

Two Prosodic Ways to Convey Positive Epistemic Bias

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1 Introduction

It has been observed that negative polar questions (henceforth, NPQs) often convey the speaker's epistemic bias toward a specific answer and that the bias could be either positive or negative (Ladd 1981, Büring and Gunlogson 2000, Huddleston and Pullum 2002, Romero and Han 2004, among others).

- (1) Ann: I'm taking a bus to Boston today.
Bill: a. Oh, really. Don't you like driving? (negative epistemic bias)
b. But, don't you like driving? (positive epistemic bias)

Also, English NPQs with non-preposed negation (i.e. negation in the pre-verbal position) do not necessarily convey the speaker's epistemic bias and have the "neutral" interpretation. In contrast, the surface position of negation is fixed in Japanese, and the polarity/presence of the speaker's epistemic bias is marked by the prosody instead. This squib argues that Japanese NPQs use not only deaccenting but also post-focus tonal compression to carry the speaker's positive epistemic bias (cf. previous work such as Ito and Oshima 2016), showing a set of new data.

Next section briefly summarizes previous work on English NPQs. Section 3 shows some similarities and differences between English NPQs and Japanese NPQs, based on Ito (2015) and Ito and Oshima (2016). In Section 4, a set of new data is given concerning P-type NPQs (mentioned in Section 3) with a simple verb predicate, demonstrating that Japanese NPQs have a dual system for distinguishing the polarity of the speaker's positive epistemic bias.

2 Previous Work on English Negative Polar Questions

Ladd (1981) observes a systematic ambiguity in English NPQs, between what he calls "inside NEG" questions like (1a) and "outside NEG" questions like (1b) (henceforth, INPQs and ONPQs respectively). Ladd says, "the negation is inside the proposition [in INPQs], so that what is being questioned is the inference $\neg p$ " and that "the negation is somehow outside the proposition under question [in ONPQs] – what is being questioned is the speaker's belief p ". Büring and Gunlogson (2000) put it in another way: " p is expected, and the speaker wants confirmation for the inference that $\neg p$ " in INPQs and "the speaker believes that p and wants confirmation for p " in ONPQs. For example, in (1a), though Bill used to believe/expect the proposition *Ann likes driving*, the discourse makes Bill infer *Ann doesn't like driving*, and hence Bill wants confirmation for the inference. Furthermore, Romero and Han (2004) observe that non-preposing of negation allows the neutral interpretation, as shown in (2).

- (2) Situation: The speaker is organizing a party and she is in charge of supplying all the non-alcoholic beverages for teetotalers. The speaker is going through a list of people that are invited. She has no previous belief or expectation about their drinking habits.
A: Jane and Mary do not drink.
S: a. OK. What about John? Does he not drink? (non-preposed negation)
b. # OK. What about John? Doesn't he drink? (preposed negation)
(Romero and Han 2004: 610)

Example (2) demonstrates that while NPQs with preposed negation obligatorily convey the speaker's epistemic bias, those with non-preposed negation do not.

3 Japanese Negative Polar Questions

In contrast with English NPQs, Japanese NPQs have two distinct patterns of prosodic realization which signal the presence (and/or polarity) of the speaker's epistemic bias (Ito 2015, Ito and Oshima 2016). In one prosodic

realization called P-type (positive type), the negative morpheme *-na'i* lacks an F0 fall.¹ In other words, it is deaccented. The left contour of Figure 1 is an example of P-type. P-type often conveys the speaker's positive epistemic bias just as English ONPQs do. The other prosodic realization is called NN-type (negative/neutral type). NN-type differs from P-type with respect to the point that the negative morpheme *-na'i* has an F0 fall – that is, its lexical accent is retained. The right contour of Figure 1 is an example of NN-type. NN-type often conveys the speaker's negative epistemic bias just as English INPQs do. Also, it allows the “neutral” interpretation, just like English NPQs with non-preposed negation.

