X-marking, Day 3

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https://kvf.me/x

Recap

X-marking

(O)   If Leila is here, there is gazpacho.

(X)   If Leila was here, there would be gazpacho.

A better name for "X-marking"?

- counterfactual
- subjunctive
- irrealis
- ontic/metaphysical
- none of the above

X $\neq$ **counterfactual**

X doesn't encode counterfactuality in its meaning.

Counterfactuality may arise as an implicature in most contexts.

For a dissenting voice, see Zakkou 2019.

X $\neq$ subjunctive

X-marking can't be equated with the subjunctive, although it often (but not always) incorporates subjunctive marking.

A better name for "X-marking"?

- ~~counterfactual~~
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X = irrealis?

"irrealis" is a disputed term, but very recently von Prince, Krajinović & Krifka 2022 put some order into the area:

- realis refers to the present and/or past of the actual world

- irrealis refers to any non-actual world or the future of the actual world

$X \neq$ **irrealis**

So, X-marking is not irrealis.

Of course, irrealis marking may be a component of X-marking in some languages.

X = ontic (vs. O = epistemic)?

Especially in some philosophical work, there's a tendency to equate the O/X-distinction with a distinction between two kinds of modal flavors conveyable by conditionals.

Some famous pairs

(1) If Oswald didn't kill JFK, someone else did.

(2) If Oswald hadn't killed JFK, someone else would have.

(3) If Shakespeare didn't write *Hamlet*, someone else did.

(4) If Shakespeare hadn't written *Hamlet*, someone else would have.

Observation: not just a difference in the epistemic status of the antecedent, but in the modal flavor of the conditional claim.

O epistemic

X ontic/metaphysical/causal

The correlation isn't one-to-one:

- O-marked conditionals about the future can be ontic.

- X-marked conditionals can be epistemic.

A scenario

There is a treasure hunt. The organizers decide between putting the treasure in the attic, the study, and the garden. They quickly eliminate the garden as inappropriate. Then, they decide that the attic is a slightly better location. Reporting this, we could say:

(5)   If it hadn't been in the attic, it would have been in the study.

Sources: Grice 1989, Edgington 2007, Khoo 2015, class discussions

Now, before the hunt, one of the organizers tells me:

(6) I'll give you a hint: it's either in the attic or the garden.

Trusting the speaker, I think

(7) If it's not in the attic, it's in the garden.

We are competing in pairs: I go to the attic and tip off my partner to search the garden. I discover the treasure. 'Why did you tell me to go to the garden?' she asks.

(8)   Because if it hadn't been in the attic it would have been in the garden: that's what I was told.

(Or more pedantically: 'that's what I inferred from what I was told') That doesn't sound wrong in the context.

X-marking $\neq$ ontic flavor

There's no automatic correlation between X-marking and ontic flavor.

Interim conclusion

A better name for "X-marking"?

- ~~counterfactual~~
- ~~subjunctive~~
- ~~irrealis~~
- ~~ontic/metaphysical~~
- none of the above

- X-marking has no obvious better name
- unless and until we understand how X-marking works, let's just keep calling it X

X-marking across languages

Ingredients

X-marking often but not always involves (fake) past tense, often but not always involves subjunctive mood, often but not always involves (fake) imperfective aspect, often but not always involves a future operator. Some languages have a simple particle without changes to verbal morphology.

Hungarian

(9)   Ha János tudja a választ,   Mari is tudja a választ.
      if   János knows the answer-ACC Mari too knows the answer-ACC

      'If János knows the answer, Mari knows the answer (too).'

(10)   Ha János tudná   a választ,   Mari is tudná   a választ.
       if   János know–*nA* the answer-ACC Mari too know–*nA* the answer-ACC

      If János knew the answer, Mari would know the answer.

Hungarian PastX

(11) Ha János tudta   volna   a   választ,   Mari is   tudta
    if   János know.PAST.3sg be–*nA*   the answer-ACC Mari too know.PAST.3g

    volna   a   választ.
    be–*nA*   the answer-ACC

    'If János had known the answer, Mari would have known the answer too.'

Hungarian FLV

(12)   a.   ha   holnap   el-indul,   a   jövő   hétre   oda-ér.
            if   tomorrow   away-leave   the following   week.onto   there-reach

'If he leaves tomorrow, he will get there next week.'

          b.   ha   holnap   el-indulna,   a   jövő   hétre   oda-érne.
            if   tomorrow   away-leave–*nA*   the following   week.onto   there-reach–*nA*

'If he left tomorrow, he would get there next week.'

Greek

(13) An o archigos pethene avrio, tha ton thavame eki.
 If the chief died.PST.IMP tomorrow, FUT him bury.PST.IMP there
 'If the chief died tomorrow, we would bury him there.'

German

(14) Wenn ich das Spiel gesehen hätte,   hätte   ich keine
    if   I   the   game   seen.PCPL   have.PAST.SUBJ,   have.PAST.SUBJ   I   no

     ruhige   Minute   gehabt.
     calm   minute   have.PCPL

     'If I had seen the game, I would have had no respite.'

One thing that doesn't happen

We know of no language where X-marking consists of only past tense.

