Actuality and fake tense in conditionals *

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Abstract Sabine Iatridou (2000) and Katrin Schulz (2014) defend accounts of the past tense in subjunctive conditionals according to which the past tense has a modal reading that excludes the world of utterance or some set of epistemically possible worlds. I argue here that these views give an unsatisfactory treatment of certain subjunctive conditionals that contain embedded indicative clauses pertaining to the actual world.

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1 Introduction

Some subjunctive conditionals contain an embedded indicative clause that pertains to the actual world rather than to the worlds of the antecedent.

(1)   If Jones had taken arsenic, he would have shown just those symptoms which he does in fact show.

(2)   If Oswald had not shot Kennedy, things would be different today from the way they actually are.

These conditionals constitute an important class of test cases for accounts of the relationship between indicative and subjunctive conditionals. Anderson

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(1951) uses (1) to argue against the view that subjunctive conditionals require that their antecedents be false. Jackson (1987), meanwhile, invokes (2) in an argument against possible-worlds-based accounts of indicative conditionals. I argue here that another view faces a problem with certain examples of this kind. The view in question, versions of which are defended by Iatridou (2000) and Schulz (2014), postulates that subjunctive conditionals contain instances of past tense that receive a modal interpretation according to which the tense excludes the world of utterance, or some set of epistemically possible worlds, rather than the time of utterance.

2 Iatridou's view

Iatridou's view is inspired by the observation that in a large number of languages, the characteristic feature of the conditionals traditionally called "subjunctive" is the past tense. Subjunctive conditionals appear to contain a layer of past morphology that is not interpreted temporally in the usual way. Consider (3) and (4):

(3)   If we were outside now, we would be cold.

(4)   If we had been outside yesterday, we would have been cold.

In (3), *were* is a past-tense form, as is *would* (of *will*). And yet, as the adverbial *now* makes clear, the state or event described in a conditional like (3) is not in the past. In order to pertain to states or events in the past, a subjunctive conditional must have a second layer of past, as in (4), whose antecedent takes a pluperfect form. And the felicity of (4), unlike that of the pluperfect outside conditionals, does not require the salience of some intervening time that is in the past relative to the time of utterance but not as far in the past as the time described by the sentence itself. Both conditionals appear to have an extra level of past morphology beyond what one would expect from the sentences' interpretation. Iatridou describes this phenomenon as the *fake past*.

This pattern gives rise to a puzzle, since traditional accounts of the semantic and pragmatic distinction between indicative and subjunctive conditionals, such as that of Stalnaker 1975, do not involve the past tense. Proposed explanations of the role of tense here take a number of forms. One type of view, defended by Ippolito 2006 and Arregui 2009, maintains that the tense and aspect morphemes here are interpreted in the usual temporal

way, and that the apparent mismatch between the sentences' tense and their temporal interpretation should be explained by the thesis that one of the temporal morphemes — either the past tense or the perfect — takes wider scope than the conditional, or at least than the modal operator in the conditional. In broad outline, (3) states that it was (or has been) the case that if we are outside now, we are cold. Another view, by contrast, holds that the past tense has an interpretation that is modal rather than temporal. Just as there is a relation of precedence between times, and the past tense expresses of a time that it bears this relation to the time of utterance, so too is there some relation between worlds such that the past tense on its modal reading expresses of a world that it bears this relation to some designated world or set of worlds.

Iatridou's proposal, to be more specific, is that the semantic value of the past tense is what she calls the *exclusion feature*, which she defines as follows, where *x* can range over times or worlds:

(5)   T(*x*) excludes C(*x*).

Iatridou explains: "*T(x)* stands for 'Topic (*x*)' (i.e. 'the *x* that we are talking about'). *C(x)* stands for 'the *x* that for all we know is the *x* of the speaker.'" When *x* ranges over times, we get:

(6)   The topic times exclude the utterance time.[1]

And when *x* ranges over worlds, as it does in conditionals with fake past:

(7)   The topic worlds exclude the actual world.