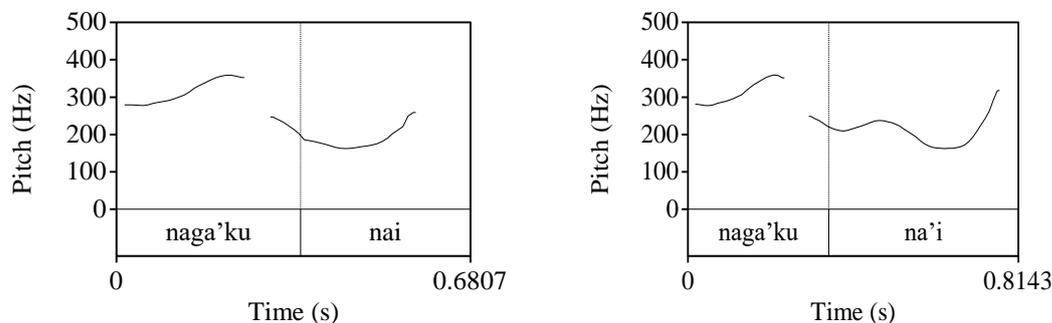


Figure 1: F0 contours of *nagaku-nai?* ('Isn't it long?') (Hwang and Ito 2014: Figure 1)

For example, while P-type NPQ *naga'ku-nai?* is acceptable in context (3), it is unacceptable in (4) and (5). In contrast, NN-type NPQ *naga'ku-na'i?* is unacceptable in context (3) but acceptable in (4) and (5).²

- (3) Situation: When Taro and Hanako were in the school yard listening to the principal's speech, they heard the bell for first period ring. When she heard the bell ring, Hanako asked to Taro (who was standing in front of her):

H: Keso-no tyooree, **naga'ku-nai?** (^{OK}P-type / #NN-type)
 this morning-Gen morning.assembly long-Neg
 'Isn't today's morning assembly long?'

T: Yeah. That was the bell for first period, right? But that means first period will be shorter, so that's nice.

- (4) Situation: Taro wanted to use his PC but his power cord was too short, so he asked Hanako if she had an extension cord. Hanako handed Taro her extension cord (but the cord was not long enough).

T: Hmm... Actually, I need a long one, but...

H: Dame? **Naga'ku-na'i?** (#P-type / ^{OK}NN-type)
 No.good long-Neg
 'Oh really? It isn't long (enough)?'

T: Yeah, it seems like it's not quite long enough...

- (5) Situation: Taro is asking Hanako about the length of her friends' hair. Taro has heard some of their names, but he hasn't met them yet.

H: Neither Aki nor Mika has long hair.

T: Yuka-wa? **Naga'ku-na'i?** (#P-type / ^{OK}NN-type)
 Yuka-Top long-Neg
 'What about Yuka? Does she not have long hair? (lit. Is her hair not long?)'

H: Yeah. Yuka doesn't have long hair either.

(Hwang and Ito 2014: 926)

In context (3), the bell ring indicates the assembly has run overtime and make it possible for the speaker Hanako to convey the positive epistemic bias (i.e. today's assembly is long) through P-type NPQ. In context (4), the speaker Hanako used to believe *p* (her extension cord is long (enough)), but the negative bias was newly formed

¹ Apostrophes indicate lexical accent nuclei.

² The abbreviations in the glosses are: Decl = declarative, Gen = genitive, Neg = negation, Pst = past, Q = question particle, Top = topic.

during the conversation. Hence, the NN-type NPQ is felicitous in (4). (This meets so-called “inference on the spot” condition for NN-type in Ito and Oshima. See Ito and Oshima for detailed pragmatic restrictions on Japanese NPQs.) In context (5), the speaker Taro doesn’t have any expectation/belief about the length of Hanako’s friends’ hair, but the predicate with negation (*naga’ku-na’i* ‘not long’) is contextually prominent, and hence, the NN-type NPQ is felicitous to be asked and indicates the speaker is unbiased about *p*.

Note that the prosodic distinction between P-type and NN-type is observed not only in NPQs with an adjective predicate as shown above but also in those with a noun predicate (e.g. *gakusee-zya-{nai/na’i}*? ‘Isn’t he a student?’) and those with a complex verb predicate (e.g. *Kare, tetuda’tte-{kure-na’i/kure-nai}*? ‘Isn’t he helpful?’). However, this kind of prosodic contrast disappears in NPQs with a simple verb predicate (Ito 2015, Ito and Oshima 2016).

