Forms of Negation in Polar Questions

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1. Introduction

There is general agreement that a semantic theory of questions needs to account for the diversity which exists between the different subtypes of polar questions. It is thought that it is not sufficient to assume the same meaning for both positive and negative polar questions. The semantic theory of questions (Groenendijk & Stokhof, 1984; Hamblin, 1973), however, predicts all yes/no-questions to denote the set of possible answers \{that \( p \), that not-\( p \)\} \(^1\). For instance, the examples in 1) and 2) both have the denotation in 3).

1) Is Jane coming?
2) Is Jane not coming?
3) Denotation for 1) and 2): \{that Jane is coming, that Jane is not coming\}

Note that there is no semantic difference between the negative marker \( n't \) in 5) and the negative marker \( not \) in 2). Thus, no matter whether a y/n-question is positive or negative or whether it contains the high negation \( n't \) or \( not \), it receives the same denotation.

4) \([\text{[not]}] = [\text{[n't]}] = \lambda <s ,t >. \neg p^2\)
5) Isn’t Jane coming?

On the other hand, the typology of negated polar questions and what they convey has been controversially discussed in the literature. Ladd (1981) suggested that negated polar questions are ambiguous between an inner (INPQ) and outer (ONPQ) negation reading. A y/n-question with an inner negation questions the negative proposition while a y/n-question with an outer negation questions the positive proposition. Buering and Gunlogson (2000) (B&G) took up this suggestion and introduced a typology of polar questions which comprises positive and negative polar questions with the negative polar questions being subdivided into INPQs and ONPQs. B&G assume all negative questions to convey an implication that the speaker believes in the truth of the positive proposition. The implication of ONPQs is, however, thought to be stronger than the implication communicated by INPQs.

Romero and Han (2004) have further expanded the typology and restricted the ambiguity to high\(^3\) negation questions - 6) and 7). High negation hereby refers to the negation which is contracted and cliticizes on the auxiliary.

6) Isn't Jane coming too?
7) Isn't Jane coming either?
8) Is Jane not coming?

Their typology of negated questions includes NI-questions such as 7)\(^4\), PI-questions such as 6)\(^5\) and low negation questions such as 8). Low negation refers to the negation which follows the subject. It is argued that 6) is a question about the positive proposition since it contains too, which requires a positive proposition. On the other hand, 7) contains either, which adjoins to negative propositions, and 7) thus questions the negative proposition. R&H assume NI-questions and PI-questions to contribute an implicature which says that the speaker has the

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\(^1\) \( p \) stands for the proposition that the question puts to debate.

\(^2\) From R&H (2004), p. 617

\(^3\) R&H call this negation preposed negation.

\(^4\) \( \approx \) Ladd’s INPQs

\(^5\) \( \approx \) Ladd’s ONPQs
positive belief that for e.g. 6) and 7), Jane is coming; they argue that low negation questions do not usually convey a speaker’s belief.

Finally, van Rooy and Safarova (2003) (vR&S) find that the assumption of an ambiguity pertaining to polar questions should be abolished. Additionally, they assume all negated polar questions to presuppose a positive speaker’s belief. The reading which R&H assume INPQs to convey is a special case which merely appears in certain pragmatic circumstances, which in turn cause the negation to receive focus marking. It is however only low negations which can be focused.

The diverging opinions on the typology and meanings of negated polar questions call for empirical clarification before we are able to suggest a way of theoretically differentiating the different subtypes of polar questions. We hope to decide between these different positions by experimental investigation. Firstly, we want to find out which question type(s) the presence of a positive speaker’s belief in the context affects. Furthermore, we would like to examine how the negation type affects the question’s meaning. We will also examine German polar questions for the purpose of crosslinguistic comparison.

2. German Polar Questions

If we are looking in German for the equivalent of English high negation questions, we find two possible representations as shown in 9) and 10). Both questions convey the presupposition that the speaker must believe in the truth of the positive proposition.

9) Hat nicht Anna den Kuchen gemocht?
   Aux not Anna the cake liked
   Did Anna not like the cake?

10) Hat Anna nicht den Kuchen gemocht?
    Aux Anna not the cake liked
    Did Anna not like the cake?

R&H predict English high negation polar questions to be ambiguous between questioning the positive proposition and asking about the negative proposition. But our investigation of high negation questions in German by means of the polarity items ziemlich (quite) / sonderlich (particularly) in 11) and 12) yields the result that the question is well formed in the presence of the positive polarity item ziemlich, while it becomes ungrammatical in case the negative polarity item sonderlich is used.

