

WPFG

working papers in functional grammar

wpfg no. 30
April 1989

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1. Introduction: Syntax, semantics and interpretation. In this paper I am going to deal specifically with the way tense influences the interpretation of conditional sentences, particularly of the kind that is often called 'unreal' conditionals. However, on a more general level, this subject will be used as an example of how an instructional conception of semantics can throw light on the relationship between syntax and semantics on the one hand, and between (linguistic) semantics and interpretation on the other. With respect to syntax, the account will take its point of departure in the model based on the syntactic layers that has been discussed a great deal in Functional Grammar recently (cf Vet 1986, Hengeveld 1988a, 1988b, Rijkhoff 1988, Dik fc).

The nature and the place of semantics in a linguistic description is still a point on which no wide-reaching agreement has been reached. The only thing one can safely say is that a natural language sentence must be assigned a syntactic structure as well as some sort of interpretation procedure before the linguist has done his job. Where semantics begins and ends in this process is still majestically unclear. One problem is that syntactic structures, if they are to be at all adequate, must be saturated with semantics: you cannot set up any adequate theory of the way words and morphemes hang together without building on semantic relationships. Another problem is that on your way towards the ultimate interpretation of sentences it is necessary to go beyond the linguistic meaning and make use of contextual assumptions - and it is very difficult to specify at what point you cross the boundary between language and context; many would say that it was impossible.

The conception I am going to defend involves a basically sign-oriented approach, in which the distinction between expression (signifiant) and content (signifie) is fundamental. This means that also in syntax we can distinguish between a syntax on the expression level, which deals with the way in

1) I would like to thank Renate Bartsch, Niels Davidsen-Nielsen, Simon Dik, Kees Hengeveld and Jan Rijkhoff for helpful comments on an earlier version of this paper. Needless to say, they are not responsible for remaining errors in the presentation.

which relations between elements are signalled: constituent order, concord phenomena etc - and a syntax on the content level, which deals with the semantic relations between elements. Syntax in FG, including the type developed in the layered model is, of course, content syntax according to this conception, the way relations are signalled being covered by expression rules. In that way we can distinguish between syntax as the theory of relations and semantics as the theory of meaning and still have syntactic structures which organize meaning - simply because part of the theory of meaning must be a theory of how meanings or content elements (as I shall call them) cooperate in sentences. As a psychological correlate of the distinction between the two levels of syntax, it may be pointed out that a speaker must know both how to organize content elements into meaningful messages and how to organize expression elements into grammatical sentences.

But of course semantics involves more than relations between elements. Apart from the structural skeleton there must be an account of what elements go into the total meaning of a sentence, or sentences with the same structure would also have the same meaning. At one time it was thought that truth conditions would serve as a common denominator for linguistic content, but for a variety of reasons this is no longer generally accepted (for an illustration of the trend, compare e.g. Kempson 1975 and Kempson 1986). However, most conceptions of what the end product of semantic interpretation is can be seen as descriptions of what is the case when a certain type of linguistic form is used: a situation with various participants and elements, including the properties and relations holding.

Whatever theory one has, a level which accounts for the total implications of an utterance type, including relations to the world or context to which it applies, is obviously necessary. When it comes to complete interpretation, the account suggested below is based on a conception of interpretation in terms of mental models, cf Johnson-Laird (1983); Dik (1988) similarly proposes an interpretation in terms of what he calls mental 'pictures'. In addition, between the syntax and the complete interpretation most people would want an intermediate level of analysis, which constitutes the level of linguistic meaning, linguistic semantics proper, so to speak (on this issue, cf Travis 1986). The account below is based on a conception of

linguistic meanings as constituting directions for the building and use of mental models. The level of linguistic semantics, of that which is communicated solely by use of the linguistic conventions embodied in the particular language code one is using, is in the nature of instructions to the addressee specifying what symbolic operations he has to perform if he is to make sense of the expression elements used by the speaker. Such directions depend for their proper use on what is the case; but they do not directly express what is the case.

This idea is not new; words like 'instruction', 'blueprint' or 'cue' can be found scattered over the linguistic literature; one version is adopted in relevance theory, cf Sperber and Wilson (1986). The earliest systematic discussion I have seen is in Davies and Isard (1972), who raise the issue in a computational context. They discuss the idea that a point of reference, with respect to which something is interpreted, can be seen as changing as a result of the interpretation, i.e. the interpretation is seen as an operation that is performed on the point of reference. In following the instructions encoded in a program it is then necessary to distinguish between a first phase of realizing what the instructions implied, and a second phase of carrying them out. The first phase would correspond to the level of understanding the linguistic meaning which I described above, whereas the second would be the phase of 'running' the program.

The advantage I see in assuming an instructional linguistic semantics is that it permits a principled distinction between linguistic and contextual information, without implying that you can look at the complete interpretation and tell linguistic from contextual meaning. In order to make sense of the linguistic expression used by the speaker, the addressee has to carry out the symbolic instructions - and this he can only do if he uses his contextual information. Once the instructions are followed, the end product will be a result of both what is already there (the context) and what is added (the coded instructions), just as when you are adding components to the sauce. If you can still tell the ingredients apart afterwards, the attempt has failed, whether we are speaking of the sauce or the communication.

The relationship envisioned between linguistic semantics and complete interpretation is basically the same, if interpretation is conceived in logical terms instead of in terms of mental models. Linguistically identical sentences often give rise to

interpretations that are quite different from a logical point of view. The strategy of instructional semantics will then be to see how far we can reasonably get by assuming that the same instruction may be worked out in different ways, avoiding ambiguities multiplying beyond linguistic necessity. That an ambiguity can be avoided on the level of linguistic semantics does not, of course, make an analysis of ambiguities on the level of interpretation uninteresting; one result of keeping both levels in mind would be a theory of what the relationship is between coding and contextualisation.

If we look at the syntactic hierarchy proposed by Hengeveld in his series of papers, the instructional point of view will be fully compatible with his syntactic model, but will entail a revision in the way it is understood. For instance, Hengeveld talks about various orders of entities as being part of the syntactic hierarchy. If this were to be strictly true, it would mean that the syntactic hierarchy could be interpreted as standing for entities: an entity with certain properties would then be the meaning of the syntactic constituent in question.

This I think is not true. A fourth-order entity, for instance, is a speech act - and I think it is dead against the whole idea of speech acts to say that an utterance stands for a speech act. As Austin pointed out, an utterance is or brings about a speech act, it does not stand for or refer to the speech act in the way that the name Joe stands for Joe. This does not mean that the hierarchy is wrong, only that it needs to be interpreted in terms of instructions rather than in terms of representing or standing for things: At the level of speech acts, the illocution 'declarative' tells the addressee to understand the content as conveying a proposition whose truth the speaker commits himself to. If the addressee follows that instruction, something will have taken place between speaker and addressee, which can then be classified as a speech act: but the linguistic meaning is part of the process of bringing about the speech act - the linguistic expression does not 'stand for' the entity which is the product.

Linguistic semantics, dealing with conventional, coded meaning, is hence to be seen as mediating between two levels of description: the fully specified syntactic structures of sentences and the finished interpretations of the speakers who understand them. By insisting on this level in the descriptive

procedure, we may hope to make possible a more precise account of the interplay between language and context, as well as a semantic description that gets closer to linguistic structure.

2. Conditionals: the background. The semantics of conditionals has been discussed intensively by philosophers, with the emphasis mainly on epistemological properties: what kinds of beliefs are expressed by conditionals; what kinds of states of the world make them true? The basic point of departure in considering conditionals from a logical point of view is the material conditional with its truth table corresponding to non (p and non q). As generally recognized, there is no unproblematic fit between intuitions about conditional statements and cases that make the material conditional true (cf the discussion in Dik 1988). This, of course, motivates a search for more precise accounts of natural language conditionals; but if, as argued above, linguistic semantics is basically non-truth-conditional, it may be that the material implication is the best one can do to describe conditionals in terms of truth conditions. If we make explicit what a truth-conditional view implies by asking what situations "if p, then q" is compatible with, the best answer we can give may be that it is compatible with all situations except one in which we can get p without getting q.

