Prolegomena to a theory of X-marking

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A pair:

1a. If Mary knows the answer, John knows the answer   O-marked

 b. If Mary knew the answer, John would know the answer   X-marked

Not "subjunctive conditionals": the subjunctive is neither necessary nor sufficient.

Not "counterfactual conditionals": Future Less Vivid conditionals, also cancellability as in Anderson 1951.

"O-marking": Open, Ordinary,..

"X-marking": eXtra

There is no deeper significance in the choice of terms.

They are picked merely to avoid wrong associations like "subjunctive" and "counterfactual"

What is the meaning difference between O- and X-marking?

"semantic X-contribution"

What is the morphological difference between O- and X-marking?

There are languages that have very specialized X-morphology.

There are languages where X-marking consists of morphemes that have other uses as well.

- Hungarian is a language with specialized X-morphology:
Add -nA to an O-conditional

3.   Ha János tudja a választ, Mari (is) tudja a választ
   if J knows the answer-acc M (too) knows the answer-acc
    'If John knows the answer, Mary knows the answer'

 4. Ha János tud**ná** a választ, Mari is tud**ná** a választ
     if J know.**NA** the answer-acc Mari too know.**NA** the answer-acc
     If John knew the answer, Mary would know the answer

(4) is Present Counterfactual (PresCF):
p, q do not hold at UT.

Past Counterfactual, where p, q do not hold at a time prior to UT: you add past +nA .

PresCF:

5.   Ha János tud**ná** a választ, Mari is tud**ná** a választ
          if J know.**NA** the answer-acc Mari too know.**NA** the answer-acc
          'If John knew the answer, Mary would know the answer'

PastCF:

 6.   Ha János **tud**ta   vol**na** a   választ,
          if J   know.past.3sg be-**NA** the answer-acc

          Mari is   **tud**ta   vol**na**   a választ
          M   too   know.past.3g   be-**NA**   the answer-acc
          'If John had known the answer, Mary would have known the answer   too'

- Future Less Vivid (FLVs):

7a. ha holnap el-indul,   a jo:vo"   h'etre   oda-e᾽r

   if   tomorrow away-leave the following week.onto there-reach

   ῾If he leaves tomorrow, he will get there next week᾽

b. ha holnap el-indul**na**,   a jo:vo"   he'tre   oda-e'r**ne**

 if tomorrow away-leave.**NA** the following week.onto there-reach.**NA**

   ῾If he left tomorrow, he would get there next week᾽

Next:

Languages where X-marking plays a different role in other environments.

Such languages variably use Past Tense, Imperfective, Future and sometimes Subjunctive to mark the difference between X and O-marked conditionals.

- For example Greek, uses "Fake Past" and "Fake Imperfective":

8. 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'

The hypothetical events described are not interpreted in the past nor as being in progress.

Yet, the morphology is Past and Imperfective.

English, among many others, is also a fake past language
(would = woll+PST):

9a. If he left tomorrow, he would get there next week (FLV)

b. If I had a car now, I would be happy   (PresCF)

c. If he had been descended from Napoleon, he would have been
     shorter

(PastCF)

English is in a small minority of languages where X-marking appears to consist only of Past tense.

There has been a fair amount of literature on trying to identify how the different morphological ingredients contribute to the meaning of the difference between X and O conditionals.

There are at least two ways this literature has been on the wrong path.

- The first is that most proposals concentrate on the role of Past tense alone. ignoring other elements in X-marking, like Imperfective Aspect in Greek, Romance etc).

But if X-marking consists of Past and Imperfective in Greek and just Past in English, one would have to come to either one of two conclusions:

- $[Past]_{Greek}$ =/= $[Past]_{English}$

After all $[Past]_{Greek}$ needs imperfective for X-marking; $[Past]_{English}$ does not.

or

- $[Past]_{Greek}$ = $[Past]_{English}$

And the obligatory imperfective in Greek X-marking makes no contribution

Either conclusion has gone under-appreciated by work that focuses only on the role of Past in X-marking.

But we are not here today to try to rectify this tendency. For today's purposes, we do not care what X consists of morphologically.

That is, Hungarian, English and Greek are on a par today.

The second way in which the literature on X-marking has been on the wrong path is that it has been trying to glean the contribution of X-marking by just looking at conditionals.

That is, the prevalent practice has been to try to understand the contribution of X- marking by looking only at the difference between X and O-marked conditionals.

However, X-marking appears in other parts of the grammar as well.

Default assumption: the contribution of X-marking remains the same, regardless of whether it appears in conditionals or elsewhere.