11) Hat nicht Anna den Kuchen *sonderlich/ziemlich gemocht?
    Has not Anna the cake NPI/PPI liked
    Did not Anna particularly/quite like the cake?

12) Hat Anna nicht den Kuchen *sonderlich/ziemlich gemocht?
    Has Anna not the cake NPI/PPI liked
    Did Anna not particularly/quite like the cake?

Negative polarity items need to occur in a negative proposition in order to be licensed, while positive polarity items cannot occur in negated propositions. Thus, there is no evidence for the ambiguity of German high negation polar questions. The pattern in 11) and 12) rather suggests that German polar questions with high negation always question the positive proposition.
13) Hat Anna den Kuchen nicht sonderlich/ziemlich gemocht?
Has Anna the cake not NPI/PPI liked
Did Anna not particularly/quite like the cake?

In contrast to the pattern in 11) and 12), both ziemlich and sonderlich can occur in a question with low negation as 13). If the question in 13) contains ziemlich, the presupposition that the speaker believes in the truth of the positive proposition seems to be present. If the question in 13) contains sonderlich, the presupposition is not present.

On the basis of the pattern demonstrated by 11) and 12) we suggest that 11) and 12) contain a positive proposition while 13) might contain a positive proposition and a negative proposition. In German, mechanisms like scrambling might apply so that constituents in the middle field do not necessarily surface in their original position. A negation in the position directly before the verb as in 13) might thus correspond to an English low negation but might as well occupy a position containing a high negation, and the fact that it ends up directly before the verb is due to movement of the DPs.

According to R&H, English low negation questions contain a negative proposition and are thus grammatical with either and marked with too, while either as well as too may adjoin to the proposition in high negation questions. We have found that German demonstrates a pattern contrasting to this. Our experimental results will, however, indicate that we can analyze German and English negated polar questions in an analogous manner.

3. Rating Studies

The aim of these studies was to decide between the different opinions on English polar questions. More precisely, we wanted to find out whether high negation polar questions require the belief of the speaker that the positive proposition is true; whether English high negation polar questions are indeed ambiguous between questioning the positive and questioning the negative proposition; and whether the type of negation (n’t or not) does have an effect on the meaning of a y/n-question. Furthermore, we wanted to investigate whether German and English negated polar questions differ and in which way they differ.

3.1. Method

The experiments were conducted with the aid of WebExp6. The questionnaire was thus administered over the internet. The participants were instructed explicitly on a webpage and received two training trials. In the first training trial, they were introduced to the method of rating. The participants had to judge the length of a bar relative to the given length of two other bars. In the second training trial, their task was to rate the naturalness of a short English sentence in comparison to given ratings of two other English sentences, differing in their level of naturalness. In the test trials, native speakers were asked to rate the naturalness of high and low negation questions – also in comparison to sentences with given ratings. The sentences for comparison remained unchanged for training as well as for test trials. All questions were presented in controlled contexts. Participants were presented with sequences such as 14) (or the German correspondent) and were asked to judge how well the question fits its context.

14) A gold-digger is talking to the barman about a shooting. The gold digger doesn't know who was involved. The barman says "Only the deputy sheriff shot bandits yesterday." The gold-digger asks "Didn't the sheriff shoot bandits too?"

6 Many thanks to the We2 Development Team. Many thanks for financial support of We2 from the University of Edinburgh E-Learning Fund and the Psychology Network of the Higher Education Academy.
3.2. Participants

Twenty-five native speakers of English and twenty-four native speakers of German were recruited with the chance to win $75.

3.3. Design and Procedure for the English Experiment

The four versions of the English questionnaire were built from 8 different lexical items, 6 different context types and 5 different question types. For every lexical variant there were 16 conditions. The following table presents the conditions (marked with an x) used for the purposes of this paper.

<table>
<thead>
<tr>
<th>Question with high negation</th>
<th>Fulfills presupposition of too</th>
<th>Fulfills presupposition of either</th>
<th>Fulfills presupposition of too</th>
<th>Fulfills presupposition of either</th>
</tr>
</thead>
<tbody>
<tr>
<td>with either</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>with too</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Question with low negation</td>
<td>with either</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>with either</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>with too</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1

The contexts differed regarding two parameters. Firstly, the contexts included either the speaker’s belief that \( p \) is true as demonstrated by the second sentence in 15); or it indicated that the speaker did not have any belief in terms of the proposition \( p \) as demonstrated in 14).

