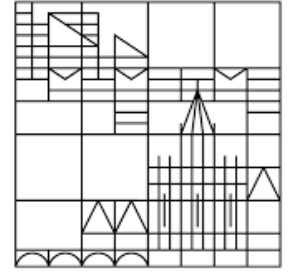




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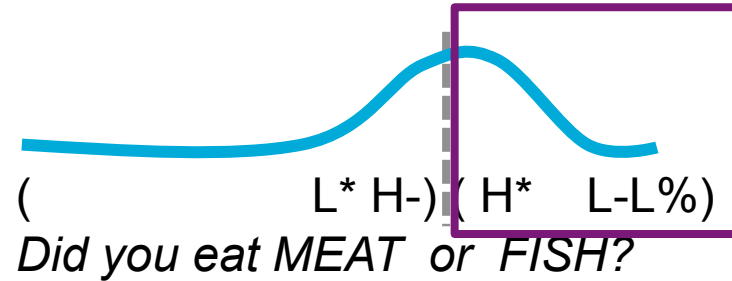
# Multiple Accent in Alternative Questions

**Erlinde Meertens, Sophie Egger & Maribel Romero**

Sinn und Bedeutung 23 , U. A. Barcelona, September 5-7, 2018

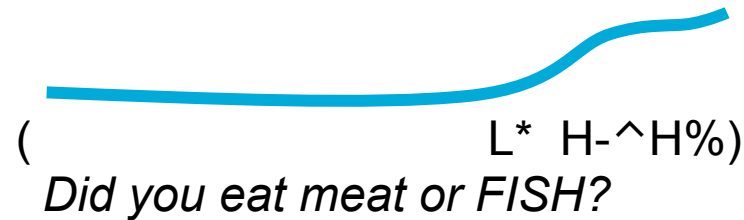
# Issue

(1) a. Did you eat MEAT<sub>L\* H-</sub> or FISH<sub>H\* L-L%</sub>?



→ Alternative Question

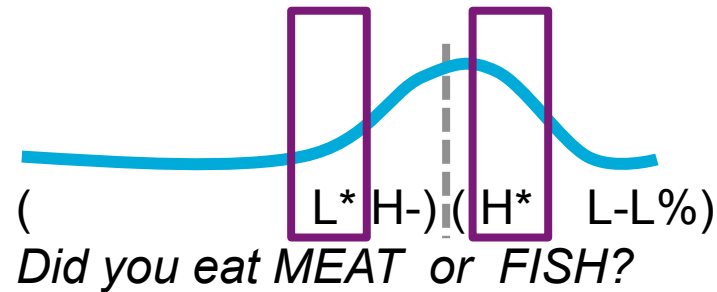
b. Did you eat meat or FISH<sub>L\* H-H%</sub>?



→ Polar Question

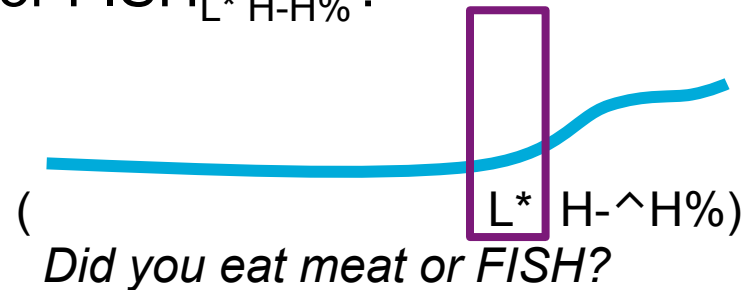
# Issue

(1) a. Did you eat MEAT<sub>L\* H-</sub> or FISH<sub>H\* L-L%</sub>?



→ Alternative Question

b. Did you eat meat or FISH<sub>L\* H-H%</sub>?



→ Polar Question

# The Puzzle

## Two prosodic cues in Alternative Questions

- The Final Fall
- The Multiple Accent

- (1) Do **both** prosodic cues contribute to the Alternative Question interpretation?
- (2) If so, what is the **contribution** of the two cues **individually**?

# Outline

- **Recent Previous Work**
  - Biezma & Rawlins (2012)
  - Roelofsen & van Gool (2010)
  - Pruitt & Roelofsen (2012)
  
- **Argument 1: Revisiting Falling Questions in English**
  - 1A-a: Acoustic properties
  - 1A-b: Pragmatic licensing
  - 1B: Embedded Alternative Questions
  
- **Argument 2: Q-particles in Turkish Alternative Questions**
  
- **Towards an Analysis**
  
- **Conclusion**

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## ➤ **Towards an Analysis**

## ➤ **Conclusion**

## Previous Work: Biezma & Rawlins (2012)

### The Final Fall signals *Closure*

The Final Fall signals exhaustivity, that is semantically encoded by means of a **closure operator**

- Fall applies to a list, indicating that nothing but the list item is a relevant answer to the Question Under Discussion (QUD)

(2) Closure operator (Biezma & Rawlins 2012)

$$\llbracket [Q^\alpha]_{H^*L-L\%} \rrbracket^c =_{\text{def}} \llbracket [Q^\alpha] \rrbracket^c$$

defined only if  $\text{SalientAlts}(c) = \llbracket [Q^\alpha] \rrbracket^c$

Constraint:  $\alpha$  must contain a disjunction

### The Multiple Accent

The Multiple Accent is not modelled as a cue for Alternative Question composition

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## Recent Previous Work: Roelofsen & van Gool (2010)

### Ingredients:

- Disjunction introduces alternatives, both in  $\llbracket \cdot \rrbracket_P$  and  $\llbracket \cdot \rrbracket_H$
- For  $\llbracket \cdot \rrbracket_P$  (set of possibilities):  $\llbracket Q \alpha \rrbracket_P$  consists of the possibilities in  $\alpha$  itself and the possibilities that  $\alpha$  excludes.
- For  $\llbracket \cdot \rrbracket_H$  (set of highlighted possibilities): focus on a constituent XP makes the H-set of XP collapse.
  - ➔ Single focus (block) accent vs. multiple focus accent
- For  $\llbracket \cdot \rrbracket_S$  (set of possible updates): exclusive strengthening operator
  - ➔ EX coming from Final Fall

## Recent Previous Work: Roelofsen & van Gool (2010)

(3) Does  $[Ann]_F$  or  $[Bill]_F$  play the piano $\downarrow$ ?

- $\llbracket (3) \rrbracket_P = \{a \text{ play}, b \text{ play}\} \cup \{\neg \text{play}(a) \wedge \neg \text{play}(b)\}$
- $\llbracket (3) \rrbracket_H = \{a \text{ play}, b \text{ play}\}$
- $\llbracket (3) \rrbracket_S = \{a \text{ play} \wedge \neg \text{play}(b), b \text{ play} \wedge \neg \text{play}(a)\}$

(4) Does  $[Ann \text{ or } Bill]_F$  play the piano $\uparrow$ ?

- $\llbracket (4) \rrbracket_P = \{a \text{ play}, b \text{ play}\} \cup \{\neg \text{play}(a) \wedge \neg \text{play}(b)\}$
- $\llbracket (4) \rrbracket_H = \{a \text{ play} \vee b \text{ play}\}$
- $\llbracket (4) \rrbracket_S = \{a \text{ play} \vee b \text{ play}\}$

# Outline

## ➤ **Recent Previous Work**

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## ➤ **Argument 2: Q-particles in Turkish Alternative Questions**

## ➤ **Towards an Analysis**

## ➤ **Conclusion**

## Recent Previous Work: Pruitt & Roelofsen (2013)

### Main question:

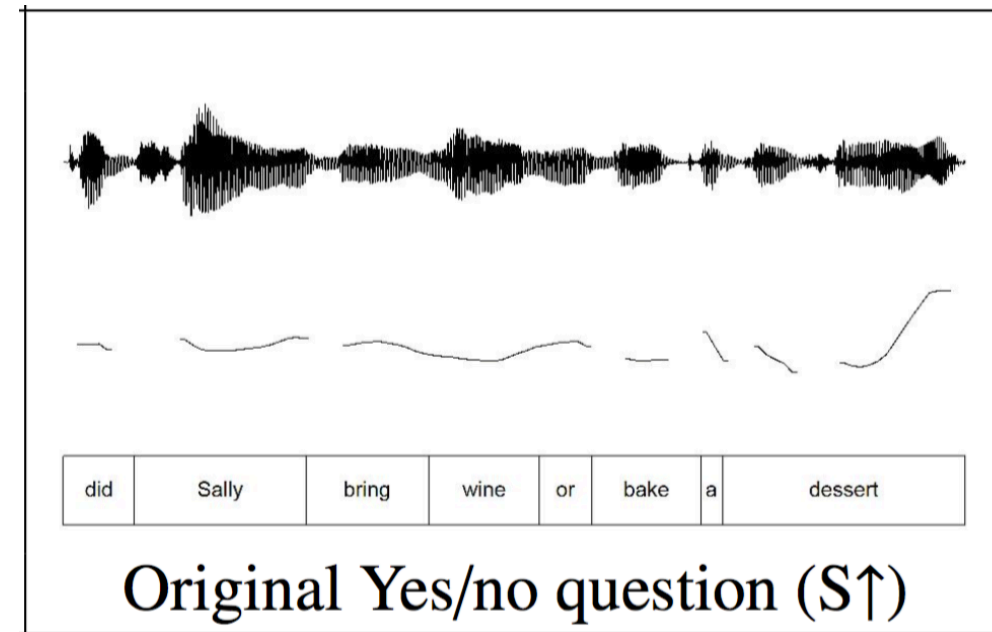
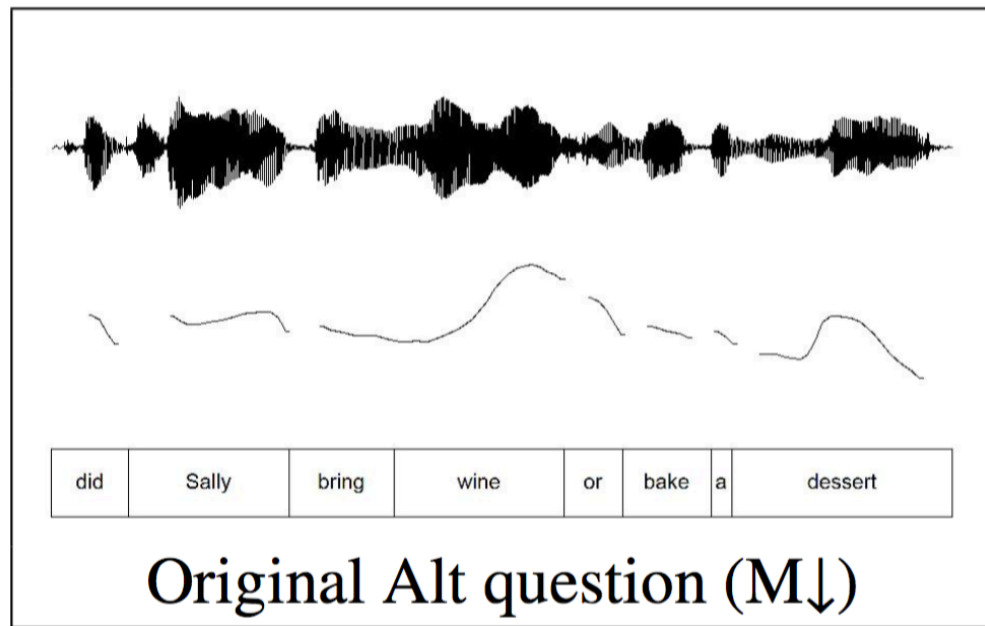
Which prosodic factors distinguish Alternative Questions from disjunctive Polar Questions?

