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Complementizers and Root Sentences

The purpose of this article is to develop the notion of "root transformation" proposed by Emonds (1970; 1976). We focus on the restraining role that a filled complementizer position plays in a sentence, above and beyond the distinction between main and embedded sentence as defined by overall position in the phrase marker. In motivating a "No-Complementizer Condition", we consider rules from Igbo, English, and French (sections 2–4), and in section 5 we consider a recent analysis by Obenauer for the French neuter interrogative system that violates the condition proposed here. In section 5 we also justify an alternative ("*Que*-Morph") analysis in some detail, and show that this reanalysis, forced by the No-Complementizer Condition, is independently preferable.

1. Introduction

Of the three kinds of rules proposed by Emonds (1970; 1976) (root, structure-preserving, local), structure-preserving rules have received by far the most attention in the linguistic literature. What discussion there has been of root rules has focused on the question of whether syntactic phenomena that generally appear restricted to main clauses are, in fact, governed by syntactic or semantic factors. Emonds's proposal was that certain transformations (the so-called root transformations) were subject to the syntactic restriction that they could apply only to root sentences—that is, S-nodes which themselves were either not dominated by any other nodes or dominated only by other S-nodes.

Along with Green (1976), Bolinger (1977), and others, Hooper and Thompson (1973) have criticized Emonds's position on the grounds that the transformations Emonds called "root" were constrained not to apply only in main clauses, as Emonds had suggested, but rather only in sentences whose content was being "asserted"—a notion difficult to formalize, but more or less clear in a good number of cases. On Hooper and Thompson's account, Emonds was misled to the conclusion that certain transformations apply only

in main clauses because, generally speaking, main clauses are normally "asserted", whereas only a rather restricted set of subordinate clauses are.

One major issue that is involved, then, is the degree to which the linguist should look for, and expect to find, formal syntactic factors governing the application of transformations. As the literature cited above has demonstrated, many factors that are difficult to formulate clearly and explicitly are involved in the range of data Emonds considered, factors which are not strictly syntactic. In this sense, Green's and Bolinger's point is surely correct: the awkwardness and unacceptability of many of the sentences involved in Emonds's data must indeed be understood in terms of what is asserted and what is presupposed by the speaker. Yet there *is* a formal element involved, and it would be a mistake not to separate the formal syntactic conditions from the semantic in the study of main clause phenomena. Bolinger's description of a strictly syntactic analysis as a "formal desolation" (1977, 519) is surely too strong; we cannot know what range of facts should be accounted for on semantic grounds until we have factored out the strictly formal part of the language.

But even when we agree to seek a formal account for some of the restrictions on main clause phenomena, the question remains: what formal characteristic(s) is (are) relevant? As we remarked above, Emonds proposed that *certain* transformations are subject to what we may call the *Root Condition*.[1]

(1) *Root Condition*

A transformation T may not apply to a sentence S_1 unless S_1 is dominated by no other nodes (except possibly other S-nodes).

One consequence of this formulation is that all transformations may apply in a main clause, even a transformation subject to the Root Condition, since a main clause is not dominated by any nodes other than S; some transformations, however, will not apply in embedded sentences.

An alternative condition, the *No-Complementizer Condition* (NCC), gives the same result for main clauses in most cases as the Root Condition, but diverges from it in a number of particular cases.

(2) *No-Complementizer Condition* (NCC)

A transformation T may not apply to a sentence S_1 if S_1 is headed by a complementizer.

In this article I shall argue that such formal constraints as the Root Condition and the NCC do, indeed, play a very real role in syntax. I shall assume that the "choice" on the part of a language of which rules will be subject to one of these conditions is arbitrary. However, I will suggest that despite the large overlap in function of the Root Condition and the NCC, both are necessary for the description of languages; furthermore,

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[1] Emonds (1970; 1976) tries to predict this marking on the basis of the structural change, but it is clear that the attempt is empirically inadequate, as he himself notes (1976, 203n.).

I will argue that if a rule is subject to the Root Condition, it is also automatically subject to the NCC, but not conversely. That is, all root rules are subject to the condition that they not apply to any sentence headed by a complementizer, but other (nonroot) rules may also be subject to this condition.

2. Igbo

The simplest example of the influence of a neighboring complementizer comes from Igbo.[2] Igbo is an SVO language; thus, full NP subjects as well as most pronominal subjects immediately precede the verb. (3a–f) are examples of typical simple sentences.

(3) a. Chali   gulu akwukwo na-abo.
        Charlie read book(s)   two
   b. I   gulu akwukwo na-abo.
        you read book(s) two
   c. O   gulu akwukwo na-abo.
        s(he) read book(s) two
   d. Anyi gulu akwukwo na-abo.
        we   read book(s) two
   e. Unu   gulu akwukwo na-abo.
        you (pl.) read book(s) two
   f. Fa   gulu akwukwo na-abo.
        they read book(s) two

Curiously, however, the first person singular form is as given in (4), with the suffix *m(u)* and the prefix *a* (for the source of *a*, see fn. 3).

(4) A gulu m(u) akwukwo na-abo.
     'I read two books.'

This postverbal *mu* has undergone the effect of a transformation, *Mu Permutation* (5), which moves the subject pronoun to the right of the verb.

(5) *Mu Permutation*[3]

     mu [+ V]
     1   2 →
     φ   2 + 1

There is evidence supporting such an analysis over generating *mu* by a phrase structure rule in its surface position.

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[2] The data in this section are from my own work with Charles Ukwu on his dialect, a typical Northern dialect, that of the city of Enugu. Although I have found no discussion of this phenomenon in the extant grammars of Igbo, the texts provided by Green and Igwe (1963), for example, for Ohuhu, a Southern dialect, largely support the present analysis.

[3] This rule is not responsible for the insertion of the dummy subject *a*; it rather leaves an empty subject position. The same form *a* (or its vowel harmonic counterpart, *e*) appears as an indefinite subject in other sentences. We may therefore hypothesize a rule inserting *a* into empty subject position.

(i) Generating *mu*s in place would require setting up two new syntactic positions which could be filled only by *mu*. In simple, one-verb sentences, such as (4), *mu* appears immediately after the verb and before the direct object. While it is true that there are base-generated bitransitive clauses in Igbo (that is, clauses having two NPs immediately following the verb) and, in fact, even base-generated tritransitive clauses, we find that even in tritransitive clauses, the nominative *mu* appears immediately after the verb, as in (6). Thus, to generate *mu* in place in (6), we would have to hypothesize quadritransitive sentences in Igbo; but these do not exist unless the subject is itself *mu*.

In addition, when the sentence contains one of the auxiliaries *na, ga*, or *da*, the subject *mu* appears after the auxiliary but before the main verb, as in (7).

(6) A   koolu mu gi   Obi akiko.
     Dummy told   I   you Obi story
     'I told Obi a story in your stead.'
(7) A   na   mu asu   Igbo.
     Dummy Aux I   speak Igbo
     'I speak Igbo.'

If *mu* were base-generated in place, then, a Pronoun or NP position, which could only be filled by *mu*, would be necessary after the first auxiliary. No other subject noun or pronoun can appear there, as we see in (8).

(8) *A   na   (g)i asu   Igbo.
     Dummy Aux you speak Igbo
     'You speak Igbo.'

Furthermore, when there is an auxiliary, the subject pronoun cannot appear after the main verb, as we see in (9).

(9) a.   A   ga   mu eje   Enugu.
         Dummy Future I   going Enugu
                 Aux
         'I will go to Enugu.'
    b. *A   ga   eje   mu Enugu.
         Dummy Future going I   Enugu
                 Aux

It is not clear how a nontransformational analysis could account for the ungrammaticality of (9b). The transformational account, using rule (5), generates only the correct (9a).

(ii) There is an exception to rule (5): when the auxiliary is the future negative *ma*, (5) does not apply. Thus, (10a) is correct; (10b) is marginal.

(10) a.   Mu ma   eme ya.
          I   Neg.-Fut. doing it
          'I will not do it.'
     b. *?A   ma   mu eme   ya.
          Dummy Neg.-Fut. I   doing it

A natural constraint on exceptions to transformations, as proposed in Lakoff (1970), is that items mentioned in the rule may be exceptionally marked so as to block its application, perhaps in the way that *how come* is an exception to Subject–Auxiliary Inversion in English. *Ma*, the future negative auxiliary, is such an exception to (5). An analysis of the distribution of *mu* in which *mu* was base-generated in its surface position would need to make the subcategorization frame of the nominative *mu* (as distinct from the accusative *mu*) sensitive to the presence of the auxiliary *ma*, blocking its presence after *ma* and permitting it to appear in the normal subject position before *ma*. On both accounts, *mu*'s position is unusual in the presence of the auxiliary *ma*; on the transformational account, however, *mu*'s reappearance in the normal subject position is predicted, whereas in the base-generated approach, its alternative position might have been anywhere at all.

(iii) Most tellingly, *mu* appears in preverbal (and pre-Aux) position, just as all other subject pronouns do, in embedded clauses, as we see in (11).

