1. Introduction

The present paper is offered to honour and congratulate my old friend and esteemed colleague Bernard Bichakjian on the occasion of his retirement from the chair of French linguistics at Nijmegen University.

In (Seuren 1976; reprinted as chapter 11 in Seuren 2001), it was observed that the problem of the positioning, combinability and ordering of clitic pronouns attached to verb forms constituted, at the time, an unsolved problem in the theory of transformational grammar (TG). In the meantime, many other grammatical theories have sprung up and TG itself has undergone many radical changes. Even so, the remarkable fact remains that the clitics problem is still unsolved: none of the new theories, nor any of the new varieties of TG, has so far been able to provide an adequate rule system specifying precisely all possible clitic clusters in French or any other language. Therefore, the conclusion in (Seuren 1976), that an extension of the grammatical machinery is inevitable if grammars are to account for the facts of clitics, still stands.

It is not the purpose of this paper to answer questions relating to the historical or functional factors that may have led to the phenomenon of clitics clustering with each other and closing ranks with verbs. Such questions are no doubt of great interest, but they are not our direct concern here, though it is not unlikely that the system proposed here may in the end, if we are lucky, contribute to a better overall understanding of the functionality of cliticisation phenomena. For the moment, we accept the facts as they are, and simply try to capture them in terms of a particular type of grammatical machinery, whereby any possible suggestion of semantic relevance or functional motivation, whether intended or not, is left open for future theorizing.

The present article falls back on the mechanism proposed in Seuren (1976), though it has proved possible, in the meantime, to simplify the system proposed there considerably. In
the present paper, I will follow the system proposed in Seuren (1996) for French, and extrapolate that to Italian, in an attempt to maximize the unification of the clitic systems of these two languages. Special attention is devoted to the treatment of clitics with imperatives, an aspect that had been left virtually undisputed in my 1976 paper.

2. The problem defined

One might say that grammatical theories do not have to worry too much about clitic clusters, as such clusters are finite in number and can be specified by simple enumeration, helped by a few rough generalizations, as, for example, in Perlmuter (1971), which, by the way, was observationally inadequate (Seuren 1976). Such an account is, in principle, no better than the standard treatment of clitic clusters in traditional taxonomic grammars. More theoretically oriented approaches can get away with that kind of treatment as well, if all that is required is to get the facts right in an observationally adequate way. But that is not satisfactory, mainly because, as will be shown, cliticisation is structure-dependent and therefore requires an analysis that incorporates it into a system of structure-dependent rules. It is our purpose to provide such a system with a minimum of extra fuss, that is, in a maximally generalized way and with the least possible disturbance of established theoretical notions.

Let us first get a few generalities right. First, in discussing grammatical analysis one can follow two opposed methods. One can take the bottom-up or parsing point of view, or one can work according to a top-down or generative method. The bottom-up method attempts to develop an algorithmic procedure that starts from the surface structures of a language and either provides a semantic interpretation directly or reduces them to some standard form ('logical form' or 'semantic analysis') that is open to direct semantic interpretation. The top-down method of analysis and description attempts to develop an algorithmic procedure that specifies, on the basis of a given input, which strings of symbols (words) are admissible and which are not. This latter method is usually called 'generative', for historical reasons.
We shall not follow the bottom-up method here, mainly because the interpretation of given clitic clusters in terms of corresponding nonpronominal structures is, on the whole, unproblematic. The real problem rests with the top-down or generative specification of the correct clitic clusters in cliticising languages. We will, therefore, deal with the problem in the well-known generative fashion.

As is well-known, however, the generative method is far from uniform. According to some (including this author), the input structures for the generative algorithmic rules are semantic forms, so that all the (generative) grammar does is transform semantic structures to corresponding surface structures. This is the 'mediational' view of grammar. According to the Chomskyan, however, grammars generate sentences from scratch, assigning them a semantic interpretation once they have been generated (in some form or other). This is the 'random generator' view of grammar. Fortunately, this theoretical difference need not detain us here, since cliticisation is transformational in both approaches. In all varieties of transformational grammar clitics are seen as transformationally derived from underlying forms where the clitics are not clitics yet but standard arguments to verbs. Any other assumption would disturb the unity of the grammar in unacceptable ways.

