Do English *if*-sentences encode two kinds of supposition?

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1. Introduction

The assumption that they do is something of an orthodoxy today, and it goes along with a popular classification of conditionals into "ontic" and "epistemic" ones.[1] One of the two kinds of supposition is thought to be such that you suppose the *world* were different from the way it actually is. The other kind is such that you suppose that your *epistemic state* were to change, while the world remains what it is. Ontic conditionals are thought to involve the first kind of supposition, epistemic ones the latter.

In this note I will ask whether there is evidence from the study of English for such a distinction, and deny it. Note I am not primarily concerned with the question whether the distinction could be defended on other than linguistic grounds. I begin by discussing two famous cases that have been thought to support the above distinction. Methodologically, I will describe their semantics as much as possible in intuitive terms, in order not to read anything into them that derives from unwarranted theoretical assumptions or the technical tools employed.

2. A Famous Example

To begin with a famous example usually credited to Richmond Thomason, the "ontic conditional", (1), might be an utterly reasonable thing to say, given what my utterance of it makes you suspect about the state of my marriage:

(1) If my wife were unfaithful, I would/might/should/could not know it.

But, the argument goes, this is not at all so for the "indicative"

(2) If my wife is unfaithful, I don't know it.

For if I actually find out that the antecedent of (2) is true, i.e., that

(3) my wife is unfaithful,

then I surely can*not* say:

(4) I don't know it.

My first point is that this argument is easily seen to be faulty, since the two different kinds of suppositions are simply read into them. Let us consider (2) above and (5), below:

(5) If my wife is unfaithful, I won't know it.

It makes perfect sense to say either of (2) and (5) before an actual discovery of her unfaithfulness (compare: *If you like me, you don't/won't show it*). That I cannot say (2) or (5) *after* it simply has to do with the fact that they have lost, by then, their condition of application. It is inherent in (5) that what you talk about, your ignorance, is future with respect to your present point of speech and the present tense of the modal *won't*.[2] It is equally inherent in (2) that what you talk about, your ignorance, is present. So no matter whether we take (2) or (5), your ignorance is present or future, but not past. But in the case of the expression of the fateful discovery, namely

(6) My wife is unfaithful,

your ignorance has passed. Consequently, where (6) is appropriate, (2) and (5) have lost their conditions of application.

An important point of difference between (2) and (5) however is that in saying (2), you summarize an *argument*. The consequent of (2) is a conclusion you draw from a specific *ground* (the state of your marriage). The latter is suppressed in an utterance of it, but is needed for its full comprehension. By the time when (6) is uttered, this ground is seen as insufficient to support (2). Hence (2), which depended on the ground as a contextual ingredient of it, cannot be said any more. An utterance of it in the new context has changed its sense.

A preliminary conclusion thus is that the reason why (2) and (5) cannot be said *after* the discovery doesn't have to do with any modes of supposition, but with the tense and the reasoning structure that is inherent in them.

3. Irrelevance

What would indeed yield the desired result for the defender of the ontic/epistemic dichotomy is the assumption that the speaker of (2) concludes something on the condition that he learns some new information. But it seems clear that the mere present tense of *be* in (2) doesn't have such a conditioning (namely, learning) as part of its meaning.

Suppositions as to whether my wife is, was, or will be unfaithful, and whether I do or will believe any of this, are, finally, also *irrelevant* to the question of what will happen if she is.[3] Hence it is not clear how in (5) an

investigation about whether I actually find out that my wife is unfaithful, or about what happens if I *have* found it out, can even speak to the question whether I will know it if she is. Similarly in the case of (2), where *my wife is unfaithful* has the status of a hypothesis. A hypothesis is a hypothesis in part because the question whether I believe it or not doesn't seem to be relevant. I come back to hypotheses further below.

4. Cross-Fantasy Comparisons

Another example, dubbed "cross-fantasy comparisons" by Levi (1996), 300-302, is also sometimes thought to forcefully support the received view about suppositional modes and their expression in different types of conditionals. Consider the following scenario. There are two routes which one can take from New York to Boston, and let the one via Hartford be actually faster (less than three hours) than the one via Providence (more than three hours). I find, at stage 1 of my deliberation, that

(7) If he travels via Providence, it will take him more than three hours.

At stage 2 I have found out that

(8) He traveled via Hartford, in less than three hours

and I find that

(9) if he had traveled via Providence, it would have taken him more than three hours.

So far so good. Now at stage 3 I find out that he actually *did* travel via Providence. The crucial observation is thought to be that in this situation one would *not* conclude – even though one accepted (9) – that it has taken him more than three hours.