Attempts to get closer to the (philosophical) semantics of conditionals have been made on the basis of the apparatus of modal logic (cf Lewis 1973, Stalnaker 1984). The key features of their accounts are ways of relating certain types of conditional statements to configurations of possible worlds, based on a notion of similarity between the actual world and the possible world in which the if-clause (=IC) is assumed to be true (Lewis 1973:77f, Stalnaker 1984:120f). Barwise (1986) offers an alternative based on situation semantics. Basically, these accounts deal with problems at the level of interpretation; although the degree of correspondence between the solutions offered and linguistic distinctions is discussed, this relationship is not the main focus of interest. Therefore, it would take us beyond the scope of this paper to go into a detailed discussion at this point.

In investigating conditionals with respect to the beliefs they may be used to express, there is one factor which makes it a very complicated subject - the fundamental context-

dependence of conditional statements. A recurrent motif (cf apart from Lewis and Stalnaker Kamp (1984), Barwise (1986) and Johnson-Laird (1986) is the emphasis on the need to define the precise place and nature of contextual factors, rather than make any attempt to remove them from the theoretical description. The difficulty can be seen as stemming from the fact that speaking conditionally is a way of playing around with our assumptions about the situation - therefore we cannot hold the situation constant while investigating the statement. In relation to this issue, which is common to the philosophical and the linguistic perspective, I shall make a few remarks on the approaches mentioned above, after I have stated my own position.

Johnson-Laird (1986) is also mainly interested in interpretation, but from the point of view of mental process. In arguing against Stalnaker's and Lewis's framework, his point is that an analysis in terms of possible worlds is "too big to fit immediately inside anyone's head" (1986:63); and Ramsay's basic idea that the way to evaluate a conditional is to add its antecedent to one's stock of beliefs, and then assess whether or not the consequent is true, is subject to similar criticism: "(people) do not have access to all their beliefs, and it might take hours for them to review even a relevant sample" (1986:65). Johnson-Laird's suggestion for interpretation involves two steps:

"Step 1. Construct a mental model based on the superficial linguistic representation of the antecedent and on those beliefs triggered during this process.

Step 2. Interpret the consequent in the context of the model and general knowledge." (1986:65)

Although centrally interested in mental process, Johnson-Laird emphasizes that his proposal should be seen as a contribution to "a unified and complete account of both competence and performance" (1986:55). He also points out that one element that is missing in his article is "a much more detailed and comprehensive account of the compositional semantics of conditionals." (1986:74). I would like to see what follows as a contribution towards this aspect of the theory of conditionals.

Dik (1988) is also basically compatible with Johnson-

Laird's approach, involving (as mentioned above) a semantics in terms of mental 'pictures'. Dik makes a basic distinction between the current picture which a speaker has and a hypothetical picture which he may create alongside his current picture. Apart from the speaker's picture we have the the addressee's picture as well as the 'general picture' which can play a role for the understanding of conditionals. A number of types of conditional statements are then described and analyzed in terms of different speaker, addressee and general pictures. In the last section below, some of these analyses will be discussed; but the main point in this paper is not about this level of analysis. The level at which we can compare the hypothetical, current and general pictures is the level of complete contextual interpretation, and the level I am interested in at this point is the level of the coded semantics of conditionals. The disagreement with Dik that I am voicing here concerns only the descriptive procedure which takes us directly from a syntactic representation to a semantic representation which also involves contextual information. As argued above, I think we need the instructional semantics to account for the interplay of code and context. In focusing on that aspect, as described, I hope to throw some light on the way in which we get from a linguistic expression falling under the category of conditional to mental interpretations of the kind suggested in Dik's paper.

Dik also makes some remarks about the level which I would call semantic; I quote (p.6) from the preliminary version

(1) We shall now interpret the conditional construction in general as a means through which the speaker S can create a "Hypothetical Picture" which differs in certain crucial ways from his current picture

and

(2) The protasis is a means for creating a hypothetical picture. It is an "entry condition" to a picture in which the apodosis is held to be true.

I think this is perfectly correct; and the word 'means' could easily be interpreted in instructional terms. But I think it is not very specific in its relationship with the compositional semantics of conditionals. It would work just as

well for the relationship between expressions like "suppose" or "let's assume" and the continuations in the subsequent sentence. In order to live up to the ideals of getting as close to linguistic structure as possible, I am therefore going to start by making some observations about the word "if", the prototypical indicator of hypothetical status in English.

3. The semantics and content syntax of 'if'. As a conjunction, 'if' may uncontroversially be assumed to have scope over the whole of the subclause it introduces and to indicate the relationship between subclause and matrix clause (=MC). Part of what is indicated by subordinating conjunctions, furthermore, must be the dependent status of the clause within its scope. These assumptions can hopefully be understood as part of the traditional lore about subclauses, which need no argumentation. Looking at this in terms of Hengeveld's layers, however, we can be a bit more precise. A clause is can be analyzed in terms of different layers, and we can therefore ask the question: at what point in the syntactic hierarchy of the clause does 'if' come in? What precise kind of syntactic object does it take within its scope?

In terms of Hengeveld's system, it is reasonably clear that 'if' takes a proposition rather than an illocution or a predication within its scope (as also assumed by Dik). It contains all the elements that are added below the level of propositions (up to tense, to which we shall return), but is not an independent illocution. However there is something interesting about the semantics of 'if' in relation to the illocutionary level. The proposition under the scope of 'if' can only be understood as describing a (hypothetical) fact, something that is assumed to be the case in a hypothetical world. That means that it cannot be combined with a proposition being used in the interrogative. But if that is so, 'if' blocks out the occurrence of a certain kind of illocution, which it ought not to be able to do if it belonged at a lower level than illocutions do. I think, therefore, that it would be worthwhile considering the semantics of subordinating conjunctions from the point of view that they assign the clauses in their scope something which takes the place of an independent illocution, but which is for that reason also syntactically at the same level - a sub-illocution, as it were.

In the case of the conditional conjunction, Ducrot (1972:167)

has suggested an analysis of French 'si' as marker of the speech act of 'supposing', discussing it in relation to the question of 'presupposing', which is the main concern of the book. This suggestion is criticized by Van der Auwera (1986) as merely a matter of inventing a new speech act term, a criticism which may be justified if the suggestion is seen as an isolated observation; speech act theory is in certain respects vulnerable to a charge of mixing up name-giving and explanation, cf also Harder (1978). But if the suggestion is made part of a semantic description which fits subordinating conjunctions into the (content) syntax of the language on the one hand, and into the possibilities of contextual interpretation on the other, it may serve as part of a systematic account of the interplay between language structure and communication.

Using the notion of illocution about something which cannot function as an independent speech act may give rise to a misunderstanding, namely that the semantic role of an IC is upgraded so as to be very like that of an independent clause. This, however, is not the intention. The account given here has only to do with the content syntax of 'if' within the context of the clause that it introduces, rather than in relation to the speech situation: in that position, it is claimed, 'if' takes the place of what might have been an independent illocution like 'declarative' or 'interrogative'. The distinction closely mirrors the syntactic distinction between dependent and independent clauses: they have a number of features in common, therefore we analyze both as clauses, but one type can function as an independent utterance, the other must be part of a superordinate clause and cannot be used on its own.

We can illustrate the similarity by imagining a pidgin-type English which allows the following two utterances:

(3) he come

(4) he come - I go

In (3) the proposition 'he come' is used, we can imagine, to make a statement, i.e. it is interpreted as a declarative. In (4) we could similarly imagine that 'he come' could be interpreted as a conditional (cp Haiman 1983), as a causal, or as a temporal subclause. In all four cases, what is missing in this Tarzan

English is an explicit, coded instruction as to what we are to do with the proposition 'he come' when we work out our interpretation. To support the claim that this position of 'if' in the content syntax is not entirely implausible from a linguistic point of view, it may be pointed out that in West Greenlandic there are no subordinating conjunctions; corresponding to 'if', instead, there is a conditional mood which stands in the same paradigm as the declarative and interrogative moods (cf. Kristoffersen *fc*).

