

# Response Particles

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## 2 Theories

Basic assumption of theories considered here:

- Response particles are / contain propositional anaphora
- Preceding clause introduces propositional discourse referents

### 3 Krifka 2013: Saliency account

(3)  $\llbracket [Bill [\bar{p}_{DR} t_{Bill} \textit{ doesn't } [p_{DR} t_{Bill} \textit{ smoke}]]] \rrbracket = \neg \textit{smoke}(\textit{bill})$

$\bar{p}_{DR}$ : negative propDR, anchored to  $\neg \textit{smoke}(\textit{bill})$

$p_{DR}$ : positive propDR, anchored to  $\textit{smoke}(\textit{bill})$

- $p_{DR}$  more salient by default than  $\bar{p}_{DR}$ , hence prime target for discourse particles
- reason: Negated clauses when non-negated DR in previous discourse
- but there are contexts where this is not the case:

(4) *A: Who of your friends does not smoke? B: Bill doesn't smoke.*

Interpretation of response particles:





- *ja* picks up a propDR, asserts it
- *nein* picks up a propDR, asserts its negation
- *doch* picks up  $p_{DR}$  when  $\bar{p}_{DR}$  is also salient, asserts it

In case of negated antecedent clause, default case where  $p_{DR}$  is most salient:

- *doch* for rejection (pick up  $p_{DR}$ , asserts it), blocks other expressions for rejection
- *nein* picks up salient  $p_{DR}$ , asserts its negation, preferred over *ja* for  $\bar{p}_{DR}$ .

Special case where  $\bar{p}_{DR}$  is most salient (*doch* for rejection same as before):

- *ja* picks up salient  $\bar{p}_{DR}$ , asserts it, preferred over *nein* for  $p_{DR}$ .

Particle	Targeted propDR	Meaning	*BLOCK	PRES	*NONSAL	
<b>Salient propDR = p<sub>DR</sub></b>						
<i>ja</i>	p <sub>DR</sub>	p <sub>DR</sub> = rejecting	*			
	$\bar{p}_{DR}$	$\bar{p}_{DR}$ = affirming			*	
<i>nein</i>	p <sub>DR</sub>	$\neg p_{DR}$ = affirming				
	$\bar{p}_{DR}$	$\neg \bar{p}_{DR}$ = rejecting			*	
<i>doch</i>	p <sub>DR</sub>	p <sub>DR</sub> = rejecting				
	$\bar{p}_{DR}$	$\bar{p}_{DR}$ = affirming		*	*	
<b>Salient propDR = <math>\bar{p}_{DR}</math></b>						
<i>ja</i>	p <sub>DR</sub>	p <sub>DR</sub> = rejecting	*		*	
	$\bar{p}_{DR}$	$\bar{p}_{DR}$ = affirming				
<i>nein</i>	p <sub>DR</sub>	$\neg p_{DR}$ = affirming			*	
	$\bar{p}_{DR}$	$\neg \bar{p}_{DR}$ = rejecting				
<i>doch</i>	p <sub>DR</sub>	p <sub>DR</sub> = rejecting			*	
	$\bar{p}_{DR}$	$\bar{p}_{DR}$ = affirming		*		

Prediction for negative antecedents, for saliency account (Krifka 2013) and feature model (Roelofson & Farkas 2013)

Response type	Context	Predicted preference patterns	
		Saliency account	Feature model
Rejecting	Positive (default)	<i>doch &gt; nein &gt; ja</i>	<i>doch &gt; nein = ja</i>
	Negative	<i>nein &gt; doch &gt; ja</i>	
Affirming	Positive (default)	<i>nein &gt; ja</i>	<i>nein &gt; ja</i>
	Negative	<i>ja &gt; nein</i>	

## 4 Experiments

4 acceptability judgement experiments (here: only for assertion antecedents)

- particle + full-clause responses to positive assertions
- preference patterns for *ja/nein* in affirming / rejecting particle + full clause responses to negative assertions
- particle + full clause responses to rejecting assertions, including *doch*
- bare particle responses to affirming responses to negative assertions

