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The semantics and pragmatics of *unless*[1]

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In this article the authors examine six different analyses of the meaning of *unless* that have been argued in the literature, and present a new analysis in which a careful distinction is made between the semantic meaning and the pragmatic interpretations of *unless*. Contrary to the common belief that *unless* cannot be used in irrealis conditionals, it is shown that *unless* can actually be used in two different senses there, one in which it alternates with *except if*, but not *if . . . not* (e.g. *He wouldn't have done it {unless I had / except if I had / *if I hadn't} asked him to, and I didn't*) and one in which it alternates with *if . . . not* but not with *except if* (e.g. *You did do well, but you wouldn't have succeeded {unless I had / if I hadn't / *except if I had} helped you*). It is shown, finally, how the various interpretations of *unless* can be reconciled with a common semantic meaning and how the different constraints on the use of *unless*, *except if* and *if . . . not* can be accounted for.

1 Introduction

In the linguistic literature, there has been some discussion as to the exact meaning of 'Q *unless* P' or '*Unless* P, Q'. At least the following analyses have been proposed:

(1) (a) 'If not P, Q' (Brée, 1985; Sweet, 1891: 147)
(b) 'Only if not P, Q'
(Clark & Clark, 1977: 457; Quirk, Greenbaum, Leech, & Svartvik, 1972: 746)
(c) 'If and only if not P, Q' (Comrie, 1986: 79)[2]
(d) 'Only if P, not Q' (Fillenbaum, 1986: 185)
(e) '{Under all circumstances except / In any event other than} P, Q'
(Geis, 1973: 235)[3]
(f) 'Q; [(not Q) if P]' (Dancygier, 1985: 68)

In this article we will argue that each of the above paraphrases is appropriate for some *unless*-conditionals, but not for all. The choice between these possible

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[2] Note that (1c) is not equivalent to (1b). *I have a walk after supper if and only if the weather is fine* implicates that I *always* have a walk after supper if the weather is fine, i.e. that fine weather is a sufficient condition for my having a walk after supper. The sentence *I have a walk after supper only if the weather is fine* does not implicate this. Formulation (1b) is therefore weaker than formulation (1c).

[3] Further on in his article Geis (1973: 246) says that '*unless*, *except in the event that*, and, for those who can say it, *except if* are alternative lexical realizations of the same underlying structure'. However, we will argue below that these phrases are not semantically equivalent to *under all circumstances except* or *in any event other than*. (The problem is the presence of *all/any* in the latter paraphrases.)

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interpretations depends on various factors, principal among which are the possibility of reading *unless* as semantically equivalent to *except if*, the pragmatic possibility of reading *except if* as 'except iff' (where *iff* = 'if and only if'), the degree of syntactic integration of the *unless*-clause into its head clause, the (positive or negative) polarity of the two clauses, and the (non)irrealis meaning of the conditional. Our main hypotheses will be that (a) the basic meaning of 'Q *unless* P' is 'Q in a case other than P';[4] (b) in nonirrealis *unless*-conditionals this means that 'Q *unless* P' is equivalent to 'Q except if P'; (c) there are other, pragmatically conditioned interpretations of *unless*; (d) a nonirrealis conditional of the form 'Q *unless* P' entails (i.e. logically implies) 'Q *if not* P'; (e) there are two different interpretations of *unless* in irrealis conditionals; and (f) in the first of these uses *unless* is interchangeable with *except if* but scarcely with *if . . . not*, while in the second use *unless* is interchangeable with *if . . . not* but not with *except if*.

Since the range of possible interpretations of *unless* is not the same in irrealis conditionals as in other conditionals, we will deal with these two possibilities separately. A conditional has irrealis meaning if its *if*-clause refers to a world which is represented as either being definitely different from the actual world or as having no relation to the actual world. A nonirrealis conditional refers to a world which is represented as having varying degrees of likelihood of matching the present or past actual world or the actual world as it will turn out to be. Thus, (2a, b) are normally interpreted as irrealis conditionals, whereas (2c–g) are not:

(2) (a) I would've told him about her if he'd asked.
(b) In your place I'd have told him about her if he'd asked.
(c) I always tell him about her if he asks. *(The actualization of the* if-*clause situation is a present (factual) habit.)*
(d) {If it's snowing there now (and it may be) / If it snowed there last night (and it may have done)} James might be late. *(The present or past actualization of the* if-*clause situation is treated as possible, i.e. as possibly matching the actual present or past world.)*
(e) If, as you say, he's in the library, I'll try and find him there. *(The actualization of the* if-*clause situation is assumed to be a present fact.)*
(f) I will tell you about him if you ask. *(The future actualization of the* if-*clause situation is treated as possible.)*
(g) I would tell you about him if you asked. *(The future actualization of the* if-*clause situation is treated as unlikely but not impossible.)*

As will be further explained in section 4, (2a, b) illustrate two different types of irrealis conditionals. Sentence (2a) is interpreted as 'counterfactual' (i.e. contrary to the actual world), whereas (2b) is interpreted as 'imaginary' (i.e. referring to a theoretical world which does not suggest any kind of inference in connection with the actual world). The former, but not the latter, allows the factual inferences 'I didn't tell him about her' and 'He didn't ask (me to tell him about her).'

[4] This differs from Geis' analysis only in that we speak of 'a case', not of 'all cases' or 'any case'.

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2 Some preliminaries

When talking about conditionals we will be using some terms and notational conventions that need introducing. To begin with, we will use 'situation' as a cover term for anything that can be expressed in a sentence (i.e. actions, events, processes, states – cf. Lyons, 1977). The verb 'actualize' will be used as a cover term for the predicates that are typically associated with one of these categories. Thus, rather than saying that an activity is performed, an event happens, a process develops or a state holds, we will simply say that the situation in question actualizes.

Second, thinking of the logical representation 'If P, (then) Q', we will refer to the head clause of the conditional (whether it is itself subordinate or not) as the 'Q-clause' and to the conditional clause as the 'P-clause'. The situations to which these clauses refer will be called the 'Q-situation' and the 'P-situation' respectively. Because both the P-clause and the Q-clause may be positive or negative, we shall refer to the propositions expressed by them as 'P' and 'Q', rather than 'p' and 'q'. This allows us to refer to affirmative propositions as [+p] and [+q], and to negative propositions as [-p] and [-q]. The symbols 'P' and 'Q' then stand for a proposition which is ultimately expressed by a tensed clause, with a positive or negative polarity value. In other words, P may be a positive ([+p]) or negative ([-p]) proposition; Q may similarly be either [+q] or [-q]. This means that a negation in the P-clause or Q-clause is simply seen as part of the proposition P or Q. Thus, '*unless* P, Q' covers the four possibilities '*unless* [+p], [+q]', '*unless* [+p], [-q]', '*unless* [-p], [+q]' and '*unless* [-p], [-q]'. This notation makes it clear that *unless* itself does not form part of the proposition P. Thus, in *I'll be happy unless she comes*, P is not *unless she comes* but *she comes*. This is logical, since only the latter is a proposition with a truth-value. (The same is true of *she comes* in *if she comes*.)

Finally, many of the examples adduced below are attested examples. Those extracted from well-known computerized corpora are marked as follows: COB-W = Cobuild Corpus of English (written); COB-S = Cobuild Corpus of English (spoken), BR = Brown University Standard Corpus of Present-day American English; ICE-GB = International Corpus of English (British English), LOB = Lancaster–Oslo–Bergen Corpus. If an example consists of more than just a conditional, the preceding and/or following context will be enclosed within square brackets.

3 *Unless*-conditionals with a nonirrealis meaning

Let us begin by exploring the parameters of syntactic (non)integration and polarity in nonirrealis *unless*-conditionals. The major cut here will be between integrated *unless*-clauses and nonintegrated *unless*-clauses.

3.1 Integrated unless-*clauses*

As already said, we will defend the hypothesis that the basic meaning of 'Q *unless* P'

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is 'Q in a case other than P'. In nonirrealis conditionals this is equivalent to 'Q except if P'.[5]

If the *unless*-clause is syntactically fully integrated into the Q-clause (i.e. if there is no intonational break between the two), there are four semantic possibilities, depending on the (positive or negative) polarity of the two clauses:[6] '[+q] except if [+p]', '[+q] except if [-p]', '[-q] except if [+p]' and '[-q] except if [-p]'. The following sentences illustrate these possibilities:

(3) (a) {Unless / Except if} you point out the consequences, people ignore the warning. *('except if [+p], [+q]')*
(b) {Unless / except if} the body is not discovered for a long time the police pathologist will see that the man has been tortured. *('except if [-p], [+q]')*
(c) I won't do it {unless / except if} you help me. *('[-q] except if [+p]')*[7]
(d) I won't do it unless nobody else knows about it. *('[-q] except if [-p]')*[8]

Because of the 'except if' meaning of *unless* in (3a–d), the logical form of all these sentences is 'Q except if P'. This logical form entails 'Q; [(not Q) if P]'. (This is Dancygier's (1985) analysis of *unless*, which we subscribe to in connection with examples like (3a–d), but which (unlike Dancygier) we do not apply to many other instances of 'Q *unless* P'.) The logical form 'Q; [(not Q) if P]' in its turn entails 'If not P, Q' (=Brée's (1985) analysis).[9] In other words, the following are necessarily true if (3a–d) are true:[10]

(4) (a) People ignore the warning if you don't point out the consequences. *('[+q] if not [+p]')*

[5] However, even in nonirrealis *unless*-conditionals, there is an exception to this generalization – see the discussion of examples (54)–(55) below.

[6] Semantically, there is no difference between '[+q] except if [+p]' and 'except if [+p], [+q]'. We therefore treat the two notations as equivalent. However, we will sometimes choose the one rather than the other if we want the semantic representation to reflect the word order of the *unless*-conditional under discussion.

[7] [-q] can be expressed by an affirmative rhetorical question:

(i) How could comparisons which reveal differences between jobs be used to justify differences in pay unless comparisons which did not reveal those differences justified the same pay? (LOB)

[8] It is sometimes claimed that *unless*-clauses cannot be negative, but this is obviously not true. The following are authentic examples:

(i) There is absolutely no way … that anybody is going to manage to get through … a year in private accommodation on that … unless they do not eat. (ICE-GB)
(ii) [He likes to consider that all his achievements are due to his own efforts] and unless he cannot avoid it, he will rarely ask for support from others. (COB-W)
(iii) … then that's not particularly your problem unless they're not paying the rent. (COB-S)

[9] Geis (1973: 232) makes the same point when he writes that 'sentences of the form "S_1 *unless* S_2" logically imply the truth of "S_1 *if not* S_2"'.

[10] This is not to say that there is no difference of meaning or interpretation between '*unless* P' and '*if … not* P'. The former expresses an exception to the validity of Q, whereas the latter states that [-p] is a condition for Q. In many cases an *unless*-clause will suggest that Q is the normal state of affairs, whereas an '*if … not*'-clause does not. Compare, e.g. *I like crossword puzzles unless they are very difficult* and *I like crossword puzzles if they are not very difficult*. Brée (1985) discusses some further reasons why *unless* and *if … not* are often not interchangeable. We will refer to still others below.

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(b) If the body is discovered soon, the police pathologist will see that the man has been tortured. *('[+q] if not [-p]') (soon = 'not [not for a long time]')*
(c) I won't do it if you don't help me. *('[-q] if not [+p]')*
(d) I won't do it if somebody else knows about it. *('[-q] if not [-p]') (somebody = 'not [nobody]')*

Moreover, because of a pragmatic implicature, *if* in (4a–d) is normally interpreted as *iff* (='if and only if'), unless there is an indication to the contrary. This implicature, which is known as 'conditional perfection' (Geis & Zwicky, 1971 – see also Van der Auwera, 1997), applies to *if* generally: the usual pragmatic interpretation of *if* is such that a one-way conditional ('if P, Q') is 'perfected' into a bi-conditional ('if P, Q' + 'if not P, not Q'). In other words, 'If P, Q' tends to be interpreted as 'Iff P, Q'. For example, *If the weather is fine, we'll go to the seaside* is conventionally interpreted as having 'but we won't go if the weather isn't fine' as part of its meaning. The unmarked pragmatic interpretation is therefore: 'We will go to the seaside if and only if the weather is fine.' Even though this conversational implicature is conventionalized to some degree, it can be cancelled, e.g. by the addition *In fact we'll go to the seaside anyhow, even if it rains* (see Haegeman, 1984).

