The prosody of Spanish *¿no?*-tags from a pragmatic perspective

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1   Introduction

1.1   Basic assumptions

¿No?: a negative adverb, also used as a discourse marker or a question tag in Spanish

- supposed to turn every statement into a question (Osa, 2017)

- meaning paraphrasable as 'right?', 'don't you think?', 'isn't it like that?' (García Vizcaíno, 2005)

- Speaker seeks confirmation, using *¿no?* helps to avoid confrontation (García Vizcaíno, 2005; Butt and Benjamin, 2013)

- pronounced with a rising contour (see Estebas-Vilaplana and Prieto (2010) on the tag *¿eh?* in confirmation questions)

(1)   participar en un congreso / y presentar un trabajo // creo que es bastante interesante / no ?
       'To take part in a congress and present a paper, I think it is quite interesting, isn't it' (C-ORAL-ROM, [efamdl42] (Cresti and Moneglia, 2005))

1.2   Distribution

Clause types

- assumed to be added to declarative clauses (1) conveying assertions

- however, it can in fact be added to all clause types (although possibly subject to substantial dialectal and regional variation):

(2)   vale // no te corre prisa / no ? (imperative)
       'all right, don't rush, ok?' (C-ORAL-ROM [etelef02])

(3)   ¿De qué está hablando, no? (interrogative)
       'What is he talking about, right?' (Osa, 2017)

(4)   qué tontería / no ? no entiendo esa discusión (exclamative)
       'What a stupid thing! I don't unserstand this discussion.' (C-ORAL-ROM, [efamdl16])

Compatibility with speech acts

- *¿no?* not compatible with all speech act types (pragmatic reasons, (Searle and Vanderveken, 1985))

- apart from assertions (1), *¿no?* can be added to the following speech acts (Osa, 2017; Kiss, 2018):

  – directives (weak imperatives) (2)
  – rhetorical questions (3)
  – exclamatives (4)
  – cohortatives

    (5)   Venga, vamos a otro sitio, ¿no?
            'Ok, let's go somewehere else, shouldn't we we?' (Osa, 2017)

  – (certain) commissives

    (6)   Te ayudo, ¿no?
            'I'll help you, ok?'

Incompatibility with speech acts

- genuine questions

  (7)   Cómo te llamas, #¿no?
          'What's your name, #right?'

- commands (strong imperatives)

  (8)   Ven aquí, #¿no?
          'Come here, #right?'

- declarations

  (9)   Os declaro marido y mujer, #¿no?
          'I declare you husband and wife, #right?'

- expressives

  (10)   Muchas gracias, #¿no?
          'Thanks a lot, #right?'

- commissives (when performative)

  (11)   Te lo prometo, #¿no?
          'I promise it to you, #right?'

1.3   Pragmatic approaches

Osa (2017)

- *¿no?* makes a given speech act tentative, *i.e.* to which the Speaker cannot commit to immediately

- full commitment possible, when the Addressee has also accepted it

- formalized in a dynamic framework (Farkas and Bruce, 2010; Malamud and Stephenson, 2015)

- Problems (Kiss, 2018):

  - does not account for the different behaviour of commands and weak imperatives w.r.t. *¿no?*

    (12) a. vale // no te corre prisa / no ? (weak imperative)
          b. Ven aquí, #¿no? (command)

  - speech acts incompatible with *¿no?* can be made explicitly tentative

    (13) a. Cuántos años tienes, #¿no?
          b. Déjame preguntarte cuántos años tienes.
              'Let me ask you how old you are.'

Kiss (2018)

- by adding *¿no?* to an utterance, the Speaker attributes the whole illocutionary act conveyed by the utterance to the Addressee, asking for confirmation and eliciting acknowledgement of the propositional content conveyed by the utterance → 'tentative feel'

- paraphrasable as "I say F(p) and you would say F(p) too, wouldn't you?"

