'NOMINAL' *IF*-CLAUSES IN ENGLISH*

TAKESHI OMURO

University of Tsukuba

This paper is concerned with the syntactic and semantic aspects of 'nominal' *if*-clauses in English. I will show that a number of conceptual and empirical difficulties arise when we try to account for them strictly within Chomsky's general framework. To overcome these difficulties, a new analysis will be proposed within the 'dynamic' model of grammar, which has been developed in Kajita 1977, 1983a, b, c, 1984. It will be shown that the discussion here provides empirical evidence in favor of the 'dynamic' theory over the 'static' one.

1. INTRODUCTION. There exist in English two types of indirect questions which are, at first glance, very similar; namely, *whether*-interrogatives as in 1a and *if*-interrogatives as in 1b.

- (1) a. I can't say *whether* GB-theory is correct.
b. I can't say *if* GB-theory is correct.

Whereas considerable attention has been paid, in the past studies of English indirect questions, to nominal *whether*-clauses (hereafter, abbreviated as WHs), no systematic investigation has been made of 'nominal' *if*-clauses (henceforth, IFs). It can be seen from e.g., Ishibashi et al. 1966, Gane 1969, Huddleston 1971, Bolinger 1978, and Regensburg and Hamburg 1979, that the distribution of IFs is severely restricted, as compared with that of WHs, but no explanation has been

* This paper is a revised version of my MA thesis presented to the University of Tsukuba in December 1984. The essence of this paper was read at the 2nd General Meeting of the English Linguistic Society of Japan held at the University of Tsukuba, November 17, 1984. Also, a slightly different version was read at the regular meeting of the Tokyo English Linguistic Circle held at Sophia University, September 22, 1984. I am sincerely grateful to Minoru Yasui, Masaru Kajita, Minoru Nakau, Heizo Nakajima, Takao Yagi and Yukio Hirose for valuable comments and suggestions. The same gratitude must be expressed to Nicholas John Teele, Wayne Lawrence and Peter Mitchell, who helped me ascertain some facts about English.

given as to why only IFs behave in such a restricted way. No treatment of indirect questions to date has discussed in a serious way what kinds of problems arise if we attempt to provide an appropriate description of IFs within the current theory of generative grammar. No one has considered what implications there are for the form of a theory of grammar in the study of IFs. So we shall direct special attention to IFs, revealing their syntactic and semantic properties through comparison of the behavior of WHs with that of IFs; at the same time, we shall also consider theoretical issues concerning them.

Any viable analysis of IFs must provide satisfactory answers to the questions in 2 below: a particular analysis of IFs will be judged on its ability to give appropriate answers to these questions.

- (2) a. What syntactic category should be assigned to *if* in 1b?
- b. Why is it that the distribution of IFs as in 1b is restricted mainly to the object position of a verb?
- c. Why is it that the particular formative *if*, which is not a *wh*-element, is used in indirect questions?

In section 2, we shall argue that Chomsky's general framework, as it now stands, is inadequate in that it cannot provide any analysis that gives satisfactory answers to the three questions listed in 2. In section 3, a new analysis will be proposed within the theoretical framework presented in Kajita 1977, 1983a, b, c, 1984, which has been referred to as A DYNAMIC MODEL OF GRAMMAR (OF THE 'NON-INSTANTANEOUS' LINGUISTIC THEORY). We shall argue that a number of mutually unrelated and ad hoc restrictions which the Complementizer Analysis (to be discussed below) seems to necessitate are artifacts of our lack of understanding of the form of grammars.

2. PROBLEMS. In view of the fact that *if* in 1b introduces a sentence, it can be said that there are only three candidates for the syntactic category which could be assigned to the *if* in 1b in the current theory of generative grammar: a complementizer, a preposition introducing a sentence, and a prepositional complementizer. In what follows, it will be shown that a number of conceptual and empirical problems arise, whichever of these three categories is selected for *if*.

2.1. THE COMPLEMENTIZER ANALYSIS. Regensburg and Hamburg 1979 (henceforth, R&H) claim that "*if* and *whether* can and should be treated as complementizers along with *that*, *for-to* and *'s ing*, as well as the

other WH-forms" (R&H: 30).¹

The differences between WHs and IFs pointed out by R&H are fourfold: "*whether* may be the first item following a sentence boundary, but *if* cannot"; "sentences with *if*-complements do not pseudo-cleft convincingly, although examples with *whether* are fine"; "*whether* occurs following prepositions, but *if* does not"; and "*whether* may introduce an infinitive, but *if* may not" (R&H: 31). It is R&H's contention that four conditions must be imposed on the rule inserting *if* in order for IFs to be differentiated from WHs in these four respects.

Such an analysis, however, encounters difficulties at the conceptual level. As we shall see in section 3, there are many additional differences between WHs and IFs. Therefore, further conditions must be built into the structural description of the *if*-insertion rule. This rule, as a result, would be so complex that it could not be formulated within the current theory of generative grammar with its severe restrictions on the form and function of rules.

The most serious defect of this analysis is that it could provide a mere description at best of the peculiarities of IFs. Even if a rule inserting *if* could be formulated, it does not reach the level of explanatory adequacy. Dividing the description of the distributional properties of IFs into a multitude of restrictions which are unprincipled and non-explanatory causes us to miss generalizations concerning the characteristics of IFs. These restrictions are not predicted by any general considerations and no hint is given as to *why* only the *if*-insertion rule should behave in such a restricted way. This means that the analysis provides no answer to question 2b.

Given the Complementizer Analysis, the grammar treats as a mere coincidence the fact that *if*, which is not a *wh*-element, is employed as an indirect question introducer. That is, no answer will be given to question 2c.

For these reasons, the Complementizer Analysis must be discarded.

¹ Chomsky 1981 entertains the possibility of *if* being a complementizer, as seen in the following brief comment.

... It might be, as suggested in Chomsky and Lasnik (1977) that *if* is in COMP in such structures as "I wonder if John will leave," and ...

