

Grammar matters  
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It is a great honor to have been asked to contribute to the Festschrift for Dorothy Edgington. When I was contacted by the editors, my initial reaction was that they had the wrong person and told them so. My work is mostly on the syntax and the syntax-semantics interface, with some morphology occasionally thrown in. The editors claimed they did not have the wrong person. In the end, I hesitatingly accepted their rejection of my self-proclaimed irrelevance and started wondering what I could say that might be of interest to a philosophical audience -- of course, more specifically, what I could say about the grammar of conditionals, one of Edgington's most famous topics, that might prove useful to philosophers. To have any chance of doing this successfully, I would first need to find out what exactly philosophers believe about conditionals and grammar and identify possible misconceptions in those beliefs - because after all, confirming correct beliefs may be less helpful and is definitely less fun. But doing this thoroughly is, of course, an impossible proposition. Even so, I have made an attempt to look for assumptions or explicitly stated beliefs about the grammatical form of conditionals. I will address some of those.

## **I. What's in a name?**

The first point is one of nomenclature and therefore not "deep". In addition, my impression is that most, if not all, philosophers are well aware of it. Even so, I would still compulsively like to make it.

There is a certain type of conditional that some refer to as "counterfactual conditionals", and that are frequently referred to by philosophers as "subjunctive" conditionals. I do not know where this terminology originated, but it is clear that the subjunctive is neither necessary, nor sufficient to create counterfactual conditionals.

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<sup>1</sup> I am grateful to Kai von Fintel, Roumi Pancheva, Bob Stalnaker, Vina Tsakali and Lee Walters for comments.

The first (and too easy to be interesting) argument for the position that the subjunctive is not necessary to create a “counterfactual conditional” is the fact that there are plenty of languages that do not have a subjunctive at all and still have counterfactual conditionals (e.g. Dutch). But even for languages that have a subjunctive, it can be shown that calling these constructions “subjunctive conditionals” is on the wrong track. To show that the subjunctive is not necessary for a counterfactual conditional, we will go to French. To show that it is not sufficient, we will go to Icelandic.

French has a subjunctive, which appears under verbs of doubt, for example<sup>2</sup>:

1. A: Marie avait un parapluie rouge hier  
 Marie had a umbrella red yesterday  
 ‘Marie had a red umbrella yesterday’

B: Je doute que Marie ait / \*<sup>3</sup>a / \*avait  
 I doubt that Marie have/SUBJ / have/PRS/IND / have/PST/IND

un parapluie rouge hier  
 a umbrella red yesterday  
 ‘I doubt that Marie had a red umbrella yesterday’

However, the subjunctive is not used in counterfactual conditionals:

2. Si Marie avait / \* ait un parapluie rouge, il l’aurait/ \*ait  
 if Marie have/PST/IND /SUBJ a umbrella red he it have/COND/  
 have/SUBJ

vu  
 seen  
 ‘If Marie had a red umbrella, he would have seen it’

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<sup>2</sup> Abbreviations:

PRS=present tense

PST=past tense

FUT=future

IND=indicative mood

SUBJ=subjunctive mood

COND=conditional mood

<sup>3</sup> The star ‘\*’ indicates ungrammaticality.

As can be seen above, the subjunctive appears neither in the antecedent, nor in the consequent.

In other words, there are languages that have a subjunctive mood, but do not use it in counterfactual conditionals.

In Iatridou (2000) (see section 2), I argued that in French, as well as in a number of other languages, what is necessary in the morphological make-up of “counterfactuals” is Past tense (and in some languages, Imperfective Aspect) and the subjunctive appears only if the language has a paradigm for the past subjunctive. As far as I know, no counterexamples to this generalization have been brought forth. Modern French does not have a past subjunctive. Its subjunctive is unmarked for tense. Hence, it cannot appear in “counterfactual” conditionals. Previous stages of French, however, did have a subjunctive which varied for tense, that is, there was a past subjunctive, and in that stage of the language, the past subjunctive was required in a “counterfactual” conditional. Modern French, on the other hand, uses the indicative, as it has no past subjunctive<sup>4</sup>.

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<sup>4</sup> In French “counterfactuals”, the antecedent is in the indicative mood, and the consequent is in what grammars refer to as “le conditionnel” (“Conditional Mood”). However, the latter seems to be nothing more than the combination of past+future that we find in other languages, like English. In English, the past and the future element *will* combine to form *would* in the consequent:

i. English “counterfactual” consequent: Future+Past Verb; e.g. if he came, she **would leave**

In Greek, we have the same past+future combination in the consequent that we find in English but with one difference: in Greek, the future is the uninflectable particle *tha*, so the Past cannot go on the future marker, as it does in English. Instead, it goes directly on the verb:

ii. Greek “counterfactual” consequent: Future Verb+Past; e.g.  
an erchotan,      tha efevge  
if come/PST      FUT leave/PST  
'if s/he came, s/he would leave'

Now imagine a language that is just like English and Greek in that the “counterfactual” consequent contains Past+Future, but differs from English and Greek in that both the future and the past are morphemes that can go on the verb (i.e. “bound” morphemes unlike freestanding items like *will* and *tha*). This language looks exactly like French:

In French we found an argument that the subjunctive is not necessary to form “counterfactual” conditionals. If we look at Icelandic<sup>5</sup>, we will see that the subjunctive is not sufficient to make a conditional “counterfactual”. Icelandic has a past subjunctive and, as predicted by the generalization in the previous paragraph, uses past subjunctive to form “counterfactual” conditionals. However, there is also an environment where the subjunctive appears in a conditional without this being a “counterfactual”. Let me first introduce some general background to the phenomenon at large.