- **AltQs:** (Bartels, 1999; Quirk et al., 1985; Rando, 1980; Schubiger, 1958)
  - Accents on each disjunct
  - Two prosodic phrases: first F $\uparrow$ , second F $\downarrow$
  
- **PolQs:** (Bartels, 1999)
  - Pitch accents on non-final disjuncts optional
  - Only one prosodic phrase
  - F $\uparrow$  default, F $\downarrow$  in specific contexts (e.g. Hedberg *et al.*, 2004)

## Recent Previous Work: Pruitt & Roelofsen (2013)

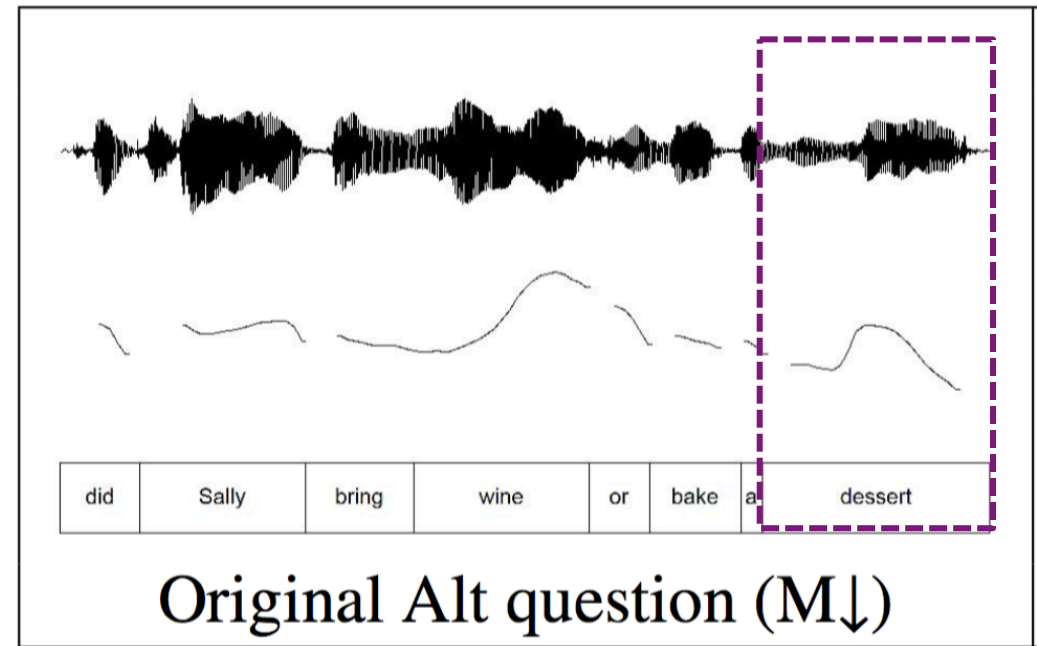
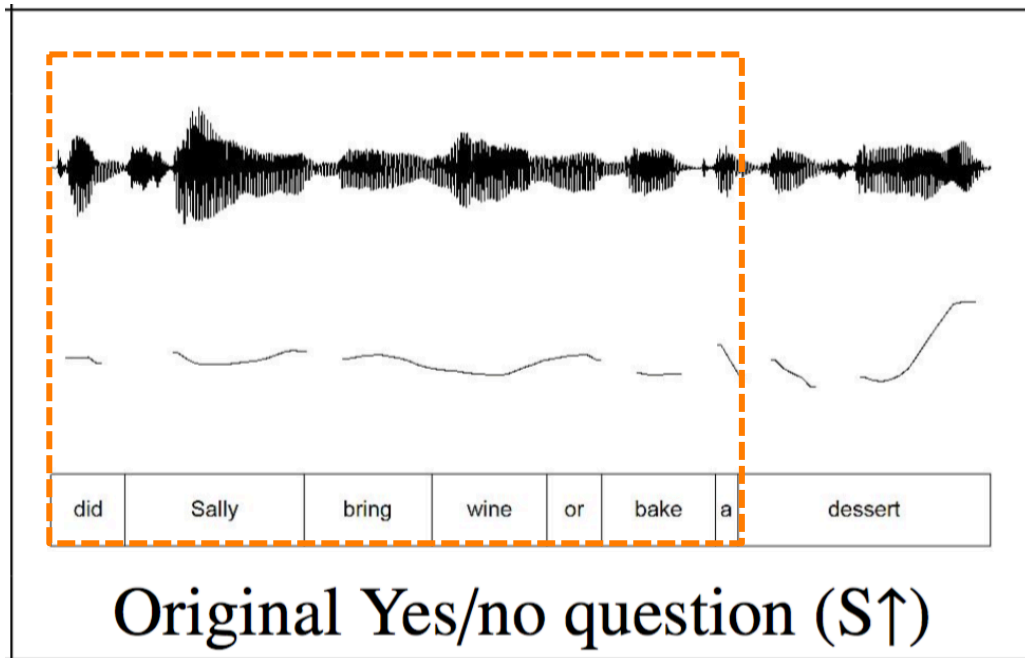
### Experiment:

- 4 different prosodic contours: 2 **original** recordings

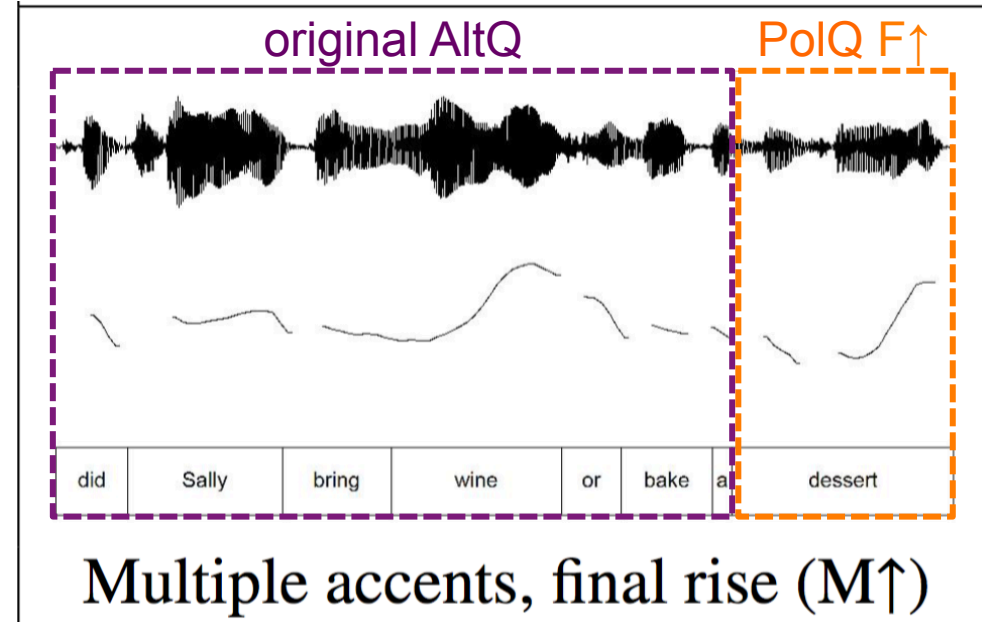
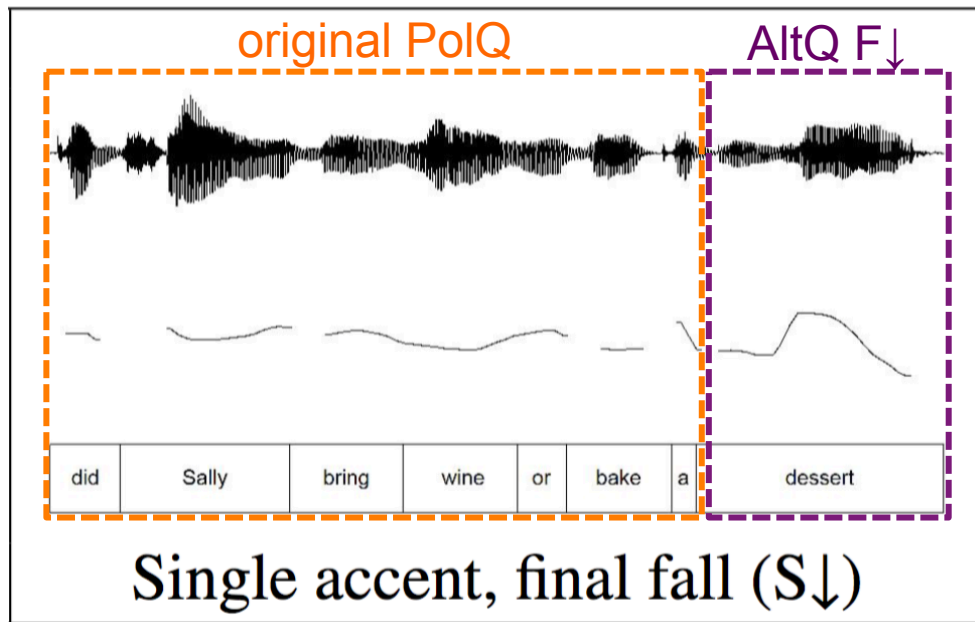


Recent Previous Work:  
Pruitt & Roelofsen (2013)

Manipulation of the spliced condition:



## Recent Previous Work: Pruitt & Roelofsen (2013)



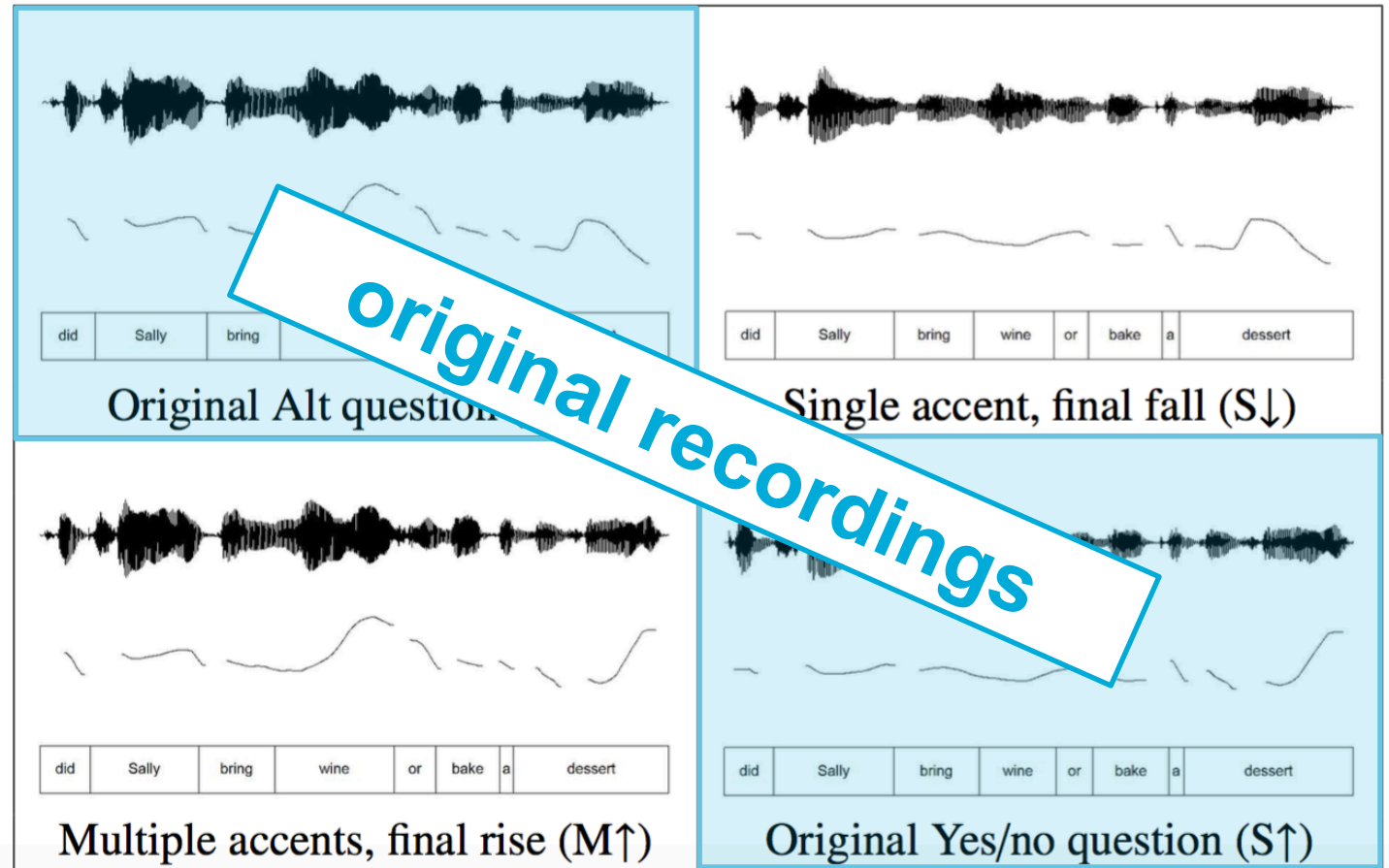
### Experiment:

- 4 different prosodic contours: 2 **spliced** questions

## Recent Previous Work: Pruitt & Roelofsen (2013)

### Experiment:

- 4 different prosodic contours:

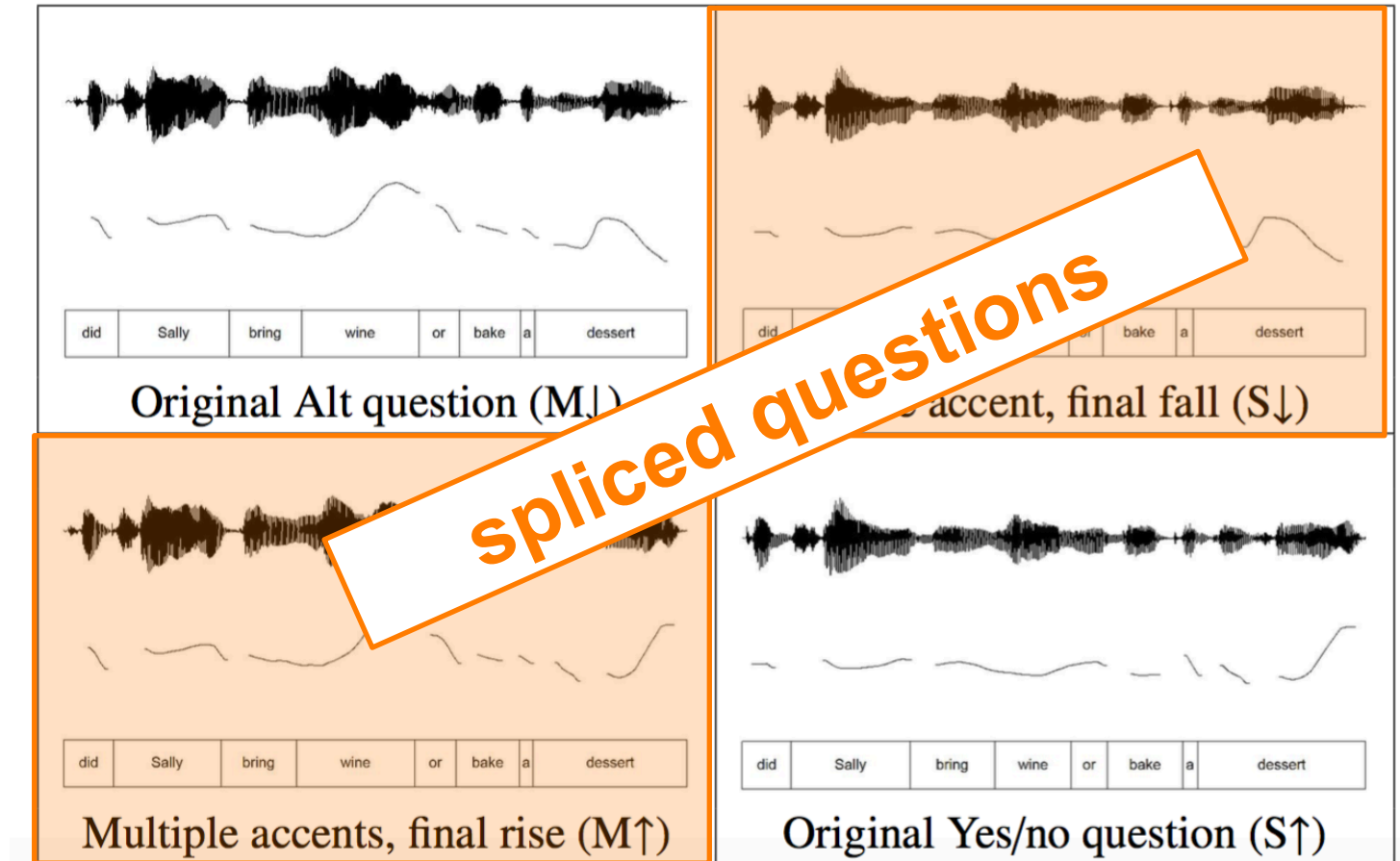




## Recent Previous Work: Pruitt & Roelofsen (2013)

### Experiment:

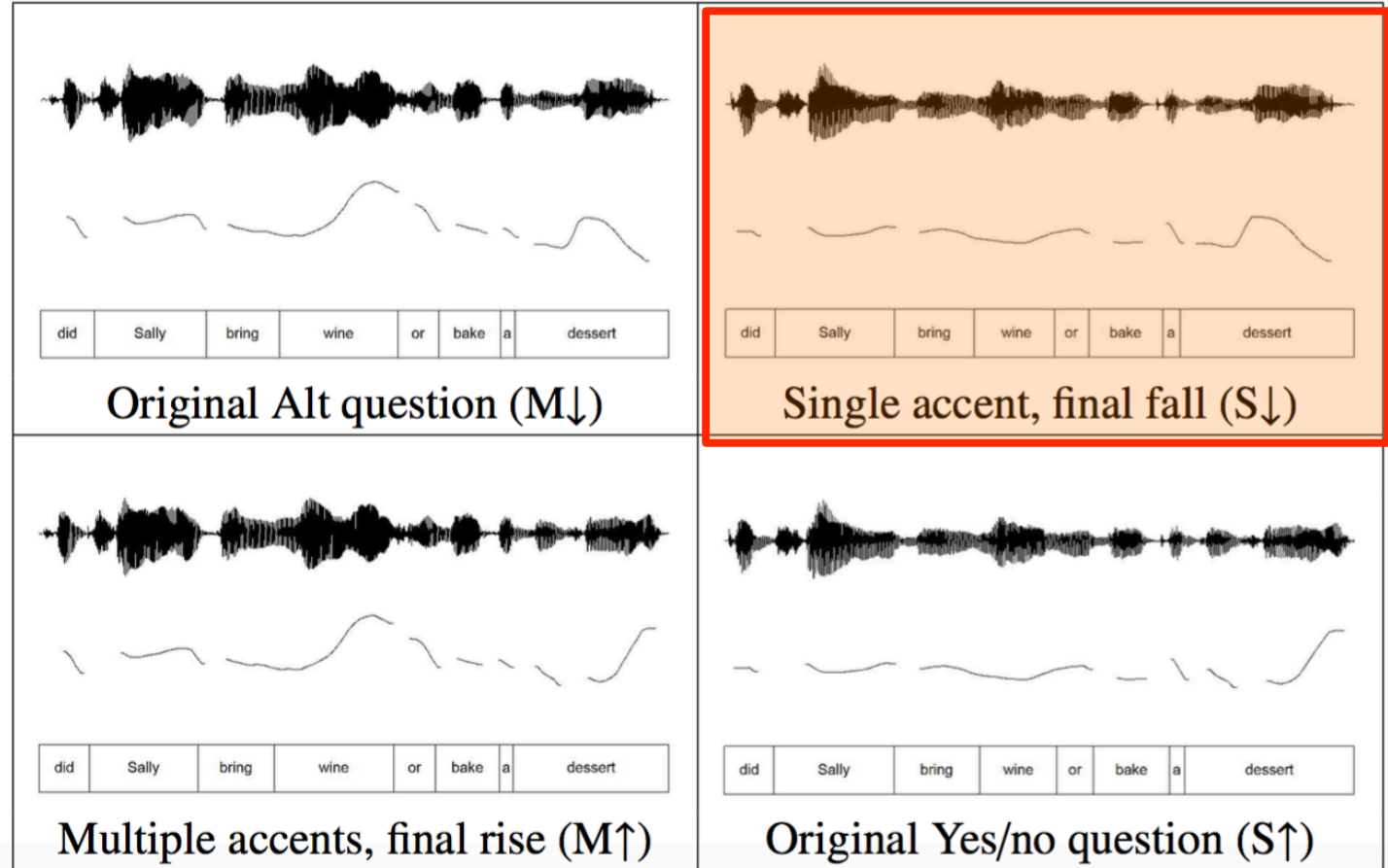
- 4 different prosodic contours:



## Recent Previous Work: Pruitt & Roelofsen (2013)

### Experiment:

- 4 different prosodic contours:



Recent Previous Work:  
Pruitt & Roelofsen (2013)

**Experiment:**

- Participants choose between paraphrases

(5) Did Sally bring wine or bake a dessert?

[M↓/M↑/S↓/S↑]

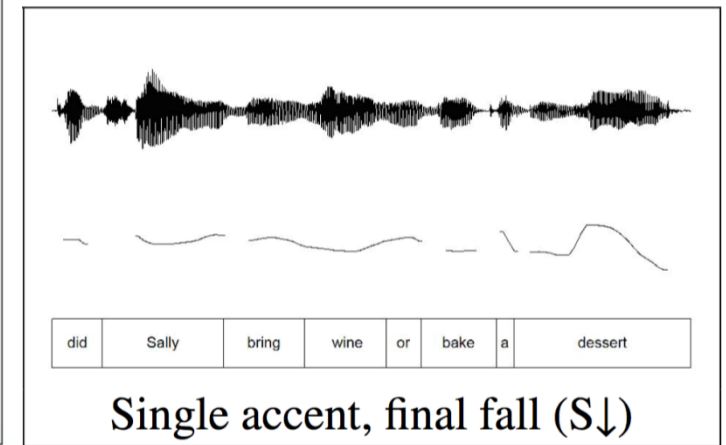
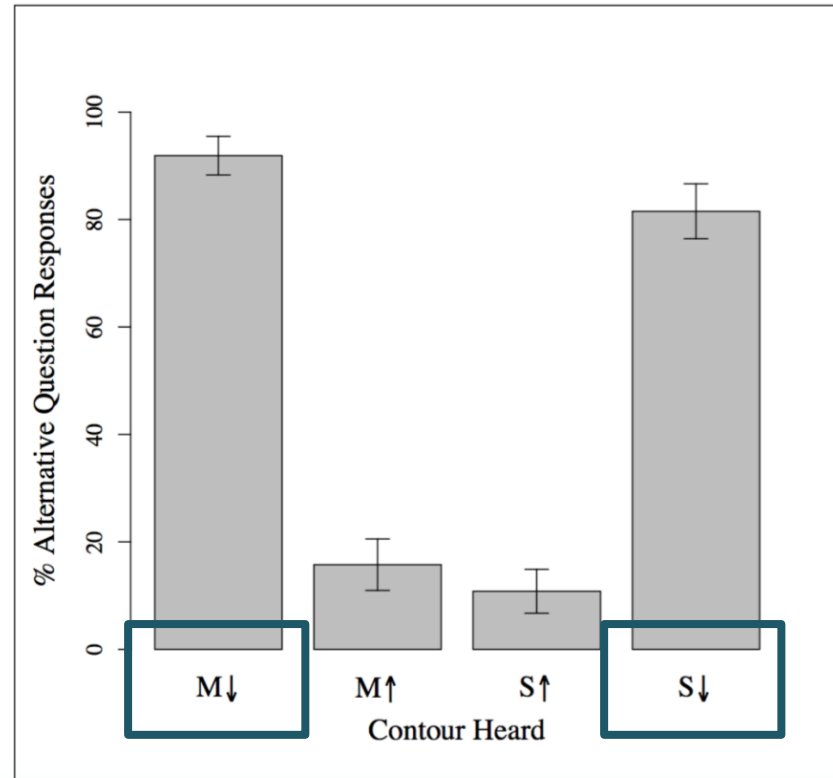
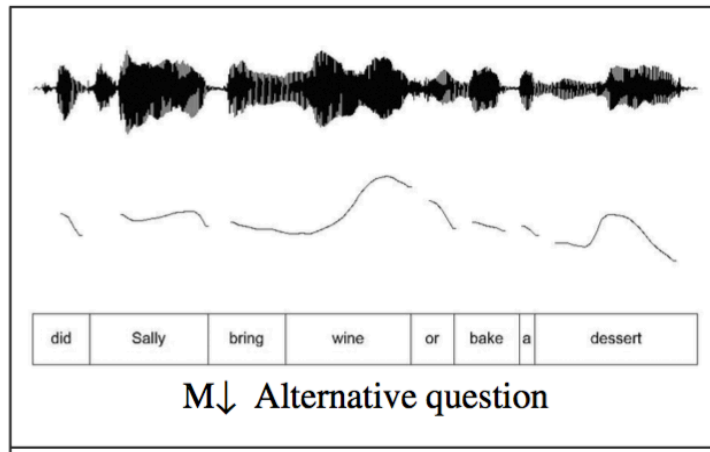
*Paraphrase options:*