As has been pointed out (in 1b, c), Comrie (1986: 79) argues that the semantics of 'Q unless P' is '[+q] if and only if [-p]', while Quirk et al. (1972: 746) and Clark & Clark (1977) make the similar (but somewhat weaker – see footnote 2) claim that the correct analysis is '[+q] only if [-p]'. However, what these analyses cover is not the semantics of *unless* but an interpretation resulting from conditional perfection. Conditional perfection, however, follows from the Gricean Maxims, which produce pragmatic interpretations that are merely cancellable implicatures. This is clear from at least two observations. First, as already noted, the 'iff'-interpretation of *if* can be cancelled by the context following the conditional. Thus, *She'll come if she's not ill* implicates 'It is only if she is not ill that she will come', but this implicature is cancelled if an exception is added, as in *She'll come if she's not ill – except if her car's still not working, of course.* Similarly, *She'll come except if she's ill* implicates 'It is only if she is ill that she will not come', but this implicature is cancelled if a second exception is added, as in *She'll come except if she's ill – and except if her car's still not working, of course.* Second, not all *if*-conditionals are interpreted in terms of conditional perfection. Consider:

(5) (a) If you send Mum flowers for her birthday, she'll be happy.
(b) If you mow the lawn I'll give you ten dollars. (Akatsuka, 1991: 35–6)

(5a) is not normally perfected to *If you send Mum flowers for her birthday, she'll be happy and if you don't send Mum flowers for her birthday, she won't be happy*. By contrast, (5b) is normally perfected to *If you mow the lawn I'll give you ten dollars and if you don't mow the lawn I won't give you ten dollars*. The reason for this difference is clear from Akatsuka's explanation (criticizing Geis & Zwicky, 1971) for the conditional perfection interpretation of (5b), namely that (5b), unlike (5a), is normally interpreted as a promise: the ten dollars is a reward, and not only do

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rewards arrive on the meeting of conditions, rewards *do not* arrive if the condition for the reward is not met. As this example shows, the conditional perfection reading of a conditional may be favoured by the pragmatic function of the conditional in question.

Similarly, conditional perfection does not always apply to *unless*-conditionals. For example:

(6) (a) Unless you pay your debts you get into trouble.
(b) Unless you drive carefully, you have accidents.
(c) (On this course,) unless you work very hard you don't get top grades.

The speaker of (6a, b) does not guarantee that there are no other circumstances in which the addressee might get into trouble or have an accident. Similarly, a student who has been told (6c) at the beginning of the year would not be considered very reasonable if she complained at the end of the year that she had been told a lie because she *had* worked hard, and still had not got good grades.

It is easy to assume that *unless* has conditional perfection as part of its *semantics* if one focuses on examples that can be interpreted as threats or deterrents:

(7) Unless you pay the rent now, you must leave the flat before the end of the week.

However, the reason that examples such as (7) receive a conditional perfection interpretation is that when an utterance has a 'Do this or else . . . !' meaning, it is not normal to assume that there might be other possibilities that will avert 'else' which the speaker just has not bothered to mention – see also Dancygier (1990: 913). That is, it is the pragmatic function of the utterance, rather than the semantics of *unless*, that encourages the conditional perfection interpretation.[11]

In sum, the interpretation of '*unless* P' and '*except if* P' as '(if and) only if not P' does not represent the semantics of '*unless* P' and '*except if* P'. For one thing, the interpretation of *if* as 'iff' can be cancelled by the context. For another, there are contexts in which the implicature simply does not arise. It is important to see that this refutes the common view that it is part of the semantics of an {*unless* / *except if*}-clause that the clause expresses the only (unique) exception to the validity of Q – a view which is to be found, for example, in Whitaker (1971: 155), Geis (1973: 233–5),[12] Dancygier (1985: 68, 1998: 169), von Fintel (1991: 138, 142–4), and Traugott (1997: 145). Geis bases this claim (also accepted by the others) on the fact that two *unless*-clauses cannot be co-ordinated, although P in '*unless* P' may consist of two co-ordinated clauses:

(8) (a) Prof. Arid will pass you in Linguistics 123 unless you fail the final exam and you make less than a C on your term paper.

[11] On the other hand, when an utterance is used as a warning ('I should warn you that failure to do X results in Y') there may be *some* opening (depending on the context) for understanding that failure to do other things might also result in Y, though that is, of course, no more a part of what the speaker is saying than that failure to do X is the *only* thing that will result in Y.

[12] It is this idea of 'unique exception' that leads Geis (1973: 235) to define the semantics of *unless* as '{Under all circumstances except / In any event other than} P, Q'.

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(b) *Prof. Arid will pass you in Linguistics 123 unless you fail the final exam and unless you make less than a C on your term paper.

According to Geis (1973: 233–4), (8b) 'says that the student's failing the final exam and his making less than a C on his term paper are each the only circumstance standing in the way of his passing Arid's course'; that is, (8b) is 'self-contradictory', i.e. 'semantically deviant'. In our opinion, this explanation is not satisfactory. If it were correct, (9a–f) should also be unacceptable, which they are not:

(9) (a) [Remember that genital herpes does not mean the end of your sex life.] It's OK to have normal sexual intercourse unless you have any active sores or blisters or unless you feel an attack is coming on. (COB-W)
(b) In these conditions the word 'Point' has a meaning corresponding with the word 'Voucher' in AIR MILES Customer Terms, unless otherwise provided or unless the context otherwise requires. (COB-W)
(c) The Bank agrees that it will make no charge for opening or continuing to make available the Card Account unless there is an breach of this Agreement by the Cardholder or unless the Cardholder or Authorised User use the Card fewer than 10 times in any period of 12 months. (COB-W)
(d) [And er in the dance hall there was a – a bit at the front where only the very best dancers were allowed to dance that was the rules.] So unless you danced very well or unless you were actually in with this group you had to dance more to the back of – the – the room. (COB-S)
(e) Both strands of the story are about things which aren't talked about unless you really pry, or unless someone finally feels able to tell you. (COB-W)
(f) I will leave unless Bill calls soon or unless there is going to be free beer. (von Fintel, 1991: 138)[13]

Like (8b), (9a–f) specify two exceptions to the validity of the Q-statement. This means that neither exception is treated as a unique exception. (It is true that (9a–f) differ from (8b) in that they imply that the actualization of one of the two exceptions mentioned is sufficient to invalidate the Q-statement, but this does not alter the fact that in (9a–f) the two exceptions are expressed in two different *unless*-clauses, which means that neither *unless*-clause can be claimed to express the unique exception invalidating the Q-statement.) The fact that (9a–f) are acceptable while (8b) is not therefore requires a different explanation from the one given by Geis. This explanation will also need to account for the fact that it does not seem possible to substitute *if . . . not* for *unless* in (9a–f), as well as for the fact that the restriction observed in (8b) does not hold for '*if . . . not*'-conditionals:

(10) Prof. Arid will pass you in Linguistics 123 if you don't fail the final exam and if you don't make less than a C on your term paper. (Geis, 1973: 233)

It is important to see that (10) is ambiguous, in that it yields the reading that fulfilment of one of the specified conditions is sufficient as well as the reading that both conditions have to be fulfilled at once. Sentence (8b), if acceptable, would only

[13] von Fintel (1991: 138) notes that the grammaticality of (9a) was pointed out to him independently by Sabine Iatridou and Ginny Bresnan. However, he does not draw conclusions from the example, merely noting that he is 'not sure how this can be integrated into' his analysis of *unless*.

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yield the latter reading. This difference, as well as the impossibility of replacing *unless* by *if . . . not* in (9a–f), can be traced back to the fact that there is an essential difference between conditions and exceptions. In 'Q if P', P determines the possible world in which Q is valid. Q can easily be valid in different P-worlds, hence the Q-clause can easily be accompanied by more than one P-clause, as in (10). By contrast, in 'Q except if P' it is Q that determines the world in which the exception P is valid. The exception can only be valid in the Q-world specified (which means that it can only be valid if a Q-world is established), but it is possible to specify more than one exception to the validity of the Q-proposition (as in (9a–f)). It follows that the Q-clause can easily be accompanied by more than one *unless*-clause, each of which specifies one of the cases invalidating Q. On the other hand, if the speaker wishes to point out several 'exceptions' which do not separately invalidate Q but do so in unison, then she is really referring to a single (but composite) exception, and therefore normally uses a single (but compound) *unless*-clause, as in (8a). This accords with the fact (observed above) that 'Q {*unless* / *except if*} P' is conventionally interpreted as 'Q except iff P': the conditional perfection implicature promotes the idea of a set of cases forming a unique exception (referred to in P). Sentence (8b), where *unless* is not interpreted as *except iff*, is therefore relatively unacceptable because it runs counter to the (strong) conditional perfection implicature (and not because it is 'semantically deviant'). That (8a) is impeccable follows from the fact that it does not run counter to the implicature. In other words, the speaker now abides by the Gricean Maxims: if she uses *unless* to specify the set of cases forming the unique exception P invalidating Q, then the Maxim of Quantity stipulates that she should specify the full set at once, i.e. in a single compound *unless*-clause. As has been said, this is not done in (8b): instead of indicating the complete set of cases constituting a unique exception in a single *unless*-clause, the speaker here uses two *unless*-clauses, which are each insufficiently informative because they each express only a subset of the complete set of relevant cases.[14] The grammaticality of (9a–f) is due to the fact that the exceptions specified in the two *unless*-clauses (co-ordinated with *or*) need not be valid at the same time (i.e. are not unique exceptions), whereas (10) is impeccable (on either interpretation) because the P-clauses express conditions, not exceptions: as we have seen, the actualization of the Q-situation can easily depend on more than one condition.

The above explanation involves the claim that co-ordination of *unless*-clauses with *and*, as in (8b), may be relatively unacceptable for pragmatic reasons but not because such co-ordination is semantically deviant. This claim is confirmed by the fact that co-ordinated *unless*-clauses with *and* (in the sense of *both . . . and . . .*) are actually to be found in corpora:

[14] Note that this explanation is consistent with the fact that the (un)acceptability of (8a and b) is not affected if we replace *unless* with *only if*. *Only if* asserts (rather than implicates) the existence of a unique condition for the nonactualization of the Q-situation. It would therefore be 'semantically deviant' (rather than just pragmatically odd) to specify this unique condition in more than one *if . . . not*-clause.

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(11) (a) ['I think the issue really is Japan's moral authority to play the role of a leading nation in Asia,' he said. 'Because] unless her leaders confront the past and unless younger Japanese are taught the truth of what happened, it's difficult for Japan to play that role.' (COB-W)
(b) [So I would hope David could stay another year. He's been very quiet. He won't go till the club is right for him so] unless the price is right and unless the club is right on Platt's part er then he won't go [and I would hope he's got another year er at Villa because – I th – I think it'll be exciting for him and for everybody else if he stays at Aston Villa]. (COB-S)
(c) Unless you have community involvement and unless you get you know erm those true voices being reflected in any forum then it's you know – it – it can very often become a talking shop between different organizations. (COB-S)
(d) That is, unless you trust someone fairly thoroughly and unless you have spent a good deal of time together talking about each other, you really don't have much basis (or motivation) for caring a lot about the other person. (COB-W)
(e) [The people of South Wales have long since learnt that] political democracy means little unless there is security, unless there is work and unless there are the general amenities that make life worthwhile. (COB-W)

Returning to our main line of argument, we can conclude that if the conditional perfection implicature is not blocked, '[+q] except if [+p]' is interpreted as '[+q] except iff [+p]', which implies '[+q] if and only if not [+p]' (hence also the weaker '[+q] only if not [+p]'), as well as 'not [+q] if and only if [+p]' (hence also the weaker 'not [+q] only if [+p]' proposed by Fillenbaum, 1986: 185).[15] Thus, failing any indication to the contrary, (12a) is interpreted not only as entailing (12b) but also as implicating (12c–d). The latter are the two representations resulting from perfecting the conditional (12b) into a bi-conditional:

(12) (a) Unless you pay me now I will sue you. *('{unless / except if} [+p], [+q]')*
(b) If you don't pay me now I will sue you. *(='if not [+p], [+q]')*
(c) Only if you don't pay me now will I sue you. *(='iff not [+p], [+q]')*
(d) Only if you pay me now will I not sue you. *(='iff [+p], not [+q]')*

In this illustration, (12d) seems a more natural paraphrase of (12a) than (12c) is. This is because (12a) is pragmatically used as a threat or deterrent. As noted by Dancygier (1990: 913), 'for deterrents the more plausible inference is *Only if p, not q*, for this means that the fulfilment of what is demanded, and only this, will stop the speaker from carrying out the threat'. However, if an *if . . . not*-conditional is used as a promise or inducement (e.g. *I will give you a fiver if you don't tell the others about this*), the most natural paraphrase is of the type (12c): 'I will give you a fiver, but only if you don't tell the others about this' (='iff not [+p], [+q]').