15) A gold digger is talking to the barman about a shooting. The gold digger has heard that the sheriff shot some bandits. The barman says "The deputy didn't manage to shoot any bandits, so they all got away." The gold digger asks "Didn't the sheriff shoot bandits either?"

The other factor refers to the presupposition of either and too: Either the statement immediately preceding the question at issue fulfilled the presupposition of a question with too as demonstrated in 14) or it satisfied the presupposition of a question with either as demonstrated in 15).

The appearance of the English questions also varied in terms of two parameters. Firstly, the questions presented differed regarding the type of the negation. Questions contained either n’t or not. Furthermore, questions either included either or too. Too and either had their focus consistently on the subject of the question.

High and low negation questions were seen with too and either, since, according to R&H, those items disambiguate whether the question asks about the positive or the negative proposition, respectively. 16) – 19) shows the different types of questions used for the experiment.

16) Didn’t the sheriff shoot bandits too?
17) Didn’t the sheriff shoot bandits either?
18) Did the sheriff not shoot bandits too?
19) Did the sheriff not shoot bandits either?

A context was combined with a question if they agreed in the usage of a certain item: A question with either was only seen in a context which was in accord with the presupposition of either; a question with too was only seen in a context which was in accord with the presupposition of too.
In sum, there were 16 different combinations of context and question for each lexical variant. Each of the four versions of the questionnaire was seen by a different group of raters. Each version of the questionnaire comprised 32 test combinations of context and question and 10 fillers. Consequently, every participant saw each condition twice and each lexical item 4 times.

3.3. Design and Procedure of the German Experiment

The eight versions of the German questionnaire were built from 8 different lexical items, 12 different context types and 10 different question types. In sum, there were 32 conditions. The conditions relevant for the purposes of this paper are marked with an x in the table below.

<table>
<thead>
<tr>
<th></th>
<th>Context+Speaker’s Belief</th>
<th>Context+No Belief</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fulfilling presupposition of auch (too)</td>
<td>Fulfilling presupposition of auch nicht (either)</td>
</tr>
<tr>
<td>Question containing nicht auch</td>
<td>First position</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>Second position</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>Third position</td>
<td>x</td>
</tr>
<tr>
<td>Questions containing auch nicht</td>
<td>In the third position only</td>
<td>x</td>
</tr>
<tr>
<td>Questions containing nicht without auch</td>
<td>In the third position only</td>
<td>x</td>
</tr>
</tbody>
</table>

The German contexts varied regarding the same parameters as the English ones: the presence of the speaker’s belief and the fulfillment of the presupposition of auch (too) or of auch nicht (either). The German questions differed in terms of three factors: The position of the negation; whether it contained auch; and whether it contained nicht auch or auch nicht. The negation occurred in one of three positions: between finite verb and subject, between subject and object or between object and infinite verb. Auch was placed immediately before the negation within questions which should parallel the English too-questions. In order to form questions parallelizing the English either-questions, auch scoped over the negation: auch nicht. The combination auch nicht was only tested in the position right before the verb because the experiment would otherwise have become too large. There was also one question without auch and with the negation positioned directly before the infinite verb in order to test whether the presence of auch influences the presupposition. 19) through 24) presents examples of the questions the participants saw.

20) Hat nicht auch Maria die Ausstellung besucht?
    Has not also Maria the exhibition visited?
    Didn’t Maria visit the exhibition too?

21) Hat Maria nicht auch die Ausstellung besucht?
    Has Maria not also the exhibition visited?
    Didn’t Maria visit the exhibition too?

22) Hat Maria die Ausstellung nicht auch besucht?
    Has Maria the exhibition not also visited?
    Didn’t Maria visit the exhibition too?
23) Hat Maria die Ausstellung nicht besucht?
   Has Maria the exhibition not visited?
   Didn’t Maria visit the exhibition?

24) Hat Maria die Ausstellung auch nicht besucht?
   Has Maria the exhibition also not visited?
   Did Maria not visit the exhibition either?

For the German experiment, there were 32 different combinations of context and question for each lexical variant. Each of the eight versions of the questionnaire was seen by a different group of raters. Each version of the questionnaire comprised 32 test combinations of context and question and 8 fillers. Every participant saw each lexical item four times.