Assuming that 'if' takes the place of the illocution and assigns the clause a sub-illocutionary function instead, what would that be? Dik, as quoted above, says that the protasis is a means to create a Hypothetical Picture - an 'entry condition' to a picture in which the apodosis is also true. In accordance with this, the IC and MC share the same (hypothetical) status in Dik's diagrams. I would like to reformulate this semantic information in a form that relates immediately to the compositional semantics of the conditional construction. The basic argument for reformulating Dik's description is that the hypothetical status which is rightly fundamental in Dik's account has much wider scope than 'if', which covers only the IC, the protasis. As also pointed out by Johnson-Laird (1986), linguistically there is absolutely nothing special about conditional MCs. They are in all respects like independent main clauses. He gives the example of a mother catching her offspring on the point of defying house rules, who says

(5a) I'll smack you.

This sentence is understood exactly as its more explicit counterpart

(5b) If you do that, I'll smack you

At this point the virtues of instructional semantics as a means of mediating between linguistic structures and full-fledged interpretations may begin to make themselves felt. The sub-illocutionary function assigned by 'if' can be understood as an instruction to understand the clause as a hypothetical basis for the further communication conveyed in the matrix clause. If we understand this as the semantic description of 'if', it will also

capture the difference in illocutionary status of IC and MC. In Dik's diagrams, as well as in all logical accounts, there is no difference in the status of IC and MC, p and q. They are both just propositions that we are playing around with. But if we look at the linguistic functions of IC and MC, there is the crucial difference that the speaker can never be made responsible for the truth or falsity of the IC - whereas he CAN be made responsible for what he says in the MC. This fits nicely with an account which says that 'if' gives the IC a special function, subordinate to the MC; that function blocks out ordinary illocutionary functions, among them the element of speaker commitment, which is obligatory in independent illocutions. We can sum this up as (6):

(6) The use of 'if' counts as an instruction to understand the proposition inside its scope as a hypothetical basis for the speaker's message in the MC.

This account explains why the MC can have the whole range of illocutionary choices and components, whereas the IC has only the restricted possibility described. On the other hand, one may ask why it is that ultimately the MC is just as hypothetical as the IC, if the MC linguistically is identical with a non-conditional MC. The question of how the content of a clause acquires its ontological status is interesting, because it is one of those areas where grammatical coding can either be present or absent. In the case of IC and MC, there is clearly grammatical coding involved, basically because the IC cannot stand alone - in order to be understood as grammatical it must be read as qualifying a main clause, standing in the grammatical relationship of satellite or adverbial to another clause. From this point of view there is nothing special about ICs: what they do to the MC can also be done by a prep phrase (I'll do it on my own terms - I'll do it if they accept my terms) or an adverb (I accept conditionally - I accept if some conditions are fulfilled). What the IC does to the MC is just a variant of any satellite expression unloading its meaning on the clause to which it is attached; talking in terms of scopes, the MC is within the scope of the content of the satellite, whether it is expressed as an IC or in different ways, just as the rest of the clause is within the scope of 'possibly' in 'possibly George made a mistake'.

However, in connection with (5), we saw that the hypothetical

status of an MC could also be purely pragmatic, because the context specified unambiguously under what conditions the MC would come into force. A possibility that may be said to be in between is explicit anaphoric reference, prototypically by means of 'then'. The word occupies a borderline position between grammatical and textual status; it may function in conditional MCs as a resumptive particle referring back to the condition stated in the MC (cf Dik 1986), or in independent MCs referring back to that part of the context which motivates the speech act communicated, compare (7) and (8)

(7) If you don't want to leave, then you can stay

(8) (I'm not sure I want to return) Then you can stay

All communication is in principle valid only if judged against the context in which it is made. If you want to refer specifically to one feature which is crucial in connection with the validity of your speech act, you can refer to it by 'then' if the context permits identification, or you can explicitly make your speech act conditional upon a specific circumstance stated in an IC - which has the particular advantage that it can get you far beyond the actual context, because you can build your own context which is full of assumptions that are not part of the actual assumed context.

What I hope to have shown here is that we can set up a description of 'if' that fits the linguistic facts, both with respect to semantic content and semantic scope, and thus can form part of a distributional account of linguistic elements - while (in virtue of its instructional content) pointing the way to interpretations in which we have a total mental model coupled with current contextual assumptions. If we let linguistic elements stand directly for models, I think this will not be possible; and therefore if we let syntactic structures and diagrams of mental models relate directly, it will not be possible to be precise about the role of coded meaning in interpretation.

4. The instructional semantics of tense - a summary. Working downwards from 'if' in the syntactic hierarchy, the next item we get to is the main area of interest in this context, tense. The

views on tense that this paper is based on are given in Harder (fc a, fc b); these I will briefly summarize before going on to deal with the additional complexities of tense in conditional sentences.

The broad area of tense distinctions includes three distinctions: past vs present, +/- future and +/- perfect. In the 'content syntax', they are hierarchically ordered, so that past/present has broadest scope, future comes second and perfect third, as summarised in (9):

(9) past/present (future (perfect (lexical verb)))

These scope relationships must be understood in relation to the semantics of each element in the system, i.e. in relation to the instructions conveyed by the four grammatical signs recognized in this system. The fact that past/present (which will be called primary tense) has broadest scope has to do with its status as a kind of determiner (cf Bartsch 1988, Rijkhoff 1988) in relation to the state of affairs (=SoA) inside its scope: it instructs the addressee to identify what is being talked about. To put it in another way: after having pieced together the descriptive content of the clause, the speaker asks the addressee to find out what is being described with this content; in doing so, primary tense changes the SoA in its scope into a proposition; the picture is so to speak used as a picture of something. Primary tense is thus essentially about where to locate the descriptive meaning, which means that it has a fundamentally modal element: it has to do with a choice of 'context' or 'world', to which the descriptive content is to be applied.

This, however, does not mean that time is irrelevant, cf below. However, the temporal element in the semantics of primary tense is subordinate to the fundamental modal element, the choice of 'context' or 'world'. The relationship between time and world of application can be compared with the date on a railway ticket: the fundamental question is whether the ticket is valid or not. If it is not valid and it is a genuine ticket, the obvious possibility is that it was valid for an earlier time. The present tense signals that an SoA is valid for the world of ongoing discourse, the past that it is meant to apply to a world or context that is distinct from the present.

The basic modal element, understanding tense as asking the

addressee to identify a domain of application rather than a time, explains some troublesome facts about tense usage. If the temporal address applied directly to the SoA instead of the world which the SoA was about, it would mean that tense indicated the extension of an SoA in time - which is patently untrue in the case of eternal truths; saying that these are valid for the present context makes much better sense. Similarly, if the job of primary tense was to locate SoAs on the time axis, it would mean that past tense would signal that the SoA could not be used to make a true statement about the present - which is also untrue; when you say 'Joe was friendly' you are not denying that he is friendly at the moment (cf the discussion in Harder fc a).

Time, then, plays a role in that it places the world to which the sentence is meant to apply on a time axis; past worlds are (prototypically) located at a point on the time axis previous to the deictic centre, which is the domain of application of present-tense sentences. We can summarise the semantic description suggested in (10) - (11):

(10) The use of the present tense counts as an instruction to identify WS, i.e. the world of discourse at the time S of speech, as the world to which the content inside its scope applies.

(11) The use of the past tense counts as an instruction to identify WP, (distinct from WS) as the world to which the content inside its scope applies, WP = the world of discourse at time P ($P < S$).

The future, which is second in line, must come inside the scope of either past or present. Its function can be stated briefly here:

(12) The use of the future counts as an instruction to understand the content inside its scope as applying to a time F ahead of the time identified (S or P).

