

## Positioning Romanian Verbal Clitics at PF: An Optimality-theoretic Analysis\*

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### Abstract:

This paper argues that Romanian auxiliary and pronominal clitics are phrasal affixes subject to a set of conflicting PF alignment constraints that are responsible for the clustering, rigid ordering, and overall positioning in a clause of both so-called verbal clitics (in Romanian) and second-position clitics (in South Slavic). Evidence that auxiliary and pronominal clitics are morphological entities comes from their syntactic inertness while evidence for their phrasal affix status comes from their moveability and the fact that they do not pattern like word-level affixes in Romanian.

### I. INTRODUCTION

As Anderson (1992, 1993, 1995) notes, second-position or Wackernagel clitics occupy a prominent place in the study of clitics because they are the ones that are most obviously ‘special’. They pose a serious challenge to the prominent generative view that clitics are lexical items introduced in phrase structure and moved around by rules of the syntax (e.g. Kayne: 1975). For Anderson, the existence of second-position clitics and the need to resort to non-syntactic mechanisms to characterize their distribution (e.g. Halpern: 1995) is a fatal blow to a syntactic theory of cliticization already undermined by the cross-linguistic evidence of numerous parallels between affixes and clitics. In fact, he argues that second-position clitics provide strong evidence for the view, previously articulated in Klavans (1985), that clitics are phrasal affixes. That is, they are to phrases what word-level affixes are to stems.

In this paper, I argue that verbal clitics, i.e. clitics traditionally defined with reference to a host -- as opposed to clitics defined by their overall position in a clause -- are also best analyzed as phrasal affixes. Romanian is chosen as the target of study. The bulk of the evidence comes from the syntactic ‘inertness’ of clitic auxiliaries and pronouns in Romanian which is independent of position issues.

I further argue that the overall positioning of verbal clitics, their clustering and rigid order results from the same violable alignment constraints that operate in South Slavic Wackernagel languages (Anderson: 1996, in press; Legendre: 1996, 1998a, 1999a, in press a). As expected under Optimality Theory’s formal theory of variation the difference reduces to one in constraint ranking (Prince and Smolensky: 1993).

The paper is organized as follows. Section 2 discusses the properties of Romanian auxiliaries while section 3 focuses on clitic pronouns. Evidence that clitics are phrasal, rather than word-level, affixes is presented in section 4. Section 5 presents a comparative OT analysis of clitic alignment in Romanian. Section 6 concludes with a summary of the main claims.

### 2. ROMANIAN CLITIC AUXILIARIES

Romanian makes use of clitic auxiliaries in compound tenses (Mallinson: 1986; Dobrovie-Sorin: 1994). These include perfect, future, or conditional auxiliaries, respectively, *avea* ‘have’, *voi*, etc. and *as*. The perfect and the future/conditional auxiliaries are combined with a past participle form and an infinitive form of the lexical verb, respectively.

Romanian also has modal verbs which Motapanyane (1991:88-112) characterizes as ambiguous between auxiliaries and lexical verbs. These include *a putea* ‘can, may’ (called a semi-auxiliary in Mallinson 1986:311) which may be followed by a subjunctive clause or a lexical verb in the infinitive as well as *am* and *o*<sup>1</sup> which combine with subjunctive verbs to form another periphrastic future. The subjunctive is expressed

via the particle *să*, itself a clitic (Dobrovie-Sorin: 1994,62). In data sets clitics are identified by italics throughout the paper.<sup>2</sup>

- (1) R a. *Am cântat.*  
 ‘(I) sang/have1SG sung’  
 R b. *Voi/aș cânta.*  
 ‘(I) will/would1SG sing’  
 R c. *Pot cânta.*  
 ‘(I) can1SG sing’  
 R d. *Am/o să cânt.*  
 ‘(I) will sing’

The first question of interest is whether the different Romanian verbal categories display the same syntactic properties or not. I will argue that the answer is clearly negative. This leads to the second question: Why don’t they share the same syntactic properties? A number of ‘syntactic’ answers have been proposed in the literature which, in my opinion, fall short of answering all relevant empirical questions besides being theoretically unappealing. After reviewing them, I will conclude that Romanian clitic auxiliaries are syntactically ‘inert’ and that treating them in the syntax on a par with their non-clitic counterparts leads to unnecessary complications. Their syntactic inertness, in fact, supports a morphological analysis.