So what we would like to do today is to look at these non-conditional environments that contain X and see what we can learn from them...

...and find out if we need to amend our view of X-marking in conditionals, in order to maintain a consistent interpretation for X across all environments where it appears.

The method: we will start with a meaning for X from conditionals and take it to the non-conditional environments and see how it fares.

But first, we will need to convince you that there are indeed non-conditional environments that contain X-marking.

There are at least two:

-a phenomenon we will call "transparent wishes" or "X-marked desires"

and

-a phenomenon we will call "transparent *ought*" or "X-marked necessity"

Let's start with what are often called "Counterfactual wishes":

10. I wish I had a brother

→I do not have a brother

The complement of WISH is (presupposed to be) false/contrary-to-fact.

But the term "counterfactual wish" is a misnomer: The desire is in the actual world. This will be important later on.

We will shortly dispense with the term "counterfactual wish".

In many languages, there is a morphological commonality between X-marked conditionals and CF wishes (Iatridou 2000).

In the full version of the generalization, the morphology on the X-conditional consequent appears on the embedding verb *want* and the morphology on the X-conditional antecedent appears on its complement:

11. X-marked conditional: if p_{m1}, q_{m2}

12. CF wish: I want$_{m2}$ that p_{m1}

We call this the Conditional/Desire (C/D) generalization.

The conditional/desire generalization holds in many languages:

11. X-marked conditional: if p_{m1}, q_{m2}

12. CF wish: I want$_{m2}$ that p_{m1}

Note that we are dealing with two "types" of X-marking:

-X on the conditional consequent and desire-verb

-X on the conditional antecedent and complement of the desire verb

The morphological difference between antecedent and consequent X-marking is not always visible because in some languages, "antecedent" and "consequent" X-marking are the same (eg Hungarian, German).

Hungarian:

13. Ha János tudná a választ, Mari is tudná a választ

    if J know.NA the answer-acc Mari too know.NA the answer-acc

    If John knew the answer, Mary would know the answer

14. Szeret-né-m   ha magasabb len-ne

    like-NA-1sg   if taller be-NE

    `I wish she was taller'

In others (eg Greek, Spanish) you can see the difference:

15. Si fuera   más alto   sería   un jugador de baloncesto.
If be.3.sg.PAST.SUBJ   more tall   be.3.sg.COND a   player of basketball
'If s/he was taller, s/he would be a bastketball player'

Spanish X-desire:

16. Querría   que   fuera   más alto de lo que es.
Want.3.sg.COND   that s/he be.3.sg.PAST.SUBJ   more tall than it s/he is
'I wish s/he was taller than s/he is

"Transparent wishes":

one part of the C/D generalization: want +X-marking

Spanish, Greek, French and others are "transparent *wish*" languages.

English is not. It has a lexicalized item *wish* and obeys only one part of the C/D generalization, namely "antecedent" X-marking on the complement of the desire verb:

16a. If I had a car, I would be happy

   b. I wish that I had a car now

If English had been a transparent wish language, it would have had *would* on *want,* and (18b) would have meant (18c), which it does not:

18a. If I had a car, I would be happy

    b. I would want that I had a car now (I would want to have a car now)

      =/=

    c. I wish that I had a car now

But even though English is not a transparent wish language, it does obey one part of the C/D generalization, namely the same morphology appears on the conditional antecedent and on the complement of the desire predicate.

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Turkish is another language like English, which has a specialized morpheme for "CF" wishes. Like English, it obeys the C/D generalization only in the complement.

X-marking in Turkish: Turkish has fake Past.

X-marking on the consequent: **aorist+past**

X-marking on the antecedent: **SA+past**　　　(past-SA in epistemic conds.)

19. John önümüzdeki salı gel-**se-ydi**, annesi çok mutlu ol-**ur-du**

　　John　　next　　　Tue　come-SA-PST　his.mom very happy be(come)-AOR-PST

　　'If John arrived next Tuesday, his mom would be very happy'

Turkish has undeclinable (non-verbal) *keşke* to convey WISH:

20. Keşke önümüzdeki salı gel-se-ydi

    Keşke next tuesday come-SA-PST

    'I wish he would come next Tuesday'

And in (20) the speaker believes that her wish will not come true.

(Hindi *kaash* behaves the same)

So the C/D generalization is real, even if there are languages, like English and Turkish, which obey only one of its two parts.

Remember: "counterfactual" wishes are so called, not because the desire is in a counterfactual world (the desire is in the actual world) but because the complement is taken to be false.

The same holds for transparent wishes/i.e. X-marked desire predicates.