- only attributable speech acts can be modified by *¿no?*

  - assertions
  - rhetorical questions (assertive illocutionary force (Asher and Reese, 2007))
  - exclamatives (convey propositions, like assertions)
  - weak commands (analyzed as suggestion or advice, beneficial for the Addressee independently of the given situation)
  - cohortatives (beneficial for both Speaker and Addressee)
  - (certain) commissives: offer, beneficial for the Addressee

  → this approach adopted in this paper

1.4   Aims

- to investigate the prosodic realisation of *¿no?* in various speech act types

- to account for the different prosodic realizations in the light of the pragmatic approaches presented above

- in a nutshell: the prosodic realization varies accross speech act types and is related (i) to the *attributability* of the given speech act (Poschmann, 2008; Kiss, 2018) and (ii) to the type of the base clause

2 The prosodic experiment

2.1 Methodology

Hypotheses to be tested

- the prosodic realization of *¿no?* is not necessarily the same accross speech act types

- even if its pragmatic function is the same (attribution), its complexity depends on the speech act type, ex. assertions are supposed to be more easily attributable than commissives and directives

- expected hierarchy of speech acts w.r.t. attribution:

  Assertions > Rhetorical Questions > Exclamatives > Commissives > Directives

- high boundary tones are associated with openness, incompleteness, doubt or uncertainty, whereas low ones with finality (Pierrehumbert and Hirschberg, 1990; Ladd, 2008; Büring, 2016), it is expected that the speech act types on the top of the hierarchy (exclamatives, commissives, directives) are associated with more rising contours in the realisation of the tag than those at the bottom (assertions and rhetorical questions)

Methodology

- recorded in Cáceres, Extremadura, Spain, March 2019

- 21 speakers (19 female, 2 male)

- native speakers of Extremaduran

- with H5 Handy recorder Zoom

- students enrolled in post-secondary education, with some foreign language skills, mostly English

The recorded material

- 12 mini-dialogues read out in pairs, changing the roles of A and B

- source of the examples: C-ORAL-ROM, questionnaire conducted online by Angelika Kiss (2019), constructed examples

- including the following speech act types

  1. assertives
     - subjective statements
     - factual statments
  2. directives
     - weak imperative (suggestion)
     - warning
  3. commissives
  4. rhetorical questions
  5. exclamatives

Examples

(14) Un amigo te pregunta si puedes ayudarle a editar una página web. Miras la página y le preguntas a tu amigo:

'A friend asks you to help him edit a webpage. You look at the page and ask:' **A: Es como el HTML, ¿no? 'It's like HTML, isn't it?'** B: No exactamente... 'Not exactly... '

(15) Vas a salir de fiesta con una amiga y estáis eligiendo qué poneros. Ella tiene un vestido nuevo que os gusta mucho y le dices:

'You are going to a party with a friend and you are discussing what to put on. She has a dress that you like very much and you say:' **A: Ponte el vestido nuevo para la fiesta, ¿no? 'Put on the new dress for the party, right?'** B: Sí, claro que voy a ponérmelo. 'Yes, of course I will put it on.'

Notes on Extremaduran prosody

Elordieta et al. (2020):

- (*phonetic*) analysis of declaratives, polar and constituent interrogatives in spontaneous speech

- a greater variety of nuclear contours than in Central Castilian Spanish (Estebas-Vilaplana and Prieto, 2010)

    - final contour in declarative sentences: predominantly low L* L%, but also rising (L* H%, L+H* H%, etc.), circumflex (LHL) and falling (H* L%) ($\leftrightarrow$ Central Castilian Spanish: low endings)
    - polar interrogatives: *majority falling* (low, falling, circumflex), but also rising (H* LH%) ($\leftrightarrow$ Central Castilian Spanish: rising endings L* H%)
      $\leftarrow$ influence from Asturian-Leonese or Galician?
    - constituent questions: predominantly rising, but also low, falling, and even circumflex endings ($\leftrightarrow$ Central Castilian Spanish: predominantly L* L%, but also L* H%)

2.2 Phonetic analysis

Phonetic analysis

- carried out in *Praat* (Boersma and Weenink, 2018)

- task for the phonetic analysis: determining the the possible shapes of the curve of the intonation of the tag

- with the help of three pitch values (in Hertz) and the difference between them calculated in semitones (gained automatically from *Praat* with the help of a script)

    - f_{sta}: fundamental frequency at the beginning and
    - f_{end}: at the end of the tag
    - f_{min}: the minimal fundamental frequency within the interval of the tag

    - $s_1 = \frac{12}{ln(2)} ln \frac{f_{min}}{f_{sta}}$ (difference between f_{sta} and f_{min})
    - $s_2 = \frac{12}{ln(2)} ln \frac{f_{end}}{f_{min}}$ (difference between f_{min} and f_{end})
    - $s_s = s_1 + s_2 = \frac{12}{ln(2)} ln \frac{f_{end}}{f_{sta}}$ (sum of the two)

