X-marking, Day 4

Kai von Fintel

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https://kvf.me/x

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.

Next

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

Some prep work

We'll be looking at structures of the form

$$X_{cons} - \begin{Bmatrix} \text{modal} \\ \text{attitude} \end{Bmatrix} (p)$$

Sometimes, such structures will occur in the consequent of an explicit or implicit X-marked conditional. But sometimes we get a different interpretation!

A general fact

Just because there's no *if*-clause doesn't necessarily mean that we are not dealing with a conditional meaning.

Modal subordination

(5)   Ali might have shown up. She would have eaten two
      helpings of this paella.

"Simple subjunctives"

(6)   Your brother Peter wouldn't have failed the exam.

Kasper 1992, Schueler 2008

These ways of getting implicitly conditional interpretations are also available when the consequent X-marking appears on modals or attitudes.

Nested modality

(7) If Ali had shown up, she would have wanted to eat two helpings of this paella.

reports what Ali would have wanted in a counterfactual scenario

X-marked modals/attitudes can be modally subordinated

(8) Ali might have shown up. She would have wanted to eat two helpings of this paella.

X-marked modals/attitudes can appear in simple subjunctives

(9)   Ali would have wanted to eat two helpings of this paella.

exo-X

We introduce the term "exo-X" for nested uses of X-marking where it occurs on a modal/attitude operator and encodes that we are interpreting that operator in a hypothetical scenario introduced by a (possibly covert/implicit) X-marked operator.

This prepares the ground for "endo-X"

- exo-X cases do not raise *additional* puzzles as far as the theory of X-marking is concerned
- but: the phenomenon of "understood" conditionals is definitely worth exploring

endo-X

"endo-X" = X-marking on modals/attitudes that does not shift interpretation from the actual evaluation index, but indicates changes to the interpretation of the modal/attitude

kinds of endo-X

What we have focused on in previous work:

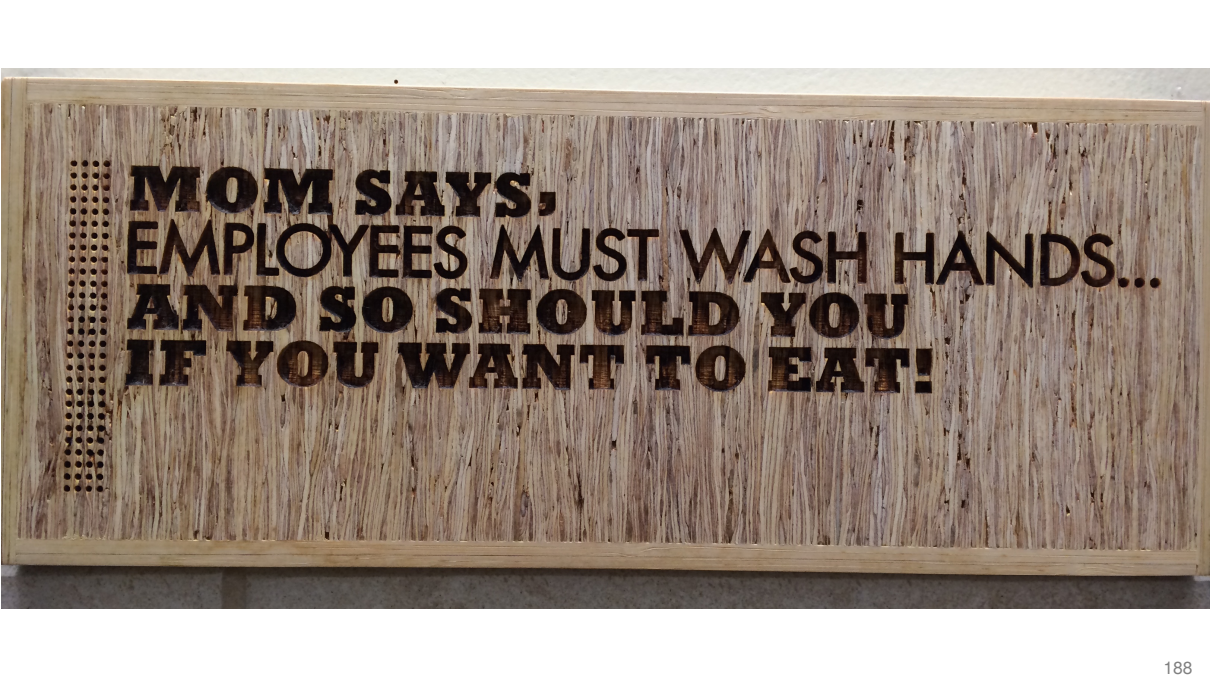- strong necessity → weak necessity
- wants → wishes

We will also look at several other kinds.
We will go through all of these briefly today. More details next week.

Weak necessity

(10)   After using the bathroom, everybody ought to wash their hands; employees have to.

MOM SAYS,
EMPLOYEES MUST WASH HANDS...
AND SO SHOULD YOU
IF YOU WANT TO EAT!

(11)   You ought to do the dishes but you don't have to.

(12)   a.   #You have to do the dishes but you don't have to.

        b.   #You must do the dishes but you don't have to.

(13)   a.   You ought to wash your hands – in fact, you have to.

        b.   ??You have to wash your hands – in fact, you ought to.

