.

# Insights from word-level analysis



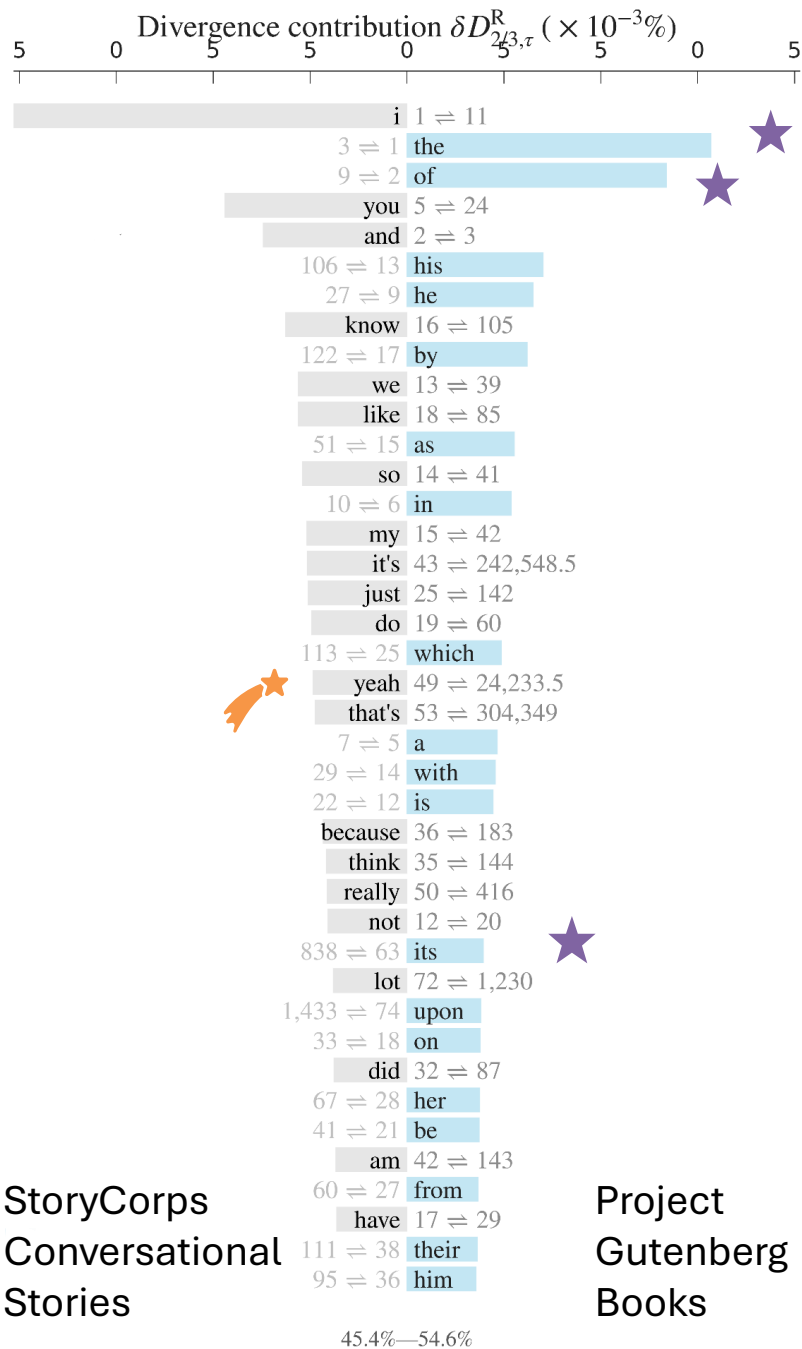
# Insights from word-level analysis

Short words matter

All words bear meaning

Decontextualized words are hard to classify

e.g., “Yeah.”