[15] In what follows, these various 'paraphrases' are only illustrated for the possibility '[+q] unless [+p]'. However, the three other combinations following from the fact that both the Q-clause and the P-clause may be either positive or negative yield similar paraphrases. Thus, when the conditional expresses '[-q] unless [-p]' and the implicature goes through, (i) not only entails (ii) but also implicates (iii)–(iv):

(i) I won't do it unless nobody else knows about it. *(='[-q] unless [-p]')*
(ii) If somebody else knows about it I will not do it. *(='if not [-p], [-q]')*
(iii) Only if somebody else knows about it will I not do it. *(='iff not [-p], [-q]')*
(iv) Only if nobody else knows about it will I do it. *(='iff [-p], not [-q]')*

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Fillenbaum (1986: 184) observes that most people do not judge (13a) as equivalent to (13b):

(13) (a) Unless you give me a ticket, I'll give you £20.
(b) If you don't give me a ticket, I'll give you £20.

We would explain this as follows. Although (13b) is entailed by (13a), the natural interpretation of (13b) is that of a promise, while the natural reading of (13a) is that of a threat. In other words, the most obvious paraphrase of (13a) is the bizarre one in which £20 is assumed to be something the addressee does not want the speaker to give him, that is: 'You'd better give me a ticket, because unless you do, I'll give you £20.' By contrast, the natural paraphrase of (13b) is 'In the event that you don't give me a ticket, I will (as a consequence) give you £20.' That is, the *if . . . not*-clause here expresses a negative condition: 'The nonactualization of the [+p]-situation will trigger the actualization of the Q-situation.' This observation is in keeping with our claim that *unless* differs from *if . . . not* in that it expresses an exception rather than a negative condition. In our analysis, it is not surprising that people do not judge (13a) as equivalent to (13b). (In section 3.2.4 we will return to (13a, b) and discuss the points just made in more detail.)

One thing we learn from these observations is that, although 'unless P, Q' entails 'if not P, Q' and implicates both 'iff not P, Q' and 'iff P, not Q', it does not follow that 'unless P, Q' is automatically interchangeable with the latter three 'paraphrases'. In section 3.2.4 we will discuss various other cases in which *unless* cannot be substituted for *if . . . not*.

To sum up section 3.1, we have come to the following conclusions about nonirrealis conditionals with a syntactically integrated P-clause: (a) in this type of conditional, *unless* is equivalent to *except if* and logically entails the corresponding *if . . . not*-conditional; (b) conditional perfection implicates that, in suitable contexts, the 'except if' meaning of *unless* should be read as 'except iff'; (c) because of its exceptive meaning, *unless* cannot replace *if . . . not* in sentences like (13b) which are interpreted in terms of a negative condition: 'The nonactualization of the [+p]-situation will trigger the actualization of the Q-situation', and lack exceptive meaning. (In section 3.2.4 we will discuss various other cases in which *if . . . not* does not have an 'except if' meaning and cannot, therefore, be replaced with *unless*.)

3.2 *Further remarks on integrated nonirrealis* unless-*conditionals*

3.2.1

An integrated *unless*-clause may either precede or follow the Q-clause, or be 'Q-median', i.e. inserted in the middle of the Q-clause, as in the following:

(14) [Without doubt a situation has now been reached on the South Coast where,] unless something is done soon, yachting and yachtbuilding will be severely restricted [because there will be nowhere to keep the yachts]. (LOB)

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However, because of their '*except if* P' meaning, integrated nonirrealis *unless*-clauses most often follow their Q-clause, as in the following examples (see also Dancygier, 1998: 173):

(15) (a) ['So many mothers,' he said, 'make the mistake of expecting to know everything about their daughters. The brutal truth is that] a girl will not grow up normally unless she has a secret life away from her parents.' (LOB)

(b) [But he also knows that racial discrimination will destroy the unity of the Commonwealth.] The translation of one nation abroad, as has been spoken of by Mr Iain Macleod, is meaningless unless a stand is made on racial discrimination [in whichever direction it operates]. (LOB)

When, in an integrated nonirrealis conditional, the *unless*-clause appears in the marked position before the Q-clause, the idea of exclusion (exception) is more salient. In that case, it is intuitively clear that '*unless* P' means 'except if P':

(16) (a) [Tea, as a beverage, varies greatly in flavour according to the water with which it is made.] Unless you are lucky and have hit at once on a blend that suits the neighbourhood in which you live, you should consult a good tea merchant and get the matter satisfactorily settled once and for all. (LOB)

(b) [There is no feeling of adventure for them in this field, no anticipation of new discovery, and without this a painter's work becomes unbearable drudgery.] Unless he feels that he can improve, he must either give up or go back and start again on a new route. (LOB)

It is worth noting that *unless* cannot be replaced (without a change of meaning) by *if* ... *not* in these examples. The reason is that *if* ... *not* would be interpreted as expressing a negative condition rather than an exception, so that the reading of (16a, b) would become 'The nonactualization of the [+p]-situation leads to the deontic statement expressed in the Q-clause.'[16]

3.2.2

It is in keeping with its 'except if' meaning (in integrated nonirrealis conditionals), that *unless* can be followed by either [+p] or [-p]. As noted above, this means that *unless* itself does not form part of the proposition P. This explains the well-known fact that, even though an exception may be seen as a kind of negative condition (as appears from the paraphrase 'Q if not P'), an '*unless* [+p]'-clause uses assertive items ('positive polarity items' – see Baker, 1970a, 1970b) where the corresponding *if* ... *not*-clause (='*if* [-p]-clause') does use nonassertive ones ('negative polarity items'):[17]

[16] This reading may be implied by the exceptive interpretation of '*unless* P' because (in nonirrealis conditionals) '*unless* P' implies '*if not* P'. However, in that case it is only a derived reading of '*unless* P', whereas it is the primary reading of '*if not* P'.

[17] Brée (1985: 310) rejects the claim that *if* ... *not*-clauses cannot take positive polarity items on the basis of the observation that the following is grammatical:

(i) Tomorrow, if Joe still isn't better, we'll call in a shrink.

However, (i) fails to prove the point, because the assertive word *still* does not fall within the scope of *not*. If it does, the sentence is ungrammatical:

(ii) Tomorrow, if Joe {*isn't still better / isn't better yet}, we'll call in a shrink.

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whatever negative aspect of meaning *unless* has, it is to be found in the 'except' element of its 'except if' meaning only, and does not reverse the polarity of the P-clause itself. The following pairs illustrate the different uses of polarity items in *unless*-clauses and in *if . . . not*-clauses:

(17) (a) I won't do it unless you give me {some / *any} money (*at all).
(b) I won't do it if you don't give me {*some / any} money at all.
(18) (a) If you don't lift a finger to help me, I quit. *('lift a finger' is a nonassertive item)*
(b) *Unless you lift a finger to help me, I quit.
(19) (a) If John doesn't care a bit for Mary, he shouldn't marry her. (Geis, 1973: 283)
(b) *Unless John cares a bit for Mary, he shouldn't marry her. *(ibid.)*

Needless to say, these observations argue against Brée's (1985) view that *unless* is semantically equivalent to *if . . . not* and support our claim that *unless* has an 'except if' meaning.[18]

3.2.3

There is a special subtype of integrated *unless*-clause, which we will refer to as the 'subset-excluding' type. Compare:

(20) (a) [Tom says that] cats are unreliable unless they have blue eyes. *(subset-excluding P-clause)*
(b) [Tom says that] cats are unreliable if they do not have blue eyes. *(set-restricting P-clause)*

Both sentences have a P-clause which we can call 'set-identifying' because it picks out the set of blue-eyed cats from the larger set of cats. In (20a), the identification happens through the exclusion of a subset of cats (viz. the cats that do not have blue eyes) from the set of cats to which the predication applies: (20a) can be paraphrased: 'Cats are unreliable, except for the ones that have blue eyes.' In (20b), the identification of the subset of blue-eyed cats is effected by directly restricting the scope of the predication: (20b) can be paraphrased: 'If they don't have blue eyes, cats are unreliable.' In other words, *unless* points out that blue-eyed cats form an exception to the assertion *Cats are unreliable*, whereas *if . . . not* stipulates a condition for the truth of this assertion and in doing so restricts the scope of the assertion from the set of cats to the subset of cats that do not have blue eyes. Pragmatically, the two means of identifying the relevant subset of cats to which the predication applies lead to much the same interpretation, and so does the use of a restrictive relative clause (*Cats that do not have blue eyes are unreliable*).[19]

[18] von Fintel (1991: 147) generally agrees with Geis' (1973) claim that an '*unless* [+p]'-clause uses assertive items, but draws attention to the following example:

(i) Unless anyone objects, we will move to the next item on the agenda.

However, one could argue that *anyone* is not the nonassertive counterpart of *someone* here, but that (i) expresses the idea 'Unless someone, whoever they may be, objects we will move to the next item on the agenda.' (This is not to say that this *anyone* is the same as that of *Anyone can do it, even a small child*, but it is the unmarked form in (i): *someone* would be almost aggressive.)

[19] However, Declerck (1988: 142–4)) points out that a set-restricting *if*-clause may not be quite semantically equivalent to the corresponding restrictive relative clause.

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As pointed out in Declerck (1988: 151–5), P-clauses can be set-identifying only if the Q-clause contains a suitable indefinite NP with unbounded reference to a set. In the following subset-excluding *unless*-clauses, the indefinite NPs are *no man* and *a line of rails or tramway* respectively:

(21) (a) [It (. . .) seemed as if] no man could claim to have done his duty as a rational creature unless he had formed some idea of what was going on 'out there'. (LOB)

(b) A line of rails or tramway constructed under the powers of this Order shall not be used for the public conveyance of passengers unless it has been certified by the Minister to be fit for that purpose. (LOB)

Perhaps it is worth noting here that *if . . . not*-clauses and *unless*-clauses do not normally have this set-identifying function in irrealis conditionals. Consider:

(22) Cats would've been unreliable {if they hadn't had / unless they'd had) blue eyes.

The normal interpretation here is (23), which implies (24):

(23) If it hadn't been for the fact that they have blue eyes, cats would have been unreliable.

(24) Cats have blue eyes. Because of this they are not unreliable.

In this case no subset of cats is identified, because, as we will see in section 4 below, the P-clause of (22) does not have an 'except if' meaning and is therefore neither subset-excluding nor set-restricting.

3.2.4

It was shown in section 3.1 that, although '*unless* P, Q' entails 'if not P, Q' and implicates both 'iff not P, Q' and 'iff P, not Q', '*unless* P, Q' is not automatically interchangeable with these three 'paraphrases'. Whether or not there is interchangeability is determined by semantic and (especially) pragmatic factors. In this section we will discuss several cases in which *unless* cannot replace *if . . . not*, without claiming that the illustrations in question exhaust the possibilities.

One case has already been referred to in section 3.1: Fillenbaum (1986: 184) observes that most people do not judge (13a) as equivalent to (13b):

(13) (a) Unless you give me a ticket, I'll give you £20.

(b) If you don't give me a ticket, I'll give you £20.

We have traced the difference to the fact that (13a) is naturally interpreted as a threat (and is therefore an odd sentence), while (13b) is naturally interpreted as a promise. In (13a), *unless* has its normal 'except if' meaning, whereas in (13b) *if . . . not* expresses a negative condition. Notice that *unless* can be substituted for *if . . . not* in (13c) without any substantial change in the meaning of the sentence, and certainly without the difference in illocutionary force that we find between (13a) and (13b).

(c) If you don't give me a ticket, I'll kill you.

