

What is at-issueness?

An experimental comparison of diagnostics

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- ▶ Very little discussion of whether definitions and diagnostics target the same underlying phenomenon (Snider 2017b,a, 2018; Koev 2018; Faller 2019; Korotkova 2020)
- ▶ This work: take a step in addressing this question, compare whether four commonly used diagnostics yield the same results for propositional contents introduced by the same kinds of expressions

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- ▶ We chose four diagnostics that have been suggested to target different notions of at-issueness and show different empirical patterns (Snider 2017b,a, 2018; Koev 2018; Faller 2019; Korotkova 2020)
- ▶ We offer a systematic experimental comparison

Question-based at-issueness diagnostics

Question-based diagnostics assume a conception of at-issueness relative to the QUD: At-issue content is the part of an utterance that interacts with the current QUD (Amaral et al. 2007; Simons et al. 2010)

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(2) QUD diagnostic (e.g., Tonhauser 2012; Chen 2024)

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B: *Greg, who bought a new car, is envied by his neighbor.*

Question to participants: How well does B's response fit A's question?

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- (3) 'asking whether' diagnostic (e.g., Tonhauser et al. 2018; Solstad and Bott 2024)

Is Greg, who bought a new car, envied by his neighbor?

Question to participants: Is the speaker asking whether Greg bought a new car?

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- ▶ Other diagnostics make other assumptions (Snider 2017b,a, 2018; Koev 2018; Faller 2019; Korotkova 2020)

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- (4) Direct dissent diagnostic (e.g., Tonhauser 2012; Syrett and Koev 2015)

A: *Greg, who bought a new car, is envied by his neighbor.*

B: *No, that's not true, he didn't buy a new car.*

Question to participants: How natural is B's rejection of A's utterance?

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Question to participants: How natural is B's rejection of A's utterance?

- (5) 'yes, but' diagnostic (e.g., Xue and Onea 2011; Destruel et al. 2015)

A: *Greg, who bought a new car, is envied by his neighbor.*

B: *Yes, but he didn't buy a new car. /*

Yes, and he didn't buy a new car. /

No, he didn't buy a new car.

Task for participants: Choose the response that sounds best.

Experiments 1–4: contents

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Propositional contents associated with:

- ▶ Sentence-medial and sentence-final appositive NRRCs (non-restrictive relative clauses): Syrett and Koev 2015 found that final appositives are more at-issue than medial ones under a version of the direct-dissent diagnostic

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In each experiment, 80 participants saw each of 7 conditions once, each randomly paired with a clause to instantiate it (item), e.g. *Greg bought a new car*, + 2 controls (attention checks)

Materials

Exp. 1 (QUD diagnostic)

Nora: *What did Ann steal?*

Leo: *The manager reported Ann, who stole the money.*

How well does Leo's response fit Nora's question?

totally doesn't fit  totally fits

Continue

Materials

Exp. 1 (QUD diagnostic)

Nora: *What did Ann steal?*

Leo: *The manager reported Ann, who stole the money.*

How well does Leo's response fit Nora's question?

totally doesn't fit  totally fits

Continue

Exp. 2 ('asking whether' diagnostic)

Charlotte: *Did the manager report Ann, who stole the money?*

Is Charlotte asking whether Ann stole the money?

no  yes

Continue

Materials

Exp. 1 (QUD diagnostic)

Nora: *What did Ann steal?*

Leo: *The manager reported Ann, who stole the money.*

How well does Leo's response fit Nora's question?



Continue

Exp. 2 ('asking whether' diagnostic)

Charlotte: *Did the manager report Ann, who stole the money?*

Is Charlotte asking whether Ann stole the money?



Continue

Exp. 3 ('direct dissent' diagnostic)

Dawn: *The neighbor envies Greg, who bought a new car.*

Charlotte: *No, he didn't buy a new car.*

How natural is Charlotte's rejection of Dawn's utterance?



Materials

Exp. 1 (QUD diagnostic)

Nora: *What did Ann steal?*

Leo: *The manager reported Ann, who stole the money.*

How well does Leo's response fit Nora's question?



Continue

Exp. 2 ('asking whether' diagnostic)

Charlotte: *Did the manager report Ann, who stole the money?*

Is Charlotte asking whether Ann stole the money?



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Exp. 3 ('direct dissent' diagnostic)

Dawn: *The neighbor envies Greg, who bought a new car.*

Charlotte: *No, he didn't buy a new car.*

How natural is Charlotte's rejection of Dawn's utterance?