This account implies that the choice of present remains in force when we choose future; what is valid for the world at S is the futurity, while the rest of the content, being inside the scope of future, is postponed. Seen in relation to the 'naked' SoA this

introduces a distinction between the current stage of the world in question and the posterior stage; sentences in the simple tenses locate their SoAs at the current stage, while sentences with a secondary choice of the future locate their SoAs at a posterior stage.

At this point the question of the difference between the future and the past as alternatives to the simple present deserves to be considered. Why is a statement in the future to be understood as valid for the world at time S, while a statement in the past is not? The answer must be sought in the basic experiential character of past as opposed to future time. To return to the metaphor of the railway ticket: a ticket whose date marks it as valid for today and one which is valid for tomorrow have one thing in common - they have a market value because they affect the options we have now. A railway ticket whose date marks it as valid for yesterday is of historical interest only.

Another general question is the grammatical status of the future. Arguments for separating 'will' from the rest of the modal verbs and calling it 'future' can be found in Davidsen-Nielsen (1988); in this context the crucial feature is that 'will' in its future sense yields a categorical commitment on the part of the speaker, whereas all the other modals merely say that there is a more or less strong case for the occurrence of the SoA (cf Perkins 1983); hence, in its future sense, 'will' is stronger even than the 'must' of necessity, which is the strongest stage of modality. The fact that it is part of the modal paradigm fits in with the fact that it shares the element of distance from the current facts; but the kind of distance expressed by the future 'will' is subtly different from that of the other modals.

The perfect, which both cross-linguistically and in relation to the literature is a very complicated case, can only be dealt with in a very rough-and-ready manner here. Originally derived from the possessive 'have', its meaning has been weakened to the point of indicating nothing but anteriority of what is inside its scope, except for the problematic notion of 'current relevance' (cf e.g. Comrie 1976). I have suggested (Harder *loc. cit.*) that the current relevance might be explained if we assume that the existence of this anterior SoA is to be understood as a description of the later point of reference - unless there is some relevance, this instruction does not make sense. In other words, where the future is a matter of lying ahead in time only,

the anteriority of the perfect is slightly more complex, to be understood in terms of the metaphor of the balance sheet: a business sums up what is true about the previous period, not as a description of the past, but as a way to find out its position at the point of observation. This semantic element can be regarded as what is left of the notion of 'possession': the current stage can be seen as 'possessing' SoAs at the anterior stage.

The difficulty of fleshing out the elusive notion of current relevance can be understood in relation to the basic experiential character of this way of looking at the past: the mere fact of having an experience behind you is of some potential importance for your present, but to pinpoint wherein the importance lies may be impossible. The perfect is the grammaticalization of this distinction between coming across a state of affairs and having it behind you.

This account of the perfect may be summarized as (13):

(13) The use of the perfect counts as an instruction to understand the content inside its scope as applying to a stage anterior to the stage of time T ($T = S, P$ or F), while understanding the anterior location (the "being-anterior") of this content as a property of the stage at time T.

5. Tense in conditionals. The first thing that must be said about tense in conditionals is that in some types of conditionals everything is completely normal. In inferential conditionals, for instance, all tense forms are possible and combinable, and they have their usual meanings (cf Dancygier 1988 for a discussion of this point).

While this sounds as if it might be the most natural thing in the world, it is worth stopping a moment to consider what context the 'normal' tense meanings are actually operating in, when we are talking about conditionals. As opposed to statements and questions, conditional clauses are, in virtue of the meaning of 'if', removed from any claim about what is actually true. If natural language conditionals were only about the relationship between propositions in a timeless logical universe, tense would have no part to play in them: we could then look at the properties of the propositions p and q without worrying about what 'world', i.e. what situation or context they belonged in. In the case of conditionals this would not be entirely implausible

in one sense, since in using conditionals we ask each other to imagine situations different from the actual situation anyway. The fact that tense does operate in conditionals, however, is a linguistic indication that even when we think hypothetically we still understand sentences by plugging them into our world of understanding at appropriate points.

In the case of conditionals with normal tense usage, tense therefore does the job outlined above: present-tense ICs ask the addressee to understand the IC as a hypothetical assumption about the situation in the context of speech, i.e. he is to add the IC to his set of assumptions about the world of ongoing discourse and understand the MC as based upon the set of assumptions that he gets by this addition. In the case of the normal temporal past, the addressee is instructed to identify the past situation being referred to and add the IC as a hypothetical assumption about that situation. We can thus see tense as guiding Johnson-Laird's "step 1", directing the process of "triggering beliefs" that is involved in interpreting the antecedent. With tense as part of the instruction, the addressee is helped to focus on the relevant part of his beliefs.

Im am going to be mainly interested in one of the two types of conditionals that both philosophical and linguistic treatments usually set up, the unreal conditional (hypothetical, subjunctive, closed, counterfactual, rejected, non-actual or marked) as opposed to the real (indicative, open, factual, neutral). As an account of tense usage in unreal conditionals presupposes a basis of comparison, however, I shall begin by introducing an important type of real conditional, namely the type that Palmer calls 'predictive conditional', and which he thinks may be the only true conditional (1974:142). The example he gives is (14):

(14) If it rains, the match will be cancelled

As Palmer says, the characteristic feature is that such conditionals express that if one event takes place, another will follow. Conditionals of this kind, Palmer says, can occur in two other versions, which he calls unreal present (15) and unreal past (16):

(15) If it rained, the match would be cancelled

(16) If it had rained, the match would have been cancelled

The generally accepted view (cf apart from Palmer Leech 1971 and Quirk et al. 1985) is that in the IC of (15) we have an unreal past tense which is not about real past time but says what might happen in the present. In the IC of (16) we have a past perfect which is a combination of the real past and the unreal past, expressed by the backshift to past perfect. In the MCs the unreal status is indicated by 'would', and, in (16), also by 'have'.

This account, which may be considered standard, is plausible enough in many respects. The reason I think it is wrong have to do with two factors. First, there is the instructional view of meaning: Palmer accounts for tense meaning in terms of what is typically the case when they are used, rather than in terms of the job done by the content elements. Secondly, and related to this, the account is extremely messy in relation to linguistic elements. Unreality may be signalled both by past tense (the IC of (15), by the perfect (the non-temporal backshift in (16)) and by 'would' (the MCs of (15) and (16)).

What I hope to do is to show that the linguistic system, far from being messy, can be seen as very closely related to the ordinary temporal use of tense forms. This strategy of understanding non-temporal uses of tense forms as generalisations of the temporal uses has been applied by Co Vet (1983) to a number of uses of past, perfect and future; and this is what I propose to carry over to the analysis of conditionals. That the past tense can have unreal meaning is common knowledge. What I hope to add to this, is first, an account of the precise relationship between temporal and unreal past, and secondly an understanding of how the future and perfect work in connection with the unreal past; I shall argue that the unreal past provides a context in which both future and perfect may (but need not) have non-temporal meanings. In the process I shall try to show how the semantic system is basically preserved, apart from some generalisations from temporal relations to non-temporal relations that are useful in the context of hypothetical communication.

6. The non-temporal past. In (15), as generally recognized, we have a past tense which does not require identification of a past context, to which the assumption is to be added. Instead, the IC

is to be located in an imagined situation, where our actual assumptions need no longer hold. The word 'need' is important, because it is often assumed that in unreal conditionals it is the descriptive content of the clause which is unreal, i.e. untrue (cf Quirk et al p. 188). However, just as in the temporal uses of the tense system, primary tense does not directly concern the descriptive content - it concerns the world, the location at which the addressee is to place it. That means it is the world of which we are speaking that is unreal, and that again means that the status of the descriptive content vis-a-vis the real world is not indicated. This is the 'unreal' equivalent of the fact that the temporal past does not say whether the proposition applies to the world at present or not.