In certain languages, English among them, in certain conditionals, the verb can appear in the position where *if* appears, namely, just before the subject:

- 3a. If I had known that you were sick, I would have visited you
- b. Had I known that you were sick, I would have visited you

That the verb *had* appears in the position of *if* can be seen from the fact that it necessarily precedes the subject. Many linguists talk about the verb “moving” to the position of the lexical item *if* but for present purposes, I will use the term “conditional inversion”. “Inversion” refers to the fact that the positions of the verb and the subject “invert”, that is, they exchange places. Inversion can also be seen in matrix questions in English, where the verbs *has* and *is* precede the subject, while they follow it in an assertion):

- 4a. **Has he** left already?                    (compare to *He has left already*)
- b. What **is she** singing?                (compare to *She is singing the Marseillaise*)

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iii. French “counterfactual” consequent: Verb+Future+Past; e.g.

Si il venait elle partirait  
if he come/PST, she leave/FUT/PST  
'if he came, she would leave'

We are therefore not justified in calling the verb form in the French “counterfactual” consequent a special mood (“le conditionnel”). The particular form of the verb follows exactly from French being a language like English and Greek, in terms of the semantic needs of the consequent, but differing from them only in the morphological fact that the future is a bound morpheme as well.

<sup>5</sup> Or for that matter, older stages of French.

The term “conditional” in “conditional inversion” obviously refers to the fact that the inversion we are dealing with occurs in conditional sentences. In many languages, English among them, conditional inversion happens only in “counterfactual” conditionals, not in non-counterfactual ones. Contrast (3) to (5):

- 5a. If he is sick, I will visit him  
 b. \*Is he sick, I will visit him

In other languages, Icelandic among them, inversion can also<sup>6</sup> happen in non-counterfactual conditionals. In non-counterfactual conditionals, when conditional inversion does not happen, the verb is in the present indicative, as one would expect (contrast 6a to 6c). But when there is conditional inversion, the verb is necessarily in the present subjunctive (6b versus 6d)<sup>7</sup>:

- 6a. Ef hann hefur farið, kem ég<sup>8</sup>  
 if he has/PRES/IND gone, come I  
 ‘If he has left, I will come’
- b. Hafi hann farið, kem ég  
 has/PRES/SUBJ he gone I come  
 ‘if he has left, I will come’
- c. \*Ef hann hafi farið...  
 if he has/PRES/SUBJ gone
- d. \*Hefur hann farið...  
 has/PRES/IND he gone

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<sup>6</sup> To my knowledge, inversion in non-counterfactual conditionals appears in a proper subset of the languages that have inversion in counterfactual conditionals. That is, I do not know of a language that has inversion in non-counterfactual conditionals but does not have it in “counterfactual” conditionals.

<sup>7</sup> Data from Iatridou and Embick 1994.

<sup>8</sup> The only inversion that matters for us is the one in the antecedent. The inversion in the consequent is irrelevant for our purposes as Icelandic is a “Generalized Verb Second language” and any constituent that is sentence-initial (like the conditional antecedent in our case) must be followed immediately by the verb.

It is unclear what the difference in meaning is between (6a) and (6b), or even if there is any to begin with<sup>9</sup>. However, it is completely certain that (6b) is not a “counterfactual” conditional<sup>10</sup>.

In other words, what we see here is that the subjunctive in a conditional is not sufficient to make it a “counterfactual”.

Since the subjunctive is neither necessary nor sufficient for “counterfactual” conditionals, the term “subjunctive conditionals” is inappropriately used.

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<sup>9</sup> The only difference that Iatridou and Embick 1994 found between inverted and non-inverted antecedents is that the former cannot be focused. This holds for Icelandic inverted non-counterfactuals as well (thanks to Johannes Johnsson for the data):

i. Aðeins ef Jón kemur, mun ég fara  
only if John comes will I go  
'Only if John comes, will I go'

ii. Aðeins komi Jón, mun ég fara  
\*only comes John, will I go

iii. A: Undir hvaða kringumstæðum munt þú koma?  
Under what conditions will you come?

