

## Response particles: The case of English (in comparison to German)

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In a recent study, Meijer, Claus, Repp & Krifka (2015) presented experimental evidence from an acceptability judgment study on the meaning and use of German response particles (*ja* ‘yes’, *nein* ‘no’ *doch*) in responses to assertions which yielded surprises for the existing theoretical accounts of the German response particle system (Krifka 2013; Roelofsen & Farkas 2015). One major finding was that for affirming responses to negative assertions (A: *John doesn’t smoke*. B: *Yes/No he doesn’t.*) there were two groups of speakers such that only a minority of speakers (the “*nein*-group”) showed the preference pattern that was predicted by the theoretical proposals, viz. that *nein* (‘no’) should be preferred over *ja* (‘nein’) in such discourses. The majority of speakers (the “*ja*-group”) showed the opposite pattern, viz. they preferred *ja* over *nein*. Furthermore, Meijer et al. found that for rejecting responses (A: *John doesn’t smoke*. B: *Yes/No he does.*), *nein* was overall preferred over *ja*, which was only predicted by Krifka (2013). Another prediction of Krifka’s, viz. that the choice of particle should be influenced by the wider context – which was motivated by the assumption that response particles are propositional anaphors and thus should be sensitive to different degrees of saliency of the propositional discourse referent they pick up – neither could be confirmed: Whether or not the context introduced a ‘negative’ propositional discourse referent (e.g. by asking about *who doesn’t smoke*) did not interact with the choice of particle.

Since the theoretical proposals, whose predictions could not be confirmed in the study by Meijer et al., make similar predictions for German and for English (affirmations: *no* > *yes*, rejections: *no* > *yes*), and since previous experimental investigations for part of the response particle paradigm in English (e.g. Brasoveanu, Farkas & Roelofsen 2013; Goodhue & Wagner 2015) suggest that the predictions of the theoretical accounts are more or less confirmed by the English data, a question as to the reasons for the different outcomes of the English vs. German experimental studies arose. The differences might be ‘real’ differences between English and German, or the differences might be due to the different materials and the different methods employed in the various studies.

The current study addresses this issue and presents evidence from an experiment that uses the same method as that employed by Meijer et al. (acceptability judgement study, 7-point-rating scale) with translation equivalents of the materials used in the German experiments (with small adaptations for culture-specific localization).

48 participants (UK English, recruited via <http://www.prolific.ac>) were presented with discourses like (1). After a general scene-setting sentence, a context sentence which had either positive polarity or negative polarity was presented. Then a dialogue starting with a negative assertion by one interlocutor, and ending with a response by a second interlocutor was presented. The response took one of the four forms shown in (1): One of the two English response particles (*yes/no*) was followed by a response clause with positive or negative polarity. Thus, the experiment had a 2×2×2 design with the factors CONTEXT (pos/neg), PARTICLE (*yes/no*), and RESPONSE CLAUSE (pos/neg).

- (1) *A couple of weeks ago Heather and Leroy asked their gardener to redo the back garden of their holiday home.*
- |             |                         |   |                             |                             |
|-------------|-------------------------|---|-----------------------------|-----------------------------|
| Kontext     | pos:                    | <i>Now they are reviewing what the gardener has done already.</i> |                             |                             |
|             | neg:                    | <i>Now they are reviewing what the gardener hasn't done yet.</i>  |                             |                             |
| Antecedent: | neg:                    | <i>The gardener hasn't sown the lawn yet.</i>                     |                             |                             |
| Response:   | (i) <i>Yes, he has.</i> | (ii) <i>No, he has.</i>   | (iii) <i>No, he hasn't.</i> | (iv) <i>Yes, he hasn't.</i> |

Participants were instructed to consider the response clause as describing the true of state-of-affairs. Their task was to judge the appropriateness of the response in the dialogue given the true state-of-affairs. After each dialogue participants answered a comprehension question. There were 48 experimental items and 16 fillers.

The statistical analysis (LMMs) revealed main effects of RESPONSE CLAUSE ( $b = .50$ ,  $se = .07$ ,  $t = 7.4$ ), PARTICLE ( $b = -.57$ ,  $se = .05$ ,  $t = -11.4$ ) and an interaction of the two factors ( $b = 1.55$ ,  $se = .08$ ,  $t = 19.4$ ). We resolved the interaction by RESPONSE CLAUSE and compared the effect of PARTICLE, i.e. preference for *yes* vs. *no* within rejecting responses ( $b = .98$ ,  $se = .10$ ,  $t = 9.7$ ) and within affirming