This difference has to do with the way in which *if . . . not* sentences of the pattern 'if you do X, I'll do Y' have different implications regarding what the speaker wants

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the addressee to do, depending on whether the Q-clause is interpreted as part of a threat (*If you don't give me a ticket, I'll kill you*) or as part of a promise (*If you don't give me a ticket, I'll give you £20*). The following steps are involved in arriving at the nonequivalent interpretations of (13a) and (13b):

(a) We look for the main illocutionary force of the utterance in Q.

(b) Where we have the pattern: 'If you do X, I'll do Y', then generally, if Q represents something desirable to the addressee which is under the speaker's control, the conditional is presumed to be being used to make a promise. (Desirability, of course, is a cultural and contextual decision – even *I'll kill you* could be a promise in some contexts, cf. Van der Auwera, 1986: 206–7 – and P is partly involved in this decision.) If Q represents something undesirable to the addressee (and, as before, Q refers to something under the speaker's control), then the conditional is generally interpreted as being used to issue a threat.

(c) For *if . . . not* conditionals, the message in the P-clause (i.e. what the speaker is trying to get the addressee to do) varies according to whether the Q-clause is interpreted as a threat or as a promise.

(d) If the conditional is being used to issue a threat, then the message from the P-clause of 'If you don't do X, then I'll do the undesirable Y' is 'do X', because it is understood that the addressee will want to avert Y by *not* not-doing X. In other words, if the speaker says that [-p] leads to an undesirable Q-situation, then the speaker is trying to get the addressee to perform the [+p]-action.

(e) If the conditional is being used to make a promise, then the message from the P-clause of 'If you don't do X, then I'll do the desirable Y' is 'don't do X', because it is understood that the addressee will want the 'cause and effect' chain to actualize. Thus, with an *if . . . not* promise, the speaker is trying to get the addressee to perform the [-p]-action.[20]

(f) In other words, threats work by saying that P (whether [+p] or [-p]) will cause an undesirable Q, and implying that 'not P' is a way of averting Q. The implicated course of action, then, is that the addressee should do 'not P' because Q will happen *except if* it is averted by 'not P'. (The 'iff' reading – which seems pragmatically highly likely in the case of threats – implies that 'not P' is the only way of averting Q, i.e. that Q will happen in all cases except if 'not P'.) It is thus unsurprising that [-p] threats can easily have *unless* substituted for *if . . . not*, since the meaning of the *unless*-clause (paraphrasable by 'Q except if P') coincides with the clear implication of the corresponding *if . . . not* clause.

(g) Promises, on the other hand, say that P will bring about a desirable Q, and the addressee is not therefore supposed to work out how to bring about the exceptive situation that will stop Q happening but simply to want to do P and thus make the causal link between P and Q go through. The message is *not* 'Do not-P, in order to avert Q' – and thus 'Q will happen except if P' – but 'Do P, in order to bring about

[20] If P is [+p] rather than [-p], what is said in (d) and (e) works exactly the same, but with reversed polarities for [p] throughout.

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Q' – which leaves the simple causal connection 'Q, if P'. That is, there is no 'except if' meaning, and *if . . . not* promises cannot have *unless* substituted.

When we look at (13a) and (13b), the illocutionary force of Q considered on its own seems most likely to be a promise – being given £20 is normally desirable. A promise, as we have seen in (g), involves a straightforward cause and effect relationship between P and Q, and thus (13b) is interpreted as meaning that the speaker wants the addressee to do P – to not give her a ticket – which leads us to assume a context in which the 'ticket' involved is, say, a parking ticket, rather than a ticket for a highly rated Broadway show. In (13a), however, we cannot interpret Q, or the whole conditional, as a promise, because the presence of *unless* in the P-clause is incompatible with a simple cause and effect meaning. The 'except if' meaning of *unless*, however, is compatible with a threat, which is the principal alternative way of interpreting the schema 'if you do X, I'll do Y', and we thus end up forced to reason backwards, so to speak, to the interpretation that Q is in fact undesirable to the addressee, with the consequence that we must assume a context in which the addressee is strongly averse to receiving £20, an interpretation which is not easy (for most of us) to accommodate. Thus, the nonequivalence of (13a) and (13b) is due to the fact that while in both cases the Q-clause seems most suited to the work of a promise, it is only in the case of the *if . . . not* version, (13b), where a simple cause and effect relationship is possible, that the whole utterance ends up conveying a promise. In the case of (13a), the 'except if' meaning of *unless* both makes it impossible for the (purely) cause and effect meaning required for a promise to go through, and also makes a threat meaning highly plausible, so that the whole utterance ends up as a rather odd threat. (Note that, while it is not possible to interpret (13a) as a promise, it is possible, in theory, to interpret (13b) as a threat, along the same lines as were outlined in points (d) and (f) above, provided we can see being given £20 as undesirable.)

A second case in which *unless* cannot replace *if . . . not* is illustrated by the following:

(25) (a) I will be surprised if that book doesn't sell well. *('[+q] if not [+p]')*
(b) *I will be surprised unless that book sells well. *('[+q] unless [+p]')*

The conditional (25a) is not equivalent to '[+q] except if [+p]', which would be the interpretation of (25b) if it were grammatical. That is, (25a) does not have an 'except if' meaning, but expresses no more than 'the nonactualization of the [+p]-situation will result in the actualization of the [+q]-situation'. This meaning can apparently not be expressed by (25b) – see below.

The following are some further examples similar to (25a, b):

(26) (a) I'll be relieved if Jane doesn't show up.
(b) *I will be relieved {unless / except if} Jane shows up.
(27) (a) It would be a pity if that book didn't sell well.
(b) *It would be a pity {unless / except if} that book sold well.

The key question, of course, is why some *if . . . not*-conditionals yield an 'except if'

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reading whereas others, such as the (b) sentences of (25)–(27), do not. Contrary to what is claimed by Dancygier (1985: 69), the answer cannot be simply that the causal link itself in (25)–(27) excludes the use of *unless*, i.e. that *unless* cannot be used where P has a causative relation to Q, since such a causative relation is clearly present in, for instance, (6a–c), (12a–d) and (14), and in these examples *unless* is possible. The problem seems to be, rather, that in cases such as the (b) sentences of (25)–(27), an 'except if' relation of P to Q is excluded. As already said, the question, then, is why this is the case in this type of conditional.

Our suggestion is that in the (a) sentences of (25)–(27) *if . . . not* does not have the 'except if' meaning because it combines with a Q-clause whose subject or object is an implicit factive nominal clause. In such conditionals, the *if*-clause specifies the condition(s) under which (or: the world in which) the corresponding sentence with an overt *that*-clause (or other type of factive clause) is true. Thus, (26a) is semantically equivalent to (28a–d):

(28) (a) I'll be relieved if it turns out to be the case that Jane doesn't show up.
(b) If Jane doesn't show up, I'll be relieved that Jane doesn't show up.
(c) If Jane doesn't show up, I'll be relieved at her not showing up.
(d) If Jane doesn't show up, her not showing up will cause me to be relieved.

Similarly, (27b) is short for

(29) (a) It would be a pity if it turned out to be the case that the book didn't sell well.
(b) If the book didn't sell well, it would be a pity that it didn't sell well.
(c) If the book didn't sell well, the fact that it didn't sell well would be a pity.

We will call conditionals like (27a), which allow paraphrases like (29a–c), 'extraposed-P conditionals'. In such a conditional the *if*-clause specifies the conditional world in which the situation expressed by the implicit *that*-clause is a fact. Because the factive clause would just repeat the *if*-clause (apart from the conjunction),[21] it is normally deleted, so that it seems as if the *if*-clause (also) functions as an extraposed subject clause. In other words, *if* does not act as a pure conditionality indicator but rather as a 'potentiality complementizer'. That is, it combines its normal role as a conditionality indicator with that of a complementizer, which may be called a 'potentiality complementizer' because the situation expressed by the implicit *that*-clause is not a fact in the actual world (in which case we use *be* {*surprised* / *a pity* / *etc.*}*THAT*), but is a fact in a potential world, witness the fact that we cannot replace *would be* by *was* in the Q-clause: **It was a pity if he didn't come*.

In (26a) [*I'll be relieved if Jane doesn't show up*], the deleted clause is a complement clause rather than an extraposed subject clause. However, for ease of reference, and because this kind of *if*-clause too looks as if it were extraposed, we will also call sentences like (26a) 'extraposed-P conditionals', although the more cumbersome

[21] By 'factive clause' we here mean a clause whose proposition is treated as being true (factual) in the possible world created by the *if*-clause. As stressed immediately below, this possible world need not be the actual world.

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'conditional with a deleted factive complement clause' would be a more accurate term.

The following are some further examples of extraposed-P conditionals:

(30) (a) I'll be {sad / happy / satisfied / disappointed / delighted / sorry ... } {if that doesn't happen / *unless that happens}. *(=If that doesn't happen, the fact that it doesn't happen will make me {sad / etc.}.)*
(b) I don't {mind / care} {if you aren't / *unless you're} faithful to me. *(=If you aren't faithful to me, I don't mind your not being faithful to me.)*
(c) It'll be {good / better / wise / surprising ... } {if he doesn't come / *unless he comes}. *(=If he doesn't come, it'll be {good for me / better for us / wise of him / surprising to us ... } that he doesn't come.)*

Sentences (30a, b) express the speaker's attitude towards the situation of the implicit complement clause. Sentence (30c) expresses the speaker's evaluation of what is said in the implicit subject clause.

Predicates like *be surprised*, *be a pity*, etc., which express a reaction to a situation (or an attitude to, or evaluation of, a situation) require that the situation which prompts the reaction is in some way retrievable from the context: sentences such as *I'd be surprised* or *It would be better* are interpreted as elliptical. When such predicates are followed by an *if*-clause, the normal interpretation is that it is the *if*-clause that refers to this 'stimulus situation'. However, it is also possible that the stimulus situation is clearly retrievable from the context other than the *if*-clause, in which case the *if*-clause is no longer interpreted as characterizing the reason for the reaction/evaluation/attitude, but performs its normal conditional role only. Thus, in

(31) Do you mind if I smoke? – I don't mind if you don't smoke cigars.

the stimulus situation to which the reply expresses the reaction 'I don't mind' is retrievable from the question (more specifically from *if I smoke*), so that here, the P-clause is not interpreted as the complement of *don't mind* but simply as expressing a condition. (This is in keeping with the fact that unlike the *if* in the question, the *if* in the reply can be replaced by other conditional conjunctions, such as *provided* or *as long as.*) Since the P-clause in the reply is not interpreted as the complement of *don't mind*, and is in fact interpreted as having 'except if' meaning, *unless* can be substituted for *if ... not* in this clause: *Do you mind if I smoke? – I don't mind unless you smoke cigars*.

The fact that predicates of the kind discussed here require that the stimulus situation be identifiable entails that, where the only candidate for this situation is the P-situation, the P-clause cannot be introduced by *unless*, for the simple reason that *unless* refers to an exception: rather than describing the stimulus situation giving rise to the reaction (etc.), it only describes a case in which the reaction does not arise. In other words, the reason why *unless* cannot be substituted for *if ... not* in (25)–(27) or (30a–c) is that, because its meaning is purely exceptive, *unless* cannot function as a potentiality complementizer.

An important element in this explanation is that (in the relevant sentences) *if* acts

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not only as a complementizer but also as a true indicator of conditionality. This claim is corroborated by the fact that (30a–c) convey the idea 'the nonactualization of the [+p]-situation leads to the actualization of the Q-situation (i.e. to the attitude expressed in the Q-clause)'. This is clear from the paraphrases added (within brackets) to (30a–c). In sum, there are at least two conclusions to be drawn from (25)–(27) and (30). First, it is only in some *if* ... *not*-conditionals that *if* ... *not* is interpreted as equivalent to *except if*, and it is only in conditionals with 'except if' meaning that *unless* (or *except if*) can replace *if* ... *not*. Second, the use of the potentiality complementizer *if* implies that there is a causal link between the P-situation and the Q-situation. This causal link belongs to the semantics of the construction and should therefore be distinguished from the causal link that has a pragmatic origin and is not incompatible with *unless*, as in (6a–c), (12a–d) and (14). (These examples have already been referred to as counterexamples to Dancygier's (1985: 69) claim that a causal link excludes using *unless*. As we pointed out there, *unless* is ruled out by a causal link only if the latter belongs to the semantics of the conditional; in exceptive *unless*-clauses there may be a pragmatically inferrable causal link, but this does not form an inherent part of the 'except if' meaning of *unless*.)

