ON THE STATUS OF SPEC OF IP[*]

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0. Introduction

In this paper I will discuss two recent proposals which have been made in the literature and show that when they are combined, some very surprising, but apparently correct, conclusions follow. The first proposal is from Kuroda (1988), who argues that in languages like English, the null [+wh] C must agree (abstractly) with its SPEC. This is what forces a wh-phrase to move into SPEC of CP in English, because only then will the agreement requirement be satisfied. In languages like Japanese and Chinese, the null [+wh] C does not need to agree, so the wh-phrase does not move.

The second proposal concerns the typology of C-agreement systems in Rizzi (1990). Rizzi claims that, in effect, a head may agree with its SPEC, with the SPEC of its complement, or with both. These three types of agreement systems are in fact attested overtly within the domain of CP. In the Bantu language Kinande, C agrees with its SPEC, in Bavarian German C agrees with SPEC of IP, and in French, the complementizer qui agrees both with SPEC of CP and SPEC of IP in his analysis.

By juxtaposing Kuroda's and Rizzi's proposals, we reach a very straightforward conclusion. If wh-phrases move in order to satisfy the agreement requirement of C, as in Kuroda (1988), and if there are three types of agreement systems within CP, as in Rizzi (1990), we then predict the existence of three types of wh-movement, as in (1).

(1)a. movement into SPEC of CP
   b. movement into SPEC of IP
   c. movement into both SPEC of IP and SPEC of CP

Now of course there is nothing novel in saying that wh-movement as in (1a) exists. This is the standard case of wh-movement in English and many other

languages. The interesting predictions are the ones in (1b) and (1c), since they both involve <u>wh</u>-movement into SPEC of IP. One might think that this type of movement would be prohibited for independent reasons. SPEC of IP is traditionally taken to be an A-position, after all, and thus should not be a possible landing site for <u>wh</u>-movement. However, given the VP-internal subject hypothesis of Kuroda (1988), Koopman and Sportiche (1988), and others, SPEC of IP is always a Θ-bar position, and there is thus no immediate reason why it could not be an A-bar position as well. This point is adopted explicitly by Diesing (1990) in her analysis of Yiddish. I will argue here that this is correct: SPEC of IP can be an A-bar position, but languages will differ as to whether it is the final landing site for <u>wh</u> or just an intermediate step.

1. Wh-movement into SPEC of IP

Let us now take (1b) and (1c) in turn. Regarding (1b), are there examples of <u>wh</u>-movement into SPEC of IP? It appears that there are. Finer (1991) argues that in Selayarese, the underlying word order is VOS but that subjects may be fronted to a pre-verbal position. This fronting is not possible when <u>wh</u>-movement has occured, thus suggesting that <u>wh</u>-phrases and subjects compete for the same pre-verbal position. This position is clearly within IP, as shown in (2).

(2) ku-isse?-i kuko inai mu-pau   la-keo Ali
     is-know-3 comp wh   2fam-say 3-call Ali
    `I know who you said Ali called.'
          (Finer's (11b))

Here the <u>wh</u>-phrase is to the right of C, thus making it appear plausible that it occupies SPEC of IP. Crucially, the <u>wh</u>-phrase does not seem to move into SPEC of CP.

Yiddish provides another possible example of movement into SPEC of IP alone, although here the facts are less clear than in Selayarese. Diesing (1990) shows that when there is a fronted <u>wh</u>-phrase in a matrix clause, a topic is not possible:

(3) *Ver dos broyt hot gegesn?
     who the bread has eaten

Since it may be shown independently that topicalization is movement into SPEC of IP, this fact suggests that <u>wh</u>-phrases as well must move into this position. What is not so clear is whether the <u>wh</u>-phrase stays in SPEC of IP or also moves into SPEC of CP. A test case such as (2) may not be constructed for Yiddish, because, as Diesing shows, in indirect questions the <u>wh</u>-phrase moves directly into SPEC of CP, without stopping off in SPEC of IP.

2. Wh-movement into SPEC of IP and SPEC of CP

Now let us turn to (1c). I will argue here that Spanish <u>wh</u>-phrases move into SPEC of IP and then into SPEC of CP, exactly as predicted in (1c).

Let us begin by examining the evidence that <u>wh</u>-phrases move into SPEC of IP in Spanish. The first suggestion that this might be the case comes from the fact that fronted <u>wh</u>-phrases and pre-verbal subjects appear to compete for the same position (as proposed by Groos and Bok-Bennema (1985)), as seen in (4) and (5).

(4)a. * ¿Qué puesto Josefina tiene en la empresa?
   b.   ¿Qué puesto tiene Josefina en la empresa?
     `What position does Josefina have in the   company?'
(5)a. * ¿Dónde Bertha compra el periódico?
   b.' ¿Dónde compra Bertha el periódico?
     `Where does Bertha buy the newspaper?'