Exp. 4 ('yes, but' diagnostic)

Vincent: *The boss scolded Dustin, who lost his key.*

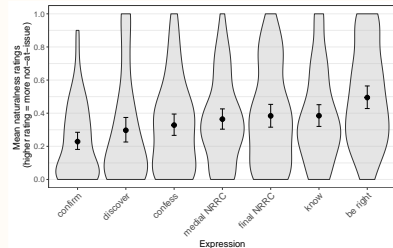
Nina:

- ☐ *Yes, but he didn't lose his key.*
- ☐ *Yes, and he didn't lose his key.*
- ☐ *No, he didn't lose his key.*

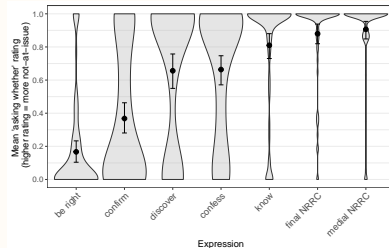
Please choose the response by Nina that sounds best to you.

Results

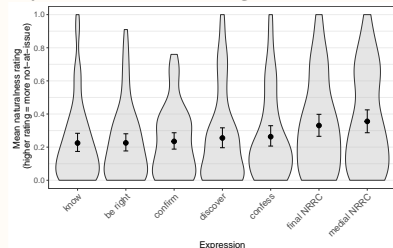
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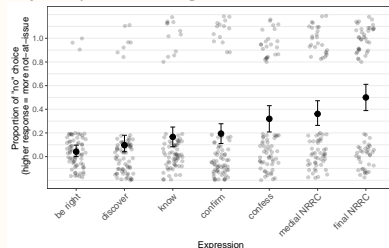
Exp. 2 ('asking whether' diagnostic)



Exp. 3 ('direct dissent' diagnostic)

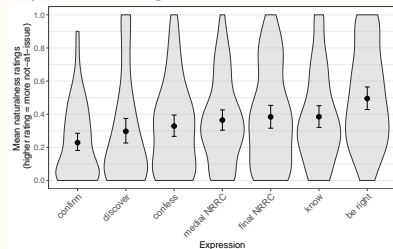


Exp. 4 ('yes, but' diagnostic)

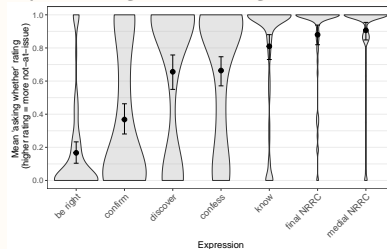


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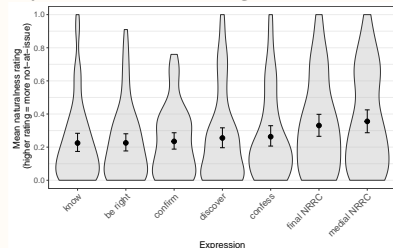
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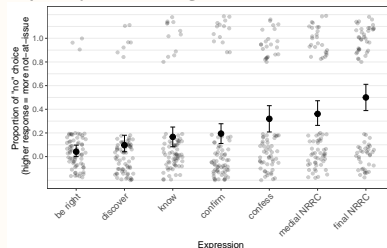
Exp. 2 ('asking whether'): greatest differentiation between contents

- ▶ Range of means
- ▶ More pairwise differences between contents

Exp. 3 ('direct dissent' diagnostic)

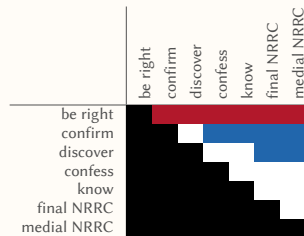


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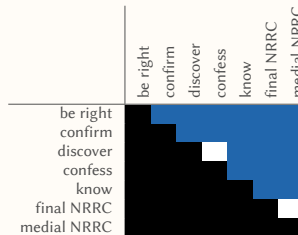


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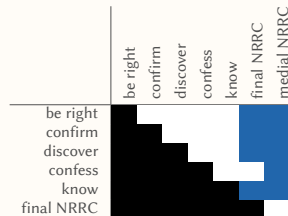
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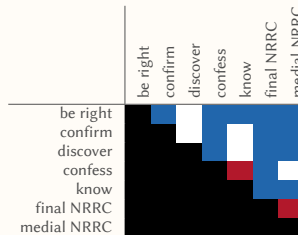
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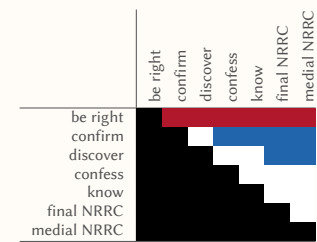
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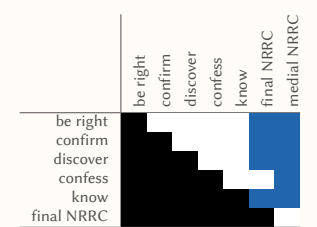
Posthoc pairwise comparisons of the estimated means/proportions for each content using the 'emmeans' package (Lenth 2023) in R (R Core Team 2016). The input to the pairwise comparisons were bayesian mixed-effects beta regression models (Exps. 1-3) or a mixed-effects logistic regression model (Exp. 4)