- a.) Which of these things did Sally do: bring wine or bake a dessert?
- b.) Did Sally do any of these things: bring wine or bake a dessert?
- c.) Other: \_\_\_\_\_

## Recent Previous Work: Pruitt & Roelofsen (2013)

### Results:

The Final Fall is the dominant cue for Alternative Question interpretation



## Recent Previous Work

### Altogether

- Prominent recent accounts do **not model** the Multiple Accent, or take it's **netto semantic contribution to be null**
- Recent empirical work suggests that the Final Fall indeed is the crucial prosodic cue for an Alternative Question interpretation
- We will argue that the Multiple Accent **should** be modelled with **a non-null semantic contribution** in a unified account of Alternative Questions

# Outline

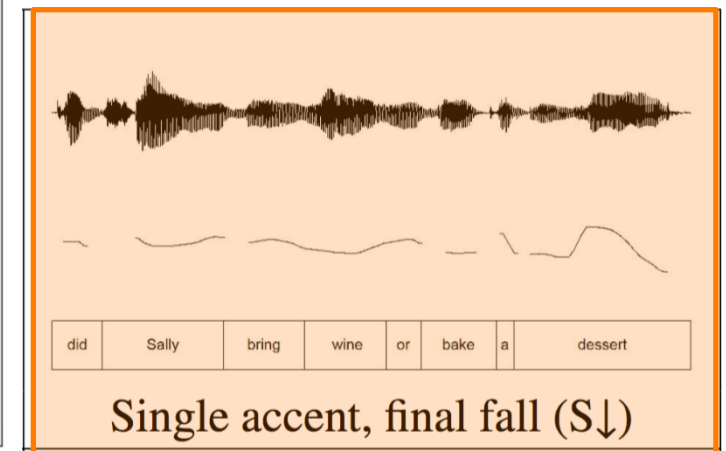
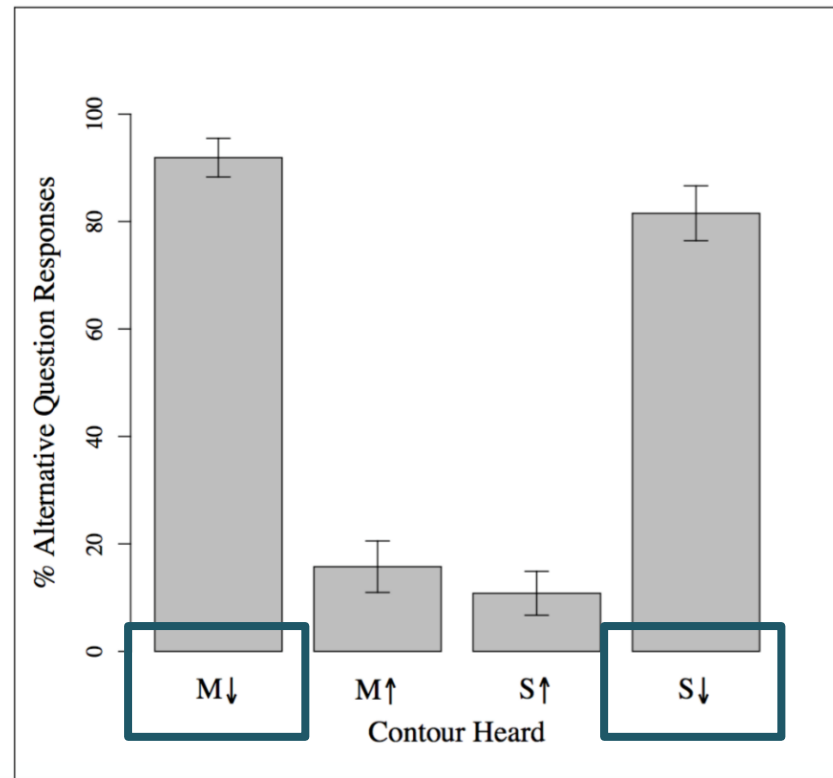
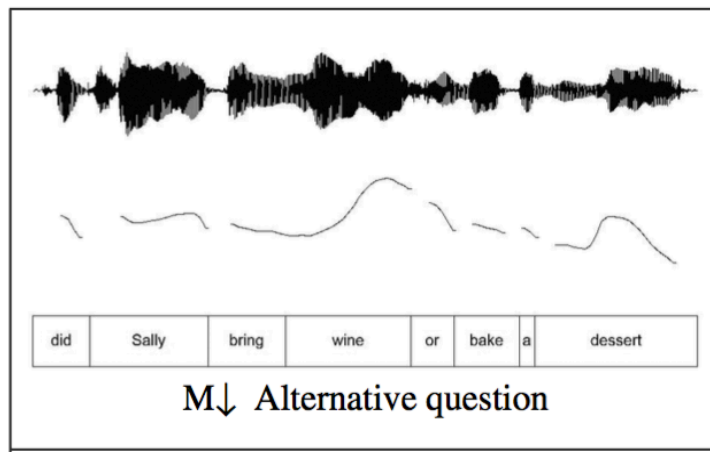
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# Argument 1: Revisiting Falling PolQs in English

## Pruitt & Roelofsen (2013)

### Results:

The Final Fall is the dominant cue for Alternative Question interpretation

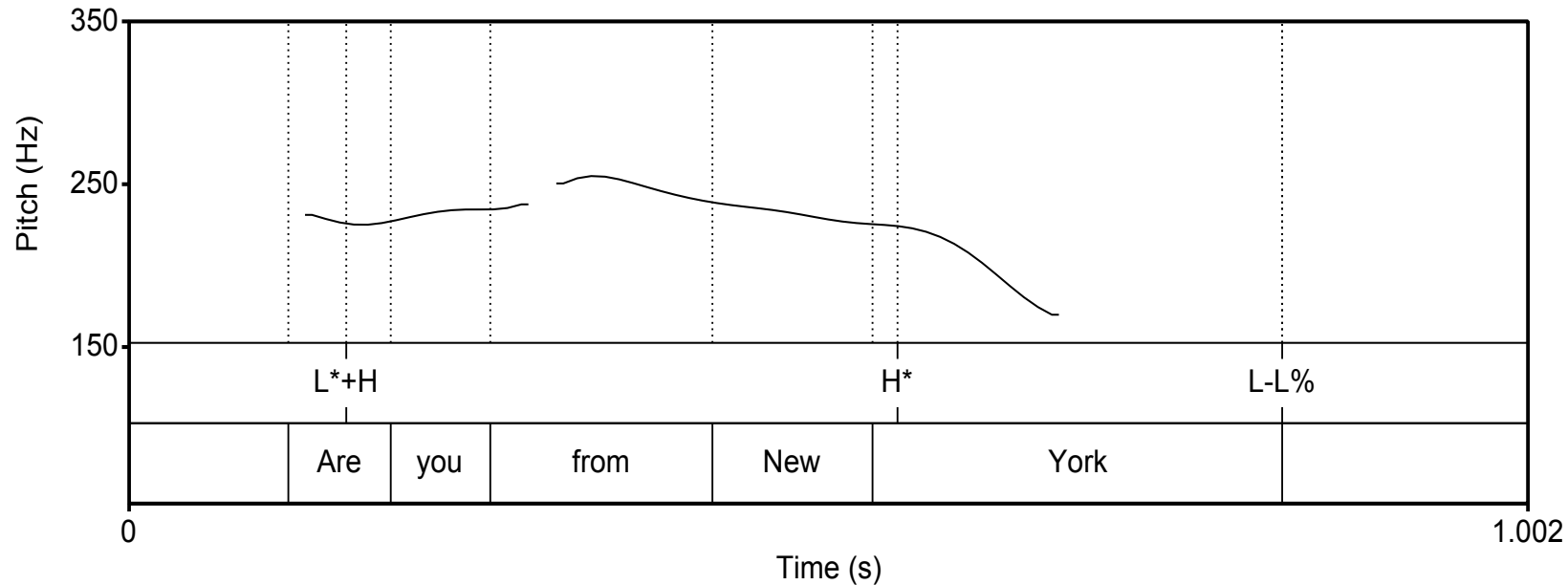


## Falling Questions in English

### ➤ Hey wait a minute...

It is known that Polar Questions can **also** have a falling final contour (Bartels, 1997; Schubinger, 1958)

*Context:* You are working as a HR secretary at a big firm, in which all employees that are from New York get a special benefit. You are fixing the paperwork for a new employee and want to know whether he can get this benefit, so you ask:



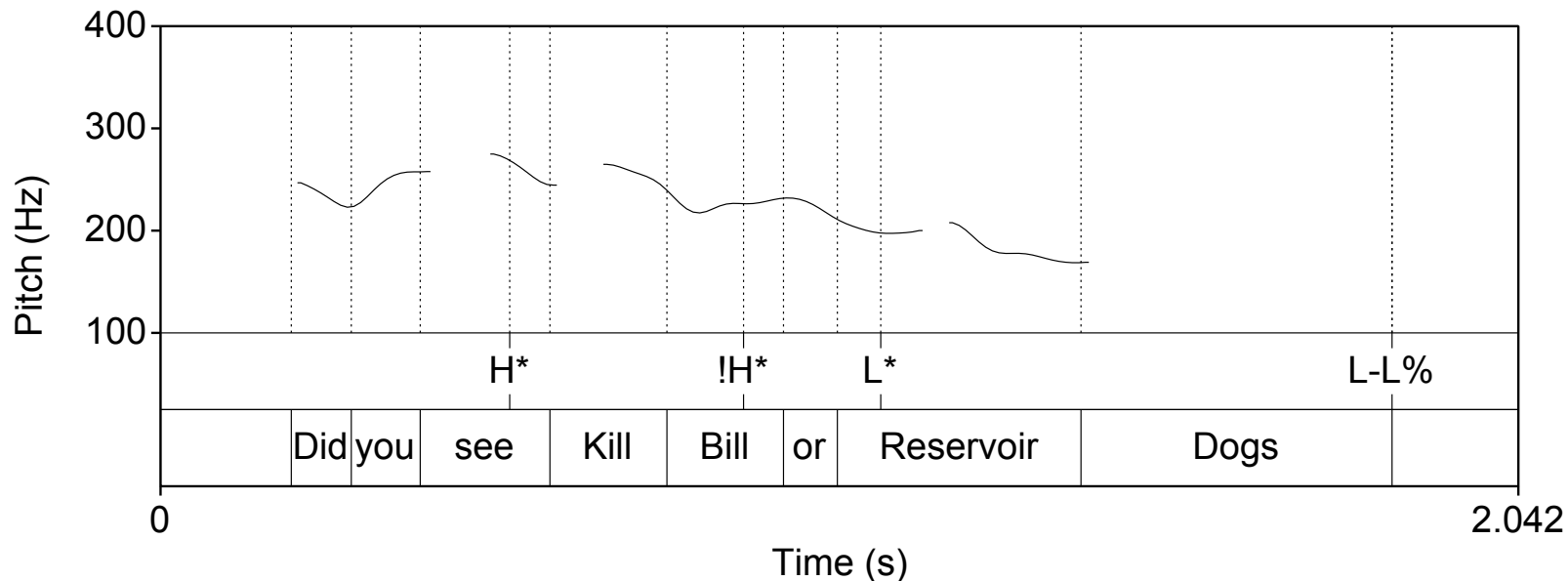


# Falling Questions in English

## Falling Disjunctive Polar Questions

This is not different for Disjunctive Polar Questions

*Context:* You are teaching a class on popular culture and want to discuss a film. For the next discussion point, you need a student who has seen Kill Bill or Reservoir Dogs, no matter which one of them. To make sure this is the case, you ask every student before they start speaking:



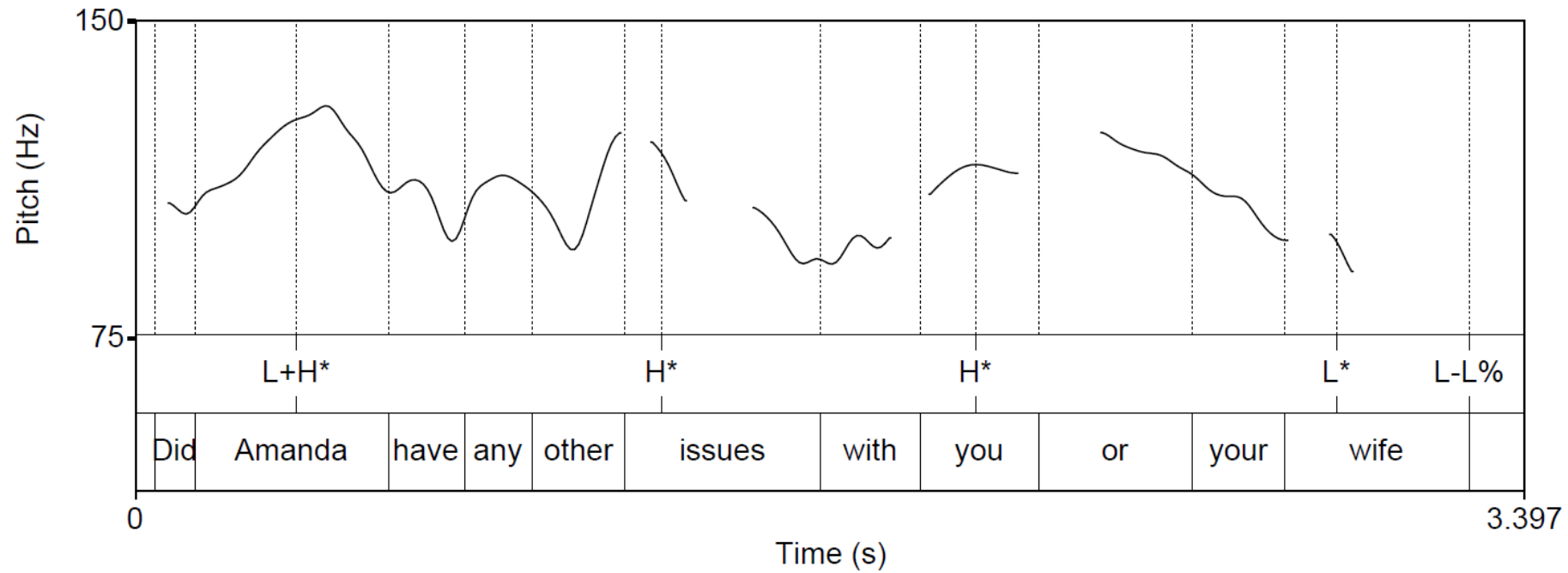
## Falling Questions in English



Biezma (2018). Non-informative assertions. Ms., University of Konstanz.  
Major Crimes, Episode 1, Season 5, "Present tense". starts on 6' 02" within the episode

# Falling Questions in English

## Falling Disjunctive Polar Questions in the wild



## Falling Questions in English

### Altogether:

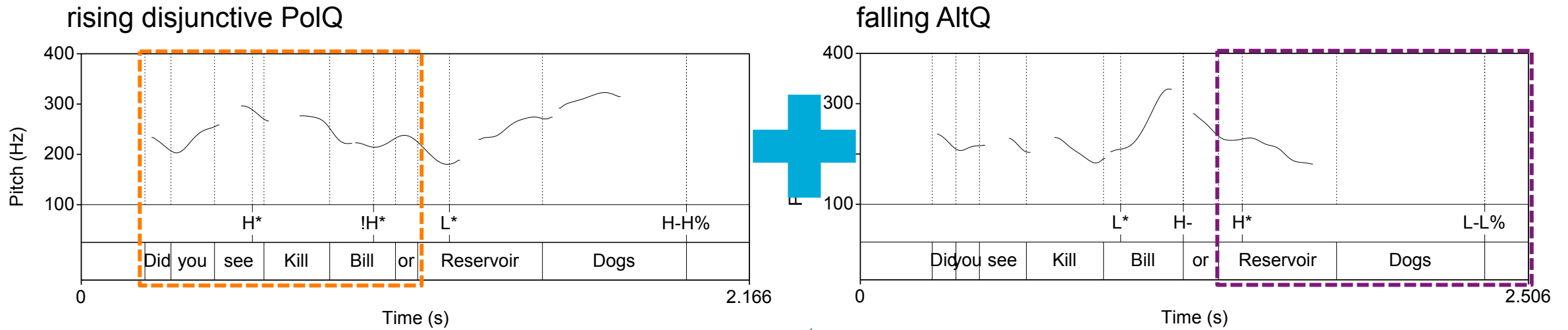
- Bartels (1997) observed that Polar Questions can have a Final Fall
- There is no reason why Disjunctive Polar Questions would be different from Plain Polar Questions
- Biezma (2018) found Falling Disjunctive Polar Questions in the wild!

### This raises the question...

**Why were the Falling Disjunctive Questions ( $S_{\downarrow}$ ) interpreted as Alternative Questions in the Experiment?**

# Falling Questions in English

## Empirical data English: splicing à la Pruitt & Roelofsen (2013)



What do you hear?  
PolQ or AltQ?

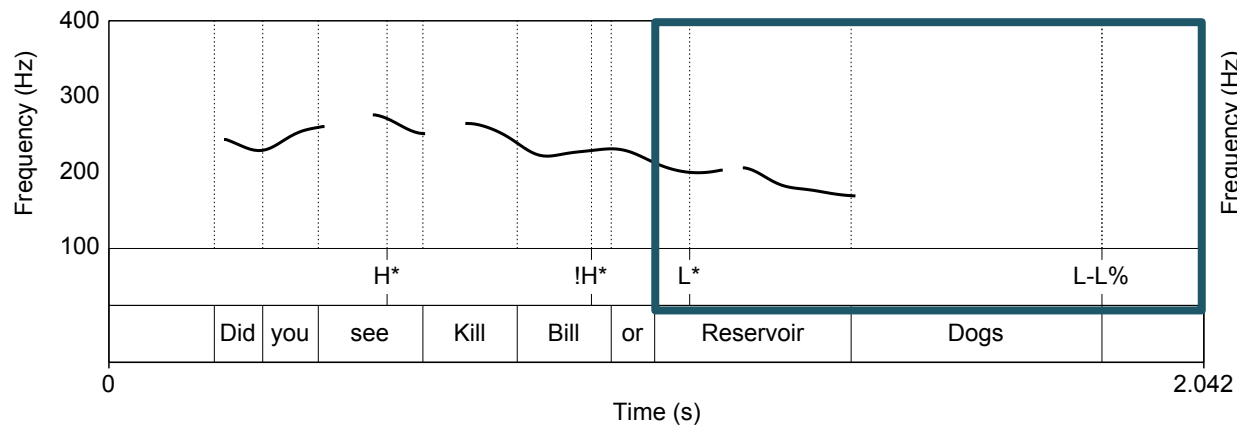
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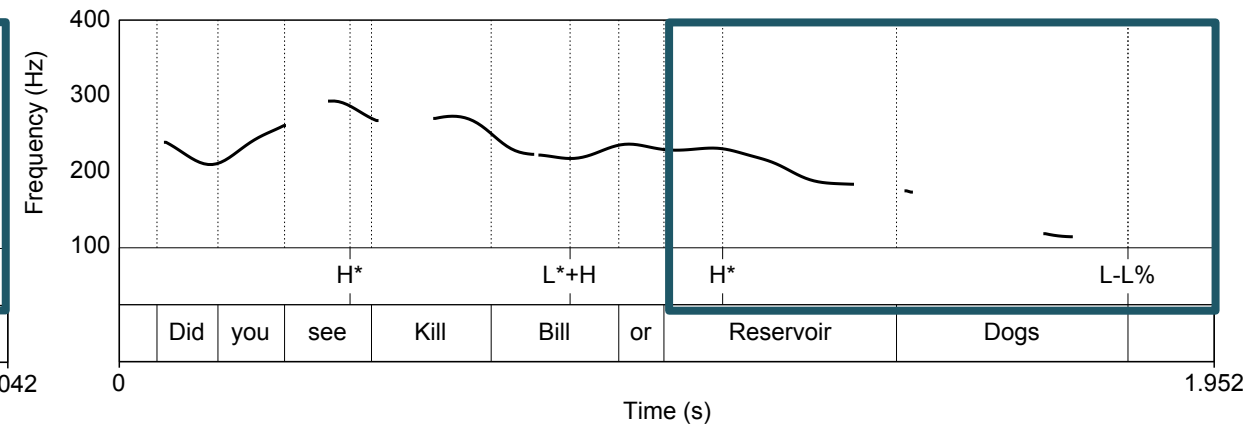
# Revisiting Falling Questions in English: Argument 1A-b: Acoustic Properties of falling Questions

## Empirical data English: Original recording vs. spliced question

original falling disjunctive PoIQ

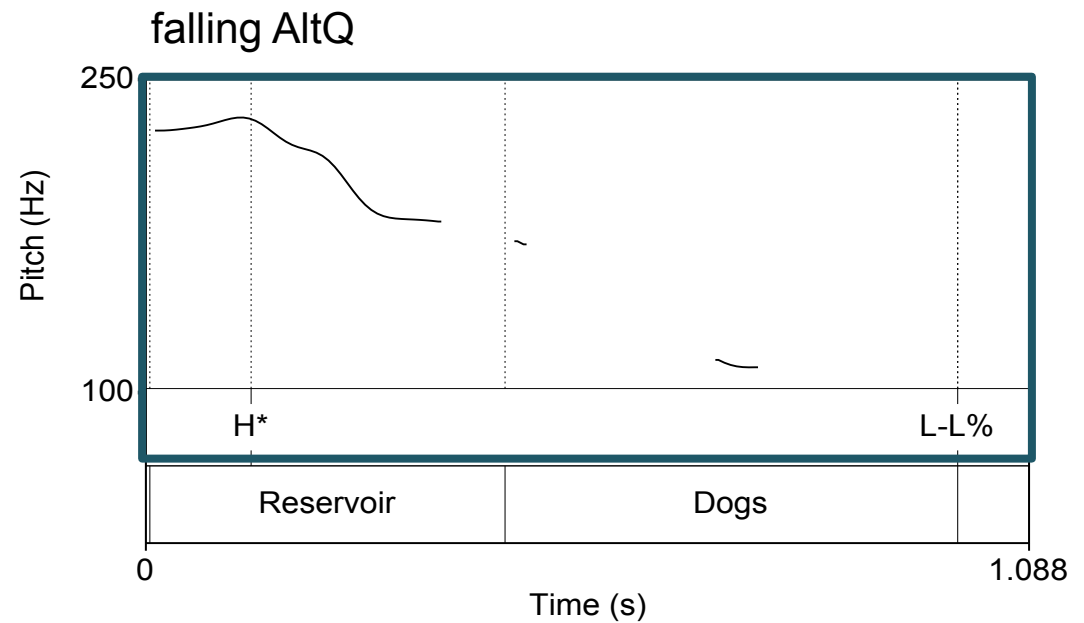
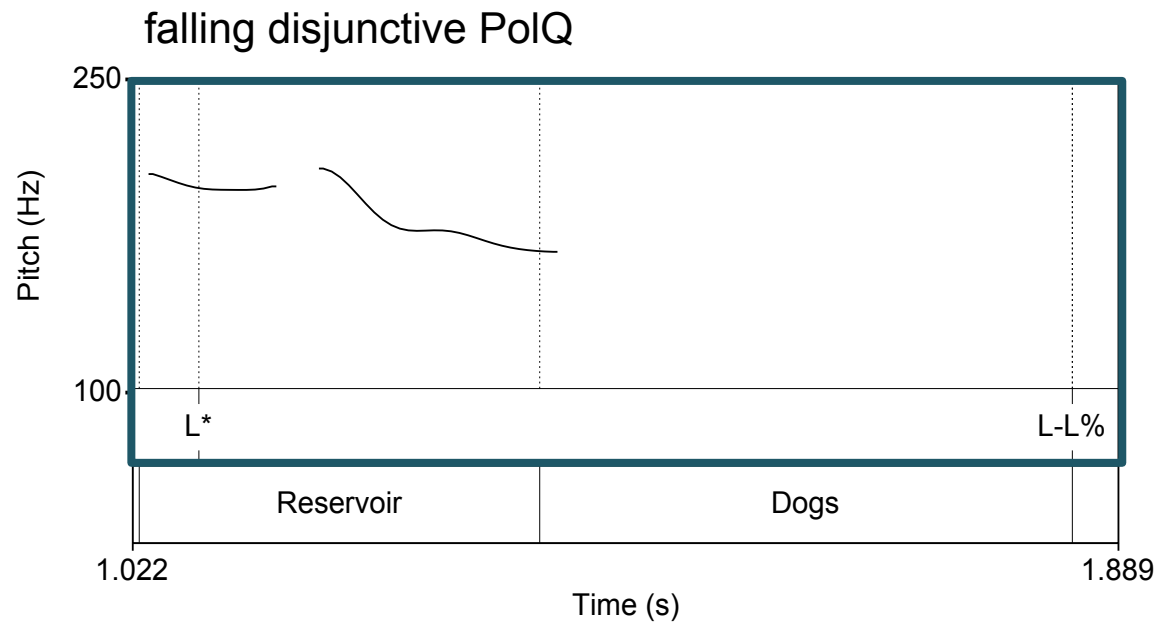


spliced falling question: rising PoIQ + fall from AltQ



# Revisiting Falling Questions in English: Argument 1A-b: Acoustic Properties of falling Questions

## Empirical data English: Original disjunctive PolQ $F\downarrow$ vs. AltQ $F\downarrow$





## Revisiting Falling Questions in English: Argument 1A-b: Acoustic Properties of falling Questions

So, if you do perceive a difference between the original falling PolQ and the spliced one, then possibly...