B: Ef Jón fer  
if John leaves

B': \*Fari Jón  
\*leaves John

<sup>10</sup> Putting aside the question of whether the subjunctive necessarily turns a conditional into a “counterfactual” (it doesn't), Bjorkman 2010 argues that there is a close relationship between subjunctive and conditional inversion crosslinguistically (not just in Icelandic) and that this can also be seen in English, where *were* is a residue of the subjunctive, which used to be much more productive in earlier stages of the language:

- i. If he were/was absent, the chair would have been offended
- ii. Were/\*was he absent, the chair would have been offended

As for the difference between the two expansions in (i), I have found that it is mostly, if not entirely generational. Older speakers prefer *were*, younger ones *was*. It seems that this little residue of the subjunctive of the verb BE is leaving the language.

And as a correlate, the term “indicative conditionals” is inappropriate for non-counterfactual conditionals, as there are plenty of languages where “counterfactual” conditionals are in the indicative mood: those that do not have a past subjunctive, and those that do not have a subjunctive at all.

Throughout this section, I consistently (and almost certainly, annoyingly) kept on putting the word *counterfactual* in quotes. The reason is that while I have been arguing that the term “subjunctive” is not correct, I am not advocating using the term “counterfactual” either. This term is not appropriate either, for at least two reasons. First of all, the constructions in question can be used in contexts, where the antecedent and consequent are not contra-to-fact, a fact made famous by at least Anderson 1951 (*But look! If he had the measles, he would have exactly the symptoms he has*). Moreover, *Future Less Vivids* (FLV), like examples (8b) below, talk about situations that can still be realized and are, therefore, not contra-to-fact. Yet, as will be shown below, FLVs are marked by the same morphological means as “counterfactual/subjunctive” conditionals are (more on this below). In other words, neither the term ‘subjunctive’ nor the term ‘counterfactual’ is appropriate. What term is then? In co-taught classes and ongoing collaborative work, Kai von Stechow and I have been using the maximally neutral term “X-marking” to refer to that combination of morphemes, that, among other effects it achieves (and we will see some of its other achievements shortly), it turns what philosophers call an “indicative” conditional into a “subjunctive” one. As a mnemonic, one can think of “X” as standing for “eXtra” marking. This would be in opposition to “O-marking”, for the morphology that appears in what philosophers call “indicative” conditionals. “O” could be taken as a mnemonic for “Open” or “Ordinary”

So from now on, I will be using the term “X-marked” and “O-marked” conditionals.

## **II. If it is not the subjunctive, then what is it?**

If it is not the subjunctive that yields an X-marked conditional, then what does? It is clearly something about the *form* of the sentence.

There are languages that have a specialized X-marker. One such language is Hungarian, where X-marked conditionals differ from O-marked conditionals

in the addition of the marker ‘nV<sup>11 12</sup> (Aniko Csirmaz, p.c.). The difference in meaning between (7a,b) and (8a,b) is reflected in the English translations.

7a. 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’

b. 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

8a. ha holnap el-indul, a jövő hétre oda-ér  
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 jövő hétre oda-ér**ne**  
if tomorrow away-leave.CF the following week.onto there-reach.CF  
‘If he left tomorrow, he would get there next week’

However, there are also languages where there is no such thing as a specialized X-marker but whose speakers still clearly know that they are dealing with meanings like (7b, 8b), as opposed to (7a,8a). How is this possible? In Iatridou (2000), I attempted to explore this question and found that the morphological means used are pooled from other parts of the grammar. Specifically, in many languages, English among them, there is a past tense morpheme that is not interpreted temporally and in many of these languages there is, in addition, an imperfective morpheme that is not interpreted as an imperfective, though I will not focus on the latter in the current context. I called these morphemes “fake past” and “fake imperfective” but one should not read much into the choice of this term. I merely meant that the meaning of this morpheme in X-marked conditionals is not what it is in other environments. Let me illustrate.

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<sup>11</sup> ‘V’ stands for vowel here. The specific choice of vowel depends on the vowel of the preceding syllable.

<sup>12</sup>I refer to X-marked conditionals like (8b) with the traditional grammarian’s term Future Less Vivid (FLV). Even though these mark the worlds of the conditional antecedent as unlikely to come about, and not as contra-to-fact, in many languages they are formed by X-marking, which is used in true contra-to-fact conditionals (as well as in the Anderson cases).

Consider the pair of sentences in (9), which clearly show that the adverb ‘right now’ is incompatible with past tense:

- 9a. She had a car last year
- b. \*She had a car right now

However, in a conditional, the combination *now*+past tense is just fine, yielding a Present Counterfactual<sup>13</sup> (PresCF). In other words, the situation described does not hold at the time of utterance:

- 10. If she had a car right now, she would be happy

Similarly, the adverb *tomorrow* is not compatible with past tense but in a conditional, this combination yields a Future Less Vivid (FLV; see fn 11):

- 11a. He left yesterday
- b. \*He left tomorrow
- c. If he left tomorrow, he would get there next week

In addition, the presence of a fake past can be detected in sentences that contain a temporally interpreted past morpheme as well, i.e. there is a “fake” past in addition to a “real” past, that is, a past tense morpheme that is interpreted temporally (on the fairly common assumption that English pluperfect can be described as containing 2 instances of past tense). This combination yields a Past Counterfactual (PastCF), which indicates that the situation described does not hold at a time before the time of utterance:

- 12 a. He was descended from Napoleon
- b. \*He had been descended from Napoleon
- c. If he had been descended from Napoleon he would have been shorter

It seems that in all these cases, the fake past morpheme is somehow involved in yielding the relevant part of the meaning in which X-marked conditionals

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<sup>13</sup> Please take the term “counterfactual” in “Present Counterfactual” with the grain of salt pointed to in the previous section. What is relevant here, is the Present tense orientation of the conditional. Idem for the term “Past Counterfactual, that is coming up.

differ from O-marked ones. The actual temporal interpretation of the conditional is what it would have been without this fake past. Specifically, the conditional in (10) is interpreted as a PrsCF because without the fake past, its temporal interpretation would be about the present:

13. “If she had a car right now” – fake past = if she has a car right now

The conditional in (11c) is interpreted as an FLV because without the fake past, its temporal interpretation would be about the future:

14. “If he left” – fake past = if he leaves

Finally, the conditional in (12c) is a PstCF because without the fake past, its temporal interpretation would be about the past:

15. “If he had been descended from Napoleon” – fake past= If he was descended from Napoleon

In other words, X-marked conditionals receive the temporal interpretation of the corresponding O-marked conditionals<sup>14</sup>.

In (2000) I suggested one way how this might be done. I proposed a meaning for the past tense morpheme that is neither that of temporal past, nor that of contra-to-factness (again, with the relevant grain of salt regarding Anderson cases and FLVs). This basic meaning turns into that of temporal Past or contra-to-factness after the addition of elements from the environment<sup>15</sup>.

Since then there have been other proposals in the literature about how fake tense does what it does. The reader can consult the original paper for details,

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<sup>14</sup> This may have bearings on a debate that I understand exists in philosophical circles, namely whether X-marked conditionals are very different from O-marked conditionals, including in basic properties. The default conclusion from the discussion in the main text would be that X-marked conditionals differ from their O-marked counterparts only in what X-marking contributes. My understanding is that Edgington (1995) explores the possibility that counterfactuals are past tense indicatives.

<sup>15</sup> Under this proposal, there is no “fake past”, obviously. This adjective was used descriptively to refer to non-Past uses of the “Past” morpheme. In my (2000) proposal, there is no morpheme which unambiguously means “Past”.

as well as subsequent work by others (e.g. Ana Arregui, Michela Ippolito, John Mckay, Katrin Schulz) that aim to improve on that proposal. X-marking in fake past languages does not just consist of fake past, however. As I described in 2000, X-marking in many languages also includes a fake imperfective. That is, an imperfective morpheme that is not interpreted (necessarily) as an imperfective. In other words, the task is to find out what X-marking contributes, that is, how X-marked conditionals differ in their meaning from O-marked conditionals, and then investigate how this meaning is compositionally contributed by the fake past and fake imperfective morphemes.

There is a crucial piece of the puzzle that one has to keep in mind when taking on the aforementioned task, and I would like to lay this out before closing this section. X-marking does not only have the discussed effect in conditionals. It has at least two other roles.

In Iatridou 2000, I argued that in many languages, X-marking is used to construct what are (misleadingly<sup>16</sup>) called “counterfactual wishes”:

16. She wishes she was taller that she is

English has a lexicalized verb “wish”, but in many languages, the way to say “wish” is to take the verb “want” and add X-marking to it. In fact, I had argued for a certain relation between the X-marking that appears in conditionals and the X-marking that appears in wishes. Specifically, I had argued that there is a crosslinguistic tendency to use consequent X-marking on the verb ‘want’, and antecedent X-marking on the embedded verb:

17. The Conditional/Desire generalization:

- a. X-marked conditional: if  $p_{m1}$ ,  $q_{m2}$
- b. X-marked desire: I want<sub>m2</sub> that  $p_{m1}$

One clear example is Spanish, where antecedent X-marking consists of Past subjunctive, and consequent X-marking of the fake past+future combination we saw earlier, which is often referred to as the “Conditional Mood” in the literature on Romance languages.

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<sup>16</sup> Misleadingly, because the desire itself is an actual world desire. That is (16) reflects the subjects preference structures in the actual world. What is “counterfactual” is the situation described in the embedded clause.

Spanish X-marked conditional:

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

Spanish X-marked desire:

19. **Quisiera** 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'

A third part of grammar where X-marking is at play, is the construction of the weak necessity modal 'ought' (von Fintel and Iatridou 2008):

20. You ought to do the dishes but you don't have to

Again, as with wishes, English has a lexicalized item but in many languages, the way to construct the weak necessity modal is to take the strong necessity modal and add X-marking to it. For example, Spanish, again:

21. #Debo limpiar los platos, pero no estoy obligado  
must clean the dishes but not am obliged  
#'I must do the dishes but I am not required to'

22. Debería limpiar los platos, pero no estoy obligado  
must.COND clean the dishes but not am obliged  
'I must do the dishes but I am not required to'

In other words, when one sets out to explore how X-marked conditionals are constructed, one should also keep in mind that whatever one says about X-marking when studying conditionals, this very same X should be able to turn *want* into *wish*, and *must* into *ought*.<sup>17</sup>

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<sup>17</sup> Such a unified approach to X-marking is currently being attempted in von Fintel and Iatridou (in progress).