The topic worlds, in the case of a conditional, are those worlds at which the antecedent is true at which the consequent must be true in order for the whole conditional to be true.[2]

Now, under normal circumstances of non-omniscience, the actual world is only one of many epistemically possible worlds. We would therefore not

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1 One might object that in the temporal case, the past tense does not just exclude the time of utterance, since the past tense also excludes the future. Iatridou responds to this, however, by invoking the claim that the future is not a tense; only past and present times are in the domain of times with which the tense system is concerned. As Iatridou points out, though, even if this claim about the future is incorrect, one could simply replace "exclude" with "exclude and does not follow temporally". At any rate, this issue does not concern us here, since we are concerned with the modal case.

2 See Iatridou 2000, 246–247.

expect "the actual world" in (7) to be obtained from the schema "the *x* that for all we know is the *x* of the speaker." Iatridou, however, uses the phrase "the actual world" in a nonstandard way to denote not just the actual world itself but the set of worlds that are epistemically possible in a context:

> For this subset relationship to hold, the "world according to the speaker" should be a set. This has been independently argued for. As Lewis (1986:27) puts it, "The content of someone's knowledge of the world is given by his class of epistemically possible worlds. These are the worlds that might, for all he knows, be his world; world *W* is one of them *iff* he knows nothing, either explicitly or implicitly, to rule out the hypothesis that *W* is the world where he lives." For example, I definitely think that the actual world can be characterized by the proposition "I am sitting in front of my computer." However, as I have no knowledge about the weather conditions in Thessaloniki at this moment, my actual world (set of worlds) also contains the mutually incompatible "I am sitting in front of my computer and it is raining in Thessaloniki" and "I am sitting in front of my computer and it is not raining in Thessaloniki."[3]

Thus, it seems that the proposal is really that the topic worlds exclude the worlds that are epistemically possible in the context of utterance. It should be noted, though, that given the factivity of knowledge, the actual world is always (for contexts in the actual world) among the worlds that for all we know may be actual: one cannot know that the actual world is non-actual. The actual world is always among the epistemically possible worlds. So if the antecedent-worlds exclude the epistemically possible worlds, they do exclude the actual world, and Iatridou's view does entail the more standard interpretation of statement (7) above. More broadly, the world of utterance is always among the epistemically possible in any context in any world.

This view has the consequence that at all the selected antecedent-worlds for a subjunctive conditional, something or other must be different from how it is at the world of utterance. One route to this consequence is via the principle that no two distinct possible worlds share in common the truth values of all propositions, which is fairly natural given most views of

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3 Iatridou 2000, 247.

propositions and possible worlds.[4] If this is correct, then since the selected antecedent-worlds exclude the world of utterance, some fact at those worlds is false at the world of utterance. But strictly speaking, the consequence in question — that at all the selected antecedent-worlds for a subjunctive conditional, something or other must be different from how it is at the world of utterance — does not depend on this principle about possible worlds. Even if pairs of possible worlds can assign the same truth value to all propositions, it cannot be that one member of such a pair is epistemically possible in a context while the other is not. Since they share all their propositions' truth values, they must be either both consistent or both inconsistent with any body of information whatsoever, and thus *a fortiori* must be either both consistent or both inconsistent with the knowledge of speakers in a context or any other propositional attitudes that figure in the determination of the epistemically possible. So given that the actual world is epistemically possible, so too is any world at which all and only propositions true at the actual world are true, and so such a world would likewise need to be excluded from the antecedent-worlds.

This leads to the problem. Consider (8) and (9):

(8)   If Jones had taken arsenic, things wouldn't be quite as they actually are.

(9)   If Jones had taken arsenic, everything would be exactly as it actually is.