(Chomsky 1981: 140, note 29)

2.2. THE PREPOSITION ANALYSIS. Emonds 1970, 1976 adopted the rewriting rule $PP \rightarrow P S$, originally proposed by Klima, for generating adverbial clauses introduced by *because*, *after*, *before*, *as*, etc. It has been demonstrated in the preceding subsection that the Complementizer Analysis is not appropriate for the description of IFs. So suppose that IFs, just as in the case of these adverbial clauses, are analyzed as PPs with the internal structure P plus S, i.e. that WHs and IFs have the structures in 3a and 3b, respectively:

This analysis, however, faces a number of serious problems, not the least of which is that it makes incorrect predictions about the facts. First of all, it offers a wrong prediction about clefting. The main reason why Emonds wants to analyze adverbial clauses as PPs is that he wants to capture the fact that they can easily occur in the focal position of cleft constructions. If we assign structure 3b to IFs, then it should be predicted that they can be easily clefted. This prediction, however, is wrong, as can be seen from 4:

- (4) a. *It is whether* John will come or not *that* Mary wants to know.
 b. **It is if* John will come or not *that* Mary wants to know.

Another problem comes from the facts concerning coordinate conjoined ininterrogatives like 5.

- (5) They all looked slightly more impressive than Freddy, and I wonder *if* this was because they really had been more impressive than Freddy, *or whether* the artists had known where their bread was buttered and painted them a bit larger than life.

(Blakely St. James, *Christina's Passion*: 13)

The important point to note here is that, according to the Preposition Analysis, the two conjuncts in 5 are dominated by categories of different sorts; namely, the first conjunct, i.e. the *if*-clause, is dominated by PP and the second, i.e. the *whether*-clause, by NP or $\bar{S}$. Coordination of different categories, however, is prohibited in general. It follows that the Preposition Analysis predicts, incorrectly, that 5 is ungrammatical.

Finally, consider the following sentences, which involve movement of *wh*-phrases from embedded interrogatives.

- (6) a. Which book does Mary wonder *whether* she should read?
(Karttunen 1977: 39)
b. Which book does Mary wonder *if* she should read?

Karttunen 1977 points out that 6a sounds marginally acceptable and that WHs constitute 'weak extraction islands'. It is widely assumed that 'a strong island' for extraction is created by the adverbial clauses which are analyzed as PPs with the internal structure P and S. What is important to our present discussion is that, under the Preposition Analysis, the *if*-clause in 6b falls into the same type PP. Then, the prediction will be made that it also creates 'a strong island' and extraction of the *wh*-phrase from it is completely blocked. 6b, however, is acceptable, though marginally, contrary to this prediction.

These empirical problems strongly suggest that the Preposition Analysis cannot be upheld for the description of IFs, either.

Moreover, no explanation will be given for the fact that *if*, which is not a *wh*-element, is used in indirect questions, i.e., question 2c will be left unanswered.

2.3. THE PREPOSITIONAL COMPLEMENTIZER ANALYSIS. Chomsky 1981 sets up a neutralized category, i.e. a prepositional complementizer, for the element *for* introducing an infinitive complement. What is noteworthy here is that, formally, there is no appropriate way of expressing such a notion as prepositional complementizer in his GB-theory.² Furthermore, no explanation will be given as to why a prepositional complementizer should exist when a verbal complementizer, a nominal complementizer and an adjectival complementizer do not.³

Apart from the theoretical problems just mentioned, suppose that *if*, along with *for*, is regarded as a prepositional complementizer. This approach encounters difficulties at the empirical level as well. Suffice it to say here that examples like 7 pose a serious empirical challenge to this analysis.

- (7) a. I prefer *for* you to speak English.
b. *I ask *if* you to accompany me.

² This was pointed out by Masaru Kajita (1982 Tokyo Gakugei University lectures). See also Kajita 1983c: 2.

³ This was pointed out by Masaru Kajita (1983 TEC lectures).

This analysis fails to differentiate 7b from 7a. If *if* is a prepositional complementizer, it should serve as a Case assigner and assign Case to *you*, and nothing would prevent the generation of 7b, incorrectly predicting grammaticality for 7b.

No answer will be given to questions 2b and 2c.

2.4. SUMMARY. All of the three possible analyses in the current theory of generative grammar have drawbacks serious enough to make them untenable. It seems to me that, so long as we subscribe to Chomsky's general framework, we shall have no way of proposing any adequate analysis which can encompass the full range of the facts concerning IFs and provide satisfactory answers to all of the questions listed in 2. For further discussion of the problems, see Omuro 1984, 1985.

3. A NEW ANALYSIS. The central concern of this section is to develop a new analysis within A DYNAMIC MODEL OF GRAMMAR (henceforth, DMG) and to show that the puzzles connected with the 'static' linguistic theory are to be resolved by this alternative approach. But, before that, we shall briefly review the relevant part of DMG in order to place our discussion of IFs in perspective.

3.1. THE NOTION 'POSSIBLE GRAMMAR' AND DMG. Chomsky defines the notion 'possible grammar' solely in terms of the characteristics of the form of adult grammars, without any reference to what can happen in the course of language acquisition. Thus, he defines the notion 'possible grammar' in the following form.

(8) THEORY-FORMAT (I):

Rules of type W are possible in G, where W makes no reference to pre-adult grammars. (Kajita 1983c: 4)

Kajita contends that, so long as we have recourse only to this kind of characterization of the notion 'possible grammar', we cannot accommodate a broad range of complex empirical phenomena and restrict the class of possible grammars so severely as to give an explanation for success of language acquisition. So he suggests that Theory-Format (I) should be replaced by THEORY-FORMAT (II) below.

(9) THEORY-FORMAT (II):

(II-A) Rules of type X are possible in G.

(X: far more restrictive than W)

(II-B) If rules of type Y are in G_i^j , then rules of type Z are possible in G_{i+1}^j .

