Meaningless past, subjunctive and perfect in counterfactuals

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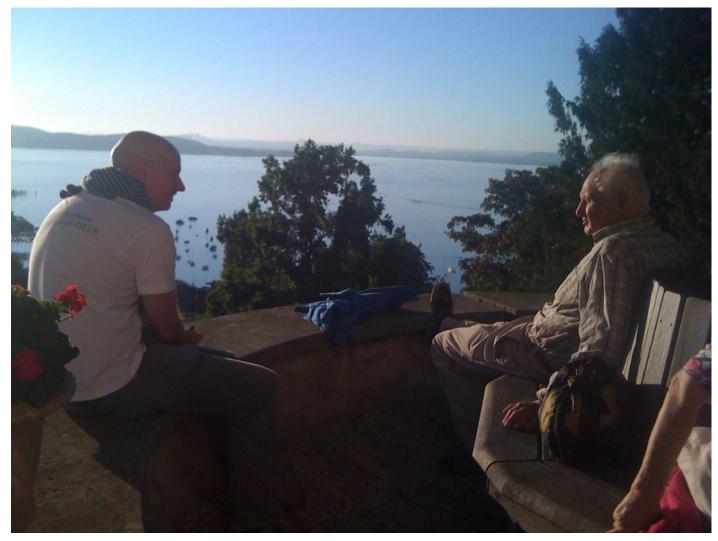
INALCO, Paris, November 4, 2022.

History of this work:

ESSLLI, Malaga 2006:

Ghanshyam Sharma, Arnim von Stechow & Atle Grønn

Let's work on counterfactuals in English, German, Norwegian, French, Italian, Spanish, Latin, Greek, Russian, Ukrainian …!

Results (alas!):

Grønn, Atle & Arnim von Stechow. 2010. *Complement Tense in Contrast: The SOT parameter in Russian and English.*

Grønn, Atle & Arnim von Stechow. 2020. *The Perfect.*

Grønn (in prep.). *Counterfactual conditionals and the sequence of tense parameter.*

Sæbø, Kjell Johan (submitted). *Counterfactual mood in Czech, Russian, German, and Norwegian.*

SOT-languages:

English

I'd be unhappy too, if you were just another bored wife casually pursuing adventure to escape from her husband.

German

Ich wäre ebenfalls unglücklich, wenn Sie eine verheiratete Frau wären wie andere verheiratete Frauen

Norwegian

Jeg ville også bli lei meg, hvis De bare var en av disse tuppene som kaster seg ut i et hvert lite kjærlighetseventyr

Jag skulle också bli olycklig, om ni var en fru som alla andra fruar och tog lätt på varje kärleksäventyr

French

Moi aussi, je serais malheureux, si vous n'étiez qu'une petite femme comme les autres

Spanish

Yo también sería muy desgraciado, si fuera [imperfect subjunctive] usted una señora de ésas y no se tomase en serio las aventuras amorosas que la alejan de su matrimonio.

Non-SOT languages:

Russian

Меня бы тоже удручало, если бы вы были одной из таких дамочек

Czech (original)

Já bych byl také nešťastný, kdybyste byla panička jako jiné paničky

Polish

Ja również był by m nieszczęśliwy, gdyby pani była taka

Today's talk. The SOT-language English:

Grønn, Atle. 2021. *Justifying tense and mood morphology in counterfactuals*. Theoretical Linguistics.

Overview:

- the morphology and interpretation of *have/had, were, would* and *could* (and *if*)

- feature system – with interpretable semantic features and uninterpretable morphological features

●temporal control from the modal in the matrix to the adjunct (*if*-clause)

Counterfactuals about

the present

(1) If the light were red, it would be too

late. (Klein)

or past:

(2) If Dickens had died in 1849, he would not have finished David Copperfield. (Klein)

- Counterfactual conditionals have their own syntax (e.g. *le conditionnel* in French)

- Tense transposition:

- Counterfactuals that speak about the present look as if they were in the past tense

- Counterfactuals that speak about the past look as if they were in the pluperfect.
- The "fake past/perfect" will be empty due to agreement.

Towards temporal control

The duality of *would/could* (Lewis)

(3) Present counterfactuals:

NOW [would/could [~~-ed~~ protasis] [apodosis]]

(4) Past counterfactuals

NOW HAVE [would/could [~~had~~ protasis] [apodosis]]

(5) Mixed present perfect counterfactuals

a. NOW [would/could [~~-ed~~ protasis] [HAVE apodosis]]

b. NOW [would/could [~~-ed~~ HAVE protasis] [apodosis]]

If

Lewis-Kratzer: *if* doesn't mean anything, *if*-clauses simply restrict quantifiers or modals.

