A Note on Verb Raising and Cliticization*

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0. Introduction

It is a well-known fact that weak forms of subject and object pronouns in French, Trentino, Fiorentino, Pirahã, and other languages are cliticized onto the inflected verb of their sentence. It has been argued in the literature that subject clitics are generated in AGR of INFL where they serve the function of licensing an empty pronominal pro in external argument position.¹ In this sense, they serve the purpose of recovering the identity of the missing information represented in syntax by the empty argument.

In the first section of this paper, the different options that arise in order to account for the clitic status of the subject pronouns are explored. We concentrate on French but the analysis adopted here could be extended to other languages having both subject clitics and syntactic structures similar to the one found in French

1. Subject Cliticization

Let us first examine Chomsky's (1981) account of the null subject property. His analysis relies on the fact that the element INFL must be attached to the verb at some point in the derivation. This is true simply because the inflectional features (person, number, gender, and tense) are affixed to the verb on surface. Chomsky chose the option of moving INFL
to VP in order to express this fact. This is what he characterized as rule R in his account of the null subject property.

One of the reasons underlying this choice is the need for an ungoverned external argument position in null subject languages in order to allow it to be occupied by PRO. If rule R (Affix Hopping) applies prior to S-structure, PRO is ungoverned when the Binding conditions apply to the structure and it follows that an empty subject can surface in any language where rule R applies at this particular level. In other languages, Phonological Form is the relevant level for the application of rule R and null subjects are consequently barred. Another reason for this choice is the relationship that was believed to hold between null subjects and free inversion. INFL in VP is in a configuration where it can assign nominative Case to an NP adjoined to VP.

Now following various recent analyses of the null subject property, the following remarks must be made. First, the empty category associated with null subjects is no longer taken to be PRO in tensed clauses. Following Chomsky (1982), we assume that pro is best suited to occupy this position. There is thus no need to eliminate government of the subject position by the INFL node. In fact, this type of government seems to be required for the licensing of pro by AGR, when AGR contains a clitic or an agreement marker. There is thus no difference between, say, French and Italian with respect to this rule. The difference between these two languages lies, rather, in the way each language licenses pro in subject
position. French has recourse to clitic pronouns, whereas rich agreement is sufficient for the licensing of pro in Standard Italian. Thus the first argument for movement of INFL to VP does not hold anymore.

Secondly, it is suggested in Roberge (1986) that the free inversion property found in certain null subject languages is made possible by the presence of the TNS element in VP prior to S-structure, where it can assign Case in the government domain of V. This is necessary as the null argument property, as it is conceived of here, cannot be directly related to free inversion. The second argument for INFL-movement to VP, which is based on the relationship between null subjects and free inversion does not go through.

We propose to approach the problem of the affixal nature of subject clitics in French by assuming that the process which accomplishes this is identical to the one that affixes inflectional features to the verb. Two possibilities arise: A) INFL/AGR moves to V (Chomsky 1981); or B) the verb to be inflected raises to INFL (Emonds 1978, McA'Nulty 1983, Pollock 1987). Before exploring these two options, we briefly examine the internal structure of INFL.

1.1. Internal Structure of INFL

Let us adopt the hypothesis that the internal structure of INFL in French must reflect the relative surface order of its constituents. The constituents of INFL are, among others, AGR, TNS, subject clitics, and the negative marker ne. The basic surface ordering, including the finite verb and
its object clitics, is given in (1a).

(1a. Subject Clitic + ne + [Object Clitics + V] + {TNS,AGR}

Object clitics are base generated on the finite verb. The verb, being in VP at D-structure, must be excluded from the structure of INFL at this particular level of representation. A plausible configuration for INFL at D-structure is thus:

(1b. INFL
    / \
   AGR TNS
   / \
  (cl)(NEG)AGR

where the subject clitic and ne are optionally generated.

Note that this structure is specific to Standard French inasmuch as there is a great deal of cross-linguistic variation with respect to the negation marker. See Rizzi (1986) for a discussion of various positions that can be occupied by negative particles in various Northern Italian dialects. In Trentino, the subject clitic always follows the negative particle (no). In Romagnolo, the negative particle follows the subject clitic as in Standard French. In Colloquial French there simply is no such negative marker in INFL; there is only pas adjoined to VP. Note also that (1b) indicates that clitics and AGR are different elements. The clitic, in a sense, is in a Spec AGR position and this allows for the feature-agreement showing up independently on the verb.
1.2. Verb Raising or INFL Lowering?