(Superscripts: particular language; subscripts: stages of acquisition) (Kajita 1983c: 4)

The crucial difference between Theory-Format (I) and Theory-Format (II) is that the latter permits Format (II-B) whereas the former does not. Format (II-B) refers to the transition from one stage to the next stage of language acquisition by saying that "if rules of type Y are in G_i^j , then rules of type Z are possible in G_{i+1}^j ," thereby contributing to the definition of the notion 'possible grammar'. Theory-Format (I), on the other hand, specifies simply whether a particular rule is possible or not, saying nothing about the transition from one stage to another. In this sense, Theory-Format (I) is 'static' while Theory-Format (II) is 'dynamic'. Following Kajita, we shall refer to the linguistic theory which contains statements of Format (II-B) as A DYNAMIC MODEL OF GRAMMAR (cf. Kajita 1984).

We would like to mention here, without a great deal of discussion, some basic advantages the 'dynamic' model has over the 'static' one.

Notice, first, that "the set of possible rules of G_{i+1}^j is much smaller than the set of type- W rules" (Kajita 1983c: 4). This means that DMG enables us to account for success of language acquisition more easily (cf. Kajita 1983c: 4).

Theory-Format (II), as was stated above, refers to the transition from one stage to the next stage of language acquisition. This leads us to the second advantage: the course of development can be accounted for more directly in terms of the general theory of grammar (Kajita 1983c: 4).

Finally, there will be no need to construct a special theory of markedness, which has been thought necessary under the 'static' theory, since Theory-Format (II) itself tells us that certain rules are in some sense 'more basic' than others. Recall that (II-B) is independently motivated because it is required to restrict the notion 'possible grammar' as narrowly as possible (cf. Kajita 1984 and Yagi 1984). We can interpret Theory-Format (II) as suggesting that the current theory of generative grammar should be revised so that a distinction may be made between 'basic' rules and 'derived' rules. While the details of DMG remain to be worked out, its advantages allow us to see it as a promising candidate for the general framework within which we might attempt to construct an analysis of IFs.

3.2. AMBIGUITY BETWEEN ARGUMENT AND NONARGUMENT AND RULES OF REASSIGNMENT OF SYNTACTIC POSITION. We have seen in section 2 that a number of conceptual and empirical difficulties arise when we try to account for the behavior of IFs strictly within Chomsky's general framework. Once we adopt DMG as a general linguistic theory, new light is shed on these problems. We can conjecture that they stem from the tacit assumption that those rules involved in generating IFs have the same theoretical status as those employed in yielding WHs. Under DMG, however, there is no need to adopt such an assumption; we can assume that "certain rules are in some sense 'more basic' than others and more or less constitute the core of the grammar, while others are in some sense peripheral and derived from the corresponding basic rules" (Kajita 1977: 72). To anticipate, we assume that WHs are generated by a set of basic rules, which are taken to have been acquired at the stage i of language acquisition, whereas IFs are generated by a set of derived rules, which are supposed to be introduced into the grammar of the next stage, $i+1$. More specifically, we assume that IFs are generated by what we call here **RULES OF REASSIGNMENT OF SYNTACTIC POSITION (RRSP)** and that **RRSP** are introduced into the grammar under the condition, **AMBIGUITY BETWEEN ARGUMENT AND NONARGUMENT (AAN)**, which, I assume, is one of the manifestations of **SYNTACTICO-SEMANTIC DISCREPANCY** (cf. Kajita 1977). It must be emphasized here that one of the most important assumptions underlying DMG is that such a basic-derivative relation is retained even in the adult grammar (cf. Kajita 1983c: 6). **AAN** and **RRSP** can be formulated as follows.

(10) **AMBIGUITY BETWEEN ARGUMENT AND NONARGUMENT**

Suppose that G_i^j (where i is some stage of language acquisition and j is a particular language) contains, among other things, two subsets (R_1 and R_2) of syntactic rules and a set (R_3) of semantic rules which meet the conditions (A):

- (A) (i) R_1 generates the structure STR_1 in a non-argument position (e.g., adverbial clause position).
- (ii) R_2 generates the structure STR_2 in an argument position (e.g., subject position, object position).
- (iii) R_3 assigns to these two structures the semantic readings M_1 and M_2 respectively, interpreting STR_1 and STR_2 as a nonargument and an argument, according to the positions given by

R_1 and R_2 .

- (iv) M_1 and M_2 are quite distinct in most cases, but IN A LIMITED CLASS OF CASES, there is no practical difference between the two; thus, STR_1 may be felt, semantically, to be an argument, just as STR_2 is.

In such a situation we say that those limited cases of STR_1 generated by R_1 involve AMBIGUITY BETWEEN ARGUMENT AND NONARGUMENT. This is one of the conditions under which the additive process may come into play and develop new rules.⁴

(11) RULES OF REASSIGNMENT OF SYNTACTIC POSITION

One type of rule that can be developed under such circumstances is that which syntactically reassigns the argument position to STR_1 , on the model of STR_2 . Rules of this type change, as it were, the original nonargument STR_1 into an argument. Rules of this type may be called RULES OF REASSIGNMENT OF SYNTACTIC POSITION.

It is well known that *if*-clauses, when they occupy the position immediately dominated by the node S, are normally interpreted as conditions. *Whether*-clauses, on the other hand, are interpreted as questions when they appear in argument positions. Needless to say, conditions and questions are quite distinct in most cases. Thus, conditional *if*-clauses and *whether*-interrogatives satisfy the above conditions (i), (ii), (iii) and the subcondition in (iv), namely, ' M_1 and M_2 are quite distinct in most cases'. Suppose that we encounter a class of cases whose conditional interpretations are practically equivalent to their interrogative interpretations. It can be said that in such a class of cases, the conditional *if*-clauses exactly meet the

⁴ Kajita 1977: 46 defines the additive process as follows:

Suppose, for example, that there is a process which, on the basis of a set R of rules of G_i , develops a new rule R' and incorporates it into G_{i+1} without eliminating R. Suppose, furthermore, that this process can be activated only when a certain set of conditions C are satisfied by R, and that the new rule R' always satisfies a set of conditions C' which are associated with C in a specific way. Then, such a process, which we might call ADDITIVE PROCESS, can in principle be reconstructed from the adult grammar, provided that the conditions C and C' are appropriately defined (and provided, of course, that R and R' are not erased by subsequent developments). (Kajita 1977: 46)

conditions (A) in 10.

