

The prosody of rhetorical questions

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The aim of this paper is to investigate the cues people need to understand, produce and interpret rhetorical questions and to explore the phonological and phonetic parameters in communicative situations. We address the question of whether or not pitch (e.g. the nuclear contour) and the context are important and reliable cues for the understanding and correct interpretation of rhetorical questions.

In order to test these assumptions about the roles of pitch and context, we investigated two parameters that help the reader to interpret rhetorical questions: the pitch contour and the context of the target utterance in the discourse. To explore a possible interaction of these parameters and whether one is more important than the other, we designed two experiments: A web-based experiment testing the role of context and a perception study addressing the role of the pitch contour while at the same time controlling for context. In particular, we were interested in whether rhetorical questions come with a specific pitch contour unique to this sentence type, or whether any non-canonical pitch contour will help the listener to interpret a question as being rhetorical. In this context, the nuclear contour is of special interest since it includes information about the sentence mood.

Identical interrogative polar and wh-sentences were embedded in semantically formal contexts that provide either a rhetorical or an information-seeking interpretation. In a web-based experiment 132 participants were asked to judge the contexts with respect to their interpretation (rhetorical vs. information-seeking).

In a subsequent step a production study based on the stimuli of the web-based study was designed. Naïve participants attended the experiment pairwise producing the contexts in a communicative situation as addressee and speaker. Both were presented with matching but slightly modified context situations on computer screens. The sessions were recorded and analyzed according to phonological and phonetic parameters following the guidelines of GToBI (Grice et al. 2005).

In a further step the contour of the target interrogative will be manipulated in such a way that it vertically mirrored the original contour causing a non-canonical contour. To ensure that participants perceive natural sounding speech data, a trained speaker will reproduce the manipulated interrogatives in the respective contexts. Participants then will be asked to judge whether the target interrogatives fit the contexts or not.

Our study shows that context is an essential factor for the interpretation of rhetorical questions not only while reading but also while listening. Additionally, we claim that the role of pitch is subordinated to context, which leads to further experiments concerning the relevance of other parameters such as duration, prenuclear features, and pitch range.

(1)

	Information-seeking question	Rhetorical question
Situation:	Der Sprecher sieht den Hausmeister der örtlichen Grundschule zum wiederholten Male in den Beeten des Adressaten arbeiten. Der Sprecher weiß nicht, aus welchem Grund der Hausmeister im Garten des Adressaten arbeitet.	Der Sprecher beobachtet, wie ein betagter Herr im Garten des Adressaten arbeitet. Es ist bekannt, dass es sich hierbei um den Vater des Adressaten handelt, nicht aber um seinen Gärtner.
Speaker:	Ist er denn dein Gärtner? Ich dachte, er arbeitet nur als Hausmeister.	Ist er denn dein Gärtner? Kümmere dich doch selbst um deine Beete.
Outline (Addressee):	Der Sprecher beobachtet einen Mann, der im Garten des Adressaten in den Beeten arbeitet.	Der Sprecher beobachtet, wie der Vater des Adressaten im Garten arbeitet.
Answer A	Ja, ich habe ihn für dieses Jahr angestellt.	Ach was, der macht das gerne.
Answer B	Sonst würde er wohl nicht im Garten arbeiten.	Ja, er ist seit einem Jahr mein Gärtner.
Situation:	The speaker notices yet again the caretaker of the local elementary school doing the gardening around the addressee's house. The speaker does not know what this is all about.	The speaker notices an elderly man doing the gardening in addressee's garden. It is known that the man is the addressee's father, but not his gardener.
Speaker:	Is he your gardener? I thought he works as a caretaker.	Is he your gardener? You should do the gardening yourself.
Outline (Addressee):	The speaker notices an elderly man doing the gardening in addressee's garden.	The speaker notices an elderly man doing the gardening in addressee's garden.
Answer A	Yes, I hired him for this year.	Well actually, he enjoys doing it.
Answer B	Well, otherwise he would't be working in the garden.	Yes, he works as my gardener for the last year.

References:

Grice, M., et al. (2005). German Intonation in Autosegmental-Metrical Phonology. *Prosodic Typology*, OUP