McA'Nulty (1983) presents some arguments in favor of a rule of Finite Verb Raising (henceforth, FVR) as proposed in Emonds (1978). The effect of such a rule is illustrated in (2). "OC1" stands for "object clitic(s)."

(2) FVR:

```
  IP
   / \        
 NP  INFL'    
   / \       
 INFL  V'    
   / \      
 AGR  ADV  V' 
   / \     
 [OC1+V], AGR  e1
```

The rule moves the inflected verb together with its object clitics to a position adjoined to the left of AGR. The account just presented has the advantage of explaining the relative position of the clitics with respect to the agreement markers as in (3), where the relevant items are underlined.

(3) Pierre le lui donnera.

   cl cl  give-FUT-3s

   'Pierre will give it to him/her.'

Consider next the sentences in (4)-(6) from McA'Nulty (1983:139) and the different positions of the underlined elements.

(4)a. Jean préférerait ne pas les avoir mangés.
    prefer-COND-3s NEG not cl to+have eaten
    'Jean would prefer not to have eaten them.'

b. Jean ne les a pas mangés.
   cl    have-3s not
   'Jean has not eaten them.'
c. * Jean ne pas les a mangés.

(5)a. Jean dit souvent les avoir mangés.
    say-3s often cl to+have eaten
    'Jean says to have often eaten them.'

b. Jean les a souvent mangés.
    cl have-3s often

c. * Jean souvent les a mangés.

(6)a. Jean voudrait tous les avoir rencontrés.
    want-COND-3s all cl to+have met
    'Jean would want to have met all of them.'

b. Jean les a tous rencontrés.
    cl have-3s all
    'Jean has met all of them.'

c. * Jean tous les a rencontrés.

If the adverbs and quantifiers (pas, souvent, tous) in (4)-(6) are generated directly under V', as in (2), then the contrasts are accounted for. The infinitive verbs in the (a) examples follow these elements because the verb stays in its base position, as the head of V'. However, a finite verb gets its inflectional features through FVR. On the surface then, such a verb precedes the adverbs and quantifiers. The contrast between the (a) and (b) sentences is explained as well as the ungrammaticality of the (c) examples where a finite verb follows the adverbs and quantifiers.

The second plausible approach is Chomsky's (1981) rule R that we call here INFL Lowering. The operation is illustrated in (7).
(7) INFL Lowering:

```
  IP
   / \   
  NP   INFL'
       / \ 
      INFL V''
          / \ 
         eADV V'
             / \ 
            Q V
                / \ 
               cl+V AGR1
```

The respective position of the clitics and agreement markers illustrated in (3) is accounted for, as is the case with FVR. On the other hand, the contrasts in (4)-(6) are left unexplained unless the structural position of the quantifiers and adverbs is revised and modified. The prediction made by the rule in (7) is that a verb (tensed or not) always follows the adverbs and quantifiers. This is an undesirable prediction as shown in (4)-(6).

The two analyses presented above do not take subject clitics into account. The issue is as follows. In both the French and Italian dialects under study here, a subject clitic always appears as the first member to the left of the surfacing clitic string as shown in (8).

(8) Il le lui donnera.
    cl cl cl give-FUT-3s
    'He will give it to him/her.'

This causes problems in both analyses, assuming that subject clitics are generated in AGR. Both FVR and INFL lowering place the subject clitic to the right of the verb. It is easier to modify the FVR rule in order to overcome this
problem. A possible modification to (2) is suggested in (9), which is consistent with the internal structure of INFL adopted above.

If we assume, following Chomsky (1986:4), that the two types of movement possible under Move α are substitution and adjunction, then the \([OCL+V]\) complex can only be adjoined to AGR as in (9).

(9)
```
  IP
  / \  
 NP  INFL'
   / \ 
  INFL VP
   / \ / \ 
  AGR TNS ADV V'
   / \ Q / 
  Sc1 AGR o1
   / \ 
 [OCL+V], AGR
```

Both the relative ordering of the clitics in the string and the position of adverbs and quantifiers are accounted for. Furthermore, the inflectional features included in AGR and the tense features will end up as suffixes on the verb.² FVR necessarily applies late in the derivation, probably in Phonological Form since there seems to be no evidence that this rule should apply in the syntactic component of the grammar.