So far we have discussed two cases in which *if* ... *not* cannot be replaced by *unless* for lack of an exceptive meaning. A third case is when *if* ... *not* is used in a conditional expressing a 'closed' condition, i.e. a condition which is assumed by the speaker to be fulfilled in the actual world:

(32) (a) {If (as you say) John won't come / *Unless (as you say) John comes} we needn't prepare dinner for him.
(b) ['I'll stay at home all day tomorrow.'] – '{If you won't / *Unless you'll} be going out tomorrow, the car will be free. [Can I use it to drive to Bristol?']

Again, *if* ... *not* does not refer to an exception here. The meaning of the conditional is 'The truth of ''not [+p]'' leads to the inference [+q].' This is not basically different from the meaning of *I will be surprised if that book doesn't sell well*, which (as we have seen) is 'The nonactualization of the [+p]-situation will result in the actualization of the Q-situation.' In both cases the conditional expresses only 'Q results from ''not [+p]'' ', and the lack of exceptive meaning means that *unless* cannot replace *if* ... *not*.

If ... *not* does not express an exception either if P is presented as true (factive) in the actual world. Thus, *unless* cannot replace *if* ... *not* in any of the following examples:

(33) (a) {If class 4b were not / *Unless class 4b were} exactly the best behaved children she'd ever taught, class 4a were positively monsters. *(The link between P and Q is a 'gradation-expressing' one. The P-clause is factual.)*
(b) {If he is not rich / *Unless he's rich}, at least he's honest. *(The link between P and Q is a concessive one. The P-clause is factual.)*

In some cases the possibility of an 'except if' reading of *if* ... *not* depends on the preceding context, i.e. on a purely pragmatic factor. Compare:

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(34) (a) [This table is going to be difficult to move.] We'll have a problem if John doesn't come.
(b) [This table is going to be difficult to move.] We'll have a problem {unless / (?)except if} John comes.
(35) (a) [This table is going to be difficult to move. I hope John comes.] We'll have a problem if he doesn't come.
(b) [This table is going to be difficult to move. I hope John comes.] We'll have a problem {??unless / *except if} he comes.

In (34a, b), the Q-clause *We'll have a problem* is quite in keeping with the preceding sentence *This table is going to be difficult to move*. Even without the P-clause, the sequence is quite coherent:

(36) [This table is going to be difficult to move.] We'll have a problem.

By contrast, in (35a, b), the Q-clause does not link up with the (immediately) preceding sentence. Without the P-clause, the sequence is incoherent:

(37) [This table is going to be difficult to move. I hope John comes.] We'll have a problem.

In other words, in (35a) there is no obvious conceptual link between the propositions expressed by the preceding sentence and the Q-clause. The only link that exists is between the propositions expressed by the Q-clause and the P-clause following it. This link is of the type 'The actualization of the Q-situation follows from the nonactualization of the [+p]-situation.' In (34), by contrast, there is a conceptual link between the propositions expressed by the preceding sentence and by the Q-clause. The only function of the P-clause is to state an exception to the validity of Q. This is in keeping with the possibility of using *unless* in (34) and with the impossibility of using it in (35). *Unless*, like *except if*, requires that the primary link between P and Q is the exceptive one. (As noted above, there may be a secondary link, such as the causal (resultative) one in *He'll leave unless you give him a rise*, but this link is merely pragmatically inferrable, not linguistically expressed – see also footnote 16.)

Finally, we can point out the cases in which we have *if not* rather than *if . . . not*. Here, substitution by *unless* is never possible, because *if not* never refers to an exception. The following provide some illustrations:

(38) (a) [I hope he'll come.] If not, we'll have a problem. *(The 'not' of 'if not' is a pro-form for a clause, i.e. 'if not' is equivalent to 'otherwise'.)*
(b) She's one of the best students, if not THE best, we've ever had. *('If not' introduces a 'boosting' P-clause.)*
(c) [Child abuse cases bring responses from a succession of social services departments and other state and para-state organizations] which, structurally if not individually, may be seen as new forms of patriarchal family. (COB-W)

3.2.5

A final remark in connection with integrated nonirrealis *unless*-conditionals is that even though the *unless*-clause is syntactically integrated, it is not semantically

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integrated into the Q-clause. This is clear, for example, from the fact that it cannot be the focus of an adverb from the Q-clause, nor the focus of a question or of a focusing Q-clause.[22] Compare the sentences in the following pairs:

(39) (a) The weekly meeting is *only* finished before 8 o'clock if it is not John who chairs it. *(=Only if it is not John who chairs the weekly meeting is the meeting finished before 8 o'clock.)*
(b) *The weekly meeting is *only* finished before 8 o'clock unless it is John who chairs it. *(ungrammatical if the* unless*-clause is to be the focus of 'only')*

(40) (a) Will you help us if John doesn't ask you to?
(b) *Will you help us {unless / except if} John asks you to?

(41) (a) [He's an athlete who performs best if it's raining. – No. Quite the opposite.] It's if it isn't raining that he performs best.
(b) [He's an athlete who performs best if it's raining. – No. Quite the opposite.] *It's unless it's raining that he performs best.

The difference in acceptability between *if . . . not* and *unless* in these examples follows naturally from the fact that *if . . . not* here expresses a negative condition, whereas *unless* expresses an exception.

3.3 *Nonintegrated* unless*-clauses (without irrealis meaning)*

A syntactically nonintegrated *unless*-clause typically takes 'postscript' position, i.e. it follows the Q-clause with an intonational break between the two clauses, as an afterthought (or ostensible afterthought). As in the case of integrated *unless*-clauses, there are four possibilities, depending on the (positive or negative) polarity of the two clauses:

(42) (a) '[+q] – {unless / except if} [+p]'
(b) '[+q] – {unless / except if} [-p]'
(c) '[-q] – {unless / except if} [+p]'
(d) '[-q] – {unless / except if} [-p]'

The following illustrate the various possibilities:

(43) (a) She'll be here by nine – {unless / except if} the traffic is bad. *('[+q] – unless [+p]')*
(b) You'll be in trouble – unless you don't tell anybody about it. *('[+q] – unless [-p]')*
(c) I won't do it – unless you help me. *('[-q] – unless [+p]')*
(d) I won't do it – unless you can't find anyone else to help you. *('[-q] – unless [-p]')*

Since 'Q – unless P' entails 'Q – (but) not Q if P', (43a) entails (44a), which in its turn logically entails (44b). When the *if* of (44b) is read as *iff* (=conditional perfection), the readings (44c, d) are implicated:

[22] For these, and similar tests, see Rutherford (1970), Quirk et al. (1985: 1071). The observation that *unless*-clauses do not normally combine with (nonrhetorical) questions was first made in Geis (1973). Dancygier (1998: 171–3) and von Fintel (1991) suggest explanations that are different from ours (but which, for lack of space, we cannot go into here).

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(44) (a) She'll be here by nine – but not if the traffic is bad. *('[+q] – but not [+q] if [+p]')*
(b) She'll be here by nine – if the traffic isn't bad. *('[+q] – if not [+p]')*
(c) She'll be here by nine – but only if the traffic isn't bad. *('[+q] – iff not [+p]')*
(d) Only if the traffic is bad will she not be here by nine. *('iff [+p], not [+q]')*

Unlike what we have noticed in connection with integrated *unless*-clauses, there are no cases where such an *if* . . . *not* paraphrase is possible while the corresponding *unless*-clause is not. A postscript P-clause introduced by *if* . . . *not* or *but only if* . . . *not* can only be interpreted as having an 'except if' meaning, i.e. as equivalent to an *except if*-clause or *unless*-clause. It follows that, unlike (13a, b), the following are assigned the same interpretation:

(45) (a) I'll give you £20 – unless you give me a ticket.
(b) I'll give you £20 – if you don't give me a ticket.

The same is true of (46b), where, unlike in (46a), *unless* and *if* . . . *not* are equivalent because both yield an 'except if' interpretation when used in postscript position:

(46) (a) It will be a relief {if Kate doesn't show up / *unless Kate shows up}. *(integrated extraposed P-clause)*
(b) It will be a relief – {if Kate doesn't show up / unless Kate shows up}. *(non-integrated P-clause)*

(46b) is quite unacceptable if the P-clause is to be interpreted as an extraposed P-clause, but is acceptable if the P-clause expresses an exception;[23] in the latter case it must be clear from the preceding context what exactly will constitute my future relief, i.e. what *it* refers to. Similarly, (47a, b) are unacceptable unless we can find a suitable context in which an 'except if' interpretation of the P-clause makes sense. They do not yield interpretations similar to those of (28) and (29):

(47) (a) Everyone will be happy – if the book doesn't sell well.
(b) Everyone will be happy – unless the book sells well.

These examples show clearly that the idea 'the nonactualization of the P-situation will trigger the attitude expressed in the Q-clause' cannot be expressed by a conditional with a nonintegrated *if* . . . *not*-clause (and never by an *unless*-conditional – see above).

The following illustrates possibility (42b) (= '[+q] – except if [-p]'):

(48) You'll be in trouble – unless you don't tell anybody about it.

This is equivalent to (49a) and entails (49b):

(49) (a) You'll be in trouble – but {not / you won't be in trouble} if you don't tell anybody about it. *(='[+q] – (but) not [+q] if [-p]')*
(b) You'll be in trouble if you tell somebody about it. *(='[+q] if not [-p]')*[24]

[23] Sentence (46b) is also acceptable if the P-clause is a right-dislocated *if* . . . *not*-clause.

[24] Note that we are only claiming that (49b) is entailed by (48) (i.e. that the latter cannot be true if the former is not). We are not claiming that the two sentences are interchangeable. They are not, because

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When the *if* of (49b) is read as *iff* (=conditional perfection), the following readings are implicated:

(50) (a) Only if you tell somebody about it will you be in trouble. *(='iff not [-p], [+q]')*
(b) Only if you don't tell anybody about it will you not be in trouble. *(='iff [-p], not [+q]')*

It will be obvious that (48) is somewhat difficult to process. Part of the explanation of this might be that exceptive *unless* (which entails *if . . . not*) has something negative in its 'except if' meaning,[25] so that combination of *unless* with [-p] constitutes something like a double negation, which demands more processing effort on the part of the speaker than a single negation. However, the pragmatic likelihood of the actualization of the *unless*-situation also appears to play a role. It is in the nature of an 'afterthought' exception that we should assume that the nonactualization of the P-situation has been taken for granted in uttering the Q-clause, but that P is then recognized as a potential exception to the validity of Q. This assumed taking for granted of 'not P' means that sentence (51) requires less processing effort when uttered in a world in which relatively few people do not eat meat than it does when uttered in a world in which most people do not eat meat:

(51) Belgian food is wonderful – unless you do not eat meat.

Similarly, (52) requires less processing effort when uttered in a world in which relatively few people do not drink red wine than it does when uttered in a world in which the vast majority of people do not drink red wine:

(52) I think we should have the claret – unless you don't drink red wine.

In sum, part of the reason why (48) seems difficult to process may be that we interpret it in a scenario in which not telling anyone is the default case, which makes it difficult to see *unless you don't tell anybody* as expressing an exception to the validity of Q.[26]

We will not go in detail into the possible interpretations of (42c, d), which are illustrated by (53a, b) respectively:

(53) (a) I won't do it – unless you help me. *('[-q] – unless [+p]')*
(b) I won't do it – unless you can't find anyone else to help you. *('[-q] – unless [-p]')*

The possible interpretations of these run parallel with those of (43a) and (48). What is worth noting, though, is that there is a special type of '[-q] – unless [+p]'

an *unless*-clause states an exception to the validity of Q, while the P-clause of (49b) expresses that 'not [-p]' is a negative condition for the validity of Q.

[25] As noted in section 3.2.2, the negative aspect of meaning of *unless* is to be found in the 'except' element of the 'except if' reading and does not reverse the polarity of the P-clause itself (hence the use of assertive items in positive *unless*-clauses).

[26] The same explanation holds for integrated negative *unless*-clauses, but nonintegrated ones are even more difficult to process because they imply more strongly that the Q-clause can stand on its own and that the exception given in the *unless*-clause is just extra, restricting, information.

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conditional which does not entail '[-q] – but not [-q] if [+p]', and therefore does not allow this kind of paraphrase:

(54) (a) There wasn't one talented player amongst them, unless it was Peter. *(=except perhaps Peter)*
(b) *There wasn't one talented player amongst them, but there was one if it was Peter.

