

Conditionals in Paris 2019

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Class 2. Past Tense in Subjunctive Conditionals

As Iatridou (2000) observes, the “subjunctive” form of the conditional in English, and many other languages, involves past tense morphology.

- (1) If it's raining now, the sidewalks are wet.
- (2) If it were raining now, the sidewalks would be wet.
- (3) If it rained yesterday, the sidewalks were wet.
- (4) If it had rained yesterday, the sidewalks would have been wet.

In each pair of conditionals, the “subjunctive” form seems to have a layer of past morphology over and above what would be expected from the conditionals’ temporal interpretation. Conditionals (1) and (2) pertain to the present, as illustrated by the presence of “now”. But in the “subjunctive” (2), “were” is a past tense form, as is “would” the past tense of “will”. Conditionals (3) and (4) pertain to the past (“yesterday”). But in (4) the antecedent takes a pluperfect form, “had rained”. Normally the pluperfect form is used when the event or state described precedes not only the time of utterance but some salient intervening past time, but there is no obvious suggestion of such an intervening past time in (4).

Iatridou observes that a phenomenon like this is crosslinguistically widespread, although the details differ. For example, in French the *conditionnel* combines past and future morphology, adding the suffixes from the *imparfait* to the *-er-* morpheme from the future. The phenomenon appears in historically unrelated language, and thus does not seem to be an accident of English or Indo-European languages.

This phenomenon raises the question what the contribution of this past tense is. Views of this question can broadly be divided into two kinds, which following Schulz (2014) we can call *past-as-past* views and *past-as-modal* views. In a *past-as-past* view, the past tense is interpreted with its standard temporal meaning.

While views differ in some details about their proposals for conditionals’ logical form, in a broad sense both types of views generally postulate that “subjunctive” conditionals contain a wide-scope past tense. Thus the subjunctive version of *if p, q* has a general form like PAST(*if p, q*). In the framework of Kratzer (1981), in which a conditional consists of a restricted modal operator, it might have a form like PAST(WILL: *if p, q*), with *will* as the restricted modal in subjunctive conditionals whose overt modal is “would”. This wide-scope hypothesis is motivated by two points:

- both the antecedent and the consequent of a subjunctive conditional can pertain to an event that is not in the past.

- typically, the ordinary past tense can vary independently between the antecedent and the consequent. However, the subjunctive cannot appear on only the antecedent or only the consequent, as one would expect if it were in a narrow scope position:
- (5) If he arrived in Paris yesterday, he is still in Paris today.
- (6) If he had arrived in Paris yesterday, he would still be in Paris today.
- (7) *If he had arrived in Paris yesterday, he is still in Paris today.

Past-as-Past Views:

According to a past-as-past view of the subjunctive conditional, the “subjunctive” conditional is true if the conditional in the scope of the past tense was true at some salient past time. However, the conditional in the scope of the past tense need not necessarily have the same truth conditionals as the indicative conditional would be assigned in the same context.

Examples of views of this general kind include those of Arregui (2009), Ippolito (2013), Khoo (2015) and Romero (2014). Here I will present the view of Khoo, which has the following elements.

- the view is presented in the framework of Kratzer (1981), in which the conditional involves a restricted modal operator.
- there are two kinds of modal bases, epistemic and metaphysical. Khoo identifies metaphysical modal bases with *historical* modal bases, which are such that at a given world w and time t , every proposition true at w that is about an interval that ends before or at t is in the modal base (and no future-oriented propositions are). Thus every world that shares its history up to t with the world of evaluation is consistent with the modal base.
- the past tense outside the modal shifts back the time at which the modal base is selected.
- a *diversity constraint* (Condoravdi 2001): there is a constraint on the assignment of modal bases to modals and conditionals in context that ensures that their prejacent or consequents are not in the modal base, and nor are their negations. Thus the modal base for *if* p , q should not contain q itself or $\sim q$.
- Khoo postulates a covert necessity modal operator even in *would*-conditionals, and gives “will” a tense-like semantics in which “will p ” is true at a time t at a world w iff p will be true at some later time t at w . The other theorists mentioned above mostly postulate that *would* is the modal restricted by the *if*-clause.

The crucial point about these principles in combination is that if q is about the past or present, then at the time of utterance, it is historically necessary if true and historically impossible if false. This means that a conditional with a historical modal base relative to the time of utterance will violate the diversity criterion if it has q as its consequent. This means, in turn, that in order to felicitously utter the conditional with a historical modal base, it needs to be put in the past tense, so that the modal time t is such that at t , there are some historically possible worlds at which q and some at which $\sim q$.

