

Information seeking vs. rhetorical questions: from gradience to categoricity

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It is well established that declarative sentences, which generally convey an assertion as in (1a), can be used for questioning as in (1b), often labelled as a declarative question. But conversely, interrogative sentences, usually interpreted as information seeking question (ISQ), can convey an assertive content, as illustrated by their use as rhetorical questions (RhQ). See the sentence (3), whose interpretation varies depending on the context in which it occurs ((2a) vs. (2b)). There is already quite a large number of studies that provide an analysis of the prosodic cues that allow turning declarative sentences into questions (a.o. [1], [2], [3], [4]), but there are only few studies on the prosodic cues distinguishing ISQs from a RhQs (see [5], [6], [7] on German, and [8] and [9] on English and Icelandic, all using the same protocol).

Our aim here is to investigate the difference between ISQs and RhQs in French. This is interesting for at least two reasons: (i) there is almost no study on the prosody of rhetorical questions in French ([10]); and (ii) French is a romance language in which the form of questions varies a lot and relatively freely (fronted vs.in-situ wh-question, declarative vs. interrogative polar questions).¹

For the study, the protocol used by Braun and colleagues ([5] to [9]) was reduplicated. We constructed 21 pairs of *wh*- and polar questions, each of them occurring in two contexts: one triggering an ISQ interpretation (2a) for the uttered question (3), and another one constraining the question to be interpreted as a RhQ (2b). Twelve monolingual native speakers of French participated. After a visual display of the context, they had to read aloud the target sentence in a way suitable to the given context.

An acoustic analysis was done in order to evaluate which prosodic features contribute to the interpretation of such interrogative sentences. Four distinct features are taken into account: form of the final contour, speech rate, pitch range (over the whole sentence and over the specifically questioned part, i.e. *wh*-word in *wh*-question), realisation of the *wh*-word or the specifically questioned part in polar question.

Concerning polar questions, preliminary results show that (i) speech rate is always faster in ISQs than in RhQs; (ii) a rising contour H*H% is observed at the end of ISQs in 83% of the cases, whereas three distinct final contours are observed in RhQs; and (iii) pitch range is larger in ISQs than in RhQs in more than 90% of the case. In addition, concerning the specifically questioned part of questions (like *quelqu'un* 'anyone' in (4)), its duration is shorter and its register greater in ISQs than in the corresponding RhQs, despite its non-final position. As for *wh*-questions, the analysis of the data shows that (i) speech rate is always faster except for one speaker; (ii) ISQs end with a rising contour in 80% of the cases, whereas a falling contour (H*L%) or a plateau are observed in RhQs (see fig. 1); (iii) F0 key is higher in ISQs than in RhQs, and pitch range is greater in more than 80% of the cases. Moreover, the *wh*-word is realized at a higher pitch in ISQs than in RhQs, and its duration is shorter in ISQs.

These results clearly show that ISQ and RhQ are realized differently. Note however that the differences are already occurring in the prenuclear domain (see also [11]). In addition, they are often related to gradient phenomena that have been considered as conveying meaning in alternative questions (see [12], difference in pitch register). Even if these results need to be validated against the entire corpus and by a perception experiment, they raise the question of the relationship between gradience and categoricity. Can a sum of gradient phenomena be the source of a categorical judgment? Can a gradient phenomenon convey linguistic meaning?

¹ In French, almost all declarative sentences, with the appropriate prosody, can convey questions. But these questions can only be ordinary (not rhetorical).

- (1a) Il pleut. L% ‘It is raining’ (1b) Il pleut? H% ‘It is raining’
- (2a) Context A triggering an ISQ interpretation:
You want to cook a dish with spinach for dinner. But your son has invited friends, and you don’t know whether they like this vegetable and will eat it or not. You say to the guests:
- (2b) Context B triggering an RhQ interpretation:
In the canteen, for lunch, oven baked spinach dish is proposed. However, you know that nobody likes this disgusting vegetable. You say to your friends:
- (3) Qui mange des épinards? ‘Who eats spinach?’
- (4) Est-ce que quelqu’un mange des épinards ? ‘Does anyone eat spinach?’

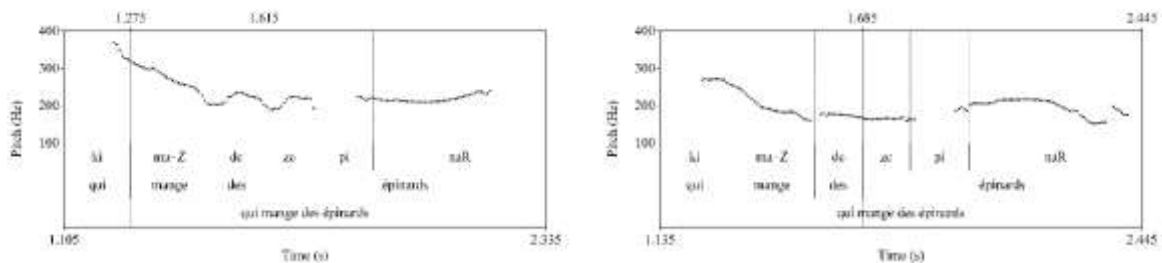


Figure 1: Pitch curve associated with the sentence *Qui mange des épinards* interpreted as a ISQ (left panel) and a RhQ (right panel).

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