### III. The mark of *then*

Even a cursory perusal of the literature, shows that conditionals are referred to interchangeably as *if p, q* and *if p, then q*. However, the switch from one form to the other is not innocent. In this section we will see differences between them that make this point<sup>18</sup>.

For many cases, the effect of *then* seems negligible:

- 23a. If Pete runs for President, the Republicans will lose
- b. If Pete runs for President, then the Republicans will lose

But for several other cases, *then* seems impossible:

- 24a. If I may be frank (\*then) you are not looking good today
- b. If John is dead or alive (\*then) Bill will find him
- c. If he were the last man on earth (\*then) she wouldn't marry him
- d. Even if you give me a million dollars (\*then) I will not sell you my piano

The difference between (23b) versus the sentences in (24), is that the latter all intend to assert the consequent. (24a) is a “relevance conditional”<sup>19</sup>, a type of conditional in which the *if*-clause does not contain the conditions in which the consequent is true but in which it is relevant. In (24b) the *if*-clause is such that it exhausts all possibilities, hence the consequent is asserted. In (24c), the *if*-clause is chosen in such a way as to make a conversational move in which the consequent is asserted. Similarly for (24d).

A rough approximation, in other words, of the contribution of *then* is that it brings with it a presupposition:

- 25a. Statement: if p, then q
- b. Assertion: if p, q
- c. Presupposition: there are some  $\sim p$  cases that are  $\sim q$

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<sup>18</sup> The discussion is based on Iatridou 1994. See Hegarty 1996 for an improvement. See Izvorski (1997) for a generalization of the proposal to other correlative pro-forms.

<sup>19</sup> Also sometimes known by the name “biscuit conditionals”.

It is obvious that the sentences in (24) violate the presupposition in (25c), as they leave no room for the existence of  $\sim p \& \sim q$  cases.

On the other hand, this is not the case for (23b), where the presence of *then* contributes something like (25), cast within possible-world talk:

26. In some possible worlds epistemically accessible to me in which Pete does not run for President, the Republicans win.

When we force the acceptability of *then*, we force the existence of  $[\sim p, \sim q]$  cases. For example, what would otherwise have been a relevance conditional, becomes something that Mary Poppins might have said, who was able to turn a situation of one being hungry into a situation in which a sandwich magically appears in the fridge:

27. If you get hungry then there will be a sandwich in the fridge

And in (28), we are forced to consider cases that do not fall under “rainy” or “sunny”. That is, “rainy” and “sunny” together should not exhaust all possible weather conditions, if we want *then* to be acceptable:

28. If it is rainy or sunny then I will visit you (but if it is foggy, I will not)

Without *then*, (28) could have been taken to convey that I will visit you no matter what. But with *then* we are forced to take  $\sim p$  possibilities into account. This is not possible at all in some cases, like (24b), where the existence of  $\sim p$  cannot be accommodated.

Finally, we can see the effect of *then* when the antecedent is a presupposition of the consequent. In such a case, the  $\sim p$  cases that are crucial to the presupposition brought in by *then*, will make the consequent suffer from presupposition failure. Consider the following sentences:

- 29a. If [Peter smiles at her]<sub>i</sub> Kathy likes it<sub>i</sub>  
b. If Peter cooks [something]<sub>i</sub>, he gives half of it<sub>i</sub> to Kathy

As they are, the sentences in (29) are fine but once we introduce *then* they become variably<sup>20</sup> odd, because if Peter does not smile or cook something, the pronoun *it* in the consequent will suffer from existential presupposition failure.

In short, *if p, q* cannot be used interchangeably with *if p, then q*.<sup>21</sup>

#### IV. There is no magic in *if*

The item “*if*” is often used as short for “conditionals”. However, the presence of the item *if* is not necessary to have a conditional interpretation. For one, we can have what we called above “inversion”, where the verb appears in the position of *if*:

- 30a. If I had known you were sick I would have visited you  
b. Had I known you were sick I would have visited you

Even though in English, conditional inversion is restricted to X-marked conditionals, in other languages, it can also take place in O-marked conditionals. Above we saw Icelandic being such a language. German is as well:

- 31a. [Wenn Hans kommt] geht Susanne  
if Hans comes goes Susanne  
'If Hans comes, Susan goes'

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<sup>20</sup> I say “variably” because my impression is that speakers need a little more time to compute the oddity that results from inserting *then* in (29) compared to (24). I suspect that parsing the correct reference of the pronoun might take a bit, but this is only an intuition. For example, Roumi Pancheva (p.c.) suggests that in (29b) there may be a parsing strategy in which the anaphora might be some form of modal subordination – “the thing that he would have cooked”.