It has often been noticed that the past, apart from its temporal use, has other uses, and that a common denominator for the past tense might therefore be the 'remote' tense, cf Lyons (1977:809f), who also regards tense as "a kind of modality" (p.820). Herslund (1988) has recently suggested that the non-temporal use of the tense system might be considered more basic than the temporal use. As I have argued, I think the tenses are basically modal in that they have to do with worlds where propositions belong rather than the temporal location of SoAs. Whether the non-temporal interpretation of past tense is basic or not is difficult to say; against this it may be said that the possibilities of occurrence of the non-temporal past are more restricted than the temporal one, and somebody making a statement in the past tense would normally be held responsible for the truth of his statement without the option of claiming that it was merely a hypothesis he was considering.

What I think is true about the modal character of the past is therefore that the semantics of the unreal past is very closely related to the temporal past, and that we can get to the non-temporal meaning merely by relaxing a condition in (11), while keeping all the rest: instead of saying that the world WP must be located at a temporally previous point, we can set up a second option for WP, locating it outside the world of space and time altogether, cf (17):

(17) The use of the past tense counts as an instruction to identify WP (distinct from WS) as the world to which the content inside its scope applies, WP = either (a) the world of discourse at time P, $P < S$ or (b) = an imagined world whose location (outside space and time) is defined in relation to a hypothesis created as part of the ongoing discourse.

The proposal argued here involves a claim that the category of unreal conditionals are, linguistically speaking, simply those involving the use of the unreal past. Other properties may be added, e.g. by the perfect; but the defining characteristics of unreal conditionals, cf below, derive solely from the non-temporal meaning of the past.

7. The non-temporal future. The modification of the semantics of future and perfect in conditionals will, as in the case of the past tense above, aim to preserve the essential features while suspending the element of temporal sequence. In the case of the future and perfect, the semantics have essentially to do with posterior and anterior stages of the world identified at the stage of primary tense. How can the notions 'posterior' and 'anterior' be preserved if we take away temporal sequence?

The basic principle is that hypothetical communication consists of stages that are not necessarily temporally related: instead, we move from one stage to the next via the assumptions we make. Moving from one stage to the next may also entail a movement in time, and the movement in time may simultaneously be a move from one stage of a causal chain to the next - but it may also simply be a move in terms of assumptions, where an assumption we make gets us to the next stage, regardless of temporal and causal sequence.

To see what the relationship is between the non-temporal future and the ordinary future in conditionals, we shall begin by looking at some aspects of the use of the ordinary temporal future in conditionals. It is often said that the ordinary future is replaced by the simple present in conditionals, unless certain exceptional circumstances are present (more of this below). A case in point would be (14), where the hypothetical fulfilment of the IC is posterior in relation to S, but the simple present is used nevertheless. Wekker (1976) suggested an explanation for this, in that he suggested that tense in the subordinate clause

is dependent on the future of the MC. I think that is unlikely, because the simple present can be used even in cases when there is no MC future to borrow, cf (18)

(18) Try the operation. If he survives, he survives - if he dies, we couldn't have done more anyway.

What I think is going on has to do with the special semantic context defined by the 'if', which gives the content its particular conditional status. Adding an assumption about the world at the moment of speech means that you modify the picture you have of the actual situation. The change effected may either be a change in assumptions or a change in facts. If it is a change in facts, it can only occur in time, which is the reason why grammarians would expect the future tense. But whether it occurs in time or not is immaterial to the combined function of 'if' and present tense, which is to add a hypothetical assumption to the actual situation to see what follows.

If this is what is going on, it enables us to be precise about the function of the normal temporal future as it functions in the MC: it indicates that the MC is posterior in time to a present that includes the assumption of the IC. To paraphrase: a present situation that includes the IC has a future that includes the MC ahead of it (cp Vet 1984 on 'anaphoric' tenses). It also makes possible a more semantically transparent account of those ICs which do contain the future: instead of saying that the future is used, if the temporal relationship between IC and MC is reversed, as in (19)

(19) If he will be left destitute, I'll change my will

we can say that 'will' is used in such cases, because the prediction of the MC is posterior not to a present where the assumption of the IC is currently true, but to a present where the assumption is still ahead. In other words, the future form of the IC has exactly its usual semantic function: it indicates that the hypothetical assumption which the addressee is asked to make is about a posterior stage (being destitute eventually) rather than the current stage, as opposed to the case in (20)

(20) If he is left destitute, I'll change my will

where the prediction comes into force only when the destitution is a current fact, whereas (19) indicates that for the MC to be valid it is only required that the destitution is posterior (cf Palmer 1974: 149). This description, which is consistent with the nine types of 'pure future' ICs in Declerck (1984), is also in harmony with the view expressed in Leech (1971:60) that ICs in the simple present express "a fact that is taken as given" and with the view of Haegeman and Wekker (1984:51) that the present tense in ICs is used "only for future events which are conceived of as present facts". Where Haegeman and Wekker account for this interpretation by introducing a distinction between central and peripheral conditional clauses, the present suggestion enables us to see the semantics of tense in English as wholly compositional on this point: ICs in the future add something to our assumptions about the posterior stage, ICs in the simple present adds something to the current stage (for a detailed discussion of this issue, involving a similar analysis, see Nieuwint 1986).

In many other languages, however, there is not a free compositional choice between simple and future forms in ICs. The reason for this is presumably that if you are thinking hypothetically, by far the most obvious thing to do is to think in terms of conditions which are currently true in the imagined situation - thinking in terms of the posterior truth of the condition gives an extra dimension of non-actuality, which makes the conditional situation much more complicated. Whether this is the reason or not, about 99 % of conditionals in English are about 'current' hypotheses (Declerck 1984:279); and in view of that it is not surprising that this is often the only option allowed, which may in principle be coded either by the simple form or by the future form (as in West Greenlandic (Lars Kristoffersen, p.c.)). If only 'current' hypotheses are allowed, the future can get the special function of marking a higher degree of uncertainty, cf Salone (1983) on Swahili.

In order to illustrate the importance of temporal posteriority in the future as used in conditional MCs, we can look at two types of conditionals which involve present states, and which therefore do not reflect the pattern of one event leading to another, as described above, cf (21)-(22):

(21) If today is Thursday, he'll be here tomorrow

(22) If today is Friday, he is here already

In (21) an assumption about the world as it is already makes possible the statement contained in the MC. Since the statement will only become true at a posterior stage, the future form is used. In (22), the statement in the MC makes a claim about what is true already, therefore the present is used.

Since (21) - as opposed to (22) - is as much a prediction as (14), Palmer's name is potentially misleading; instead, I shall refer to conditionals in which one event is said to lead to another as 'trigger' conditionals. The idea of a trigger is related to causation, but is more restricted, because the trigger is only the last in a series of events which causes the gun to go off - just as the hypothesised event in a conditional is understood to be (in the assumed context) the only thing which is needed for an event to occur, whatever the deeper causes may be.

In the trigger conditionals, there is both a causal, a temporal, and an assumptional chain. In predictions from assumptions about a present state there need be only a temporal and an assumptional chain; but the temporal relationship is sufficient for the future form. When we use an unreal past, the assumptional chain is enough. As also underlined by Palmer, an unreal past in the IC requires a modal verb in the MC, as in

(23) If today was Friday, he would (could, ought to, might, should) be here already

Again, what makes 'would' qualify for special treatment among the modals is its semantic role as indicator of categorical commitment. Where the other modals merely indicate the presence of a stronger or weaker case for the proposition becoming true, ranging from possibility via probability to necessity, 'would' says without any qualification that the proposition will become true at the posterior stage. The word posterior in the non-temporal context indicates that in an imagined world where the IC is true, the truth of the MC follows (categorically) at the next stage. The form 'would', analysed as the non-temporal past form of the non-temporal future 'will', announces that the content inside its scope is something that follows from an unreal conditional assumption. The amended account of the future can be stated as (24)

(24) The use of the future counts as an instruction to understand the content inside its scope as applying to a stage F posterior to the point of identification (S or P), either (a) by applying to the stage which is temporally ahead, or (b) - in the context of the non-temporal past - to the following stage of assumption.