- a Final Fall does NOT automatically give you an AltQ interpretation, but
- the interpretation depends on the kind of Final Fall:
  - Final Fall L\* L-L%: falling PolQ
  - Final Fall H\* L-L%: AltQ

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## Revisiting Falling Questions in English: Argument 1A-a: Pragmatic Requirements

So, if you do not perceive a difference between the original falling PolQ and the spliced one, then possibly...

➤ the interpretation of the pattern  $S\downarrow$  as falling PolQ vs AltQ is induced by the previous context.

### Pragmatic requirements on falling PolQs: Keeping the addressee 'to the point'

Falling Polar Questions are more restricted than their Rising counterparts in terms of the alternatives taken into consideration (Schubinger, 1958:63).

(6) a.) In a guessing game:

Is it green<sub>H\* L-L%</sub>? Does it grow here<sub>H\* L-L%</sub>?

b) To spouse who is unpacking the suitcase:

Did you find my camera<sub>H\*L-L%</sub>? Did you leave it in Edinburgh<sub>H\*L-L%</sub>? (Bartels 1989)

This is the **only** colour you care about. You do not want to know about any other colour

We will get back to this!

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## Revisiting Falling Questions in English:

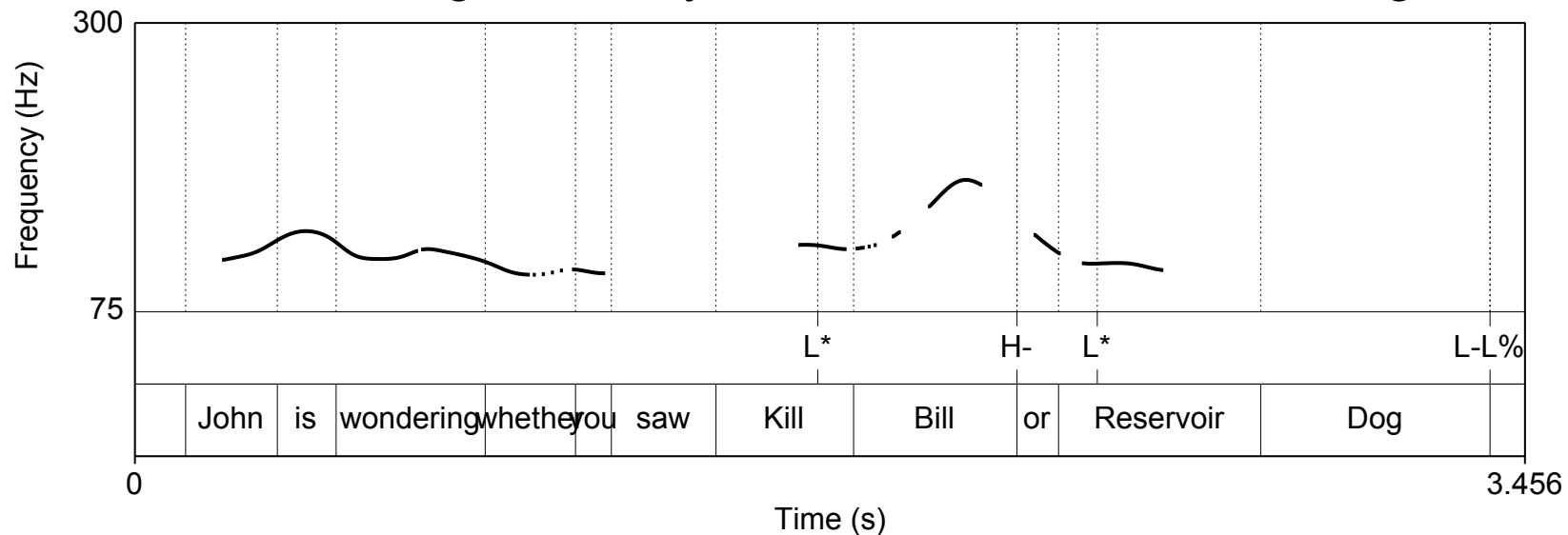
### Argument 1B: Embedded Alternative Questions

## Both Alternative Questions and Polar Questions are produced with a Final Fall under embedding

(7) Embedded AltQ:

“John is wondering which of these two is true: you saw KB or you saw RD.”

John is wondering whether you saw Kill Bill or Reservoir Dogs.



## Revisiting Falling Questions in English:

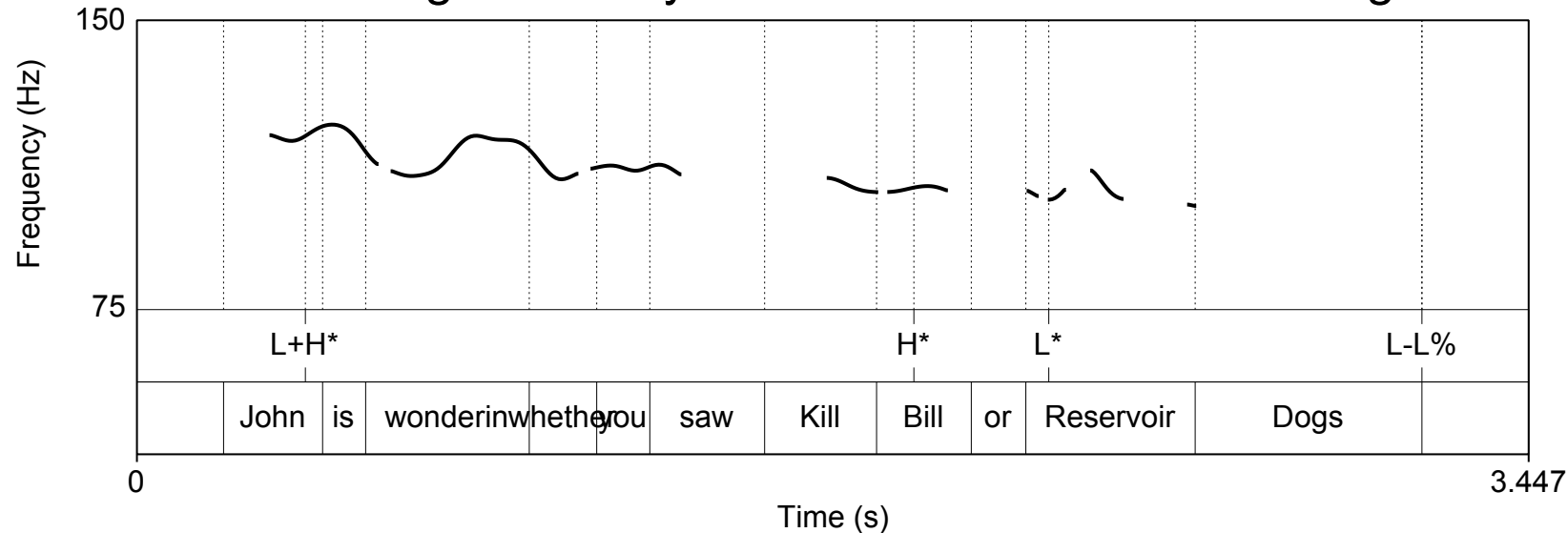
### Argument 1B: Embedded Alternative Questions

Both Alternative Questions and Polar Questions are produced with a Final Fall under embedding

(8) Embedded PolQ:

“John is wondering whether the following is true: that you saw KB or RD.”

John is wondering whether you saw Kill Bill or Reservoir Dogs.



## Revisiting Falling Questions in English

### Altogether...

- There is a bias in recent literature towards the Final Fall as the crucial cue for Alternative Question Composition, but...
- Under **embedding**, Polar Questions always have a **Final Fall**
- Unembedded Polar Questions can also have a Final Fall, although
  - There is an **acoustic difference** between the **AltQ Fall** and the **PolQ Fall**
  - Falling Polar Questions are **pragmatically restricted**

# Outline

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## Argument 2: Non-null contribution of the Multiple Accent

### Turkish

- Alternative and Polar Question prosody in Turkish parallels English
- The Multiple Accent is mirrored by occurrences of the Q-particle *mi*

- (9) a. Ali iskambil **mi** (oyyadi) yoksa futbol **mu** oynadi?  
Ali cards Q play.past or<sub>alt</sub> football Q play.past  
'Did Ali play cards or football?' [Alternative Question]
- b. Ali iskambil veya futbol oynadi **mu**?  
Ali cards or<sub>decl/pol</sub> football play.past **Q**  
'Did Ali play cards or football?' [Polar Question]

## Argument 2: Non-null contribution of the Multiple Accent

### Turkish

- *ml* appears in Polar Questions
- *ml* in Polar Questions signals that the constituent it attaches to is in focus (Kamali 2015)
  
- We find similar patterns in other languages, such as Sinhala and Macedonian (Slade 2011)

**Argument 2:**  
**Non-null contribution of the Multiple Accent**

- (10) a. Ali iskambil oynadi **mi**?  
Ali cards play Q  
'Did Ali play cards?' [Neutral]
- b. Ali **mi** iskambil oynadi?  
Ali Q cards play  
'Was it Ali who played cards?' [Focus]
- c. Ali iskambil **mi** oynadi?  
Ali cards Q play  
'Was it cards what ali played?' [Focus]

**Argument 2:**  
**Non-null contribution of the Multiple Accent**

(10) a. Ali iskambil oynadi **mi**?  
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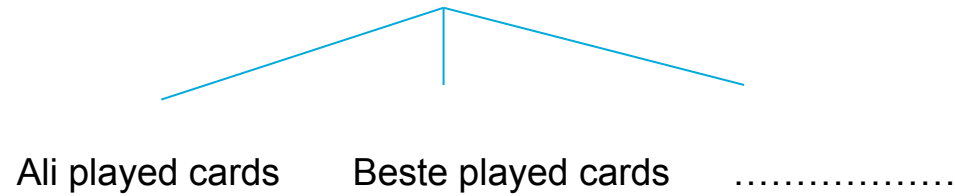
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'Was it Ali who played cards?' [Focus]

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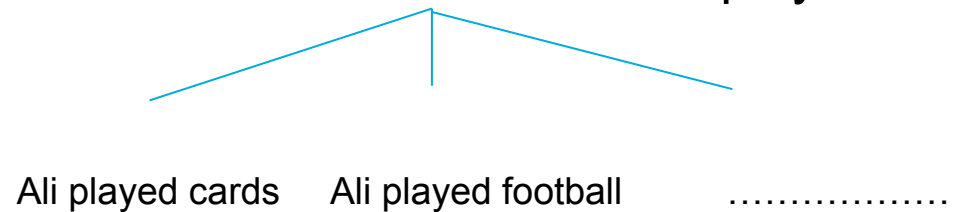
**Argument 2:**  
**Non-null contribution of the Multiple Accent**

The effect of *m/* is reminiscent of the focal accent in English (Biezma 2009)

(11) a. Did ALI play cards? → QUD: Who played cards?



b. Did Ali play CARDS? → QUD: What did Ali play?