#### 2.1. SUBJECT-AUX INVERSION VS. AUX-TO-COMP

To begin with, Romanian verbal categories differ with respect to whether they allow English-type Subject-Aux Inversion (SAI) in matrix or embedded questions (Dobrovie-Sorin: 1994,12). (In the interest of space only the former is discussed). There is a clear division of labor. Lexical verbs and the modal *a putea* allow SAI (2a-b) but tense auxiliaries and the modals *are/o* do not (3a-d). Instead, the subject must follow the lexical verb. That is, the auxiliary or modal plus lexical verb form a unit which cannot be broken up by a subject.

- (2) R a. *Cînd vine Ion?*  
 when come3SG John  
 ‘When is John coming?’  
 R b. *Cînd poate Ion veni mîine?*  
 when can3SG John come tomorrow  
 ‘When can John come tomorrow?’  
 (3) R a. *Ce a spus Ion?*  
 what have3SG said John  
 ‘What has John said?’  
 R b. *\*Ce a Ion spus?*  
 R c. *Pe cine are/o să vada doctorul mîine?*  
 whom will SUBJ see doctorDET tomorrow  
 ‘Who will the doctor see tomorrow?’  
 R d. *\*Pe cine are/o să doctorul vada mîine?*

This is rather unexpected if, as assumed in Rivero (1994), all verbal elements head a lexical or functional projection. That is, under standard Principles & Parameters assumptions about wh-movement, V-I-C movement occurs in (2a). In (2b) and (3c), it would be natural to generate all modals *poate* and *are/o*, in the same position, say I (or M as in Rivero (1994)), yet I-C movement is possible in (2b) but impossible in (3d) (and (3b)). Hence, they must receive a different analysis. *A putea*, unlike other modals, behaves like a lexical verb. Henceforth it will be referred to as a modal verb.

The absence of SAI is found in other Romance languages, where tense auxiliaries are not usually considered to be clitics. French disallows it with lexical subjects in its Stylistic Inversion construction (Kayne, 1972).<sup>3</sup>

- (4) F a. A qui a parlé Jean?  
to whom have3SG spoken John  
'Whom did John speak to?'  
F b. \*A qui a Jean parlé?  
I c. Che cosa ha visto Gianni?  
what have3SG seen Gianni  
'What did Gianni see?'  
I d. \*Che cosa ha Gianni visto?

Yet, Romanian differs from the rest of Romance in a number of ways which cast doubts that the absence of SAI across Romance is one and the same phenomenon. For example, Romanian does not allow the subject to appear preverbally in *wh*-questions, as shown in (5).

- (5) R a. \*Ce Ion a spus?  
what John have3SG said  
'What has John said?'  
R b. \*Mă întreb ce Ion a spus.  
meREFL wonder what John have3SG said  
'I wonder what John has said'  
R c. \*Mă întreb pe cine doctorul are/o să vada mâine.  
meREFL wonder pe who doctorDET will SUBJ see tomorrow  
'I wonder who the doctor will see tomorrow'

The situation is more complex in Italian. As in Romanian, the subject may not appear preverbally in matrix questions (6a). In embedded questions, at least for some speakers, preverbal subjects are degraded if the auxiliary is in the indicative but fully grammatical if the auxiliary appears in the subjunctive (Georgi and Pianesi: 1996). This is shown in (6b,c). In contrast, even Romanian modals selecting for a subjunctive complement in embedded questions do not allow preverbal subjects, as shown in (5c). That is, all preverbal subjects are ungrammatical in Romanian *wh*-questions.

- (6) I a. \*Che cosa Gianni ha visto.?  
what Gianni have3SG seen  
'What did Gianni see?'  
I b. ?\*Gianni si domanda che cosa ha visto Mario.  
Gianni wonder3SG what hasIND seen Mario  
'Gianni wonders what Mario saw'  
I c. Gianni si domanda che cosa Mario abbia fatto.  
Gianni wonder3SG what Mario hasSUBJ done  
'Gianni wonders what Mario did'

In matrix declaratives, Romanian permits SVO, VSO and VOS (Monachesi: to appear). In Italian, the VSO word order is dispreferred, even when the subject is contrastively stressed (Luigi Burzio, p.c.).