A possible objection against the notion of an assumptional chain being marked by "will" is that this is redundant in the case of a condition, because 'if' as analysed above already indicates that the IC is a means to get to the next stage of assumptions. To this may be said that the redundancy is not total: the condition may not make possible a categorical conclusion, which means that one of the other modals would be used, just as a modal could be used in a real conditional, if the speaker did not feel confident enough to make a categorical statement about the temporal future, as in

(25) If it rains, the match may be cancelled

A context in which the redundancy between the meaning of 'if' and the non-temporal future disappears altogether is in MCs without an explicit conditional, as in (26)

(26) George would be against it

The condition under which George would be against it is not expressed, but 'would' signals the same thing: that the SoA of (25) occurs categorically as the next stage once you make a certain assumption - exactly as

(27) George will be against it

indicates that the SoA follows categorically in the next temporal stage. This means that the peculiarity that distinguishes the future 'will' is carried over to the non-temporal uses. Another argument for considering the two uses to be closely related can be suggested if we look at the use of the temporal as well as the non-temporal future in Danish. As described in Davidsen-Nielsen (1985), the Danish auxiliary 'ville' (cognate with English

'will') is used less than its English counterpart; in fact, one might argue that it is always optional to mark posteriority, disambiguation being left to context. This optional character applies in exactly the same manner to non-temporal uses of the future, strongly suggesting that the two uses are related in terms of linguistic structure. The account I have suggested may be regarded as one way in which one can "have one's cake and eat it" (cf Dahl 1985:67) by viewing conditional uses of the future as manifesting both the future and special 'conditional' features.

8. The perfect. In order to understand the function of the perfect in conditional sentences in the present framework, it will be useful to return briefly to the essential aspects of the semantics of the perfect in 'normal' sentences. As described above, the perfect is a means to distinguish between an anterior stage of affairs (at which the SoA occurs) and a current stage of affairs (which we are describing in the light of what has occurred at the anterior stage). The metaphor of the balance sheet, of taking stock was suggested as a way of visualizing the semantics of the perfect: we see where we are by looking at what has happened in the previous period.

Anterior events, regarded as a property of the current stage, assume the character of states, even if in non-perfect forms they can only denote events (cf Bartsch 1988, Hengeveld 1988a). From the position of hindsight associated with the perfect the notion of an event happening to you is turned into the state of having an event behind you. The property of denoting states means that the 'trigger' relationship between IC and MC cannot very well be combined with the perfect. Consider (28)-(30):

(28) If it rains, the street will get wet

(29) If it rained, the street would get wet

(30) If it has rained...?

Both the simple tenses allow the interpretation of adding a new SoA to the situation we are talking about, triggering a further change in that situation at the next stage. But in the perfect form, the anteriority is in conflict with the trigger effect,

because the trigger has already been pulled at the previous stage. A trigger which has already been pulled does not necessarily take us to the next temporal stage of affairs, because the effects may already be with us, cf (31):

(31) If it has rained, (then) the street has got wet

Because the effects are already here, the future cannot be used; this is the same effect that we saw in example (22):

(22) If today is Friday, he is here already

This function of states (ordinary or perfect) in conditionals is related to the familiar difference in narrative contexts, where states as opposed to events do not move the action forward, unless special factors dictate it (cf also Vet 1986 on 'imparfait' vs 'passe simple').

Since this whole account is fundamentally based on a compositional analysis of the semantics of tense forms, in considering the use of the perfect in non-temporal conditionals, we can start by considering how far we can get by assuming that the perfect has its usual temporal meaning, and the non-temporal meaning is a property only of the non-temporal past, which by now we know so well. If we replace the present with the non-temporal past in (31), we get

(32) If it had rained, the street would have got wet

The appearance of a modal in the MC, as we recall, is inevitable in the context of the non-temporal past; and 'would', as described, signals that the MC is a categorical consequence of assuming the IC.

The predictions made by the analysis suggested here are as follows: The non-temporal past says that what we are describing is an imaginary world; the perfect, as summarized above, says that at the stage we are at (i.e. our current position in the imaginary world) we have a stage behind us where the SoA occurred. So when combined with the (temporal) perfect, the non-temporal past does not take us to a point where an SoA occurs, but to the stage after an SoA has occurred. In the case of (32) above, the IC asks the addressee to imagine (as the basis for

further communication) a position in which the anterior stage of affairs included rain. Just as in the temporal past, the addressee is instructed to understand the content as being about a world at a certain point, which is not identical to the point of speech; and just as in the temporal past perfect, the point which the content is about has an anterior stage behind it, where the SoA occurred.

In this analysis the notion of temporal pastness is conspicuously absent from the semantic instruction assumed for the past perfect in cases like (32). How can we account for the prototypical use of past perfect to talk about counterfactual versions of past events, if we leave that out of the semantics?

As described by Dik (1988:7), the point of making hypotheses is basically to consider alternatives to the way things are or seem to be. If we want to consider alternatives to past events, the present account suggests that we code them as alternative versions of 'what-we-have-behind-us': we look at them not by imagining ourselves as being at the point where they occur, but by imagining ourselves as looking back on a different anterior stage than the one we are actually looking back on.

In this way we maintain (even in imagination) our position of hindsight. By doing so, we are actually considering an alternative to our present position, rather than an alternative past state. The fascination of 'subjunctive history' ('What if Hitler had not invaded Russia in 1941?') lies in thinking about where we would then be. This is the reason why the perfect is a suitable medium for counterfactual reasoning, cf below: looking at the present as shaped by what has gone before (cf the description of the perfect above), it is only natural to take the further step of considering what the present would have been like if something else had gone before - going from actual to subjunctive stocktaking, as it were.

If this is the semantics of the IC, it remains to consider the semantics of the MC. We saw above that perfect ICs could not obviously be seen as introducing trigger effects. This, however, does not mean that we necessarily stay at the anterior stage in the MC (as we did in the rain example). Assumed states may have posterior effects, as in

- (33) If it has rained, the desert will bloom
(with thanks to Johnson-Laird)

In this example, we are making an assumption about what is true at the current stage (rain has fallen at the anterior stage), and use it to predict what will happen at the posterior stage. Transformed into the non-temporal past, it would be

(34) If it had rained, the desert would bloom

In the IC, as we saw, we imagine ourselves at a point where we had rain behind us; the MC represents the stage after that (in the imaginary world we are describing). But the cases that are most often discussed are those where the MC is in the past future perfect, corresponding to (32). The perfect (would have got wet) signals that the SoA belongs at a stage anterior to the current one. In the MC, it must be remembered, we have moved at stage forward in relation to the IC; but at the stage we have advanced to, the SoA of the MC is now seen as anterior. In relation to the rain example, the MC with the perfect added takes us to an assumptional stage where the street getting wet is anterior.

This view gives MCs with the perfect added, as in (32), a special communicative potential. If we assume that (32) is true, and we would like to know whether it has in fact rained, we need only to check whether the SoA of the main clause (the street getting wet) is already behind us - otherwise the IC could not be true. This possibility of immediate falsification does not exist with MCs in the past future. One may assert (34) at a time when there is no flower in sight, and the IC may still be true, because the rain has not had time to generate flowers yet; this possibility may be made explicit by a time adverb, as in

(35) If it had rained, the desert would bloom within a week

which does not make its antecedent obviously false. The special 'counterfactual' flavour of MCs in the past future perfect is due to the element of 'looking back' associated with the perfect. The quality of permitting instant falsification suggests an obvious communicative use: showing the impossibility of assumptions whose truth value is of interest (*reductio-ad-absurdum*). If you can find a way to locate an assumption as something which leads to an MC in the past future perfect, which contrasts obviously with the actual state of things, the IC cannot be actually true, cf 'If he had arrived, we would have heard'.