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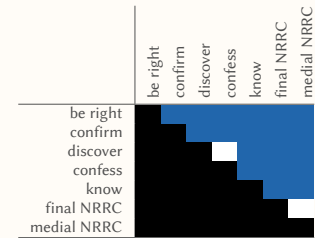
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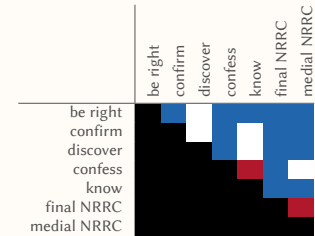
Exp. 3 (‘direct dissent’ diagnostic)



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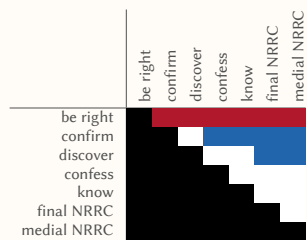
Content rankings always different

- ▶ Embedded content of *confirm* and *discover* always more at-issue than NRRCs
- ▶ No other pairwise difference is found for all diagnostics

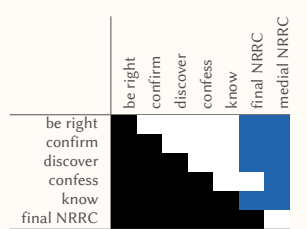
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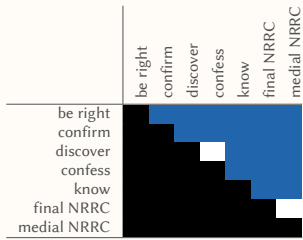
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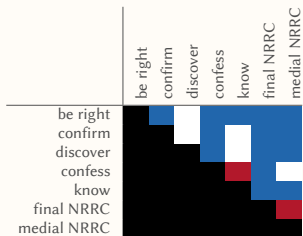
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Final NRRCs are not more at issue than medial NRRCs

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We further explore this question:

Why does Exp. 2 ‘asking whether’ show a greater differentiation of contents than the other diagnostics?

Why is 'asking whether' so different?

Previous literature:

- ▶ **Question-based vs. assertion-based at-issueness** diagnostics:
The question-based diagnostics (QUD, 'asking whether') are about whether a proposition is at issue relative to a QUD introduced in the previous discourse, whereas assertion-based diagnostics (direct dissent, 'yes but') target a different underlying notion

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① **Question embedding:**

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① **Question embedding:**

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② **Response task:**

...when participants are more directly asked what the utterance was about vs. when giving acceptability judgment or forced-choice continuation responses.

Question-embedding or response task?

In experiments 5 and 6, we test whether the fine-grained differences among clause-embedding predicates observed with one diagnostic (asking-whether) are replicated with other diagnostics.

- (6) a. Exp. 5 ('asking whether' diagnostic)
Nora: *Is Cole right that Lucy broke the plate?*
Question to participants: Is Nora asking whether Lucy broke the plate?
- b. Exp. 6 ('direct response', question embedding + direct *yes*-response)
Nora: *Is Cole right that Lucy broke the plate?*
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Question to participants: How natural is Leo's response to Nora's question?

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- 1 If **question embedding** is what allows for greater differentiation between contents, results from Exp. 5 and Exp. 6 should be very similar
- 2 If **response task** is what allows for greater differentiation between contents, results from Exp. 5 and Exp. 6 should be rather different

Materials + procedure

Exp. 5 (‘asking whether’ diagnostic)

Ruth asks: "*Did Helen discover that Tony had a drink last night?*"

Is Ruth asking whether Tony had a drink last night?

no

yes

Next

Materials + procedure

Exp. 5 ('asking whether' diagnostic)

Ruth asks: "*Did Helen discover that Tony had a drink last night?*"

Is Ruth asking whether Tony had a drink last night?

no

yes

Next

Exp. 6 ('direct response' diagnostic)

Gary: "*Did Cole acknowledge that Julian dances salsa?*"

Christina: "*Yes, Julian dances salsa.*"

Does Christina's response to Gary sound good?