## 4.1 Experiment 1: positive antecedent, base line.

48 experimental items, 16 fillers, 48 subjects, 2x2x2 within subjects, rating 1-7

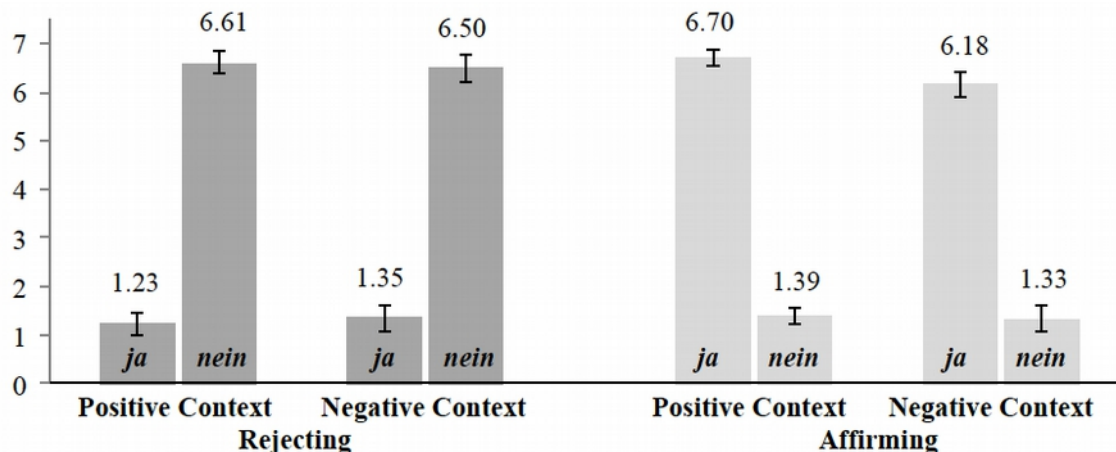
Context sentence: *Ludwig and Hildegard have their large garden redesigned.*

- Positive context: *They are talking about what the gardener has done already.*
- Negative context: *They are talking about what the gardener hasn't done yet.*

Ludwig: *The gardener has sown the lawn already.*

Hildegard: Affirming: *JA, he has sown the lawn already.*  
*NEIN, he has sown the lawn already.*

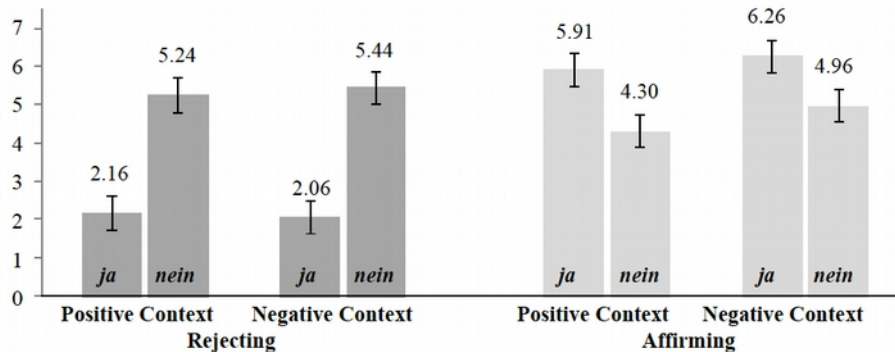
Rejecting: *JA, he hasn't sown the lawn already.*  
*NEIN, he hasn't sown the lawn already.*