- (7) R a. Mama a făcut o prăjitură.  
'Mum have3SG made a cake'

- R b. *A făcut mama o prăjitură.*  
 R c. *A făcut o prăjitură mama.*

Thus, Romanian and Italian differ in significant ways with respect to word order issues. Hence it is not obvious that the absence of SAI in Romanian can be assimilated to the absence of SAI in Italian. Nor can the Romanian pattern be assimilated to French Stylistic Inversion which displays the following properties: (i) It is triggered, typically by the presence of a fronted *wh*-phrase, (ii) Its postverbal subject has a special informational status (Legendre: 1999b).

As shown in (8a), the subject follows the verb complex in Romanian yes/no questions. (Yes/no questions can also be expressed simply by intonational means, without inversion, as shown in (8b)). Stylistic Inversion, on the other hand, is ungrammatical in yes/no questions. This is evidence that the Romanian construction in (8a) cannot simply be assimilated to French Stylistic Inversion in (8c).

- (8) R a. *A venit Ion?*  
           have3SG come John  
           ‘has John come?’  
 R b. *Ion a venit?*  
 F c. *\*Est venu Jean?*  
           be3SG come John  
           ‘has John come?’

I propose that the status of syntactic head (i.e. heading a syntactic projection) is a necessary condition for SAI. Romanian does not allow SAI whenever the verbal category is a clitic auxiliary. Hence, I propose that Romanian clitic auxiliaries do not head syntactic projections. Note that the status of syntactic head is not a sufficient condition for SAI, since other Romance languages restrict SAI despite the fact that the relevant auxiliaries are not clitics. Other constraints are clearly at work, including some violable information-based constraints on arguments (e.g. Samek-Lodovici: 1996; Legendre: 1999b).

SAI is an instance of aux movement to a functional head, typically C. If the hypothesis that Romanian clitic auxiliaries disallow SAI because they do not head a syntactic projection is correct, then Romanian clitic auxiliaries should not allow any other type of auxiliary movement. As Dobrovie-Sorin (1994:13) notes, Romanian does not allow Aux-to-Comp in infinitivals, contra Italian (Rizzi: 1982; Georgi and Pianesi: 1996).

From the discussion of SAI I conclude (with Dobrovie-Sorin: 1994) that it is V which systematically occupies C in Romanian *wh*-questions like (3). V-movement proceeds as if the auxiliary were not there. My hypothesis is that it is not there because functional features of verbal heads do not have to be realized in the syntax; in many instances they are only realized at PF, as is the case when they are clitics.<sup>4</sup> In OT terms, features of the verbal head belong to the input to optimization. Whether they are realized as heads of a projection or not depends on the ranking of relevant constraints. See further discussion below.

## 2.2. THE POSITION OF ADVERBS

Romanian has two classes of adverbs, a small class of five monosyllabic intensifiers (including *mai* ‘again’) that several scholars have identified as clitics (e.g. Mallinson: 1986; Dobrovie-Sorin: 1994; Rivero: 1994) as well as regular adverbs. They display different positional properties.

Regular adverbs in Romanian cannot separate clitic auxiliaries from their verbal complement (Dobrovie-Sorin, 1994:8; Monachesi, to appear). Regular adverbs follow the lexical verb both in the presence or the absence of a clitic auxiliary.<sup>5</sup> Regular adverbs also follow modal *putea*, which behaves in all relevant respects like a lexical verb. A similar pattern is found with quantifiers (Dobrovie-Sorin: 1994, 9).

- (9) R a. *Elevii mei văd adesea filme bune.*  
           students my see3PL often films good

- R b. ‘My students often see good films’  
 Ion poate adesea veni luni.  
 ‘John can often come (on) Monday’
- (10) R a. *Am văzut adesea filme bune.*  
 have1SG seen often films good  
 ‘I have often seen good films’
- R b. \**Am adesea văzut filme bune.*
- R c. Doctorul *are/o să-l* vada adesea luni.  
 doctorDET will SUBJ- himACC see often monday  
 ‘The doctor will often see him on Mondays’
- R d. \*Doctorul *are/o să-l* adesea vada luni.