So our problem is the following: How can we best define the positioning, combinatorial and ordering of clitics in terms that maximize both intralinguistic and crosslinguistic generalizations, and involve a minimal disruption of the formal descriptive means already in use. It is recognized that the formal descriptive means already in use are insufficient for the description of cliticisation phenomena. Even so, we want the inevitable extension of the system to be as much as possible in the same style.

3. Grammatical prerequisites for a treatment of clitics

We will not burden the reader with an extensive survey of the relevant facts in French (or Italian), and will simply consider them known to the reader. But we will give some general statements, using the following notation:
‘A’ stands for accusative  ‘1’ stands for first person
‘D’ stands for dative    ‘2’ stands for second person
‘R’ stands for reflexive ‘3’ stands for third person

Given this notation we can formulate the following generalizations for preverbal clitics in French (cp. Seuren 1996: 170):

A(i)  In preverbal position, D precedes A. This generalization holds generally for the Romance languages, for Modern Greek, and for the cliticising Slavonic languages. The only exception is found in French with the order A3-D3 which is required when A3 and D3 are combined.
(ii) A3-clitics can be combined with all other pronominal clitics.
(iii) A1/A2/A3R-clitics can be combined with no other pronominal clitic.
(iv) Non-cliticised pronominal datives are treated as full lexical datives.
(v) The negative clitic ne combines with all clusters not already containing ne and precedes all other clitics.
(vi) The adverbial clitics y and en follow all other clitics, in that order.

Thus only the following pronominal preverbal clitic clusters (with or without ne, y and/or en) are allowed:

(a) D1/D2/D3R + A3    (b) A3 + D3

The following assumptions are made regarding French VP-structures before cliticisation:

B(i)  Underlyingly, datives precede accusatives. If not marked [Cl], they are extraposed and combined with the preposition à. (Seuren 1996: 166-183.)
(ii)  When NP[D] (Dative NP) or NP[A] (Accusative NP) is a weak pronoun, the feature [Cl] is added to [D] or [A], except when NP[D] is flanked on the right by a weak pronominal NP[A] of the type A1/A2/A3R, or when NP[D] is preceded by a weak pronominal NP.
NB: When NP[D] is preceded by a non-clitic NP[D], no sentence results: the derivation is aborted.

(iii) In finite VPs (i.e. VPs with Aff[Pres] or Aff[Past]) assign the feature [Cl] to ne.

Complex V-clusters, with branching V_{N F}-nodes (non-finite V-nodes) are the result of the cyclic rule of Predicate Raising or PR (Seuren 1972 (=2001 ch. 7), 1996: 63-66, 191-203, 237-45). PR is commonly found, in the languages of the world, as a cyclic rule induced by verbs that allow for an untensed clause as subject or object term. The rule appears to occur most frequently with verbs of causing and allowing, but in some languages, like Dutch or German, PR is induced by many more verbs. In French, PR is induced obligatorily by the verb faire (cause, make, do) and optionally by laisser (allow, let) (for a more precise analysis of laisser see Seuren 1996: 191-203). A few more verbs, notably voir, entendre, envoyer, induce PR with certain idiosyncratic restrictions (Seuren 1972).

In the present context a simple illustration of PR with French faire will suffice. Consider the sentences:

(1) a. Je ferai partir Jules.
    b. Je ferai voir la lettre à Jules.
    c. Je ferai réparer la voiture par Jules.

Assuming an input VSO-structure, (1a,b) correspond with (2a,b), respectively:

(2)a. \hspace{1cm} \begin{array}{c}
   \text{Pres} \\
   \text{Fut} \\
   \text{V faire} \\
   \text{je} \\
   \text{NP} \\
   \text{Sobj} \\
   \text{SMatrix} \\
   \text{S} \\
\end{array}

(2)b. \hspace{1cm} \begin{array}{c}
   \text{Pres} \\
   \text{Fut} \\
   \text{V faire} \\
   \text{je} \\
   \text{NP} \\
   \text{Sobj} \\
   \text{SMatrix} \\
   \text{S} \\
\end{array}