Phonetic analysis: contours identified

| Contour	Semitones	Percentage (100%=273)
Flat	$\|s_1\| \leq 1.5$ and $s_2 \leq 1.5$	11,7
Rising	$s_2 \leq 1.5$	80,5
Falling	$1.5 < \|s_1\|$	7,8

Note: 1.5 semitones = threshold value between flat and rising contours (following, roughly, Navarro Tomás (1974))

2.3 Towards a phonological analysis

Towards a phonological analysis

- majority rising (corresponds to the results of Estebas-Vilaplana and Prieto (2010) on confirmational yes-no tag questions (L* H%) containing *¿eh?*)

- however: falling and flat tags as well (Extremaduran dialect, or pragmatic reasons)

- find out what is contrastive (does the clause type or the speech act type influence the contour of *¿no?*)

- labelling: 4 contrastive tonal levels in sentence final position in Central Castilian Spanish (L%, M%, H%, HH%) (Estebas Vilaplana, 2009) → how many are necessary here?

Boxplot: speech acts and semitones


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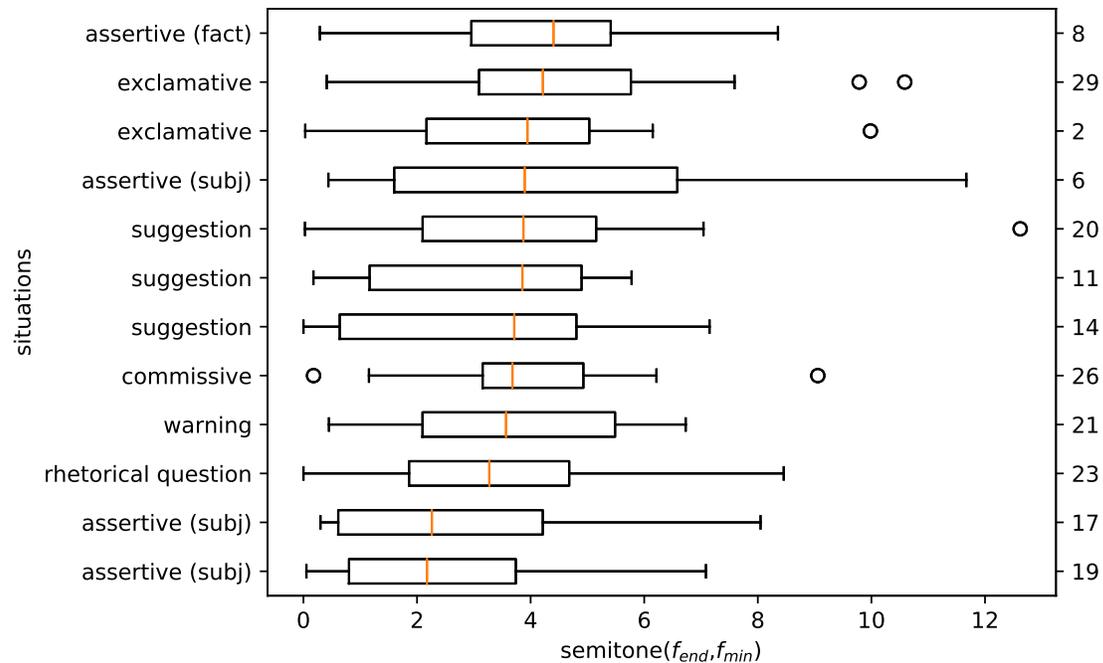
Realizations as a steep rise according to speech act types
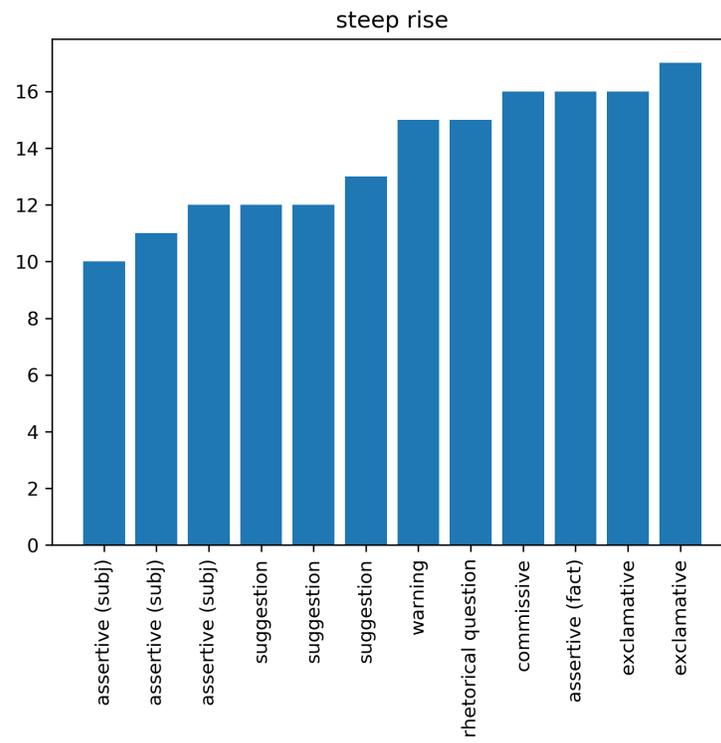
steep rise