Just as ICs in the past perfect do not necessarily lead to MCs in the past future perfect, we can have MCs in the past future perfect after ICs in the (simple) non-temporal past:

(36) If you knew him, you wouldn't have said that

The IC takes us to a point where it is currently true that A knows B, and from that we get to a stage where the sending of the letter did not occur at an anterior stage: a person who knows B can't have such an utterance behind him.

It remains to look at those cases where there is no temporal distance between the SoA and the current stage - those cases which are mentioned by Schibsbye (1966), in which the past perfect is used to talk about unreal states in the present, as in

(37) If I had been in better health, I should have joined you

Since it is not plausible to assume that the speaker imagines himself as looking back on a time when he was in better health, concluding that at that anterior stage he would have joined the others (who are going away now), we have to find a way to explain what is going on.

What I shall suggest is basically the same solution as in the other conditional tenses, i.e. that in the conditional context the element of temporal distance may be suspended from the semantics of the tense distinctions, preserving the other aspects of their meaning. What we described above as the central element of the perfect was the separation between the occurrence of the SoA and the current stage of the world we are talking about; the SoA did not occur at the point where we imagined ourselves to be. This made possible the stocktaking operation, seeing where we are as a function of what took place at the anterior stage. This element of 'subjunctive' stocktaking is also obvious in the examples we've been through: we imagine ourselves in a position where we have a certain SoA behind us in order to see where we would then be.

Essentially the same semantic effect can be obtained if we return to the notion of stages of assumption as an alternative to temporal stages. Just as the posterior stage can be the stage where we are going with respect to assumptions (signalled by 'would'), the anterior stage can be a stage we have behind us

(signalled by 'had'), talking in terms of the assumptions we are making.

It is important to maintain a distinction between the stage being anterior and the assumptions being anterior. When we locate an assumption at the anterior stage, all that is meant is that it is thought of as no longer current - we do not actually say that it is false (just as a sentence in the temporal perfect locates an SoA as occurring earlier, without saying anything about what occurs at the current stage). This can be illustrated by a fictional context to (37):

A convalescent would like to join an outing. A month before the event he can say

(38) If I am in better health (than now), I shall join you

In dark hours, he may prefer to talk of an imagined world:

(39) If I was/were in better health, I should join you

The day before, he has a health check, and recovery is proceeding very slowly, therefore he says (37)

(37) If I had been in better health, I should have joined you

The stage at which the idea of being in better health belongs is something he puts behind him. In a stage of assumptions where IC was true, MC would follow; but it is not only unreal, it is all over and done with, assumptionally speaking. Even in the unreal world (announced by the unreal past) the speaker puts himself in a position where the alternative belongs at a no longer current stage of proceedings. The effect is the usual one of subjunctive stocktaking: where would I be, if the anterior stage had been different? The only difference is that the anteriority is not temporal, but only a matter of the point of view chosen by the speaker.

If this account appears suspiciously abstruse, notice that there is very little difference between temporal and assumptional anteriority in the hypothetical context we are talking about. In both cases we are at an imagined current stage, and in both cases we are considering what an IC would lead to in a stage that is behind us, taking stock of where we would be under alternative

assumptions about the anterior stage. In fact we could also choose to regard (37) as an odd variant of the temporal use of the perfect. In that case the current phase, from which we are viewing events, must correspond to a future point in relation to the world of discourse - but since we are putting ourselves in an imagined situation anyway, in principle we can locate ourselves where we want to in relation to ongoing events. The man who says (37) would then be imagining himself in a position where the going had already taken place, and saying that a better health at the anterior point of leaving would imply his joining the outing at the same anterior stage. Whether it seems most plausible to maintain temporal distance or talking in terms of the point of view of the speaker ('putting' instead of 'having' something behind him) is a matter of taste - in either case the central semantics of perfect, that of taking stock after the stage of the SoA, is maintained. This description can be summed up as (40):

(40) The use of the perfect counts as an instruction to understand the content inside its scope as applying to a stage anterior to the stage of time T ($T = S, P$ or F), while understanding the anterior location of this content as a property of the stage at time T; 'anterior' is to be understood (a) as anterior in time or (b) as belonging to a stage of assumptions that is no longer current in terms of ongoing discourse.

9. Instructions and interpretations. Without going into a detailed investigation, I would like to say a few things about the relationship between the instructions I have tried to argue for here and the interpretations that Dik has suggested in his paper. Beginning with 'if', cf (6), the addressee is instructed to understand the IC as hypothetical; and if he follows that instruction he will create a mental model involving a hypothetical picture of the kind Dik envisages; and in that hypothetical picture the IC is true and thus brings about the commitment of the speaker to the MC speech act. In the case of declaratives, which are the ones Dik deals with, it brings about the speaker's commitment to the truth of the MC. The commitment is not a descriptive element, so that cannot form part of the picture itself: what it does is that it charges the picture with the two propositions to the speaker's account in the mind of the

addressee.

To this tense adds something which is not explicitly mentioned as part of Dik's mental pictures. The present instructs the addressee to understand the IC as being a hypothesis about the world of ongoing discourse. In other words, it locates the hypothetical picture as an extension of a particular current picture, that of the speech situation. Similarly in cases with the temporal past we add the hypothesis to our already existing current picture of the past situation referred to; for unreal conditionals, cf below.

To give us an accurate account of the mental model which the addressee must produce in order to make sense of a conditional statement, the hypothetical picture should therefore be represented as attached to a current picture of the world either at the time of speech or at the past time referred to. To see what difference this would make in the relationship between Dik's current and hypothetical pictures we can look at one of the observations made by Dik in relation to the truth value of the IC in the current picture.

In the basic notion of hypothetical thinking lies that the content of a hypothesis cannot already be true in the current picture. If this was the case, considering the hypothesis would not get us anywhere: adding the IC yields no more than what we already had in our current picture. What is left is that the IC may be undetermined or false in the current picture. With the contribution of tense, however, we can get a stage further. In real conditionals, with the present tense or the temporal past, the IC cannot be incompatible with the current picture, either, because then we could not rationally add it to our existing current picture (as tense instructs us to do). This Gricean mechanism is responsible for the communicative point in making a distinction between real and unreal conditionals: the meaningfulness of adding IC to current pictures presupposes that they are compatible with them.

As always, of course, Gricean maxims can be flouted, and then we get some of the interesting cases that Dik deals with: the semi-factive (cf 41), ex absurdo (cf 42) and sarcastic (cf 43) conditionals:

(41) A: It's raining. B: If it's raining, let's not go to the park.

(42) If you're the Pope, I'm the empress of China

(43) If Amsterdam is in Belgium, we're still in Belgium

The basic mechanism is that we must create a picture in relation to which the IC is not either redundant or incompatible; and thus we need the extra layers of pictures, where the speaker's picture, the addressee's picture, and the general picture have to be kept distinct in order for the hypothesis to make sense. The mechanism can be illustrated with the semi-factive conditional in (41). Here the assumption in B's IC has already been introduced by A, yet B signals that it is to be understood as a hypothetical assumption. This cannot make sense if the current picture is taken to be one in which the assumption is established; therefore the interpreter has to work out an interpretation in which the notion 'current picture' becomes problematic: although A has tried to make the rain part of the current picture, B refuses to consider it as an established part of his assumptions.

The general moral of this is that via the instructions and the Gricean requirements for them to make sense, the addressee is forced to produce a series of pictures or sub-models in which he locates assumptions about truth or falsity of propositions - and this gets us part of the way to the pictures that Dik has described. Some of the pictures, however, are purely a matter of circumstances, such as in the case of the biconditionals, cf (44)

(44) If you cross that bridge you will die

As pointed out by Dik we get the biconditional if it is part of the current picture that the addressee is not going to die soon anyway. In this case, there is no Gricean mechanism involved which leads the addressee to produce pictures in order to make sense of the conditional: it is only a matter of circumstances giving certain conditionals a particular force.