If we say that subjects are underlyingly post-verbal, this pattern of data makes sense. When a wh-phrase is fronted, the subject cannot be. This situation contrasts with that of ordinary declaratives, where subjects may be freely fronted. That the pre-verbal position is probably SPEC of IP is shown by the fact that it appears to the right of C, as evidenced by the position of the pre-verbal subject in (6).

(6) Creo que Juana se fue a Albuquerque.
       `I believe that Juana went to Albuquerque.'

Notice that one crucial property of this analysis is that the V+I complex remains in place; there is no movement into C in the (b) examples in (4) and (5), for example. Evidence that this is correct comes from the fact that the asymmetry in (4) and (5) also obtains in embedded clauses, that this asymmetry does not obtain with all types of wh-phrases (see (13) below), and that adverbs which are not allowed in a pre-C position do appear to the left of the verb in sentences of type (4)-(5). These arguments are developed more fully in Goodall (1991).

There is thus good evidence that the above analysis is correct and that wh-phrases thus move into SPEC of IP in Spanish. However, we shall now see that they occupy SPEC of CP as well. Consider first the contrast between overt subjects of embedded infinitival clauses and wh-phrases which have been extracted out of such positions, as seen in (7) and (8).

(7)a. ?* Yo considero esta novela de Borges ser la
         más interesante.
     `I consider this novel by Borges to be the   most interesting.'
   b. * Yo creo esta película ser la mejor.
     `I believe this movie to be the best.'
   c. * Yo decía esta casa ser muy bonita.
     `I said this house to be very pretty.'
(8)a. ? ¿Cuál novela consideras ser la más
                  interesante?
     `Which novel do you consider to be the most
        interesting?'
   b. ?? La película que yo creo ser la mejor es "El   Ultimo Emperador."
     `The movie which I believe to be the best is   "T h e   L a s t
Emperor."'
   c. ? ¿Cuál casa decían ser muy bonita?
     `Which house did they say to be very pretty?'

The ungrammaticality of the sentences in (7) is not at all surprising, since the embedded subjects appear to have no way to get Case. The relative grammaticality of the sentences in (8) must then be due to the wh-phrase's ability to pick up Case from some other position. Following the analyses of Rizzi (1981) and Kayne (1984)

for Italian and French, respectively, this is because the trace of the <u>wh</u>-phrase is in SPEC of CP and the matrix verb may assign Case to this position. The subject, in contrast, is in SPEC of IP.

A second argument in favor of a SPEC of CP surface position for <u>wh</u>-phrases comes from the fact that in some dialects a PP may be <u>wh</u>-extracted out of a fronted <u>wh</u>-phrase but not out of a preverbal subject (Torrego (1985), Chomsky (1986)):

(9)a. *Esta es la autora de la que [varias   traducciones t] han ganado premios   internacionales.

     `This is the author by whom several   t r a n s l a t i o n s   h a v e   w o n international award.'

   b. ¿De qué autora no sabes [qué traducciones t]   han ganado premios internacionales?

     `By what author don't you know what   t r a n s l a t i o n s   h a v e   w o n international awards?'

This is presumably because the PP-trace is antecedent-governed in (b) but not in (a), thus suggesting that the subject is in SPEC of IP and the <u>wh</u>-phrase is in SPEC of CP.

For a third piece of evidence, let us turn to <u>wh</u>-movement out of multiply embedded clauses, as in (10).

(10) ¿Qué puesto dijo Manolo que <u>Iris</u> <u>cree</u> que   <u>Josefina</u> <u>ocupa</u> en la empresa?

   `Which position did Manolo say that Iris believes   that Josefina has in the company?'

In this example, Subjacency should force the <u>wh</u>-phrase to stop off in at least one of the embedded clauses before moving into the matrix clause. If the landing site is SPEC of IP, then at least one of the embedded subjects should be obligatorily post-verbal. Such is not the case, however, as (10) shows (for most dialects, at least), thus again suggesting that <u>wh</u>-phrases move into SPEC of CP.

At this point, then, we have seen evidence that in [+wh] clauses in Spanish, <u>wh</u>-phrases move first into SPEC of IP and then into SPEC of CP. In [-wh] clauses, it appears that the <u>wh</u>-phrase may move directly into SPEC of CP. This accounts for why preverbal subjects are disallowed in [+wh] clauses, be they matrix or embedded, and for why fronted <u>wh</u>-phrases and preverbal subjects occupy different positions (as we saw in (7)-(10)).