- (6) Kinoo, nom-a’nakat-ta?
 yesterday drink-Neg-Pst
 a. ‘Didn’t you drink yesterday?’ (Epistemically biased toward either positive or negative)
 b. ‘Did you not drink yesterday?’ (No epistemic bias (i.e. neutral interpretation))

In (6), the negative morpheme *-a’nakat* has to be accented, and the prosodic contrast is neutralized. Consequently, the NPQ in (6) is ambiguous in its interpretation (i.e. positively biased, negatively biased, or unbiased), and the addressee has to anticipate the presence/polarity of the speaker’s epistemic bias from the context.

4 Deaccenting vs Post-focus Reduction

I mentioned that the negative morpheme *-na’i* is “deaccented” in P-type NPQs, following Hwang and Ito (2014) and Ito (2015). On the other hand, Ito and Oshima (2016) argue that the negative morpheme *-na’i* is “tonally compressed” in P-type NPQs and see the compression as an example of the phenomenon called post-focus reduction. Figure 2 exemplifies an F0 contour involving post-focus reduction.

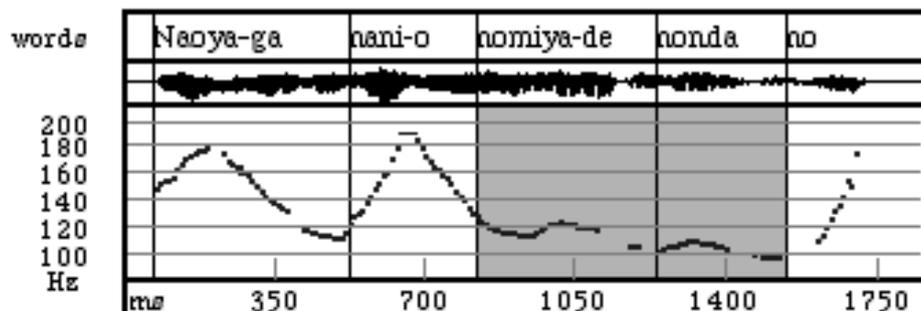


Figure 2: Tonal compression as post-focus reduction (Ishihara 2003: 53)

In the *wh*-question *Naoya-ga nani-o nomiya-de nonda no?* (‘What did Naoya drink at a bar?’) in Figure 2, each of the two phrases (i.e. *nomiya-de* ‘at a bar’ and *nonda* ‘drank’) following the focus phrase (*nani-o* ‘what’) is tonally compressed. The point is that each of them is tonally compressed but still has an F0 fall – that is, it retains its own lexical accent. Ito and Oshima (2016) say “in the P-type, the phrase containing the negation is *part of ground* (i.e., not part of the focus), so that it is tonally compressed, and [...] in the NN-type, the phrase containing the negation is *part of focus*, so that it is not tonally compressed”.

However, as shown in Figure 1, the F0 peak of the negative morpheme *-na’i* is not compressed but rather completely lost in the contour for P-type (the left one). The F0 contour is “scooped” there in Figure 1 while the F0 peaks in the phrases in part of ground are considerably lowered (but still you can see those peaks) in Figure 2. Furthermore, Hwang (2010) documents cases where accent deletion takes place in focus-related contexts in Fukuoka Japanese and South Kyeongsang Korean, and she argues that Tokyo Japanese differs from those two languages with respect to not employing accent deletion in focus-related contexts. In other words, post-focus reduction is not marked with accent deletion in Tokyo Japanese. Hence, I argue that the speaker’s positive epistemic bias conveyed via P-type NPQs is marked with accent deletion (not with post-focus tonal compression) of the negative morpheme in the case of NPQs with a noun, adjective, or complex verb predicate.

There might be a counter-argument against this claim: the negative morpheme *-na’i* is too short to represent tonal compression (induced as post-focus reduction) in P-type NPQs, and hence, though it is not observed in a F0 contour, post-focus reduction in *-na’i* exists. Japanese has a longer negative morpheme *-arimase’n*, which is the

polite equivalent of *-na'i*.³ If the counter-argument is correct, then a (tonally compressed) F0 fall should be observed in the domain of *-arimase'n*. Look at Figure 3.