(11) a. O sili na   mu melu ya.
         he said that I   did   it
     b. akwukwo mu gulu
         book   I   read
         'the book that I read'

A transformational account would express this directly by saying that (5) applies only in main clauses; that is, it is a root rule in the sense of Emonds (1976). Phrase structure rules, however, cannot be sensitive to the distinction.

Having established rule (5), we are now in a position to observe that although it applies only in main clauses, there do exist main clauses that contain an overt complementizer, and that in such sentences, *Mu* Permutation (5) does not apply. Thus, roughly synonymous with (12a), in which the *wh*-word appears in an "unmoved" position, we also find the more common sentence form (12b). When the subject is *mu*, *Mu* Permutation applies in (13a), but not in (13b), where the complementizer is overt. (See Goldsmith (1981b) for a detailed analysis of these constructions.) It may be noted that neither of these sentences can be analyzed as syntactically "embedded" in any sense, because *wh*-pronouns, such as *gini* 'what', cannot appear in indirect questions (cf. (14) and Goldsmith (1981b)).

(12) a. I   kwulu gini?
         you said   what
     b. Gini ka   i   kwulu?
         what Comp you said
         'What did you say?'
(13) a. A   kwulu mu gini?
         Dummy said   I   what
         'What did I say?'

    b.   Gini ka   mu kwulu?
         what Comp I   said
         'What did I say?'
    c.   *Gini ka a kwulu mu?

(14) a.   *O julu   m gini m kwulu.
         he asked me what I said
    b.   O julu   mu ife   m kwulu.
         he asked me thing I said
         'He asked me what I said.'

Thus, while (13a) and (13b) are both main clauses, *Mu* Permutation applies only in (13a); (13c), corresponding to (13b), is ungrammatical. It would be a mere curiosity if this resulted from an arbitrary addition to *Mu* Permutation, a condition requiring that the element preceding *mu* not be a complementizer. That would be odd in two senses: one might well wonder, first, how such a condition on complementizers' presence could have arisen and, second, how a negative condition, requiring the *absence* of a category in a certain position, could be a legitimate condition on a structural description.

    Let us hypothesize, then, that this is the result of something more significant than merely a condition on rule (5). What is needed is precisely (2), the No-Complementizer Condition, which, as we have noted, will automatically apply to all root transformations, including of course (5).

3. Subject–Auxiliary Inversion in English

The well-studied rule of Subject–Auxiliary Inversion in standard English applies, though not exclusively, in direct questions introduced by a *wh*-word, as in (15). Although Subject–Aux Inversion will not apply in indirect questions (16) in standard English, it does apply to indirect questions in many popular dialects, as in (17).

  (15) a.   Where did John go?
       b.   Who should I ask?
  (16) a.   I asked her where John went.
       b.   She wondered who she should ask.
  (17) a.   I asked John where did he go.
       b.   He wondered who should she talk to.
       c.   I asked had Bill left already.

However, even speakers who accept indirect questions such as (17a–c) do not accept cases in which Subject–Aux Inversion has applied but a complementizer (*if*) has remained, as in (18).

  (18) *I asked if had Bill left already.

The ungrammaticality of (18) follows from the NCC, however, since *if* is a complementizer. If the dialect accepting (17a–c) is the more progressive one, we may hypothesize

that as the rule of interrogative Subject–Aux Inversion loses its arbitrary marking as a root rule, it nonetheless retains its mark for the NCC, which had been, in the earlier stage, a consequence of being marked for the Root Condition.

4. Subject–Clitic Inversion in French

Kayne (1972) proposed a rule of Subject–Clitic Inversion (SCI) for Modern French whose application, as we shall see, is governed by the NCC. The modern rule of Sub-ject–Clitic Inversion is the descendent of an earlier "inversion" of the subject in Old French. As Foulet (1919) notes,

> L'inversion du sujet est le grand fait qui domine la construction médiévale . . . (p. 307) De nos jours, l'inversion après quelques adverbes ou locutions adverbiales est un héritage de la vieille langue et tout ce qui reste d'une construction autrefois si répandue et si familière. (p. 315)[4]

SCI has a rather special effect, however, and one that is distinct from the earlier "inversion". (i) When the subject is a full NP, rather than a pronoun, the effect of SCI is not, strictly speaking, an inversion of the subject, but rather the placement of a pronominal (clitic) copy of the subject to the right of the first (and finite) verb, as in (19).

(19) Input: Jean a   mangé.
             John has eaten

     Output: Jean a-(t)-il mangé?
             John has-he eaten
             'Has John eaten?'

(ii) If the subject is itself a clitic pronoun, an identical pronoun appears to the right of the verb, and no subject appears to the left, as (20) illustrates.

(20) Input: Il a   mangé.
             he has eaten

     Output: A-t-il mangé?
             has-he eaten

This description should be taken as descriptive rather than theoretical; we shall discuss below the precise formulation of the structural change of SCI.

As Kayne (1972) emphasizes, it is crucial to distinguish between SCI and a rather different rule of subject inversion, one which Kayne calls *Stylistic Inversion*. This latter rule moves a full NP (nonpronominal) subject into the direct object position, and (unlike SCI) crucially does not affect pronominal subjects. See Goldsmith (1980) for an analysis of Stylistic Inversion within the framework proposed here.

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[4] 'Subject inversion dominates the medieval construction . . . inversion after certain adverbs or adverbial elements today is a heritage of the older language and the sole remainder of a construction once quite general and familiar.'

To all appearances, SCI is a rule that applies under quite specific conditions, and our primary concern here will be to determine what those conditions are. Perhaps the most common locus of its application is in direct "*wh*"-questions, as in (21a–c):

(21) a.   Comment puis-je vous aider?
          how   can-I   you help
     b.   Quand veux-tu   partir?
          when   want-you to-leave
     c.   Où   est-il   allé?
          where has (lit. 'is')-he gone

Such application of SCI is triggered by the presence of the sentence-initial *wh*-word in (21a–c); as Kayne notes, if the *wh*-word is not preposed, as in (22a–c), SCI is impossible.

(22) a.   Tu vas partir quand?
          you will leave when   (not an echo question)
     b.   *Vas-tu partir quand?
     c.   Quand vas-tu partir?

We also find SCI triggered by certain noninterrogative sentence-initial adverbs, such as *ainsi* (in the sense 'thus'), *peut-être* 'perhaps', *à peine* 'hardly', and certain others.

(23) a.   J'avais le dessus;   aussi le président a-t-il   renoncé.
          I had   the advantage thus the president had-he given-up
          'I had the advantage; thus, the president gave up.'
     b.   Peut-être les politiciens voulaient-ils cacher quelque-chose.
          perhaps   the politicians wanted-they to-hide something

There is something rather remarkable about the adverb *peut-être* in this respect, however. Not only may it appear in a context such as (23b); it may also be followed by *que* 'that', as in (24).

(24)   Peut-être que les politiciens voulaient cacher quelque-chose.
       perhaps   that the politicians wanted   to-hide something

(23b) and (24) mean precisely the same thing. Furthermore, the construction illustrated in (24) is not unique to *peut-être*; Grevisse (1964, §180) gives a list of 22 adverbs appearing with *que*, and the list is representative rather than exhaustive. It is worth noting, as well, that the appearance of quite a few adverbs in this construction is markedly "popular" or "familiar", rather than literary. *Peut-être* and *sans doute* are somewhat unusual in that they may either be followed by *que* (as in (24)) or not (as in (23b)).

Dubuisson and Goldsmith (1975) have noted the following effect: SCI applies when and only when *que* does *not* follow the sentence-initial sentential adverb. This generalization has two aspects. First of all, those adverbs like *heureusement* which cooccur with *que* will never trigger or permit SCI (cf. (25a,b)); second, *peut-être* and *sans doute* will trigger and permit SCI when and only when *que* is not present.
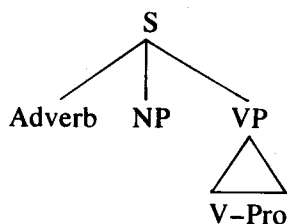
(25) a.   Heureusement que Jean a   mangé!
          fortunately   that John has eaten
          'Fortunately, John has eaten!'
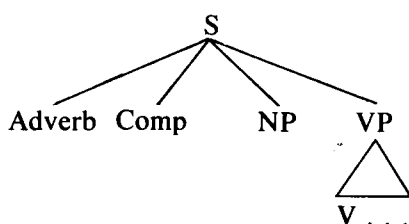   b.   *Heureusement que Jean a-t-il mangé!

The question now becomes acute: how are the constructions in (23b) and (24) (cf. (26a,b)) related? If (27a) represents (26a), does (27b) represent (26b)?

(26) a.   Adverb – NP – V – Pro . . . .
     b.   Adverb – *que* – NP V . . . .

