

Intonational meaning in Spanish conversation: low-rising vs. circumflex questions

Francisco Torreira & Simeon Floyd



MAX PLANCK INSTITUTE
FOR PSYCHOLINGUISTICS

Introduction

Variety of intonational tunes in Spanish questions

Questions > different actions:

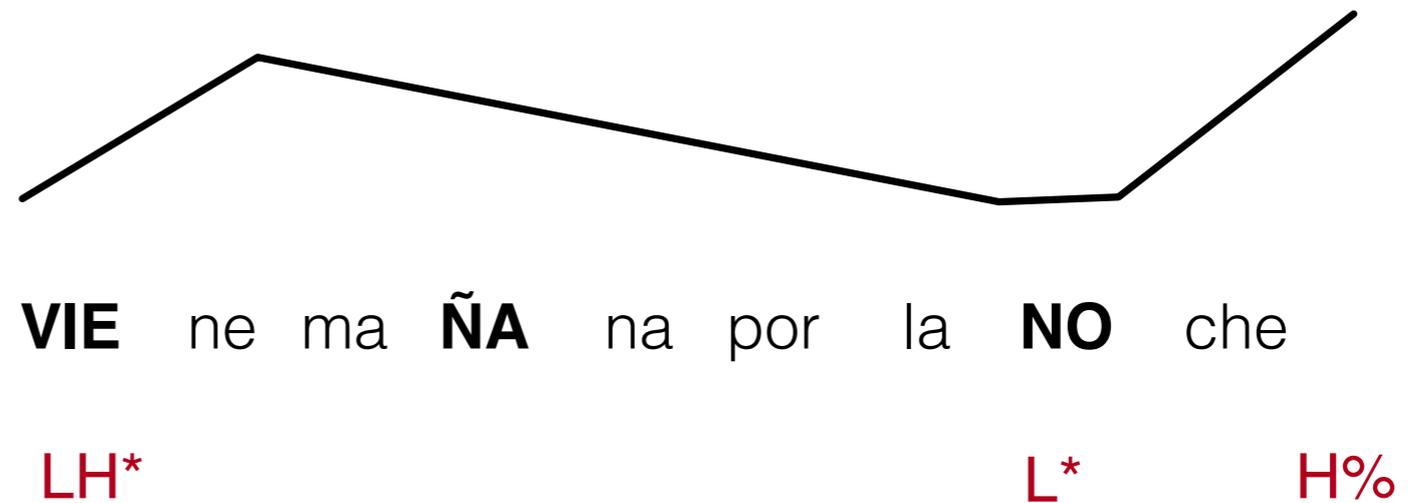
- requesting unknown information, confirmation...
- requesting action
- expressing surprise, disagreement...
- announcing new information

Meaning of different question tunes?

Links with observable actions?