The effect of PR is shown in (3a,b), respectively.
That is, $\varphi[\text{partir}]$ is united with $\varphi[\text{faire}]$ under one V-node, forming a V-cluster. The object S-node has disappeared, and the remaining material has been reattached under the higher S-node, in the order given. One notes that, after PR, the matrix-S of (3a) has the structure of an ordinary transitive S, whereas the matrix-S of (3b) has the structure of an ordinary ditransitive S, i.e. with both indirect and direct object. In fact, a later automatic feature assignment procedure will assign to $\text{NP}[\text{Jules}]$ in (3a) the feature [A] (i.e. accusative), since it is the final NP in the structure. But in (3b) the feature [D] (i.e. dative) will be assigned to the same $\text{NP}[\text{Jules}]$, as it precedes the direct object in what will be the VP. The final NP, $\text{NP}[\text{la lettre}]$, in (3b) will then be marked [A], as shown in (4b,c) below.

Sentences like (1c) are likewise the product of PR, but they have a passivized object-S to the matrix-verb faire. In the case of (1c), passivization is obligatory, but there are cases where it is optional, as in Je ferai lire la lettre à/par Jules. The origin of the subtle semantic distinction between the two versions has so far not been identified with certainty. Why passivization is sometimes obligatory, sometimes optional, and sometimes inadmissible, is a question to which the answer still has to be found. It would seem that the crucial parameter is the functional role (theta-role) of the subject of the embedded verb, but we still lack a precise theory of functional roles. One notes that analogous restrictions hold for PR in Dutch.

The NP-VP-structure of surface sentences is brought about by the Tense Routine (TR). TR consists of cyclic Lowering (L) of the tenses (Pres, Past, Fut, Perf) onto the V of the matrix-S, with which they form a V-cluster. Before the Lowering of Pres or Past, Subject Raising (SR; see below) lifts the subject-NP of the matrix-S, which, deprived of its
subject-NP, is demoted to the rank of VP. The tenses (except Perfect) are assigned the surface category ‘Affix’ (Aff). TR applied to (3a) is shown in (4a-c):

(4a) \[ L_{Fut} \Rightarrow S \quad SR \Rightarrow \]
\[ Pres \quad S_{Matrix} \]
\[ V \quad NP \quad NP_{[A]} \]
\[ Aff \quad Fut \quad je \quad Jules \]
\[ faire \quad partir \]
\[ V \quad V \]

(4b) \[ L_{Pres} \Rightarrow \]
\[ Pres \quad NP \quad VP \]
\[ je \quad NP_{[A]} \quad Jules \]
\[ Aff \quad Fut \quad faire \quad partir \]
\[ V \quad V \]

(4c) \[ NP \quad VP \]
\[ je \quad NP_{[A]} \quad Jules \]
\[ Aff \quad Fut \]
\[ faire \quad partir \]
\[ V \quad V \]

Postcyclically, affixes are right-adopted by the first V down the cluster by the rule Affix Handling (AH). AH leads to left-branching and hence to morphological (word) structures. Successive applications of AH give (5a,b), for (3a,b) respectively, where the V-cluster contains a separate V-constituent with the affixes. This V-constituent is the finite V-constituent labelled \( VF \), which will be turned into \( ferai \) by the morphophonological component. We shall return to AH in Section 5 below.

(5a) \[ S \]
\[ NP \quad VP \]
\[ je \quad NP_{[A]} \quad Jules \]
\[ V_{F} \quad V \]
\[ partir \]
\[ V \quad Aff \quad Pres \]
\[ faire \quad Fut \]

(5b) \[ S \]
\[ NP \quad VP \]
\[ je \quad NP_{[D]} \quad NP_{[A]} \quad Jules \quad la lettre \]
\[ V_{F} \quad V \]
\[ voir \]
\[ V \quad Aff \quad Pres \]
\[ faire \quad Fut \]

