

# Deaccenting, MAXIMIZE PRESUPPOSITION and Evidential Scale

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## Abstract

Some studies have assumed that prosodic patterns of sentences are exclusively determined by the rules of accented expressions, with deaccenting of non-focused elements playing little or no role [1, 2]. However, many researchers have also recognized the importance of deaccenting rules [3, 4, 5, 6, 7]. This paper documents two intonational patterns of Japanese biased questions, "Rise with Accents" and "Rise with Deaccentuation", used by young speakers of the Tokyo dialect for Japanese biased questions. We argue that Japanese data furthers the deaccenting-as-rule view. Specifically, deaccentuation in biased questions has recently gained a grammaticalized status, and now gives rise to a Givenness presupposition. Moreover, the presuppositions of Bias and Givenness form a scale, i.e., Given  $\subset$  Bias, which interacts with MAXIMIZE PRESUPPOSITION [8]. Our proposal also naturally extends to the evidential hierarchy proposed in the literature.

## 1. Two Intonations

In Japanese, rising negative questions express bias meanings which parallel English tag questions or preposed negative questions as in (1-b). This paper documents two intonational patterns used by young speakers of the Tokyo dialect. In (1-b-i), the lexical accent of *aoku* (H\*+L) is retained, and it is accompanied with a sentence-final intonation rise: we call this intonation "Rise with Accents" (RwA; Figure 1). Rise with Accents has been used by all speakers of the Tokyo dialect. On the other hand in (1-b-ii), the lexical accent of the predicate *aoku* is deleted while keeping the intonational rise: we call this intonation "Rise with Deaccentuation" (RwD; Figure 2).<sup>1</sup> Rise with Deaccentuation is a new prosodic pattern used by young speakers of the Tokyo dialect.

- (1) a. Context: Both the speaker and the addressee stand in front of the beautiful sea.

<sup>1</sup>The intonation sample contours were uttered by the second author, although we have also documented the same patterns in spontaneous utterances as well. In this paper, we indicate the lexical accent with an apostrophe (').

- b. Ano umi aoku nai?  
that sea blue NEG  
'That sea is blue, isn't it?'/ 'Isn't that sea blue?'  
(i) Ano umi ao'ku nai↑  
L%H\*+L L%H%  
(Rise with Accents)  
(ii) Ano umi aoku nai↑  
%LH- H%  
(Rise with Deaccentuation)

Rise with Accents and Rise with Deaccentuation are not completely interchangeable. Specifically, the distribution of Rise with Deaccentuation is more specialized with respect to context types. Both the Rise with Accents (1-b-i) and the Rise with Deaccentuation (1-b-ii) can be used when both the speaker and the addressee are acknowledging the blueness of the sea. However, Rise with Deaccentuation is infelicitous when there is still room for doubt, i.e., when the speaker is not sure whether the truth of the positive answer is believed by the addressee as in (2).

- (2) Context: B has just won a lottery. A has never won a lottery in her life.  
A: takarakuji atat tara ureshiku nai?  
lottery won COMP happy NEG  
'Aren't you happy, since you won a lottery?'  
(i) ✓ ureshi'ku nai↑ (RwA)  
(ii) #ureshiku nai↑ (RwD)

Furthermore, Rise with Deaccentuation expresses a variety of stronger emotive contents compared to Rise with Accents, although what kind of emotive content actually arises depends on the context. For example, (1-b-ii) is understood as an exclamation (e.g., 'and it's amazing how blue it is'). (3-b) uttered with deaccentuation is likely to be perceived as a complaint.<sup>2</sup>

<sup>2</sup>Although we are not in a position to make a claim about English biased questions, we note in passing that the preposed negative question uttered with Falling intonation seem to convey similar emotive effects (originally pointed out by Maribel Romero, p.c.).