The observation is meant to support that, crucially, we have an "ontic" conditional in (9), and that this is what made it acceptable when we did accept it. Turning it into an "epistemic" conditional, however, yields a completely different conclusion, since at stage 3 I wouldn't accept

(10) if he has traveled via Providence, it has taken him more than three hours

What in fact does this observation amount to? A first and quick countermove is to say that one *can* react to the information received in Stage 3 by saying (11):

(11) But if he has traveled via Providence, it has taken him more than three hours!

That sentence is fine as it stands. It might figure as a premise in the following *reductio*:

(12) But if he has traveled via Providence, it has taken him more than three hours – which it didn't. Hence he didn't travel via Providence.

One might equally react to the information received in stage 3 by saying:

(13) Oh, he has? But then, it would have taken him more than three hours!

That is all to say that we might in fact conclude what the received view tells us we cannot conclude.

But it is not clear why the whole issue is relevant. Someone wondering whether to assert (9) doesn't care whether the person talked about did or did not travel via Providence. The issue is how long it would have taken him if he did. There is no question or assumption in (9) as to whether he did or didn't travel via Providence. What *has in fact happened* is no issue in (9). The verdict it involves is about a duration of a journey.

It is rather dubious, by contrast, whether (10) is "about" anything at all. It is a claim about what arguably follows from something else, namely the hypothesis (14):

(14) he has travelled via Providence.

(10) is thus an argument that involves a *hypothesis* as a premise, a suppressed but essential *second premise*, and a *conclusion* derived from both. Note that there is no hypothesis in (9) comparable to (14): *he had travelled via Providence* isn't of the right linguistic form to be one. (9) also hardly involves a conclusion. There is nothing like an argument in (9), in which that conclusion might be derived. Rather there is a point tense-marked as past in (9), at which a fantasy sets out that, disregarding or staying clear of actual historical facts, arrives at a verdict concerning the events unfolding in that fantasy.

If we now consider the tense structure of (9) as well, we find that the verdict it involves is about a duration of a journey at a time *prior* to the point of speech, even though *later* than the choice of the route. By the time the choice of route has become a fact, though, and (14) is asserted, the form of *has* is tense-marked as present: it's among the facts established at the point of speech that he has travelled via Providence. The verdict in (9), however, as just proposed, makes a claim about something prior to the point

of speech, and this is why (9) cannot be used anymore at the time when (14) is said. To use the previous terms, (9) has lost its condition of application.

Note finally that (10) not only contains (14) as a constituent, but also

(15) it has taken him more than three hours

Again this is not true of (9), which doesn't contain (15) as a constituent. But then it is all the more unclear why the fact that in stage 3 we might reject (15) has any bearing on (9). Instead of (15), (9), I proposed, contains a verdict, a choice of a modal to express it, and a specific tense structure that is lacking in (10). The basis of the problem appears to be that comparing (9) and (10) is to compare apples and oranges: there is little commonality between the two, none that would provide a reason for calling them both "conditionals".

In sum, it seems that all data concerning cross-fantasy comparisons can be accounted for by appealing to simple, linguistic and tense-theoretic considerations. None of these have anything to do with different kinds of suppositions, or two types of conditionals that reflect them.

5. Counterfactuals versus Indicatives

These remarks raise some larger doubts about the counterfactual/indicative taxonomy that mirrors the ontic/epistemic one. In this context consider the following claim:

> "It is appropriate to make an indicative conditional statement only in a context which is compatible with the antecedent." (Stalnaker, quoted in Kratzer 1979)

That would seem to predict that (16), said by me when talking to my audience at GAP 2000, is inappropriate:

(16) If I am dead, my life insurance will take care for the kids.

But it seems perfectly appropriate. Turning to a similarly questionable assumption about "counterfactuals":

> "A counterfactual conditional is used just in case the truth of the antecedent is incompatible with what's believed." (Kratzer 1979)

But in fact, whether I believe or don't believe the "antecedent" of a "counterfactual" seems quite irrelevant to its interpretation, as (17) and (18) suggest:

(17) Whether or not Caligula is dead now, if he were, I would get promoted.
(18) Whether or not Caligula has died, if he had, I would have got promoted.

What dictates the choice of *were* and *had*, rather, is merely that one wishes to stay clear of whatever may be the case in the circumstance in which a verdict is made on one's life fortunes. Not "incompatibility" is needed: consistency is the point.

A sensible suggestion might be that counterfactuality arises from the fact that in order to carry out some fantasy one sometimes has to „set aside" a given reality. Consider (19):

(19) Had Caligula died tomorrow, that would have been nice.