It is interesting to note that FVR as it is conceived of here has further desirable consequences in the grammar of French. Lobeck (1986) proposes a similar rule and argues that it can explain the absence of VP anaphora or ellipsis in French. In this language, a sentence like (10) is
ungrammatical.

(10) * Marie a vu le film et Paul a ø aussi.
    'Marie has seen the film and Paul has ø too.'

Lobeck argues that the ECP modulates the occurrences of empty VPs in the sense that the empty VP requires a proper governor. There is such a governor in English where, it is argued, auxiliary verbs are in INFL during the syntax where they can serve as proper governors for empty VPs. In French, on the other hand, auxiliary verbs and main verbs both behave in the same way, as argued in Kayne (1975), and undergo FVR in PF. There is thus no proper governor for empty VPs at S-structure or at LF (that is, whichever level the ECP applies at). The modified rule of FVR in (9) therefore allows us to account for a variety of phenomena, at least in French.

2. Coordination

Rizzi (1986) appeals to certain differences between Trentino and Standard French in the behavior of subject clitics with respect to coordination to support the existence of two different types of subject clitics. The relevant sentences are given in (11) and (12).

(11) Standard French
    Elle chante et danse.
    'She sings and dances.'

(12) Trentino
    a. La canta e la balla.
        'She sings and she dances.'
    b. * La canta e balla.

According to Rizzi, a zero pro-form is barred in AGR under
coordination. Therefore, by assuming base generation of the subject clitics in AGR in Trentino, he can provide an explanation for the ungrammaticality of (12b) and the obligatory repetition of a subject clitic in the second conjunct as in (12a). On the other hand, if French subject clitics are in [NP,IP] and later cliticized to the verb, then (11) is predicted to be grammatical since there is no zero pro-form in the AGR node of the second conjunct.

In this section, we offer another interpretation of the coordination facts and a reevaluation of Rizzi's conclusion. This analysis is based on three premises: 1) subject clitics are base generated in AGR of INFL in the languages exhibiting them; 2) Finite Verb Raising applies late in the derivation and subsumes cliticization; 3) coordinate structures are representations available during the syntax and are subject to syntactic rules.

In Colloquial French, a lexical NP may be followed by two coordinated VPs as in (13).

(13) Marie danse pis chante.
    'Marie dances and sings.'

When the subject is represented by a clitic the grammaticality of the sentence is questionable, as in (14), unless the clitic is repeated in both conjuncts, cf. (15).

(14) ?? Elle danse pis chante
(15)    Elle danse pis elle chante.

Let us tentatively assume the structure in (16) for (15).

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where subject clitics are generated in their usual position and INFL' projections are coordinated.

\[(16)\]

\[
\begin{array}{c}
\text{IP} \\
\downarrow \\
\text{NP} \quad \text{INFL'} \\
\downarrow \\
\text{INFL'} \quad \text{CONJ} \quad \text{INFL'} \\
\downarrow \\
\text{INFL} \quad \text{VP} \quad \text{INFL} \quad \text{VP} \\
\downarrow \\
\text{AGR} \quad \text{TNS} \quad \text{AGR} \quad \text{TNS} \\
\downarrow \\
\text{elle AGR} \quad \text{elle AGR} \\
\downarrow \\
\text{danse} \quad \text{chante}
\end{array}
\]

Consequently the structure of (13) is as in (17).

\[(17)\]

\[
\begin{array}{c}
\text{IP} \\
\downarrow \\
\text{NP} \quad \text{INFL'} \\
\downarrow \\
\text{Marie} \quad \text{INFL'} \quad \text{CONJ} \quad \text{INFL'} \\
\downarrow \\
\text{INFL} \quad \text{VP} \quad \text{INFL} \quad \text{VP} \\
\downarrow \\
\text{AGR} \quad \text{TNS} \quad \text{AGR} \quad \text{TNS} \\
\downarrow \\
\text{danse} \quad \text{chante}
\end{array}
\]

An alternative analysis could be suggested. Suppose that (13) is actually a coordination of two VP projections as illustrated in (18) instead of a coordination of INFL' projections as in (17) above.
(18) 

This hypothesis causes a problem for sentences like (19), where VPs dominating forms of the auxiliary verbs *avoir* and *être* are coordinated. Following Kayne (1975), it is assumed that auxiliary verbs in French are dominated by VP.

(19) Marie a mangé pis est allée voir un film. 
    has eaten and is gone to see a film 
    'Marie ate and went to see a movie.'