<sup>21</sup> *then* is also impossible in *only if* conditionals:

- i. Only if it rains will we stay inside
- ii. \*Only if it rains then we will stay inside
- iii. \*Only if it rains then will we stay inside

At first blush, the presupposition in (8c) would predict that *then* should be perfect with *only if p, q* as in the latter ALL  $\sim p$  cases are  $\sim q$  cases. However, discussing these will take us too deeply into syntax, which does not seem appropriate in the current context. For more details on the effect of *then* on *only if p, q* please see Iatridou 1994.

- b. [Kommt Hans] geht Susanne  
 comes Hans goes Susanne  
 ‘If Hans comes, Susan goes’

While inversion can happen in a number of environments, including questions, as we saw in (4), inversion of a tensed<sup>22</sup> verb in an adjunct can *only* receive a conditional interpretation (Iatridou and Embick 1993). This generalization holds crosslinguistically; at least no counterexamples have been reported so far. In other words, a sentence like (23b) can never, for example, mean “Because I had known, ...” and (24b) can never mean “Because Hans comes, Susan will leave”.

This means that (30b) is just as much “necessarily” a conditional as (30a), and (31b) is just as much necessarily a conditional as (31a) is, even though *if* is missing in both (30b) and (31b). And by ‘necessarily’ I mean that the grammatical form of all four sentences *only* permits a conditional interpretation. If (30b) and (31b) do not contain *if*, yet receive a conditional interpretation, why then do we consider that *if* is the *sine qua non* of conditionality? It clearly is not<sup>23</sup>.

The absence of *if* in the above sentence is the result of conditional inversion. There are quite a few grammatical constraints on conditional inversion and

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<sup>22</sup> It is crucial that the verb be tensed for a conditional interpretation. If we have inversion with a participle for example, the meaning is completely different. Consider Italian:

- i. avendo Gianni finito il giornale, iniziò a leggere il libro  
 having Gianni finished the newspaper, started to read the book  
 ‘Gianni having finished the newspaper, he started reading the book’

<sup>23</sup> I would dare venture the following guess, in fact: it may well be the case that the verb can move to the position of *if* and kick it out so to speak, exactly because *if* has no meaning of its own. Items like *because* or *although* can never be replaced by a verb because they do have a meaning of their own, which would not be recoverable under deletion. But if *if* does not contribute conditionality, how do we know to interpret sentences like (30a,b) and (31a,b) as conditionals? The answer may lie in the tense and aspect composition of the verbs, as well the construction as a whole. As we will see shortly, there is good reason to believe that all we need from the syntax to access a conditional interpretation is information of which clause to interpret as the restrictor and which as the scope of a quantifier over worlds.

inversion in general and syntacticians have successfully explored and explained many of them. For example:

- 32a. If I knew the answer, I would tell you  
b. \*Knew I the answer, I would tell you

- 33a. He knew the answer  
b. Did he know the answer?  
c. \*Knew he the answer?  
d. \*Did I know the answer, I would tell you

- 34a. Had he not seen the truck?  
b. Hadn't he seen the truck?  
c. Had he not seen the truck, he would have been killed  
d. \*Hadn't he seen the truck, he would have been killed

This is not the appropriate place to delve deeper into the syntax of inversion; the interested philosopher is encouraged to look up his or her friendly neighborhood syntactician and ask about “T-to-C movement”. The syntactician will understand this term and will know what to say.

There are also semantic and pragmatic effects of conditional inversion. An inverted antecedent cannot be focused (see also fn. 7). This generalization holds for all the languages in which it has been tested<sup>24</sup>. For example, it cannot be a fragment answer:

35. A: When/under what conditions would Mary have come?  
B: If she had been offered many artichokes  
B': \*Had she been offered many artichokes

Nor can it be focused by *only*:

- 36a. Only if you had given me a million dollars would I have sold you my piano  
b. \*Only had you given me a million dollars would I have sold you my piano

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<sup>24</sup> Data here are from Iatridou and Embick 1993. See also Horn 2000 and Biezma 2011.

Nor can it be focused in sentences called “clefts”:

- 37a. It is if Walter had come that Susan would have left
- b. \*It is had Walter come that Susan would have left

So we learn two basic things from inverted conditionals: The item *if* is not necessary to form a conditional<sup>25</sup> and furthermore, different morphosyntactic expressions of conditionality come with their own slew of interpretive properties. Grammatical form matters, in other words. But they are still all conditionals.

In footnote 20, I suggested that maybe the reason that *if* can be absent in conditionals is that it does not contribute to the interpretation of the sentence. One might wonder why, if *if* has no meaning, why it is there to begin with. In syntax, there are conditions on the wellformedness of sentences as such. In fact, syntax is full of them. Often, these conditions take the form of the need for words that do not contribute to the semantics. One easy to spot example is the appearance of dummy verb *do* in non-subject questions:

- 38a. What did you eat?
- b. \*What you ate?
- c. When did he leave?
- d. \*When he left?

but

- 39. Who ate the tiramisu?