(27) a.

```
              S
           /  |  \
     Adverb  NP   VP
                   /\
                  /  \
                 V–Pro
```

     b.

```
               S
          /  /  |  \
   Adverb Comp  NP  VP
                     /\
                    /  \
                   V . . .
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Tobler (cited in LeBidois and LeBidois (1967, §1668)) suggests that here "une proposition dépendente, introduite par *que*, se joint à une proposition principale incomplète, manquant de verbe" ('. . . a dependent clause, introduced by *que*, is attached to an incomplete matrix clause lacking a verb'). LeBidois and LeBidois note that, "en réalité, la 'proposition principale incomplète' se réduit à un simple adverbe; ce n'est donc qu'une proposition à l'état embryonnaire" ('In reality, the "incomplete matrix clause" is reduced to a single adverb; it is thus no more than a sentence in an embryonic state'). In generative terms, we might then propose another surface structure for (26b) in addition to (27b), namely (28).

(28)

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              S
           /     \
     Adverb       S
                /  |  \
              que  NP  VP
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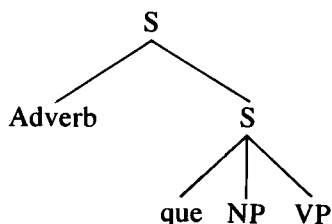
In §1669, LeBidois and LeBidois suggest that a structure like (28) may well be correct,

with *peut-être* in fact having an internal structure, as shown in (29), or with *il est* deleted in the *sans doute* construction, as in (30).

(29)

```
              S
           /     \
         NP       VP
               /   |   \
              V    VP    S
              |    |    /  \
            peut  être que NP VP
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(30)

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              S
           /     \
         NP       VP
          |     /   |   \
          |    V    PP    S
          |    |   / \   / \
          |    |  P   NP que NP VP
          |    |  |   |
         (il) (est) sans doute
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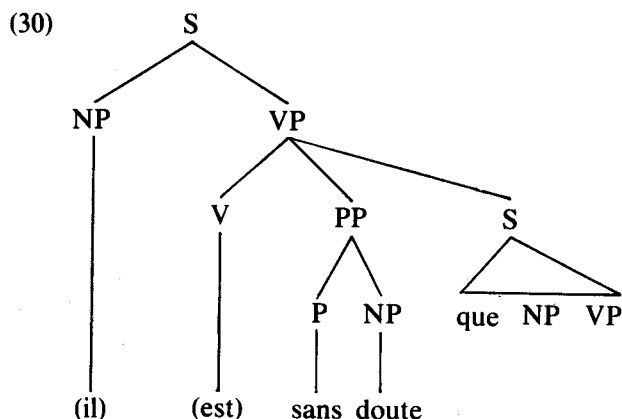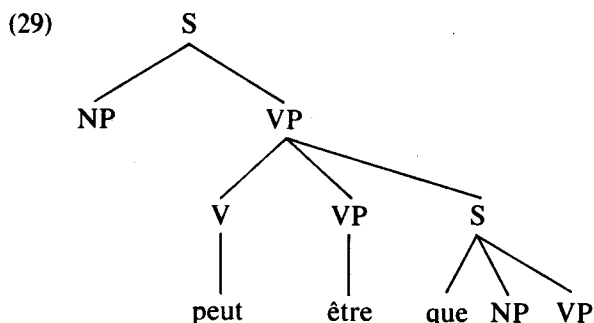
But no sooner do LeBidois and LeBidois consider this analysis than they turn to another, one which they clearly prefer. Noting precisely the complementarity between the appearance of the postadverbial *que* and SCI, they suggest that the *que* is utilized precisely to avoid inversion, which they suggest is not completely "populaire". They conclude (1967, 583),

> If this interpretation is correct, the *que* of this construction is no longer the conjunction serving to introduce the complement, but rather the "syntactic kingpin" which we have made frequent reference to . . . and which the modern language uses as frequently as it does the preposition *de*.

This seems in part correct and in part incorrect. We agree that the complementarity of the appearance of *que* and the application of SCI is a crucial observation, but from this it does *not* follow that the *que* that we observe here is distinct from the complementizer *que* found in *il pense que* . . . 'he thinks that . . .'.

In fact, the plausibility of alternatives such as (29) and (30), in which *peut-être* is essentially a VP and in which *sans doute* is the superficial remnant of a VP, is consid-

erably weakened by comparison with cases which are clearly of the form (29), such as those in (31a,b).

(31) a. Il se   peut que Jean soit   parti.
          it refl. can that John be (subjunctive) left
          'It is possible that John has left.'
    b. Il est possible que Jean soit   parti.
          it is   possible that John be (subjunctive) left
    c. *Il se   peut que Jean est   parti.
          it refl. can that John is (indicative) left
    d. *Il est possible que Jean est parti.

Verbal and adjectival predicates of possibility, such as those illustrated in (31), uniformly govern, or require, the subjunctive mood in their sentential complements, and all indications are that this is essentially notional, and not lexically idiosyncratic in any way. Nonetheless, constructions like (26) with *peut-être* consistently require a following sentence in the indicative, rather than the (ungrammatical) subjunctive. This suggests that the adverb *peut-être* does not govern the mood of the sentence as a higher matrix verb or adjective could, and thus supports (28) over (29) or (30).

On notional grounds, then, we may conclude with LeBidois and LeBidois (1967, 585):

> Inutile donc, s'il ne faut pas dire impossible, de voir une ellipse dans ces tours: aucun terme n'est à suppléer, et l'on est obligé de changer entièrement le tour initial si l'on veut présenter la phrase sous sa forme logique.[5]

Adopting the analysis (27a,b) for (26a,b), then, we may enunciate the reason why SCI may apply in (26a), (27a) and not in (26b), (27b) (that is, when *que* is present). The explanation is directly provided by the NCC. Just as the presence of *ka* blocks *Mu* Permutation in Igbo, as we observed in section 2, so *que* blocks SCI.

LeBidois and LeBidois note a fact that confirms the explanation that SCI is impossible in (26b) because of the presence of a "complementizer". While the notion of "complementizer" has been only loosely defined in the literature of linguistic theory to this point, there is agreement that *si* and *que* are both complementizers in French, just as their counterparts, *if* and *then*, are in English.

> Among the adverbs or expressions which can trigger inversion, there are two or three which can be followed not by *que* but by *si*: "À peine si les soldats avaient leurs armes" Flaubert, Sal. VI, 129; "C'est à peine s'ils sont fiancés, ils ont le temps!" Vildrac *La Brouille* I,1; "Tout au plus si un des lévriers remua la tête, et si l'enfant daigna tourner . . ." Daudet *C. du lundi* (cited by Soltmann, *Syntax der Modi*). In each of these examples, the omission of

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[5] 'It is useless, then, if not impossible, to view these constructions as elliptical: there is no term to fill in, and one would have to change the initial material entirely if one wanted to present the sentence in its logical form.'

si normally triggers inversion of the subject: "À peine les soldats avaient-ils leurs armes"; "Tout au plus un des lévriers leva-t-il la tête . . ." We see that the role of *si* is completely analogous to that of *que* in sentences of the type "Peut-être que . . ." . . .". (LeBidois and LeBidois (1967, 583))

Thus, the presence of either basic complementizer, *que* or *si*, is sufficient to block the application of SCI.

Another and rather different construction illustrates the effects of the NCC. In sentences like (32), an independent Adjective Phrase (AP) may display a complementizer *que* or not, and inversion occurs just in case the *que* is not present.

(32) a.   Son intérêt ne sera   pas suffisant, si   grand qu'il soit.
            his interest neg will be not enough   however great that it be
      b.   . . . , si   grand soit-il.
            however great be-it
      c.   . . . , *si grand que soit-il.

The structure of the *si grand qu'il soit* is shown in (33).

(33)
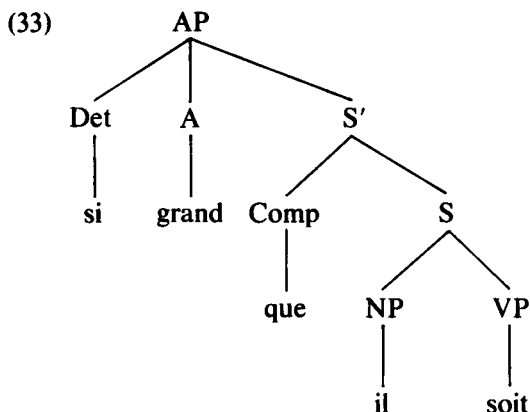
We may, in fact, note several other constructions where SCI is possible just in case the complementizer is deleted. First, as a paraphrase of a simple *si* clause:

(34) a.   Rentrait-il avant onze   heures du soir, elle l'attendait   dans le
            returned-he before eleven o'clock P.M.   she him-waited-for in   the
            vestibule.
            vestibule
            (Huysmans, *Là-Bas*, cited in LeBidois and LeBidois (1967, 31))
      b.   S' il rentrait avant onze   heures du soir, . . .
            if he returned before eleven o'clock P.M. . . . .
      c.   *Si rentrait-il avant onze heures . . .

Subject–clitic inversion can also indicate an exclamation of some intensity, as (35a) shows. (35a) is synonymous with (35b), though, as the NCC predicts, (35c) is impossible.

(35) a.   Est-elle   belle!
         is-she (ever) beautiful
     b.   Qu'elle est belle!
         that-she is   beautiful
     c. *Qu'est-elle belle!