Once more, we are dealing with a pattern of clitic auxiliaries being ‘invisible’ to the syntax, i.e. the placement of adverbs. The only relevant position to adverb placement is that of the lexical or modal verb. On a V-I analysis of inflected lexical verbs, the lexical V moves to I, by-passing the adverb (presumably) adjoined to VP. At PF, the V feature [perfect], for example, is realized as a phrasal affix. If affixation of all functional features (tense, aspect, person/number, etc.) takes place at PF, as argued in Legendre (to appear a, b), and the subject occupies its VP-internal position (Koopman and Sportiche: 1991), then the respective position of V and adverbs is the result of a competition in the syntax, the details of which do not affect the present argument. On a syntactic analysis of clitic auxiliaries as located in, say I, an extra mechanism has to be invoked to account for the impossibility of adjoining the adverb to VP.

Returning to the intensifier *mai* ‘again’, note that it is part of the clitic cluster (Dobrovie-Sorin: 1994, 26). It is positioned between pronominal clitics and lexical verbs. While regular adverbs follow modal *putea* (9), *mai* precedes it, along with other clitics.

- (11) R a. Ion *îl mai* vizitează.  
 John himACC again visit3SG  
 ‘John is still visiting him.’
- R b. Maria *nu-l mai* poate ajuta.  
 Maria neg-himACC again can3SG help  
 ‘Maria can’t help him any longer’

In the presence of a clitic auxiliary, *mai* again precedes the lexical verb:

- (12) R a. Nu *l-am mai* văzut  
 neg-himACC aux1SG still seen  
 ‘(I) have not seen him anymore’
- R b. Ion *are/o să-l mai* vada.  
 John will SUBJ-himACC again see  
 ‘John will still see him’

On a syntactic analysis of generating *mai* in the same position as regular adverbs like *adesea* ‘often’, one would have to stipulate that V-I movement of inflected verbs depends on the type of adverb. An alternative is the ‘derivational affix’ analysis of *mai* of Rivero (1994). Based on the fact that *mai* immediately precedes the main verb in simple (and compound) tenses, she proposes to base-generate *mai* on the lexical verb and have the complex clitic+V<sup>o</sup> move to T/Agr. As also noted in Dobrovie-Sorin (1994:9), this account cannot be extended to (11b) in which *mai* precedes the modal verb *a putea* rather than the lexical verb.

On the present analysis, *mai* is not an independent element occupying a particular (adjoined) position in the syntactic structure. It is the PF realization of a feature [intensity].<sup>6</sup>

### 2.3. INVERTED CONJUGATIONS

The hypothesis that clitic auxiliaries are not realized in the syntax explains further properties, in particular the fact that Romanian clitic auxiliaries escape the Head Movement Constraint of Travis (1984). The phenomenon in question is widely spread in Balkan and pertains to a second-position restriction on clitics. It is found in some dialects of Romanian as well as in the literary register (Dobrovie-Sorin: 1994; Monachesi: to appear; Rivero: 1994). In poems and cursing expressions, Romanian allows what Rivero (1994) has dubbed Long Head Movement, i.e. movement of a lexical verb over an auxiliary in violation of Travis' Head Movement Constraint. In Romanian, this may occur only in the presence of clitic auxiliaries (Dobrovie-Sorin: 1994).

- (13) R a.      *Mira-m-aș.*  
wonder me would1SG  
'(I) would wonder'  
R b.      *Pleca voi.*  
leave shall1SG  
'(I) shall leave'

On a syntactic analysis like Rivero's, the solution is to complicate the Head Movement Constraint so that it is not violated whenever a verb is fronted over a clitic auxiliary. Note that this complication is needed solely to accommodate a syntactic analysis of clitic auxiliaries as heads. The present analysis, on the other hand, leaves the content of the original Head Movement Constraint intact as the positioning of clitics takes place as PF. In other words, Long Head Movement is not a type of movement sanctioned by the grammar. What Romanian inverted conjugations exhibit is a (remnant) second-position clitic phenomenon limited to certain registers and dialects. These registers and dialects are formally characterized by a different constraint ranking, essentially that of Bulgarian (Legendre: 1999a, in press a).

### 2.4. COORDINATION

Additional evidence for the affix-like status of clitic auxiliaries comes from coordination patterns. Clitic auxiliaries do not have wide scope over coordination. They must be repeated in each conjunct, as shown in (14a-b). The Romanian pattern contrasts with other Romance languages in which auxiliaries head syntactic projections. For example, in French, tense auxiliaries have wide scope over coordination (14c).