(a) a single *if*-clause can modify more than one modal

(b) *if*-clauses can be stacked like relative clauses.

If *if-then* were a two-place operator, this could not be explained.

(6) If 2+2 were 5, 2+3 would not be 1, but

2+3 could then be 6.

(7) Not Would (*if*_i 2+2 = 5) (2+3 = 1), but

Could (*then*_i) (2+3 = 6)

The main modal: *would* or *could*

Pace Iatridou: *it is not the past tense morphology that takes us to the remote worlds in counterfactuals, but the modal.*

"If *P* were the case, then *Q* would be the case" is true in world w at time t iff the worlds w' in which *P* is true at time t and which are maximally similar to w are worlds in which *Q* is true at t.

(Time dependent Lewisian *would*-counterfactual)

- Modals embed a non-finite clause ("the prejacent").

- Like all other verbs, modals have a time argument.

- The semantics of modals contains the information that the prejacent is to be evaluated in the accessible worlds at the local evaluation time of the modal.

- Thus, modals are verbs of temporal control.

[[would$_R$]] $^{g\,\le}$ = λwλtλq: g(R) as below.

($\forall$w')[(w g(R)$_t$ w' & ¬($\exists$w'')[w g(R)$_t$ w'' &

w'' <$_w$ w']) $\rightarrow$ q(w')(t)],

where w g(R)$_t$ w' iff w and w' have the

same past up to time t.

[[could$_R$]] $^{g \leq}$ = $\lambda w \lambda t \lambda q$: g(R) as above.

($\exists$w')[(w g(R)$_t$ w' & $\neg$($\exists$w'')[w g(R)$_t$ w'' &

w'' <$_w$ w']) & q(w')(t)]

- *Would* and *could* are one-place operators.

- Like any other verb they have a temporal variable.

- We have to relativize the (metaphysical) accessibility relation R to time (Ippolito).

- Which worlds are accessible depends on the local evaluation time.

●Trivialization of the modals without a restriction (an *if*-clause).

(12)   It would be too late.

(in a counterfactual sense!)

 = It could be too late.

 = It is too late.

Whenever an *if*-clause (or something similar) restricts the modal, we get temporal control:

(13)   If the light were red, it would be too late.

All the nearest worlds now in which the light is red now, are worlds in which it is too late now.

- The highest semantic tense in the protasis is TPRO

- TPRO is also the highest embedded tense under attitudes in (Grønn & von Stechow 2010).

- In both cases, we can apply Sequence of Tense-rules.

A tensed version of Kratzer's Modal

Modification:

Let α be a modal, R and accessibility relation,

and let β be an *if*-clause (type (s,it)).

$[[\alpha_R \beta]]^g = [[\alpha_R]]^{g*}$, where g* is like g with the

  exception that

$g*(R) = \lambda w \lambda t \{w' : w\ g(R)_t\ w'\ \&\ [[\beta]]^g(w')(t)\}$

Fake past

Iatridou (2000): past tense morphology has an exclusion feature (ExclF) and points to a remoteness operator (<) in the temporal or modal domain.

- If the Past and Perfect can be world shifters, where does the quantification over worlds come from?

- What would be the role of the necessity modal *would* vs. the possibility modal *could* in such a system?

The modal approach (Schulz 2014) also faces the problem that *would-have*-conditionals end up being semantically present.

Contra empirical evidence from temporal adverbials:

(14) If Dickens had died in 1849, he would not have finished David Copperfield.

We separate quantification over worlds from quantification over times.

The first is done by modals, the second is done by semantic tense operators.

Real and fake perfect

[[HAVE]] as a relative Past $\lambda t \lambda P.(\exists t' < t)\ P(t')$

Locates the modal in the past by restricting the time variable of the accessibility relation of R.

A transparent semantics has the perfect auxiliary above the modal (German/French)

At LF, we switch the relative hierarchy:

HAVE(N) would(protasis)(prejacent)

would-have-conditionals in (Arregui 2009):

PAST(N) would(protasis)(prejacent)

Semantically the same, but the compositional contribution of *have* is different, and the syntax-semantics interface is unclear.