The treatment of \( J'ai fait partir Jules \) follows a similar pattern, except that (a) the perfective auxiliary verb \( avoir \) induces the cyclic addition of \( Aff[-U] \) (where \(-U\) is an abstract representation of the past participle suffix) to the V-cluster, and (b) \( avoir \) is not relabelled ‘Aff’ but remains ‘V’, as shown in (6a-g):
It is easily seen that a sentence like *Je ferai faire partir Jules* is generated by application of PR on each of the two occurrences of faire, as shown in (7). Then, double datives result in sentences of the type *Je lui laisserai donner le livre à Jeanne*, shown in (8a,b). Note that *Je laisserai donner le livre à Jules à Jeanne* is ungrammatical, due to two consecutive lexical datives (see B(ii) above). In such cases the derivation is blocked and a different way of expressing the same meaning must be sought, such as *Je laisserai Jules donner le livre à Jeanne*, using the alternative argument frame of laisser (Seuren 1996: 202). Note also that *Je lui laisserai donner le livre à Jeanne* can only be understood as saying that he (il) will give the book to Jeanne, not that Jeanne will give the book to him. This again follows from B(ii).
Besides PR, French has the rule *Subject Deletion* (SD) for the treatment of embedded Ss. SD deletes the subject of the object-S under conditions of referential identity. Thus, as illustrated in (9) for the sentence *Je veux acheter ce livre*, the verb *vouloir* induces the rule SD, making the embedded S lose its subject-NP. Having lost its subject-NP, the embedded S is degraded to VP, giving rise to an embedded VP:

A further cyclic rule that occurs in French for the treatment of embedded Ss is *Subject Raising* (SR). This rule takes the subject-NP of the lower S and places it in the position of its own S, which is degraded to VP and moved one position to the right. In French, SR occurs only with embedded subject-Ss, never with object-Ss. (10) illustrates SR for the sentence *Jean semble avoir mangé la pomme*, where the verb *sembler* induces the rule SR:
4. Cliticisation

We are now ready for the actual cliticisation processes in French. But note first that in discussing the French clitics we will leave the clitics *y* and *en* out of account, apart from the overall statement that they occur at the end of any clitic cluster, in that order. The reason for leaving them out rests with their complex non-clitic origins (see, for example, Ruwet 1991:56-81 for a subtle and well-informed account of French *en*).

As regards the pronominal clitics and the negative *ne*, we begin by taking an unusual step, which consists in assigning numerical values or weight features to the nodes marked [CI], according to the parameters of case, person and reflexivity, and a separate weight feature to *ne*. The values assigned are as follows:

\[
\begin{align*}
(11) \quad 3 \text{ (non-reflexive) clitics} & \rightarrow [0] \\
A \text{ clitics} & \rightarrow [0] \\
1,2,3^R \text{ clitics} & \rightarrow [1] \\
D \text{ clitics} & \rightarrow [1] \\
ne & \rightarrow [3]
\end{align*}
\]

These values are accumulated for each [CI] node.

Again, a note of caution is in order here. One might easily think that the weights or values that are assigned to clitics must reflect, in some ill-defined way, some measure of semantic or functional content. While this possibility should by no means be discounted, no
claim to that effect is implicit in the treatment proposed here. All that is claimed here is that the system works. As such it appears to be unique.

Now the postcyclic rule *Clitic Movement* (CM) applies (before AH):

**Clitic Movement (CM):**

All [Cl] nodes are adopted by the V-cluster of the first dominating VP. The order of application is [1]-[0]-[2]-[3] for the consolidated values.

After CM the clitic nodes are relabelled ‘CL’.

This gives precisely the correct clitic clusters and none of the incorrect ones. Consider, for example, *Je ne le lui donnerai pas*, illustrated in (12):

The postcyclic rule *Negative Placement* (NegPl) moves *[ne pas]* to the right of the first V in the V-cluster after the last tense affix. But for certain new varieties, French has no NegPl in infinitivals or participials: *ne pas le faire, en ne pas le prenant.*
The processing of, for example, *il me le donnera* follows the same principles:

(13a) $\begin{array}{c}
S \\
NP \\
il \\
VP \\
Aff \\
Pres \\
V \\
donner
\end{array}$  
(13b) $\begin{array}{c}
S \\
NP \\
il \\
VP \\
Aff \\
Pres \\
V \\
le \\
me \\
m_{[D,Cl]} \\
m_{[A,Cl]}
\end{array}$  
(13c) $\begin{array}{c}
S \\
NP \\
il \\
VP \\
Aff \\
Pres \\
V \\
le \\
me \\
m_{[D,Cl]} \\
m_{[A,Cl]}
\end{array}$