Jespersen 1928 makes a very interesting factual observation on the *if*-clauses under discussion.

- (12) This use of *if* goes back to OE times (*gif*), and is in fact a very natural development, as there are many combinations in which it is hardly possible to distinguish between a conditional and an interrogative clause, for instance "I hope you will tell me if you can come". (Jespersen 1928: 42-3)

In other words, no practical difference in meaning is brought about even if we take the conditional *if*-clause as an interrogative one in such a sentence. In fact, we see no difference between condition and question when the sentence is translated into Japanese.

- (13) a. Koreru node areba watashi ni itte hoshii.
(condition: I hope you will tell me in case you can come.)
b. Koreru ka dooka watashi ni itte hoshii.
(question: I hope you will tell me whether or not you can come.)

These observations strongly suggest that the conditional *if*-clause under discussion involves AAN.⁵

Let us now illustrate the mechanism involved in the generation of IFs, taking a slightly modified version of Jespersen's sentence as an example: *you will tell me if you can come*.

- (14) G_i^E basic structure

⁵ That such ambiguity as pointed out by Jespersen is indeed significant, and not merely a matter of coincidence, is suggested rather strongly by the data on the same type of ambiguity pointed out by other traditional grammarians. Rowe and Webb 1914: 309, Fowler 1968: 264 and Palmer 1938: 256 point out i, ii and iii, respectively.

(i) Tell me if you are tired.

(ii) Please inform the secretary if you intend to be present.

(iii) Write and tell me if I am to come.

(15) G_i^E model (16) G_{i+1}^E derived structure

where, (i) R_1 generates the structure $[_{PP} \text{ if } [_S \text{ you can come}]]$ ($= \text{STR}_1$) in the nonargument position (= the position immediately dominated by the node S). See 14. Cf. 10Ai.

(ii) R_2 generates the structure $[_{NP} [_S [_{COMP} \text{ whether}] [_S \text{ you can come}]]]$ ($= \text{STR}_2$) in the argument position (= the object position). See 15. Cf. 10Aii.

(iii) R_3 assigns to these two structures the semantic readings M_1 and M_2 respectively, interpreting $[_{PP} \text{ if } [_S \text{ you can come}]]$ and $[_{NP} [_S [_{COMP} \text{ whether}] [_S \text{ you can come}]]]$ as a nonargument (= condition) and an argument (= question), according to the positions given by R_1 and R_2 . Cf. 10Aiii.

(iv) M_1 and M_2 are quite distinct in most cases but, in a limited class of cases (e.g. $[_{PP} \text{ if } [_S \text{ you can come}]]$ in *you will tell me if you can come*), there is no practical difference between the two; thus STR_1 ($= [_{PP} \text{ if } [_S \text{ you can come}]]$ in 14) may be felt, semantically, to be an argument just as STR_2 ($= [_{NP} [_S [_{COMP} \text{ whether}] [_S \text{ you can come}]]]$) is. Cf. 10Aiv.

In such a situation, the structure $[_{PP} \text{ if } [_S \text{ you can come}]]$ in 14 generated by R_1 can be said to involve AAN. Therefore, the additive process can be activated and may develop new rules, RRSP. RRSP, which are

represented as the arrow from 14 to 16, syntactically reassign the argument position to STR_1 ($[_S \dots [_{PP} [_P \textit{if}] [_S \textit{you can come}]]] \longrightarrow [_S \dots [_{NP} [_{\bar{S}} [_{COMP} \textit{if}] [_S \textit{you can come}]]]]]$), on the model of STR_2 ($[_{NP} [_{\bar{S}} [_{COMP} \textit{whether}] [_S \textit{you can come}]]]]]$).

Let us now examine the basic structure in 14 and the model structure in 15. First of all, the 'flat' structure of *tell me if you can come* in 14 and that of *tell me whether you can come* in 15 are virtually identical, the former being [V NP P S] and the latter [V NP COMP S], as indicated by the circles in 14 and 15. (Cf. Aissen 1973 for the notion of 'flat' structure.) Moreover, the P in 14 and the COMP in 15, which constitute the only difference between the two flat structures, both function as 'connectors', which play a role in combining one element with another element. Thus, they are similar in their 'function' (cf. Kajita 1983c: 5). Finally, as has been already observed above, the conditional *if*-clause in 14 and the interrogative *whether*-clause in 15 are quite similar in their 'meaning' (cf. Kajita 1983c: 5). From these considerations, it is clear that structure 15 has some of the defining characteristics of models suggested by Kajita 1983a, c, and that it is a highly qualified model for 16.

It should be noted that the operations involved in RRSP are similar to those involved in RULES OF SYNTACTIC REINTERPRETATION in that they have no effect on the string to which they apply, but only change the labeled bracketing (cf. Kajita 1977).

To sum up, we have made the following claims. At an earlier stage of language acquisition of English grammar, the child does not generate 'nominal' *if*-clauses at all. At some later stage, he 'notices' the fact that, in a limited class of cases, no practical semantic difference can be seen even if a conditional *if*-clause is taken to be interrogative, so he begins to interpret the *if*-clause appearing in the position immediately dominated by the node S as ambiguous: conditional and interrogative. But this syntactic position is closely connected with the conditional reading. It turns out that there is no syntactic position which is eligible to bear a close relation to the interrogative reading of an *if*-clause. It can be said that there is a kind of discrepancy between syntax and semantics; there exists a meaning whereas there is no appropriate syntactic position for it. Suppose the child at this stage has acquired the rules that generate the *whether*-clause, which occupies an argument position and is interpreted as interrogative. The presence of a clause of this type, then, will tempt the child to reassign an argument

position to the *if*-clause which lacks the syntactic position appropriate for its interrogative meaning. The child succeeds in eliminating the discrepancy by reassigning an argument position to an interrogative *if*-clause on the analogy of the fact that an interrogative *whether*-clause occupies an argument position.

3.3. THE MERITS OF THE NEW ANALYSIS. In this section, we shall show how our analysis explains the peculiarities of IFs and how it answers the questions listed in 2.