Take French. The difference between an infinitive or a subjunctive complement is a function of the (contra)indexing of the subjects:

21a. Je veux aller à Paris.

    I want   go.inf to Paris

    b. Je veux que tu ailles à Paris.
        I want that you go.subj to Paris

When the embedded event is not attainable anymore, plain *want* is out:

22a. *Je veux être arrivé mardi passé.

    I want be arrived   Tuesday passed

   intended: 'I want to have arrived last Tuesday'

  b. *Je veux qu'il soit arrivé mardi passé.

    I want   that he be.subj arrived Tuesday passed

    intended: 'I want you to have arrived last Tuesday'

Instead, X-marking on *want* must be used.

French (consequent) X-marking is called the "conditionel", which is not a mood but a future+past+imperfective combination (Iatridou 2000).

23a. Je voudrais être arrivé mardi passé.

    I want+X   be arrived   Tuesday passed

    'I wish I had arrived last Tuesday'

  b. Je voudrais qu'il soit arrivé mardi passé.

    I want+X   that he be.subj arrived   Tuesday passed

    'I wish he had arrived last Tuesday'

So the first environment where we see X-marking appear outside conditionals is X-marked desires for unattainable situations.

The second environment is X-marked necessity.

Take the English modal *ought,* which we identify by the test in (24a):

24a. You ought to do the dishes but you do not have to
   b. #You must do the dishes but you do not have to

We will refer to modals that behave like *ought* in this test as "weak necessity modals".

English has a lexical item *ought* but other languages do not.
(von Fintel and Iatridou 2008)

Other languages: X-marking on a strong necessity modal.

In Hungarian X-marking is just nA.
25. Péter-nek   el   kell-ene mosogat-ni-a az edény-ek-et,
     Peter-DAT   PRT must-X   wash-INF-3sg the dish-PL-ACC

de   senki   nem kényszer-ít   rá
but   noone   not   force-3sg.SUBJ.3.OBJ   that.SUBL

'Peter ought to do the dishes but nobody requires him to do that'

In the absence of X-marking the sentence is grammatical but a contradiction.

And when you can tell the difference, we see it is specifically "consequent"-X-marking. Spanish:

26a. Deberia limpiar los platos, pero no estoy obligado

Must+COND clean the dishes but not am obliged

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

   b. Tendria que limpiar los platos, pero no estoy obligado

Have+COND COMPL clean the dishes but not am obliged

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

   c. #Tengo que limpiar los platos pero no estoy obligado

Have COMP clean the dishes but not am obliged

If English had been a transparent ought language, it would have had *would* on *have to,*

and (27b) would have meant (27c), which it does not:

27a. If I had a car, I would be happy

  b. You would have to do the dishes but you are not required to

    =/=

  c. You ought to do the dishes but you are not required to

So the way there is a conditional/desire generalization, morphologically speaking, there is also a conditional/necessity generalization, again morphologically speaking.

(And again, there are languages that show only one part of each generalization, in this case languages where complements of modals are infinitival and thus incapable of showing X-marking)

But it's all about X-marking!

And on the assumption that the modal of a conditional is situated in the consequent, we understand what "consequent"-X-marking is: X-marking on a modal!

-in the conditional consequent

-on the desire predicate

-on the necessity modal

Here we can already draw our first lesson about our theories of X-marking in conditionals:

A number of proposals about X-marking in conditionals consider only X-marking in the consequent to be semantically active, and X-marking in the antecedent a sort of agreement phenomenon (or SoT) to the X-marking in the consequent. (Those proposals mostly talk about the Past in X).

But such approaches run into a difficulty in the face of the C/D generalization: antecedent X-marking is required even when the embedder is not a past-marked element, like English *wish*, the Turkish *keşke*, Hindi *kaash, etc.*

A second reason why "antecedent" X-marking is not just agreement:

Some of these particles, like Turkish *keşke*, Greek *makari* can take either O-marking or X-marking on their complement:

28. Makari na   ine eki tora   O-marking

    makari PRT   is   there now

    (roughly): 'I want him/her to be there now'

29. Makari na   itan eki   tora   X-marking

    makari PRT   was there   now

    'I wish s/he was there now'

But with X-marking it is necessarily conveyed that s/he is not there now. So clearly "antecedent X-marking" is not JUST agreement or SoT. Antecedent X-marking makes a difference in meaning.

So far we have:

X-marked conditionals

X-marked desires

X-marked necessity

We saw what they have in common in form.

Next we need to see what they have in common in meaning.