Unlike Anderson's original (1), sentence (8) is naturally construed as an argument against the hypothesis that Jones took arsenic. If Jones did indeed take arsenic at the world of the context, (8) should be false while (9) should be true. But if the world of utterance is never among the topic antecedent-worlds, then in no context can everything at these worlds be exactly as it

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4 First of all, this claim follows from the view that propositions are sets of possible worlds, since no two worlds can be members of all the same sets. Dissent from this view of propositions is generally motivated by the idea that there should be distinct propositions true at the same sets of possible worlds (so that, for example, there is more than one necessary proposition). By contrast, it is somewhat hard to see what motivates the thesis in the opposite direction, that there are distinct possible worlds with the same propositions true at them. How could there be distinct possible states of the world, ways things could be, that share all truths in common? See Kaplan 1995, 43–44, for more discussion. Perhaps, according to the modal realism of Lewis 1986, there could be possible worlds that in some sense are qualitatively identical but numerically distinct, though Lewis himself accepts that there is a proposition for each set of worlds. See Lewis 1986, 104–8.

is at the world of utterance. Thus (8) is true in all contexts and (9) is false in all contexts, regardless of whether Jones took arsenic at the world of the context. But these are incorrect results: (8) is not a trivial tautology consistent with the patient's having taken arsenic, and (9) is not a contradiction that is false even if the patient took arsenic.

These judgments of truth value are not reversed with the addition of language explicitly indicating that the quantification is intended to range beyond the domain of the context to which a bare quantifier without such language would likely be restricted.

(10)   If Jones had taken arsenic, some fact or other about the universe would be different from how it actually is, although it might not be a fact about our immediate environment.

This, again, is not a triviality that is true in all contexts, even those in which Jones did take arsenic. Like (8), (10) suggests that Jones did not take arsenic, though the evidence against his having done so may have the convolution characteristic of detective stories. This contrasts with ordinary cases of contextual domain restriction, in which it is easy to see the reversal of truth values when the quantification is explicitly stated to range over the whole world. In many contexts in which (11) is true, for example, (12) is clearly false.

(11)   Every book was on this table.

(12)   Every book in the whole universe, even those of no interest to us, was on this table.

So, although it is to be granted that in many ordinary contexts, when we use a phrase like "things would be different" or "things would be exactly as they are", the "things" in question are restricted to the relevant things in context and do not cover all the facts about the whole universe, the judgment that a conditional like (8) is not true in all contexts does not appear to depend on its being interpreted in such restricted fashion.

These considerations indicate that the world of utterance is not always excluded from the worlds selected for the evaluation of a subjunctive conditional. It follows that the epistemically possible worlds are not all excluded, since the world of utterance is always epistemically possible in a context of utterance.

3   Schulz's view

Schulz 2014, meanwhile, proposes a view like Iatridou's but with the following differences. First, for Schulz, the modal reading of the past does not directly constrain the selection of antecedent-worlds, but rather expresses a presupposition about the selection of worlds by a partial strict ordering that Schulz labels $<_R$. Thus for Schulz it is possible, in principle, that the worlds selected in a context for the evaluation of a subjunctive conditional should not meet the conditions imposed by the past tense; however, the conditional would then suffer from presupposition failure. Second, in Schulz's view, the set of worlds whose exclusion is presupposed by the fake past is not the set of epistemically possible worlds but a subset of them she calls the *epistemic center*, which need not include the world of the context. The epistemic center is the set of worlds that are not only epistemically possible but also most in conformity with some combination of what is expected or normal, what the speakers are aware of, or what the evidence suggests. This notion is adapted from the view of Kratzer (1981) that the set of worlds at which a sentence in the scope of an epistemic necessity operator is evaluated need not include the world of utterance. Third, Schulz also proposes that both indicative and subjunctive conditionals — as well as non-conditional indicative sentences — carry a presupposition that the world of utterance is in the epistemic center. This last commitment is due to the presence in the syntax of a speech act operator for assertion, which is not specific to conditionals. In Schulz's formalism, the truth value of sentences whose presuppositions fail is undefined.

