

The Role of Indeterminacy in Licensing Inner Negation Polar Questions

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The Issue. [8] argue that negative polar questions where negation inverts with the auxiliary are used to manage the common ground. [2, 6] report that one variety of these, *inner negation polar questions* (INPQ, which license NPIS, but not PPIS [5]), are felicitous only in the presence of *compelling* evidence for a negative answer: (1). This finding is puzzling, since compelling evidence should settle the issue and make further questioning infelicitous. I show that (i) INPQs are felicitous only if the evidence is indeterminate as to whether it settles the question, (ii) the relation between INPQs and this evidence emerges from the interaction of indeterminacy and question semantics, and (iii) the answers to INPQs reduce indeterminacy.

(1) B is visiting K and J in Chicago while attending CLS.

B: I'd like to take you guys out to dinner while I'm here – we'd have time to go somewhere around here before the evening session tonight, don't you think?

K: I guess, but there's not really any place to go to in Hyde Park.

B: Oh really, aren't there any restaurants around here? (adapted from [5])

[8] show that Hamblin/Karttunen-style partition semantics doesn't provide an explanation for differences between positive and negative polar questions, as it assigns the same semantics to negative and positive polar questions. Negative polar questions then provide an area for exploring the contextual factors that determine the choice of question form and the division of labor between semantics and pragmatics. The work here builds on previous studies of the relation between the semantics and pragmatics of polar questions such as [3, 8, 6].

The Role of Indeterminacy. Indeterminacy about the evidence commonly arises from ambiguity about how to resolve context dependent aspects of meaning, e.g. covert domain restrictions, often supported by hedges like *isn't really* in (1). In (1), K might have excluded from the domain of *any* restaurants that are far away, expensive or bad. Similarly, (2) is felicitous to many speakers if Pat and Jane usually go everywhere together.

(2) S hates both Pat and Jane and their friends. The prospect of an excursion without them pleases S. S does not have any previous belief about whether any one of them is coming or not. [8, 613, adapted]

A: Pat is not coming.

S: Great! Isn't Jane coming (either)? That would be the best!!!

The indeterminacy is about whether S can conclude from A's claim that Jane will be absent. This indeterminacy can be captured in terms of vague standards of justification proposed by [1]. When indeterminacy is absent, INPQs are infelicitous. (2) is infelicitous if John and Mary don't go everywhere together, (3) demonstrates the same effect for domain restrictions.

(3) A and B are checking the passenger list of an airplane before leaving.

A: OK, I have checked three times. Everyone who is on the the list is on the plane.

B: #Isn't anyone left in the waiting area?

Relatedly, INPQs address the contextual evidence. B in (1) is checking whether K has excluded restaurants that he might find acceptable, S in (2) what can be concluded from A's claim. Since the indeterminacy of the evidence determines the extent to which the issue raised by an INPQ is still open, it follows that a felicitous question will be about the evidence. Below, I develop a way of representing the impact of indeterminacy on the context and show how in combination with a partition semantics for questions it captures this relation. As INPQs address evidence provided by their addressee, their use is consistent with a questioner having strong expectations about the answer, as is usually the case. Conversely, INPQs are felicitous to their addressees only to the extent that they recognize the question as open. Speakers may vary as to whether some piece of evidence settles an issue, resulting in variable judgments about the felicity of INPQs in some contexts.

Indeterminacy in Contexts. One way of capturing the effect of indeterminacy comes from Kaplan’s [4] distinction between *character* and *content*. A character is a function from contexts to contents, i.e. propositions, that fixes context dependent aspects of meaning. When there is indeterminacy about what the context is like, what inferences it allows in (2), what an appropriate domain restriction is in (1), one character maps to different contents, depending on how the relevant contextual parameters are resolved. For illustration, assume that Tab. 1 represents the possibilities of restaurants existing in (1), prior to K’s utterance. When the context is open about which restaurants are under discussion, it may allow the three different domains for restricting *any* in Tab. 2 on the left, resulting in the propositions on the right. Extending the proposal in [10] that utterances with epistemic modals introduce indeterminacy via proffering multiple propositions that can subsequently be addressed, I suggest that the multiple propositions arising from indeterminacy can also be explicitly addressed. Specifically: INPQs determine partitions over these propositions.

Restaurants:	w ₁	w ₂	w ₃	w ₄	w ₅	w ₆	w ₇	w ₈
close and good	1	0	0	1	1	0	1	0
distant and good	1	1	0	0	1	1	0	0
close or distant	1	1	1	1	1	1	1	0

Table 1: The context prior to K (1)

- a. $\{x \mid x \text{ a close, good restaurant}\} : \{w_2, w_3, w_6, w_8\}$
b. $\left\{ x \mid \begin{array}{l} x \text{ a close or distant,} \\ \text{good restaurant} \end{array} \right\} : \{w_3, w_8\}$
c. $\{x \mid x \text{ a close or distant restaurant}\} : \{w_8\}$

Table 2: Domains for *any place* in (1) and corresponding propositions

that INPQs address the contextual evidence. Once indeterminacy is taken into account, the relation between INPQs and the evidence follows from partition semantics and INPQs can be treated as ‘normal’, in that they cannot be used when the issue they address is settled.

Conclusions and Extensions. A question that is left open here is why INPQs are sensitive to evidence for a *negative* answer while insinuating a positive one. Work on different kinds of biased questions (e.g. [7, 9]) has argued that their special properties arise from factors external to their semantics. The work here shows that at least the sensitivity of INPQs to indeterminacy and their relation to contextual evidence can be understood from the interplay of (i) the properties of contexts that show indeterminacy, (ii) a partition semantics for questions, and (iii) the felicity conditions of questions.

Indeterminacy and Questioning. If

INPQs determine partitions that differentiate the multiple propositions arising from contextual indeterminacy, answers to them reduce indeterminacy. Say, B’s INPQ in (1) determines the partition $\boxed{w_8} \mid \boxed{w_2, w_3, w_6}$. The left cell corresponds to the proposition in Tab. 2c., the right one entails the propositions in Tab. 2a. and b. Both *yes*- and *no*-answers exclude some worlds and thus reduce indeterminacy. This derives the observation

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