The system predicts the correct placement of the clitics in sentences like:

(14)  
   a. *Je le ferai partir.*
   
   b. *Je veux le faire.*
   
   c. *Il me semble s’en moquer.*

The correct placement of the clitics follows from the VP-structures of the sentences concerned. As was shown above, *faire*-constructions involve PR, which results in one V-cluster under one VP. Therefore, the VP-structure of (14a) is: $\text{VP}[\text{le ferai partir}]$, so that the clitic *le* must go to the position just left of *ferai partir*. Not so in (14b), which has the VP-structure $\text{VP}[\text{veux } \text{VP}[\text{le faire}]]$, since the only cyclic rule that has applied to the object-S is SD. (14c) is derived as in (15). More will be said about this in Section 6 below.

(15a) $\begin{array}{c}
S \\
Pres \\
V \\
semble \\
r_{[S]} \\
moque \\
r
\end{array}$  
(15b) $\begin{array}{c}
S \\
Pres \\
V \\
semble \\
r \\
moque \\
r
\end{array}$  
(15c) $\begin{array}{c}
S \\
NP \\
il \\
VP \\
Aff \\
Pres \\
V \\
semble \\
r \\
moque \\
r
\end{array}$
5. Affixation

As has been said above, cliticisation precedes affixation (AH). This has been done for good reasons. First consider the remarkable phenomenon of mesoclitics occurring in formal (written) Portuguese (da Cunha & Cintra 1985:300). Mesoclitics are clitics placed in the middle of a future finite verb form, just before the present or past tense/person suffix. The use is ancient; its history is based on the fact that the present or past tense/person suffix derives from the Latin verb habere, so that 'I will read it' was originally construed as 'read it I have (to do)'. Da Cunha & Cintra give as examples calar-me-ei ('I will remain silent') and calar-me-ia ('I would remain silent'), from the verb calar(se) 'to remain silent.'

In terms of the present theory, one surmises that the ancient analysis has been regrammaticalized as one where the weak pronoun has been cliticised not as a clitic but as an affix just underneath Aff[Fut], as shown in (16c). Normal successive applications of AH
then lead to (16f). The insertion of clitics underneath the highest tense suffix is, of course, exceptional, but it does fit into the general scheme.

The recategorization of clitics as affixes, however, appears not to be exceptional. Consider Italian, whose system of preverbal clitics can be considered largely identical to the French system (give or take a few details), provided recategorization as ‘Affix’ is allowed for. First, in Italian nonfinite verb forms (infinitivals and participials), as well as in nonnegative tu-imperatives, the same clitic clusters that occur preverbally with finite verbs are placed after the nonfinite forms and are written as forming one single word with the verb: dandoglielo, dartene, dammelo. (Exceptionally this occurs also with finite verbs, as in vendesi on billboards or in advertisements) This suggests an operation whereby the entire clitic cluster is taken together as one Affix constituent, and hence moved by AH to the right of the following lexical word as a morphological construct (word), as in (17):

\[(17)a. \quad \text{V} \quad \Rightarrow \quad \text{b. V} \quad \text{AH} \quad \Rightarrow \quad \text{c. V} \]

\[
\begin{array}{l}
\text{CL} \quad \text{V} \\
\text{te} \quad \text{CL} \quad \text{CL} \\
\text{ne} \quad \text{dare} \quad \text{te} \quad \text{ne}
\end{array}
\]

A similar process may be assumed for the Italian counterpart of French le lui (in general A3 + D3; see A(i) above), which is glielo, i.e. D3 + A3, but now written as one word. All that is required to obtain the Italian result is the assumption that Italian follows the same procedure as French and moves A3 pronouns to a clitic position just above D3 pronouns, but that A3 pronouns moved to that position are recategorized not as ‘CL’ but as ‘Aff’, operating on the first lexical form down, the D3 clitic CL[gli/le]. AH then gives glielo, as one word. (Note that me lo is spelled as two words, as in French.) Otherwise, French and Italian can be considered identical in this respect. (One admires the intuitive analytic powers of those who design spelling systems and have a natural feeling for word boundaries.)