We start with a similarity that X-marked desires and X-marked necessity share: a certain ambiguity which does not appear to be present in X-marked conditionals. We will start by presenting this similarity with X-marked desires.

X-marked necessity is ambiguous between

-A weak necessity modal in the actual world:

30. **tha eprepe** na pari aftin tin varka

    must+X   take this the boat
    'he ought to take the boat'   ← **note English translation**

-A strong necessity modal in a "counterfactual" world:

31. An o Fred ithele   na pai sto nisi,   **tha eprepe**   na pari   aftin tin varka

    If the Fred wanted to go to-the island, must+X   take   this the boat
'If Fred wanted to go to the island, he would have to use the boat'   ← **note English translation**

These translate differently into English but in "transparent" languages they both are X-marking on a necessity modal.
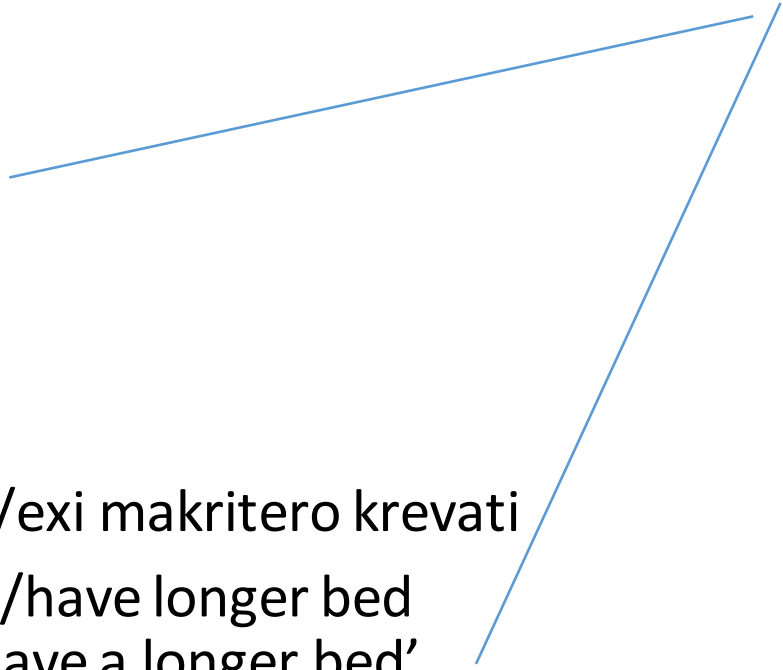
X-marked desires are equally ambiguous:

-A desire in the actual world towards something unattainable:

Again, note the different English translations

32. tha ithele na ixe makritero krevati

    FUT want**+Past** na had longer bed
    'He wishes he had a longer bed'

-A desire in a CF world:

33. An itan psiloteros tha ithele na ixe/exi makritero krevati

    if was taller **FUT** want**+Past** na had/have longer bed
    'If he was taller he would want to have a longer bed'
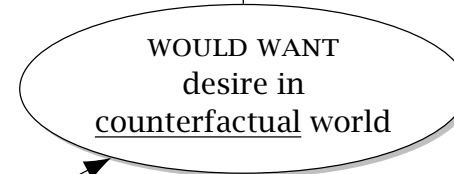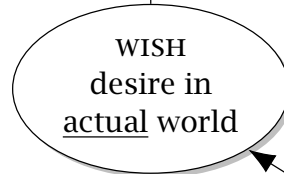
transparent languages:

strong necessity + X

OUGHT
modal claim in
<u>actual</u> world

WOULD HAVE TO
modal claim in
<u>counterfactual</u> world

From von Fintel
and Iatridou
2008

"ought"

"would have to"

English:

"wish"

"would want"

WISH
desire in
<u>actual</u> world

WOULD WANT
desire in
<u>counterfactual</u> world

transparent languages:

want + X

But note:

Despite the parallels between transparent *ought* and *wish*, there is one difference:

- Necessity+X in the actual world: a weak modal (*ought*)

  Want + X in the actual word: not a weaker desire (but a desire towards

  something unattainable; hence the frequent term "CF wish")

So here is our task: understand what X does in the following environments:

a. X-marked conditionals
b. X-marked necessity which yields a weak necessity in the actual world
c. X-marked necessity which yields a strong necessity in a CF-world
d. X-marked desire which yields an unattainable desire in the actual world
e. X-marked desire which yields a desire in a CF-world

We will start with a reduction that should not be controversial:
(c) and (e) reduce to (a):

a. X-marked conditionals
b. X-marked necessity which yields a weak necessity in the actual world
c. X-marked necessity which yields a strong necessity in a CF-world
d. X-marked desire which yields an unattainable desire in the actual world
e. X-marked desire which yields a desire in a CF-world

(c): strong necessity in a X-marked consequent: *if ..., I would have to...*
(d): a desire verb in a X-marked consequent: *if ..., I would want to...*

So (c, d) are cases of (a).