- (14) R a.      *Ion va rămîne aici sau va pleca.*  
John fut3SG stay here or fut3SG leave  
'John will stay here or will leave'  
R b.      *Am văzut-o și i-am vorbit.*  
have1SG seen herACC and herDAT-have1SG talked  
'(I) have seen her and talked to her'  
F c.      *J'ai bu et mangé à midi.*  
I have1SG drunk and eaten at noon  
'I drank and ate at noon'

Note that the scope facts are compatible with two kinds of affixation analyses, word-level affixes as in Miller and Sag (1997), Monachesi (1998, to appear) as well as phrasal affixes (Klavans: 1985; Anderson: 1992). On the former view, coordination takes place at the  $V^0$  level, on the latter view it takes place at a phrasal, ( $V'$  or VP) level.

In languages in which auxiliaries head syntactic projections it is possible to conjoin them as shown in (15) -- though the result is not always felicitous for reasons that remain unclear. In French, for example, auxiliaries coordinate (as long as they are not identical), in particular if an adverb is added. Note that a pause after the second auxiliary *sera* is not required in (15b).

- (15) E a. I can and will go out tonight.  
 F b. Pierre est et sera sans aucun doute réélu sénateur.  
 'Peter is and will without any doubt be reelected senator'

In Romanian, however, it is outright impossible to conjoin two distinct clitic auxiliaries, as shown in (16a). Adding an adverb does not improve the example (Ioana Chitoran, p.c.). In contrast, lexical verbs freely undergo coordination (16b). Note that it is also possible to coordinate a compound past tense form (with a clitic auxiliary) with a simple present tense form as in (16c).

- (16) R a. \*Ion *va sau ar* veni.  
 John fut3SG or cond3SG come  
 'John will or would come'  
 R b. Lupul *vînează sau ignorează* oile.  
 wolfDET hunt3SG or ignore3SG sheepDET  
 'The wolf hunts or ignores the sheep'  
 R c. Lupul *a* urmărit și acum ucide oile.  
 wolfDET have3SG followed and now kill3SG sheepDET  
 'The wolf followed and is now killing the sheep'

The Romanian pattern of coordination in (16) is a puzzle if clitic auxiliaries head syntactic projections on a par with their non-clitic counterparts. Why is (16a) ungrammatical but (16c) grammatical? On the present account, there is a simple explanation for their different status. Clitic auxiliaries are not in the syntax, hence they cannot be coordinated. (16c) is simply a subcase of coordination of lexical verbs. The clitic auxiliary only surfaces at PF.

Summarizing section 2, I have argued that clitic auxiliaries are syntactically inert. They do not undergo V movement to C and they escape the Head Movement Constraint, two fundamental properties of syntax. Coordination facts further reveal that they are affix-like. Their behavior is therefore a challenge to analyzing them as heads of a functional projection.

One solution is to get around the problem by relying on additional language-particular syntactic mechanisms. This is what Dobrovie-Sorin (1994, 1995) does by proposing an idiosyncratic pseudo bi-clausal structure for Romanian whereby clitic auxiliaries are generated adjoined to CP/IP. Note that her proposed structure involves adjoining a head to a maximal projection, in clear violation of the Structure Preserving Hypothesis. Furthermore, why the clitic auxiliary could not have scope over a coordination of lower verbal constituents is unclear as her analysis appears to predict exactly the opposite.

The alternative proposed here is that Romanian clitic auxiliaries are morphological entities -- PF realizations of functional features--, on a par with their South Slavic counterparts which, in addition, are subject to productive second-position requirements (Anderson: 1996, in press; Legendre: 1996, 1998a, 1999a, in press a). Dobrovie-Sorin (1994:9) explicitly rejects an affix analysis of clitic auxiliaries on the basis of inverted conjugations in which the clitic auxiliary follows, rather than precedes, the lexical verb (13). That conclusion does not follow under a phrasal affix analysis and an OT alignment analysis of phrasal affixation. As mentioned in section 2.3, the inverted conjugation pattern is a productive one in South Slavic for which extensive phrasal affix analyses already exist (Anderson: 1996, in press; Legendre: 1996, 1998a, 1999a, in press a).

The next section examines Romanian clitic pronouns and concludes that they too are PF entities.