As the first step, we should ask what cases constitute THE LIMITED CLASS OF CASES mentioned in 10Aiv in which there is no practical difference between M_1 and M_2 . Special attention must be called here to the verb *tell* contained in Jespersen's example. This verb can take either a single object (e.g., *Please tell me*) or a double object (e.g., structure 15). In other words, it is a verb which can guarantee the well-formedness of the structure which will be generated through the application of RRSF. Putting it again in other words, it is a verb which provides an empty slot which the adjacent conditional *if*-clause can later move into to become a 'nominal' *if*-clause. This is represented diagrammatically as follows.

Much the same remark holds of the verb *mind* in the following examples.

- (18) a. Would you mind if I check a little more on him?
 b. I don't mind if people say I sound like my father.

The verb *mind* may take no object (e.g., *Never mind*) or it may take one. Then *mind*, as in 17, can provide an empty slot.

If these observations are correct, it appears that those limited cases in which there is no practical difference between M_1 and M_2 (i.e. those cases which meet AAN) may be restricted to those cases in which a slot can be set up in the position adjacent to the conditional *if*-clause. Bearing this observation in mind, we shall show how our approach accounts for the peculiarities of IFs.

To begin with, it now becomes possible to give an account of why IFs may not appear in subject position.

- (19) a. *Whether* he eats cabbage or not simply doesn't matter.
(Bresnan 1972=1979: 37)

b. **If* he eats cabbage or not simply doesn't matter.

The reason is that the subject position, as shown in 20 below, has already been filled with some material and no empty slot can be set up in the position adjacent to the conditional *if*-clause, which means that there is no case in which the difference between M_1 and M_2 may not be felt; that is, there is no conditional *if*-clause which meets AAN. Therefore, IFs may not be generated in the subject position.

- (20) If he comes, I shall tell him.

Next, it also becomes possible to answer the question of why IFs may be excluded from prepositional complement position.

- (21) a. I shall have to put inquiries in hand *as to whether* anyone recently tries to obtain cocaine.
(Ishibashi et al. 1966: 874)

b. *I shall have to put inquiries in hand *as to if* anyone recently tries to obtain cocaine.

A preposition almost always requires an object, which suggests that a slot may not be placed in the position adjacent to a conditional *if*-clause. Then, there arises no situation where there is no practical difference between M_1 and M_2 , accounting for why IFs do not appear after prepositions.

Perhaps what we have said also applies to the case of nominal complementation.

- (22) a. *The question whether* they'll strike remains unanswered.
(Bresnan 1972=1979: 37)

b. **The question if* they'll strike remains unanswered.

We are now in a position to give an answer to question 2b. The reason why IFs are largely restricted to the post-verbal object position is that only those conditional *if*-clauses that are generated in the position adjacent to the object position of certain verbs can meet AAN.

Let us now seek to answer question 2c: why is it that the particular formative *if*, which is not a *wh*-element, is used in indirect questions? Why can *if* rather than *because*, *till*, *after*, *as*, etc. be used as an indirect question introducer? An answer to this question is also given as an automatic consequence of our analysis. Conditional *if*-clauses, as we have seen above, give rise to a situation in which there is

no practical semantic difference even when they are taken to be interrogative clauses, whereas other adverbial clauses never bring forth such a situation. Since certain limited cases of conditional *if*-clauses can meet AAN, *if*, which is not a *wh*-element, may be used in indirect questions. This means that our analysis is capable of giving an answer to question 2c, which is a serious obstacle to the three analyses under the 'static' theory.

Now let us consider what kind of operations CANNOT be applied to IFs. Special attention must be called here to the model structure in 15 and the derived structure in 16. At first sight, these structures are identical. Yet, as for their status, there is a crucial difference between them: structure 15 is generated in terms of basic processes at the stage of language acquisition *i* whereas structure 16 is derivatively constructed and is generated only in the object position of the verb through such a mechanism of analogy as defined by AAN and RRSP at the stage *i*+1. Such a basic-derivative distinction is assumed to be retained in the adult grammar under DMG, as has been emphasized in section 3.2. Thus, it is to be expected from our analysis that the shifting of IFs from the object to other positions may be prohibited in general since such positions do not meet AAN at all; namely, since such a shifting is quite 'inharmonious' with the derivative process defined by AAN and RRSP. The facts which would require ad hoc conditions under the Complementizer Analysis lend some support to this view.

(23) Passivization

*Whether/*If* the departure should be postponed or not must be decided.

(24) Topicalization⁶

*Whether/*If* John will come or not, I can't say.

(25) Tough-Movement

*Whether/*If* GB-theory is correct is more difficult to find out.

(26) Clefting

If is *whether/*if* John will come or not that Mary wants to know.

It should be kept in mind that the problematic facts under the 'static'

⁶ The following sentence, which was given to me by Takao Yagi, is a counter-example to our analysis, because the *if*-clause is topicalized, contra our analysis.

(i) There was something, a snake, lying comfortably stretched out along the rib cage. It was a brown-tan, and *if it was a rattler*, I wasn't going to find out.
(Peter and Barbara Jenkins, *The Walk West*: 180-1)

theory have turned out to be supporting evidence for our analysis.⁷

It is also expected from our analysis that as far as IFs are retained in the object position of a verb, they behave just like WHs, since this position is 'harmonious' with the derivative process. Consider the following examples.

(27) Gapping

John knows $\left\{ \begin{array}{l} \text{whether} \\ \text{if} \end{array} \right\}$ Tom went to New York and his
wife $\phi * \left(\left\{ \begin{array}{l} \text{whether} \\ \text{if} \end{array} \right\} \right)$ Jim went to Tokyo.

(28) Sluicing

John knows that I went, but his wife doesn't know when/
why/how/where/*whether/*if.

(29) Conjunction Reduction⁸

- a. *Whether Kip or whether Mary did it doesn't matter.
- b. *It doesn't matter if Kip or if Mary did it.

27, 28 and 29 clearly show that IFs behave just like WHs with respect to Gapping, Sluicing and Conjunction Reduction, as far as they are retained in the object position of a verb. Notice that 5 and 6 also illustrate the same point. For further similarities between WHs and IFs, see Omuro 1984.