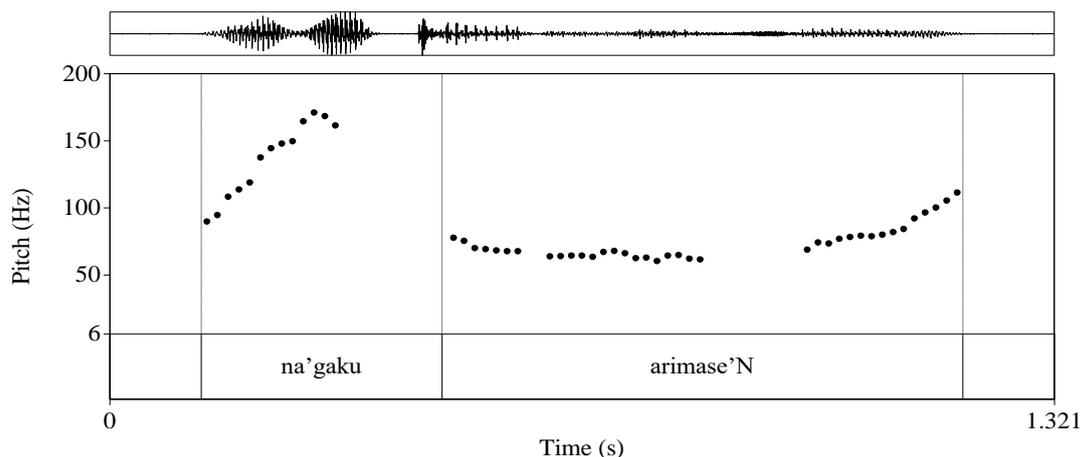


Figure 3: F0 contour of *nagaku-arimase'n?* ('Isn't it long?')

In Figure 3, no clear F0 fall is not observed in the negative morpheme *-arimase'n*, which means an F0 peak is not lowered but rather lost – that is, the negative morpheme is deaccented in Figure 3. Based on this observation, I reject the counterargument mentioned above.

4.1 Prosodic Distinction in NPQs with a Simple Verb Predicate As we saw in (6), the prosodic distinction disappears in the case of NPQs with a simple verb predicate, and hence, the NPQ in (6) is ambiguous. However, NPQs with a simple verb predicate can indicate the presence (and/or polarity) of the speaker's epistemic bias by implementing post-focus tonal compression instead of deaccenting of a negative morpheme. Suppose two separate situations in (8) and (9) for asking the NPQ in (7).

(7) Wa'in nom-a'nakat-ta?
 wine drink-Neg-Pst
 'Didn't you drink wine?'

(8) Situation: Taro came back from a party. His roommate Jiro knows that Taro likes drinking wine and that the host of the party always prepares various kinds of wine for parties. But, Taro told Jiro that he hadn't drunk any alcohol at the party. So, Jiro asked NPQ (7).

(9) Situation: Taro went to a party together with Jiro. On the next day, Taro told Jiro that Taro hadn't drunk any alcohol at the party. Jiro thinks that he saw Taro drinking a glass of wine at the party and can't believe what Taro said to him. So, he asked NPQ (7).

In the situation in (8), the speaker Jiro had previously assumed *p* (i.e. John drank wine at the party), but the negative bias (i.e. John didn't drink wine at the party) was newly formed during the conversation. Hence, the NPQ in (7) should convey the negative epistemic bias. In contrast, Jiro is suspicious about what Taro told him and still believes that Taro drank wine at the party (because he saw Taro drinking wine there) in situation (9). Therefore, the NPQ in (7) is expected to convey Jiro's positive epistemic bias. The F0 contour in Figure 4 is legitimate for

³ The negative morpheme *-arimase'n* consists of three parts in appearance: *ar* ('exist'), *-imas* (politeness), and *-en* (negation) but works as a single negative morpheme for adjective predicates and copula construction where the copula *da* follows a noun, as shown below.

- (i) a. Kore-wa oisiku-arimase'n. b. Kare-wa gakusee-zya-arimase'n.
 this-Top delicious-Neg he-Top student-ZYA-Neg
 'This is not delicious.' 'He is not a student.'

The morpheme *-zya* in (i-b) is assumed to be the contracted form of "*de* (a conjugational form of copula) + *wa* (Topic)". I'm not going to discuss the internal structures of *-arimase'n* and *-zya* in this squib.

NPQ (7) in situation (8) and (9). However, the F0 contour in Figure 5 is also natural in situation (9) while it is awkward in context (8).