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## Towards a Unified Analysis

**We aim for an analysis that accounts for:**

- The semantic effect of *mi* in plain Polar Questions
- The mandatory status of the occurrence of the Q-particle *mi* in each disjunct in Turkish Alternative Questions
- The mandatory status of the Multiple Accent in English Alternative Questions

## Towards a Unified Analysis

### Ingredients:

1. Discourse trees and QUD (Roberts 1996, Büring 2003)
2. Focus Marking (Rooth 1992, Biezma 2009)
3. (Un)satisfaction of Maxims (Westera 2017)

### Realisation of Ingredients 2 and 3:

- Focus Marking:
  - English: Focal Accent
  - Turkish: Q-particle *mi*
- (Un)satisfaction of Maxims:
  - English: Boundary tone
  - Turkish: Boundary tone in AltQs;  
not sure how in PolQs



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  - Turkish: Q-particle *mi*

- (Un)satisfaction of Maxims:
  - English: Boundary tone
  - Turkish: Boundary tone in AltQs;  
not sure how in PolQs

## Contribution of Ingredients 2 and 3 to QUD:

➔ General shape of the QUD (Biezma 2009)

➔ Restriction on content of QUD (Westera 2017)

## Towards a Unified Analysis Ingredients: Discourse Trees and QUD

### Roberts (1996)

Discourse is structured in a hierarchy of (often implicit) Questions under Discussion (QUDs):

QUD1: Who ate what?

QUD1.1: What did Amy eat?

QUD1.1.1: Did Amy eat tofu?

QUD1.1.2: Did Amy eat natto?

QUD1.2: What did Hassan eat?

QUD1.1.1: Did Hassan eat tofu?

QUD1.1.2: Did Hasaan eat natto?

...

QUD2: Who drank what?

...

## Towards a Unified Analysis Ingredients: Focus

### Rooth (1992)

The focus semantic value  $\llbracket \cdot \rrbracket^f$  is exemplified in (12a), and the focus felicity condition of the squiggle operator  $\sim$  is defined in (12b) (Rooth 1992)

- (12) a.  $\llbracket \text{Ali}_F \text{ played cards} \rrbracket^f = \{a \text{ played cards, } b \text{ played cards, } c \text{ played cards, } \dots\}$   
b.  $\llbracket \varphi \sim C \rrbracket$  is felicitous only if  $\llbracket C \rrbracket \subseteq \llbracket \varphi \rrbracket^f$

## Towards a Unified Analysis: Ingredients: A-Maxims

### Westera (2017)

Next to Information Maxims (Grice 1975), we have A(attention)-Maxims shaping the Question under Discussion (QUD)

- A-Quality: Intend to draw attention only to states of affairs that you consider (epistemically) possible
- A-Relation: Intend to draw attention only to states of affairs that you consider relevant

Final boundary tones signal the speakers attitude towards A-Maxims

- The Final Fall signals that the speaker believes all A-Maxims are satisfied
- The Final Rise signals that the speaker considers the possibility that not all A-Maxims are satisfied

### Example

- (13) a. Are you from Denmark ↑?  
b. Are you from Denmark ↓?

## Towards a Unified Analysis: Ingredients: A-Maxims

### Westera (2017)

The relationship between rising and falling and the speaker's obedience of the A-Maxims can be applied to sub-sentential constituents

(14) Barbara visited Loulou ↑, Sophie ↑, and Mila ↓ for Christmas.

## Towards a Unified Analysis:

### Proposal combining ingredients from literature:

- (i) *ml* / focal accent contributes F-marking of its adjacent constituent at LF
- (ii) The squiggle operator ~ shaping  $\llbracket C \rrbracket$  is attached to IP
- (iii)  $\llbracket C \rrbracket$  is taken as a salient Question Under Discussion
- (iv) Boundary tones restricting or not restricting  $\llbracket C \rrbracket$  / QUD

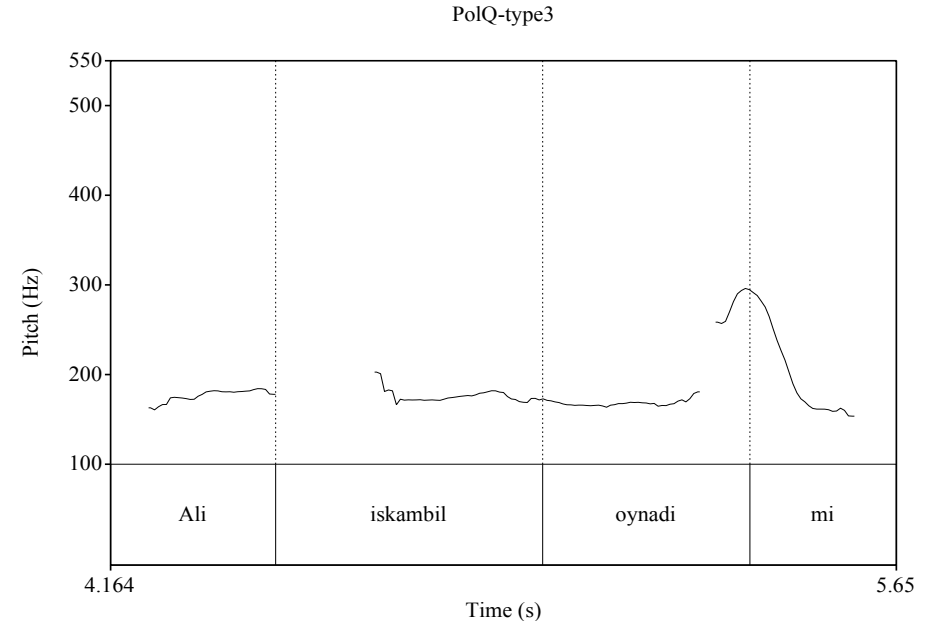
## Towards a Unified Analysis: Polar Questions

### Polar Question + broad focus / broad *ml*

(15) Did [Ali play cards]<sub>F</sub> ↑?

(16) Did [Ali play cards]<sub>F</sub> ↓?

(17) [Ali iskambil oynadi] *mi*?  
Ali cards play Q



(Kamali & Büring 2011, Karatas 2017)

## Towards a Unified Analysis: Polar Questions

### Polar Question + broad focus / broad *mi*

(15) Did [Ali play cards]<sub>F</sub> ↑?

(16) Did [Ali play cards]<sub>F</sub> ↓?

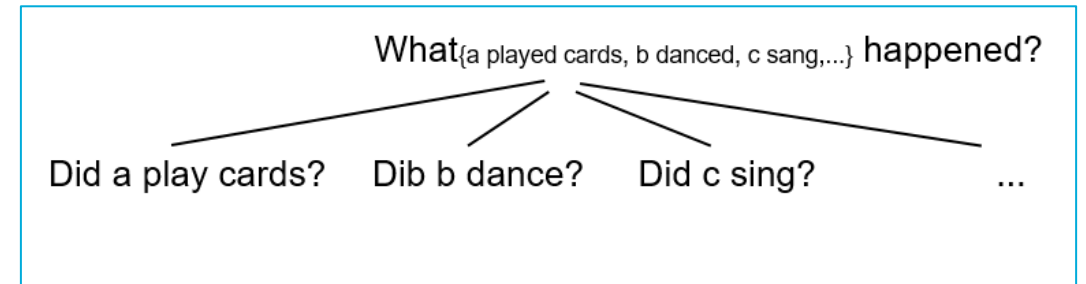
(17) [Ali iskambil oynadi]<sub>F</sub> *mi*?  
Ali cards      play    Q

(18) Analysis of (15) and possibly (17):

a. LF: [Q [<sub>IP</sub> Ali play cards]<sub>F</sub> ~ C]

b.  $\llbracket C \rrbracket \subseteq \llbracket [Ali\ played\ cards]_F \rrbracket^f = \{a\ played\ cards, b\ danced, c\ sang, \dots\}$

c.  $\llbracket C \rrbracket = QUD = \{a\ played\ cards, b\ danced, c\ sang, \dots\}$   
= 'What<sub>{a played cards, b danced, c sang, ...}</sub> happened?'





## Towards a Unified Analysis: Polar Questions

### Polar Question + broad focus / broad *mi*

(15) Did [Ali play cards]<sub>F</sub> ↑?

(16) Did [Ali play cards]<sub>F</sub> ↓?

(17) [Ali iskambil oynadi]<sub>F</sub> mi?  
Ali cards      play    Q

(19) Analysis of (16) and possibly (17):

a. LF: [Q [<sub>IP</sub> Ali play cards]<sub>F</sub> ~ C]

b.  $\llbracket C \rrbracket \subseteq \llbracket [Ali\ played\ cards]_F \rrbracket^f = \{a\ played\ cards, b\ danced, c\ sang, \dots\}$

c.  $\llbracket C \rrbracket = QUD = \{a\ played\ cards, \cancel{b\ danced}, \cancel{c\ sang}, \dots\}$   
= 'What<sub>{a played cards}</sub> happened?'

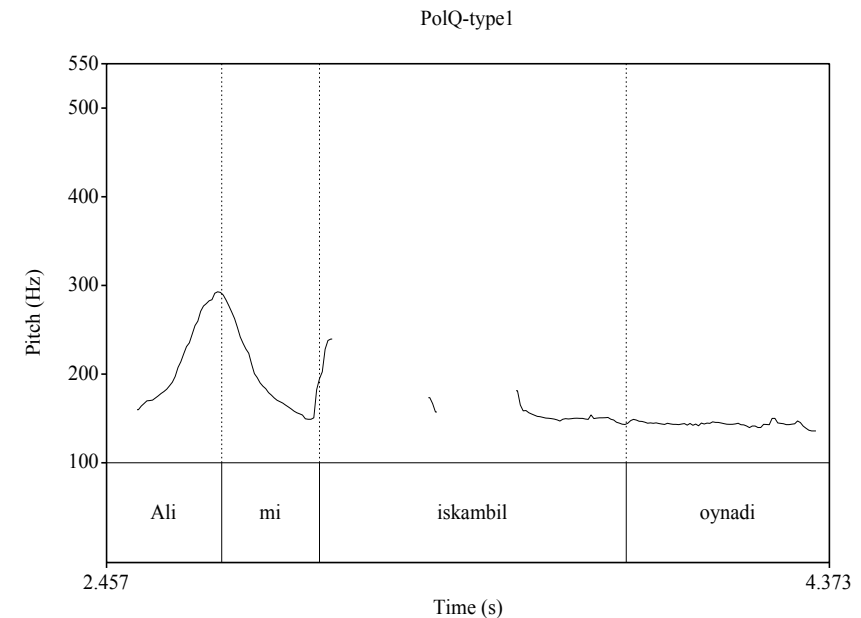
What<sub>{a played cards}</sub> happened?

|  
Did a play cards?

## Towards a Unified Analysis: Polar Questions

### Polar Question + narrow focus / adjacent *mi*

- (20) Did [Ali]<sub>F</sub> play cards ↑ ?  
(21) Did [Ali]<sub>F</sub> play cards ↓ ?  
(22) [Ali] *mi* iskambil oynadi?  
Ali Q cards play



(Kamali & Büring 2011, Karatas 2017)

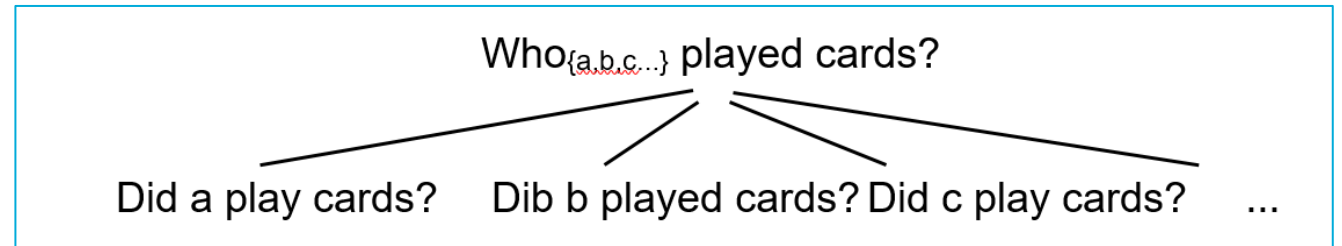
## Towards a Unified Analysis: Polar Questions

### Polar Question + narrow focus / adjacent *mi*

(20) Did [Ali]<sub>F</sub> play cards ↑ ?

(21) Did Ali<sub>F</sub> play cards ↓ ?