Indirect questions in general (with the possible exception of *why*-indirect questions) can take *to*-infinitive forms as well as finite forms. IFs are an exception to this regularity.

- (30) a. At the entrance we met a party of American youths,
very drunk, wondering *whether to go in*.
(Ishibashi et al. 1966: 875)
- b. *At the entrance we met a party of American youths,
very drunk, wondering *if to go in*.

This exceptionality also can probably be accounted for by noting that, under our analysis, the conditional *if*-clauses which underlie IFs can never take *to*-infinitive forms. Thus, this exceptionality provides a piece

⁷ It has been pointed out (e.g. Chomsky 1981: 147, note 107, Kajita 1982: TEC lectures) that 'derivative' constructions in general do not readily undergo further grammatical operations. Ishii 1983: 81 points out the important fact that "not all the transformations but only those that change the properties of the model (in this case, the configuration) are inapplicable to the derivative constructions."

⁸ Our informants judge as unacceptable example 29a, which Bresnan 1970: 311 cites as grammatical.

of evidence in favor of our analysis. The same remark applies to example 7b.

Quirk et al. 1972: 737 state that except in the second part of an alternative question, a *whether*-interrogative cannot be made negative while an *if*-interrogative can, citing the following pair of sentences.

- (31) a. *I don't care *whether* it *doesn't* rain.
 b. I don't care *if* it *doesn't* rain. (Quirk et al. 1972: 737)

According to Langacker 1974, we will have the derivation sketched in 33, for sentence 32.

- (32) I don't know [whether he can swim].
 (33) a. WH+OR [[he can swim] [not [he can swim]]] $\Rightarrow$
 b. [WH+OR [he can swim] [WH+OR [not [he can swim]]]
 $\Rightarrow$
 c. [WH+OR [he can swim] [WH+OR [not [he can]]] $\Rightarrow$
 d. [WH+OR [he can swim] [WH+OR [not]]] $\Rightarrow$
 e. [WH+OR [he can swim]] (cf. Langacker 1974: 22)

As can be seen from 33, the alternative question with *whether* is of the form [positive] + *or* [negative] but not of the form [negative] + *or* [positive] in the deep structure. Since the portion [negative] of the form [positive] + *or* [negative] is to be deleted, the form *whether* + [negative] will never appear in the surface structure. The reason why an *if*-clause can be made negative even in the first part of an alternative question is that, unlike a *whether*-interrogative, it bears no essential relation to the *either-or* conjunction, as is evident from its morphology, and that, in terms of our analysis, the conditional *if*-clause which underlies a 'nominal' *if*-clause can be made negative.⁹ If Langacker's analysis for WHs and our analysis for IFs can be maintained, and I think they can, it becomes possible to explain the contrast in grammaticality between 31a and 31b in a natural way.¹⁰

Another question now arises: if, unlike *whether*, *if* essentially bears no relation to the *either-or* conjunction, why does the phrase *or not* occur at the end of such an *if*-interrogative as that in 34b below?

- (34) a. I asked Mary if Tom kissed her. — basic structure
 b. I asked Mary if Tom kissed her or not. — derived structure

⁹ See also Gane 1969 and Bolinger 1978 for the idea that *if* bears no essential relation to the *either-or* conjunction.

¹⁰ This line of argument would lead us to expect that the pure future *will* is excluded from IFs, but in fact it is not, at least one short-coming of our analysis.

- c. I asked Mary whether Tom kissed her or not. } model
 d. I asked Mary whether Tom kissed her. }

This problem will be handled as follows within DMG. Let us now call our attention to the stage of acquisition of English grammar, G_{i+1}^E , where it becomes possible for 34a to be generated by RRSP. At this stage our grammar generates 34a, 34c and 34d but not 34b. That is, 34a fails to have a partner (in this case 34b) at this stage whereas 34d, which is quite similar to 34a in syntax and semantics, has its partner 34c. A speaker at this stage, however, adds to 34a the potential meaning corresponding to the overt form *or not* when interpreting it in the mind. In other words, example 34a involves a kind of Syntactico-Semantic Discrepancy; namely, there is a meaning but no overt linguistic form for the meaning. In order to eliminate this discrepancy, the speaker adds the overt linguistic form *or not* to 34a on the model of the pair of 34c and 34d, thereby yielding 34b. One might object that such a device is ad hoc in that it is designed only to account for such examples as 34b. Kono 1984, however, demonstrates that such a device is required to account for the characteristics of 'pretty'-constructions in English. Thus, the device is independently motivated.

We have argued that IFs such as 34a are more 'derivative' than WHs like 34d. At this point, we claim, further, that IFs as in 34b, in which the phrase *or not* is attached to the end of the *if*-clause, are still more 'derivative' than ordinary IFs as in 34a. If it is the case that 34b is such a 'derivative' construction as that generated by the device discussed above, it should be predicted that it is impossible to move the phrase *or not* from the end of the sentence (cf. footnote 7). This prediction is actually borne out by the ungrammaticality of 35b, as against the grammaticality of 35a:

(35) a. I asked Mary *whether or not* Tom kissed her.¹¹

b. *I asked Mary *if or not* Tom kissed her.

Thus, the contrast in grammaticality between 35a and 35b is automatically accounted for as a consequence of our analysis.

The assumption which underlies the above two arguments is that *if* essentially bears no relation to the *either-or* conjunction. This assumption seems to be strengthened further by the contrast in grammaticality between 36a and 36b.

(36) a. *I asked John *whether either* Tom kissed Mary or not.

b. ?I asked John *if either* Tom kissed Mary or not.

¹¹ As for the justification for the derivation of 35a from 34c, see Pope 1976: 96-99.

Langacker 1974 states that the inability of *whether* and *either* to cooccur is automatically explained by the analysis that derives *whether* from WH+*either*. If this argument is correct, the cooccurrence of *if* and *either* in 36b, though its status is marginal, shows that *if* is not closely related to the *either-or* conjunction.

Turning now to those IFs which involve pseudo-clefting, consider the following.