StoryCorps  
Conversational  
Stories

Project  
Gutenberg  
Books

# Scales of Conversation Analysis

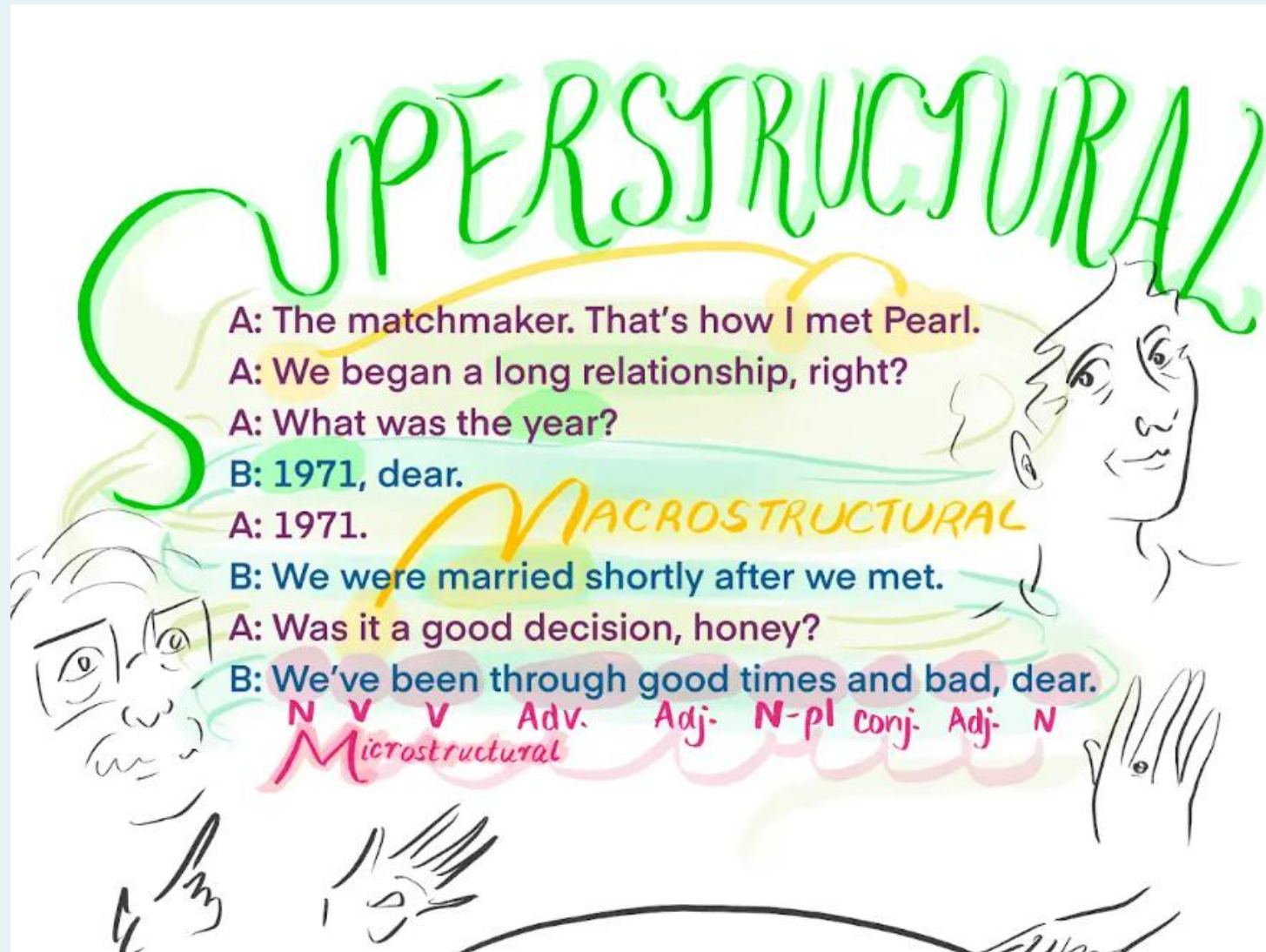


illustration by Julia Zimmerman

# Communicative acts

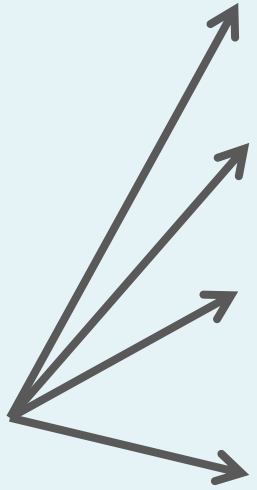
## Monologic narratives

- Statements
- Opinions
- Quotations
- Rhetorical Questions






## Conversational Narratives

- Questions  
Open-ended, Y/N & Wh
- Answers  
Affirmative, negative, and equivocal
- Understandings  
Backchannels, acknowledgements,  
& appreciations
- Agreements
- Collaborative Repairs & Clarification requests

“yeah”