3.4. Statistics

The statistical analysis was done by means of SPSS. The global, statistical differences of the data were calculated by means of *repeated measures of analysis of variance (ANOVA)*. We carried out by subject and by item analyses. Furthermore, planned comparisons were used to compute *paired t-tests*.

3.4.1. Results of the Experiment on English Polar Questions

Table 3 illustrates the error bars obtained from the experiment on English y/n-questions. The x-axis yields the different types of contexts. *PresupEither* indicates that the context fulfilled the presupposition of *either* and *PresupToo* indicates that the context fulfilled the presupposition of *too*. The *B* characterizes contexts which contain the speaker’s belief that the positive proposition is true; the contexts do not contain this belief.

Considering the left half of Table 3 (blue and orange bars), we see that the orange bars represent lower values than the blue bars, and indeed the type of negation (high or low negation) has a significant effect on the rating ($F_1$ (1,24) = 9.120; $p = 0.006$; $F_2$ (1,7) = 16.741; $p = 0.005$). We take this as evidence that high negation polar questions are marked if containing *either*. Since there is no effect of the speaker’s belief, there is no evidence that negated questions with *either* presuppose a speaker’s belief that the positive proposition is true.

<table>
<thead>
<tr>
<th>Context type</th>
<th>Question type</th>
</tr>
</thead>
<tbody>
<tr>
<td>PresupEither-B</td>
<td>Did the sheriff not shoot bandits either?</td>
</tr>
<tr>
<td>PresupEither+B</td>
<td>Did the sheriff not shoot bandits too?</td>
</tr>
<tr>
<td>PresupToo-B</td>
<td>Didn’t the sheriff shoot bandits either?</td>
</tr>
<tr>
<td>PresupToo+B</td>
<td>Didn’t the sheriff shoot bandits too?</td>
</tr>
</tbody>
</table>

Turning to the questions with *too* on the right hand side of the table (green and purple bars), the error bars of questions within contexts with a speaker’s belief demonstrate higher ratings.
than the error bars of questions within contexts without a speaker’s belief do. The effect of the speaker’s belief is significant ($F1 (1, 24) = 7.941; p = 0.010; F2 (1, 17) = 5.914; p = 0.045$).

We take this as evidence that negated questions containing *too* presuppose the speaker’s belief that the positive proposition is true. Furthermore, questions with high negation (purple bars) receive higher values than questions with low negation (green bars). The statistical effect of the negation type is highly significant ($F1 (2, 48) = 12.732; p < 0.001; F2 (2, 14) = 17.748; p < 0.001$). This finding provides evidence for that questions containing low negation and *too* are marked while questions containing high negation and *too* are perfectly grammatical.

### 3.4.2. Results of the Experiments on German Polar Questions

![Graph showing error bars for German polar questions](image)

*Table 4*

*Table 4* shows the error bars obtained from the experiment on German y/n-questions. At the x-axis, the contexts are distributed equivalently to *Table 3*. The German questions in the legend are the same as given in 20) - 24) (in the same order) and the gloss can thus be obtained from above.

Considering the left half of *Table 4*, the purple bars representing questions with a negation in the lowest position without *auch* demonstrate significantly higher values in the presence of a speaker’s belief. A t-test confirmed this effect ($p1 = 0.032; p2 = 0.037$). There was no effect of the speaker’s belief on questions containing *auch nicht* (*either*).

This is evidence that questions containing a negation in the lowest position presuppose a positive speaker’s belief only if *auch* is not preceding the negation. Our interpretation of this finding is that *auch* disambiguates the negation as being of the low negation type. If *auch* is not present, the negation is of the high negation type and contributes the presupposition.

Turning to the right half of *Table 4*, there is a main effect of the presence of the speaker’s belief, which is statistically highly significant ($F1 (1, 23) = 19.866; p < 0.001; F2 (1, 7) = 35.797; p = 0.001$). The values of the blue and green bars especially indicate an effect of the speaker’s belief. T-tests confirmed this effect for questions containing *nicht auch* immediately after the finite verb ($p1 = 0.004; p2 = 0.002$) and after the subject ($p1 < 0.001; p2 < 0.001$).

We take this as evidence that the position following the finite verb and the position following the subject host a negation which contributes the presupposition that the speaker believes in the truth of the positive proposition. The ratings of the questions with a negation in the
position directly before the infinite verb do not give rise to this assumption in the contexts fulfilling the presupposition of *auch* (*too*).