The perfect can also have local scope inside the apodosis or protasis:

(15)   If this book were boring, I would not have recommended it. (Klein)

(16)   If Ito had eaten the fish, he would now be dead. (Klein)

The local perfect in counterfactual conditionals can have different flavours, e.g. relative past, resultative perfect or extended now (Grønn & von Stechow 2020).

Yet another reading of the perfect: the identity reading, or the fake/empty auxiliary.

(17)   If Dickens ~~had~~ died in 1849, he would not have finished David Copperfield.

Three perfect structures:

1. A relative past *have* in the apodosis out-scopes *would* at LF, and *had* in the protasis is semantically fake.

2. A real perfect *have* remains in the scope of *would,* i.e. the entire conditional is out-scoped only by NOW.

3. A real perfect *had* is interpreted locally inside the protasis.

Feature system

Obtain the correct logical form (LF) from surface syntax.

A feature theory that licenses the temporal morphology.

"To the extent possible, such an analysis should conform to the linguistic make-up of the sentence and only operate with grammatical rules that are needed anyway." (Klein 2021)

The theory below was independently motivated and applied to SOT in complements under attitudes in (Grønn & von Stechow 2010).

Feature pairs iF/uF, where iF is the interpretable feature, and uF is the uninterpretable counterpart.

The i-features are carried by overt/covert semantic operators.

A semantic operator transmits its i-features to the variables it binds, *feature transmission under binding*.

The u-features are licensed under agreement, possibly multiple agreement.

The transmitted/licensed feature has to be in the *semantic* domain of the operator.

The features needed here are:

[n] "now", [p] "past",

[perf] "perfect",

[sub] "subjunctive".

If the time variable is an argument of a finite verb form, the u-feature on the variable has to agree with the inherent morphology of the verb.

Tense/subjunctive morphology is semantically empty and licensed by covert operators under agreement.

The u-features will be exactly what we see on the surface.

The subjunctive has no meaning by itself. It is morphology (*were*) and a reflex of semantic operators like *would* (or *could*).

Present counterfactuals

If the light were red, it would be too late.

N λ_1 would$_R$(t$_1$) (if λ_2 light ~~were~~(t$_2$) red)(λ_3 it be(t$_3$) too late)

i-n   i-p   (u-n)   u-p   (u-p)

i-sub   u-sub   (u-sub)

Counterfactual modals carry the feature combination i-past, i-subjunctive.

The modal does not have an inherent morphological uF.

The temporal variable of the modal, the time of the accessibility relation R, receives a present tense feature (u-n) from the deictic NOW.

Semantically, the construction is therefore present.

Due to temporal control, the present interpretation gets into the *if*-clause and the prejacent.

In the semantic binding domain of *would*, we encounter the form *were* in the *if*-adjunct.

The verb form *were* has two inherent morphological features, u-past, u-sub, on the temporal variable t_2 where they can be checked against the i-features of *would*. Hence, the past subjunctive of *were* is licensed and semantically empty.

We have basically applied the SOT-rules from (Grønn & von Stechow 2010).

Relevant principles behind the feature system:

P1. An iF of a semantic operator (e.g. i-past, i-sub of *would*) is transmitted under binding as an uF to a variable bound by the operator.
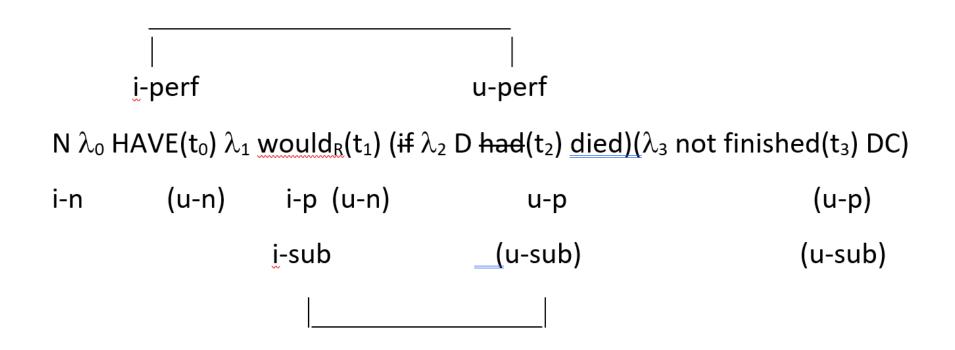
P2. For each lexical entry with an inherent uF (e.g. u-past, u-sub of *were*), there must be an overt or covert semantic operator with a corresponding iF (e.g. i-past, i-sub of the overt *would*).