Must a speaker of this believe the proposition that Caligula doesn't die tomorrow? Or that he won't die tomorrow, because he did today? Note that (19) is not saying anything about the present. A fortiori it is not clear in what sense (19) is contradicting any statement about the present. Putting forward the above prescriptions is to mistake the *motive* for choosing the form in (19): to make what you say consistent with anything that may have been the case today.

6. More on Tensed Verdicts

We have collected some indications that it's tense that counts, not mood (counterfactual or indicative). There is further support for this conclusion, of a slightly different sort, once we consider the following two if-sentences, usually both classified as "indicatives".

(20) If Socrates is a man he is mortal.
(21) If Socrates is a man, he will fight like a bull.

But these "indicatives" seem as different as two things in linguistics can be (compare again the differences between (9) and (10) above), raising questions about the artefactuality of their usual taxonomy. To check in the present instances what I argued for in the cases of (9) and (10), (20) doesn't say anything about the world at all, much as an argument doesn't, which just says what follows from something else. Also, (20) doesn't seem to involve a supposition. I do not seem to engage in any such mental acts if I put forward an argument. *If Socrates is a man* is simply a hypothesis that's needed to derive a conclusion. The term supposition seems inappropriate to the extent that it goes beyond the term hypothesis. Belief transformations, for example, are not clearly involved in giving something the status of a hypothesis, and

they are certainly not in the case of simple arguments and proofs one teaches in a logic course.[4]
By contrast, (21) does say something about something in the world: a fight of Socrates, namely how it will happen in the event of the prior satisfaction of a certain condition. A speaker of (21) also does *suppose* something, namely

(22) Socrates will fight like a bull,

even though this supposition of his is complicated through the imagined intrusion of an extraneous condition. As in (9) there is a verdict involved in this judgement – that the fight *will*, rather than: *may*, *can*, *should*, *would* take place this particular way – linguistically expressed through a modal that is absent from forms like (20). Again contrary to the consequent of (20), the verdict in (21) is what we may call, following Dudman (1991), a *personal reaction* to the imagined satisfaction of an event of real manhood. Again following Dudman, we might say that the verdict is *projected* into an ongoing *fantasy* that sets out from the *tense* registered by the form of the verb, and culminate in an event (a fight) that is later than than the time fixed by the tense. Neither the verdict, the tense structure, or the referential properties are to be found in structures like (20).

That would make (21) pattern with other tensed verdicts such as (23) and (24):

(23) If Socrates were a man, he would fight like a bull.
(24) If Socrates had been a man, he would have fought like a bull.

On the other hand, (20) is on a par with

(25) If Kohl talks, we are embarrassed.
(26) If anybody has a hearing problem here, it’s not me.
(27) If my wife deceived me, it took her no effort.

all of which are condensed arguments rather than tensed verdicts.

7. The Question of Truth

Neither (20) nor (21) make a claim about their tenses, by contrast to, say,

(28) Snow is white,

which makes a claim about a truth of fact in the present, which is also the tense of the verb. That is in part what makes (28) a good potential candidate for the assessment of its truth, while the opposite seems true of either (9),

(20) or (21). (20), being an argument and not being about anything, is not true or false, or not at least in the sense in which a factual claim like (28) is true or false. As regards, (21), the question of truth invites the question of correspondence, and the latter is a lot less clear in the case of a judgement like (21) than in the case of a statement of fact like (28). A judgement – involving a fantasy, a personal reaction, a verdict expressed by a modal, and not being about its tense – is an *act*, something you *do*, and if *this* is supposed to correspond to something out there I simply wouldn't know what to look for.

8. Considerations of Logical Form

What speaks more decisively against a truth conditional analysis of a conditional like (9) or (21) is that their truth conditional analysis depends on an assignment of a grammatical structure to them that isn't grammatically licensed. There might be some who would suggest that this doesn't matter all too much, simply because a given theory of truth conditions can go together with any grammar you like. But I for one adopt the methodological maxim of Larson&Segal (1995), 105, that

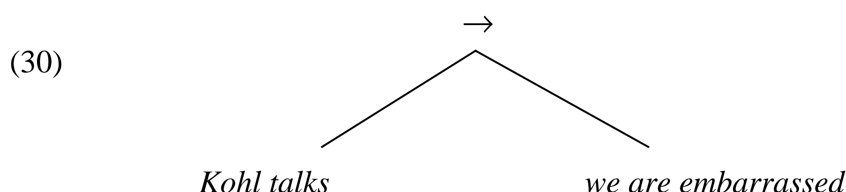
> "the truth conditions and the logical form for a given construction should be worked out in tandem. (...) "any structure proposed for a construction on the basis of semantic considerations must also be licensed by syntactic principles".

