

The prosody of Cantonese information-seeking and negative rhetorical *wh*-questions

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Background: This paper reports on the preliminary results of a production experiment investigating the suprasegmental properties of two different types of questions in Cantonese. Most typically, *wh*-interrogatives function as information-seeking questions (ISQs), with the speaker requesting information from the addressee (Krifka, 2011). Rhetorical questions (RQs) differ from ISQs in that, instead of requesting information, RQs strongly suggest a certain answer to the question asked. Negative rhetorical questions (RQ-s) are a subtype of RQs where the answer suggested by the speaker is the empty set. For instance, the question *Who would drink coffee?* can be asked as an ISQ, where the speaker does not prefer any member of the set denoted by the *wh*-word *who*. This question can also be asked as an RQ-, with a reading equivalent to the speaker saying ‘no one would drink coffee’ (Han, 2002).

The findings from previous studies comparing the prosody of ISQs and RQ-s in English, Icelandic, and German lend weight to the claim that ISQs and RQs are prosodically distinct (Banuazizi and Creswell, 1999; Wochner et al., 2015; Dehé et al., 2018; Neitsch et al., 2018). However, to the best of our knowledge, no studies have systematically examined the prosodic distinction between ISQs and RQ-s in tone languages. The current study therefore contributes to this line of research program by extending to a tone language, that is, Cantonese.

Experiment: The original production experiment was designed to investigate a larger set of question types (i.e., positive RQs and RQs-as-retorts, in addition to ISQs and RQ-s) and Cantonese sentence-final particles (i.e., both *aa1* and *aa3*). We created 12 string-identical targets *wh*-questions with the Cantonese *wh*-word *bin1go3* ‘who’ that are ambiguous between rhetorical and information-seeking readings (e.g., *Jau5 bin1go3 soeng2 jam2 gaalfeil aa1?* ‘Who wants to drink coffee?’). The sentences were embedded in contexts that favor different readings, and participants were tasked to read these sentences exactly as written and as naturally as possible after listening to the context.

Preliminary results: The results from 15 participants reported here focus on the contrast between ISQs and RQ-s, as summarized in Figure 1. As can be seen, RQ-s are different from ISQs in Cantonese by having an overall lower F0 stretch and longer utterance duration, with the latter finding mirroring the pattern found for German (Wochner et al., 2015). While we are currently analyzing the data for other question types, it should be clear that prosody helps to distinguish between ISQs and RQ-s in Cantonese.

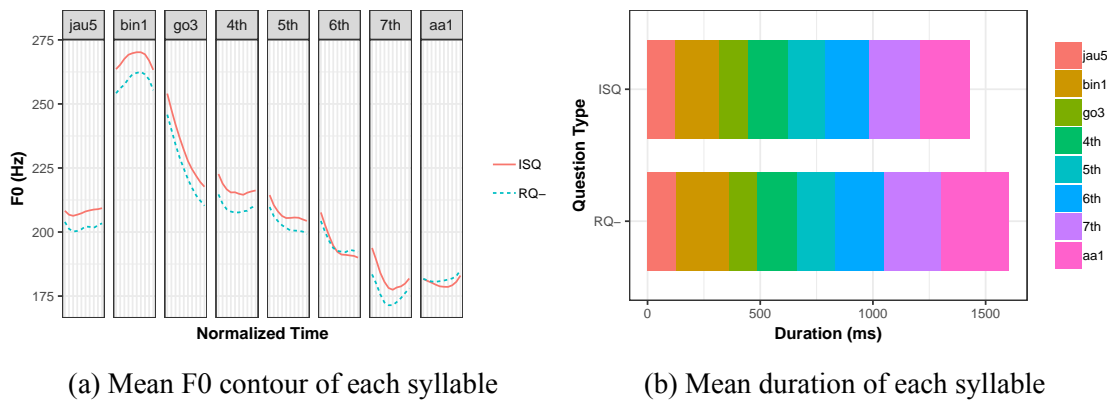


Figure 1: Prosodic measurements of information-seeking questions (ISQs) and negative rhetorical questions (RQ-s) in Cantonese

References

- Banuazizi, Atissa, and Cassandre Creswell. 1999. Is that a real question? Final rises, final falls and discourse function in *yes-no* question intonation. In *Proceedings of CLS 35*, 1–14. Chicago, IL.
- Caponigro, Ivano, and Jon Sprouse. 2007. Rhetorical questions as questions. In *Proceedings of Sinn und Bedeutung 11*, 121–133. Barcelona.
- Dehé, Nicole. 2018a. The intonation of polar questions in North American (“heritage”) Icelandic. *Journal of Germanic Linguistics* 30:213–259.
- Dehé, Nicole. 2018b. The prosody of rhetorical questions. In *Proceedings of NELS 48*, 173–192. Reykjavík.
- Dehé, Nicole, Bettina Braun, and Daniela Wochner. 2018. The prosody of rhetorical vs. information-seeking questions in Icelandic. In *Proceedings the 9th International Conference on Speech Prosody 2018*, 403–407. Poznań.
- Han, Chung-Hye. 2002. Interpreting interrogatives as rhetorical questions. *Lingua* 112:201–229.
- Krifka, Manfred. 2011. Questions. In *Semantics: An international handbook of natural language meaning*, ed. Claudia Maienborn, Klaus von Heusinger, and Paul H. Portner, volume 1, 1742–1785. Berlin: De Gruyter Mouton.
- Neitsch, Jana, Bettina Braun, and Nicole Dehé. 2018. The role of prosody for the interpretation of rhetorical questions in German. In *Proceedings the 9th International Conference on Speech Prosody 2018*, 192–196. Poznań.
- Pierrehumbert, Janet, and Julia Hirschberg. 1990. The meaning of intonational contours in discourse. In *Intentions in communication*, ed. Philip R. Cohen, Jerry Morgan, and Martha E. Pollack, 271–312. Cambridge, MA: MIT Press.
- Rohde, Hannah. 2006. Rhetorical questions as redundant interrogatives. *San Diego Linguistics Papers* 2:134–168.
- Schaffer, Deborah. 2005. Can rhetorical questions function as retorts? Is the Pope Catholic? *Journal of Pragmatics* 37:433–460.
- Wochner, Daniela, Jana Schlegel, Nicole Dehé, and Bettina Braun. 2015. The prosodic marking of rhetorical questions in German. In *Interspeech 2015: 16th Annual Conference of the International Speech Communication Association*, 987–991. Dresden.