(55) (a) 'I can look after myself,' said Tate in a low voice. – 'I never saw a man less capable of doing so, unless it is Mr Dunsand.' *(=except perhaps Mr Dunsand)*[27]
(b) *I never saw a man less capable of doing so, but I saw one if it is Mr Dunsand.

In (54a) and (55a), the *unless*-clause is an identifying copular clause. In such examples, *unless it is/was/were* . . . just means 'except perhaps'.[28]

A final note in connection with nonintegrated nonirrealis *unless*-clauses is that they can sometimes take the form of syntactically independent 'afterthought' sentences:

(56) Don't have me stuffed, pettie, when I die. Unless you think I could be useful standing in the hall holding a tray for cards – like bears in Scots Baronial homes. (LOB)

In this position, *if . . . not* cannot readily substitute for *unless*. Thus, replacing *unless* by *if . . . not* in the above example would yield:

(57) Don't have me stuffed, pettie, when I die. If you don't think I could be useful standing in the hall holding a tray for cards – like bears in Scots Baronial homes.

This is a distinctly odd piece of discourse, because an independent *if . . . not*-clause is not readily interpreted as having the exceptive function of an {*unless* / *except if*}-clause. Example (57) is therefore interpreted as 'Don't have me stuffed; this should be entailed by your not thinking I could be useful standing in the hall . . .'.

4 *Unless* in irrealis conditionals

An irrealis conditional is one which is not presented as possibly matching the actual world.[29] The world in question may be either purely 'imaginary' or 'counterfactual'.

[27] Example from Ruth Rendell, *Some lie and some die*, p. 162 (in: *The third Wexford omnibus*, London: Arrow Books, 1990, pp. 7–179).

[28] The following is a further example of this:

(i) Nothing on four legs was supposed to be faster than a lion over a short distance, unless it was a cheetah. (BR)

[29] It should be noted that not all conditionals with the past perfect in the P-clause and the conditional perfect in the Q-clause are irrealis conditionals. In Declerck & Reed (forthcoming) several such exceptions are discussed. To mention only one, a seemingly irrealis conditional may actually be the 'backshifted' version of an open conditional with the present perfect in the P-clause and the future perfect in the Q-clause. There is no problem with *unless* in such reported open conditionals, as is clear from the following:

(i) He said: 'Unless you have finished the painting by tonight, all your work will have been in vain, because the customer will not want it any more.' *(direct speech)*

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A counterfactual conditional refers to a world (consisting of a set of propositions) which is presented as known to be contrary to the actual world. An imaginary conditional refers to a world which is presented as existing in the imagination of the speaker only (and which the addressee is invited also to imagine). This means that it refers to a world of propositions which is not represented as being truth-conditionally related to the actual world (irrespective of any inferences about the actual world that might be drawn from the utterance of the conditional). In other words, the difference between counterfactual and imaginary conditionals is that, whilst the imagination is involved in both cases, in the latter case the world imagined is a world of propositions which are not represented as having any particular truth relationship with the propositions making up the actual world, whilst in the former case (i.e. in a counterfactual conditional) the world imagined is represented as being 'negatively' related to the actual world, in that it is explicitly different from (i.e. contrary to) it. In a counterfactual conditional, both the P-situation and the Q-situation are represented as actually unfulfilled (or unfulfillable) in the past, present or future, as in the following:

(58) (a) I would have been extremely happy if I had got a first. *(is understood as: 'I did not get a first' + 'I {was/am} not happy')*
(b) My life would be easier if I had a car. *(is understood as: 'I don't have a car' + 'My life is not as easy as it would be if I had a car')*
(c) If you had come tomorrow instead of today, you would not have found me at home. *(is understood as: 'You aren't coming tomorrow' + 'You have found me at home (today)')*

The following is an example of an imaginary irrealis conditional:

(59) In your place I would have been happy if I had got a first. *(implies neither 'I did not get a first' nor 'I {was/am} not happy')*

It has sometimes been claimed that *unless* cannot be used in 'counterfactual' (=irrealis) conditionals (see e.g. Dancygier, 1985: 70; 1998: 174; Geis, 1973: 242–3; the *Longman Dictionary of Contemporary English*, 1978: 1204; Quirk et al., 1972: 747).[30] However, this claim is disproved by the following:

(60) (a) But unless I'd gone along with you, you'd have told my husband, I bet. (COB-W) *(*except if)*
(b) [There are of course some descriptions under which something we do can be unintentional, but their use is derivative. For example,] there would be no such thing as unintentional offence unless we had the concept of intended offence in the first place. (LOB) *(*except if)*

There is no doubt that these are counterfactual conditionals. Thus (60a) implies both 'I went along with you' and 'you didn't tell your husband'. What is remarkable

(ii) Unless I had finished the painting by the end of the day, all my work would have been in vain, because the customer would not want it any more. *(free indirect speech)*

[30] von Fintel (1991) makes the milder claim that attested counterfactual *unless*-conditionals are extremely rare and that, if you try to make them up, they seem unacceptable.

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is that *unless* cannot be replaced by *except if* here. This means that in counterfactuals, *unless* does not mean the same as *except if*.

On the other hand, *unless* does have the same meaning as *except if* in imaginary irrealis conditionals:

(61) [I didn't go to the party, so I don't know if I would've become as drunk as you all appear to have been. In fact, I'm afraid] I would've been drunk too, unless I'd brought my wife with me to keep an eye on me.

We must conclude, then, that there are two possible interpretations of *unless* in irrealis conditionals: the imaginary reading, in which *unless* is interchangeable with *except if*, and the counterfactual one, in which this is not the case. In order to explain how speakers understand *unless* correctly in irrealis conditionals, it is therefore necessary to have a closer look at the two types of irrealis conditionals.

The unmarked reading of irrealis conditionals (i.e. their default reading out of context) is that in which the speaker assumes (presupposes) a counterfactual relation between the theoretical world created by the conditional and the real world. For example:

(62) (a) If the Dean hadn't answered my letter, I would've had to resign. *(Example inspired by Reinhart's (1976: 702) example quoted as (65) below.)*
(b) Unless the Dean had answered my letter, I would've had to resign.

Out of context, these sentences are assumed to refer to the real past (=the past part of the actual world), with the P-clause expressing 'if at that real time in the past, x had happened' (where x is something other than what actually happened). On this reading the sentences implicate

(63) Actually, the Dean answered my letter and I didn't have to resign.

These implicated factual readings (with polarity reversal after *if . . . not* and without polarity reversal after *unless*) constitute a counterfactual interpretation of the conditional; that is, the conditional is interpreted as 'contrary to fact', where 'fact' is interpreted (by default) as referring to the actual world because this is the most relevant world to the speaker and addressee. This means that the truth of a counterfactual proposition is taken to imply the truth of the corresponding factual proposition, but (as long as *if* is used)[31] with a reversal of polarity. In sum, failing any indication to the contrary, an irrealis world is assumed (pragmatically presupposed) by the speaker to be counterfactual, i.e. contrary to the factual (=actual) world. However, as is typical of implicatures, these factual readings can be cancelled by the context. In example (64) below this is done by a preceding counterfactual conditional, which creates an imaginary world in which the relevant conditional (*if he hadn't answered my letter, I would've had to resign*) is true. The context following

[31] In a counterfactual 'Q *if* P' conditional there is polarity reversal in the interpretation of both clauses. In a counterfactual 'Q *unless* P' conditional there is polarity reversal in the interpretation of the Q-clause only: in *I couldn't have written this book unless you had helped me*, there is no polarity reversal in the interpretation of the *unless*-clause.

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the latter conditional shows clearly that, because of the preceding counterfactual, this conditional lacks the factual implicatures (expressed in (63)) which it has in isolation, i.e. that the relevant conditional is not to be interpreted as counterfactual but rather as 'imaginary':

(64) [If things had been as they used to be, I would've had to write a letter to the Dean, and] if he hadn't answered my letter, I would've had to resign. [Luckily I didn't need to send him a letter, because the rule about writing to the Dean was abolished shortly after I was employed.]

Reinhart (1976: 702) gives an example that is similar, except that the conditional of itself creates the imaginary world:

(65) If the Dean hadn't answered my letter I would have had to resign. [Luckily, however, since I never sent any letter to the Dean, I didn't have to resign.] *(The emphatic contrastive accent on 'my' can be interpreted as creating an imaginary world, in the same way as the counterfactual 'if I had been you' does.)*

In (64) and (65), the relevant conditional does not refer to a counterfactual world (i.e. a world which is treated as contrary to the actual world) but rather to an imaginary world which is not truth-conditionally related to the actual world at all. This absence of any truth relation between the imaginary world and the actual one is the reason why the irrealis conditional in (64) and (65) does not yield the factual implicatures expressed in (63). In fact, it does not implicate anything about the actual world whatever. In (64) and (65) it is not the conditional itself but the sentence following it that states or implies claims about the factual world.

In sum, in isolation (62a) [*If the Dean hadn't answered my letter I would've had to resign*] is interpreted as a counterfactual conditional with the factual implicatures expressed in (63) [*The Dean did answer my letter and I didn't have to resign*]. In (64) and (65) the same conditional is embedded in a counterfactual context creating an imaginary world. Since the truth relation between an imaginary world and the actual world remains vague, the conditional does not implicate anything about the factual world. More specifically, it implicates neither *The Dean did answer my letter and I didn't have to resign* nor *The Dean didn't answer my letter and I had to resign*. In other words, out of context (62a) is assumed to refer to the real past and the P-clause is taken to express 'if at that real time in the past, x had happened' (where x = something other than what actually happened). In (64) and (65) the same conditional is embedded in a counterfactual context. A speculation about a world which might (have) exist(ed) if a counterfactual world (had) existed is no longer a speculation about a world which is explicitly different from the actual world: it is a speculation about a world whose relation to the actual world is impossible to define, i.e. a purely imaginary world. Since the truth relation between the propositions of such a world and those of the actual world remain vague, the conditional *If the Dean hadn't answered my letter, I would've had to resign*, when used in the counterfactual contexts of (64) and (65), refers to an imaginary past world and the P-clause means 'if the past had been different, and within that different past x had happened'. In this case

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the world about which the speculation is put forward bears no relation to the real world, so that there is no implicature about P in the real world.

As we have already done in the preceding paragraphs, we will refer to irrealis conditionals that have factual implicatures as 'counterfactual conditionals' and to those which have no factual implicatures as 'imaginary conditionals'. The label 'irrealis conditionals' will continue to be used as a cover term for both types. Imaginary conditionals represent the marked type of irrealis conditionals because the imaginary reading is only available in a suitable context. Examples of such contexts are when the conditional is preceded by a counterfactual *if*-clause, as in (64), or contains an implicit counterfactual *if*-clause, as in (65). The following examples are similar, in that either the preceding context or the sentence itself makes it clear that the irrealis conditional should not be read as counterfactual:

(66) (a) If the butler had done it, we would have found just the clues that we did in fact find. (Comrie, 1986: 90)
(b) [If John hadn't told Kelly the truth, someone else would probably have told her sooner or later.] If no one else had told her, she would never have found out the truth herself.
(c) [If John hadn't told Kelly the truth, someone else would probably have told her sooner or later.] If no one else had told her, she would never have known the truth.

In (66a) it is the relative clause in the sentence itself that sees to it that the implicatures 'The butler didn't do it' and 'We didn't find this sort of clues' do not arise. (This does not mean, however, that (66a) rules out the possibility that the butler did not do it. As we have seen, the fact that it is an imaginary conditional means that (66a) is vague as to the question whether the butler actually did it or not.) In (66b) it is the preceding counterfactual that blocks the implicatures 'Someone else (=other than John) told her' and 'She found out the truth herself.' Sentence (66c) is similar, though it might suggest that the Q-implicature 'She knows the truth' goes through. In fact, however, 'She knows the truth' is not implicated by the imaginary conditional but is implied by the preceding context. As could be expected, there is no P-implicature 'Someone else told her.'