P3. An iF of an overt operator does not require the presence of an inherent uF in its semantic domain. A clear case is i-sub of *would*, which only has a function in the system when *were* u-sub surfaces in the *if*-clause. Typically, [sub] is neutralised.

P4. Verbs, adjectives transmit features to the variables they bind provided there is no competition with an inherent i-feature of the operator. Thus, when *would* inherits the feature (u-n) which is in conflict with its own semantic tense feature i-past, (u-n) is not transmitted further.

P5. Lexical entries can be unmarked with respect to F. The counterfactual modals *would, could*, non-finite verbs etc. don't have inherent, morphological u-features.

Past counterfactuals

If-adjuncts under verbal quantifiers like *would* are subject to the SOT-parameter, but that is not enough to explain away the second layer of past tense in the protasis of Germanic and Romance languages.

If Dickens had died in 1849, he would not have finished David Copperfield.

i-perf   u-perf

N λ_0 HAVE(t_0) λ_1 would$_R$(t_1) (if λ_2 D had(t_2) died)(λ_3 not finished(t_3) DC)

i-n   (u-n)   i-p (u-n)   u-p   (u-p)

                         i-sub   (u-sub)   (u-sub)

had in the *if*-clause must be semantically void.

had is an agreement phenomenon with the shifting by *have* toward the past.

In the standard decomposition of *had* as

Past + have, the first layer is deleted as a fake past, and the other layer is uninterpreted as well.

would under attitudes

What about the temporal *would*, known as *the future in the past*?

[[*would2*]] relative future: $\lambda t \lambda P.(\exists t' > t)\ P(t')$

Unlike the pluperfect, *would2* is typically blocked in main clauses; cf. the u-features

(18)   John *had* forgotten his money, when he entered the bar. (backwards shift)

(19)   (?? On an episodic reading) When John entered the bar, he *would2* order a beer. (forward shift)

would2 has the inherent feature combination u-past, u-sub, but there is no subjunctive operator that could license u-sub.

So when do we use *would2*? Under past attitude verbs (Abusch 1997)!

(20)   Mary said: "it will be too late" →

Mary said that it *would2* be too late.

Attitude verbs are intensional and embed temporal properties, hence the feature distribution in a standard SOT configuration:

PAST Mary said that it would2 be too late.

i-p   u-p   u-p   (u-p)

                   i-sub   u-sub (u-sub)

Attitude verbs inform us about the temporal properties of the counterfactual *would1*.

Recall that *would1/could* have the feature combination i-past, i-sub.

would1/could cannot have an inherent/morphological u-past feature since the construction cannot be modified by a past time adverbial:

* PAST Yesterday it *would1*(t) be too late.

  o

  i-p   i-p   u-p

                                         i-sub

Could *would* have an inherent present feature u-now?

No!

N PAST Mary believed that *would1*(t) (if the light were red) (be too late).
o

i-n i-p   u-p   i-p (u-p)   u-p   (u-p)

                  i-sub   i-sub (u-sub)   u-sub   (u-sub)

The temporal variable of *would1* must receive the feature u-p from the matrix PAST, the closest temporal operator.

This shows that *would1* cannot be an inherent present despite our informal talk of *would*-conditionals as being semantically present.

Note that the embedded *would1-conditional cannot be backwards shifted* under the past attitude, which would be expected as a possible reading if *would1* had an inherent u-past feature.

So counterfactual *would* (*could*) must be semantically tenseless, i.e., it cannot be classified as a plain present or as a plain past.

We can insert the same counterfactual also under *believes* with the same simultaneous reading as above:

N Mary believes that *would1*(t) (if the light were red) (be too late).

i-n	u-n	i-p	(u-n)	u-p	(u-p)
	i-sub	i-sub	(u-sub)	u-sub	(u-sub)

The system accounts for the empirical fact that neither the modal nor temporal *would* can be immediately bound by a semantic PAST, but both are OK under past attitudes.

The modal *would1* is tenseless and cannot make i-past visible on PAST.

The temporal *would2* has a u-sub feature that must be licensed in addition to u-past.

To sum up:

We need a modal semantics with built-in temporal control and a feature system with sequence-of-tense/mood rules at the interfaces.

1. [i-n] originates with the present NOW.

2. [i-p] originates with the semantic PAST and counterfactual modals like *would*.

3. [i-sub] originates with verbs of attitude and counterfactual modals like *would*.

4. [i-perf] originates with the temporal auxiliary *have*.

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