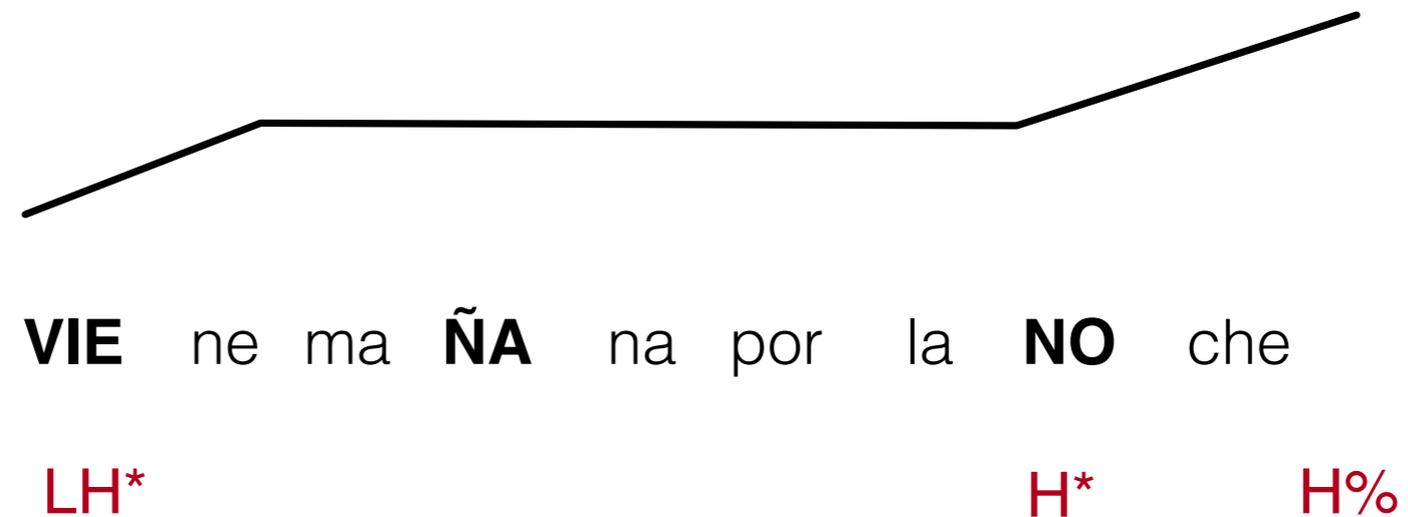
Low rise

'Is she coming tonight?'



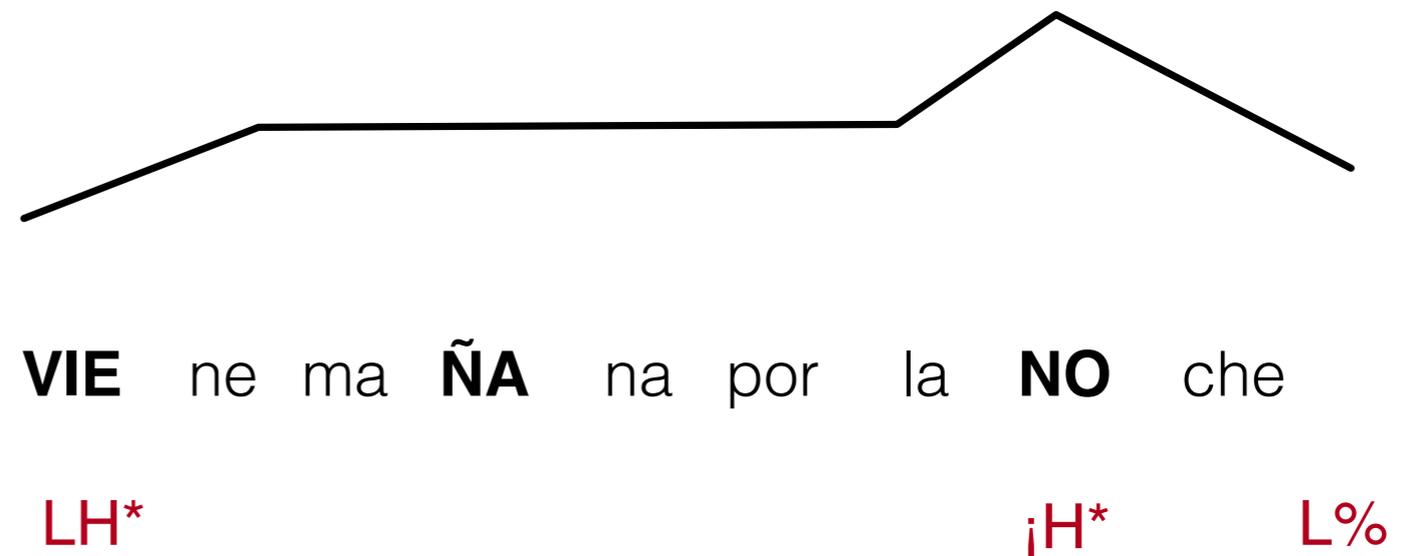
- Unmarked yes-no questions
- Most common in reading tasks

High rise



- Speaker knows the answer [Escandell-Vidal 1998](#) and usually produces it ~ rhetorical question
- Evidentiality marker: Speaker as source [Escandell-Vidal 2017](#)

Circumflex



- Affective & conversational [Fernández Ramírez 1959](#)
- Attributive questions [Escandell-Vidal 1998](#)
i.e. *Is this what you mean?* ~ echo questions / repeats
- Evidentiality marker: Hearer as source [Escandell-Vidal 2017](#)

Comprehensive account

Question operator: [Q]

Evidentiality marker: [Evid]

- Low rise: [Q]
- High rises: [Q] + [Evid self]
- Circumflex: [Q] + [Evid other]

Method

- Corpus data collection / extraction ✓

- Coding & qualitative inspection ...