Realizations as a light rise according to speech act types
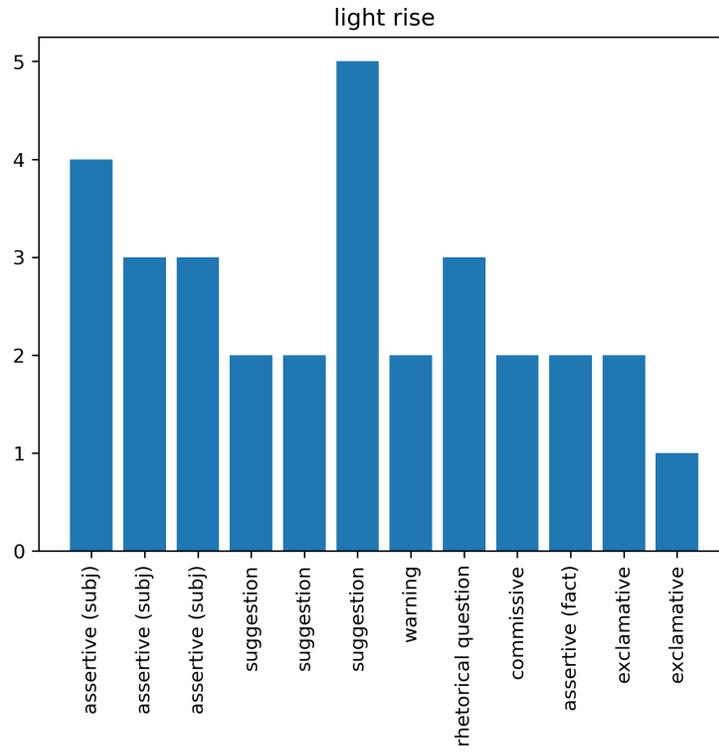
light rise

Realizations as a flat contour according to speech act types
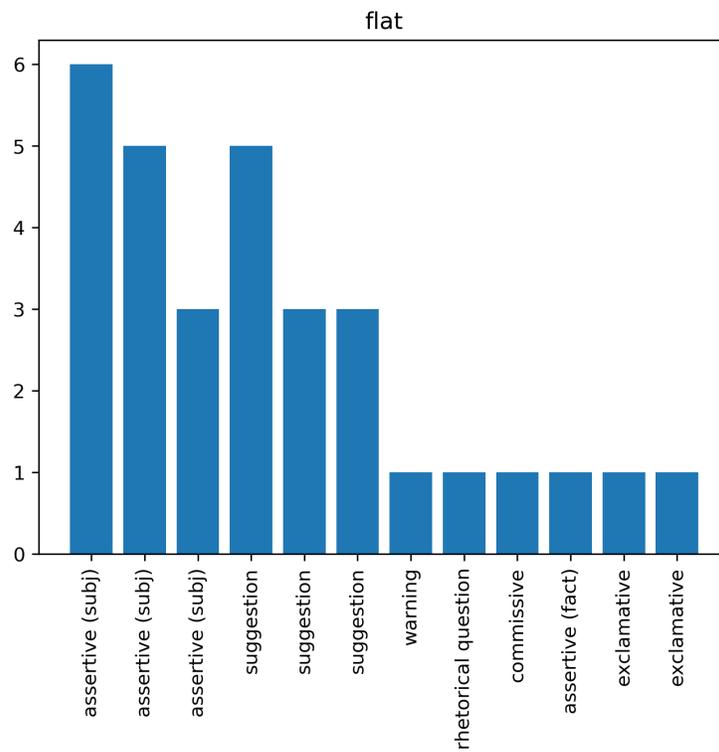
flat