Schulz does not state whether the ordering $<_R$ which determines the selection of worlds is centered, meaning that each world is nearest to itself — or weakly centered in the sense of Lewis 1973, meaning that each world is among the nearest to itself. Thus, in principle, for a given context and a given subjunctive conditional with a true antecedent, the selected worlds of the antecedent might include the world of utterance or not. If the ordering in a context is at least weakly centered, then the worlds selected for a true antecedent must include the world of utterance: since the world of utterance is among the nearest to itself and the antecedent is true, the world of utterance is among the worlds nearest to itself at which the antecedent is true. By contrast, if the ordering is not centered, then the selected antecedent-worlds may either include or exclude the world of utterance. Even if the world of utterance is not among the nearest worlds overall to itself, it might be among

the nearest worlds at which the antecedent is true; in this case, the world of utterance would be among the selected worlds. But with an uncentered ordering, the world of utterance might also not be among the selected worlds.

If the world of utterance is among the selected worlds for a subjunctive conditional with a true antecedent, Schulz's view has the consequence that the conditional suffers from presupposition failure. On the one hand, if the world of utterance is in the epistemic center, then since the world of utterance is among the selected antecedent-worlds, the presupposition of the past tense fails. On the other hand, if the world of utterance is outside the epistemic center, then by the presupposition of the assertion operator, the conditional suffers from presupposition failure.

Subjunctive conditionals with true antecedents, however, do not all suffer from presupposition failure. They must therefore, according to this view, be asserted in contexts in which the ordering that selects antecedent-worlds is uncentered and the worlds of the antecedent exclude the world of utterance. But now we have the same situation as we did with Iatridou's version above: any consequent stating that something would be different from how things actually are is true. Compare Anderson's original (1) above with (13):

(13)   If Jones had taken arsenic, he would have shown just those symptoms which he does in fact show, but something else would be different from how it actually is.

Suppose that the patient did indeed take arsenic and Anderson's (1) is true. As we have seen, on Schulz's view, since the conditional has a truth value and does not suffer from presupposition failure, the world of utterance cannot be among the selected antecedent-worlds. This means that (13) must be also true in any such context. But this is incorrect. The accurate prediction is that (1) is true and (13) is false in this context, but this is impossible on the view under consideration.

Now, the claim that subjunctive conditionals presuppose that the selected worlds of the antecedent are outside the epistemic center is independent of the claim that they presuppose that the world of utterance is inside the epistemic center. In Schulz's view, the former arises from the modal interpretation of the past tense in subjunctive conditionals, whereas the latter arises from the presence of the speech act operator for assertion, which is not specific to subjunctive conditionals.

One might therefore retain Schulz's basic view of the past tense in the subjunctive conditional while abandoning the overall view that a broader

class of sentences presupposes that the world of utterance is in the epistemic center. Indeed, the claim that sentences in general presuppose that the world of utterance is in the epistemic center is independently problematic. Schulz states that this notion captures the idea that the speaker is being honest. First, however, it is doubtful that the norm of speakers' honesty should be incorporated into the presuppositions of a sentence. The assertions of dishonest speakers do not lack a truth value, nor do they cause an intuitive clash with the context of utterance. If successfully deceptive, they can be accepted smoothly into the context despite being false. Second, the speaker's honesty does not require that the world of utterance actually be among the most expected worlds; a speaker can be honest but mistaken and have beliefs and expectations that diverge from reality. All these considerations might motivate a view that retains the thesis that subjunctive conditionals presuppose that the worlds of the antecedent exclude the epistemic center while abandoning the thesis that they presuppose that the world of utterance is inside the epistemic center.

The resulting view would allow, correctly, for contexts in which (1) is true and (8) and (13) are false. Suppose that the world of utterance is among the selected antecedent-worlds but — along with the other such worlds — is outside the epistemic center, and the antecedent is true. In such a case, the modal presupposition of the past tense is met, since the selected antecedent-worlds are outside the epistemic center. Since the world of utterance is among the worlds selected, the conditionals stating that something would have been different from how it actually is are false.