Utterance	Dialog Act
A: You know, it was against the rules of our religion to marry someone who had been married or divorced	statement
A: and so it was nice that he was, quote, available	statement
A: because I too was looking for someone to spend the rest of my life with.	statement
A: We were, I think it was 37, and uh... 37....	statement
B: <i>I was 45 or 44.</i>	collaborative completion
A: [It was] <i>years ago, so...</i>	appreciation
B: <i>Yeah, yeah.</i>	agree-accept
A: <i>Yeah, yeah.</i>	agree-accept
B: <i>Yeah.</i>	turn exit
A: So we were older.	statement
A: And I was enjoying a very exciting single life for a while.	statement
B: <i>What was the year?</i>	wh-question
A: 1971, dear.	statement
B: <i>1971.</i>	repeat-phrase
B: <i>Alright.</i>	agree-accept
A: <i>Yeah.</i>	acknowledge-backchannel
A: So we were married shortly after we met.	statement
A: Isn't that so, <i>yeah?</i>	tag-question
B: Yes.	yes-answers
B: <i>Yeah, right.</i>	agree-accept
A: Was it a good decision, honey?	yes-no-question
B: <i>Oh yeah.</i>	yes-answers

Taxonomic Families	
	Statements
	Understandings
	Agreements
	Other
	Requests
	Answers

# Dialog act distributions

## Automated process

Fast! (10s per 40 min audio)

Distribution comparable to hand-annotated benchmarks (green)

Accuracy comparable to tool as trained on Switchboard telephone conv.

## Clinical utility

Evidence of partner support in Memory Loss (blue)