Let us now return to *unless*. It appears that in irrealis conditionals, *unless* can be rendered by 'except if' in imaginary conditionals, but not in counterfactual ones, where it is more naturally rendered by 'if it {hadn't been / weren't} the case that' (or 'if it {hadn't been / weren't} for the fact that'). The following illustrate the two interpretations, respectively:

(67) (a) [I know John's behaviour was disgraceful, but] he wouldn't have done it {unless / *except if} Mark had persuaded him to. *(counterfactual)*
(b) [I don't know whether it was John or Gordon who started the fight, but if it was John, I'm sure] he wouldn't have done it {unless / except if} Mark had persuaded him to. *(imaginary)*

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4.1 Imaginary irrealis conditionals

As we have seen, imaginary irrealis conditionals have no factual implicatures about the real world. Consequently, an *unless*-clause in an imaginary conditional does not by itself say anything about the relation between the *unless*-situation and the real world. This should be clear from (68a), which receives the reading (68b):

(68) (a) [If the British had wanted to call all-party talks,] they would not have succeeded in bringing the Unionists to the table unless Sinn Fein had decommissioned arms. (COB-W)
(b) [If the British had wanted to call all-party talks, then, if they had called all-party talks,] they would not have succeeded in bringing the Unionists to the table {unless / except if} Sinn Fein had decommissioned arms.

The *unless*-clause in (68a) (in which we can substitute *except if* for *unless*) states an exception to what would have been the case in the imaginary scenario in which the implicit condition (expressed by *if they had called all-party talks* in (68b)) was true. The meaning of the *unless*-clause is not counterfactual but imaginary: there are no implicatures linking the *unless*-situation to the actual world. That is, (68a) implicates neither 'Sinn Fein decommissioned arms' nor 'Sinn Fein did not decommission arms.'

It should be noted that the presence of the counterfactual *if*-clause *If the British had wanted to call all-party talks* is of crucial importance in (68a). Without it, no imaginary conditional world would be created, and the *unless*-clause would receive a counterfactual interpretation (and thus have a positive factual implicature):

(69) The British would not have succeeded in bringing the Unionists to the table unless Sinn Fein had decommissioned arms.

The natural reading here is:

(70) The British would not have succeeded in bringing the Unionists to the table {if it hadn't been for the fact that / in a case other than the factual case in which} Sinn Fein had decommissioned arms. *(This implicates both 'The British succeeded in . . .' and 'Sinn Fein (had) decommissioned arms.')*

As is the case in (68a), an imaginary *unless*-clause is typically found in a counterfactual context. The following examples further illustrate this:

(71) (a) [He's lucky you did it without asking for his help. If I'd been you], I wouldn't have done it {unless / except if} he'd helped me. *(The counterfactual* if*-clause 'If I'd been you' creates an imaginary irrealis world in which 'I wouldn't have done it' is true. The 'unless'-clause expresses an exception to the validity of this imaginary Q-clause and is therefore imaginary itself: it does not by itself implicate either 'He helped' or 'He didn't help.')*
(b) [You're lucky he did it without asking for your help.] In his place I wouldn't have done it {unless / except if} you'd helped me. *('In his place' is equivalent to 'if I had been him.')*
(c) ['If the money hadn't been used for building a luxurious entrance hall, it would probably have been spent on other unnecessary things.'] – 'So unless there had been much stricter control, the money would have leached out in other ways?'

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(COB-S) *(The imaginary world in which the* unless-*conditional is true is created by the preceding counterfactual* if-*conditional. The interpretation is: 'Is it correct that in the imaginary world in which the money had not been used for building a luxurious entrance hall, the money would have leached out in other ways unless there had been much stricter control?'* Unless *is equivalent to* except if *and has an imaginary meaning: there is no factual implicature 'There was much stricter control.')*

(d) [Her new book is splendid. I am sure] YOU wouldn't have been able to write it {except if / unless} she'd helped you. *(The contrastive accent on 'you' creates the implicit condition 'if it had been you who undertook writing this book'. The* unless-*clause does not implicate 'She helped you write the book.' Its meaning is therefore imaginary, not counterfactual.)*

Apart from the (overt or implicit) presence of a counterfactual *if*-clause, there are other ways in which the context can make it clear that an irrealis conditional is to be interpreted as imaginary rather than counterfactual. This is illustrated by the following:

(72) (a) [I don't know whether or not Peter hit Jim. If he did,] he wouldn't have done it {unless / except if} Mary had asked him to. *(The factual implicatures 'He did it' and 'Mary didn't ask him to', which the conditional yields when used in isolation (in which case it is interpreted as counterfactual), are precluded here by the nonfactuality which is inherent in the open condition 'if he did' (which implies that the speaker does not know whether Peter did it or not) and which is also signalled by the preceding sentence. In this context the irrealis conditional is therefore interpreted as an imaginary one.)*

(b) [I was asked to resign, but I said 'no, I don't want to leave, you'll have to sack me'. I was told the decision was taken because I stated I was ambitious to manage a big club, but] I would not have left unless an offer came in from the biggest, [which was unlikely]. (COB-W) *(Here too the context forces the conditional clause to be read as imaginary rather than counterfactual: it makes it clear that there is no factual implicature 'An offer came in from the biggest'. (We may infer that the speaker did in fact leave the club, but that inference is not derived from the conditional itself but from the context, more specifically from the factuality of 'The decision [to make me leave] was taken because . . .'))*

(c) [Moscow wants a piece of paper. And Bulgaria in particular has had to act fast. Its existing treaty with the Soviet Union expires on 4 August next year.] But it would have been renewed automatically unless either side had given a year's notice to the contrary. [With a couple of days to spare, Bulgaria has formally notified Moscow that it does not want to continue the treaty.] (COB-W) *(The conditional is again imaginary: it is not the Q-clause itself but the context that implies 'It won't be renewed automatically', and it is not the* unless-*clause but the context that conveys the understanding 'One side gave a year's notice to the contrary.')*

Out of context, irrealis *unless*-conditionals may sometimes be ambiguous between an imaginary and a counterfactual interpretation. Thus, in isolation (73a) can be interpreted either as (73b) or as (73c):

(73) (a) How would he have known the details of the planned coup d'état unless Langley had given the information? (COB-W)

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(b) He knew the details of the planned coup d'état, but he wouldn't have known them if it hadn't been the case that Langley had given the information. *(counterfactual)*
(c) He may or may not have known the details of the planned coup d'état. I doubt that he did, because it seems impossible that he would have known the details except if Langley had given the information, and that seems unlikely. *(imaginary)*

In isolation, the counterfactual interpretation (73b) is the unmarked one. It is also the interpretation which is confirmed by the context in which the (authentic) example is embedded:

(74) [... than by the actual revelation that he (=Ruiz) was working for the CIA. He certainly had no reason to disbelieve him. How else would he (=Ruiz) have known that Pruitt had been to the apartment?] And how would he have known the details of the planned coup d'état unless Langley had given the information? [No, Ruiz was on the level. Of that he was certain. And the more he thought about it, the more he realized just what an inspired move it had been by Langley to recruit him.] (COB-W)

Similarly, (75a) is ambiguous between (75b) and (75c) – see Whitaker (1971: 155):

(75) (a) I couldn't have got to Slough in time unless I'd had a helicopter.
(b) I couldn't have got to Slough in time *(and I didn't)* unless I'd had a helicopter *(which I didn't)*. *(imaginary:* unless = except if*)*
(c) I couldn't have got to Slough in time (*but I did)* unless I'd had a helicopter *(which I did)*. *(counterfactual:* unless = *'if it hadn't been for the fact that')*

Out of context, the latter interpretation is more natural than the former. (However, as we will see in section 4.3, in both cases, *unless* can be glossed: 'in a case other than P'.)

In all the above examples of imaginary *unless*-conditionals, the conditional has no factual implicatures, and *unless* can always be replaced by *except if*. On the other hand, *unless* is not freely interchangeable with *if ... not*. Unlike (76a), (76b) is naturally interpreted as counterfactual rather than as imaginary:

(76) (a) He wouldn't have done it unless Mary had asked him to.
(b) He wouldn't have done it if Mary hadn't asked him to.

4.2 Counterfactual unless

The second meaning which can be expressed by *unless* in irrealis conditionals (but not, this time, by *except if*) is the counterfactual reading which can be rendered by 'if it hadn't been the case that' or 'if it weren't for the fact that'. In this case both clauses of the *unless*-conditional do have a factual implicature:

(77) (a) But {unless / *except if} I had gone along with you, you'd have told your husband, I bet. *(=If it hadn't been the case that I went along with you, you'd have told your husband.) (Factual implicatures: 'I went along with you' + 'You didn't tell your husband.')*

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(b) I couldn't have finished this in time {unless / *except if} you'd helped me. *(= . . . if it hadn't been for the fact that you helped me) (Factual implicatures: 'You helped me' + 'I managed to finish this in time.')*
(c) I wouldn't be here {unless / *except if} I was interested, would I? *(=If it wasn't a fact that I'm interested, I wouldn't be here, would I?) (Factual implicatures: 'I am interested' + 'I'm here.')*
(d) [There are of course some descriptions under which something we do can be unintentional, but their use is derivative. For example,] there would be no such thing as unintentional offence unless we had the concept of intended offence in the first place. (LOB)

In these examples, the conditionals are used either in isolation or in a context that triggers neither a counterfactual nor an imaginary (exceptive) reading of the *unless*-clauses. The latter are interpreted as counterfactual for the simple reason that this is their default (unmarked) reading in irrealis conditionals. However, the context may confirm this reading, as in (78a), or cancel it, as in (78b):

(78) (a) ['Why did you do it?'] – 'I wouldn't have done it unless Mary had asked me to.' *(The idea 'I did it' is not only implicated by the counterfactual reading of the conditional but also asserted in the preceding sentence. Because of the counterfactual meaning,* unless *can be replaced with* if . . . not *but not with* except if.*)*
(b) I wouldn't have done it unless Mary had asked me to, [and she didn't]. *(The conditional might initially be interpreted as a counterfactual with an* unless*-clause meaning 'if it hadn't been for the fact that Mary asked me to', but this initial reading is cancelled by the following* and*-clause. The* unless*-clause is therefore ultimately interpreted as imaginary rather than counterfactual. It follows that* unless *can be replaced with* except if*, but not with* if . . . not.*)*

Sometimes the context allows either interpretation of the *unless*-conditional:

(79) ['We need to talk, Rick. That's why I asked McCrain to give us some time alone.' – 'Yeah, we do,' he replied, pulling out one of the chairs and sitting down.] 'You wouldn't have changed your mind unless you'd had a damn good reason for doing so. [You've obviously concocted some elaborate scheme to try and outwit Langley.]' (COB-W) *(The context does not make it quite clear whether the addressee has actually changed his mind or not. The sentences preceding the conditional suggest that he did (=the counterfactual interpretation), but the imaginary reading (in which* unless *means* except if *) is not impossible.)*

In some cases the lexical material in the conditional itself guides us towards a particular interpretation:

(80) [Michael Forsyth (. . .) made it clear that he was against the closure. It was following his intervention that Mr Salmon suddenly saw the force of the argument and changed his mind.] But Mr Forsyth would never have stepped in unless he had seen the way the wind was blowing and how strong the opposition was. (COB-W)

The preceding context here invites the counterfactual interpretation, but what actually enforces it is the use of *the way the wind was blowing* (i.e. 'he saw that the wind was blowing in the way that it was') and *how strong* (i.e. 'he saw that the opposition was as strong as it was'). The interpretation of these phrases is such that

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a (counterfactual) link is made between the irrealis world and the actual one. Without these phrases – say if it was phrased: 'unless he had felt that the opposition was very strong' – the conditional would be ambiguous between a counterfactual and an imaginary reading (the unmarked reading, however, being the former one).

4.3 Unless *versus* except if *and versus* if . . . not *in irrealis conditionals*

In sections 4.1 and 4.2 it was noted briefly that *unless* is interchangeable with *except if*, but not always with *if* . . . *not*, in imaginary conditionals, and that it is interchangeable with *if* . . . *not*, but not with *except if*, in counterfactual conditionals. Let us now have a closer look at these data and attempt to account for them.

Imaginary *unless*-clauses tend not to be interchangeable with *if* . . . *not*-clauses, especially if they are not syntactically integrated. Thus, in (81) the postscript *unless*-clause can be replaced with an *except if*-clause, but hardly with an *if* . . . *not*-clause, at least if the imaginary sense is to be retained:

(81) [This is not a show to write home about, and since it purports to be a morale-boosting entertainment for American troops in wartime London,] it is nothing they would have wanted to write home about either, unless complaint was the tone. (COB-W)

Similarly, compare:

(82) (a) ['If the money hadn't been used for building a luxurious entrance hall, it would probably have been spent on other unnecessary things.'] – 'So unless there had been much stricter control, the money would have leached out in other ways?' (COB-S) *(=(71c))*

(b) ??['If the money hadn't been used for building a luxurious entrance hall, it would probably have been spent on other unnecessary things.'] – 'So if there hadn't been much stricter control, the money would have leached out in other ways?'