This view, however, still delivers the correct prediction only for those contexts in which the world of utterance is not in the epistemic center. This is not a satisfactory result. Even if things are proceeding normally according to speakers' expectations, a sentence like Anderson's (1) can be true even while another conditional stating that if the patient had taken arsenic, things would be different from how they actually are is false. Granted, in the absence of a precise specification of how the epistemic center is determined in a context of utterance, it is hard to know how much of an idealization it is to imagine the actual world being among the epistemically ideal ones. But the intuitive judgment is that in a context in which the patient did in fact take arsenic, (1) is true while (13) is false. The mere fact that the world is proceeding normally according to speakers' accurate expectations does not mean either that these truth values change or that both conditionals are undefined due to presupposition failure.

A reviewer points out, meanwhile, that although Iatridou, unlike Schulz, states that the exclusion feature is part of the conditional's content and does not incorporate presupposition into her view, this is still consistent with the idea that the exclusion feature does not directly constrain the selection of worlds but rather states a claim about the set of worlds selected by another mechanism. According to this alternative interpretation, the worlds are selected by an ordering on possible worlds and then the fake past contributes the additional content that the worlds thus selected exclude the epistemically possible. A conditional uttered in the subjunctive is true if the consequent is true at the nearest antecedent-worlds and the nearest antecedent-worlds exclude the epistemically possible, and false otherwise. This view, however, faces somewhat similar problems to Schulz's view. On the one hand, if, in a given context, the worlds of the antecedent include the world of utterance, then a subjunctive conditional with a true antecedent is false: the world of utterance is epistemically possible. On the other hand, if the worlds of the antecedent exclude the world of utterance, then the conditionals stating that things would be different from how they actually are are automatically true. In no context can some conditionals with true antecedents be true while (8) and (13) are false.

Lastly, it should also be noted that for conditionals with the past perfect *would have* such as (1), Schulz does not present a detailed proposal, but sketches two types of view to which she remains open. On the view she prefers, these past perfect subjunctive conditionals contain two layers of the modally interpreted past, and so the worlds of the antecedent are doubly removed from the epistemic center. The antecedent-worlds for conditionals with *would have* thus exclude the epistemic center. On the second account, however, a "past as modal" view of the simple past is combined with a temporal "past as past" view of the past perfect. It is not entirely clear how such a view would treat examples such as (1).

This point, however, does not deprive the argument of its force. Although I have worked with Anderson's example and variants of it, the specific tense of these examples is not essential to the case. A single-past subjunctive conditional can have a true antecedent without thereby rendering trivial the consequent stating that things would be different from how they are. Suppose that Anderson's detective assesses that Jones did not poison himself after all, but was killed by another person, and tries to determine who is guilty.

(14)   If Smith were the guilty party, he would be acting just as he actually
         is acting.

(15)   If Smith were the guilty party, something or other would be different
         from how it actually is.

If indeed (14) is true, without presupposition failure, it does not follow that
in the same context (15) is true. This is the type of case with which the views
under consideration have difficulty, but the sentences involved have only a
single layer of past tense.

4   Conclusion

I conclude that the role of the past tense in a subjunctive conditional is not
to exclude the actual world, the epistemically possible worlds, or the epis-
temically ideal worlds from those antecedent-worlds where the consequent
must be true in order for the whole conditional to be true.

   The present note should not be read as an endorsement of the competing
view that the past tense has no modal reading and is always interpreted
temporally. The views discussed here do not exhaust the space of possible
positions according to which the past tense has a modal reading that appears
in these conditionals. Whether the past tense has a modal reading is a more
general question than whether the effect of such a reading is to exclude some
particular set of worlds. Thus, in principle, there might be a modal reading
of the past tense according to which the actual world can still be included.
Whether such a view would account for the data better than a purely temporal
view is not addressed here.

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