In the case of the unreal conditionals, the non-temporal past - by locating the assumption in an unreal world - permits the IC to be incompatible with our current picture. It might be asked whether the unreal world, since it need not conform to the standards obtaining in the current picture, is characterized in any way except by the IC. But in fact the interpretation of the

unreal past also works by a process that draws on the current picture. The difference is that when you add the IC to the current picture, you adjust those assumptions that jar against the IC (since the whole point is to imagine a situation in which the IC is true, any potential conflict is resolved in favour of the IC). Again, this feature of tense guides the process of triggering beliefs described by Johnson-Laird. In real conditionals, you are required to stick to current assumptions; the unreal past lifts this restriction. The difference might be expressed by saying that real conditionals instruct the addressee to imagine the IC being true ceteris paribus, whereas the unreal conditionals instruct him to imagine them as true mutatis mutandis.

In talking about the possibility of ICs being incompatible with the current picture, it should be emphasized, however, that the unreal past only permits this possibility, it does not dictate it. This is well-known in the case of the unreal (simple) past, where counterfactual and potential interpretations are equally likely in many cases, and it is clearly the question of compatibility with the context that dictates which is the actual interpretation. The notions of 'lowerbound' and 'upperbound' possibility (V.d. Auwera 1983) can be understood in the light of the view that it is the world rather than the SoA that is unreal: locating a SoA in an unreal world is only necessary when there is a risk of conflict with our assumptions about the actual world (hence unreal conditionals express lowerbound possibility); locating a SoA in our actual world is only possible when there is no risk of conflict (hence real conditionals express upperbound possibility).

The unreal past perfect, as we have seen, takes us to an imagined point where we are looking back on the stage where the proposition is located. Therefore the counterfactual interpretation is almost always the only likely one. What has taken place at an anterior stage is naturally assumed to have the status of something established and unchangeable - it is only in Orwell's "1984" that you expect history to be rewritten continually. Therefore, if we are instructed to look back on something different from what we actually have behind us, we are less ready to assume that this might in fact be the case than if we are asked to imagine a current or posterior situation which diverges from our actual assumptions. But even there

counterfactuality is not obligatory, as pointed out by Comrie (1986), cf (45):

(45) If the butler had done it, we would have found just the clues that we did in fact find

This might be uttered as an argument suggesting that he was in fact the culprit. It would be interesting if one could find an explanation for why we are asked to imagine an alternative situation, when it might be the actual situation that we are talking about. In the intricate case here, the speaker is using the unreal past perfect in exactly the opposite way than the one suggested above (in which it was used to show the absurdity of a proposition by showing that it led to a conclusion which was incompatible with the actual situation).

Based on the assumption that in real conditionals the hearer is asked to add the IC to his actual assumptions (about WS or WP) it is possible to account for the use and interpretation of non-counterfactuals like (45) above. The reason for employing the past perfect is that the inferential chain can only work properly if we locate the proposition in an imaginary world, otherwise it will become trivial, cp (46):

(46) If the butler has done it, we have found just the clues that we did in fact find

The reason is that the present (which is part of the composition of the present perfect) instructs the addressee to add the IC to the assumptions that he already has about the world of discourse at time S, and among those assumptions is an assumption about certain clues that we have found. Because of that, (46) leads to a conclusion which is a known fact, so the IC gets us nowhere. Therefore we have to locate the proposition in an imaginary world where it does not automatically associate itself with an established body of assumptions which includes our finding the clues in question. Once we locate the assumption about the butler in this imagined world, then we can make it lead to a conclusion which (surprise, surprise) tallies exactly with the known facts - suggesting that imagination may fit reality also in the IC.

At this point I would like to return briefly to some basic aspects of the philosophical discussion I referred to in the

beginning, seen in the light of the claims made above. Lewis's and Stalnaker's theories are truth-conditional, suggesting an account for the meaning of conditionals in terms of what claims they make. Their accounts rest on a procedure whereby the hypothetical situation in which the IC is true is evaluated in terms of a notion of similarity with the actual situation. This notion of similarity is a way of getting at the same thing that is involved when it is said that the IC is to be added to the current picture. However, on the account given here, it is a misrepresentation of the status of this similarity, because the contextual use of the current picture is translated into a property, the property of similarity between an actual and a possible world.

Barwise's account is closer to the picture given here in that it rejects the notion of similar possible worlds and speaks instead of (1986:45) "knowing what situation...the speaker is talking about" , thus appealing to the use of situational knowledge. Barwise places great emphasis on the relationship between IC and MC, using the concept (crucial in situation semantics) of constraint; a constraint is roughly speaking a feature of the world whose existence regulates the co-occurrence of (sets of) SoAs; in connection with conditionals, there may be a constraint guaranteeing that p never co-occurs with non q. Seeing meaning as "strong information conditions", Barwise makes the existence of such a constraint part of the meaning of conditionals. Hence, Barwise's proposal for the meaning of a conditional is also a matter of what is the case. On the account suggested here, the meaning of the conditional includes only the speaker conveying his commitment to the truth of the MC in a situation where the actual situation is (suitably) modified to accommodate the IC. The existence of a constraint warranting this commitment is a Gricean condition on undertaking it (arising from the requirement of adequate evidence).

10. Felicity and validity conditionals. Dik suggests that the distinction between what Quirk et al. call 'direct' conditionals (including all examples above) and 'indirect' conditionals (cp 47)

(47) If you need petrol, there's a garage round the corner

may be handled in terms of the layered analysis. The characteristic feature of 'indirect' conditionals is that there is no relationship between the truth values of IC and MC (cf also Johnson-Laird 1986:69). Dik therefore suggests that the 'indirect' conditionals should be renamed 'illocutionary', because the IC is a condition on the performance of the illocutionary act, whereas the ordinary conditionals could be called 'propositional' and be inside the domain of the MC illocution.

This suggestion is like the suggestion by Haegeman & Wekker (1984) in that it offers a syntactic account of differences between two types of IC; the difference is only that the distinction between the more 'central' and the more 'peripheral' ICs is made in a different place. My objection to Haegeman & Wekker was that the difference between ICs with and without 'will' could be accounted for in terms of compositional semantics only, without syntactic distinctions being necessary. Dik's formulation is open to another type of objection, namely that the so-called propositional conditionals need not have a clearly propositional relationship, cf (48)-(49):

(48) If you fail, we shall all be killed

(49) If you fail, God help us all

(49) seems more like the propositional than the illocutionary type in that the IC is a condition on the validity of the MC. Like the MC in (48), it only applies to a situation where the IC has become true - whereas the garage in (47) is located round the corner irrespective of the IC. The difference between the two types of conditionals may be better expressed by a distinction in terms of 'felicity' as opposed to 'validity' conditionals, where both types are conditions on the performance of a speech act, only conditions of different types.

11. Final remarks. What I hope to have shown in this paper is that the instructional approach offers a way to explain part of the road from syntactic forms to full-fledged interpretations, partly by their own conventional content, partly by the meaningfulness criteria embodied in Gricean maxims, so that the purely circumstantial factors can be supplemented by factors

which have to do with the linguistic elements themselves. Part of the difference in approach to semantics lies in the addressee-orientation that follows from asking what is signalled by the linguistic forms, rather than accounting for what situation (or types of situation) obtains when they are used.

As an exemplification of this difference in perspective, I would like to take up a formulation on p.8: "In a number of cases, the difference in picture constellations will also lead to a different kind of expression of the conditional construction". The approach embodied in this statement goes from full-fledged interpretations to expression, seeing linguistic differences as 'reflections' of an underlying difference in understanding. In instructional terms, the direction goes the other way: because linguistic forms give cues for interpretations, the full-fledged understanding must be compatible with these instructions. Dik quotes Rijksbaron's investigation of classical Greek (1986) as a case in point, where different choice of conjunctions + grammatical mood correspond to degrees of probability of a potentialis conditional. Similarly, Wakker (1986, 1988) describes a wealth of nuances in Greek conditional clauses in terms of factors influencing the speaker's linguistic choice. Of course we can choose to regard the speaker as bound by what he wants to say; but I find it more illuminating to say that the language provides a set of choices that enables him to say what he wants.

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