(20) 

In Phonological Form, FVR will apply in both (18) and (20). The leftmost verb in each VP is raised to INFL as in (21a) and (22a), generating the ungrammatical sentences in (21b) and (22b).
(21) a. 

\[
\begin{array}{c}
\text{IP} \\
/ \ \\
\text{NP} \quad \text{INFL'} \\
/ \ \\
\text{Marie INFL} \quad \text{VP} \\
/ \ \\
\text{AGR} \quad \text{TNS} \quad \text{VP} \quad \text{CONJ} \quad \text{VP} \\
/ \ \\
\text{V} \quad \text{V} \\
/ \\
\text{danse} \quad \text{chante}
\end{array}
\]

b. * Marie chante danse pis.

(22) a. 

\[
\begin{array}{c}
\text{IP} \\
/ \ \\
\text{NP} \quad \text{INFL'} \\
/ \ \\
\text{Marie INFL} \quad \text{VP} \\
/ \ \\
\text{AGR} \quad \text{TNS} \quad \text{VP} \quad \text{CONJ} \quad \text{VP} \\
/ \ \\
\text{V} \quad \text{VP} \quad \text{V} \quad \text{VP} \\
/ \\
\text{a} \quad \text{V} \quad \text{est} \quad \text{V} \quad \text{CP} \\
/ \\
\text{mangé} \quad \text{allée} \quad \text{voir un film}
\end{array}
\]

b. * Marie a est mangé pis allée voir un film.

Besides generating ungrammatical strings, the operation in (21) and (22) violates Ross' (1967:89) Coordinate Structure Constraint in (23) since two verbs have raised out of conjoined VPs into INFL.

(23) Coordinate Structure Constraint

In a coordinate structure, no conjunct may be moved, nor may any element contained in a conjunct be moved out of that conjunct.

On the other hand, FVR applying in a structure with coordinated INFL' does not violate the Coordinate Structure
Constraint and produces the right outputs, i.e. (13) and (19) with the structures in (24) and (25).

(24)  
```
  IP
    /\  
   NP /  
     /   
    INFL' / \ 
      /     
     Marie INFL' CONJ INFL'
    / \    / \ 
   INFL VP INFL VP  
  / \   / \   
 AGR TNS V AGR TNS V 
```

```
  danse  chante
```

(25)  
```
  IP
    /\  
   NP /  
     /   
    INFL' / \ 
      /     
     Marie INFL' CONJ INFL'
    / \    / \ 
   INFL VP INFL VP  
  / \   / \   
 AGR TNS V VP AGR TNS V VP  
```

```
  mangé est V CP  
```

```
  allée voir un film
```

So, what appears like coordinated VPs on the surface is in fact coordinated INFL' projections in French. It is only in coordinated INFL' structures that FVR may apply without violating the Coordinate Structure Constraint.

Sentences like the one in (26) are also possible in Colloquial French where one auxiliary verb is followed by coordinated VPs, in this case the two past participles dansé and chanté.

(26) Marie a dansé pis chanté.
    has danced and sung
    'Marie danced and sang.'
A D-structure for (26) where two VPs are coordinated, is blocked for the reasons just outlined -- it would require a structure where the finite auxiliary verb a is base generated in INFL instead of VP.

(27) *

```
    IP
   / \
  NP INFL'
   / / \ /
 Marie INFL VP
   / / \ /
   a AGR TNS VP CONJ VP
   | | | |
   V V V
   | | | |
 dansé chanté
```

The structure in (28), where INFL' projections are coordinated, is also an impossible source for (26) -- there is no auxiliary preceding the past participle in the second conjunct.

(28) *

```
    IP
   / \
  NP INFL'
   / / \ /
 Marie INFL' CONJ INFL'
   / / \ /
 INFL VP INFL VP
   / / / / / / / / |
 AGR TNS V VP AGR TNS V
   | | | | | | | |
 a V chanté |
 dansé
```

We are able to generate sentences like (26) by adopting an exception clause to the Coordinate Structure Constraint -- the Across-the-Board Constraint in (29), which is proposed by Ross (1967) and discussed extensively in Williams (1978).
(29) The Across-the-Board Constraint

((23) may not be violated) unless the same element is moved out of all the conjuncts.

The Across-the-Board Constraint allows restricted violations of the Coordinate Structure Constraint. Elements may be moved out of a coordinate structure only when such elements are identical. As a result of Across-the-Board application of a movement rule, the two identical elements moved out of coordinate structures appear as a single element in the surface string. This is schematically illustrated in (30).