The *unless*-conditional of (82a) is interpreted as imaginary, with no factual implicatures. It is therefore compatible with a context which makes it clear that there was no stricter control, and that the money did not leach out in other ways (i.e. in ways other than the one way in which it did leach out, viz. by building a luxurious entrance hall). However, in (82b), although it is not impossible to read the *if* . . . *not*-conditional as having imaginary meaning, the primary interpretation is that the irrealis conditional is counterfactual. In a counterfactual, both the Q-clause and the *if* . . . *not*-clause have a factual implicature (with reversed polarity). Thus the counterfactual reading of (82b) would implicate 'There was much stricter control' and 'The money did not leach out in other ways.' In fact, however, in the counterfactual case, the Q-clause is not readily interpretable because of 'other', so no implicature is really available. The forced counterfactual interpretation would be that, since there was stricter control, the money was spent neither on a luxurious entrance hall nor on other unnecessary things, i.e. that these are things that the stricter control prevented the money leaching out on. However, this interpretation

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clashes with the presence of 'other'.[32] In sum, whereas the *unless*-clause receives an imaginary reading in (82a), the *if* ... *not*-clause in (82b) does not. The latter invites a counterfactual reading which is nonsensical and therefore renders the sentence unacceptable.

Similarly, if we substitute *if* ... *not* for *unless* in (72b), the interpretation changes from imaginary to counterfactual, as in (83). Since the counterfactual reading (implicating that an offer did come in) does not make sense in the given context, (83) is contradictory and therefore unacceptable:

(83) ??[I was asked to resign, but I said 'no, I don't want to leave, you'll have to sack me'. I was told the decision was taken because I stated I was ambitious to manage a big club, but] I would not have left if an offer had not come in from the biggest, [which was unlikely].

On the other hand, *if* ... *not* can be substituted for *unless* in some contexts that make it quite clear that the conditional can only be interpreted as imaginary:

(84) [In your place] I wouldn't have dared to come here {unless I'd had / if I hadn't had} a bodyguard with me.

Although this example is not completely straightforward to interpret because of the fact that the context (*In your place*) imposes an imaginary reading whilst the normal interpretation of *if* ... *not* is counterfactual, it is not impossible to interpret the *if* ... *not* clause as imaginary. (Note that the imaginary reading of *I wouldn't have dared to come here if I hadn't had a bodyguard with me* has a single intonation contour (starting after *In your place*) – thus keeping the second 'I' in the scope of the 'imaginary operator' – whilst the counterfactual reading (which is obviously only available without *In your place*) has a separate intonation contour for each clause. This difference in intonation contour indicates that on the level of intonation we actually have to divide up the sentence differently for the two readings, so that interpreting *if* ... *not* as imaginary is not a matter of resolving a local ambiguity but has an impact on the whole sentence.)

It should be clear now why an irrealis *if* ... *not*-conditional normally triggers a counterfactual interpretation. In order to explain this observation we only need to combine two data. First, as we have seen, *unless*, when used in the sense of *except if,* entails *if* ... *not*, but not vice versa: *if* ... *not*-conditionals can also express the nonexceptive idea 'Q follows from [-p]' (as in *If you're not careful, you'll trip over that wire*). This means that 'except if' does not form part of the semantics of *if* ... *not*. Second, the unmarked interpretation of an irrealis conditional is the counter-

[32] In fact, the counterfactual reading of (82b) also causes problems of interpretation in combination with the comparative 'stricter', which is interpreted as 'stricter than was actually the case' – resulting in the anomalous: 'if there had not been (as there was) stricter control than there actually was'. However, it is in fact possible to interpret 'stricter' as, for example, 'stricter than there had been at some preceding time', which then allows the counterfactual reading to go through. What is clear is that (a) the difficulty of interpreting (82b) arises because the default interpretation of an *if* ... *not* irrealis conditional is counterfactual, and (b) this default counterfactual reading means that *if* ... *not* is not readily substitutable for *unless* in (82a), because (82a) has an imaginary meaning.

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factual reading: as we have seen, an imaginary interpretation arises only in suitable contexts. It follows from these two data that an irrealis *if* . . . *not*-conditional is by default interpreted as counterfactual, unless an imaginary interpretation is enforced by the context, as in (84) (where *in your place* imposes an imaginary reading on the irrealis conditional that follows it).

The second constraint that needs explaining is the impossibility of substituting *except if* for *unless* in counterfactual conditionals:[33]

(85) But {unless / *except if} I had gone along with you, you'd have told your husband, I bet. *(=(77a))*

In section 4.2 we reached the conclusion that in counterfactual conditionals (i.e. those irrealis conditionals which are interpreted counterfactually) *unless* is equivalent to 'if it hadn't been the case that' or 'if it weren't for the fact that'. This rendering, however, stems from the basic meaning of 'Q *unless* P', namely 'Q in a case other than P'.[34] Thus the basic meaning of (85) is: 'In a case other than (the) one in which I went along with you, you would have told your husband', which, because the conditional is counterfactual, is equivalent to 'other than – i.e. if it weren't for – the fact that I went along with you, you would have told your husband'. Two points should be noted here regarding counterfactual *unless*-conditionals. First, unlike *if* . . . *not*, *unless* does not simply suppose the absence of P, but positively supposes the existence of a case other than P. Second, and relatedly, unlike the P-clause of a counterfactual *if* . . . *not*-conditional, the P-clause of a counterfactual *unless*-conditional expresses what is (or was) the case in the real world, rather than what is not (or was not) the case in the real world. That is, counterfactual '*unless* P' says: 'in a case other than what is/was the case in the real world' (where 'what is/was the case in the real world' is expressed in P), or: 'if circumstances had been other than what they are/were', whereas counterfactual *'if* . . . *not* [+p]' says: 'if it had been the case that what is/was the case (i.e. [+p]) {was not / had not been} the case'. In sum, in counterfactual conditionals, *unless* and *if* . . . *not* have the same meanings as they do in noncounterfactual conditionals, but now with factual implicatures, and those implicatures are arrived at by slightly different routes. The implicature in the case of *unless* is that 'the case other than P' is contrary to fact, hence that P, which in normal circumstances (see below) is [+p], is factual; the implicature in the case of counterfactual *if* . . . *not* is that 'not [+p]' (=[-p]) is contrary to fact, hence that [+p] is factual. (In both cases [-p] is interpreted as contrary to fact, but the negation in [-p]

[33] There is also a constraint on the use of *unless* in counterfactuals. This is the same as was noted in section 2.1 in connection with nonirrealis conditionals: *unless* cannot replace *if* . . . *not* if the conditional expresses the idea 'the nonactualization of the P-situation triggers the actualization of the Q-situation'. Thus, (i) is completely parallel to (ii):

(i) It would've been a pity {if the book hadn't sold well / *unless the book had sold well}.
(ii) It'll be a pity {if the book doesn't sell well / *unless the book sells well}.

[34] This definition of the meaning of *unless* is in keeping with its original meaning, which, according to the *Oxford English dictionary* – see p. 3521 of the 1971 *Compact edition* – was 'on a less or lower condition, requirement, footing, etc. than (what is specified)'.

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has a different origin: with *unless* it follows from the 'in a case *other than* [+p]' meaning, whereas in the case of *if* . . . *not* it follows from the use of *not*.)

To explain why *except if* is not possible in counterfactual conditionals, and therefore cannot be substituted for *unless* in them, we need to look both at the similarity between *except if* and *unless* and at the difference between them. From the behaviour of e*xcept if* with nonassertive items – see (86a–c) – it appears that *except if*, like *unless*, refers to 'a case (or cases) other than P'. In other words, e*xcept if* is like *unless* and unlike *if* . . . *not* in that it does not simply posit the absence of P: the meaning of '*except if* P, Q' is not 'if not P, Q', but 'in a case (or cases) other than P, Q'.

(86) (a) I won't do it except if I get {some / *any} money from you.
(b) *Except if you lift a finger to help me, I quit.
(c) *Except if John cares a bit for Mary, he shouldn't marry her.

However, unlike *unless*, *except if* contains *if*. This *if* makes P nonfactual, which means that '*except if* P', unlike '*unless* P', refers to 'a case other than (=*except*) the/a nonfactual (=*if*) P'. (By 'nonfactual' we do not mean 'counterfactual'. A nonfactual conditional refers to a world which is not explicitly the real world. That is, in using a nonfactual conditional, a speaker does not commit herself to the truth of the utterance in the real world. Nonfactual conditionals include, for example, 'open' conditionals, such as *(Except) if John comes, Mary won't,* as well as counterfactual conditionals.) In other words, when *except if* is used, as when *if* is used, P is always (with very specific exceptions) potential rather than actual (even if the potentiality concerns the past or present).[35] The combination of the positive meaning of P in '*except if* P' – the positiveness of P appears from its incompatibility with nonassertive items – and the requirement (imposed by *if*) that P be nonfactual in fact prevents the compatibility of *except if* with counterfactual meaning. Sentence (87) is unacceptable because its *except if*-clause can only be read as 'in a case other than the nonfactual case that was in fact the case' (or: 'in a world other than the nonfactual world which was actually factual'), which is nonsensical.

(87) *Except if I'd gone with you, you'd have told your husband, I bet.

Although the *if* of *if* . . . *not* is also nonfactual, *if* . . . *not* does not raise a similar problem, because *if* . . . *not* does not positively suppose a case other than nonfactual P (i.e. a world other than the nonfactual [+p]-world), but supposes the nonfactual case (world) in which [+p] is not the case. (Similarly, *if* in positive counterfactuals supposes the nonfactual case (world) in which P is the case – which accords with the factual implicature of positive *if*-counterfactuals that [+p] is not the case in the actual world.) It follows that the use of *if* . . . *not* in counterfactuals presents no

[35] It is noted in Declerck & Reed (forthcoming) that there are a few types of factual conditionals, e.g. those in which *if* is interchangeable with *whenever*. Needless to say, *except if* can be similarly used with a factual meaning. However, the cases in which this is possible are so special that we can disregard them in this article.

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problem because the supposed nonfactual world in which [+p] is denied may easily be a counterfactual world.

5 Conclusions

The following are the main conclusions we have arrived at in connection with *unless*: (a) The central (basic) meaning of '*unless* P' is 'in a case other than P'; in nonirrealis conditionals this meaning is also expressed by '*except if* P'. (b) When used in the sense of *except if*, an *unless*-clause logically entails the corresponding *if* ... *not*-clause; like *except if*, *unless* (in the 'except if' sense) can therefore normally be replaced by *if* ... *not* (except in imaginary conditionals – see below). (c) Because of the conditional perfection implicature, 'Q *unless* P' is normally interpreted as equivalent to 'Q except iff P'. (d) There is no 'except if' meaning in *if* ... *not*-clauses that are extraposed or otherwise express the idea 'Q results from "not P"' (the most common realization of which is 'The nonactualization of the [+p]-situation leads to the actualization of the Q-situation'); it follows that in such P-clauses, *if* ... *not* cannot be replaced by *except if* or *unless*. (e) In irrealis conditionals we must distinguish between counterfactual and imaginary *unless*-clauses; the former implicate a relationship (of difference) to the actual world, whereas the latter do not implicate a truth relationship to the actual world at all. (f) Out of context, the unmarked reading of irrealis conditionals, including irrealis *unless*-conditionals, is the counterfactual reading. (g) Imaginary readings for irrealis conditionals arise only in special contexts: they may be determined by the presence of an implicit or overt counterfactual *if*-clause or by other contextual information. (h) In the imaginary interpretation, *unless* can be replaced with *except if* but not normally with *if* ... *not*; this is because in irrealis conditionals, the default interpretation of *if* ... *not* is counterfactual, i.e. it expresses a negative condition ('"not P" results in Q') rather than an 'except if' meaning. (i) In a counterfactual conditional, *unless* is interpreted as 'if it hadn't been the case that ... ' and is therefore interchangeable with *if* ... *not*, but not with *except if*.

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