questions, acknowledgements, backchannels, clarification requests

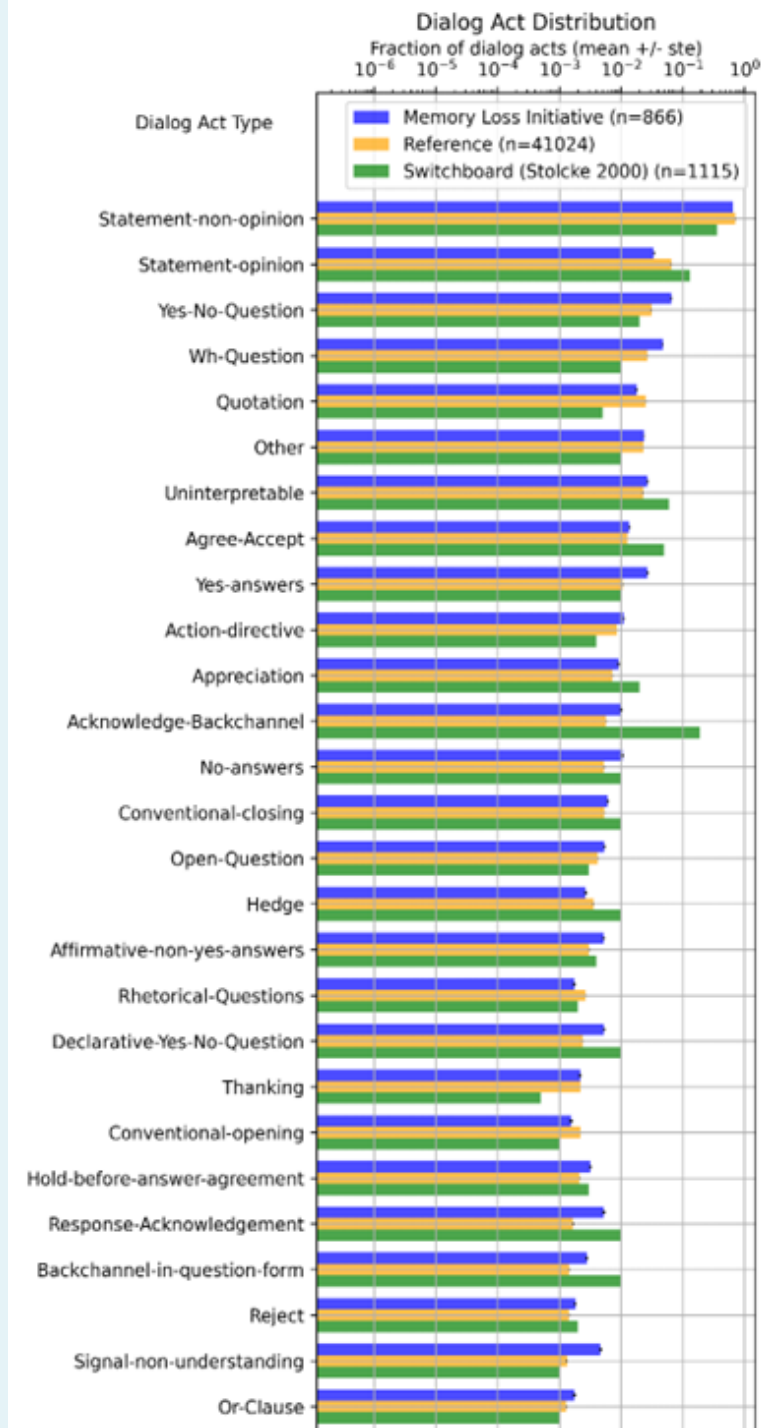
Increased “communication management” =

more common ground negotiation

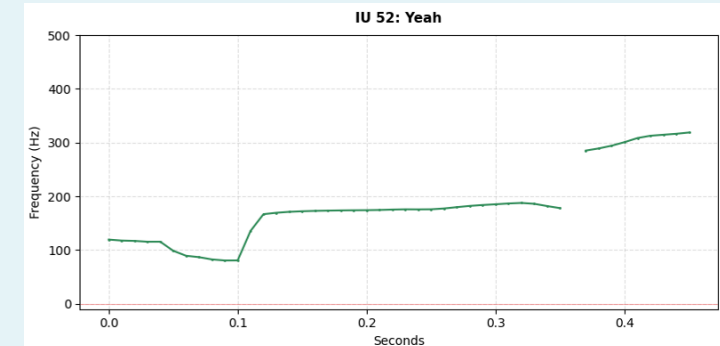
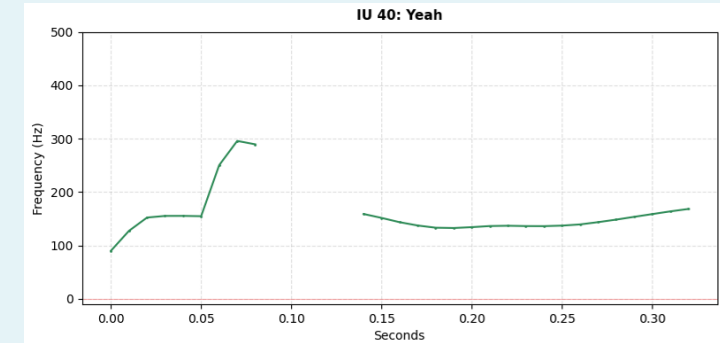
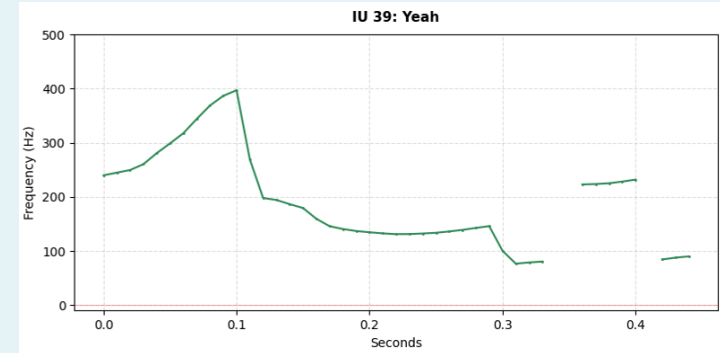
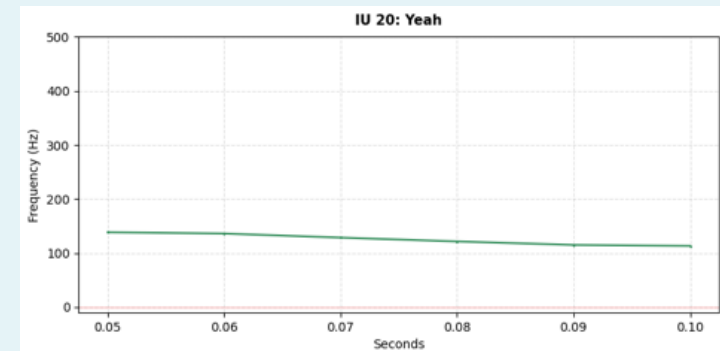
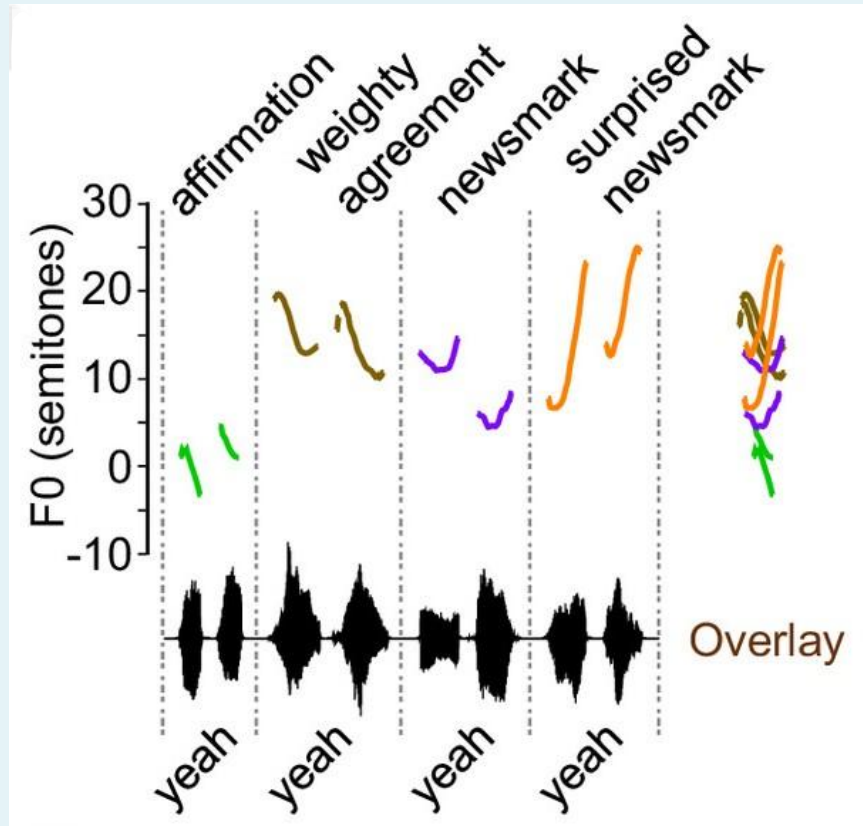
## Future directions