no

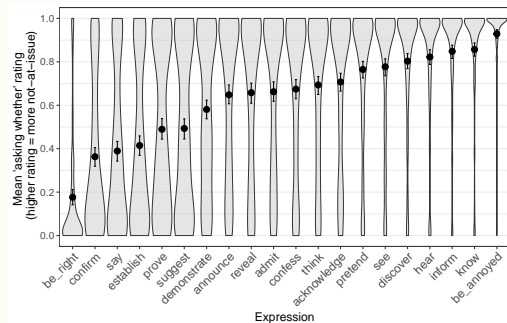
yes

Next

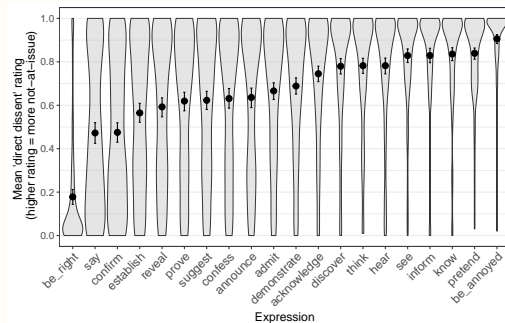
Across both experiments, 550 participants saw each of 20 conditions once, each randomly paired with a clause to instantiate it (item), e.g. *Julian dances salsa* + 6 control trials (attention checks)

Results

Exp. 5 ('asking whether' diagnostic)

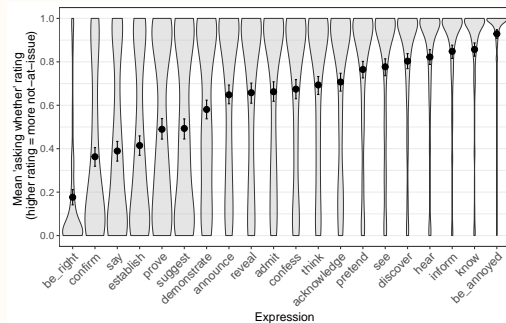


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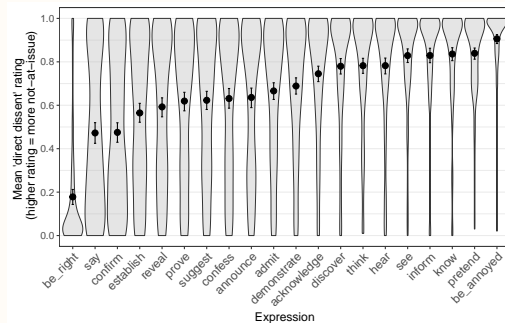


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Exp. 5 ('asking whether' diagnostic)



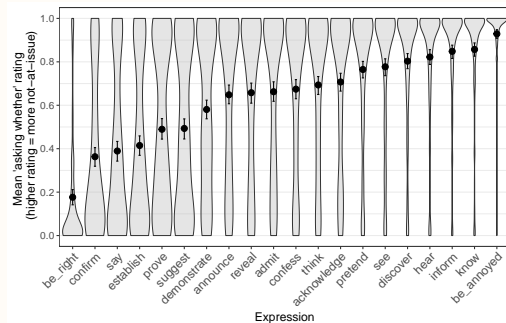
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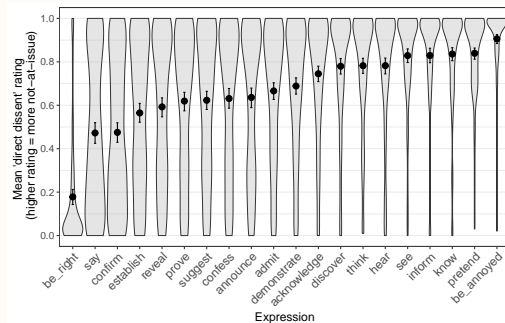
- ▶ Results look very similar here
- ▶ Pairwise differences between many of the same contents (?)

Results

Exp. 5 ('asking whether' diagnostic)



Exp. 6 ('direct response' diagnostic)



- ▶ Results look very similar here
- ▶ Pairwise differences between many of the same contents (?)
- ▶ By-content means from the two experiments are highly correlated (Spearman rank correlation = .93)

Discussion

- ▶ Results from Exps. 5–6 are highly correlated
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 - ▶ More than response task
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Different from previous literature suggesting that different diagnostics show different empirical results: Mostly highlighted difference between QUD at-issueness, and assertion-based diagnostics, which are either argued not to be about at-issueness at all (Snider 2017b,a, 2018), or about a separate assertion-based notion of at-issueness (Koev 2018; Faller 2019; Korotkova 2020)

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- ▶ Therefore **questions are good context to test at-issueness differences** which may be conditioned by literal
- ▶ Testing the at-issueness of contents in declarative assertions muddles the picture, making at-issue and not-at-issue content harder to distinguish; especially when the test itself invokes commitment (like those using assent/dissent)

Takeaways

- ▶ Experimental confirmation for claims that there are empirical differences between at-issueness diagnostics (Snider 2017b,a, 2018; Koev 2018; Faller 2019; Korotkova 2020)

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- ▶ Left open here: What the results might tell us about whether the diagnostics reflect a shared underlying notion of at-issuence

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