Thus far, we have considered several phenomena in the grammar of standard French, and we have suggested that the complementarity of the appearance of a complementizer and the application of SCI results from the NCC on the rule, rather than from the specific formulation of SCI in standard French. Further, cross-dialectal studies suggest that the nonexistence of certain otherwise expected dialects can be explained by assuming that the NCC is a condition on the rule in all dialects.[6]

The phenomenon in question concerns the triggering of SCI by a simple class of *wh*-words, as in (21a–c). In standard French, as (21a–c) indicate, the *wh*-word is preposed and is not followed by the complementizers *que* or *si*. In many other dialects, however, such as Québécois, the preposed *wh*-word is followed by the complementizer *que* just as adverbs like *heureusement* are, and adverbs like *peut-être* may be.

Furthermore, we find that none of the dialects which *retain* a *que* contiguous to the *wh*-word permit SCI in such sentences, as (36a–c) illustrate (see, for example, Tuaillon (1975)). This is what the NCC predicts, if we take it as a principle of the theory (and hence universal), and we thus have a principled account for the "missing" dialect that would generate sentences such as (36a–c), alongside the widespread dialect type seen in (37a–c).

(36) a. *Comment que vas-tu?
        how   that go-you
     b. *Où   que Jean est-il allé?
         where that John is-he gone
     c. *Où   qu' est-il allé?
         where that is-he gone
(37) a. Comment que tu   vas?
        how   that you go?
     b. Où   que Jean est allé?
         where that John is gone
     c. Où   qu'il   est allé?
         where that-he is gone

A similar "missing dialect" argument can be constructed based on the behavior of parenthetical insertions. In addition to the standard form of an "incise" or parenthetical seen in (38a), we find forms such as (38b) and, interestingly enough, (38c). What we never find is the "hybrid" or intermediate dialect of (38d).

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[6] This assumption follows from the strongest version of the NCC, given in Goldsmith (1980), that is, that it is a condition on *all* transformations and not a rule-particular effect.

(38) a. Marie, a-t-il   dit, est de retour.
         Mary   has-he said is   back
     b. Marie, il a dit, est de retour.
     c. Marie, qu'il   a   dit, est chez elle.
         Mary   that-he has said is at-home
     d. *Marie, qu'a-t-il dit, est chez elle.

Once again, the "intermediate" dialect that would retain the complementizer *que* but permit SCI in the parenthetical is nonexistent.

We see, then, that several processes in French indicate the direct effects of the No-Complementizer Condition on the rule of Subject–Clitic Inversion. In the next section, we shall consider a recent challenge to this generalization.

5. Neuter Interrogatives in French

5.1. Que's Anomalous Behavior

The analysis of Subject–Clitic Inversion suggested in section 4 can be helpful in coming to grips with a number of syntactic problems in the analysis of French interrogatives. Dubuisson and Goldsmith (1975) have noted that alongside the expected dialectal variations (39a–c), the conceivable alternative (39d) does not in fact exist.

(39) a. Standard: Qui a-t-il   vu?
                    who has-he seen
     b. Popular: Qui qu(e) il a   vu?
                    who Comp he has seen
     c. Standard: Qu(e) a-t-il   vu?
                    what has-he seen
     d. Popular: *Que qu(e) il a vu?

Instead, the alternative popular form is *Quoi qu(e) il a vu?* Dubuisson and Goldsmith (1975, 108) comment on this unexpected "suppletion": "Nous n'avons pas ici un contre-exemple réel à l'alternance que l'on a vu, de la forme avec inversion du clitique sujet et de la forme sans inversion du clitique sujet, introduite par un complémentiseur. En effet la phrase est grammaticale si le mot WH est *qui* . . . mais ne l'est pas si le mot WH est *que* . . . ."[7] A better account for what seemed to be a counterexample to a predicted pattern of correspondences would have been to acknowledge that *quoi* is simply an allomorph of the interrogative pronoun in just the same way that *que* is.

Indeed, this is the traditional view, and one not seriously questioned until recently. In a series of extremely interesting publications, Obenauer (1976; 1977) has argued that the interrogative *que* in a sentence such as (39a) is in fact the complementizer, and not an interrogative pronoun. From the point of view of the NCC, such an analysis is

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[7] 'We do not have here a real counterexample to the alternation we have seen, of the form with subject–clitic inversion and the form without inversion of clitic subject introduced by a complementizer. Indeed, the sentence is grammatical if the *wh*-word is *qui* . . . but is not if the *wh*-word is *que* . . .'

untenable; no subject–clitic inversion could occur in a sentence headed by a comple-
mentizer. Obenauer's analysis thus represents an interesting and intricate challenge to
the proposal defended here. In this section, I shall argue that Obenauer's analysis is not
desirable on independent grounds, and indicate certain advantages that accrue from the
more traditional approach.

The "neuter" or inanimate interrogative pronouns in modern French display a
certain amount of allomorphy and even syntactic suppletion—or so the traditional ac-
count maintains, at least. By contrast, the animate interrogative is an invariant *qui*. The
relevant forms are summarized in table 1.

As table 1 illustrates, the particular form used for the neuter interrogative depends
on (a) whether the item is questioned from subject, object, or another (oblique) position;
(b) whether the question is direct or indirect; (c) whether the question is finite or non-
finite; and (d) whether the item questioned is (assumed to be) animate or inanimate. No
forms are given for the subject of a nonfinite question, of course, because by their nature
such forms do not exist (compare English *Why dress up to go to the opera?* with **Why
me dress up to go to the party?*).

I shall not discuss the fixed expressions *qu'est-ce que* and *qu'est-ce qui*; on these,
see Obenauer (1977). The main issues that an analysis of the neuter interrogative must
face are the following five.

Table 1

Finite Questions

Direct Questions	Subject	Object	Oblique
Animate	qui	qui	qui
Inanimate	(qu'est-ce qui)	(qu'est-ce que) or que*	quoi

Indirect Questions			
Animate	qui	qui	qui
Inanimate	ce qui	ce que	quoi

Nonfinite Questions

Direct Questions	Object	Oblique
Animate	qui	qui
Inanimate	que* (?quoi)	quoi

Indirect Questions		
Animate	qui	qui
Inanimate	quoi (??que)	quoi

The forms marked with an asterisk are clitic forms; see text. The forms marked with
question marks represent variation in the data; see Hirschbühler (1978) and text.

Q1: Why is there no regular nominative neuter interrogative form?

Q2: Why is the regular accusative interrogative form *que* subject to the condition that it be a clitic of the verb? That is, as Obenauer notes, *que* 'what' is unlike *qui* 'who' (and all other *wh*-words) in that *qui* need only be preposed to the left of the subject; *que* further imposes the condition that nothing intervene between it and the verb. This "cliticity" appears to have three subcases: (i) SCI must apply to remove a clitic subject from between the interrogative *que* and the verb (or its other, nonnominative clitics) (40a–d). (ii) The quite separate rule of Stylistic Inversion may apply, to the same end (41a–d). In both cases (i) and (ii), this rule application makes possible certain grammatical sentences. (iii) Parenthetical material is not permitted to intervene between *que* and the verb (though such material may follow *qui* or other *wh*-words); cf. (42a,b).

(40) a. Qui a-t-il vu?
         who has-he seen
     b. Popular: Qui il a   vu?
                   who he has seen
     c. Qu(e) a-t-il vu?
         what has-he seen
     d. **Qu(e) il a   vu?   (possible in no dialect)
         what he has seen
(41) a. Qui Jean voit-il?
         who John sees-he
         'Who does John see?'
     b. Popular: Qui Jean voit?
                   who John sees
     c. Que voit Jean?
         what sees John
         'What does John see?'
     d. **Que Jean voit? (possible in no dialect)
(42) a. Qui, à ton avis, a-t-il vu?
         who in your opinion has-he seen
     b. *Que, à ton avis, a-t-il vu?
         what in your opinion has-he seen

Q3: What principle governs the change in phonological shape in the alternation *que/quoi*?

Q4: Why is the indirect question form so different from the direct question form? That is, why is the *ce* necessary in *ce qui* and *ce que*? And why does *qui* have an inanimate reading here? Why, for example, is (43) an indirect question dealing with an animate subject, rather than being ambiguous between such a reading and the strictly inanimate reading in (44)?

(43) Il s'   est demandé qui a   fait ce bruit.
     he himself was asked   who has made that noise
     'He wondered who made that noise.'

(44) Il s'   est demandé ce qui a   fait   ce   bruit.
      he himself was asked   *ce qui* has made that noise
      'He wondered what made that noise.'

Similarly, why does (45) have only an animate reading, rather than being ambiguous between such a reading and the inanimate reading of (46)?

(45) Il s'   est demandé qui Jean a   vu.
      he himself was asked   who John has seen
      'He wondered who John saw.'
(46) Il s'   est demandé ce que Jean a   vu.
      he himself was asked   *ce que* John has seen
      'He wondered what John saw.'

Q5: Why is *quoi* generally the preferred interrogative form in indirect questions, whereas *que* is generally preferred in direct infinitival questions (though there is much variation in these data)?