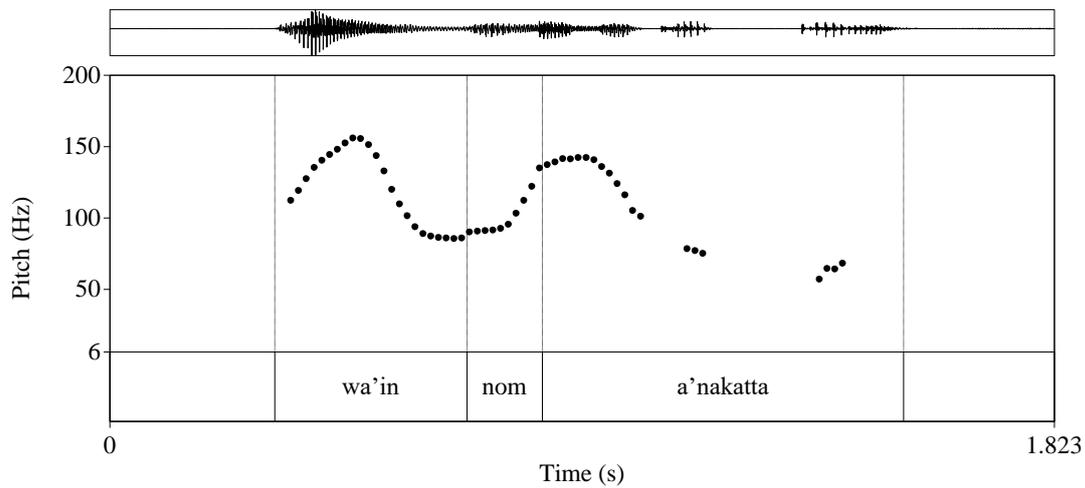


Figure 4: Legitimate F0 contour of NPQ (7) in situation (8) and (9)

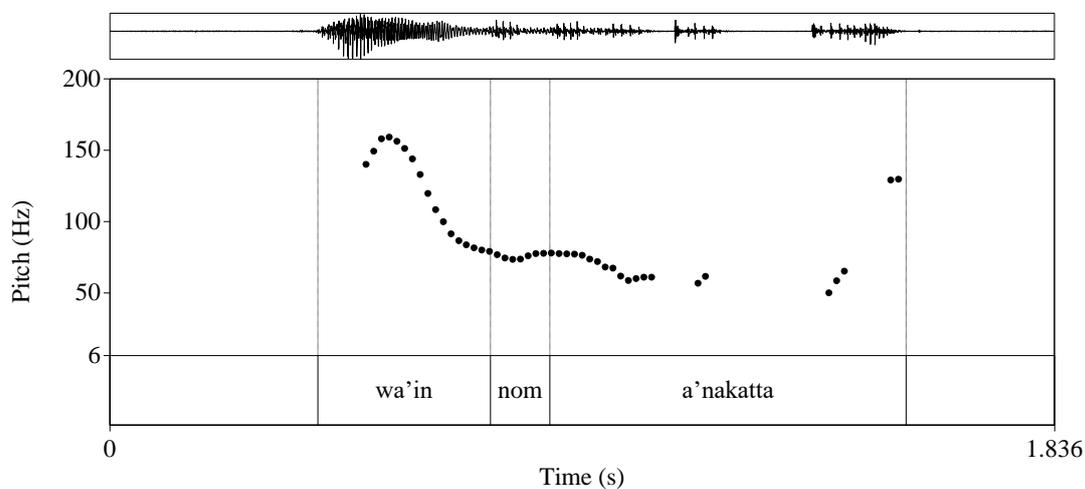


Figure 5: Legitimate F0 contour of NPQ (7) in situation (9)

In Figure 5, the F0 peak of the simple verb predicate with negation (i.e. *nom-a'nakat-ta*) is not completely lost but just lowered, which means its accent is retained. This tonal compression in Figure 5 can be attributed to post-focus reduction. (The noun phrase *wa'in* ('wine') is in focus.) I argue that post-focus tonal compression can be employed to show the speaker's positive epistemic bias in the case of NPQs with a simple verb predicate. Thus, in Japanese, the speaker's positive epistemic bias is conveyed via "single phrasing" via (i) deaccenting in the case of NPQs with a noun/adjective/complex verb predicate or (ii) (post-focus) tonal compression in the case of NPQs with a single verb predicate.