Phonological analysis

- 3 contrastive levels:

  - steep rise (*anticadencia*) (HH%)
  - light rise (*semianticadencia*) (H%)
  - flat (*suspensión*)

- Autosegmental-Metrical model and the ToBI transcription system (Pierrehumbert (1980); Pierrehumbert and Hirschberg (1990); Ladd (2008), a.o., see Estebas-Vilaplana and Prieto (2010) for the Spansih ToBI system)

- tag analysed as a separate ip, comprising a pitch accent, ending in an ip and an IP boundary tone

- general problem: monosyllabic tag, how to identify these tonal events?

Contrastive contours
Proposed labels:

Contour	Semitones	Possible label combinations
Flat	$|s_1| \leq 1.5$ and $s_2 \leq 1.5$	L* L- L%
		H* H- L%
Rising	$1.5 \leq s_2 \leq 3$ (light rise)	L* H- H%
		L* L- H%
		L+H* H- H%
	$3 \leq s_2$ (steep rise)	L* H- HH%
		L* L- HH %
		L+H* H- HH%
Falling	$1.5 < |s_1|$	H+L* L- L%

3 semitones= threshold value between light and steep rise

**Example: assertion (subjective statement)**

Play
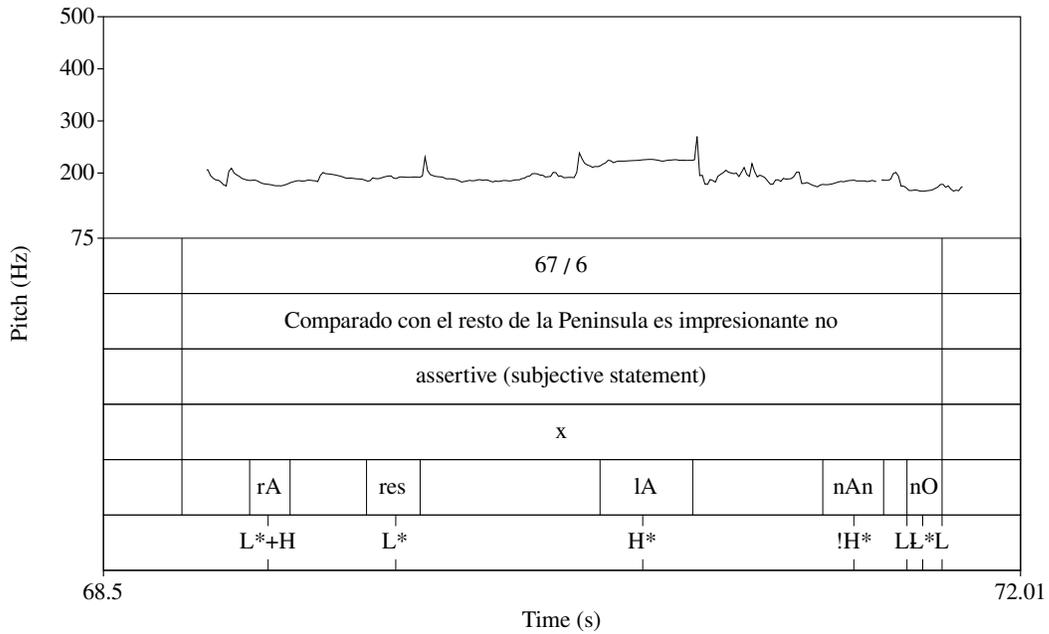
Comparado con el resto de la Península es impresionante, ¿no? pronounced with a rising nuclear contour and flat tag