- Formulation of hypotheses ...

- Experimentation

In this talk

Data

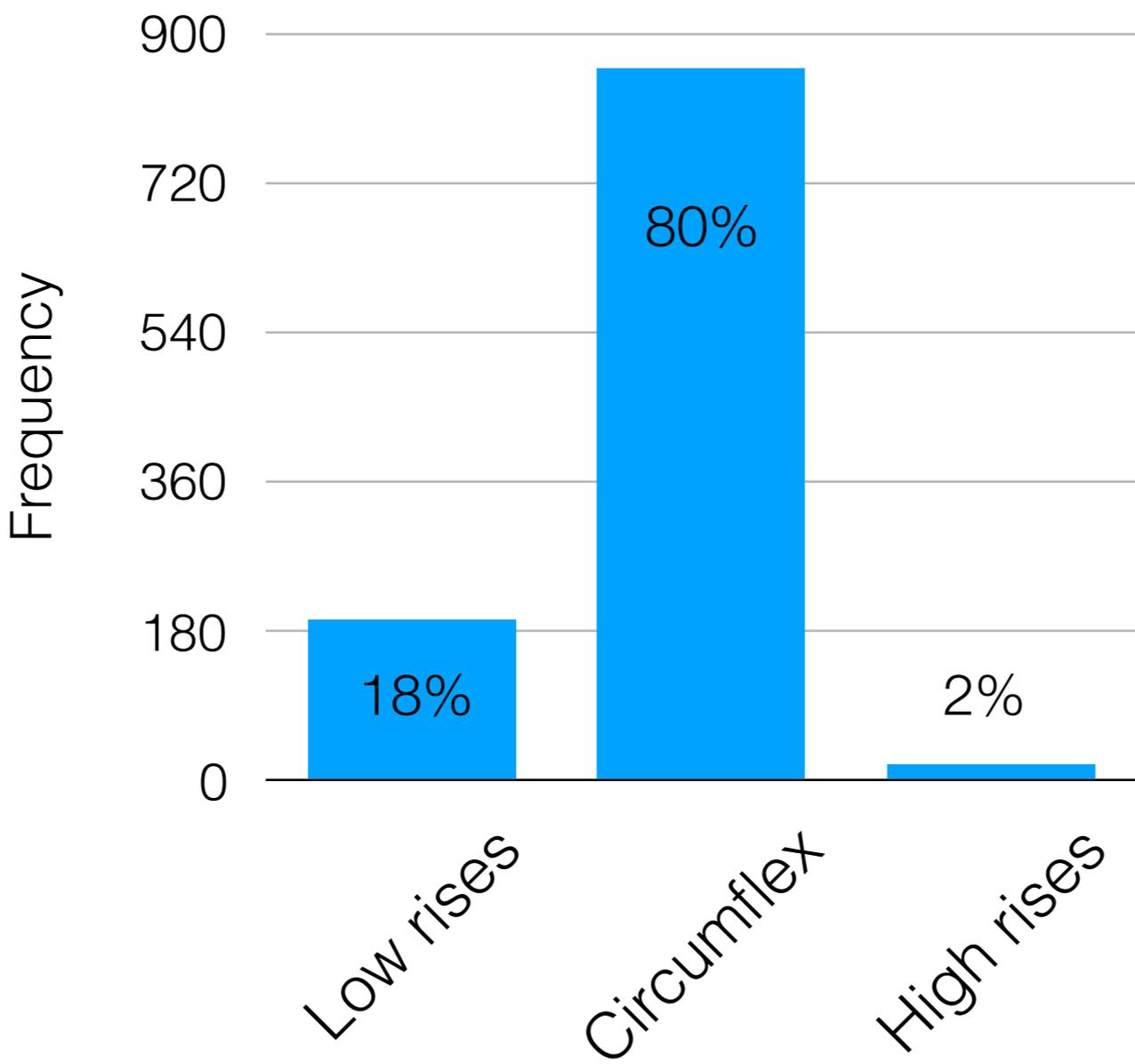


~30 hours of dyadic/triadic conversation extracted from Nijmegen Corpus of Casual Spanish [Torreira & Ernestus 2012](#)

1070 questions in total

Only questions containing two or more PWs

Frequency



Coding

Coding of subset of tokens (n = 263):

