X-marking, Day 4

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https://kvf.me/x

What X means

Where we are

- X-marking on conditionals
  - does not encode counterfactuality
  - does not encode exclusion (of the actual world/epistemic set)

- So, what does X-marking encode?

A near consensus: widening

X-marking in conditionals signals a widening of the domain of worlds quantified over.

Stalnaker 1975

"I take it that the subjunctive mood in English and some other languages is a conventional device for indicating that presuppositions are being suspended."

The idea

- O-marked conditionals range over a set of worlds consistent with the presuppositions of the context.

- X-marked conditionals range over a wider set, since some presuppositions are suspended.

In von Fintel 1998 (ish) and in von Fintel & Iatridou 2022, this is recast within a world quantification view:

- O-marking signals that the domain of the conditional is contained in the set of epistemically accessible worlds.

- X-marking signals that the domain of the conditional is not entirely contained in the set of epistemically accessible worlds.

The proposal in Mackay 2019 is related.

When the antecedent is counterfactual, X-marking reflects that one had to go outside the epistemic set. But as Stalnaker shows, there are clear reasons for domain widening in the non-counterfactual cases as well.

Anderson-type examples

(1) If she had taken arsenic, she would show exactly the symptoms that she is in fact showing.

In this case, it is clear that the presupposition that is being suspended in the derived context is the presupposition that she is showing these particular symptoms — the ones she is in fact showing. The point of the claim is to say something like this: were we in a situation in which we did not know her symptoms, and then supposed that she took arsenic, we would be in a position to predict that she would show these symptoms.

– Stalnaker 2014: pp.185

modus tollens

(2) There were no muddy footprints in the parlor, but if the gardener had done it, there would have been muddy footprints in the parlor, so the gardener must not have done it.

Adrian Ommundsen (pc): this is another reason for abandoning the exclusion approach.

Here, the subjunctive conditional cannot be counterfactual, in the sense defined, since one is arguing that the gardener did not do it, and one cannot presuppose something one is arguing for. That is, the argument is appropriate only in a context in which it is initially an open question whether the gardener did it.

In this case, the presupposition that is suspended is the proposition, made explicit in the first premise of the argument, that there are no muddy footprints in the parlor. The idea behind the conditional claim is something like this: suppose we didn't know that there were muddy footprints in the parlor, and in that context supposed that the gardener did it. That would give us reason to predict muddy footprints, and so to conclude that if we don't find them, he didn't do it.

How does X widen the domain?

Two main approaches:

1. X = a marker of widening

2. X = past, which produces a wider domain by talking about what used to be possible

Stating that there is widening

There are different ways of formulating it, depending on the technical implementation of modal meanings:

- accessibility functions
- premise sets
- subset selection functions

- An accessibility function f^+ is a widening of f iff $\forall w\colon f(w) \subseteq f^+(w)$

- A premise set function $\mathcal{P}^+$ is a widening of $\mathcal{P}$ iff $\forall w\colon \mathcal{P}^+(w) \subseteq \mathcal{P}(w)$

- A subset selection function $\mathcal{S}^+$ is a widening of $\mathcal{S}$ iff $\forall w\forall A\colon \mathcal{S}(w)(A) \subseteq \mathcal{S}^+(w)(A)$

X = past

An old idea:

$$p \to_X q = \text{PAST}(p \to_O q)$$

Thomason & Gupta 1980:

"We want to propose (tentatively) that a subjunctive asserts that the corresponding indicative sentence was true in some contextually determined interval of time."

Moving to the past widens the domain

- At earlier times, futures were still possible than since then may have turned out to not have happened.

- At earlier times, less was known (or "within epistemic reach"), so the set of epistemically accessible worlds was larger.

Some issues

- needs agreement into the antecedent but not all languages that have fake pasts in the antecedent have sequence of tense elsewhere (such as in speech reports)

- antecedents that weren't any more possible at earlier times

- the fact that X-marking generally does not consist of just past tense

These don't seem to mean the same thing

(3)   If it wasn't in the attic, it had to be in the garden.

(4)   If it hadn't been in the attic, it would have been in the garden.