Example: commissive

Play
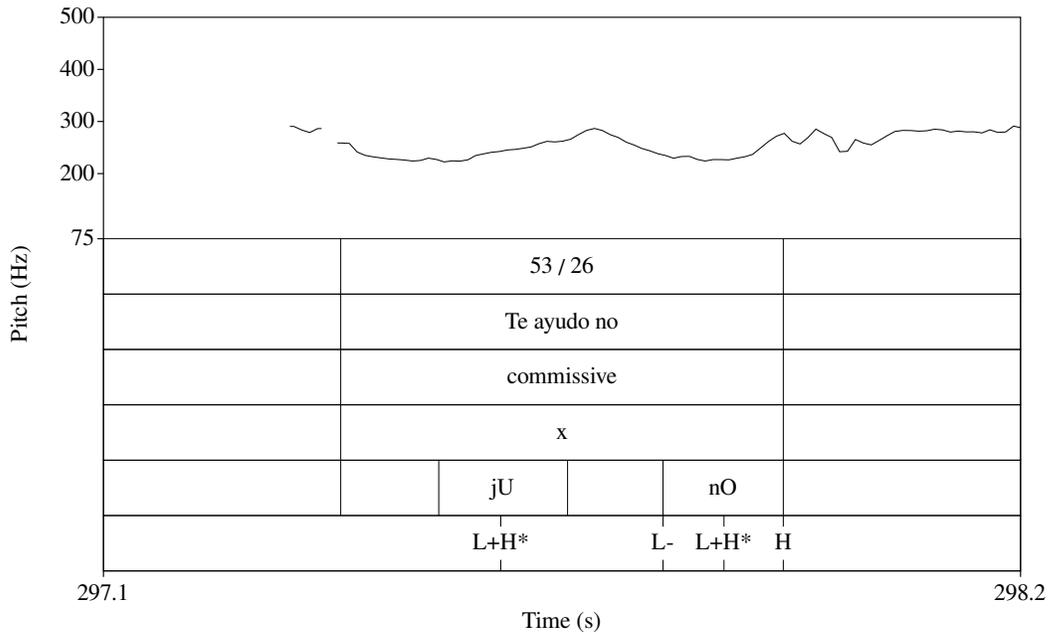
Te ayudo, ¿no? produced with a slightly rising tag

Example: assertion (factual statement)

Play

		43 / 8		
		Es como el HTML no		
		assertive (factual statement)		
		x		
		mE	nO	
		H+L*	H- L* HH	
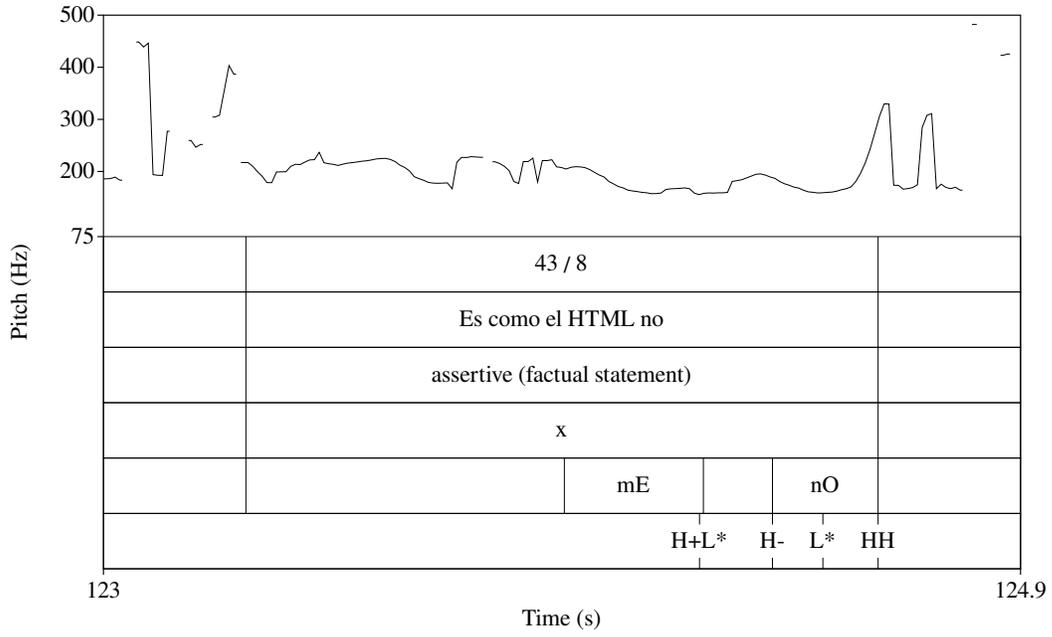
Es como el HTML, ¿no? pronounced with a steep rising tag