See also Dahl 1997, Van linden & Verstraete 2008.

What's next

Big questions

1. What does X-marking contribute semantically?
2. How is the semantic contribution composed from whatever the ingredients of X-marking are in a particular language?

You know, the usual questions

The meaning of X in conditionals

X-marking

(O)   If Leila is here, there is gazpacho.

(X)   If Leila was here, there would be gazpacho.

Strategy

I am going to assume that we can identify at least paradigm cases of the contrasting categories of conditionals independently of any contentious theoretical assumptions about the grammatical marks by which we are identifying them, and then ask what work are those grammatical marks, whatever they are, doing?

Stalnaker 2014: pp.175f.

What we're dealing with

If X-p, X-q

or

If X-p, X-(modal q)

Questions

- does X-marking effect or reflect a meaning change
- if X-marking is effective, is one of antecedent vs. consequent X-marking the effective one and the other is reflective?
- is the meaning about the two component clauses?
- is the meaning about the whole conditional proposition?
- does X-marking get its meaning via competition with O-marking?

Our guess (for what it's worth)

X-marking (both antecedent and consequent) reflects a property of the domain of quantification of the conditional/modal operator

counterfactual?

We already saw several reasons not to treat X-marking as meaning counterfactuality:

- semi-factual conditionals
- FLVs
- Anderson conditionals
- X-marked passages

exclusion?

Iatridou 2000:

X-marking encodes that we are not talking about the evaluation world

simplest execution

$$\llbracket \text{X-p} \rrbracket^w = \llbracket \text{p} \rrbracket - \{w\}$$

or:

$$\llbracket \text{X-p} \rrbracket^w = \llbracket \text{p} \rrbracket - \text{EPIST}_w$$

more elaborate: Schulz 2014

Capturing optional counter-factuality

Exclusion allows for X-marked conditionals to have both counterfactual and non-counterfactual uses:

- one reason to talk about worlds disjoint from the actual world: you want to consider what if p while p is false in the actual world

- but it's also possible that one talks about non-actual p-worlds without committing one way or the other about the actual world

Parallel to how past tense sometimes signals that the past situation does not extend to now and sometimes it's compatible with it still holding now:

(15)   Jill was Welsh.

(16)   Laura met an interesting woman at the party. She was Welsh.

Conflict with Stalnaker & Lewis

Stalnaker/Lewis conditionals obey (at least, weak) centering:

Weak Centering If p is true in the evaluation world, then the evaluation world is among the selected (closest, most similar) p-worlds.

Strong Centering If p is true in the evaluation world, then the evaluation world is the selected (closest, most similar) p-world.

Centering → modus ponens

Lewis 1973:

(17)　A:　If Caspar had come, it would have been a good
　　　　　party.

　　　B:　That's false; for he did come, yet it was a rotten
　　　　　party.

(17)   A: If Caspar had come, it would have been a good
            party.

       B: That's false; for he did come, yet it was a rotten
            party.

       A: #Dude, I didn't say that if he came, it was a good
            party. All I said was that if he had come, it would
            have been a good party.

Mackay 2015

(18) If Jones had taken arsenic, things wouldn't be quite as they actually are.

(19) If Jones had taken arsenic, everything would be exactly as it actually is.

(20) If Jones had taken arsenic, some fact or other about the universe would be different from how it actually is, although it might not be a fact about our immediate environment.

Another argument

The exclusion account predicts that X-marking should be usable when the actual world is a *p*-world but we want to make a claim about the nearest non-actual *p*-worlds.

(21) # The butler did it with the ice-pick, but if the butler had done it, he would have used a dagger.

(22) # Julie won the race by a lot; Sally came in second but just a tad ahead of Jessica. So, if Julie had won the race, Jessica would have been second.

Similarly, Khoo 2022 points out that the exclusion account "predicts that strings like the following should sound fine, yet they sound incoherent":

(23) #If John had asked Sue for help, she would have helped. And, furthermore, he did ask and she refused to help.

BTW

Wolfgang Klein. 2021. Another way to look at counterfactuals. *Theoretical Linguistics* 47(3-4). 189–226. https://doi.org/10.1515/tl-2021-2019

- a kind of exclusion account
- faces the same problems

What else then?

- X ≠ counterfactual
- X ≠ exclusion
- … ??

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 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 signals 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

(24)   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

Sidenote

Why is the O-marked version of Anderson conditionals completely anomalous?

(25) #If the butler did, we found just the clues that we in fact found.

This is a truly maddening problem, see
Kai von Fintel. 2016. On the absence of certain ambiguities in some contexts.
http://mit.edu/fintel/fintel-2016-sera.pdf.

modus tollens

(26)   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.

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. a marker of widening

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

Stating the widening account

depends on what the precise meaning of modals is

- accessibility function

- premise set

- subset selection function

different ways of formulating it

- 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:

$$p \rightarrow_X q \;=\; \text{PAST}(p \rightarrow_O q)$$

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 no language has X-marking that is just past tense

These don't seem to mean the same thing

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

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

But isn't (27) simply a past epistemic conditional?

Next

We will look at X-marking outside conditionals to find more clues about what X might mean.