The item *if* is called a complementizer. Complementizers are words that introduce clauses. The item *that* is a complementizer in the following example:

- 40. He thinks **that** she never calls him

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<sup>25</sup> One could also make the quick and easy argument that *if* is not sufficient either, as this item appears in embedded questions as well (not just in English, in many other languages as well):

- i. I do not know if he will be able to get here on time

This argument is a bit too easy, though, because the historical origins of this homophony are unclear.

Stowell (1981) found that in English, among other languages, complementizers may be optional when the clause they introduce is the object of a verb, as in (33), but they are required when the clause they introduce is not the object of a verb. That is, the complementizer in (40) can go missing:

41. He thinks she never calls him

But the complementizer cannot go missing when the clause is in subject position:

42a. that she never calls him bother him  
b. \*she never calls him bothers him

Similarly, a conditional antecedent is a clause and specifically, a clause that is not in the object position of a verb. It is what is called an “adjunct”. Therefore, its complementizer cannot go missing<sup>26</sup>:

43a. We will go to the movies if it rains  
b. \*We will go to the movies it rains

If this path of thinking is correct, the presence of *if* is dictated by syntactic reasons and not because it makes a particular semantic contribution.

I will conclude this section by mentioning that some languages may not even have an item like *if*. By this mean that they do not have a morpheme that marks an adjunct clause as an antecedent of a conditional as such, yet, they have no problem expressing conditionals. This may be the case for Turkish, in fact, as I argued in Iatridou 2013.

## **V. And, there is no special status to if p, q**

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<sup>26</sup> In the case of inversion, the verb moves to the position of the complementizer, as we said. So even though the lexical item *if* is missing, the complementizer *position* is filled.



The sentences in (44a, 45a, 46a and 47) clearly receive a conditional interpretation. Therefore, why should we not call them conditionals? The only reason why somebody might not do that is because s/he thinks that “conditional” is the name for a particular *morpho-syntactic* form, namely the one that has an adjunct clause introduced by *if*, which is also the syntactic form chosen for the paraphrases in (44b) and (44b). But I find it hard to believe that when philosophers talk about ‘conditionals’ that they think they are referring to a particular *syntactic* construction. I assume they think they are referring to a particular *interpretation*. But if that is the case, (44a, 45a, 46a and 47) have to be included in this class as well.

Again, we see that *if* or the syntax associated with it does not have a privileged status when it comes to conditionality. And like before, we can also see that the choice of grammatical form determines possible interpretive choices. For example, conjunctions of this sort cannot yield epistemic conditionals (48), and interpretations associated with X-marking are restricted (49a,b):

48. His light is on and he is at home  
≠ If his light is on, he is at home

49a. One more mistake and he would have been fired  
b. \*She had looked at him and he would have shied away in fear  
≠ If she had looked at him, he would have shied away in fear

Moreover, conjunctions like the one in (46a), that is, with an imperative first conjunct have certain restrictions on the predicates involved (Bolinger 1967):

50a. Own a piece of property in this town and you get taxed mercilessly  
=If you own a piece of property in this town, you get taxed mercilessly

51a. Own this property and I’ll buy it from you  
≠ If you own this property, I will buy it from you

In short, we have the same bifurcated conclusion: Any sentence form that receives a conditional interpretation has to be classified as a conditional and

studied as such. But grammatical form matters, as not all forms that receive a conditional interpretation have the same type of restrictions. There are quite a few more syntactic constructions that these two points can be made with, but I will mention only one more. The following sentence has been argued to receive a conditional interpretation (Stump 1985) but its form is obviously very different from *if p, q*:

- 52a. Standing on a chair<sup>29</sup>, he will be able to reach the ceiling  
b. = If he stands on a chair, he will be able to reach the ceiling

Sentence (44a) clearly receives a conditional interpretation but if we change the predicate slightly, the meaning immediately shifts:

- 53a. Having long arms, he will be able to reach the ceiling  
b. ≠ If he has long arms he will be able to reach the ceiling  
c. = Because he has long arms, he can reach the ceiling

I hope the general point has come across by now: if we study only conditionals that have the syntactic form *if p, q* we narrow our vision considerably. We need to study a variety of different grammatical forms that receive a conditional interpretation. This way we will also be able to understand why and how and which possible meanings group together for each grammatical expression of conditionality.

To be honest, the mistake of identifying the interpretive category “conditional” with the *syntactic* form *if p, q* is also committed by linguists. Culicover and Jackendoff 1999 explore sentences like (44) and claim that they have identified what they call a “syntax-semantics mismatch”. They argue that this particular type of *and* is syntactically a coordination (conjunction) but in the semantics, the sentence receives a conditional interpretation and this is a case of “subordination” according to them. This poses a challenge to an approach they are arguing against: there is a common belief in generative grammar according to which semantic interpretation is read off a level of syntactic representation, called “Logical Form” or LF. The surface string, that is, the sentence that we pronounce, yields an (unpronounced) LF via a series of syntactic operations. Cases like (44) are a problem for an LF-based approach, according to Culicover and Jackendoff,

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<sup>29</sup> Note that this is not a case of conditional inversion. There is no subject and the verb is not tensed. It is a participle.

because there are no syntactic transformations that will change a coordination into a subordination. This much is indeed true, there are no syntactic operations that we know of that will transform a structure of coordination into a structure of subordination. But do we need such an operation?

