

**1 Synopsis.** Under focus intonation, the traditionally factive verb *know* patterns as a nonfactive, both semantically and syntactically. It has been noted in the literature (see Abusch 2002, 2010; Simons *et al.* 2014) that some factive verbs, including *know*, lose their factive presuppositions in certain contexts. For example, Simons *et al.* (2014) discuss the role of intonational focus with respect to factive presuppositions. However, in all of the examples discussed in the literature, the presupposition canceling coincides with negation. In this analysis, I argue that focus intonation alone is enough to cause *know* to behave as a nonfactive, and furthermore, that this is a distinct phenomenon from those discussed in Abusch 2002, 2010; Simons *et al.* 2014. Specifically, when under focus, *know* functions as a strengthened nonfactive *believe*. As a result, focused *know* does not give rise to a factive presupposition, and furthermore, patterns as a nonfactive with respect to syntactic tests.

**2 Assertion and presupposition of focused *know*.** The use of *know* ordinarily commits the speaker to the truth of the embedded proposition, as represented in (1); however, when *know* is expressed with focus intonation, as in (2), this presupposition is not present.

- (1) Andrew knows that Faith ate the last Hot Pocket.  
*assertion:* Andrew believes that Faith ate the last Hot Pocket.  
*presupposition:* Faith ate the last Hot Pocket.
- (2) Andrew [knows]<sub>F</sub> that Faith ate the last Hot Pocket.  
*assertion:* Andrew believes (strongly) that Faith ate the last Hot Pocket.  
*presupposition:* no factive presupposition

Additionally, the focus intonation appears to add an emphasis to the belief meaning of *know*, where it ceases to indicate simple awareness and becomes instead a strength of conviction. Essentially, focused *know* is similar in meaning to *be convinced*. This contrast in factivity under focus is supported by the felicity of a contradiction to the presupposition of (1) when following focused *know*, but not when following ordinary *know*.

- (3) Andrew knows that Faith ate the last Hot Pocket. #But she didn't. Dawn did.  
(4) Andrew [knows]<sub>F</sub> that Faith ate the last Hot Pocket. But she didn't. Dawn did.

**3 Focus amelioration of island effects.** As has long been noted in the literature, factive complements serve as islands to *wh*-extraction of subjects and adjuncts, unlike nonfactive complements. This can be seen in the following examples of subject extraction.

- (5) Who<sub>i</sub> does Andrew believe t<sub>i</sub> ate the last Hot Pocket?  
(6) \* Who<sub>i</sub> does Andrew know t<sub>i</sub> ate the last Hot Pocket?

In order to account for this contrast, it has been proposed that factives and nonfactives select for different clause types (Kiparsky & Kiparsky 1970; Haegeman 2006; de Cuba 2006, 2007). On one version of this analysis, nonfactive clausal complements contain additional structure which hosts an operator that reassigns the speaker value in the context of evaluation of the embedded clause (Haegeman 2006; de Cuba 2006, 2007; Basse 2008). This additional structure serves as an escape hatch for *wh*-extraction, explaining the asymmetry in extraction from nonfactive and factive complements. This account also attributes the presuppositions of factive predicates to a default evaluation, resulting from the lack of this operator.

However, while non-focused *know* exhibits island effects, when *know* is expressed under focus intonation, it behaves like a nonfactive with respect to *wh*-extraction, as shown in (7).

- (7) Who<sub>i</sub> does Andrew [know]<sub>F</sub> t<sub>i</sub> ate the last Hot Pocket?

**4 Embedded free relatives.** Further evidence for the nonfactive nature of focused *know* comes from the distribution of embedded free relatives under factive and nonfactive predica-

tes. Ott (2011) argues that the entire free relative clause takes on the featural structure of the moved *wh*-phrase. Given his proposal, it is predicted that nonfactive matrix verbs should only be able to embed free relatives which themselves contain a nonfactive verb, and vice versa for factive verbs. This prediction is borne out, with some added restrictions. The contrast is clearly evident with a matrix verb like *believe*, which does not license embedded questions. For the examples (8-11) below, consider a context where Anya said (or believes, etc.) that Faith ate the last Hot Pocket; the intended free relative reading is that Andrew believes that Faith ate the last Hot Pocket.

- (8) Andrew believes what Anya said.                   (10) ?Andrew believes what Anya knows.  
 (9) Andrew believes what Anya believes.           (11) \*Andrew believes what Anya regrets.

As the data above demonstrate, a nonfactive verb like *believe* will only take a free relative when the embedded clause contains a nonfactive verb. And as predicted by the current analysis, when *know* is under focus intonation, it patterns with nonfactives and may be embedded in a free relative under *believe*. This construction is markedly better than when unfocused *know* is embedded under *believe*, as in (10). This is shown in (12) below.

- (12) Andrew believes what Anya [knows]<sub>F</sub>.

Here, the intended meaning is that Anya is convinced that Faith ate the Hot Pocket, and Andrew shares that belief (perhaps to a lesser degree). Note that the judgment is made more clear with the inclusion of a focusing adverb like *only* before *believes*.

**5 Proposal.** As shown above, focused *know* consistently patterns with nonfactive verbs in both the semantic and syntactic domains. The puzzle, then, is why focus intonation would cause a structural change in the complement of a factive verb. I argue that the answer is tied to the particulars of the lexical meaning of *know* and its nonfactive friend *believe*. More precisely, I propose that the lexical entries of *believe* and *know* are identical except for their selectional requirements. Specifically, this analysis takes there to be a nonfactive feature, which I call [+nf], in the lexical entry of *believe* selecting for a nonfactive clausal complement, which is not present in the default lexical entry of *know*. In addition to triggering a nonfactive syntactic structure, this feature necessitates the existence of the operator discussed in section 3, accounting for the differing presupposition behavior of factive and nonfactive predicates.

When *know* is under focus an alternative set based on strength of belief (or strength of evidence for belief) is triggered; the strongest value is selected, resulting in the nonfactive assertion of strong belief. Because this alternative set is based on *believe*, the feature present on focused *know* is [+nf], yielding a nonfactive syntactic structure, and thus no factive presupposition. This analysis requires a slight broadening of the role of focus discussed in Rooth 1992 to include featural as well as semantic alternatives, which is supported by the differing syntactic behavior of focused and non-focused *know* demonstrated above.

REFERENCES: \*Abusch 2002. Lexical alternatives as a source of pragmatic presuppositions. *SALT* 12. \* Abusch 2010. Presupposition triggering from alternatives. *JoS* 27. \* Basse 2008. Factive complements as defective phases. *WCCFL* 27. \* de Cuba 2006. The adjunction prohibition and extraction from non-factive CPs. *WCCFL* 25. \* de Cuba 2007. *On (non)factivity, clausal complementation and the CP field*. \* Haegeman 2006. Conditionals, factives and the left periphery. *Lingua* 16. \* Kiparsky & Kiparsky 1970. *Fact*. \* Ott 2011. A note on free relative clauses in the theory of phases. *LI* 42. \* Rooth 1992. A theory of focus interpretation. *NLS* 1. \* Simons, Beaver, Roberts & Tonhauser 2014. The best question: explaining the projection behavior of factives. Ms.