In addition, this account makes some very interesting predictions. First, we expect that in clauses which are [-wh] but in which there is movement, the <u>wh</u>-phrase will be able to move directly into SPEC of CP, without stopping in SPEC of IP. This is what happens in the embedded clauses in (10), but it should also occur in relative clauses, which are standardly assumed to be [-wh]. That this is true is shown by the lack of contrast between (11)(a) and (b).

(11)a. Esta es la muchacha que todos conocemos.

   b. Esta es la muchacha que conocemos todos.

   `This is the girl that we all know.'

Since the <u>wh</u>-phrase does not need to pass through SPEC of IP, the subject is free to move there, as in (11a).

The second prediction made by this analysis is that if the clause is [+wh] but

there is no <u>wh</u>-movement, then the subject shall again be free to move into the preverbal SPEC of IP position. There are two cases where this prediction can be tested. The first is with complementizers of the <u>whether</u> class (<u>si</u> in Spanish), which appear to be [+wh], as shown in (12).

  (12)a. No sé si Juana se fue a Albuquerque.

      b. No sé si se fue Juana a Albuquerque.

       `I don't know whether Juana went to   Albuquerque.'

The prediction is correct, in that the subject has moved into SPEC of IP in (12a). The second case is the most striking. It has been argued that <u>wh</u>-words such as <u>why</u> are base-generated in SPEC of CP (cf. Rizzi (1990)). If we assume that <u>por qué</u> in Spanish has this property, then we clearly predict that the subject will be able to move into SPEC of IP in a [+wh] clause headed by <u>por qué</u>, since no <u>wh</u>-phrase will pass through that position. This prediction is confirmed by the data shown in (13).

  (13)a. ¿Por qué Luis Miguel trabaja tanto?

      b. ¿Por que trabaja tanto Luis Miguel?

       `Why does Luis Miguel work so much?'

Here the subject may freely appear in the preverbal position.

3. Improper Movement

One interesting aspect of the analysis of Spanish proposed here is that the movement required in examples such as (10) bears a strong resemblance to classical cases of "improper movement," as in May (1979).[1] That is, in (10) the <u>wh</u>-phrase moves from SPEC of CP to the matrix SPEC of IP, just as in May's example, given in (14).

  (14) *Who t_i decided t_i Bill would hit t_i

May rules (14) out by saying, in effect, that the Case-marked trace in matrix subject position c-commands the Case-marked trace in embedded object position, thus resulting in a binding theory violation. Unfortunately, this account carries over to (10) as well. More recent accounts, however, do not give this result. In a theory such as Chomsky (1982), for example, (14) violates a version of Principle C which states that a variable must be A-free in the domain of the operator which A-bar-binds it.[2] This would not rule out (10) if we assume that there SPEC of IP is an A-bar position, so the trace in that position does not A-bind any other trace.

4. Conclusion

We see, then, that the prediction made by the conjunction of Kuroda's and Rizzi's proposals is clearly fulfilled. The most surprising aspect of this prediction, the existence of <u>wh</u>-movement of type (1c), is confirmed, in that there is extensive evidence for this type of movement in Spanish.

The typology in (1) by itself of course does not exhaustively describe the variation found in the behavior of <u>wh</u>-movement. Not only may languages differ in their choice of an agreement system in (1), but individual complementizers in a given language may differ as well. In Spanish for example, it is only [+wh] complementizers which appear to be of type (1c). In the dialect of Spanish described

in Torrego (1984), though, any CP through which a <u>wh</u>-phrase passes is of type (1c). (10) is thus ungrammatical in this dialect, since at least one of the embedded subjects needs to be post-verbal, so that the <u>wh</u>-phrase can stop off in SPEC of IP.

Another area of variation is found in differences between matrix and embedded complementizers. For example, in Spanish both matrix and embedded [+wh] null complementizers are of type (1c). In Portuguese, on the other hand, only the matrix ones appear to have this property. Thus Portuguese behaves essentially like Spanish, with the difference that the asymmetry in (4)-(5) does not obtain in embedded clauses in Portuguese. In embedded [+wh] CP's, the <u>wh</u>-phrase does not need to stop in SPEC of IP.

In conclusion, I have attempted to provide new types of evidence in this paper for the idea that (i) subjects are base-generated in a position internal to VP, (ii) SPEC of IP is a Θ-bar position, (iii) SPEC of IP is a potential A-bar position, and (iv) whether or not <u>wh</u>-movement makes use of SPEC of IP as a landing site depends on the agreement properties of C.

Notes

1. My thanks to Andy Barss for pointing this out to me.

2. (14) would in fact also be ruled out by the Θ-criterion, but it is easy to construct examples such as (i) which would not be.

(i) *Who t_i seems t_i Bill would hit t_i

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