- Connectors: *y* 'and', *pero* 'but'
- Subject ellipsis
- (Partial) repeats
- Anaphora

Backward-looking
questions

- Attentional particles: *oye* 'listen', *tú* '(hey) you'
- Follows silence > 1 s

Forward-looking
questions

**Connector
Anaphora
Ellipsis
Repeat**

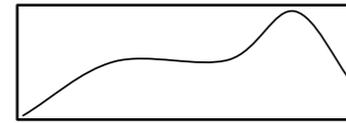
**Attentional
Silence**

Circumflex

90%

11%

Circumflex contour



Two young men talk about friends:

→ L *tú tío ¿el lunes te vas a ver a un coleguita?* [Evid other]
you man on Monday are you gonna go see a friend or what

B *¿eh?*
huh?

→ A *¿el lunes te vas a ir a ver a un colega?* [Evid other]
on Monday are you gonna see a friend?

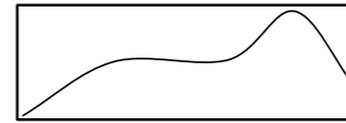
Echo

→ B *¿quieres que me lleve a un colega?* Attributive
do you want me to bring a friend along [Evid other]

A *no tío tú sólo te lo he preguntado ¿sabes?*
no man I was just asking you know

Answer

Circumflex contour



Two young women talk about exercising at the gym:

A *tú te subes todo el rato a una máquina que*
you get on a machine all the time that

acaba de usar alguien
someone has just been using

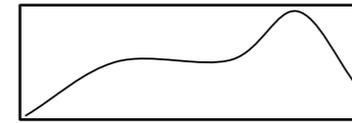
y hay gente que suda y es asqueroso
and there's people who sweat and it's disgusting

→ B *y la máquina, ¿te toca cada vez una?* [Evid other]
and the machine, is it a different one every time?

A *Pues... sí*
So yes

Answer

Circumflex contours



Circumflex tunes are common in:

- Echo questions (repeats & partial repeats)
- Attributive questions
- Questions where recipient is likely to know the answer from first-hand experience

Escandell-Vidal's recent proposal that circumflex tunes involve [Evid other] best captures the data

**Connector
Anaphora
Ellipsis
Repeat**

**Attentional
Silence**

Circumflex

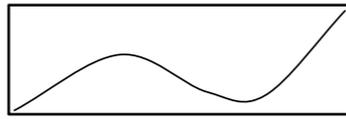
90%

11%

Low-rise

36%

Low rise



Three young men talking about travel:

A *¿tú que has visto en Bruselas? sabes*
what have you seen in Brussels? you know

B *pues el Manneken Pis, el muñequín ese meando*
the Manneken Pis, the little guy who's pissing

C *es lo único que mola=*
that's the only cool thing

→ C *=tú Charly ¿te han dado el Erasmus?* Information-seeking
you Charly, did you get the Erasmus (grant)?

A *No lo he mirado, pero... sale en diez días*
I haven't looked it up yet, it'll come out in ten days

Answer



Connector
Anaphora
Ellipsis
Repeat

Attentional
Silence

Circumflex

90%

11%

Low-rise

54%

36%

Low-rises in echo questions: non-information-seeking

Three young women talking about a friend:

A *Cris es monotema*
Cris is monothematic

Echo



B ***¿Cris es monotema?***
Cris is monothemati

~~Information-seeking~~

Surprise

A *o sea, tiene un tema::, tiene un tema:: y es recurrente*
I mean she has a topic she has topic and it's recurrent

Answer
Account

C *¿No la has visto que siempre habla de Erasmus conmigo?*
Haven't you seen that she always talks to me about Erasmus stuff

Three young women talk about a foreign exchange student who's staying with one of them:

A *la puedes aguantar ¿sabes? [b]*
You can put up with her you know

B *sí no si el problema le el quien la va luego a aguantar es mi hermano*
yes no the things is that it's my brother who will have to deal with her

→ A *aah el de es que **¿sabes que su hermano juega al rol?*** ((Looking at C))
oh the one who did you know that her brother plays role-playing games

B *&ah& idiotas!*
oh god

A *va a juegos de rol, pero de verdad*
he plays role playing games live

A *cuéntalo*
tell us about it

B *no, es que es muy friqui*
No he's such a nerd

Main findings (so far)

Circumflex contours:

- most frequent Q contour type in face-to-face conversation
- encodes that recipient has first-hand access to answer

Low rises:

- do not mark evidentiality
- often used in non-information-seeking questions

Hypothesis: Low rises trigger conversational implicatures in contexts where a circumflex contour is expected

Alternative hypotheses

H1: Low rises trigger conversational implicatures where a circumflex contour is expected

H2: Low rises trigger conversational implicatures only in specific contexts/constructions:

- echo questions (repeats)
- pre-telling formulas: *did you know that...*

H3:

Experimentation

Production:

- Scripted dialogues

Comprehension:

- Continuation task: Guess next speaker's reaction
- Question - Answer matching

Tonal-metrical association in Spanish

Tonal-metrical association in circumflex contours

Ah! vienes mañana?
iH* L%

'Oh! You're coming tomorrow?'

Ah! mañana?

'Oh! tomorrow?'

Tonal-metrical association in circumflex contours

Ah! vienes mañana?
iH* L%

'Oh! You're coming tomorrow?'

Ah! mañana?
LH* iH%

'Oh! tomorrow?'

Imitation experiment

Torreira & Grice (to appear)

Imitation experiment: Training phase

Torreira & Grice (to appear)

For each stimulus, participants:

1. See a written transcription of the stimulus on the screen

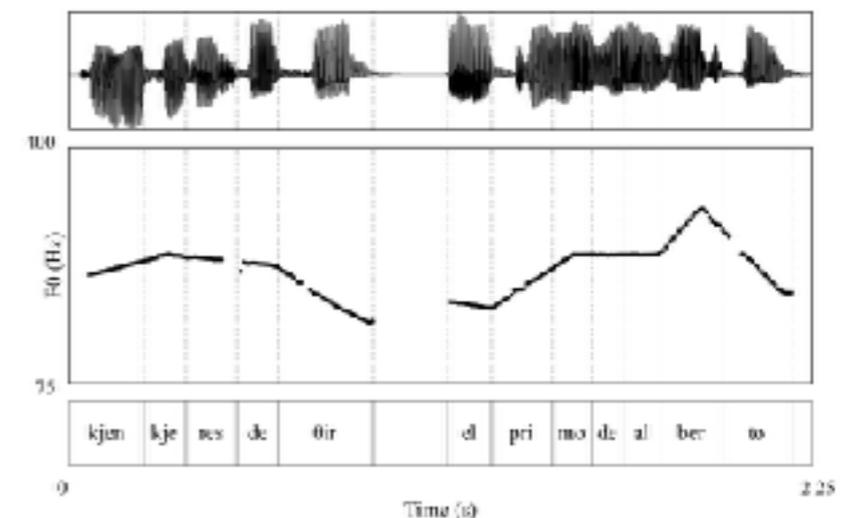
e.g. *Quién quieres decir, el primo de Alberto?*

'Who do you mean, Alberto's cousin?'

Always
2 PWs

2. Hear a synthetic audio stimulus

3. Are asked to imitate the utterance



Imitation experiment:

Test phase

Participants:

1. See a written transcription of each stimulus on the screen

e.g. e.g. *Quién quieres decir? Manolo?*

‘Who do you mean, Manolo?’