Example: rhetorical question

Play
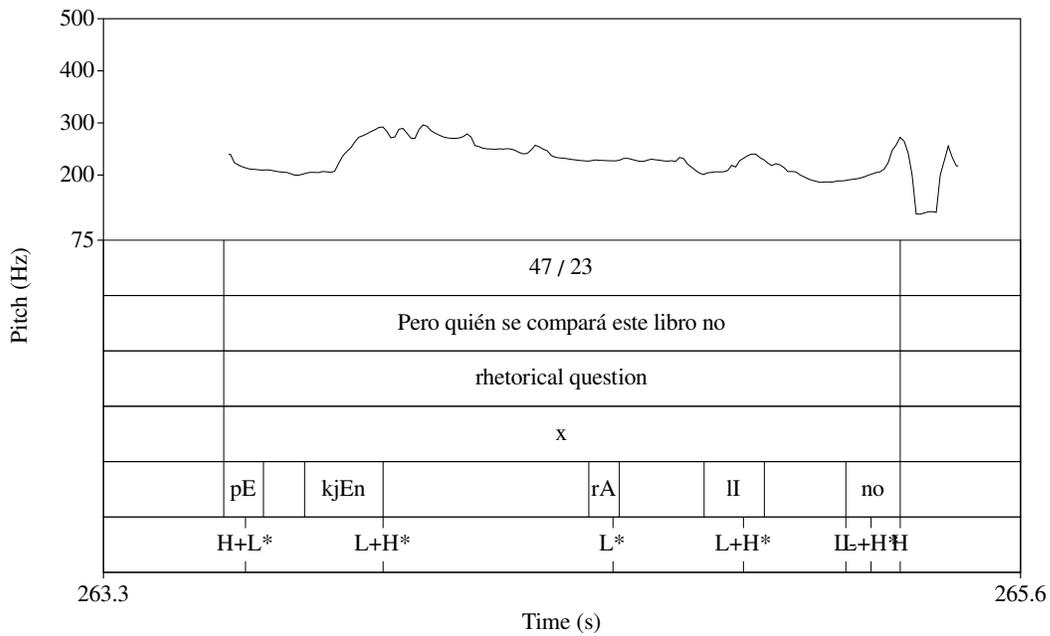
Pero quién se comprará este libro, ¿no? pronounced with a slightly rising tag

Example: directive

Play
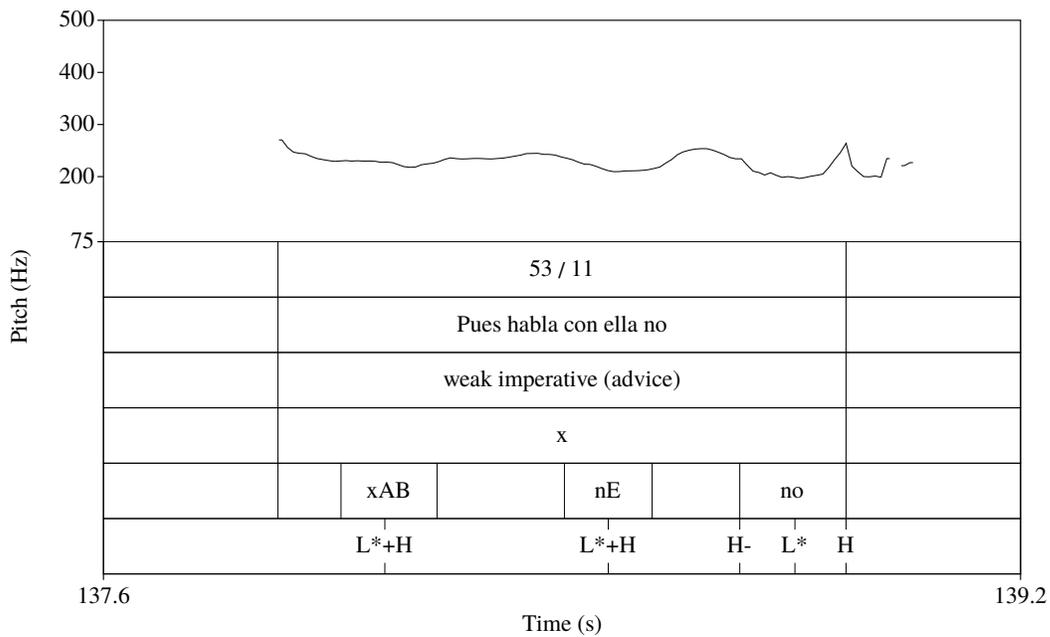
Pues habla con ella, ¿no? produced with a falling-rising tag