4. Discussion of the English Results

Surprisingly, the presence of the speaker’s belief does not have an effect on the rating of high negation questions with *either*. According to R&H, high negation questions with *either* presuppose a positive belief of the speaker. Thus, the presence of a speaker’s belief should have an effect on the rating. The missing effect of the speaker’s belief implies – especially in contrast to the great effect of the speaker’s belief on the ratings of high negation questions with *too* – that high negation questions with *either* do not presuppose the presence of a speaker’s belief. The main effect of the type of negation along with the low ratings suggest that high negation questions with *either* are evaluated as being less natural as their low negation counterparts. A possible explanation of the missing effect of the speaker’s belief on high negation questions is thus that high negation questions with *either* are inherently marked so that the speaker’s belief in the context might not be able to improve their status.

The statistical difference between the two question types might to be due to *either* demanding a low negation. The low negation questions which contain *either* are significantly higher rated than their high negation counterparts. We may thus attribute the low ratings of high negation questions to that *either* makes a difference between high negations and low negations and prefers to appear in questions with low negation. There is actually no other reason for this pattern, since the conditions of high negation questions with *either* and low negation questions with *either* were identical except for the position of the negation. In addition, the high negation questions with *too* received significantly higher ratings than high negation questions with *either*, so that the low ratings of high negation questions with *either* cannot be due to a general rejection of high negation questions in written language.

We have seen that *either* does not like to occur in a high negation question and that *too* likes to occur in a high negation question rather than in a low negation question. The ratings of high negation questions containing *too* are in significant excess of the ratings of low negation questions with *too*. Hence, there is evidence that low negation questions are marked if containing *too* and that high negation questions are marked if containing *either*.

Considering this pattern, we would like to suggest the following explanation: High negations are so high within the syntactic structure that *either* has to adjoin to a positive proposition and the question is thus marked. Questions with the negation above *too* within the syntactic tree are unmarked because *too* can take a positive proposition as preferred. 25) illustrates this

7 The negation might have originated in NegP but it is beyond the scope of this paper to discuss the syntactic position of the negation.
25) Isn’t John coming too/*either?

If the negation is low, questions comprising *too are marked because *too had to attach to a negative proposition. This might be the causal factor for the ungrammaticality of the question in 26) if containing *too. If containing *either, the question in 26) is unmarked because *either can take a negative proposition as required.

26) Is John not coming either/*too?

The pattern which *too and *either demonstrate suggests that English comprises two different kinds of negation in polar questions. The two types of negation are disambiguated by their syntactic position plus morphology as well as by the behavior of *too and *either. The low negation type is used in order to ask about not-*p no matter whether the speaker has a certain belief about *p. Since the belief-state of the speaker does not have an effect on the values for *either-questions, there is no need to assume a presupposition of a positive speaker's belief in terms of this question type. Since *too is known to adjoin to positive propositions while *either is said to require a negated proposition, we want to argue that high negation questions differ from positive questions only in that they convey a positive belief of the speaker. Therefore, it is necessary to specify a special meaning for high negations while low negations are treated as taking a positive proposition and yielding its complement as usual. We propose that we do not longer name *n’t high negation since it obviously does something else than negate a proposition. It is rather a presuppositional operator, which we will call *n’tPrO (PrO = presuppositional operator). Simply put, *n’tPrO contributes the presupposition that the speaker believes in the complement of *n’t, that is in *p. The meaning of *n’tPrO is given in 30). It presupposes that in all worlds that are compatible with what the speaker s believes, *p is true. We further assume that *n’tPrO requires being in the scope of the question operator Q since it can only occur in questions (28)). The negative marker *n’t in declarative sentences like 27) do not convey a belief of the speaker that the positive proposition is true.

27) Jane isn’t coming.
The meaning of the contracted negation in declarative sentences thus corresponds to the normal-negation and the meaning of \( n' \) does not apply to it. Considering the application of Q to the proposition in the scope of \( n' \), it turns out that Q skips \( n' \) and applies to the proposition without even noticing \( n' \). The question operator is said to be a hole to the presupposition’s projection (Karttunen (1973)). Consequently, the whole meaning of a question containing \( n' \) consists of two parts evaluated on different levels. This is also what vR&S propose in order to account for the different kinds of polar questions: keep the denotations equal in the semantics but account for the differences on a pragmatic level.