## 4.2 Experiment 2: negative antecedent

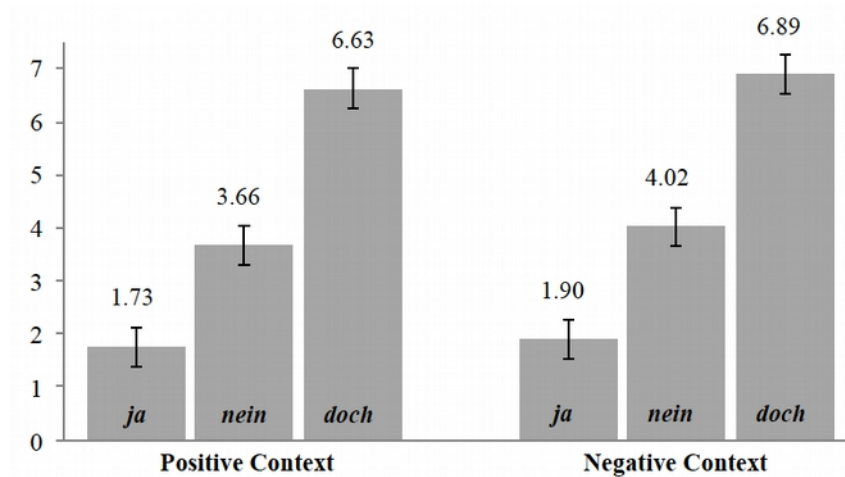
Ludwig: *The gardener hasn't sown the lawn yet.*



- No influence of context, against prediction by saliency account
- Preference for *nein* for rejecting responses (no *doch* provided) not predicted by feature model, predicted as default by saliency account (*NO, he has sown the lawn*; recall that *doch* was not offered as option)
- Slight preference for *ja* for affirming responses against default prediction of saliency and feature model, common knowledge (e.g., Wikipedia) (*JA > NEIN, he hasn't sown the lawn yet*).

### 4.3 Experiment 3: negative antecedent, with *doch*

Results for rejecting answers:



- no influence of context, as before, contra saliency account
- *doch* clearly the best option, as expected
- *nein* better than *ja*, different from expectations of both accounts, as before

## 4.4 Bare particle responses to negated antecedents

Setting: *Ludwig and Hildegard have their large garden redesigned. This morning, Hildegard talked to the gardener, who told her that because of the weather he would sow the lawn only in a couple of days.*

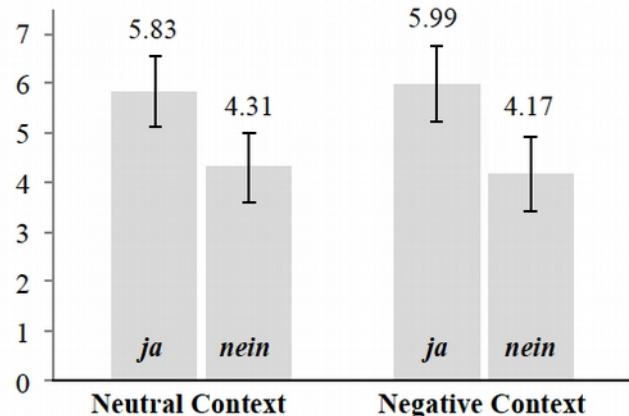
Context: Neutral: *During lunch, Hildegard and Ludwig are talking about the gardener and the redesigning of their garden.*

Negative: *During lunch, Hildegard and Ludwig are talking about what the gardener hasn't done yet.*

Dialogue: Ludwig: *The gardener hasn't sown the lawn yet.*  
Hildegard: *Ja. / Nein.*

Results, again:

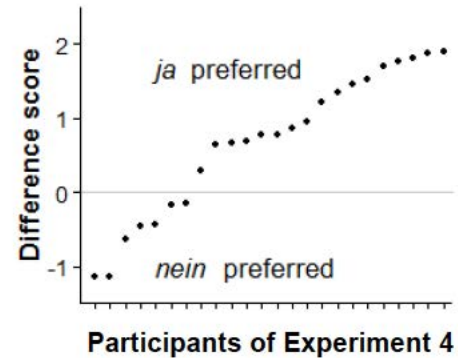
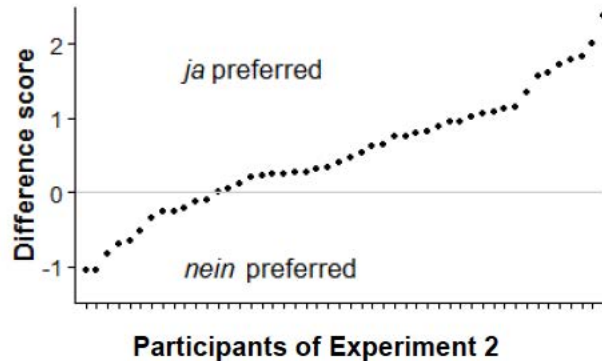
- No influence of context
- Slight preference for *ja* for confirmation