(30) Across-the-Board Rule Application

\[
\begin{array}{c}
\text{Y} \quad \text{XP} \\
\text{X} \quad \text{CONJ} \quad \text{XP} \\
\text{X} \\
\end{array}
\quad \rightarrow 
\begin{array}{c}
\text{Y} \quad \text{XP} \\
\text{X} \quad \text{XP} \quad \text{CONJ} \quad \text{XP} \\
\text{X} \quad \text{X} \\
\end{array}
\]

The sentence in (26) can be generated by allowing FVR to apply across-the-board to both conjuncts, raising identical auxiliary verbs out of each VP into INFL as in (31). This results in a surface string where only one auxiliary is phonologically realized.
The interaction of FVR and constraints on rule application in coordinated structures predicts that, in French, structures where VPs are coordinated are allowed only when FVR is able to apply across-the-board.

We are now able to generate sentences with subject clitics in Colloquial French in a straightforward way. In the grammatical sentence in (15) the conjuncts contain non-identical verbs. Because FVR is blocked from applying across-the-board, it must apply individually in each conjunct. We conclude then that INFL', not VP, is coordinated. The subject clitic elle is generated within AGR in the INFL node of each conjunct and cliticizes to the verb after FVR applies as illustrated in (32).
We are also able to generate the grammatical sentence in (33), where the subject clitic and the auxiliary verb a are followed by a coordinated VP.

(33) Elle a dansé pis chanté.
            she have-3s danced and sung
          'She danced and sang.'

The D-structure for (33) is given in (34), where two VPs containing the auxiliary verb a are coordinated. FVR applies across-the-board to raise the identical auxiliary verbs into the single INFL node dominating the subject clitic.

(34)

The questionable grammaticality of (14), where one subject clitic is followed by conjoined VPs, is explained
under our hypothesis. The subject clitic elle may be
generated in INFL, but the derivation will be ruled out
because FVR violates the Coordinate Structure Constraint.
This is illustrated in (35).

\[
\begin{array}{c}
\text{IP} \\
/ \ \ \ \ \ \ \ \ \\
\text{NP} \quad \text{INFL}' \\
/ \ \ \ \ \ \ \ \\
\text{INFL} \quad \text{VP} \\
/ \ \ \ \ \ \ \ \ \\
\text{AGR} \quad \text{TNS} \quad \text{VP} \quad \text{CONJ} \quad \text{VP} \\
/ \ \ \ \ \ \ \ \ \\
\text{elle} \quad \text{AGR} \quad \text{V} \quad \text{V} \\
/ \ \ \ \ \ \ \ \\
\text{dans} \quad \text{chante}
\end{array}
\]

In conclusion, the properties of the French finite
auxiliary and main verb interact with constraints on rule
application in coordinate structures to allow us to predict
whether INFL' or VP is coordinated. We are then able to
provide an account of the distribution of subject clitics in
Colloquial French in coordinate structures which supports the
analysis of subject cliticization in (9).

Now, with respect to the ungrammaticality of (12b) in
Tentino, Safir (1985:350) alludes to the possibility that
there may be a difference in the properties of conjoined
structures in this dialect, as opposed to French. We follow
this intuition and assume that, since Trentino subject clitics
are obligatorily generated in AGR in INFL, then it is
only possible to coordinate INFL' projections. The only
possible structure in Trentino is therefore equivalent to the
one in (32). The other possibility, namely the one in (35),
is blocked independently, as argued above.

We can thus conclude that the difference in the behavior of subject clitics in coordination between French and Trentino is not due to different structural positions for the elements in the two languages/dialects but follows instead from various constraints on coordinate structures and the fact that subject clitics are obligatory in Trentino.

Footnotes

* This is an expanded and revised version of a paper presented at the LSA Meeting in Seattle in 1985.


2. Note that in the instances of free inversion in Trentino and Fiorentino, the TNS element of INFL is moved in VP prior to S-structure. This does not constitute a problem for FVR. The verb, together with TNS now attached to its right, moves to AGR in PF as in (i).

   (i)  
   \    /  
   NP  INFL'  
    \   /  
    pro INFL  V'' 
       / \  / \  
      AGR V'' NP  
        / \  
      SCI AGR V'  
           \  
           [V+TNS]  
               \ 
                e_1


References:


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