So the question reduces to: What does X do in the following?

a. X-marked conditionals
b. X-marked necessity which yields a weak necessity in the actual world
d. X-marked desire which yields an unattainable desire in the actual world

At this point, we get our second take-home lesson about our theories of X-marking in conditionals.

Schulz has coined the terms "Past as Modal" and "Past as Past" for the two camps of proposals for what/how Past Tense (part or whole of X-marking) contributes to the interpretation of X-marked conditionals.

Past as Modal:

The "past" morpheme has an underspecified meaning:

temporal past

times

μ

worlds

CF inference
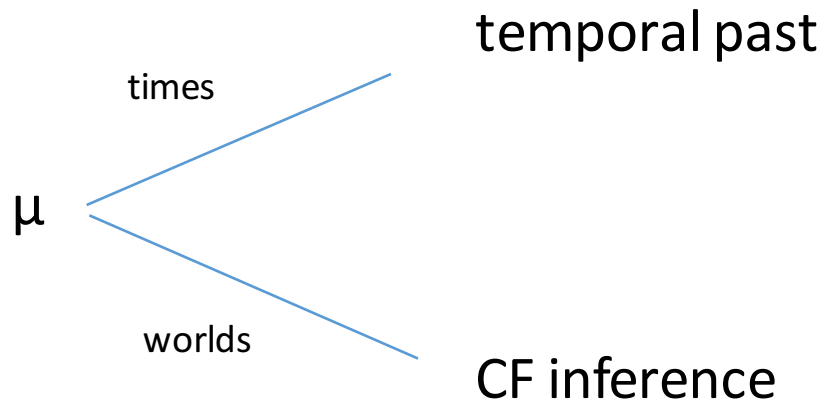
Past-as-Modal: Iatridou, Schulz, Mackay, Bittner, and others

Past as Past:

X-marking is a past operator with wide scope over the conditional, which results in the (mostly metaphysical modal's) modal base being calculated in the past time of the utterance time.

~p

~p

p

p

The "splitting point"
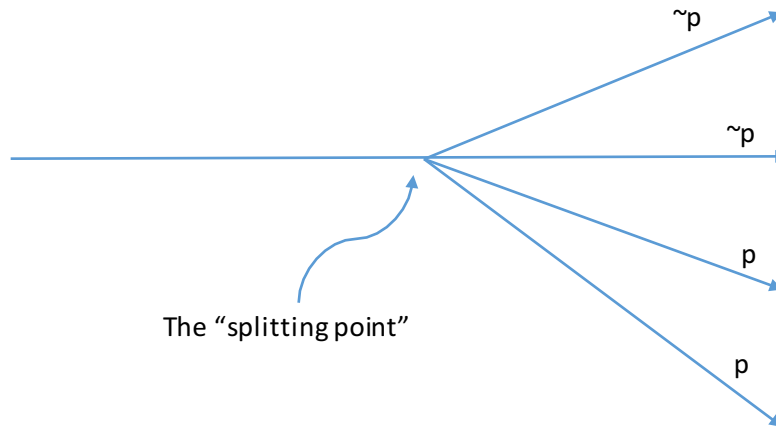
Roughly: the Past takes us back to a time where the (non-Past) conditional could still have been true.

Past-as-Past: Ippolito, Arregui, Khoo, Romero, and others

Nobody that we know of has attempted a Past-as-Past account of the X-marking in X-marked desires or X-marked necessity.

Back-shifting the time of evaluation of the modal, would not yield a weak modal in the actual world.

The same holds for transparent *wish*:

Back-shifting the time of evaluation of the modal, would not yield the constellation of properties of CF wishes. After all, what we call CF wishes are about current desires in the actual world.

So the Past- as-Past camp does not fare well once we look at X-marking outside conditionals.

What about the Past-as-Modal camp?

Mackay 2015 (see also Leahy 2015) argues that certain Past-as-Modal accounts (more specifically Iatridou 2000 and Schulz 2014) suffer from Modus Ponens problems. There have been attempts to save the Past-as-Modal approach from this problem by Schulz, and in fact, by Mackay himself.

We will not express an opinion on this debate today, but instead continue our discussion with a "classic" account of X-marking, the one in Stalnaker 1968, 1975.