

# **X-marking, Day 6**

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<https://kvf.me/x>

# **Coda to last week**

- Modal widening account for X-marking in conditionals
- There were interesting questions and comments about the precise nature of the conditional's domain and the boundary beyond which it is signaled to be widened when X-marking is present (context set, factive context, epistemic set, ...)
- Recommended readings: Mackay 2019, Mandelkern 2021, Schultheis 2021, Holguín 2021.

full bibliographic detail on the class website

# Today

X-marking beyond conditionals, first take

**Some prep work**

- (1) If Carly knew, Formiga would tell me.  
if Carly  $x_{\text{ant}}$  (know), Formiga  $x_{\text{cons}}$  (will tell) me

if  $x_{\text{ant}}$  (p),  $x_{\text{cons}}$  (MODAL q)

What does X do to the interpretation of MODAL q?

# The effect of X-marking on the conditional modal

- X-marking does not affect the evaluation world of the modal: the conditional is a claim about the evaluation world
- X-marking sends a signal about the parameters of the modal: the modal base function can reach outside the epistemic set

## The effect of X-marking on the prejacent of the conditional modal

- $q$  is interpreted in evaluation worlds that the X-marked conditional modal feeds to it
- in other words,  $q$  is evaluated in hypothetical (often counterfactual) scenarios



## endo-X vs. exo-X

**endo-X** X-marking that affects the parameters of the modal it combines with

**exo-X** X-marking that signals that its sister is evaluated in hypothetical (often counterfactual scenarios) that are fed to it by a higher conditional/modal

We'll be looking at structures of the form

$$x_{\text{cons}} \left\{ \begin{array}{c} \text{modal} \\ \text{attitude} \end{array} \right\} (p)$$

We will often observe an exo-X vs. endo-X ambiguity!

## **An easy case**

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

what Ali would have wanted in a counterfactual scenario → exo-X

# Hidden conditionals

## 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

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

## **“Simple subjunctives”**

- (4) 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.



## **X-marked modals/attitudes can be modally subordinated**

- (5) 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**

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

## These are exo-X effects on *want*!

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

The X-marking signals that we're moving to a hypothetical scenario against which the *want*-claim is interpreted. The modal parameters of *want* are unaffected, just its evaluation world is shifted.

- 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

**Moving to endo-X**

endo-X = X-marking on modals/attitudes that does not signal a shift from the actual evaluation index, but indicates changes to the parameters 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.

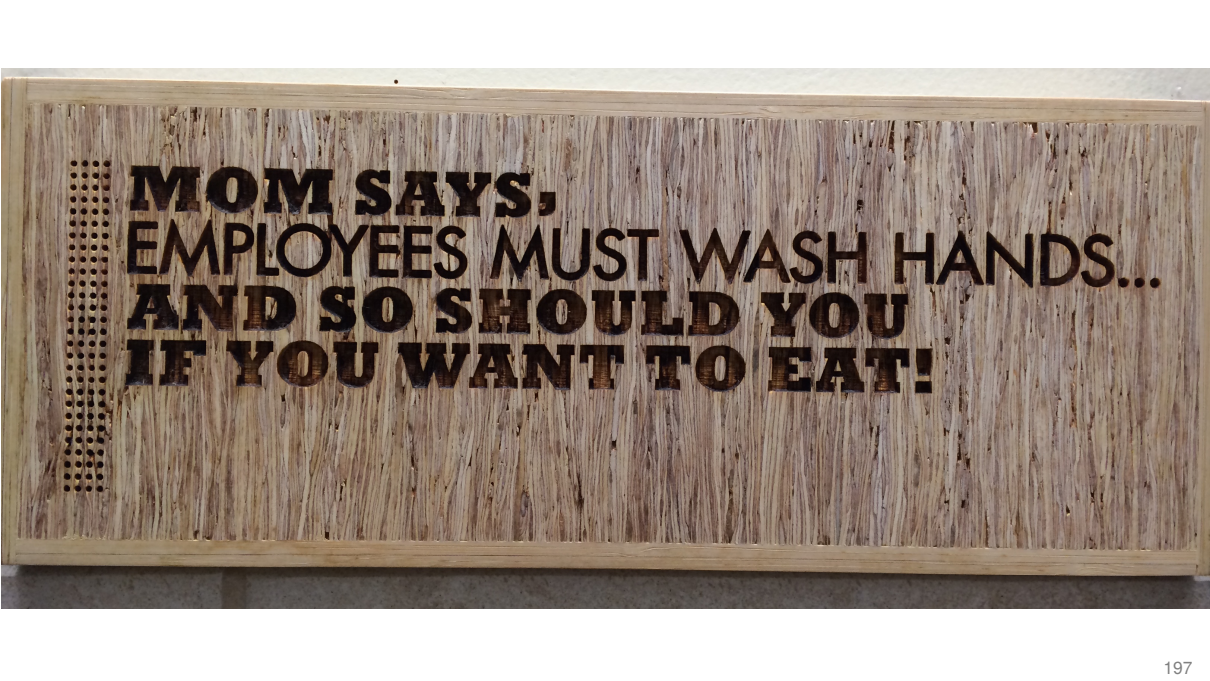
We will go through all of these briefly today. More details in the last two classes.

**Weak necessity**



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



A rectangular wooden sign with a light-colored wood grain. On the left side, there is a vertical strip of perforated metal. The text is printed in a bold, black, sans-serif font.

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

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

- (9) 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.
- (10) 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**

- (11) 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*
- 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

- (12) 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.’

- (13) #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

- (14) 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

- (15) 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'

## endo, exo

- We will see in more detail on Thursday that the strong → weak shift is an endo-X effect
- 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.

(16)    tha eprepe    na       pas       me    plio  
          X<sub>cons</sub>-(must) COMP go.2sg with boat

can mean:

- you ought to go by boat (the best option; there are others)
- you would have to go by boat (the only option in some hypothetical scenario; say: if you decided to go to Santorini)

# 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

- (17)
- 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**

- (18) a. X-marked conditional: if  $x_{\text{ant}}$ -p,  $x_{\text{cons}}$ -q  
b. wishes: I  $x_{\text{cons}}$ -want that  $x_{\text{ant}}$ -p

- (19) 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
- $X\text{-Modal/Attitude}$  =  $\text{Modal/Attitude}$  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

(20) 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 Stechow & Iatridou 2008:

(21) 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.



## **Similar cases discussed by Sæbøe 2022**

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

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

(23) I am happy that he is here.

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

most recently: Longenbaugh 2019: Section 4.4

## Realis X-marking in German

(25) A: I am thirsty.

B: Ich hätte Saft im Kühlschrank.

I have.X juice in.the fridge

“I would have juice in the fridge.”

## PastX version

(26) 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?

(27) We need someone to count.

Calvin könnte zählen.

Calvin can.X count

“Calvin would be someone who can count”

Example from Csipak's thesis

**even more X**

**as if we didn't have enough to deal with**

- if only
- as if
- almost



## *if only*

(28) If only Morgan were here.

A place to start: Grosz 2014

***as if***

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

very recent work: Bledin & Srinivas 2022

## ***almost***

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

not very frequent (or even possible) in English

## German *almost*

(31) Ich habe fast nichts gegessen.

I have almost nothing eaten

'I ate almost nothing'

(32) Ich hätte fast nichts gegessen.

I have.X fast nothing eaten

'It almost happened that I ate nothing.'

**For Thursday and Friday**

# Recommended readings

**Thursday** Ferreira 2022

**Friday** Sæbø 2021