

**“now that we know, what stands out?”**  
posterior comments on  
**“prior beliefs and projection”**  
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this is super cool stuff

i think we can all agree

# two\* major contributions

at least the way I see it      there are probably many more

1. we can derive the ‘factive’ inference of *know* via a pragmatic RSA process, without having to encode it as a presupposition in the lexical entry
2. this method allows us to observe the sensitivity of projection to a number of factors, including
  - lexical entailments
  - compositional semantic denotation
  - what the QUD is
  - prior beliefs

} semantic stuff

} pragmatic stuff

# deriving factivity via inference

(as opposed to storing it in the lexicon)

## A. how far can we take this?

what things that we normally think of as ‘part of the semantics’ can actually be recovered via a rational inference process?

- argument structure?
- compositional structure?
- verbal Aktionsart?

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presumably there are limits to how far we can push this

we don’t have to infer the meaning of every expression from 0 every time there is *some* stored representation, even if it can shift (over time/in context)

but where exactly those limits are: an even-more-open question!

# deriving factivity via inference

(as opposed to storing it in the lexicon)

## B. what about diversity?



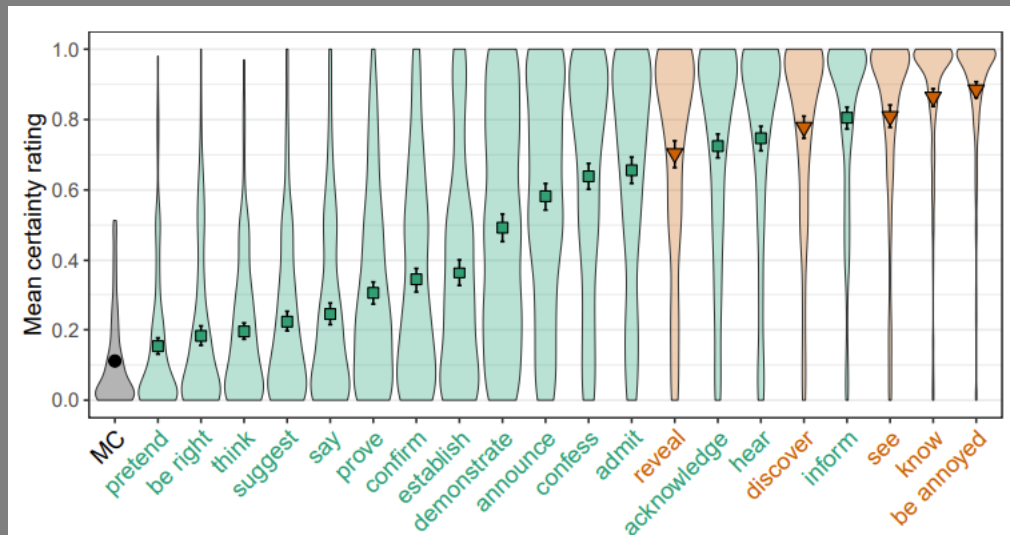
# deriving factivity via inference

(as opposed to storing it in the lexicon)

## B. what about diversity?

in Intro to Semantics we learn words are either factive or not

but for the past 15 years at least, we've paid increased attention to the fact that the picture is more complicated than that



**projection diversity,**  
**or projection variability,**  
is the name for the observation that there is no clear categorial distinction between e.g. factive and non-factive embedding verbs



# projection diversity



in this project, we see *know* diverge from *think* because it has

- different semantics ('literal meaning') from *think*
- both *think* and the bare complement as competitors

what happens if we populate the utterance space with many more competitors (*believe, guess, suppose, understand...*)?

can we still derive this *know* vs. *think* (vs. bare) projection behavior, with many more competitors in the inference space?

can we derive the full range of gradient predictions we see in experimental data, using this set-up?

# projection diversity



if we do want to derive the full range of gradient predictions we see in experimental data using a similar RSA set-up,

how much of that variability can we attribute to

- experimental participants having (a range of) different priors
- experimental participants imagining different (implicit) QUDs
- how variably ‘relaxed’ (i.e., credulous) experimental participants are
- <and so on for whatever other pragmatic factors we add to the list>

would we see clear categories if we controlled for those things?!?

can we predict the gradience without having to postulate an unspoken parameter for interpreters to jointly infer (i.e., how factive the speaker intends a use of *know* to be)



# projection diversity



the **Gradient Projection Principle** (Tonhauser et al. 2018) accounts for projection diversity by tying it to **gradient at-issueness**

as noted in §2.3, there is work calling the GPP into question for some predicates (but via apples-to-oranges comparisons), but the current project's experiments are in line with the GPP for *know/think*

but if we can explain the gradience (even partially!) via

- experimental participants having (a range of) different priors
- experimental participants imagining different (implicit) QUDs
- how variably 'relaxed' (i.e., credulous) experimental participants are
- <and so on for whatever other pragmatic factors we add to the list>

then C. can we go back to considering at-issueness categorical?

# what is projection sensitive to?

as we saw, projection is sensitive to:

- lexical entailments
- compositional semantic denotation
- what the QUD is ←
- prior beliefs
- how 'relaxed' (i.e., credulous) the listener is

Stay tuned for forthcoming work out of here at Tübingen!

## D. what else should be on this list?

one suggestion: how credible the listener takes the speaker to be

- this might influence how likely a listener is to uptake (i.e., if the speaker says  $p$ , how likely the listener is to now come to also believe  $p$ )  
(and thus now consider  $p$  to be part of the Common Ground)
- but also how likely a listener is to consider the speaker to be faithfully representing their own beliefs (a BSer's content might never project!)