responses ( $b = -2.12$ ,  $se = .088$ ,  $t = -24.2$ ). In rejecting responses, *yes* ( $M = 6.43$ ,  $sd = 1.00$ ) was preferred over *no* ( $M = 4.48$ ,  $sd = 1.68$ ). In affirming responses, *no* ( $M = 6.57$ ,  $sd = .85$ ) was preferred over *yes* ( $M = 2.32$ ,  $sd = 1.40$ ). CONTEXT had no effect. The results, collapsed over context conditions, are shown in Figure 1. The analysis of the preference patterns of individual participants (calculation of z-scores for each participant and subtraction of mean z-score for *no*-answers from that for *yes*-answers, delivering a difference score) showed that in rejecting responses all but one participants preferred *yes* over *no*. Note, however, that for 24 participants the difference score was rather small, below 1. For affirming responses all participants preferred *no* over *yes*. Here, all participants had a difference above 1.

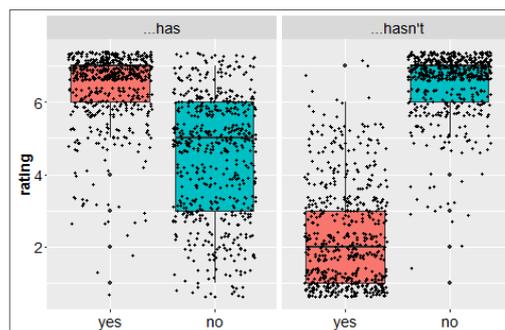


Figure 1 Preference ratings for yes/no in rejecting responses (left) and in affirming responses (right)

The results of the experiment suggest that (UK) English differs clearly from German. In affirming responses to negative assertions English speakers in general prefer *no* over *yes*, which confirms the theoretical predictions and replicates the findings from the earlier experimental studies for English. It is the opposite preference pattern from the German majority group (the *ja*-group), although it is obviously similar to the German minority group (the *nein*-group). We did not find differences between speakers in English. In rejecting responses, English speakers preferred *yes* over *no*, which does not confirm the predictions of the theoretical accounts, which expected the opposite pattern. Neither is the finding a replication of earlier findings by Goodhue & Wagner (2015) for rejecting answers to negative questions, who could not ascertain a difference between *yes* and *no*. Note, however, that the difference between the two particles that we found is not as large as the difference between the two particles in the affirmations in our study, and that for some speakers the former hardly existed. Overall, the smaller difference seems to be due to speakers' being fairly 'permissive' with respect to the non-preferred particle *no* in rejections to negative assertions in the sense that they will accept it but still prefer *yes*. Finally, the preference pattern for rejections in English also differs from the pattern for German rejections, where all speakers preferred *nein* over *ja* (although the dedicated reversing particle *doch* was the most preferred particle in such discourses). Thus, it is not the case that the German *nein*-group in general shares its preferences with English speakers: there is only a similarity in the affirming responses.

Evaluating the experimental findings in a theory-neutral way, (UK) English seems to have a so-called polarity-based system (cf. Pope 1976), i.e. one where the response particle indicates the polarity of the response clause, that is *yes* indicates positive response clause polarity (*yes, he has*) and *no* indicates negative response clause polarity (*no, he hasn't*), with the additional but dispreferred option to use *no* as a purely rejecting particle, that is *no* may generally be used to reject a previous utterance. The German *nein*-group does not share this system even though they have the same preference pattern as English speakers for affirming responses. In rejections, the *nein*-group seems to be able to (also) use *nein* in its rejecting function (*no, he has*), i.e. similarly to English *no*, but *ja* cannot be used in its polarity-indicating function, unlike English *yes*. The most obvious difference between the two languages is the availability of the particle *doch* in German, which is used as a rejecting particle to negative antecedents (A: *He hasn't*. B: *Doch, he has*). If we assume that *doch* is the dedicated particle for indicating the positive polarity of the response clause in such dialogues, it most likely blocks the use of *ja*, which therefore becomes highly unacceptable. The *ja*-group in German has a completely different response particle system from the (UK) English speakers we tested: their system is 'more' truth-based, i.e. the response particles indicate whether the response is affirming (*ja*) or rejecting (*nein*) the antecedent utterance.

In our poster presentation we will discuss in how far these findings can be accounted for by the theoretical accounts mentioned above.

MEIJER, CLAUS, REPP & KRIFKA (2015). Particle responses to negated assertions: Preference patterns for German *ja* and *nein*. *Proceedings of the 20th Amsterdam Colloquium* (pp. 286-295).

POPE (1976). *Questions and answers in English*. The Hague: Mouton.

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ROELOFSEN & FARKAS. (2015). Polarity particle responses as a window onto the interpretation of questions and assertions. *Language* 91. 359-414.