2. Hear the **first part of the stimulus only**:

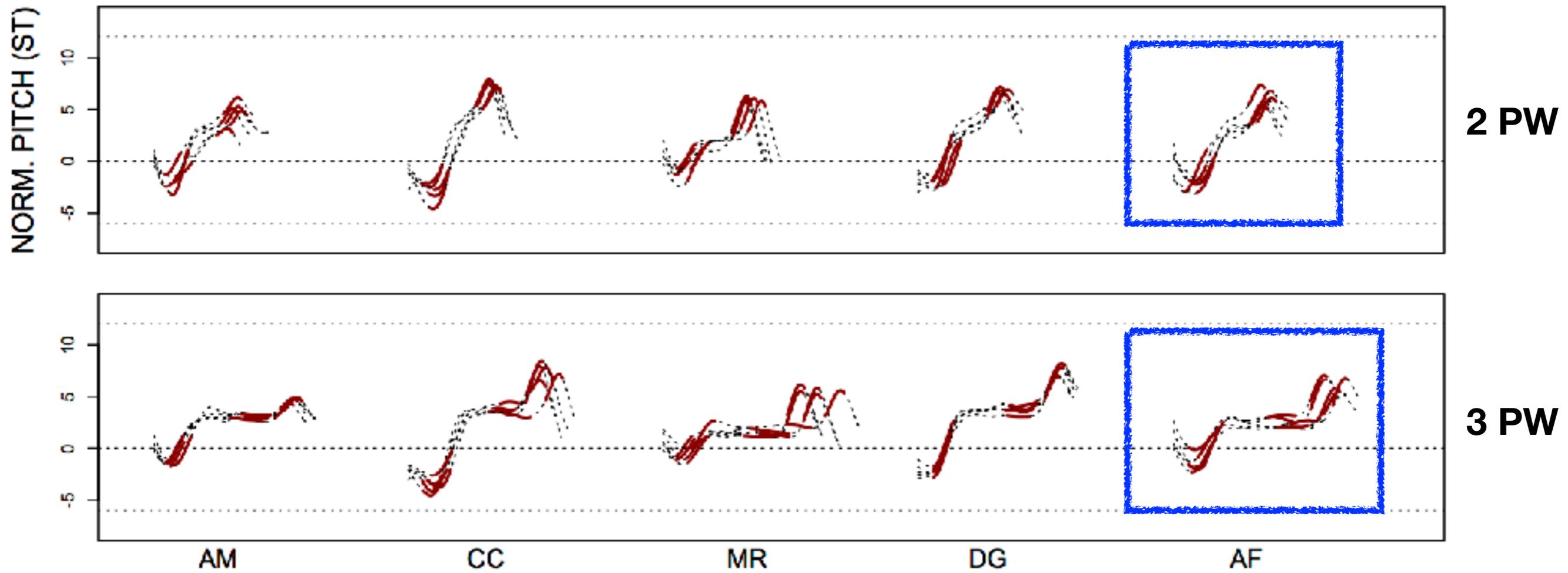
3. Are asked to **imitate and complete** the utterance

e.g. *Quién quieres decir?*

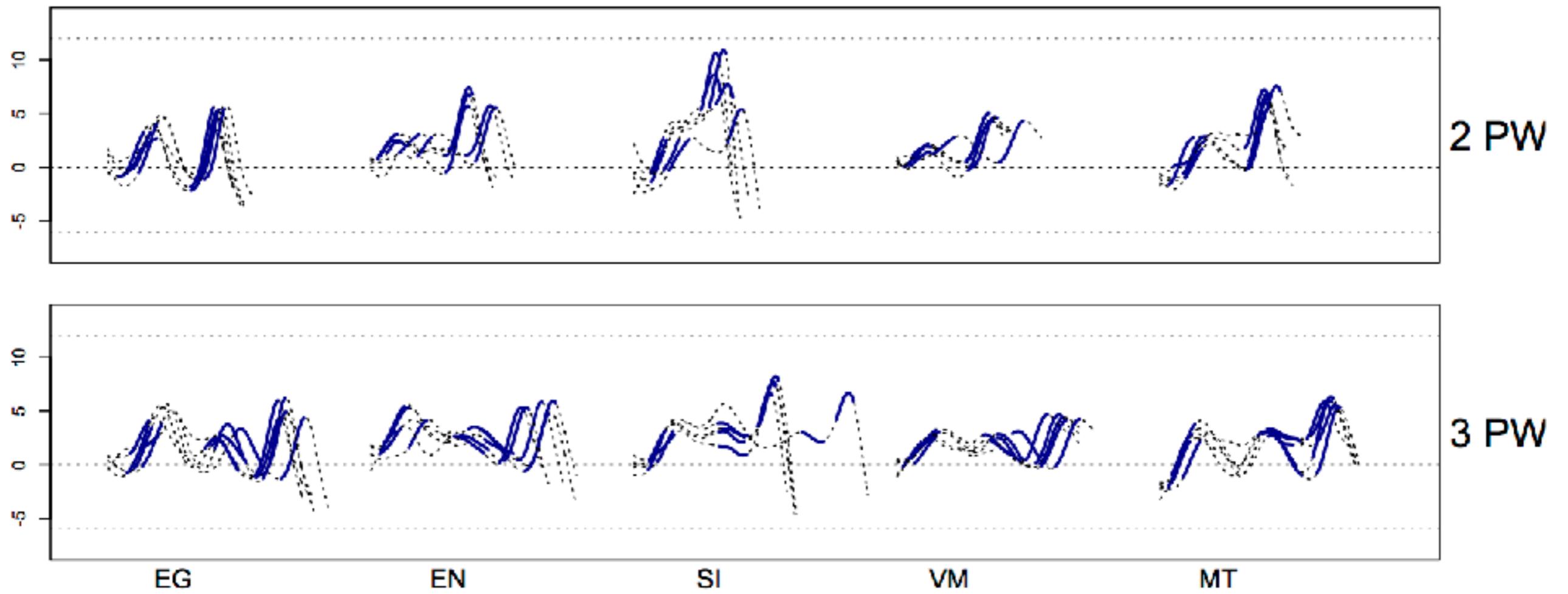
Manolo?