Diminished capture of overlapping speech

agreements, appreciations, acknowledgements, backchannels



# Intonation units



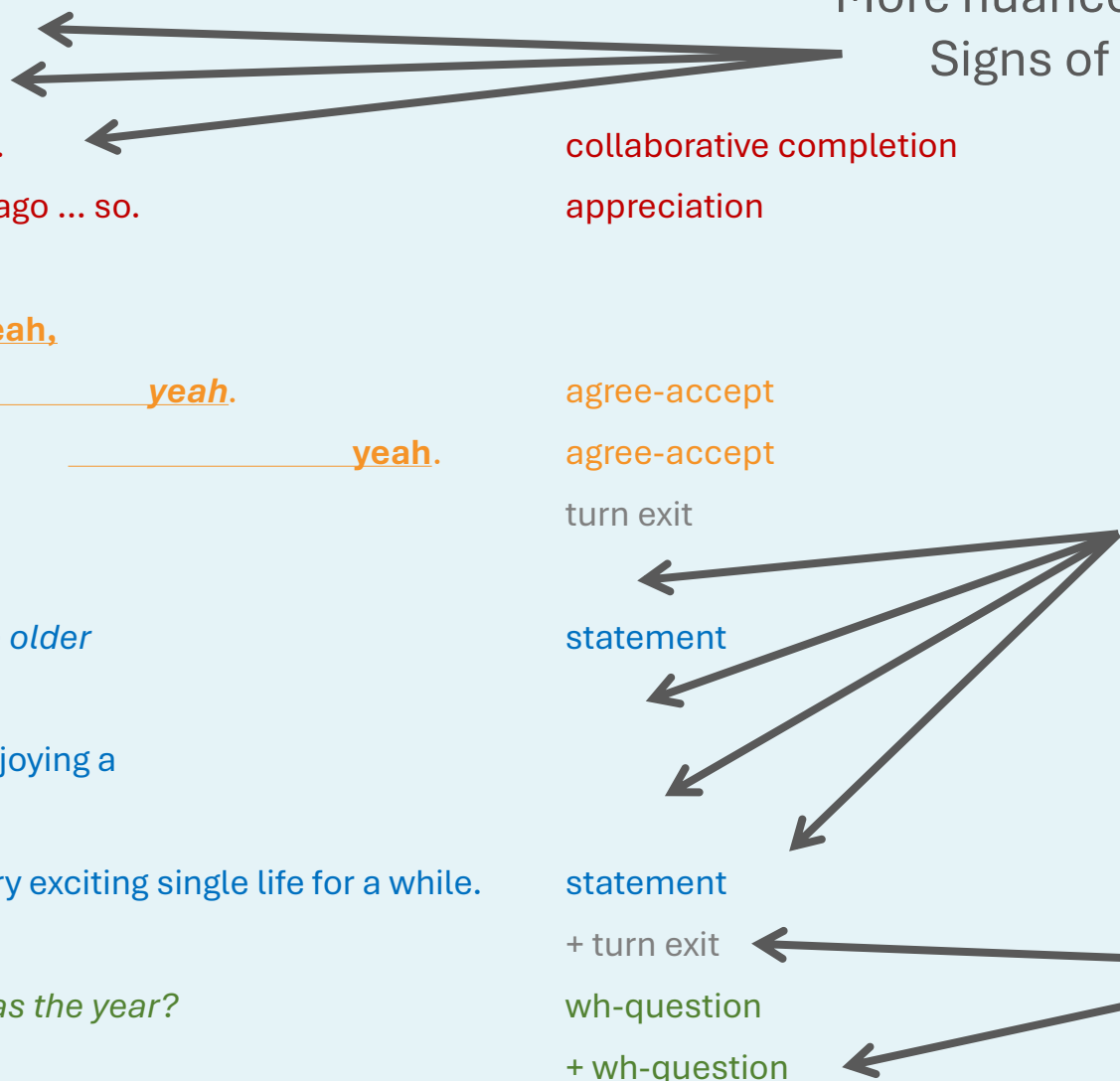
From: Matalon, N., Weinreb, E., Freche, D., Volk, E., Biron, T., Moses, E., & Biron, D. (2025). Structure in conversation: Evidence for the vocabulary, semantics, and syntax of prosody. *Proceedings of the National Academy of Sciences*, 122(17), e2403262122. <https://doi.org/doi:10.1073/pnas.2403262122>

