The Prosody of Evidentiality in Japanese: A rating study
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The correlation between Information Structure and prosody has been central in theoretical and experimental studies. In particular, many studies have shown that focus induces particular prosodic patterns cross-linguistically. In Japanese, for instance, linguistic materials after a focused element are deaccented (called ‘Post-focus reduction’ in Ishihara 2003; see also Tomioka 2009). Our study identifies a similar yet distinct kind of deaccentuation which can be regarded as a reflection of another semantic-pragmatic phenomenon, evidentiality.

**DEACCENTUATION IN A BIASED QUESTION:** In Japanese, rising negative questions like (1) express bias meanings which parallel English preposed negative questions (Romero & Han, 2004). That is, the question accompanies an implicature that the speaker has a bias toward the positive answer (‘Tortoise jellies taste disgusting’). The rising intonation for this construction has two variants. In (1a), the lexical accent of *mazuku* (H*+L) is retained. In (1b), the lexical accent is deleted (i.e., deaccented).

(1) kame zerii mazuku nai?
tortoise jelly distasteful NEG
‘Don’t tortoise jellies taste disgusting?’
a. mazu’ku nai↑
L%H*+L L%H%
b. mazuku nai↑%
%LH- H%

An introspection-based data suggests that the deaccented question (1b) expresses a stronger degree of bias than the one with accents (1a). That is, deaccentuation requires a context where the speaker has direct evidence which supports the positive answer. To confirm this observation objectively (see Schütze 1996), we conducted an experiment to test the hypothesis that evidentiality affects the choice of the intonational patterns. We argue that deaccentuation has gained a grammaticalized status as a marker of direct evidentiality (*DIREVID*).

**METHOD:** The experiment was a naturalness rating study. The stimuli had two fully-crossed factors—accentedness and evidentiality—which resulted in four conditions. Each stimulus consisted of a context, which distinguished evidentiality, as exemplified in (2a) and (2b). Each context was followed by a target sentence either with an accented or a deaccented predicate. Each condition had 16 items. 64 fillers were included. A native speaker of Japanese pronounced the stimuli at a sound-attenuated room. An assessment management software, Perception, was used for the rating study. The order of the stimuli was pseudo-randomized. No minimal pair sentences appeared next to each other.

(2) a. Direct Evidence Context: A had recently tasted a tortoise jelly and didn’t like it very much. B told A that B also tried one before. A asked B,...

   b. No Direct Evidence Context: B took a tourist A to a restaurant in Hong Kong and ordered tortoise jellies. A has never eaten one and asked B before trying,...

Fourteen native speakers of Japanese, all recruited from the University of Tokyo, participated in the rating experiment. The participants rated the naturalness of the target sentences on a 1-to-5 scale. To analyze the results, a general linear mixed model was run in which accentedness and evidentiality were the fixed factors and speakers and items were the random factors. If accentuation of the predicate depends on the evidentiality of the context, then the dependency was expected to result in a significant interaction between accentedness and evidentiality.

**RESULTS:** Figure 1 shows the average naturalness ratings in each condition. In the contexts with direct evidence, the speakers judged the predicates without accents more natural. On the other hand, in the contexts
without direct evidence, the speakers judged the predicates with accents more natural. Because of this asymmetry, the interaction between accentedness and evidentiality was significant in the linear mixed model analysis ($t = -24.5, p < .001$).

**Discussion:** The result shows that deaccentuation marks the embedded proposition (i.e., the positive answer) as DIREVID. Hence, deaccentuation is discouraged in no direct evidence contexts like (2b). In direct evidence contexts like (2a), in contrast, DIREVID-marking is encouraged. Then a question that arises is: Why does a DIREVID-marked question allows us to ask about something already directly-evidenced? The answer is that a DIREVID-marked question is not an information-seeking question but rather a meta-question about the discourse states. Barker (2009) proposes that an English clarity assertion *It is clear that p*, which appears to be uninformative, is actually a meta-assertion about the discourse states; hence it translates as ‘The publicly available evidence justifies concluding that p’. Similarly, a DIREVID-marked question *p-nai?* expresses an uncertainty about the sufficiency of the evidence available in the discourse, ‘Is the evidence strong enough to conclude that p?’ Indeed, it is observed that the Japanese deaccented question has a “seeking for agreement” function (Wakuda, 2003).

**Conclusion:** Deaccentuation marks an embedded proposition in a biased question as DIREVID, and the utterance results in a meta-question about the discourse states. Our experimentation thus shows that intonation can mark evidentiality as well as focus structures.

![Figure 1: Average Naturalness Ratings](image)

Word Count: 748

**References**