- (37) a. What I am now at a great loss *for/*as to* is *whether* GB-theory is correct.
 b. I am now at a great loss **for/as to whether* GB-theory is correct.
 c. What I am now at a great loss *?for/*as to* is *if* GB-theory is correct.
 d. I am now at a great loss **for/*as to if* GB-theory is correct.

We have seen in this section that IFs are quite resistant to movement transformations. What is to be asked here is why 37c with *for* selected is marginally acceptable, despite 'the fact' that it is 'generated' through the application of the Pseudo-Cleft 'Transformation'; does it constitute a counterexample to our analysis? If movement is actually involved in the generation of 37c, it would be a true counterexample to our analysis. Kono 1983, however, argues convincingly that no movement is involved in the derivation of pseudo-cleft constructions and that they are generated directly in the base. Thus, 37c is not a counterexample to our analysis.

Even from as small a sampling as 37, however, it becomes clear that no movement is involved in the production of pseudo-cleft sentences. If 37c is generated by means of some kind of movement rule, then 37d would be taken as the deep structure. Since 37d is completely unacceptable, it is predicted that 37c is also completely ungrammatical, which is not the case. Thus, 37c is taken to be generated in the base. Let us call our attention to the prepositions, *for* and *as to* in 37a and 37b. If movement is involved in the generation of 37a, then its deep structure is supposed to be 37b. Since *for*, but not *as to*, is excluded from 37b, it is predicted that the same pattern will be found in 37a. But the exact converse is the case; *as to* but not *for* is excluded from 37a. These observations show that no movement is involved in the generation of pseudo-cleft constructions and that 37c does not constitute a true counterexample to our analysis.

Let us consider the marginal status of 37c. In terms of our analysis,

IFs are normally derived from those conditional *if*-clauses which meet AAN on the model of certain *whether*-interrogatives. Notice that, as for 37c, there are no conditional *if*-clauses which could meet AAN. Thus, 37c is not to be generated by the same mechanism that is involved in the generation of ordinary IFs. The question is, then, what makes it possible for 37c to be generated. The point to be observed here is that there are two properties common to the ordinary IFs and 37c; on the one hand, both of them appear after the category with the feature [+V] and, on the other hand, the interpretations of their subjects plus verbs are compatible with those of their complements. We conjecture that these two common properties make it possible for 37c to be generated as such in the base on the model of ordinary IFs. If such is the case, we suspect that the marginal status of 37c is due to the fact that it differs from normal IFs in that it skips over the mechanism employed in the generation of ordinary IFs whereas it is similar to normal IFs in that it shares these two properties with them. Thus, it appears that the marginal status of 37c, which is a *prima facie* counterexample, turns out to be supporting evidence for our analysis. It should be noted that the marginal status of 38b, in which the *if*-clause is used as the complement to the copula *be*, is due to the same reason.

- (38) a. The point is whether he will understand it.
- b. ?The point is if he will understand it.

We assume that sentences like 37c and 38b are still more "derivative" than ordinary IFs and that there is a device that skips over a certain mechanism and generates certain sentences directly in the base. One might argue, again, that such a device is ad hoc in that it is designed only to account for 37c and 38b. However, it has been demonstrated by recent studies (e.g. Kajita 1982: TEC Lectures, McCawley 1981, Okada 1984) that such a device is needed in other parts of the grammar. We shall confine ourselves to citing some examples from Okada 1984.

- (39) a. Leander was the man, he accused.
- b. *He accused that Leander was the man. (Okada 1984: 100)
- (40) a. He was said to come from Ireland.
- b. *They said him to come from Ireland. (Okada 1984: 104)
- (41) a. There is something nice about him.
- b. *Something is nice about him. (Okada 1984: 104)

Downgrading (or Localization by Insertion), Passivization and *There*-Insertion are skipped over in 39a, 40a and 41a, respectively. What should be observed in this connection is that Extraposition is skipped over in

the following *if*-construction.

- (42) a. It is doubtful if he would commit deliberate perjury.
 (Ishibashi et al. 1966: 874)
 b. *If he would commit deliberate perjury is doubtful.

Notice that in 42a the *if*-clause shares with ordinary IFs the two properties mentioned above. Notice, incidentally, that the low acceptability of 43a below is due to the lack of one of the two properties; that is, it does not appear after the category with the feature [+V].

- (43) a. ?*It is *a question if* he saw the tears that stung her eyes.
 b. *If he saw the tears that stung her eyes was a question.

Thus, the device employed in the generation of 37c and 38b is independently motivated, it seems.

A final remark may be in order as to question 2a: what syntactic category should be assigned to *if* in 1b? In terms of our analysis, the answer to this question is as follows. If a complementizer is assigned to *whether*, then a 'semi-complementizer' is to be assigned to *if* introducing an indirect question. We should bear in mind that there is no place in the 'static' theory to state such a notion as 'semi-complementizer' whereas under the 'dynamic' theory, the theory itself can state it, thanks to the Theory-Format (II) in section 3.1.¹²

4. INDEPENDENT MOTIVATIONS AND CONCLUDING REMARKS. One might object, at this point, that our analysis is ad hoc because it is designed only to account for the peculiarities of IFs. But such is not the case.

As is clear from the formulations of AAN and RRSP, our analysis is elegantly incorporated into DMG and, in that sense, it is not ad hoc at all.

Furthermore, there are other constructions which can be taken to be generated by essentially the same mechanism employed in the generation of IFs. Let us consider such alternative conditional-concessive clauses as that in 44b below.

- (44) a. I don't care whether you can come or not. —basic structure
 b. I don't care, whether you can come or not. —derived structure
 c. I don't care, even if you can't come. —model

¹² Kajita (1983 TEC lectures) argues that DMG is capable of capturing the fact that *without*, expressing 'attendant circumstances' is still far less of a complementizer than *with*. As for this, see also Hantson 1983.

Notice that in 44a there is a discrepancy between syntax and semantics: the *whether*-interrogative which is generated in the argument position may be felt, semantically, to be a nonargument just as the *even if*-concessive clause in 44c is. It should be noticed that we can characterize this sort of Syntactico-Semantic Discrepancy simply by replacing 10Aiv with 45 below, leaving other parts of AAN unchanged.