Speaker & IU#	Utterance	Dialog Act
B: IU 179	<i>I was uh</i>	
B: IU 180	<i>um</i>	
B: IU 181	<i>45 or 44.</i>	collaborative completion
A: IU 182	<i>years ago ... so.</i>	appreciation
B: IU 183	<b>Yeah,</b>	
A: IU 184	<b>Yeah,</b>	
B: IU 185	<u>                  </u> <b>yeah.</b>	agree-accept
A: IU 186	<u>                  </u> <b>yeah.</b>	agree-accept
B: IU *	<u>Yeah.</u>	turn exit
A: IU 187	<i>so</i>	
A: IU 188	<i>we were older</i>	statement
A: IU 189	<i>and</i>	
A: IU 190	<i>I was enjoying a</i>	
A: IU 191	<i>um</i>	
A: IU 192	<i>uh, a very exciting single life for a while.</i>	statement
A: IU 193	<i>but uh</i>	+ turn exit
B: IU 194	<i>What was the year?</i>	wh-question
B: IU 195	<i>Was it...</i>	+ wh-question
A: IU 196	<i>1971, dear.</i>	collaborative completion
B: IU 197	<i>1971.</i>	repeat-phrase
B: IU 198	<i>Alright.</i>	agree-accept
A: IU 199	<b>Yeah.</b>	acknowledge-backchannel

More nuance!  
Signs of cognitive challenge and compensation!

“Disfluency” is temporal  
Can be used as discursive tool

More dialog acts!



	<b>Utterance</b>	<b>Dialog Act</b>
A:	You know, it was against the rules of our religion to marry someone who had been married or divorced	statement
A:	and so it was nice that he was, quote, available	statement
A:	because I too was looking for someone to spend the rest of my life with.	statement
A:	We were, I think it was 37....	statement
B:		
A:		
B:		
A:		
B:	<u>So</u> we were older.	statement
A:	And I was enjoying a very exciting single life for a while.	statement
B:		
A:		
B:		
A:		
B:		
A:	So we were married shortly after we met.	statement
A:		
B:		
B:	.	
A:		
B:		

# Thank you!

- Skyler Heining
  - Mia Dulcin
  - Savannah Evans
  - Hazen Kellner
  - Lucy Murphy
  - Claire Phillips
  - Hayden Riggio
  - Grace Rogan
  - Freddie Tagupa
  - Mia Twarog
  - Veronica Golbin
  - Evan Stowell
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Julia Zimmerman  
**The Rest of the  
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