This predicts the following points:

- an indicative with a narrow scope past tense on the consequent—i.e. one whose antecedent concerns a past event or state—can only receive the epistemic reading. This is

because, if the consequent is true, it will be true at all historically possible worlds, and if it is false, it will be false at all historically possible worlds, both of which violate the diversity constraint.

- subjunctives and future-oriented indicatives can receive either metaphysical or epistemic interpretations.

Epistemic subjunctives (Edgington 2008):

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

Metaphysical future-oriented indicatives:

- (9) If Sue doesn't meet the boss tomorrow, Ben will.

Khoo argues that there are two readings of this sentence—one that requires that there be a plan for Ben to be a substitute if Sue is unavailable, and another that does not require this and might be known by someone who could not read whether Sue or Ben's name was listed on the schedule.

Potential difficulties for this view:

- Lewis (1979) argued against time-based approaches to counterfactuals on the grounds that some counterfactuals are not about times at all.

- (10) If gravity went by the inverse cube of distance...

- There is a potential difficulty in explaining why, in the subjunctive, the two-past or pluperfect form is mandatory. Suppose that it is clear from the context that we are talking about an event yesterday.

- (11) If she had been here, she would have enjoyed the event.

- (12) #If she were here, she would enjoy the event.

There is some discussion of proposed solutions in Ippolito (2013) and Romero (2014).

Past as Modal Views

Past-as-modal views include Iatridou (2000), Schulz (2014) and Mackay (forthcoming).

Iatridou proposes that the past tense designates what she calls the "exclusion function":

$T(x)$ excludes $C(x)$.

In the case of conditionals:

$T(x)$ are the worlds of the antecedent.

$C(x)$ are the epistemically possible worlds.

Thus, the view is that the worlds of the antecedent exclude the epistemically possible worlds. Given that knowledge is factive, the actual world is epistemically possible in all actual contexts, so this means that the worlds of evaluation exclude the actual world (among others). This is consistent with Anderson's example about the doctor, since a world can be true at the actual world without the actual world being among the selected worlds of the antecedent. However, as Mackay (2015) points out, it makes sentences like the following tautologies.

(13) If the patient had taken arsenic, something would be different from how it actually is.

Schulz proposes a similar view except that what is excluded by the past tense is the *epistemic center*, which combines an epistemic modal base with an ordering source that ranks worlds by how typical or normal they are. Since the actual world is not always among the most normal, the actual world is not part of the epistemic center in all contexts, which means that strictly speaking, Schulz does not predict that (13) is true in all contexts. But she does predict that (13) is true in all contexts in which the world is proceeding normally.

Mackay (forthcoming) proposes a view that modifies Iatridou's in two ways:

- the past's modal interpretation expresses a presupposition not about just the selected worlds of the antecedent but the modal base
- the condition expressed by the past's modal interpretation is not exclusion, but rather that the modal base is a proper subset (thinking in terms of propositions—equivalently, a proper superset, thinking in terms of worlds) of the *factive context*, the true presuppositions of the context.

Thus, the idea is that on the modal reading of the past tense, $PAST(MODAL_{f,g} p)$ is true (without presupposition failure) if f determines a subset of the true presuppositions of the context. This is the reading in subjunctive conditionals.

This makes the following commitments:

- indicatives only have epistemic readings; their modal base always consists in the true presuppositions of the context.
- subjunctives can have empty modal bases; this is how Kratzer implements the Lewis semantics for counterfactuals within her view. All the work ranking selected worlds is done by the ordering.
- subjunctives can also have modal bases that are subsets of the true presuppositions of the context. This obtains when we use our earlier state of knowledge as the modal base, as in Edgington's epistemic subjunctives. The modal base consists in what we knew then, which is a subset of what we know now.

Remaining issues:

- Should the past-as-modal theorist be predicting an ambiguity here in subjunctives between the modal and the temporal reading of the past? After all, the temporal reading of the past does exist. Why isn't the view that there are all the readings proposed by the past-as-past theorist exist as well as the readings proposed by the past-as-modal theorist?

- How does all this relate to aspect? Iatridou argues that imperfect morphology is used for counterfactual conditionals in many languages. How different should the semantics for conditionals in these languages be?
- How does all this relate to past-tense morphology in the complements of counterfactual attitudes like “wish” and “imagine”?

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