But the grammatical analysis of a conditional like

(29) If Kohl talked, we would be embarrassed.

which one can expect to find in a logic book (where a truth-conditional analysis will mostly be presupposed), would stipulate that there are two independent (truth-theoretic interpretable) propositions that we can join by a binary operator:

(30)



You need those two sub-propositions to get a larger, also truth-theoretically interpretable proposition. But clearly, those sub-propositions in (30) are simply not there for the eye to see in (29). Suppose they occurred in the derivation of (29). Then one problem is why integrating them into (29) changes their tense, and another is why a modal suddenly shows up (Dud-

man 1986). A third problem is that the if-clause is not co-ordinated but subordinated, being an *adjunct* to the main clause. In short, one would have to stipulate correspondence rules that map the logical form of (29), in the grammatical sense, to a logician's logical form, as in (30), but it doesn't seem clear why these rules would be anything but arbitrary (or simply needed to vindicate a traditional logical analysis).

There are other, epistemological reasons for shunning the application of truth to conditionals, defended forcefully in Levi (1996), which I will not discuss here.

9. Remarks on Acceptance-Theoretic Analyses

Shunning a truth-theoretic analysis of conditionals might invite an acceptance-theoretic analysis. The relevant tradition here goes back to a famous remark of Ramsey's, to the effect that if you wonder whether to accept a conditional, you first integrate, in a consistency-preserving manner, the conditional's antecedent into your "stock of beliefs", in order to ask then whether the consequent is among the deductive consequences of the changed epistemic state.

But note first that this "test" of Ramsey's (RT) operates in terms of the *epistemic status* of the supposed "antecedents" and "consequents". In the case of types of if-sentences like (9), (21), (23) or (24) (which are not what I recommended to call condensed arguments), I have claimed that there are no such constituents involved in them, linguistically speaking. They have to be imposed on the linguistic structures by brute force, and even a plausible intuitive account of what they mean, which I have tried to provide, doesn't invite this arbitrary grammatical analysis.

Secondly, someone evaluating (31), say, wouldn't care whether or not the comet will hit the earth, or in what way that's possible or coherent, the issue being what the *connection* is between the hitting and shattering:

(31) If the comet hits the earth, it will be shattered.

Someone who was convinced that the comet will hit the earth and was also convinced that it will be shattered, need *not* accept (31), even though RT would seem to recommend acceptance in this instance. Again, it's the connection that matters, the factual dependence between the hitting and the shattering event. Someone who does accept (31), upon adding *the comet will hit the earth* to his "stock of beliefs", will do so because he accepts the dependency in what is taken to be the actual world, which is to say that there is no need for the belief transformation.

In the case of the argument-like if-sentences (10), (20), (25)-(27), the epistemic status of the "antecedent" is again irrelevant. To give something the status of a hypothesis *is* to ignore the fact whether it's believed or disbe-

lieved, or whether it's consistent or inconsistent. Thus a wide range of attitudes towards the antecedent is possible, and indeed (32) would seem to be an example where the complete irrelevance of the antecedent's epistemic status is virtually explicit:

(32) If the baby hasn't been crying before it is now.

I conclude that *as far as the linguistic and meaning-theoretic analysis* of English if-constructions is concerned, the Ramsey-style analysis in terms of acceptance conditions seems of dubious help.

10. A Final Famous Case

Our analysis will finally have to prove its value with respect to one of the most famous cases, namely Ernest Adams' (cf. also Joyce 1999, 182-3):

(33) If Oswald didn't kill Kennedy, someone else did.
(34) If Oswald hadn't killed Kennedy, someone else would have.

Edgington (1995), 237-8, comments that everyone of us would accept (33), yet some might reject (34), and explores the conclusion whether this shows that *if*, in the two cases, "doesn't mean the same", which would mean that we have to choose different operators to formalize their respective semantic contributions. That in itself would be a rather surprising conclusion, for it seems utterly incredible that the little word *if* should mean something so different when switching from (33) to (34). A different explanation of the difference in interpretation seems rather desirable.

Now, on the account above, (33) is a condensed argument, while (34) is a conditional. Again this is manifest through differences in tense-theoretic structure and other grammatical differences between the two, which account for interpretive differences. So once again, it seems we are comparing apples and oranges, not different sorts of apples (or conditionals).

