

The Meaning and Use of Negative Polar Interrogatives

Brian Reese
University of Texas at Austin

On the standard theory of interrogative meaning, the denotation of a question is the set of propositions comprising its direct answers; so negative polar interrogatives (NIs) like *Isn't Jane coming?* are predicted to be equivalent to positive polar interrogatives (PIs) like *Is Jane coming?* While this prediction is correct in so far as simple *yes* and *no* answers to PIs and NIs always express the same proposition, they diverge in important respects. First, NIs are typically biased toward a specific answer. Furthermore, NIs are ambiguous in the sense that the bias may be either toward the positive or negative answer (Ladd, 1981).

- (1) a. A: Sue can't attend the meeting, so there'll be no syntacticians there.
b. B: That's not true! Isn't Jane coming (too)?
c. B': Oh, really? Isn't Jane coming (either)?

In (1b), the speaker expects a positive answer, Ladd's *outer negation* reading (ONI). In (1c) the speaker expects a negative answer, Ladd's *inner negation* reading (INI). INIs and ONIs are biased in a second respect as well: they require the speaker to hold some prior positive attitude toward the proposition in the scope of the question operator.

ONIs and INIs also differ with respect to their discourse function. While both behave like real questions, ONIs also display certain characteristics of assertions (Sadock, 1971).

- (2) a. A: Sue can't attend the meeting, so there'll be no syntacticians there.
b. B: What do you mean? After all, isn't Jane coming too?
c. #B': What do you mean? After all, isn't Jane coming either?

After all introduces evidence for or against some proposition. (2a) entails (on the assumption that Jane is a syntactician) that Jane is not coming. We thus understand *B*'s utterance as counterevidence to *A*'s. ONIs, for us, are a type of indirect speech act used by speakers in cases of epistemic conflict to challenge a commitment of the addressee, who can either concede the challenge or back up his belief with further evidence. Following Asher and Lascarides (2001), ONIs are composed of both an assertion and a question. This approach allows both aspects of the speech act to be exploited in a discourse or dialogue.

Competing approaches (Romero and Han, 2004) derive the discourse function, or intent, of an NI by examining the "pronounced cell" of the partition induced by the question. One problem with this approach is that in order to know which cell is pronounced one has to know whether the question is an ONI or INI. While certain lexical cues can disambiguate each type of interrogative, such cues are not always present. Furthermore, the contexts in which each can be used overlap, as already evidenced by (2). We believe, on the other hand, that the distinction between ONIs and INIs is reflected in certain prosodic features. Our preliminary investigations suggest that while the intonational contours of ONIs and INIs are roughly equivalent, ONIs exhibit a greater pitch range

and/or a higher mean intensity than INIs, properties consistent with the incredulity reading of the English *rise–fall–rise* contour (Hirschberg and Ward, 1992).

Incredulity toward a proposition p by an individual can be understood as the possession of a relatively high degree of belief in the proposition $\neg p$, a meaning we gloss $\lambda p_{\langle s,t \rangle} \mathbf{certain}(x, \neg p)$ where x is likely to be resolved to the speaker since intonational meanings generally convey speaker attitudes. In an interrogative sentence, this meaning must be shifted to something like $\lambda C_{\langle \langle s,t \rangle, t \rangle} \exists p \in C. \mathbf{certain}(x, \neg p)$. We assume that interrogatives somehow convey or implicate a lack of speaker commitment to the descriptive content of the question (cf. Han, 2002; van Rooy and Šafářová, 2003, for more details).¹ Given a question $\{q, \neg q\}$ then, the only coherent choice for p is $\neg q$, entailing that the speaker has some high degree of belief in q , i.e., $\mathbf{certain}(\mathbf{speaker}, \neg \neg q)$ which is equivalent to $\mathbf{certain}(\mathbf{speaker}, q)$, i.e. the speaker is incredulous about $\neg q$. A final assumption is that intonational meanings are similar to conventional implicatures as analyzed by Potts (2005). Specifically, the question meaning is not “used up” by the intonational meaning. The end result of the derivation, then, is a meaning consisting of more than one dimension in Potts’ terminology. Furthermore, given that the propositional content of the intonational component conveys a high degree of belief on the part of the speaker, we have a plausible derivation of the assertion argued for above, in addition to the question.

However, if ONIs assert p , what is the point of the question in the complex speech act? The default goal in asking a polar question $?p$ is to know whether p or $\neg p$. If an ONI $? \neg p$ asserts p , then the question associated with the speech act cannot be a simple request for information. Rather, it must be a request for confirmation or a challenge to the addressee to explain some prior discourse contribution (as in (2)). INIs, on the other hand, don’t convey bias by the same means. We provide more detail on the differences between ONIs and INIs in the full paper.

Prior accounts, like Romero and Han (2004), do not take NIs to be complex speech acts. They assume that NIs contain a focus induced *VERUM* operator conveying that either the speaker (or the sum individual of the speaker and the hearer) is certain that the proposition within the operator’s scope should be added to the common ground, FOR-SURE-CG _{x} for short. When the negation scopes over *VERUM* an ONI arises, with the cells of the resulting partition being FOR-SURE-CG _{x} ϕ and \neg FOR-SURE-CG _{x} ϕ ; when negation scopes under *VERUM*, we get the partition consisting of FOR-SURE-CG _{x} $\neg\phi$ and \neg FOR-SURE-CG _{x} $\neg\phi$. We point out a number of problems with this approach. First, direct affirmative and negative answers do not, in any straightforward manner, correspond to the partitions induced by these questions suggesting that the meaning of NIs is not what Romero and Han suggest it is. Second, Romero and Han (2004) claim that NIs always carry a positive *epistemic* attitude on the part of the speaker. In fact, they cite it as an empirical generalization. Examples from Huddleston and Pullum (2002), however, show that these prior attitudes are not always epistemic as in *Aren’t you ashamed of yourself?* or *Don’t you like it?* The former, for example, conveys a *deontic bias* – i.e. the attitude that the speaker holds is *that the addressee ought to be ashamed of himself*. Romero and Han predict that the speaker *believes* that the addressees are ashamed of themselves. Our account is compatible with these observations if examples like (4) are, as we suppose, all INIs.

¹A alternative is to argue, following Pierrehumbert and Hirschberg (1990), that the **L*+H** pitch accent on *Jane* in (1b) conveys a lack of predication, resulting in a lack of speaker commitment to the proposition that Jane is not coming.