On the presuppositional level (PL - 32), we add that the speaker believes in \( p \). On a strictly semantic level - 31), the question operator is applied to the proposition just as in any other question and yields \{that \( p \), that not \( p \}\}.

28) Isn’t John coming?
29) **Licenser of \( n' \):** \( n' \) requires being in the scope of Q
30) \([n'[[n]]] = [\lambda p: \forall w' [w' \in \text{Dox}(g(s), w) \rightarrow p(w')]. p\)
31) **Denotation:** \( Q[[\text{John is coming}]] = \{\text{John is coming, John is not coming}\}
32) **Presupposition:** s believes that John is coming

In sum, the findings suggest that polar questions with high negation usually ask about the positive proposition while low negation questions usually question the negative proposition. This in turn challenges the claim that high negation questions in English are ambiguous. If *either* preferably adjoins to the proposition of questions containing a low negation and *too* preferably adjoins to the proposition contained in high negation questions,\(^8\) then there is evidence for that high negation questions are not ambiguous. Rather, it seems as if they are merely used to express a positive question, which conveys a positive belief of the speaker.

5. Discussion of the German Results

The first impression of the German results is similar to the one of the English results. The ratings of the *auch nicht* questions (either-equivalents) are not sensitive to the presence of a positive speaker’s belief while the ratings of the questions with *nicht auch* increase significantly if the context indicates that the speaker believes in the truth of the positive proposition. We interpret this result such that questions which clearly contain a low negation (disambiguated by *auch* scoping over the negation) do not usually convey the speaker’s belief that the positive proposition is true. Questions with high negation presuppose the positive speaker’s belief.

Surprisingly, the presence of the speaker’s belief had an effect on the ratings of questions containing a negation but *no auch* in the position right before the verb in contexts fulfilling the presupposition of *auch nicht* (either), while the same effect did not appear when the same question was placed in a context which fulfilled the presupposition of *auch* (too). This finding indicates the ambiguous status of the low negation in German polar questions, which might be due to discourse related word ordering.

Since questions with low negation were felicitous with a positive as well as with a negative polarity item, we assume two different readings for them: questioning the positive proposition and questioning the negative proposition. Furthermore, since high negation questions are only possible with positive polarity items and since these questions always convey the speaker’s

\(^8\) Recall the statistically significant difference between the rating of preposed negation questions with *too* and normal negation questions with *too*
belief that the positive proposition is true, questions with a negation immediately before the infinite verb should be regarded as being ambiguous between questioning the positive proposition while presupposing a positive speaker’s belief and questioning the negative proposition. Consequently, negations in the position right before the verb should be regarded as being ambiguous between being of the high negation type and being of the low negation type.

6. Conclusion

Both, the results of the experiment on English negated questions and the results of the experiment of German negated questions indicate that there are two different kinds of negation in polar questions. In English, the two types of negation can be clearly differentiated by morpho-syntax: *n’t versus not*. In German, the negation can partly be differentiated by its position within the sentence structure: If the negation is positioned between the finite verb and subject, the negation does not negate its complement but contributes the presupposition that the speaker believes in the truth of the positive proposition. If the negation is positioned directly before the infinite verb, it might either constitute a ‘real’ negation and negate its complement so that the question asks about the negative proposition or it might constitute the high negation and ask about the positive proposition while presupposing a positive belief of the speaker.

In order to account for the differences between different types of polar questions, vR&S suggested to maintain the semantic denotation as supplied before and allow for differences on another level. We would like to pursue in this direction and assume a presuppositional level on which a high negation question receives the entry that this question presupposes the speaker’s belief that the positive proposition is true. Furthermore, a low negation question might presuppose that a negated question requires a reason for the negation. Finally, positive questions do not receive an entry on the presuppositional level because they can be regarded as the default type of polar questions according to vR&S. In this way, the semantic denotation does not need to be changed. By assuming that different types of polar questions give rise to different entries on the presuppositional level and are thus distinguished from each other, the denotation may remain as supplied before.

Concluding, B&G’s typology of polar questions is best conformable with the findings from the experiments. There are two different kinds of negated polar questions. One questions the negative proposition. The other question asks about the positive proposition and clearly presupposes that the speaker believes in the truth of the positive proposition. The experimental results do not support R&H’s typology, which assumes three types of negated polar questions.

7. Literature