But so be it. Being an argument, (33) again involves a suppressed, contextually supplied premise, which, on the understanding invoked by Edgington, is that Kennedy was in fact killed. The fact that he was, together with Oswald's not doing it, typically yields an assertion of (33). But of course it may or may not yield an assertion of (34): What if Oswald was the only one with the intention and capability of doing it? Crucially, though, that very same additional assumption may perfectly well yield a rejection of (33). Thus take someone rejecting it in fact. He might argue from a different suppressed premise: from the hypothesis that Oswald didn't do it, and the suppressed background information that nobody else planned to do it or could do it, we must rewrite the history of America. Kennedy wasn't killed. That appears to show that the difference of interpretation between (33) and

(34) has nothing at all to do with the linguistic facts that appear on the page if we write those sentences down, but with background knowledge that interacts with linguistic meaning to yield interpretive effects. In this case, the difference between the so-called "future indicative" (33) and the so-called "counterfactual" (34) is not a fact about English.

Another datum falls into place on this analysis.

(35) If Oswald doesn't kill Kennedy, someone else will.
(36) If Oswald wouldn't kill Kennedy, someone else would.

For (35) to be usable, someone else's killing of Kennedy must be later than the present. In the case of (36), it may be either present or future. But we may note that in the case where (36) is used to talk about a killing in the future, the message of (35) and (36) is much the same: that someone else's killing of Kennedy will be the outcome of Oswald's not doing it now. The only difference is that when someone else's killing of Kennedy is conceived to occur in the present, we must switch to (36). That appears to show that there is an important semantic and structural similarity between (35) and (36), which doesn't justify classifying them as different kinds of conditionals, one indicative, one counterfactual. Even less does it justify crediting their difference, which appears to be one of tense, to a lexical ambiguity of the rather innocent *if*.

11. Summary

My question has been whether English conditionals – creatures like (9), (21), (23), (24), (34)-(36) – encode two kinds of suppositions. I have found no evidence in standard examples that would warrant such a claim, and thus whatever motivates such a view cannot, for all I can tell, derive its evidence from an analysis of language. A distinction between such two kinds may be useful for various epistemological issues. But to the extent that our epistemological intuitions are shaped through the languages we speak, what I argued raises questions about the point that such a distinction may be meant to have.

To sum up, I have claimed that the appearance that two sorts of supposition are encoded in English arises

- from misinterpreting argumentative structures in English (the (10), (20), (25)-(27) or (33) style of *if*-sentence) as suppositional (conditional) ones
- from considerations irrelevant to the evaluation of *if*-sentences, such as the epistemic status of the supposed "antecedents" and "consequents"
- from according an arbitrary grammatical structure to English conditionals.

12. Afterthought

Why actually did analytic philosophers become so much interested in English if-sentences? The epistemologist's and philosopher of mind's answer might be: We wish to study conditionals to study the human mind, that is, the suppositions, deliberations, belief dynamics, etc. occurring in it. But is the path from English conditionals to such entities and processes methodologically sound? In general we shouldn't expect *English* to provide us with the *concepts* of this field of inquiry. A physicist interested in forces would not think to win much from a study of English sentences like *Arthur forced Paul to leave*. In the same vein, one might wonder whether an account of suppositions, beliefs, etc., being a psychological one, would centrally involve language.

The meaning theorist's answer might be the one that Frank Jackson actually puts forward in the introduction to his book *Conditionals*: "the ideal would be a plausible account of truth conditions and acceptance conditions" (1991, 1). That however presupposes that the meaning of English conditionals can be analyzed in terms of such things, and as I have argued there are good reasons to doubt this. Precisely linguistic items like conditionals might provide some motivation for rethinking this basic commitment of analytic philosophy: that linguistic meaning is to be given in terms of conditions on truth or acceptance.[5]

Notes

1 There is another important connection with two different paradigms in decision theory, evidential and causal decision theory (see Levi 1996, and Joyce 1999, esp. ch. 6), which I will not discuss here, although my discussion has a bearing on this.

2 In line with Palmer (1974) I assume that *will* and *would* are the present tense and the past tense forms, respectively, of an English modal, on a par with the present/past alternation in other modals such as *can*/*could* or *shall*/*should*.

3 See Dudman 1994.

4 According to Joyce, "a *supposition* is a form of provisional belief revision in which a person accepts some proposition *C* as true and makes the minimum changes in her other opinions needed to accommodate this modification" (1999, 182). I take it that giving something the status of a hypothesis, as in the antecedent of (20), has no similarity to something of this sort at all. Someone drawing a conclusion from *Socrates is a man* is not acting "*as if* she believes it for a time" (ibid.).

5 I am grateful to Hans Rott for extended discussions, as well as to those who listened to my talk at GAP 4.

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