5.2. *The Que-Comp Analysis*

Let us see how Obenauer's *Que-Comp analysis*, which analyzes the interrogative *que* as the complementizer *que*, answers these questions. The transformational rule crucial to the *Que*-Comp analysis is one called *Pas-de-Quoi*, which, as its name suggests, deletes *quoi* (the neuter interrogative word) when it has been placed in Comp-initial position by *Wh* Movement.

(47) *Pas-de-Quoi*

      [$_{Comp}$ quoi X ·   que]

            1   2 → φ 2

Thus, the derivation of a simple question might proceed as in (48), under the *Que*-Comp analysis.

(48)   que Jean mange quoi   underlying
      quoi que Jean mange   *Wh* Movement
      quoi que   mange Jean   Subject Postposing
          que   mange Jean   Pas-de-Quoi (47)

Although this derivation has produced a grammatical sentence, a question arises immediately regarding the presence of the complementizer *que*. Obenauer assumes that all sentences, including root Ss, are preceded by a Comp node—effectively a *que*, in most cases. This is surely correct; see Kayne (1974), Dubuisson and Goldsmith (1975), and Obenauer (1976). But in virtually all other root sentences the complementizer *que* deletes when it is sentence-initial; why has it not deleted in (48)?

This, Obenauer suggests, is because when Pas-de-Quoi deletes *quoi*, it leaves behind

a *wh*-feature in its place, so that when the *Que* Deletion rule ((i) of fn. 8) attempts to apply, the *que* is not sentence-initial.[8]

Q1: Obenauer's analysis gives no satisfactory account for the nonexistence of sentences such as **Que se passe?* or **Quoi se passe?* 'What's happening?', where a neuter subject is required.[9]

Q2: Curiously, Obenauer (1976) offers no account of the cliticity of the interrogative *que*—''curiously'', because it is suggested there that this is the second of the three major problems for the *Que*-Morph position (p. 100). In the absence of an account within the *Que*-Comp framework of the way in which the complementizer *que* becomes subject to the cliticity conditions mentioned above, such facts pose equally serious problems for the *Que*-Comp approach.

Q3: The *que/quoi* alternation is not one of allomorphy under the *Que*-Comp analysis. *Que* is the superficial alternative to *quoi* simply because *que* is the phonological form of the complementizer. The fact that the vocalic alternation (orthographic) *oi/e* of *quoi/que* parallels that of other pronouns, such as *moi/me*, has no synchronic status under the *Que*-Comp analysis.

Q4: In analyzing the problematic nominative and accusative inanimate indirect questions, Obenauer recognizes that his analysis predicts that such sentences as (49)–(50) should be grammatical, as (51) illustrates.

(49) *Je me demande que   se passe.
     I   me ask   Comp happens
     'I wonder what is happening.'

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[8] Leaving behind such a *wh*-feature is an unusual, and otherwise unmotivated, property for the *Que* Deletion rule to have; it is not clear why a feature, not being a terminal element, would block the string from meeting the structural description of the *Que* Deletion rule (i).

(i) [$_{S'}$ que
                     (root S only)
     1   →   φ

A more natural alternative for the *Que*-Comp approach would seem to be to order *Que* Deletion before Pas-de-Quoi, in a counterfeeding order, an alternative Obenauer does not discuss. This approach, however, requires extrinsically ordering a root rule (i) before a nonroot rule, something which is required in no other cases, to my knowledge. Obenauer assumes, as well, that Pas-de-Quoi precedes and bleeds the (nonroot) rule of Standard French (ii) that deletes *que* after a *wh*-word.

(ii) [$_{Comp}$ X + wh que]

     1   2 → 1   φ

To my knowledge, the most natural formulation of rule (ii)—required on anyone's account of French—is one in which the *que*-deletion is triggered by the [+ wh] feature in the preceding item; we would not want to have to specify all the various words which may trigger (ii). But then, if Pas-de-Quoi leaves behind a [+ wh] feature which blocks the application of (i), that [+ wh] feature should trigger the application of (ii), so that the final line of derivation (48) is not the (grammatical) *Que mange Jean?* but rather the (ungrammatical) **Mange Jean?*

[9] 'I must leave this question open, recalling that the problem of the nonembedded subject exists equally for the *Quoi*-morph hypothesis which must either exclude ad hoc subjects changed into *que* or else mark as ungrammatical sequences beginning with *quoi* . . . this problem still awaits a solution' (translated from Obenauer (1976, 111)).

(50) *Je me demande que   Jean voit.
     I me ask   Comp John sees
     'I wonder what John sees.'

(51) je me demande   que quoi se passe   underlying form
     je me demande quoi que   se passe   *Wh* Movement
     je me demande   que   se passe   Pas-de-Quoi

But rather than trying to derive the grammatical *Je me demande ce qui se passe* and *Je me demande ce que Jean voit* from the forms in (49) and (50), Obenauer proposes that the ungrammaticality of (50) be attributed to a larger generalization concerning certain embedded *que*s. He observes that there are five constructions in French where one might, all other things being equal, expect to find *que* at the beginning of an embedded sentence. However, not all five can, in fact, be found there:

(i) First of all, in the embedded interrogatives we have been considering, subordinate clause-initial *que* is not possible.

(ii) Free relatives present a similar constraint. While we find (52a), the corresponding inanimate is not possible (52b); instead, (52c) is found.

(52) a.   Jean regarde qui il veut regarder.
         John looks-at who he wants to-look-at
    b. *Jean regarde que/quoi il veut regarder.
         John looks-at what   he wants to-look-at
    c.   Jean regarde ce qu(e) il veut regarder.
         John looks-at *ce que*   he wants to-look-at

(iii) While one can exclaim (53), such exclamatives cannot be embedded; again, *ce* is necessary, or some other paraphrase.

(53) a.   Que cette fille est belle!
         that that girl is pretty
         'How pretty that girl is!'
    b. *C'est incroyable qu'elle est belle.
         'It is incredible how beautiful she is.'
    c.   C'est incroyable ce qu'elle est belle.
         it-is   incredible 'how' she is beautiful

(iv) On the other hand, *que* may perfectly well introduce embedded sentences as the complements to nouns, verbs, and various noncomplement but embedded sentences:

(54) a.   Le fait que le monde soit rond ne m'intéresse point.
         the fact that the world is   round neg me-interest not
    b.   Mon père m'a   dit que le monde est plat.
         my father me-has told that the world is flat
    c.   Que ce soit vrai ou faux, j'aimerais   bien le croire.
         that this be true or false I-would-like well it to-believe

(v) Similarly, *que* may introduce relative clauses, as in (55), as may its allomorph *qui*, as in (56). As noted above, this was convincingly argued by Kayne (1974), and it is accepted by Obenauer. A rule (dubbed *Mas-que-rade* by F. R. Higgins) selects the *qui* allomorph before a verb (57) (mention of a trace left by *Wh* Movement may be necessary in (57) where (*t*) is noted in the rule).

(56) l'homme que Jean a   rencontré au   bureau
      the-man that John has met   at-the office

(56) l'homme qui est dans le   bureau
      the-man who is in   the office

(57) *Mas-*que-*rade*
$$\begin{bmatrix} \text{QUE} \\ \text{Complementizer} \end{bmatrix} \rightarrow /ki/ \; / \underline{\hspace{1cm}} (t) \; V$$

In sum, of the five cases where one might expect to find a subordinate clause-initial *que*, three are not found and two are. Obenauer summarizes these observations as follows (1976, 130):

(58) In a structure

$$_{S'}[\ldots \;_{S'}[\text{que} \ldots] \ldots]$$

where there exists no possible antecedent of *que*, the interpretation can only be that of neutral embedding.[10]

Let us accept this condition for a moment as the explanation for the ungrammaticality of cases (i)–(iii) above. Obenauer suggests that if (58) is the correct explanation, then that fact provides an argument that (i) the *que* of the embedded interrogative, (ii) the *que* of the free relative, and (iii) the exclamative *que* are the same grammatical element. For example, Obenauer says, "Consider, however, going past the observation that the three *que*s behave in an identical manner with regard to embedding, the hypothesis that this results precisely from the fact that they are one single element with respect to whatever condition it is that excludes the three cases." As Hirschbühler (1978) points out, however, *any* analysis of the origin of the various *que*s is compatible with Obenauer's filter approach, for all the various relevant *que*s will have been placed in Comp (as filter (58) requires) by the time the filter is applicable. Filter (58) as such, then, with no further complication, says nothing about the various *que*s having the same syntactic origin. Thus, if we adopt filter (58), the parallels among the exclamative, the free relative, and the embedded interrogative ultimately tell us nothing about the parallel or lack of parallel of the *que*s involved. On the other hand, (58) seems highly suspicious, for two reasons.