(22) [Ali] *mi* iskambil oynadi?  
Ali Q cards play



(23) Analysis of (20) and possibly (22):

a. LF: [Q [<sub>IP</sub> Ali<sub>F</sub> play cards] ~ C]

b.  $[[C]] \subseteq [[Ali_F \text{ played cards}]]^f = \{a \text{ played cards, } b \text{ played cards, } c \text{ played cards, } \dots\}$

c.  $[[C]] = \text{QUD} = \{a \text{ played cards, } b \text{ played cards, } c \text{ played cards, } \dots\}$   
= 'Who<sub>{a,b,c,...}</sub> played cards?'

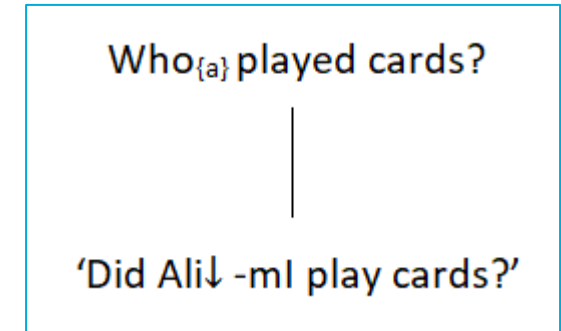
## Towards a Unified Analysis: Polar Questions

### Polar Question + narrow focus / adjacent *mi*

(20) Did Ali<sub>F</sub> play cards<sup>↑</sup>?

(21) Did [Ali]<sub>F</sub> play cards<sup>↓</sup>?

(22) [Ali] *mi* iskambil oynadi?  
Ali Q cards play



[Turkish (22) as "surprise" question in Karatas (2017)]

(24) Analysis of (21) and possibly (22):

a. LF: [Q [<sub>IP</sub> Ali<sub>F</sub> play cards] ~ C]

b.  $\llbracket C \rrbracket \subseteq \llbracket \text{Ali}_F \text{ played cards} \rrbracket^f = \{a \text{ played cards, } b \text{ played cards, } c \text{ played cards, } \dots\}$

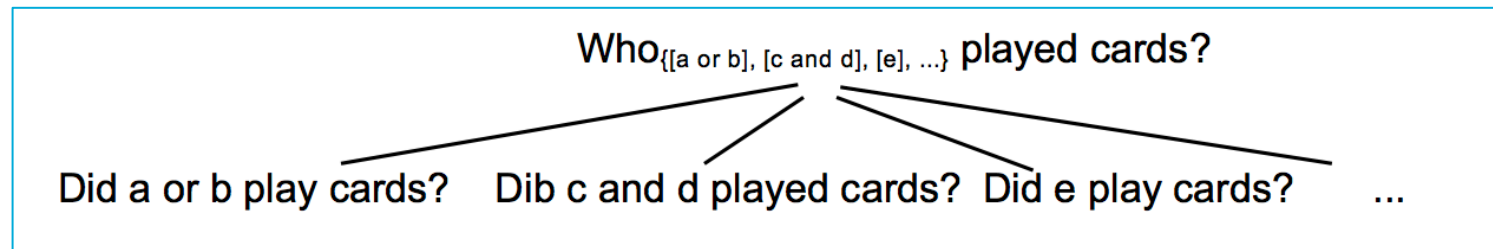
c.  $\llbracket C \rrbracket = \text{QUD} = \{a \text{ played cards, } \cancel{b \text{ played cards}}, \cancel{c \text{ played cards}}, \dots\}$   
= 'Who<sub>{a}</sub> played cards?'

## Towards a Unified Analysis: Disjunctive Polar Questions

### Disjunctive Polar Question + narrow focus

(25) Did [Ali or Beste]<sub>F</sub> play cards ↑?

(26) Did [Ali or Beste]<sub>F</sub> play cards ↓?



(27) Analysis of (25):

a. LF: [Q [<sub>IP</sub> [Ali or Beste]<sub>F</sub> play cards] ~ C]

b.  $\llbracket C \rrbracket \subseteq \llbracket [Ali \text{ or } Beste]_F \text{ played cards} \rrbracket^f$

= {a or b played cards, c and d played cards, e played cards...}

c.  $\llbracket C \rrbracket = \text{QUD} = \{ \text{a or b played cards, c and d played cards, e played cards...} \}$

= 'Who<sub>{[a or b], [c and d], [e],...}</sub> played cards?'

## Towards a Unified Analysis: Disjunctive Polar Questions

### Disjunctive Polar Question + narrow focus

(25) Did [Ali or Beste]<sub>F</sub> play cards ↑?

(26) Did [Ali or Beste]<sub>F</sub> play cards ↓?

(28) Analysis of (26):

a. LF: [Q [<sub>IP</sub> [Ali or Beste]<sub>F</sub> play cards] ~ C]

b.  $\llbracket C \rrbracket \subseteq \llbracket [Ali\ or\ Beste]_F\ played\ cards \rrbracket^f$

= {a or b played cards, c and d played cards, e played cards...}

c.  $\llbracket C \rrbracket = \text{QUD} = \{ a\ or\ b\ played\ cards, \cancel{c\ and\ d\ played\ cards}, \cancel{e\ played\ cards} \dots \}$

= 'Who<sub>{[a or b], [c and d], [e],...}</sub> played cards?'

Who<sub>{[a or b]}</sub> played cards?

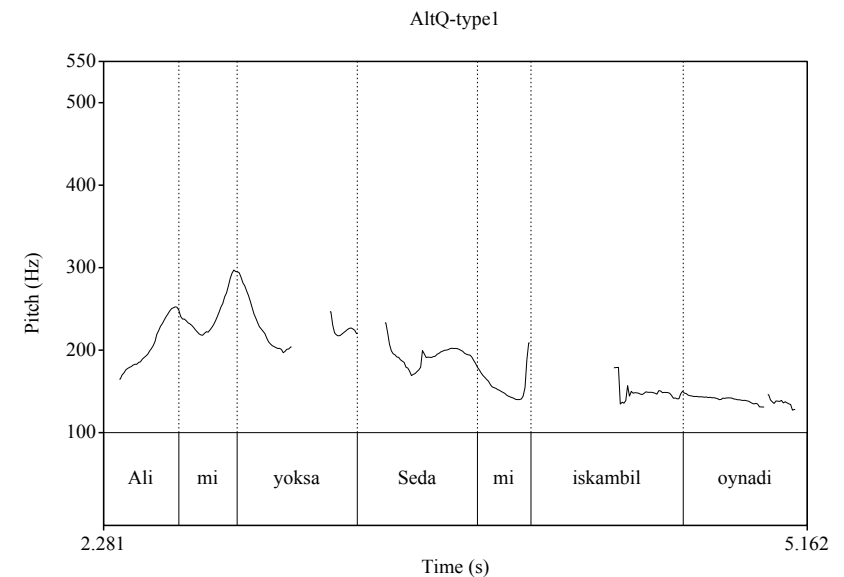
Did a or b play cards?

## Towards a Unified Analysis: Alternative Questions

### Alternative Question + focus on each disjunct

(29) Did [Ali]<sub>F</sub>↑ or [Seda]<sub>F</sub>↓ play cards?

(30) [Ali] mi↑ yoksa [Seda] mi↓ iskambil oynadi?  
Ali Q or Seda Q cards play

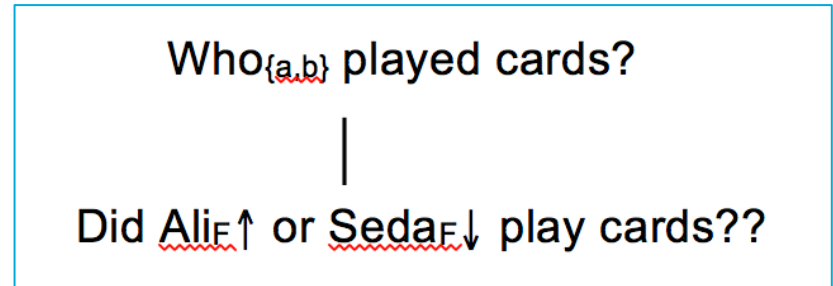


## Towards a Unified Analysis: Alternative Questions

### Alternative Question + focus on each disjunct

(29) Did [Ali]<sub>F</sub>↑ or [Seda]<sub>F</sub>↓ play cards?

(30) [Ali] mi↑ yoksa [Seda] mi↓ iskambil oynadi?  
Ali Q or Seda Q cards play



(31) Analysis of (29) and (30):

- LF: [Q [[<sub>IP1</sub> Ali<sub>F</sub> played cards]~ C or [<sub>IP2</sub> Seda<sub>F</sub> play cards ]~ C]]
- [[C]] ⊆ [[IP1]]<sup>f</sup> = [[IP2]]<sup>f</sup> = {a played cards, s played cards, c played cards, ...}
- [[C]] = QUD = {a played cards, s played cards, ~~c played cards, ...~~}  
= 'Who<sub>{a,s}</sub> played cards?'



# Outline

- **Recent Previous Work**
  - Biezma & Rawlins (2012)
  - Roelofsen & van Gool (2010)
  - Pruitt & Roelofsen (2013)
  
- **Argument 1: Revisiting Falling Questions in English**
  - 1A-a: Acoustic properties
  - 1A-b: Pragmatic licensing
  - 1B: Embedded Alternative Questions
  
- **Argument 2: Q-particles in Turkish Alternative Questions**
  
- **Towards an Analysis**
  
- **Conclusion**

## Conclusion

### Two prosodic cues in Alternative Questions

- Final Fall
- Multiple Accent

(1) Do **both** prosodic cues contribute to the Alternative Question interpretation?

YES!

(2) If so, what is the **contribution** of the two cues **individually**?

Multiple Accent → General shape of the QUD via Focus marking

Final Fall → Restrictions on content of QUD via (un)satisfaction of Attention Maxims

## References

- Bartels (1999) The intonation of English statements and questions.
- Biezma, M. (2009, September). Alternative vs polar questions: the cornering effect. In *Semantics and Linguistic Theory* (Vol. 19, pp. 37-54).
- Biezma, Butt & Jabeen (2017) Interpretation of Urdu/Hindi polar kya. *XPrag*.
- Biezma, M., & Rawlins, K. (2012). Responding to alternative and polar questions. *Linguistics and Philosophy*, 35(5), 361-406.
- Büring, D. (2003). On D-trees, beans, and B-accent. *Linguistics and philosophy*, 26(5), 511-545.
- Han & Romero (2004) The syntax of whether/Q...or questions: ellipsis combined with movement. *Natural Language and Linguistic Theory*, 22(3), 527-564.
- Hedberg, N., Sosa, J. M., & Fadden, L. (2004). Meanings and configurations of questions in English. In *Proceedings of Speech Prosody 2004* (Nara, Japan), 309–312.
- Kamali, B., & Büring, D. (2011). Topics in questions. In *Workshop on the Phonological Marking of Focus and Topic: GLOW* (Vol. 34).
- Kamali (2015) Information structure of yes/no questions in Turkish. *T PF interface of Turkish*.
- Karttunen (1977) Syntax and Semantics of Questions *Linguistics and Philosophy*, 1(1),3-44.
- Petrone, C., & Niebuhr, O. (2014). On the intonation of German intonation questions: The role of the prenuclear region. *Language and Speech*, 57(1), 108-146.
- Pruitt, K., & Roelofsen, F. (2013). The interpretation of prosody in disjunctive questions. *Linguistic inquiry*, 44(4), 632-650.
- Quirk, R., Greenbaum, S., Leech, G., & Svartvik, J.. (1985). *A comprehensive grammar of the English language*. London: Longman.
- Rando, E. (1980). Intonation in discourse. In *The melody of language*, ed. by Linda R. Waugh and C. H. van Schooneveld, 243–278. Baltimore, MD: University Park Press.
- Roberts, C. (1996). Information structure in discourse: Towards an integrated formal theory of pragmatics. *Working Papers in Linguistics-Ohio State University Department of Linguistics*, 91-136.
- Roelofsen, F., & Van Gool, S. (2010). Disjunctive questions, intonation, and highlighting. In *Logic, language and meaning* (pp. 384-394). Springer, Berlin, Heidelberg.
- Rooth, M. (1992). A theory of focus interpretation. *Natural language semantics*, 1(1), 75-116.
- Schubiger, M. (1958). *English intonation: Its form and function*. Tübingen: Max Niemeyer Verlag.
- Westera, M. (2017). *Exhaustivity and intonation: a unified theory*. Institute for Logic, Language and Computation, Universiteit van Amsterdam dissertation.

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