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Example: exclamative

Play

		43 / 29		
Cómo ha crecido no			
exclamative			
x			
kO	TI	nO	

500
400
300
200
75

Pitch (Hz)

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

388.2   390.1

Time (s)
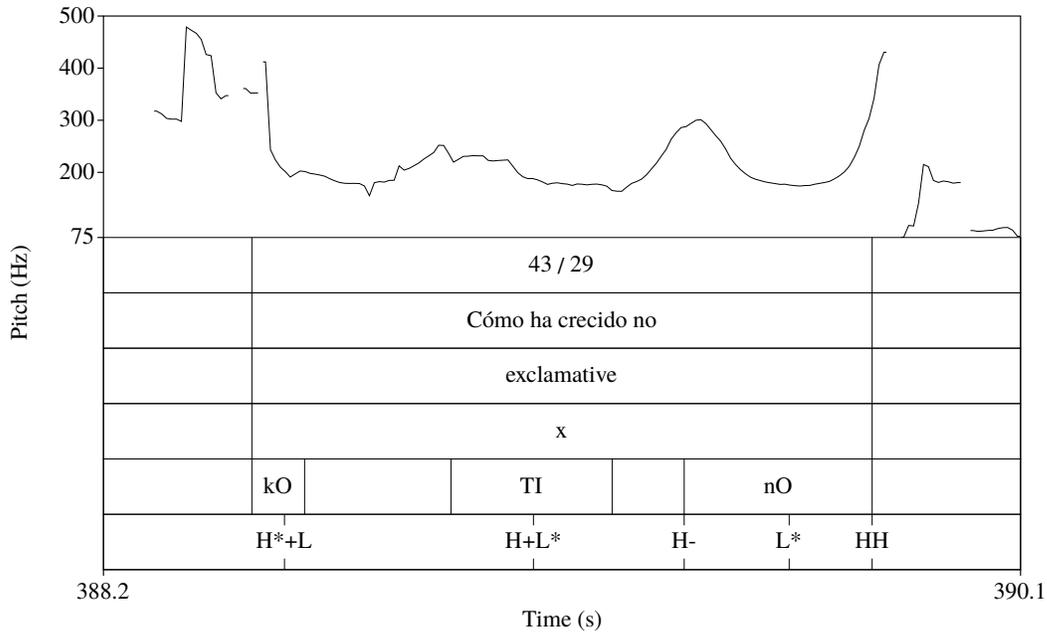
¡Cómo ha crecido!, ¿no? produced with a steep rising tag

3   Results and analysis

Pragmatic aspects

- surprising result: amount of rising contours in exclamatives and assertions conveying factual statements

- assertives (subjective statements) > rhetorical questions > commissives > directives behave as expected

- assertives (factual statements): the Speaker expects confirmation, the question is biased, but the Speaker is not completely committed to the truth of the propositional content, not necessarily attributable

- exclamatives? → the prosody of the base clause also plays a role

Influence of the base clause

- realization influenced by the base clause (nuclear pitch accent and boundary tone) as well (Estebas-Vilaplana and Prieto, 2010)

  - exclamative statements: nuclear accent shows "upstep with respect to the previous f0 peak (L+¡H*)"
  - imperatives (circumflex contour)
    * commands: L+H* M%
    * requests: L* HL%
  - rhetorical questions: !H* M% (in rhetorical wh-qustions)
  - declaratives: L* L%

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4   Conclusions

- prosody of *¿no?*-tags shows more variability than assumed in Estebas-Vilaplana and Prieto (2010) on confirmation questions

- in addition to rising, there are falling and flat tags as well

- influence of the clause type: *¿no?* in declaratives is realized with more flat contours than in imperatives, and especially exclamatives

- pragmatic import: the realization of *¿no?* can reflect the attributability of speech acts (more difficult in directives than in assertives)

- future work: statistical analysis of the role of speech acts

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