- (45) M_1 and M_2 are quite distinct in most cases, but IN A LIMITED CLASS OF CASES, there is no practical difference between the two; thus, the structure STR_2 may be felt, semantically, to be A NONARGUMENT, just as STR_1 is.

Compare 10Aiv with 45. In order to eliminate such a discrepancy, the slightly different version of RRSP may change the original argument, the interrogative *whether*-clause, into the nonargument on the model of 44c, yielding the alternative concessive clause in 44b. Notice that this version of RRSP and the original version of RRSP have the same function in that they eliminate the same sort of Syntactico-Semantic Discrepancy, though they operate, as it were, in opposite directions (cf. Kajita 1977, in particular, LOCALIZATION BY INSERTION VS. LOCALIZATION BY EXTRACTION). Notice, further, that this version of RRSP may also be involved in the generation of such concessive clauses with *X-ever* as that in 46b from the corresponding free relative clauses.

- (46) a. I don't care whatever you like.
b. I don't care, whatever you like.

Thus, it might be concluded that our analysis has the possibility of further generalization and that, in that sense also, it is not ad hoc at all.¹³

In this paper, we have shown that our analysis can explain the peculiarities of IFs by interacting with other independently motivated devices. This leads us to the conclusion that the peculiarities of IFs are automatically accounted for without recourse to any ad hoc conditions only if (i) AAN is characterized as a part of Universal Grammar, namely, the Language Acquisition Device, and (ii) the definition to the effect that, when AAN is met, RRSP will be introduced into a particular grammar, is incorporated into UG. Viewed from a slightly different angle, many curious properties of IFs follow from our analysis, so that once a language learner has noticed that a limited class of conditional *if*-clauses meet AAN, he automatically comes

¹³ This argument is partly based on T. Kono's insightful suggestions (personal communication). I am particularly indebted to him for the model structure in 44c.

to know the observed peculiarities of IFs without learning such ad hoc and mutually unrelated conditions as those required by the 'static' theory.

REFERENCES

- AISSSEN, JUDITH. 1973. Shifty objects in Spanish. CLS 9.11-22.
- BOLINGER, DWIGHT. 1978. Yes-no questions are not alternative questions. Questions, ed. by H. Hiž, 87-105. Dordrecht: Reidel Publishing Company.
- BRESNAN, JOAN W. 1970. On complementizers: Towards a syntactic theory of complement types. FL 6.297-321.
- _____. 1970=1979. Theory of complementation in English syntax. MIT dissertation.
- CHOMSKY, NOAM. 1981. Lectures on government and binding. Dordrecht: Foris Publications.
- _____, and HOWARD LASNIK. 1977. Filters and control. LI 8.425-504.
- EMONDS, JOSEPH E. 1970. Root and structure-preserving transformations. MIT dissertation.
- _____. 1976. A transformational approach to English syntax. New York: Academic Press.
- FOWLER, H.W. 1968. A dictionary of modern English usage. London: Oxford University Press.
- GANE, GILL. 1969. On *if* and *whether*. MIT ms.
- HANTSON, ANDRÉ. 1983. *For*, *with* and *without* as non-finite clause introducers. English Studies 64.54-66.
- HUDDLESTON, RODNEY. 1971. The sentence in written English. Cambridge: Cambridge University Press.
- ISHIBASHI, KOTARO et al. 1966. (eds.) A dictionary of current English usage I. Tokyo: Taishukan.
- ISHII, YASUO. 1983. Notes on quasi-predicatives in English. DAL 16.73-84.
- JESPERSEN, OTTO. 1928. A modern English grammar on historical principles, part III. London: George Allen & Unwin.
- KAJITA, MASARU. 1977. Towards a dynamic model of syntax. SEL 5.44-76.
- _____. 1983a. Some derivative processes in syntax. A lecture given at the TELC April meeting, Sophia University, Tokyo.
- _____. 1983b. Core to periphery: A dynamic view. A lecture given at the 1983 Tokyo linguistics seminar, ICU, Tokyo.
- _____. 1983c. Grammatical theory and language acquisition. A lecture given at the 1983 ELSJ symposium, Sophia University, Tokyo.
- _____. 1984. Eigo-kyoiku to kongo no seisei bunpo. Gengo-huhensei to eigo no togo-imikozo ni kansuru kenkyu, ed. by Masatomo Ukaji, 60-87. Tokyo: Gakugei University.
- KARTTUNEN, LAURI. 1977. Syntax and semantics of questions. LP 1.3-44.
- KONO, TSUGUYO. 1983. Remarks on pseudo-cleft sentences in English. SEL

- 11.12-27.
- . 1984. Eigo no “pretty” kobun ni tsuite. *Gengo* 13.108-16.
- LANGACKER, RONALD W. 1974. The question of Q. *FL* 11.1-37.
- MCCAWLEY, JAMES D. 1981. The syntax and semantics of English relative clauses. *Lingua* 53.99-149.
- OKADA, NOBUO. 1984. Sonyubun no baai. *Gengo* 13.99-104.
- OMURO, TAKESHI. 1984. On ‘nominal’ *if*-clauses in English. Unpublished MA thesis, University of Tsukuba.
- . 1985. Problems on ‘nominal’ *if*-clauses in English. *English linguistics today*, ed. by Nobuhiro Kaga and Kozo Iwabe, 293-305. Tokyo: Kaitakusha.
- PALMER, HAROLD E. 1971. *A grammar of English words*. London: Longman.
- POPE, EMILY N. 1976. *Questions and answers*. The Hague: Mouton.
- QUIRK, RANDOLPH et al. 1972. *A grammar of contemporary English*. London: Longman.
- REGENSBURG, PHILIP A. LUELSDORFF and NEAL R. NORRICK HAMBURG. 1979. On *if* and *whether* complementation. *Linguistische Berichte* 62.25-47.
- ROWE, F. J. and W. T. WEBB. 1914. *A guide to the study of English*. London: Macmillan.
- YAGI, TAKAO. 1984. Togoron no yuhyosei riron. *Gengo* 13.238-48.