1 PW, 2 PW or 3 PW

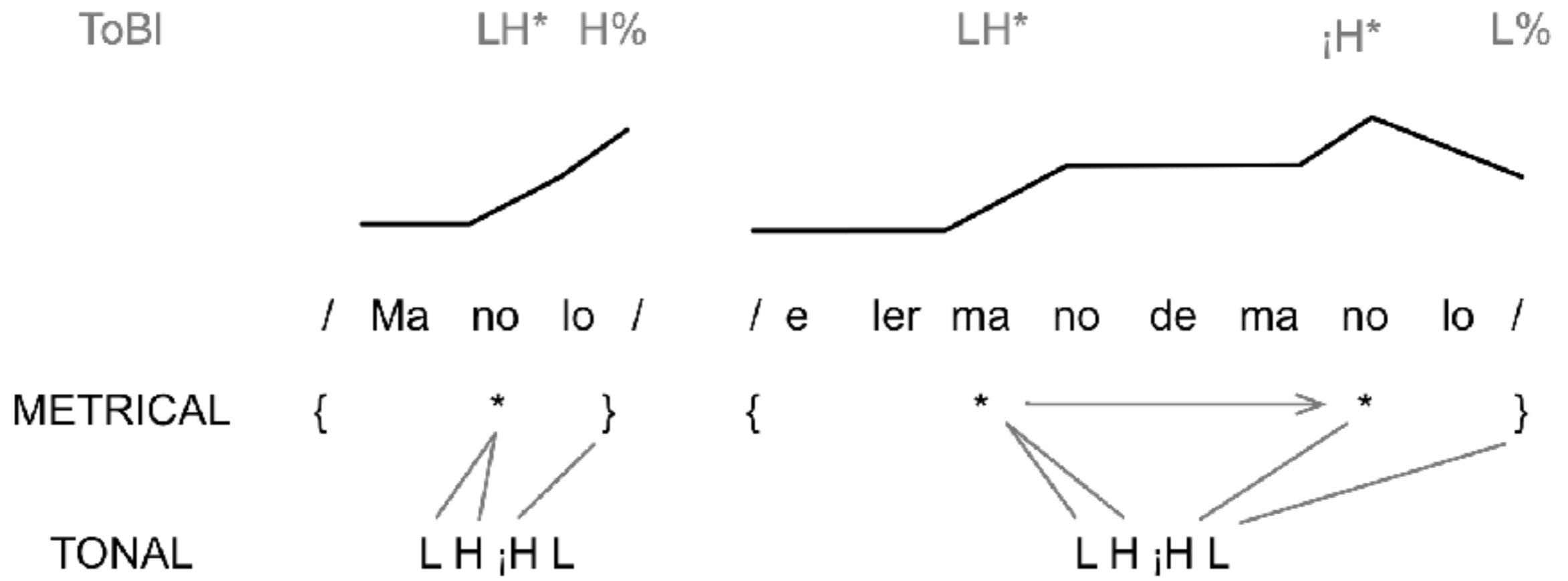
SPANISH SPEAKERS



ITALIAN SPEAKERS



Tonal-metrical association in circumflex contours



Circumflex contour

Melodic construction:

- Sequence of tones: LH !H L
- Phrase-length-dependent principles of tonal-metrical association
- Meaning: [Q] [Evid other] [Escandell-Vidal 2017](#)

Conclusion

Working with corpus data from the bottom up and can reveal unexpected phenomena:

- Intonational tunes as evidentiality markers
- Non-trivial tune-text association patterns >> insights in intonational phonology
- Canonical question intonation non-information-seeking more often than not