

Layers in the Meaning of Conditionals (?)

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The Epistemic Modal Analysis

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cf. *John must have left Cambridge on time.*

Annoyances

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The Linguists: “Epistemic modals express comments on the content of the sentence.”

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Instead, indicative conditionals *If P, Q* “express” a high subjective conditional probability for Q given P.

[Jonathan Bennett. *A Philosophical Guide to Conditionals*. Oxford University Press, 2003]

Gibbard's Dilemma

M, at a peep-hole, is spying on three hit-men, Tom, Dick and Harry, and their boss. M hopes to discover who will receive the order to kill. M sees Tom leave the room. He then hears the boss give the order. M thinks (and could easily assert)

If he didn't tell Harry, he told Dick (not Tom)

Gibbard's Dilemma

Another spy, N, at a different peep-hole with a different view, saw Dick leave the room by a different door. He too heard the boss give the order. N thinks (and could easily assert)

If he didn't tell Harry, he told Tom (not Dick)

Gibbard's Dilemma

Each of M and N has adequate grounds for his conditional belief. The only relevant information that each would like but does not have – that the boss told Harry – would not refute their conditionals, but would render them useless: we have no use for “If he didn't tell Harry” thoughts when we are sure that he did tell Harry.

Edgington's Dilemma

Premise 1

Being certain that $P \vee Q$, without being certain that P , is sufficient for being certain that *if* $\neg P$, Q .

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Premise 2

It is not necessarily irrational to disbelieve P , yet also disbelieve that *if* P , Q .

Lewis' Triviality Result

There is no two-place connective $P \star Q$ such that the probability of $P \star Q =$ the conditional probability of Q given P .

Bennett's Complaint

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Bennett complains:

“But this is not what indicative conditionals mean. Winifred tells me ‘If Pete called, he won’, and I say ‘Are you sure?’ She replies ‘Yes, I am pretty sure I’m right’. If she had meant that her value for the conditional probability is high, then her reassurance to me would have meant that she is pretty sure that it *is* indeed high. But confidence in a conditional is not like that.”

The Conclusion

In an indicative conditional the speaker *expresses* but does not *report* a fact about his own state of mind. In the absence of anything else he could be reporting, the conclusion is that indicative conditionals are not reports at all; that is, they are not propositions with truth values.

In a sense, indicative conditionals are something like very sophisticated shrieks (*ouch!*).

Prediction

Indicative conditionals should not be embeddable in normal proposition-taking constructions.

Question

How does this meaning for indicative conditionals work compositionally? What is the semantic type of a shriek?

Quoth the Linguist

[Epistemic modality]... is the speaker's assessment of probability and predictability. It is external to the content, being a part of the attitude taken up by the speaker: his attitude, in this case, towards his own speech role as 'declarer'. (Halliday, 1970: 349)

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[E]pistemic modals must be analyzed as evidential markers. As such they are part of the extrapositional layer of clause structure and take scope over all propositional operators... (Drubig, 2001: 44)

Urmson's Parentheticals

It's raining, I think.

“[W]hen these verbs are used in the first person of the present tense, as is very clear when they occur grammatically in parenthesis, the assertion proper is contained in the indicative clause with which they are associated, which is implied to be both true and reasonable. They themselves have not, in such a use, any descriptive sense but rather function as signals guiding the hearer to a proper appreciation of the statement in its context, social, logical, or evidential. They are not part of the statement made, nor additional statements, but function with regard to a statement made rather as ‘READ WITH CARE’ functions in relation to a subjoined notice, or as the foot stamping and saluting can function in the Army to make clear that one is making an official report. . . . They help the understanding and assessment of what is said rather than being part of what is said.”

[Urmson, “Parenthetical Verbs”]

The Challenge Argument

This professor must be smart.

- a. Is that so?
- b. I don't believe it.
- c. That's not true.
- d. I agree.

?Must this professor be smart?

For discussion and criticism, see Anna Papafragou. Epistemic modality and truth conditions. To appear in A. Klinge & H. Müller (eds.), *Perspectives on Modality* (working title). Amsterdam: Benjamins.

Prediction

Epistemic modals should not be embeddable in normal proposition-taking constructions.

Question

How does this meaning for epistemic modals work compositionally?
What is the semantic type of footstamping?

That damn Kaplan

“Assuming that the epithet ‘damn’ is an expressive and that it expresses a derogatory attitude on the part of the speaker, then: ‘That damn Kaplan was promoted’ is going to be expressively correct just in case the speaker has a derogatory attitude toward Kaplan, and descriptively correct just in case Kaplan was promoted.”

[David Kaplan. The meaning of *Ouch* and *Oops*: Explorations in the theory of meaning as use. (Talk Length Version – Draft #3), 1999, p.9].

ja ja

Angelika Kratzer. *Beyond Ouch and Oops: How descriptive and expressive meaning interact*. Cornell Conference on Theories of Context Dependency, March 26th 1999, 1999.