First, (58) arbitrarily bifurcates the five possible uses of subordinate French *que* into two classes: the good and the bad. What we have called types (iv) and (v) above are "good", i.e. grammatical; all others are ungrammatical. This explains nothing; worse

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[10] "Dans une structure . . . où il n'existe pas d'antécédent possible de *que*, l'interprétation ne peut être que celle de l'enchâssement neutre."

yet, no defining characteristics are given for types (iv) and (v). Type (iv), where *que* acts like the traditional relative pronoun, is defined as the case where "*que* has a possible antecedent"; but, as Obenauer continues in a footnote, "the notion of possible antecedent remains to be formalized." It seems, rather, that accepting Kayne's analysis of relative *que* precludes the possibility that relative *que* has an antecedent, since *que* is precisely not a relative pronoun.

Similarly, what is "neutral embedding"? Is there something that all three cases in (54) (and other grammatical uses of *que*) have in common that can be explicitly defined? In the absence of a positive proposal, it is difficult to see what such a definition would be.

But the second problem with filter (58) is more serious. As Obenauer notes, (58) is not simply a surface filter like those proposed, for example, in Chomsky and Lasnik (1977). It is, in fact, a derivational constraint (or, depending on the definition of "possible antecedent", a transderivational constraint) relating the surface structure to one or more levels of the semantic interpretation. Such a derivational constraint should certainly not be permitted within a syntactic theory; we shall argue that, indeed, it need not be.

So far we have considered Obenauer's account of how to exclude such forms as (50); how, then, would such an analysis derive the corresponding grammatical forms with *ce qui, ce que*? Obenauer suggests that these constructions are in fact syntactically free relatives with the semantic interpretation of embedded questions, where *ce* represents the determiner of a lexically empty NP-head.

Q5: The data concerning the variation between *que* and *quoi* in direct and indirect infinitival questions are quite complex; see Hirschbühler (1978) and references cited there for a fuller discussion. Obenauer suggests the following major generalizations: *que* appears regularly with direct infinitival questions and in some (more or less frozen) indirect infinitival forms (*je ne sais que* + infinitive); *quoi* appears otherwise with embedded infinitival questions.

To account for the occurrence of *quoi* in such embedded questions as (59), Obenauer points out that the complementizer *que* is specifically mentioned in the formulation of the rule Pas-de-Quoi (47).

(59) Je lui ai   demandé quoi faire avec ses valises.
     I him have asked   what to-do with his bags

The complementizer *que* is not compatible with infinitives, however, as noted in Kayne (1974). Thus, *que* will not be present in front of the infinitive in (59), and *quoi* in turn will not be deleted by Pas-de-Quoi.

However, since *quoi* is not (necessarily) present in the parallel direct question (60), by parity of reasoning the complementizer *que* must be present in order to trigger the deletion of the interrogative *quoi*.

(60) Que faire avec ma vie?
     what to-do with my life

Thus, Obenauer is forced to give up Kayne's generalization regarding the incompatibility of *que* and infinitives, and ultimately to adopt the position that *que* and the infinitive can cooccur only in nonembedded contexts. However, this is just another way of restating the facts, and does not account for them on the basis of independent principles or observations. In fact, it violates (in nonembedded contexts) what is otherwise a well-founded generalization about French, that is, that the complementizer *que* does not cooccur with infinitives.

In summary, the *Que*-Comp analysis provides no account for Q1 and Q2, an empirically adequate account for Q3, an extremely dubious account for Q4, and a dubious account for Q5.

5.3. *The* Que-*Morph Analysis*

The "*Que*-Morph" account that we shall offer for the neuter interrogative in French is based on the following assumptions:

(A) The No-Complementizer Condition obtains.

(B) *Quoi* plays a role in the morphology of French parallel to that of the other pronouns such as *moi, toi,* etc. In particular, the paradigm for such pronouns includes a nominative form, a strong form, and a weak or clitic form. *Quoi* is unpredictably defective in its paradigm in having no nominative form.

(C) There is a rule in French syntax that inserts *ce* under an otherwise empty NP which dominates an S beginning with the complementizer *que* (62).

(61)
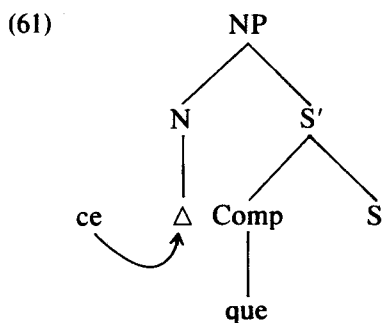
(62) $[_{NP}$ e $[_{S', +finite}$ X$]]$
             1   2 $\rightarrow$ ce 2

Whether *ce* is inserted into the head N position, as (61) suggests, or in a determiner position, or elsewhere, is irrelevant for our purposes.

Rather than giving a lengthy account of each of these assumptions immediately, let us consider the five above-mentioned peculiarities of *que*'s behavior, filling in the details of the *Que*-Morph approach as they become relevant.

Q1: Why is there no regular nominative interrogative form? On the assumption that *quoi* is morphologically a member of the category Pronoun, we would expect its paradigm to parallel that of such pronouns as *moi, toi, lui,* etc. Among these pronouns, as table 2 indicates, we find a nominative form, a strong form used before double word boundaries (##), and a weak or clitic form. (Third person animate pronouns also have a dative clitic form, but this is irrelevant for our purposes, since *quoi* is inanimate.) The point in the paradigm in table 2 marked *** has no entry; this accounts for the absence of a normal neuter interrogative in subject position.

This analysis of the exceptional nature of *quoi* makes sense of some exceptions to the exceptions, so to speak. First, although there is normally no nominative interrogative pronoun, the strong form *quoi* may actually be used if the subject is stressed, as in (63).

(63)   *Quoi* a explosé?
       '*What* has exploded?'

But such an exceptional usage is precisely parallel to the use of the strong form of the third person pronouns in subject position when stressed: if the subject is stressed, (64) has the paraphrase (65). (See the appendix for further discussion of this topic.)

(64)   Il a mangé le gâteau tout seul.
       'He has eaten the cake all alone.'
(65)   *Lui* a mangé le gâteau tout seul?!
       '*He* has eaten the cake all alone?!'

Second, the strong form of the personal pronouns is used in subject position, rather than the normal nominative form, when the pronoun is part of a coordination. Thus, (66b) is used rather than (66a).

(66) a.   *Jean et il sont allés à l'école.
          'John and he are gone to school.'
     b.   Jean et lui sont allés à l'école.
          (same)

Table 2

	Nom.	*Strong*	*Weak (Acc./Dat.)*
1 sing.	je	moi	me
2 sing.	tu	toi	te
3 sing. masc.	il	lui	le/lui
3 sing. fem.	elle	elle	la/lui
3 sing. neut. inter.	***	quoi	que

In parallel fashion, *quoi* may and must be used in a coordination, as Obenauer notes:

(67)   Qui ou $\begin{Bmatrix} \text{quoi} \\ \text{*que} \end{Bmatrix}$ vous a   fait   penser cela?

who or   what   you   has made think   that

'Who or what made you think that?'

Third, by saying that *quoi*'s exceptionality is the result of a defective paradigm, we sharply delimit the kinds of exceptionality we expect to find. We would predict, for example, that no dialect could exist that was parallel to standard French but in which there was no *direct object* form of the neuter interrogative, because direct objects do not correspond to a unitary point in the paradigm of French neuter pronouns.

Q2: Why is the regular accusative interrogative form *que* subject to the condition that it be a clitic of the verb? On the analysis proposed here, *que* (like *me, te,* etc.) is not an accusative form, but rather *is* the clitic form. It is therefore not surprising, but in fact predicted, that it has properties that closely resemble those of the other pronominal clitics of French.

Let us assume that the choice of which inflected form of a noun, verb, etc., is appropriate in a sentence is assigned by the syntactic component; in fact, we need only assume for our purposes that such a choice *can* be made by the syntactic component. Furthermore, we shall adopt the main points of Perlmutter's (1971) proposal concerning the treatment of clitics. The notion of clitic is therefore part of the vocabulary of linguistic theory, and furthermore may be used to specify certain inflected forms of a lexical item. In the case at hand, what we have up to now called the "weak" forms are the clitic forms.

We propose that *quoi*, the syntactic formative moved into Comp by *Wh* Movement, is marked with the feature [+ clitic] by a root rule (68).

$$(68) \quad \begin{bmatrix} \begin{bmatrix} +\text{pro} \\ +\text{interrogative} \\ -\text{animate} \end{bmatrix} & X \end{bmatrix}_{\text{Comp}}$$

$$\qquad\qquad 1 \qquad\qquad\qquad 2 \quad \rightarrow \quad \begin{bmatrix} 1 \\ +\text{clitic} \end{bmatrix} 2$$

Within the framework proposed by Perlmutter (1971), all clitics are matched against a linear schema or template at the output of the syntax. This schema represents a string of contiguous morphemes, not necessarily a syntactic constituent. The leftmost "slot" in this template is that of the interrogative pronoun. It therefore follows that no nonclitic element could intervene between the interrogative pronoun (now marked [+ clitic]) and the sequence of clitics on the verb. This accounts immediately for two of the three clitic properties of *que* noted above: neither an NP subject nor a parenthetical item may occur immediately after the interrogative *que* (cf. (41)–(42)). One question remains: why must Subject–Clitic Inversion occur with the interrogative *que*? That is, since subject pronouns are themselves clitics (cf. Kayne (1975)) and the analysis of Perlmutter's that we

(71) Je me demande à quoi Marie pense.
      I me ask   to what Mary thinks
      'I wonder what Mary is thinking about.'