- (i) a. (Oh dear,) Isn't it cold here.↓

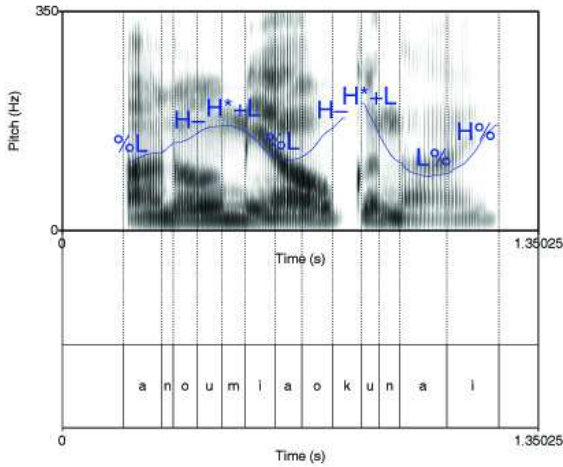


Figure 1: Rise with Accents

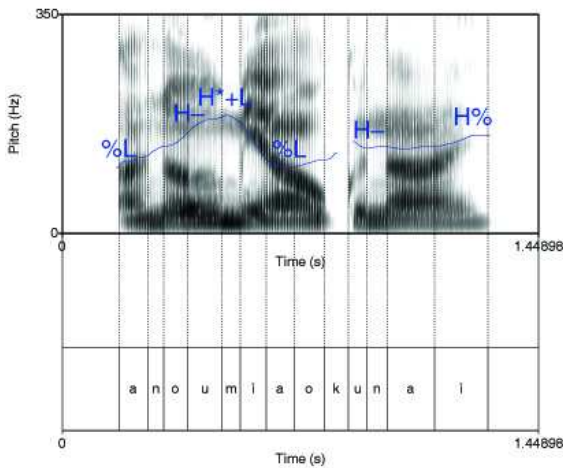


Figure 2: Rise with Deaccentuation

- (3) a. Context: both the speaker and the addressee are in a cold room.  
 b. koko samuku nai?  
 here cold NEG  
 ‘It’s cold here, isn’t it?’/‘Isn’t it cold here?’  
 (‘it sucks that it’s cold here’)

## 2. Goals

The main purpose of this paper is to answer the following questions: 1. why does Rise with Deaccentuation express emotive content? 2. why does Rise with Accents have a wider distribution than Rise with Deaccentuation?

In this paper, we argue that deaccentuation is a lexicalized phenomenon. First, we summarize our assumption

- b. (Ah,) Isn’t this sea beautiful↓

tions about biased questions (Section 3) and background issues about deaccenting and information structure (Section 4). Second, we claim that deaccentuation gives rise to a Givenness presupposition (Section 5). Third, we show that this Givenness presupposition and the Bias presupposition forms a scale (Given  $\subset$  Bias). Accordingly, the choice between two intonational patterns is subject to MAXIMIZE PRESUPPOSITION [8]. Our proposal accounts for the distributional asymmetry between Rise with Accents and Rise with Deaccentuation (Section 6). Finally, we extend our analysis to the evidential scale proposed in the literature (Section 7).

## 3. Biased Questions

Before going into the analysis, a note on biased questions is in order. Regardless of presence/absence of deaccentuation, rising negative questions in Japanese have a positive epistemic bias. A preposed negation question in English like (4) necessarily carries an epistemic interpretation that the speaker believed or at least expected that the positive answer is correct [9, 10].

- (4) Isn’t Jane coming too? [9]

Japanese negative yes-no question patterns the same as the English preposed negative question [11]. We assume that regardless of the presence/absence of deaccentuation, question of the form *p-nai?* (e.g. (1-b), (2-i) and (3-b)) gives rise to the following Bias presupposition (5). In terms of the Lewisian subjective probability [12], the speaker’s degree of belief is at least above chance ( $C$  is a credence function that maps a proposition  $p$  to  $A$ ’s degree of belief in  $p$  in context  $c$ ).

- (5) The presupposition of *p-nai?*:  
 The speaker has a Bias toward  $p$ . ( $C_{A,c}(p) > .5$ )

## 4. Deaccenting in Information Structure

There is an ongoing discussion on what determines the placement of sentence accent. It has often been assumed that the rules of accenting expressions in focus govern the prosodic patterns of sentences [1, 2]. In this view, deaccenting of the non-focused materials are considered to be an epiphenomenon. However, many researchers have also recognized the importance of deaccenting rules [3, 4, 5, 6, 7]. In particular, in English, Given materials in the discourse are deaccented (see [4] and [6]).

The Japanese data in section 1 furthers the deaccenting-as-rule view since deaccentuation has a grammaticalized status. In the following, we argue that in a certain context (e.g. biased questions), deaccentuation of the main predicate carries a lexical presupposition that the expressed proposition is already Given in the common ground.

Furthermore, this presupposition triggered by the deaccentuation competes with the one which comes with the

non-deaccented counterpart. As a result, by employing the notion of MAXIMIZE PRESUPPOSITION, we can account for the asymmetric distribution between Rise with Accents and Rise with Deaccentuation.

## 5. Lexical Intonation Meaning

As observed in section 1, Rise with Deaccentuation has stronger restriction on its distribution than Rise with Accents, i.e., it is licit only when the biased proposition is already a common belief [13]. Hence, we define the presupposition of *p-nai?* with deaccentuation as follows:

- (6) The presupposition of *p-nai?* with Deaccentuation:  
 p is already Given in the common ground. ( $C_{A,c}=1$ )

If p is already in the common ground, it follows that both of the interlocutors fully believe p ( $C_{A,c}=1$ ). We argue that this Givenness presupposition (6) and the Bias presupposition (5) form a scale,  $\text{Given} \subset \text{Bias}$ . i.e., if p is Given, it is entailed that p is Biased.

By defining the lexical meaning of deaccentuation, we can account for why Rise with Deaccentuation induces emotive meanings. The emotive contents arise as a flouting of the maxim of Quantity [14]. In principle, tautologies like *War is war* and *Either John will come or he won't* are uninformative, yet they can have some communicative import. The actual inferences depend on their pragmatic implications (see [15]). Similarly, when the speaker asks a question with deaccentuation as in (1-b) and (3-b), the speaker is inquiring something which is already in the common ground. That is, the speaker is asking a superfluous question; hence the speaker is flouting the maxim of Quantity to convey some implicatures out of a number of possible ones (e.g. surprise, complaint etc.).

