Focus Effects on the Factivity of *know*

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PLC 39, March 2015

Overview

- *Know* has traditionally been analyzed as a factive predicate.
- I show that, when focused, *know* behaves like a nonfactive.
- I provide a unified account of the syntactic and semantic behavior of *know* as it interacts with focus: I propose that *know* is a "camouflaged" nonfactive predicate that exhibits factive behavior in default contexts.

Factive vs. Nonfactive Predicates

- Kiparsky & Kiparsky 1970: propositional attitude predicates can be classified into two categories, factive and nonfactive.
  - These predicates differ in both their semantic and syntactic behavior.
- Semantics – Presupposition:
  Factive predicates presuppose the truth of their sentential complements:

(1) Factives:
  a. Andrew resents that Faith ate the last Hot Pocket.
  factive presupposition: Faith ate the last Hot Pocket.
  b. Jonathan hates that Warren was talking about him yesterday.
  factive presupposition: Warren was talking about Jonathan yesterday.

(2) Nonfactives:
  a. Andrew thinks that Faith ate the last Hot Pocket.
  no factive presupposition/speaker commitment
  b. Jonathan suspects that Warren was talking about him yesterday.
  no factive presupposition/speaker commitment

- Syntax – Island Effects:
  Factive predicates are also weak islands to *wh*-extraction from their complements:

(3) Factives:
  a. * Who does Andrew resent (that) ate the last Hot Pocket?
  b. * When does Jonathan hate that Warren was talking about him?

(4) Nonfactives:
  a. ✓ Who does Andrew think ate the last Hot Pocket?
  b. ✓ When does Jonathan suspect that Warren was talking about him?

	presuppose complement	allow *wh*-extraction
factive	✓	×
nonfactive	×	✓

Unmarked vs. Focused *know*

- Presupposition:

(5) Unmarked (non-focused) *know*:
  a. Andrew knows that Faith ate the last Hot Pocket. #But she didn't—I saw Dawn take it.
  b. Jonathan knows that Warren was talking about him yesterday. #But he's just being paranoid—Warren didn't talk about him at all yesterday.

(6) Focused *know*:
  a. Andrew [knows]$_F$ that Faith ate the last Hot Pocket. ✓But she didn't—I saw Dawn take it.
  b. Jonathan [knows]$_F$ that Warren was talking about him yesterday. ✓But he's just being paranoid—Warren didn't talk about him at all yesterday.

- Island Effects:

(7) Unmarked (non-focused) *know*:
  a. */? Who does Andrew know ate the last Hot Pocket?
  b. */? When does Jonathan know Warren was talking about him?

(8) Focused *know*:
  a. ✓ Who does Andrew [know]$_F$ ate the last Hot Pocket?
  b. ✓ When does Jonathan [know]$_F$ Warren was talking about him?

Factivity of *know* and [*know*]$_F$

	presuppose complement	allow *wh*-extraction
know	✓	×
[know]$_F$	×	✓

Semantics & Pragmatics – Background

- The standard analysis: factive presuppositions are lexically encoded:

(9) $[\![\text{know}]\!] = \lambda p \lambda x [\text{M}_\text{B}(x) \subseteq p_{\langle \text{M}_\text{B}(s) \subseteq p \rangle}]$, where s is the speaker

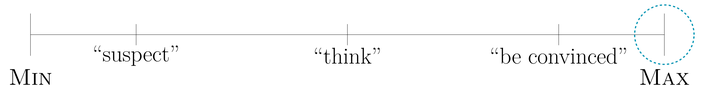
(10) $[\![\text{believe}]\!] = \lambda p \lambda x [\text{M}_\text{B}(x) \subseteq p]$

(following Hintikka 1969; Beaver 2001, among others)

Semantics & Pragmatics – Proposal

- Instead, I assume that the asserted content of both *know* and *believe* is (10).
  - They differ only in their selectional requirements, which syntactically determine the presuppositional content.
- When under focus, *know* seems to mean something like "strongly believe".
- So, I take focus intonation to:
  1) give rise to a **scale** based on the base meaning of *know*, which can be thought of as an alternative set (as in Rooth 1992) and,
  2) pick out the **maximum value** on that scale.

Strength of belief scale:

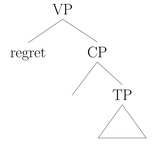


- I take the ordinary (non-focused) meaning of *know* to be completely nongradable in this way; it is the focus intonation (and potentially other salient factors) that allows for this scalar gradability.

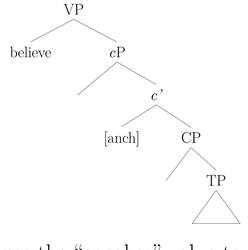
Syntax – Background

- I adopt a variant of the frameworks in de Cuba 2006, 2007; Haegeman 2006, which assume that factives and nonfactives select for different clause types.
- de Cuba 2006: nonfactives select for an additional functional projection, *c*P, which allows *wh*-movement through its specifier and hosts an operator which prevents speaker commitment (factive presupposition). Factives lack this additional structure.

(11) Factive:



(12) Nonfactive:

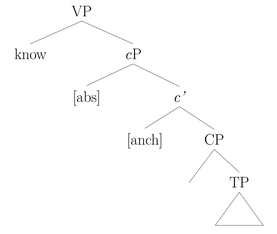


- The operator, which I call [anchor], reassigns the "speaker" value to the subject, resulting in evaluation in the belief model of the subject rather than the speaker.

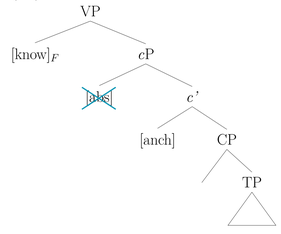
Syntax – Proposal

- *Know* is syntactically nonfactive, i.e., it selects for a *c*P.
- The distinction between *know* and *believe* is that the complement of *know* contains an additional operator, which I label [absolute], sitting in the specifier of *c*P.

(13) Unmarked *know*:



(14) Focused *know*:



- This [absolute] operator is speaker-oriented, and essentially requires that the proposition be non-gradable. Thus, [absolute] evokes the belief model of the speaker, resulting in a "factive-like" presupposition.
- Because of the non-gradable imposition of the [absolute] operator, it is incompatible with the stated effects of focus intonation. As a result, we can say that focus may only occur on *know* when the [absolute] operator is not present.
- Thus, it is exactly when *know* is under focus that it allows for *wh*-extraction.
- Furthermore, because *know* also selects for a *c*P headed by the [anchor] operator, the result is that focused *know* behaves entirely like a nonfactive, syntactically and semantically.

Conclusions & Open Questions

- Although *know* is often cited as a classic example of a factive verb, evidence from focus intonation lends support to the notion that *know* is actually nonfactive.
- Putting the analysis in this framework helps account for the fact that focus affects the factivity of *know* in both the syntactic and semantic domains (without resorting to positing multiple lexical entries, another potential solution).
- It is interesting that *know* appears to be the only "factive" verb that is sensitive to focus effects in this way. However, there are a number of other factive verbs whose presuppositions disappear in certain contexts, such as *discover*, *realize*, *learn*, *find out*, etc. Future work on this topic will examine whether a similar story can be told for the behavior of these predicates.
- It would be worth examining gradability cross-linguistically to see if corresponding effects are observed.
- Additionally, more data providing evidence for the speaker-oriented [absolute] operator in other contexts would lend further support for this analysis.

Selected References

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Special thanks to Dorit Abusch, John Bowers, Miloje Despic, Molly Diesing, Sarah Murray, and my friends and colleagues at Cornell from Research Workshop, Syntax Circle, and Semantics Reading Group