These facts suggest the following questions:

(i) What is the grammatical status of the *que* in *ce que* and the *qui* of *ce qui*? Answer: They are the complementizer *que*, with its allomorph *qui* (cf. Mas-*que*-rade (57) above). Rule (57) accounts for the allomorphy as well as the "negative" fact that neither *que* nor *qui* is a clitic in this construction. This follows, of course, from the fact that the complementizer is never a clitic.

(ii) What is the origin of the *ce*? Why is it obligatorily present in (44) but not, for example, in (71)? Answer: The syntax of French independently requires a rule of *Ce* Insertion within the VP into any otherwise empty NP which exhaustively dominates an S beginning with the complementizer *que* (see (62)). Such a rule is needed to account for the kind of alternation shown in (72) (see Grevisse (1964, 975, 999)), illustrating a complement construction in which there is clearly no free relative involved, since there has been no extraction of any kind.

(72) a. Je m'attends à ce que Jean le fasse.
          I me-expect to *ce* that John it do-subjunctive
          'I expect John to do it.'
     b. Je m'attends à le faire.
          I me-expect to it do-infinitive
          'I expect to do it.'

Quite generally, where the NP node dominating an S can be motivated (as by the presence of a preceding preposition—here, *à* or *de*), *ce* must be inserted when the embedded sentence begins with the complementizer *que*; in these cases, this is where Equi has not applied.

Returning to the indirect interrogative construction, if the *que* and *qui* are complementizers, as we have just suggested in (i), then *Ce* Insertion (62) will automatically insert *ce* in the correct position if the indirect question is in fact dominated by an NP-node. We will return to the motivation for this latter assumption shortly.

(iii) Finally, if the *que* and the *qui* are forms of the complementizer, what has happened to the interrogative pronoun *quoi*? We might account for its absence with a rule whose formal effects are reminiscent of Obenauer's Pas-de-Quoi, but whose role in the grammar would be entirely different, a rule (73) which deletes Comp-initial (interrogative) *quoi* in embedded sentences.

(73) $[_{S'} X [_{S'} [_{Comp} \cdot quoi \cdot W] Y] Z]$

$$
\begin{array}{ccc}
1 & 2 & 3 \rightarrow \\
1 & \phi & 3
\end{array}
$$

Such a straightforward approach leaves several questions open and also violates two

otherwise strong linguistic principles. First, it leaves unstated the relation of this *Quoi* Deletion to what is otherwise an identical transformation of Relative Pronoun Deletion motivated in Kayne (1974), (74).

$$(74) \quad \left[_{Comp} \quad \begin{bmatrix} +pro \\ -wh \end{bmatrix} \quad X \right]$$

$$\begin{array}{cc} 1 & 2 \rightarrow \\ \phi & 2 \end{array}$$

Second, unless further complicated, (73) would wrongly delete the *quoi* in embedded infinitival questions. (In a similar position, Obenauer complicates his rule of Pas-de-Quoi by adding *que* to the structural description, as we have seen; but this leads to certain problems, as we have also seen.) Third, (73) is an "antiroot" rule—that is, one applying only in embedded clauses, something I take to be ruled out on theoretical grounds. Fourth, (73) violates the general observation (noted, for example, by Chomsky and Lasnik (1977)) that relative pronouns in many languages (including, of course, both French and English) are often deleted, but interrogative pronouns are not.

Thus, the single part of French syntax which appears to violate this general principle of nondeletability of interrogative pronouns is a small fragment whose behavior otherwise parallels the syntax of relative clauses, in that the obligatorily present *ce* indicates the presence of the superordinate NP, and the complementizer *que* remains on the surface. What is more, the deletion of the interrogative pronoun takes place precisely where the grammar of French contains a rule that deletes relative pronouns.
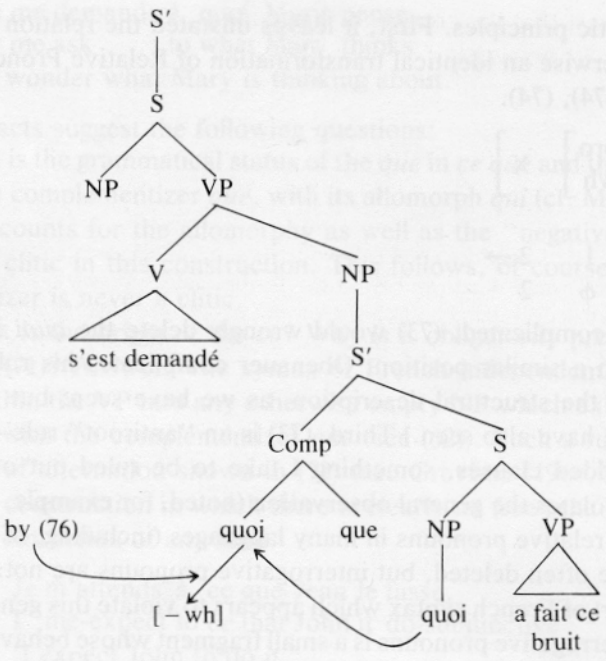
Thus, the single peculiarity of the indirect neuter interrogative system can be analyzed as a rule which changes the inflectional category of the interrogative *quoi* into a [−wh], or relative, pronoun. Such a rule does not delete the interrogative pronoun, and thus does not violate the cross-linguistic observation; the interrogative-turned-relative pronoun is then deleted by the independently necessary rule (74). Under this analysis, the derivation of a form like (44) would proceed as shown on the next page in (75).

Let us summarize at this point. Of the five rules illustrated in derivation (75), two were independently formulated by Kayne, (57) and (74); another is independently motivated, (62); and *Wh* Movement, the first, is uncontroversial. The only rule particular to the construction is the feature-marking rule (76), whose formal character is simple and unexceptionable. (Alternatively, if (74) is restricted to embedded contexts, and if the "[−wh]" feature in (74) is simply dropped from the rule, then rule (76) can be dispensed with entirely.)
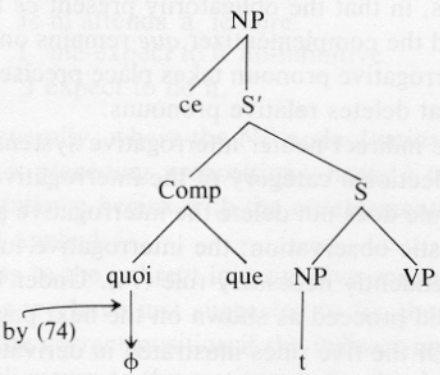
$$(76) \quad \left[_{NP} \quad \begin{bmatrix} +pro \\ -animate \end{bmatrix} \quad X \right]$$

$$1 \qquad 2 \rightarrow \begin{bmatrix} 1 \\ -wh \end{bmatrix} 2$$

(75) a.

S'

S

NP   VP

V   NP

s'est demandé   S'

Comp   S

by (76)→   quoi   que   NP   VP

[−wh]

quoi   a fait ce
bruit

b.

NP

ce   S'

Comp   S

quoi   que   NP   VP

by (74)

φ

t

c.
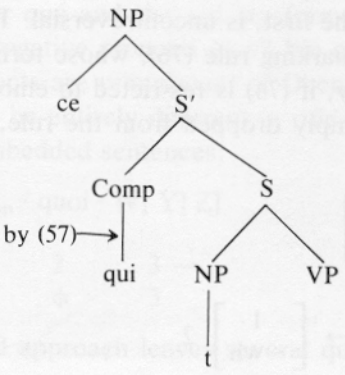
NP

ce   S'
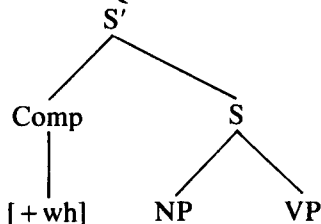
Comp   S

by (57)→   qui   NP   VP

t

I would like to suggest that the change illustrated in (75) and (76) is itself in fact the result of another rule, a "tree-grafting" rule in the sense of Clements (1975). As noted above, and as the historical study of French clearly demonstrates, the indirect question system has come to "mimic" the free relative system. In a striking way, then, the question arises—though not for the first time—how such notions of analogy are to be dealt with in a generative framework. As Clements (1975, 5) notes,
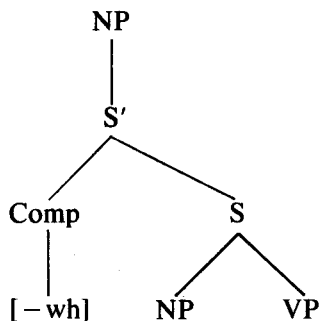
> Any well-defined theory of analogy should be able to state under precisely what conditions an "analogical process" may occur and what the formal nature of such a process may be. Clearly, no such theory is yet available, as very few putative cases have as yet been examined. . . . it nevertheless appears that some principle of analogy is needed to account for certain processes in Ewe syntax, morphology, and phonology. Without such a principle, these processes remain totally without explanation under current theories of grammar. What appears to be happening is that an analogical syntactic process, not characterizable in terms of present theory, superimposes further structure on the structures generated by the normal rules of the grammar. Its effect is to recategorize a structure S_1 as the genetically quite distinct structure S_2.