## 6. Asymmetry of Distribution and MAXIMIZE PRESUPPOSITION

If one assumes accenting (rather than deaccenting) as a central rule in the grammar, it is plausible to posit a presupposition of non-deaccented *p-nai?* (i.e., Rise with Accents).

- (7) The presupposition of *p-nai?* with Rise with Accents (tentative):  
 There is a room for doubt in adding p to the common ground. ( $C_{A,c}<1$ )

However, the definition in (7) makes a wrong prediction for (1-b), since Rise with Accents can be used when it is clear from the context that the truth of the embedded proposition is shared among the interlocutors. Instead, we propose that Rise with Accents carries no presupposition with respect to Givenness and make use of Heim's

[8] constraint, MAXIMIZE PRESUPPOSITION.

- (8) MAXIMIZE PRESUPPOSITION:  
 Use the strongest presupposition that is satisfied.  
 (adapted from Heim [8] and Sauerland [16])<sup>3</sup>

In (1-b), both Rise with Accents and Rise with Deaccentuation are questioning the proposition 'that sea is blue'; hence they have the same semantic content. Among these competitors, MAXIMIZE PRESUPPOSITION selects the form that carries the strongest presupposition compatible with the context. Now, the presuppositions of Rise with Deaccentuation (i.e., (5) and (6)) are stronger than that of Rise with Accents (i.e., (5) only). Namely, it forms a scale in terms of Lewisian subjective probability,  $\text{Given} \subset \text{Bias}$ . Hence, if the context is such that the proposition 'that sea is blue' is already given in the common ground, the use of Rise with Deaccentuation blocks the use of Rise with Accents. Accordingly, the use of Rise with Accents triggers *implicated presupposition* [16] that 'it is not presupposed that p is already in the common ground'. This implicated presupposition is defeasible. Therefore, Rise with Accents can be used even when the embedded proposition p of *p-nai?* seems to be already in the common ground as in (1-b). Hence, Rise with Accents exhibits a broader distribution than Rise with Deaccentuation.

## 7. Further Consequence: Evidential Scale

The scale associated with the Givenness/Bias presuppositions explains evidential effects observed for this construction. Rise with Deaccentuation is not compatible with inference derived from indirect evidence (9), nor from hearsay evidence (10), whereas Rise with Accents can be used in both contexts. Rise with Deaccentuation is licit only when the speaker has direct (sensory) evidence as in (1-b) and (3-b).<sup>4</sup>

- (9) a. Indirect Evidence Context: Yao Ming is a huge guy. I've never seen his son, but, guessing from Yao Ming's height, ...  
 b. Yao-Ming-no musuko tte **ookiku nai**  
 Yao.Ming-GEN son TOP big NEG

<sup>3</sup>In Sauerland's [16] exposition of MAXIMIZE PRESUPPOSITION [8], the constraint is stated as "[u]se the most informative presupposition that is satisfied." (p. 1). In the current case, however, the informativity is not appropriate since Given material is not informative as noted in Section 5.

<sup>4</sup>The distributional difference between the Rise with Accents and the Rise with Deaccentuation seem to parallel the difference between the Rising tag-question and the Falling tag-question in English. For example, if the speaker has never been to Canada, a tag question with Falling accent (i-b) is inappropriate (Chris Potts, p.c.). Again, we are not ready to give a formal analysis of the difference between these intonations.

- (i) a. Canada is cold, isn't it↑  
 b. Canada is cold, isn't it↓

‘Yao Ming’s son is big, isn’t he?’

(i) ✓ ooki’ku nai↑ (RwA)

(ii) #ookiku nai↑ (RwD)

- (10) a. Hearsay Evidence Context: The speaker has never been to Canada, but she heard that it’s cold over there.
- b. kanada tte **samuku nai**  
Canada TOP cold NEG  
‘Canada is cold, isn’t it?’  
(i) ✓ samu’ku nai↑ (RwA)  
(ii) #samuku nai↑ (RwD)

As defined in (5), in uttering *p-nai?*, it is presupposed that the speaker has a bias toward *p*, which implies that the speaker has at least some kind of (possibly weak) evidence for *p*. As for *p-nai?* with deaccentuation, the scale proposed above specifies a stronger presupposition (i.e., higher on the scale), resulting in direct evidentiality. Indeed, in the literature of evidentiality [17, 18], direct evidence is placed higher on the scale than indirect evidence and hearsay evidence. The Japanese data confirms this scale.

- (11) Direct Evidence  $\subset$  (generic) Evidence.  
(Adapted from [17])

## 8. Summary

This paper has documented and analyzed a new intonational pattern in Japanese. We have argued that deaccentuation in a biased question is grammaticalized. That is, when the predicate in the rising negative question is deaccented, the sentence presupposes that the positive proposition is already Given (*p* is a common belief). We show that in this construction, various emotive contents are induced as flouting of the maxim of Quantity. By using the notion of MAXIMIZE PRESUPPOSITION [8], we account for the asymmetry in the distribution of Rise with Deaccentuation and Rise with Accents.. Finally, the presuppositional scale determined for Givenness further supports the scale which has been proposed for evidentiality.

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