

# Iffy knowledge and epistemic modality *de re*

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## 1 iffy knowledge

Bob to Sarah:

- (1) I'll tell you this much. The set {Dilip, Seth} contains my favorite student, but also a student I'm on the fence about at best.

From this Sarah learns:

- (2) Bob's favorite student is either Dilip or Seth.
- (3) If Bob's favorite student isn't Dilip, it's Seth.

That is, she *gains knowledge* from what Bob tells her. She can say truly:

- (4) I know that Bob's favorite student is either Dilip or Seth.
- (5) I know that if Bob's favorite student isn't Dilip, it's Seth.

How exactly did Sarah come by this conditional knowledge, if or-to-if isn't semantically valid but is rather only a "reasonable inference" (Stalnaker [1975])?

Idea: Sarah's state of knowledge corresponds to a set of possibilities (cf. Stalnaker [1984, 2006]). The indicative morphology compels the selection function to choose from Sarah's knowledge worlds.

How does this work? Where is this constraint in the semantics/pragmatics?

For indicatives... the pragmatics adds a contextual constraint on the selection function... The effect... is to ensure that all of the presuppositions of the basic context [the context set] are preserved in the subordinate context. [Stalnaker, 2014, 150]

Except: the embedded indicative in (5) selects from Sarah's knowledge worlds (not from the context set). And the selection function constraint seems part of the semantics, not pragmatics.

## 2 iffy knowledge again

Anyway, the main issue: what can Bob say about what Sarah knows?

Bob to Nan: "Dilip is my favorite student, but Sarah doesn't know that..."

- (6) Sarah only knows that my favorite is either Dilip or Seth.
- (7) ?? Sarah only knows that if my favorite isn't Dilip, it's Seth.

Reminder: Bob is on the fence about me. (At best.)

Why is (7) marked? (5) is true, we said. Sarah know something conditional. Moreover, Bob *gave her* this knowledge. So why does Bob have trouble reporting what it is that Sarah knows?

Given what was said above, the embedded indicative must select a Dilip-isn't-favorite world from among Sarah's epistemic alternatives. But no problem there: the indicative presupposition is satisfied in its local context. So what is wrong with (7)?

Idea: (7) presupposes the whole indicative. This would require Bob's context set to leave open Dilip-isn't-favorite worlds. But it doesn't. So it's marked.

Note: on this story, the indicative conditional that Bob must presuppose is not identical to the indicative conditional Sarah knows.

Problem: (7) is still weird for Bob to say, even if it isn't already presupposed in his conversation that Dilip is the chosen one.

Solution (perhaps): the presupposition has a prospective character (cf. Stalnaker [2014]).

Question: what is the genesis of this presupposition? How does the pure pragmatic story (Stalnaker [1974]) work here?

Anyway: is it so clear the issue here is just something about presupposition projection? Suppose Bob says:

(8) Sarah believes that my favorite student is either Dilip or Seth. And she's right.

(9) Sarah believes that if my favorite student isn't Dilip, it's Seth. ??And she's right.

Why can't Bob say she's right in the second case?

Maybe it's not just that some awkward presuppositions get in the way of Bob's describing what Sarah knows; maybe it's rather that from Bob's epistemic vantage, Sarah is actually wrong when she says (5). What conception of knowledge, and of conditionals, could underwrite this?

### 3 epistemic modality *de re*

Stalnaker [2014]:

Neither Lewis nor Yalcin discuss the case of... epistemic modals in the scope of quantifiers, but one advantage of a theory that uses a truth-conditional semantics... is that it can give a smooth semantics for such cases. (143)

Alas. Definite descriptions:

- (10) (a) The winner might not have been the winner.  
(b) # The winner (is a person who) might not be the winner.
- (11) (a) The first person to contract the Dengue virus—it isn't known who that is.  
(b) # The first person to contract the Dengue virus (whoever he is) might not be the first person to contract the virus.

Quantifying in:

- (12) # Every person who is not infected (is a person who) might be infected.  
(13) # Some person who is not infected (is a person who) might be infected.  
(14) ?? Some person who might be infected is not infected.

Failure of classically valid patterns:

- (15) Not everybody who might be infected is infected.  
⇒ ?? So, somebody who might be infected is not infected.  
⇒ # So, somebody who is not infected might be.
- (16) Everyone with the birthmark likely has the disease.  
It's not likely that Jane has the disease.  
⇒ Jane doesn't have the birthmark.