As a more general account of syntactic analogy, Clements's proposal appears to be precisely what is needed for the case at hand. (77a,b) illustrate the change-over under discussion, from both a historical and a synchronic point of view:

(77) a. Indirect Question

```
            S'
          /    \
      Comp       S
        |      /   \
     [+wh]   NP     VP
```

b. Free Relative

```
         NP
          |
         S'
       /    \
   Comp       S
     |      /   \
  [-wh]   NP     VP
```

The synchronic formulation of this process of analogical change will be, precisely as Clements predicts, a "tree-grafting", or node-insertion, as formalized in (78).

(78) $[_{S'} \langle P \rangle_a + \text{pro } X]$

                        1   → $[_{NP} 1]$

Condition: if a, then rule is optional

(It is worth noting, too, that there is no *principled* basis for the general climate of disapproval for structure-building rules of the sort Clements proposes, as opposed, say, to the use of global rules.)

Q5: Why is *quoi* generally the preferred interrogative in indirect infinitival questions, whereas *que* is generally preferred in direct infinitival questions? (As noted above, Hirschbühler (1978) discusses various problems concerning this generalization, mentioned in Obenauer (1976).)

Given that *Quoi* Cliticization (68) is a root rule, this alternation follows automatically. It cannot apply in embedded clauses, and the strong form appears whether *quoi* is preposed into Comp or not (see appendix).

There is an independent reason for viewing *Quoi* Cliticization as a root rule. If it is, then the NCC is in effect, and in those dialects where the complementizer *que* does not delete after preposed *wh*-words, we would expect to find the strong form *quoi*. This is, in fact, precisely what we do find:

(79)   Quoi qu'il   a   donc, notre maître?
       what that-he has then   our   master
       (Balzac, cited by Nyrop)
       'What is our master's problem, then?'

To my knowledge, no dialect permits the corresponding ***Que qu'il a donc?*

5.4. Summary of the French Neuter Interrogative System

We have compared the *Que*-Morph and the *Que*-Comp analyses of this system in some detail, and I would argue that in none of the cases is the *Que*-Comp analysis superior. By contrast, the *Que*-Morph analysis is superior in at least the following respects:

(a) It is consistent with the No-Complementizer Condition.

(b) It makes no appeal to blocking transformational rules with (otherwise ad hoc) nonterminal features.

(c) It makes no appeal to derivational constraints.

(d) It provides an account of the cliticity of the interrogative *que*.

(e) It provides an account of the details of the general, but not total, lack of a nominative interrogative form.

(f) To the extent that the data are clear, it permits a theoretically simple account of the difference between embedded and nonembedded infinitival questions.

6. Conclusion

In this article, I have attempted to defend the No-Complementizer Condition stated in (2), a binary condition that may be placed on syntactic transformations. We have seen

the value of such a condition in several examples, and examined its consequences for French syntax in some detail. In recent and forthcoming work, I hope to show how these apparent restrictions on the application of transformations can be derived from more general principles governing the interaction of transformations that modify structure and the complementizer specification, or "signature" (see especially Goldsmith (1981a)).

Appendix

Above and beyond noting that the pronoun *quoi/que* may appear in its strong form under stress in subject position like other third person pronouns, we may wonder why the strong *quoi* does not necessarily move into Comp and undergo the rules that will reduce it to a clitic form. Whatever the explanation is, we may note that such an account must independently be given for cases where an (exceptional) strong form occurs in object position under stress; *quoi*, similarly, remains in its underlying position without being displaced by *Wh* Movement (80). In this sense, *Wh* Movement must be optional (unlike Clitic Placement, for example; cf. (80b)).

(80) a.   Il a   fait QUOI?!
            he has done what
            'He did what?!'
      b. *Il a   vu LUI?!
            he has seen HIM
            'He saw HIM?!'

We shall assume, therefore, that *Wh* Movement is optional. Similarly, we assume that a special rule marks certain subject forms for the strong inflectional form, which bleeds the rule (81) of Nominative Case Assignment. Furthermore, a form marked by this special "stressing" rule may not then undergo cliticization; that is, rule (68) may not apply to such marked forms, because a form marked [+strong] and [+clitic] is inherently contradictory (in the sense that there is no lexical entry simultaneously including both markings). Thus, a form marked [+strong] in subject position *cannot* be moved into Comp in a main clause, because (68) would mark it [+clitic] as well.

$$(81)\quad \begin{bmatrix} u & case \\ + & pro \end{bmatrix}\quad V$$

$$\qquad\qquad 1\qquad 2 \rightarrow \begin{bmatrix} 1 \\ +\text{nominative} \end{bmatrix} 2$$

Obenauer notes that his analysis appears to predict that it should be possible to question an inanimate item from the subject of an embedded clause, generating such forms as (82) by the process illustrated in (83).

(82)   Que crois-tu qui s'est passé?
       what think-you that refl-is happened
       'What do you think happened?'

(83)
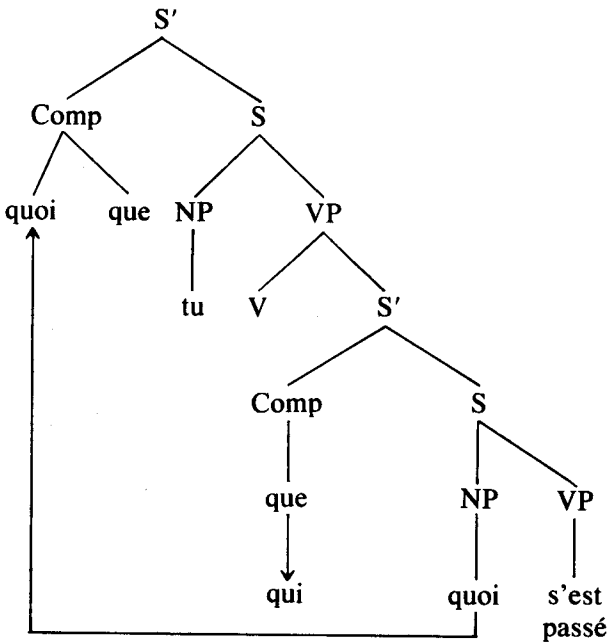
But in fact, such constructions have a rather marginal status in French, and most such sentences can also be analyzed as having undergone the effects of "indefinite *il*-extraposition", under which account (82) is actually a misspelling of (84).

(84)   Que crois-tu qu'i(l) s'est passé?
       (cf. Il s'est passé une chose ahurissante.
        'An astonishing thing happened.')

While a full study of this construction would go well beyond the space available here, a brief discussion is in order. It is not clear that Obenauer's analysis does in fact generate any such sentences. Filter (58) apparently is not supposed to rule them out, but whether this is because the lower complementizer *qui* has the higher complementizer as an antecedent (a conceptually odd possibility), or because the *qui* present in the lower complement does not trigger (58), is not clear. Obenauer may well be assuming (as Chomsky and Lasnik (1977) do) that the *qui* triggered by (57) is syntactically different from the complementizer *que*. This is by no means obvious within the present framework; the choice of the allomorph /ki/ in the environment specified in (57) does not need to take into account any difference in the feature specification of the complementizer formative.
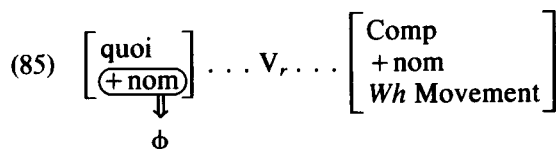
If Obenauer's account, with filter (58), does not generate these sentences, then the one argument he claims most clearly supports his position does not in fact do so. On our account, however, we may indicate those exceptional verbs that permit *que*-raising (to the extent that such verbs do in fact exist), as in (85).

Table 3

	Wh Movement to Comp?	Pronoun marked: +Nom	+Strong
Main Clause	Yes	**	**
	No	*	OK
Embedded Clause	Yes	OK (deletes)	OK (deletes)
	No	*	OK

* = no such form exists morphologically
** = marked for contradictory values

$$(85) \quad \begin{bmatrix} \text{quoi} \\ \underline{(+\text{nom})} \end{bmatrix} \dots V_r \dots \begin{bmatrix} \text{Comp} \\ +\text{nom} \\ Wh \text{ Movement} \end{bmatrix}$$
$$\Downarrow$$
$$\phi$$

That is, in this particular context, the moved *que* loses its nominative marking, in the context of these *r*-verbs, and thus may successfully be marked [+clitic].

I summarize the history and fate of the subject *quoi*s marked in various ways above in table 3. As indicated elsewhere, I assume that the syntax may mark a formative for its inflectional form, and that if a form that requires inflection is not marked in this way, the morphology is ill-formed. Further, as we have seen, subject pronouns can be marked either [+nominative] or [+strong].

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