4.2 NPQs in South Kyeongsang Korean Prosodic phrasing is the key for marking the presence (and/or polarity) of the speaker's epistemic bias not only in Japanese NPQs but also in South Kyeongsang NPQs.

- (10) a. mukʌp-ta b. an mukʌp-ta c. mukʌp-ci ani ha-ta
 Heavy-Decl Neg heavy-Decl heavy-CI Neg do-Decl
 '(It is) heavy.' '(It is) not heavy.' '(It is) not heavy.'

Korean has two types of negative constructions, so-called “short form” negation as in (10b) and “long form negation” as in (10c). The interrogative counterpart of short form negation is shown below.

- (11) an mukʌp-na
 Neg heavy-Q
 ‘(Is it) not heavy?’

According to Hwang (2017), there are two possible prosodic patterns for (11) in Kyeongsang Korean, as shown in Figure 6.⁴

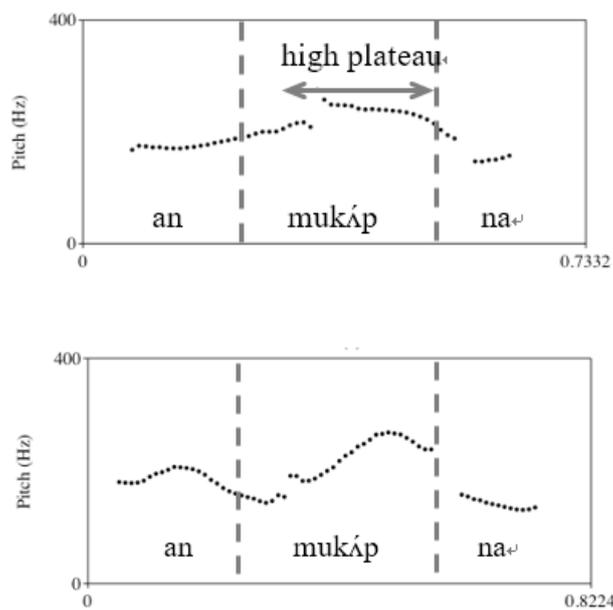


Figure 6: Prosodic patterns of (11): Single Phrasing (top) and Double Phrasing (bottom) (Hwang 2017: 2)

In the top F0 contour in Figure 6, the lexical pitch accent of *an* is completely lost, and the negative morpheme forms a single prosodic phrase together with the pitch of the predicate stem (i.e. Single Phrasing). Note that the declarative counterpart in (10b) also involves single phrasing. On the other hand, the negative morpheme and predicate stem retain their own accents, and each of them forms a single prosodic phrase (i.e. Double Phrasing) in the bottom F0 contour in Figure 6. Hwang (2017) mentions, “[i]ntuitively, the Double Phrasing seems to be correlated with positive bias as the [P-type NPQ] in Japanese. In fact, Gim et al. (2000) report that this pattern is used when a negative question conveys a positive description”. Thus, though the phrasing pattern in South Kyeongsang Korean NPQs is opposite to Japanese NPQs, the comparison indicates that prosodic phrasing is the key for the distinguishing the presence/polarity of the speaker’s epistemic bias. Also, NPQs in both languages show an interesting similarity that marked phrasing (i.e. single phrasing in Japanese and double phrasing in South Kyeongsang Korean) is used for representing the speaker’s positive epistemic bias.

5 Conclusion

This squib has demonstrated that the speaker’s positive epistemic bias is represented by deaccenting (not by post-focus tonal compression) of the negative morpheme in NPQs with a noun/adjective/complex verb predicate in Japanese. In addition, Japanese employs post-focus tonal compression to convey the speaker’s positive epistemic bias in the case of NPQs with a simple verb predicate. Thus, two different prosodic ways can be implemented to convey positive epistemic bias in Japanese NPQs. Also, the comparison of Japanese with South Kyeongsang Korean suggests that prosodic phrasing is a key factor for representing epistemic bias in both Japanese and Korean NPQs. However, it is still unclear why Japanese NPQs realizes positive epistemic bias via marked single phrasing while those in Korean convey through marked double phrasing. It has not been solved

⁴ As it is well acknowledged that short form negation is used pervasively in Kyeongsang Korean, only NPQs with short form negation is discussed in Hwang (2017).

how the speaker's epistemic bias in NPQs is calculated semantically either. I leave them for future research.

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