The facts of French nonnegative imperatives are similar. There, generally speaking, the preverbal clitic cluster is also moved to the right of the imperative verb form, as in Donnez-le-lui or Parlez-m’en. (Modern French texts tend to do without the hyphens but they
were *de rigueur* in better days. Then, in spoken French forms like *parlez-m’en* are sometimes replaced by *Parlez-moi-s-en*, with inserted spurious *s.*)

So far, the same process as sketched for Italian postverbal clitic (affix) clusters can be assumed (with hyphens for the internal morpheme boundaries). In one class of cases, however, French deviates from Italian. In French the combination of A3 and D1 or D2 clitics is different in preverbal and postverbal position: preverbally the order is D1/2 + A3, as in *Il me l’a dit*, but postverbally the order is inverted to A3 + D1/2, as in *Dis-le-moi*. This, again, is effortlessly accounted for in the terms of the machinery developed here. All we have to say is that in the case of preverbal clitic clusters of the form D1/2 + A3, the cluster is not taken together as one Affix constituent, but the CL constituents of the V-cluster are singly relabelled as Affix. This then produces the correct result. Then, however, we face the difficulty of how to describe this deviation from the general procedure in maximally economic terms. The best we can do is stipulate that in French the subsumption of clitic clusters under one Affix constituent is restricted by the principle that subclusters with an A3 as highest element form one Affix constituent, whereas any remaining higher material in the same V-cluster forms another. This solution gets the facts right, but there is, so far, no indication that it is based on any general principle.

6. No Clitic Climbing

As has been indicated above, there is an interesting difference between French and Italian in the ways clitics are handled with embedded infinitives. Modern French keeps the clitics in front of their own infinitive, as in *Je pourrais le vendre, Tu sembles ne pas vouloir me le dire*, except when the main verb takes PR, as in *Tu ne m’en feras pas prendre trop*. This follows directly from the machinery sketched above, where *faire*-constructions lead to a single VP, owing to PR, whereas SD and SR lead to embedded VPs. The generalization now holds that Clitic Movement unites clitics with the V(-cluster) of the first VP above them. Clitics are thus assumed to stay within their ‘own’ VP, which works perfectly well for modern French.
In 17th century French, however, one also finds forms like *Je le veux faire*, with the clitic moved to the V(-cluster) of the higher embedding VP. The same is found (with bare infinitives, i.e. without any preposition like *di* or *a*) in modern Italian, which allows for both *Lo voglio fare* and *Voglio farlo* (which corresponds to French *Je veux le faire*, modulo affixation). Likewise, *Sembra averlo fatto* is found on an equal footing next to *Lo sembra aver fatto*, i.e. with embedded subject clauses.

This phenomenon has been attributed to a rule of *Clitic Climbing* (optional for Italian and 17th century French), allowing clitics to go past the V-cluster of their own immediate VP and look for the higher VP. This rule, however, seems superfluous, since all we need to account for such facts is the assumption that the verbs in question take optional Predicate Raising. The pair *Voglio farlo* / *Lo voglio fare* is thus generated, without extra cost as shown in (18) and (19), respectively:

(18)a. \[ S \quad \text{SD} \Rightarrow \quad b. \quad S \quad \text{no PR} \Rightarrow \quad c. \quad S \quad \Rightarrow \quad d. \quad S \]

(19)a. \[ S \quad \text{SD} \Rightarrow \quad b. \quad S \quad \text{PR} \Rightarrow \quad c. \quad S \quad \Rightarrow \quad d. \quad S \]

7. Conclusion

This concludes our cursory discussion of cliticisation in French and to some extent in Italian, with some support from Portuguese. Although there are still many questions to be answered in this area, it does seem that some system has been found in the madness of the
grammatical behaviour of clitics. The assignment of numerical values to nominal (and adverbial) constituents that have been marked as clitics appears to have a certain explanatory value, even if questions regarding the functional or semantic motivation of such a system have to remain open. Yet the very fact that such questions naturally arise in this context seems encouraging. Moreover, the strategy of assigning affix status to clitics under certain conditions appears to pay off in surprising ways. It is hoped that this study will stimulate others to carry on the job of exploring the mysteries that still surround the phenomenon of cliticisation in natural language.

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