

Title

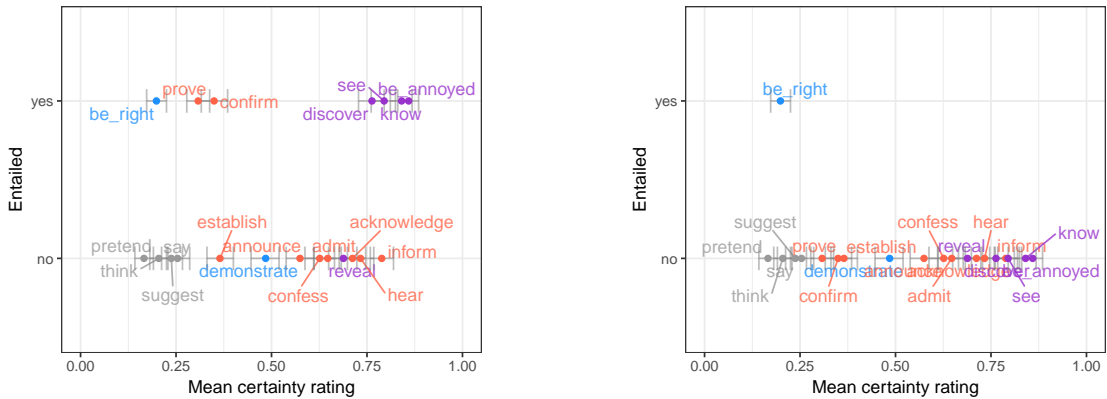
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Projection analyses have largely limited their attention to ‘factive’ predicates, like *know* and *discover*, to the exclusion of ‘non-factive’ ones, like *think* and *announce* (see, e.g., Heim 1983, van der Sandt 1992, Abrusán 2011, 2016, Romoli 2015 and Simons et al. 2017). This limitation is motivated by the long-standing and widely-assumed assumption that ‘factive’ predicates are empirically distinguished from ‘non-factive’ ones (see, e.g., Karttunen 1971, Kiparsky and Kiparsky 1971 and much literature thereafter): as shown in Fig. 1, the content of the complement of a ‘factive’ predicate is taken to be both projective and entailed, whereas it is not both projective and entailed for a ‘non-factive’ one (e.g., Gazdar 1979, Chierchia and McConnell-Ginet 1990, van der Sandt 1992, Schlenker 2010, Anand and Hacquard 2014, Spector and Egré 2015).

	‘non-factive’	‘factive’
yes	demonstrate be right	be annoyed know see discover reveal
no	pretend think suggest say	inform hear acknowledge admit confess announce establish confirm prove
	no	yes
	Projective	

Figure 1: Standard classification of 20 English predicates

This paper investigates the empirical support for the distinction between ‘factive’ and ‘non-factive’ predicates by measuring projectivity and entailment for the complements of the 20 predicates in Fig. 1. Projectivity was measured with the ‘certain that’ diagnostic: following Tonhauser, Beaver, and Degen 2018, we assume that projectivity is a gradient property of content. For entailment, we applied two standard diagnostics: under the ‘inference’ diagnostic, p entails q iff q follows from the truth of p ; under the ‘contradictoriness’ diagnostic, p entails q iff p but not q is contradictory. As shown in Fig. 2, the content of the complement of ‘factive’ predicates (given in purple) is overall more projective than that of ‘non-factive’ ones. However, the content of the complement of many ‘non-factive’ predicates is projective, too. We argue that these contents constitute an exciting challenge for future projection analyses. Furthermore, we found that the entailment diagnostics do not both support an analysis of the content of the complement of the ‘factive’ predicates as entailed; neither diagnostic provides such support for *reveal*. We suggest that research on entailment needs to take the pragmatics of entailment judgments more seriously (see also de Marnette et al. 2012). **BUT WHAT DO WE CONCLUDE ABOUT FACTIVE PREDS?**



(a) Inference diagnostic for entailment

(b) Contradictoriness diagnostic for entailment

Figure 2: Mean certainty rating (with 95% CIs) of the content of the complement of 20 predicates by whether the content is entailed under the (a) inference or (b) contradictoriness diagnostic.

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