Ja α is appropriate in a context c if the proposition expressed by α in c is a fact of w_c which — for all the speaker knows — might already be known to the addressee.

Webster schläft *ja*.

Are you sure?

(= are you sure that Webster is sleeping?)

(\neq are you sure that the addressee might already know this?)

The Basic Idea

We systematically associate with any sentence α a tuple of propositions, $\langle \llbracket \alpha \rrbracket_o, \llbracket \alpha \rrbracket_1, \llbracket \alpha \rrbracket_2, \dots \rangle$; the first member of the tuple is the ordinary/descriptive/asserted meaning, while the others are expressive contents.

$\llbracket ja \alpha \rrbracket = \langle \llbracket \alpha \rrbracket_o, \text{it may already be known to the hearer that } \llbracket \alpha \rrbracket_o \rangle$

Compositional Implementation

Christopher Potts. *The Logic of Conventional Implicature*. PhD thesis, University of California, Santa Cruz, 2003.

Reconstructing the Tradition

$\llbracket \textit{must } \alpha \rrbracket = \langle \llbracket \alpha \rrbracket_o, \llbracket \alpha \rrbracket_o \text{ follows from the evidence} \rangle$

$\llbracket \textit{may } \alpha \rrbracket = \langle \llbracket \alpha \rrbracket_o, \llbracket \alpha \rrbracket_o \text{ is compatible the evidence} \rangle$

But wait!

Chris may be home.

Descriptive meaning: Chris is home

Expressive meaning: It is compatible with the evidence that Chris is home.

Weird! The speaker can't normally be taken to be **asserting** that Chris is home. [Chris Potts, pc, March 22, 2003]

Similarly

Actually, the same problem arises with Kratzer's *ja*: usually, assertion is not supposed to be correct unless the speaker believes that the asserted content is news to the hearer.

—

Again, an expressive analysis of Urmson-style parentheticals like
It's raining, I guess.

would run into the same problem.

Way Out #1: Modify Asserted Proposition

Give up and make modals contribute to the asserted proposition.

Way Out #2: Modify Speech Act Force

Make modals modify the speech act force. This brings speech act theory into the compositional apparatus.

This is what Faller does in her work on evidential markers.

Martina Faller. *Semantics and Pragmatics of Evidentials in Cuzco Quechua*. PhD thesis, Stanford, 2002.

Way Out #3: The Strongest Speech Act Hypothesis

Posit a (partially ordered) family of “assertive” speech acts, with assertion the strongest, and acts like conjecture, guesses, . . . at the weaker end.

When a speaker utters (“assertively”) a sentence α , this is understood as an assertive speech act which is as strong as possible given the expressive meanings conveyed by the sentence.

Example: *May* α

A speaker who puts forward *may* α does not assert $[[\alpha]]_o$, since that is incompatible with the expressive meaning that $[[\alpha]]_o$ is merely* compatible with the evidence. Instead, the utterance is understood is a conjecture.

*It is to be investigated how this can be made to mesh with the usual scalar quantity implicature stories about possibility modals.

How It Would Work

Compositional Structure: $if\ P, Q = [must\ [if\ P]]\ Q$

Meaning: $\langle [[Q]]_o, [[Q]]_o \text{ follows from the evidence together with } P \rangle$

Uttering *if P, Q* is **putting forward** Q as a possibility and **expressing** that if P is added to the evidence, then the evidence entails Q.

If you'd like, you could call the resulting speech act a conditional assertion.

Biscuit/Beer Conditionals

If you're thirsty, there's beer in the fridge. (à la Austin)

[Keith DeRose and Richard E. Grandy. Conditional assertions and 'biscuit' conditionals. *Noûs*, 33(3):405–420, 1999].

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Not Very Original Idea: the *if*-clause restricts a relevance operator.

Addition: the relevance operator lives in the second dimension.

⟨there's beer in the fridge, if you're thirsty, this is relevant⟩

assertive force: almost assertion (minus warranty of relevance)

Embedding # 1

Dorothy is certain that if P, Q.

This is not a case of *if* P, Q embedded under *certain*. Instead, the *if*-clause is restricting the operator *certain*.

Embedding # 2

If P, if R, Q

Here, the two *if*-clauses jointly restrict the covert modal element.

[Kratzer 1986]

Embedding # 3

(If John is here,) the train can't have been delayed.

What is the descriptive content? That the train was delayed, or that the train was not delayed? Apparently, the latter. (In fact, we hear *the train can't have been delayed* as close to an assertion that the train was not delayed.) Therefore, negation is part of the descriptive dimension.

What is the expressive content? That the train's having been delayed is incompatible with the evidence ($\neg\diamond$). So, the negation is part of the expressive dimension.

How can that be? Make *can't* an operator that contributes to both dimensions? Contra one of Potts' claims about the extra dimension.

What to do next

1. Do the grunt work.
2. Give the epistemic conditional analysis a good shot.
3. Extend expressive analysis to epistemically loaded NPs:
(*whatever, some, algun*).