

## Two response systems for German *ja* and *nein*? Evidence from usage preference data and interpretation data

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The German response particle system is a three particle system: *ja*, *nein*, and *doch*. In responses to positive assertions and questions, *ja* and *nein* are translation equivalents of *yes* and *no*; *ja* affirms and *nein* rejects a positive antecedent. *Doch* is a dedicated particle for rejecting responses to negative antecedents (see 1.B.i). In affirming responses, both, *ja* and *nein*, can be used (see 1.B.ii), with *ja* signaling the truth of the antecedent (*truth-based strategy*; cf. Jones 1999) and *nein* signaling that the response has negative polarity (*polarity-based strategy*; cf. Jones 1999).

(1) A: Anna raucht nicht. ('Anna doesn't smoke.')

B: i. Doch. (= She does.)

ii. Ja/Nein. (= She doesn't.)

Two recent approaches to response particles (Roelofsen & Farkas 2015, Krifka 2013) can account for the pattern for *ja* and *nein* with competing theoretical analyses. In a nutshell, Roelofsen & Farkas propose that *ja* and *nein* do double duty: *ja* can indicate that the antecedent is true or that the response is positive, and *nein* can signal that the antecedent is false or that the response is negative. Krifka assumes that negative utterances introduce two propositional discourse referents, a negative one and its positive counterpart, which both can be picked up with *ja* and *nein*, with *ja* asserting the targeted discourse referent and *nein* asserting its negation. Both approaches predict that by default *nein* is preferred over *ja* in affirming responses to negative antecedents. In two acceptability-judgment experiments, however, Claus et al. found the opposite pattern: overall, higher ratings for *ja* compared with *nein*. A closer inspection of the data revealed differences among participants. The majority of participants showed a preference for *ja* over *nein*. Yet, a notable minority displayed a preference for *nein* over *ja*. One possible account for the opposite preference patterns is that they reflect two different response systems (e.g. truth-based vs. polarity-based). Yet, what casts some doubt on this account is that the overall difference between the ratings for *ja* and *nein* was rather small and that both particles received mostly rather high ratings. However, the method may have been crucial for this finding. When judging acceptability, people might allow for variation that they are familiar with, e.g. different usage preferences. Thus, participants might have judged a particle response that does not correspond to their response system as quite acceptable because they are acquainted with the usage pattern resulting from the alternative response system.

The goal of the **present study** was to gain further insight into preference patterns for *ja* and *nein* in affirming responses to negative utterances by using different methods. Experiment 1 tapped into usage preferences, with the following rationale: if there are indeed two different response systems, then a production-like task should reveal unequivocal usage preferences. Experiment 2 tapped into interpretation preferences. If speakers of German are indeed familiar with two different usage patterns (possibly reflecting different response systems), then they should take into account both patterns when interpreting bare particles.

In **Exp 1**, participants ( $n=43$ ) were presented with 48 short dialogues (see Table 1). The dialogues consisted in a (negative or positive) assertion and a response, comprising a response particle and a (negative or positive) full response clause. In all target items ( $n=12$ ), the polarity of both the assertion and the response clause was negative. Participants were presented

Der Gärtner hat den Rasen noch nicht gesät. 'The gardener hasn't sown the lawn yet.'
<input type="checkbox"/> Ja, er hat den Rasen noch nicht gesät.
<input type="checkbox"/> Nein, er hat den Rasen noch nicht gesät.
<input type="checkbox"/> Doch, er hat den Rasen noch nicht gesät.
'Ja/Nein/Doch, he hasn't sown the lawn yet.'

**Table 1:** Sample of the dialogues of Exp 1

with three versions of the response, differing only in the response particle. Their task was to indicate which of the responses they themselves would use given they had the knowledge conveyed by the response clause. They were explicitly allowed to choose more than one of the response options. For the target items, i.e. affirming responses to negative assertions, there was a clear overall pattern of response choices: 56% *ja*-response, 27% *nein*-response, 17% choice of both *ja*- and *nein*-response ( $p < .001$ ). An inspection of the individual choice patterns revealed that the majority of participants, approx. 50%, had a clear preference for *ja*. However, approx. 20% showed a clear preference for *nein* and approx. 15% chose the *ja*-response and the *nein*-response about equally often. The choice patterns of the remaining participants are inconclusive. Taken together, the findings from Exp 1 are consistent with the findings by Claus et al. and extend them by revealing more clear-cut preference patterns.

**Exp 2** employed an interpretation choice task. Participants ( $n=45$ ) were presented with modified versions of the 48 dialogues from Exp 1, i.e. the three response versions were replaced by one single response consisting of a bare particle (*ja*, *nein*, or *doch*). In all target items ( $n=16$ ), the assertion was negative and the response particle was either *ja* or *nein*. The participants were asked to indicate how they interpreted the bare response particle by choosing one of three options (see Table 2). They were instructed to choose the third option if they were not sure how to interpret the response particle.

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| <input type="checkbox"/> The gardener hasn't sown the lawn yet. (affirming response)<br><input type="checkbox"/> The gardener has sown the lawn already. (rejecting response)<br><input type="checkbox"/> Without additional information it is not clear to me, what the response means. |
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**Table 2:** Sample of the choice options in Exp 2, translated from German. The information in parentheses was not presented to the participants.

The choice pattern for *ja* differed from the choice pattern for *nein* ( $p < .001$ ). However, both response particles were interpreted as affirming responses in the vast majority of cases (*ja*: 93.1%, *nein*: 84.7%). A closer data inspection revealed that most participants ( $\approx 80\%$ ) interpreted both *ja* and *nein* consistently as affirming responses. Only a small number of participants showed a clear difference between the two particles: Six participants interpreted *ja* as affirming and *nein* as unclear or rejecting, and three interpreted *nein* as affirming and *ja* as unclear. The finding that most participants did not show a clear distinction between *ja* and *nein* is consistent with the assumption that speakers of German are acquainted with two different usage patterns of response particles and take this variation into account when interpreting bare particles.

**Conclusion:** The present findings, stemming from usage preference data and interpretation data, together with the previous findings (Claus et al.), stemming from acceptability data, indicate that there are two different usage preferences for *ja* vs. *nein* in affirming responses to negative antecedents and that speakers of German are familiar with them. The two usage preferences possibly reflect two different response systems. In the framework proposed by Roelofsen & Farkas, the two systems could be characterized in terms of truth-based vs. polarity-based strategies. In Krifka's account, the two different usage preferences would rather be attributed to differences in negation processing.

## References

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