## 4.5 Group differences

Evidence for different behavior of participants

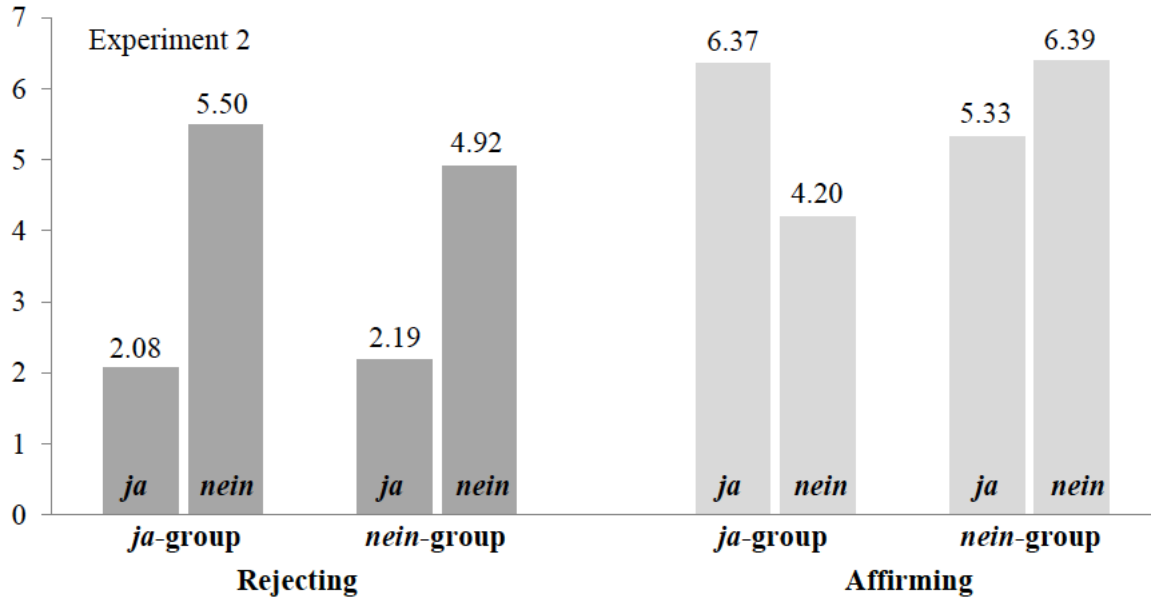
- Difference scores for each participant: Mean rating of *nein* – mean rating of *ja*
- z-value transformation



Two groups:

- *ja*-group (majority) prefers *ja* as affirming particle to negative antecedent
- *nein*-group (minority) prefers *nein* as affirming particle to negative antecedent

## Acceptability judgements by groups, here: Experiment 2



## 5 Revised saliency account

For negated antecedents:

(5)  $[[[Bill [\bar{p}_{DR} t_{Bill} \text{ doesn't } [p_{DR} t_{Bill} \text{ smoke}]]]]] = \neg \text{smoke}(\text{bill})$

*ja*-group:

- The negated DR  $\bar{p}_{DR}$  is more salient
- Reason: It is introduced by the major constituent vs. a subconstituent  
cf. Gordon, Hendrick, Ledoux & Yang (1999) on nominal anaphora:  
*Mary's aunt owns a lake house where she likes to go swimming.*
- Result: *ja* preferred for affirming responses, as it picks out  $\bar{p}_{DR}$

*nein*-group:

- No saliency differences between the two groups
- The use of *ja* is penalized, as the result is ambiguous (creates a tie)  
between  $p_{DR}$  and  $\bar{p}_{DR}$
- With *nein*, picking up  $\bar{p}_{DR}$  would result in a double negation:  $\neg \bar{p}_{DR}$ , to be avoided,  
hence *nein* picks up  $p_{DR}$  and negates it:  $\neg p_{DR}$
- *doch* can only pick up a negated DRs and negates it:  $\neg \bar{p}_{DR}$

## 6 No saliency differences

*ja*-group:

- Always picks up the propositional discourse referent that was asserted
- With negative antecedents, this is  $\bar{p}_{DR}$
- *doch* expresses negation of negated DR:  $\neg \bar{p}_{DR}$

*nein*-group:

- *ja/nein* always pick up the TP discourse referent of the antecedent
- With negative antecedents, this is  $p_{DR}$
- *nein* picks up  $p_{DR}$  and negates it:  $\neg p_{DR}$
- *doch* is like *ja* but requires presence of a negated propDR,  $\bar{p}_{DR}$   
picks up  $p_{DR}$  and affirms it:  $p_{DR}$

## 7 Question antecedents

Low negation questions:

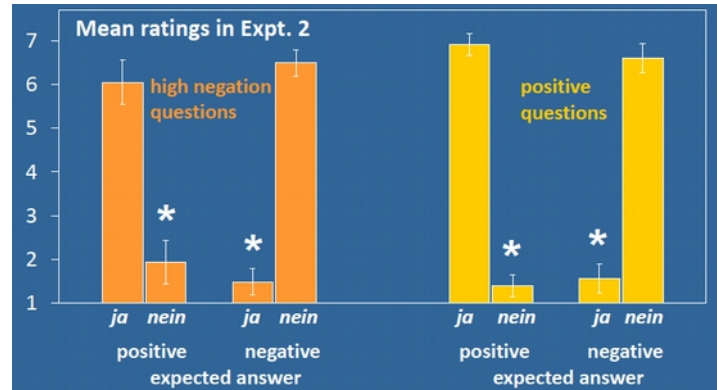
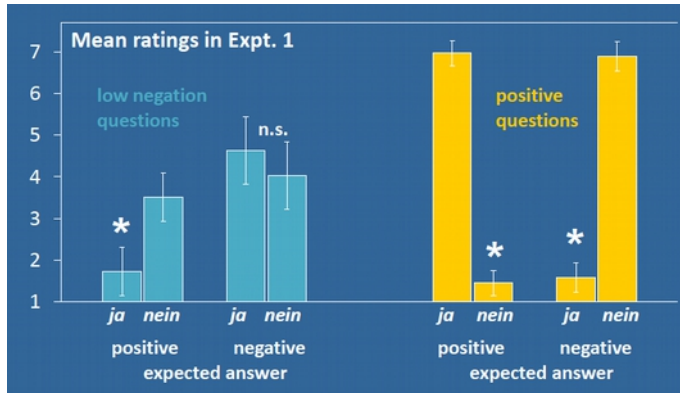
- Example: *Has the gardener not sown the lawn yet?*
- Two propositional discourse referents,  $\rho_{DR}$  and  $\bar{\rho}_{DR}$

High negation question:

- Example: *Hasn't the gardener sown the lawn already?*
- High negation is not propositional, hence only one propDR:  $\rho_{DR}$

Two experiments:

- Low negation questions similar to negated assertions as antecedents
- High negation questions similar to non-negated assertions as antecedents





## 8 Other Responses

Conventional gestures:

- Nodding / Head shake

“Paralinguistic” gestures:

- English: *uh-huh, uh-uh*
- German: *m-hm, m-m*

Expressing agreement / disagreement with assertions, biased (!) questions.

- English: *Right. / Wrong.*
- German: *Richtig. / Falsch. / Stimmt. / Stimmt nicht.*

## 9 Jein



## Use of *jein*:

- Typically used after questions, not after assertions.
- Agreeing response, but signals that usual stereotypical inferences (I-Implicatures, Levinson; R-Implicatures, Horn) should not be drawn.

(6) A: *Have you ever been to Bremen?*

B: *Jein, ich bin nur mal durchgefahren.*  
'Jein, I just drove through once.'

B: *Nein, ich bin nur mal durchgefahren.*  
'No, I just drove through once.'

B: *Ja, aber ich bin nur mal durchgefahren.*  
'Yes, but I just drove through.'

- Agreeing response for one aspect of a question.

(7) A: *Would John be a good for the job?*

B: *Jein. Er bringt die nötige Qualifikationen mit, aber er ist unzuverlässig.*  
'Jein. He has the necessary qualifications, but he is not reliable.'