When Culicover and Jackendoff use (44a) to argue against LF-based approaches, they assume that the latter would need to turn the **syntax** of coordination into the **syntax** of *if p, q*, which indeed is a case of syntactic subordination. But the **syntax** of *if p, q* is not the same as “semantic subordination” or “conditional semantics”. It is just one of the syntactic structures that can receive a conditional interpretation. There is in principle no need for a syntactic construction to first turn into a different syntactic construction in order to map onto a particular semantic scheme. In order to prove a syntax-semantics mismatch, they would need to give a semantics for conditionals for the semantic side of the “mismatch” and show that it is not possible to map into that from a particular syntactic construction. But they do not do this. What they do instead, is give syntactic structures for both sides of the alleged mismatch. This is because they wrongly identify the essence of **conditional semantics** with the **syntactic structure if p, q**. But one should not. The syntactic structure *if p, q* is one of several syntactic structures that can yield conditional semantics, as we saw. And it is not the case that those other syntactic constructions should first turn into the **syntactic construction if p, q** before they receive a conditional interpretation. Why would they need to?

To prove a mismatch, one would need to first assume a certain *semantics* of conditionals, and show that it cannot be derived compositionally from a certain syntax. But they do not assume any conditional semantics. As mentioned above, they identify a particular syntactic construction with a conditional semantics.

So let us assume Kratzer’s semantics for conditionals, which is currently one of the most popular theories for conditionals in the linguistic community. According to Kratzer, in conditionals, one clause restricts a modal/quantifier over worlds (what we call “the antecedent”) and another clause is the scope (what we call “the consequent”). This means that what we need from the syntax is an indication as to which clause is the restrictor and which clause is the scope. One such indication can be seen in the syntax of *if p, q*: the adjunct (whether it has the item *if* or not) is the restrictor. But why should

that be the only possible morpho-syntactic flag? Why should there be only one syntactic construction with instructions for which clause is the restrictor and which the scope of the quantifier over worlds? We have another indication with *and* in (44): the first conjunct maps into the restrictor and the second conjunct into the scope. The order of the conjuncts cannot change with the conditional interpretation remaining intact.

54a. She looks at him and he shies away in fear

b. ≠ He shies away in fear and she looks at him

So in the conjunction in (44a, 54a) the order of conjuncts tells us what the syntax to semantics mapping should be. In the syntactic construction *if p, q*, the cues are different: there it is the adjunct that maps into the restrictor and the matrix into the scope. Given those cues, the order of the two can flip, unlike in (54), where the order itself was the cue to the semantic mapping. With *if p, q*, we do not rely on word order to decide which clause is the antecedent and which the consequent:

55 a. If she looks at him, he shies away in fear

b. = He shies away in fear if she looks at him

And we should also contrast (54a) with (56), a garden variety conjunction, where the two clauses can be switched without effect on the meaning:

56a. London is the capital of England and Paris is the capital of France

b. = Paris is the capital of France and London is the capital of England.

The inability to flip the two conjuncts (54a) is exactly because we would then lose the grammatical cue as to which clause is the antecedent.

In short, coordinations like (44) and *if p, q* structures contain the same amount of information that a conditional semantics needs, at least for the identification of the restrictor and of the scope of the modal. There is no one privileged syntactic structure of a conditional semantics that all the other ones would have to first turn into, before being mappable to a conditional semantics.

At this point, I would like to preempt a possible thought in the reader's mind, which if it is there, is the result of a bias and has no grounds. The reader might think "All that is fine and well but the form *if p, q* is really what conditionals are and coordinations like (44) are marginal structures"

There is no basis for such a belief, however. Coordinations of this sort are crosslinguistically extremely wide-spread (von Stechow and Iatridou 2017). They contain all the syntactic information one would want for a conditional semantics and are immediately and very easily identified as such by speakers. They, and other constructions like the ones we mentioned, are conditionals just as much as those of the *if p, q* form.

## VI. Conclusion

In honor of Dorothy Edgington, I have tried to provide a gentle introduction to a grammarian's view of conditionals for philosophers. I zigzagged through an assortment of grammatical properties of conditionals, with one of my main goals having been to show that grammatical form matters: different syntactic expressions of conditionality come with a different range of possible meanings. Moreover, I argued that we should not consider "conditionals" coextensive with the syntactic form *if p, q*. The syntactic construction *if p, q* is merely one of several syntactic paths that lead to a conditional semantics. I hope this point is relevant because I assume that when philosophers talk about 'conditionals', they are talking about a particular *interpretation*, not a particular syntactic form. Overly narrowing conditional semantics to only one syntactic construction makes it harder to identify where each of the elements of meaning originates.

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