Strong Necessity Modals: *must, have to*
Weak Necessity Modals: *ought, should*

flavors of weak necessity

(14) a. You ought to call your mother more often.

    b. Given that it is Tuesday, Morris ought to be in his office.

    c. To go to Amherst, you ought to take Route 2.

lexical weak necessity

- English *ought*, *should*
- Dutch *horen*
- (Brazilian) Portuguese *dever* (Ferreira 2022)

X-marked strong necessity = weak necessity

A recurring pattern is that languages can manufacture a weak necessity meaning from putting (consequent) X-marking on a strong necessity modal.

Hungarian

(15) Péter-nek el   kell-ene   mosogat-ni-a   az   edény-ek-et, de   senki nem
    Péter-dat part must–*nA*   wash-inf-3sg   the dish-pl-acc but noone not

    követeli   meg   tőle.
    require-3sg.subj-3.obj   part 3.sg.abl

    'Péter ought to do the dishes, but he is not obliged to.'

(16) #Péter-nek el   kell   mosogat-ni-a   az   edény-ek-et, de   senki nem
    Péter-dat part must   wash-inf-3sg   the dish-pl-acc but noone not

    követeli   meg   tőle.
    require-3sg.subj-3.obj   part 3.sg.abl

    'Péter has to do the dishes, but he is not obliged to.'

Spanish

(17) Deberia   limpiar   los   platos, pero   no   estoy
    Must+COND clean   the   dishes   but   not   am
     obligado.
     obliged

    'I ought to do the dishes but I am not obliged.'

Greek

(18)   Tha   eprepe   na   plinis   ta   piata   ala   dhen   ise
        FUT   must+Past   NA   wash   the   dishes   but   NEG   are

           ipexreomenos   na   to   kanis
           obliged   NA   it   do

     'You ought to wash the dishes, but you're not obliged to'

NB: exo-X readings

Typically, we find that X-marked necessity modals that can be used as weak necessity modals also have an exo-X reading: strong necessity in a hypothetical X-type scenario.

Questions

- what is the semantic difference between strong and weak necessity?
- how does X-marking manage to manufacture weak necessity out of a strong necessity?

Wishes

wish

(19) a.   I wish I had bought a different car.

       b.   I wish Aline were here now.

       c.   I wish my book sold/would sell well next year.

X-want = wish

(20) a. X-marked conditional: if p_{ant}, q_{cons}

b. wishes: I want$_{cons}$ that p_{ant}

(21) Querría   que fuera   más alto
      Want.3.sg.COND that be.3.sg.PAST.SUBJ more tall

      de   lo que es.
      than it that be.3.sg

      'I wish s/he was taller than s/he is.'

More X-readings

- X-$\Diamond$ = weak possibility
- X-$\Diamond$ = anchor-shifted epistemic possibility
- X-Modal/Attitude = Modal/Attitude but prejacent false
- X-marked attitudes with non-logical *if*-complements
- realis subjunctives

Weak possibility?

It is often reported that X-marked possibility modals serve to convey remote possibility.

Anchor shifting

(22) Context: Chris and Burt are sitting by the window in a cafe. When a bus goes by they see their friend Ann, who is angry with Burt, jumping behind a bush. Chris asks Burt why Ann did that. Burt responds:

a. # Az-on a busz-on le-het-ek.
   dem-sup def bus-sup be-poss-1sg

   'I might be on that bus.'

b. Az-on a busz-on le-het-**n**-ék.
   dem-sup def bus-sup be-poss-**X**-1sg

   'I might be on that bus.'

X = prejacent falsity

von Fintel & Iatridou 2008:

(23)   I would have expected him to be here.

This has a non-exo-X-reading: I did expect him to be here but
he isn't.

More such prejacent falsity cases discussed by Sæbø 2022

(24) I would have been able to smuggle a drink into the lecture room.

X-marking and non-logical *if*-complements

(25)   I am happy that he is here.

(26)   I would be happy if he were here.

Realis X-marking in German

(27) A: I am thirsty.

     B: Ich   hätte   Saft   im   Kühlschrank.

        I   have.X juice in.the fridge

        "I would have juice in the fridge."

Csipak 2020

PastX version

(28) Context: A is babysitting for B who comes home much later than agreed upon. A complains that he got thirsty while waiting.

B: Da wäre Saft im Kühlschrank gewesen.
there is.X juice in.the fridge be.Pcpl
"There would have been juice in the fridge."

Csipak's diagnosis

These cases of realis X-marking convey the following not-at-issue content:

"there are worlds that are optimal with respect to the agent's decision problem in which the agent chooses the action alternative made salient by the prejacent proposition p"

Modals in realis X-marking?

(29) We need someone to count.

      Calvin könnte zählen.

      Calvin can.X count

      "Calvin would be someone who can count"

even more X

as if we didn't have enough to deal with

- if only
- as if
- almost

if only

(30)   If only Morgan were here.

as if

(31)   Beatriz strutted as if she had won the world cup.

almost

(32)   I almost wouldn't have recognized you.

not very frequent (or even possible) in English

German *almost*

(33)   Ich   habe   fast   nichts   gegessen.

        I   have   almost   nothing   eaten

        'I ate almost nothing'

(34)   Ich   hätte   fast   nichts   gegessen.

        I   have.X   fast   nothing   eaten

        'It almost happened that I ate nothing.'

Next week

- Monday: guest lecture on aspect in X-marking by Sabine & Sergei

- Tuesday, Thursday, Friday:
    - closer looks at some of the uses X-marking outside conditionals
    - the prospects for a unified analysis of X-marking