### 3. ROMANIAN PRONOMINAL CLITICS

#### 3.1. CLITIC DOUBLING

Like many Balkan languages Romanian has clitic doubling (see Farkas: 1978, Steriade: 1980, and

Gierling: 1997 for discussion). Romanian clitic doubling shares some features of Balkan clitic doubling.

In Macedonian, clitic doubling is obligatory with definite objects which are, in turn, not marked in any way, either by a preposition or morphological case. Yet, they presumably have abstract Case, suggesting that the doubling clitic functions as an agreement marker. The existence of this type of clitic doubling (also found in Bulgarian) raises doubt that a case-absorbing analysis of clitic doubling like Jaeggli (1982) is universally available. Such an analysis was, in fact, explicitly designed to account for the presence for a case marker on the doubled NP in Spanish.

- (17) M a.      *Go<sub>i</sub> imam videno Petar<sub>i</sub>.*  
                   himACC have1SG Peter  
                   ‘(I) have seen Peter’  
       R b.      *L<sub>i</sub>-am vāzut pe Ion<sub>i</sub>.*  
                   him have1SG seen John  
                   ‘(I) have seen John’

In Romanian clitic doubling, direct objects appear preceded by the preposition-like element *pe* if the referent is [+specific, +human]. Gierling (1997) characterizes *pe* as a dummy preposition rather than a case marker. Clitic doubling with indirect objects lacks *pe*; the NP instead bears morphological dative Case (Dobrovie-Sorin: 1990, 355). As a reviewer points out, clitic doubling without *pe* is also found when the referent of a direct object is [+specific, -human] -- evidence that the appearance of *pe* is not tied to Case..

Regardless of the appearance or absence of a marker on the doubled NP, both Macedonian and Romanian share a similar ‘syntax’ of clitic doubling which provides additional empirical support for the present morphological analysis of clitics. If clitic pronouns were active in the syntax instead of being mere agreement markers, we would expect Binding Principle C effects, for example in strong crossover contexts. As shown in (18a,b) however, such blocking effects are completely absent in both Macedonian and Romanian.

- (18) M a.      *Čovekot<sub>i</sub> kogo<sub>i</sub> što go<sub>i</sub> vidov t<sub>i</sub>.*  
                   manDET whom that himACC saw1SG  
                   ‘The man whom I saw’  
       R b.      *Omul<sub>i</sub> pe care l<sub>i</sub>-am vāzut t<sub>i</sub>.*  
                   manDET pe which himACC-have1SG seen  
                   ‘The man whom I saw’

Recall that doubled NPs in Macedonian must have abstract Case (17a). On standard assumptions (Chomsky: 1981), the *wh-t* in (18a) has Case, hence it is a variable. This entails that it is subject to Principle C of the Binding Theory (Chomsky: 1981).

In Dobrovie-Sorin (1990) the *wh-t* in Romanian *care* structures (18b) is claimed not to be a variable on the assumption that clitic doubling is tied to a case-absorbing property of the doubling clitic and to the presence of a case marker on the doubled NP. I reject this crucial assumption of Dobrovie-Sorin’s analysis because it predicts languages without a case marker on the doubled NP like Macedonian to be impossible. I propose instead that the *wh-t* in (18b) is in fact a variable.

Note that (18a,b) are grammatical despite the intervening doubling clitic co-indexed with the *wh*-trace. If the doubling clitic were adjoined to the verb, as might be expected under a syntactic analysis of clitics, then it *c-commands* the *wh*-trace, causing a Binding Principle C violation. Note that there is no evidence that the *pe*-phrase is dislocated in (17b) because Romanian does not allow right-dislocation of NPs. NPs can only be dislocated to the left. Note also that the doubling clitic is not a resumptive pronoun in (18b) as these structures are sensitive to islands (Dobrovie-Sorin: 1990, 351).

The fact that (18a,b) are grammatical, however, straightforwardly follows from an analysis in which

the doubling clitic is not present in the syntax. There is simply no Binding Principle C violation.

### 3.2. COORDINATION

The view that Romanian clitic pronouns are affix-like is supported by their behavior in coordinations (Monachesi: 1998). Romanian clitic pronouns do not have wide scope over coordination. When verbal constituents are coordinated, the clitic pronoun must appear in front of each conjunct, just like in French (Miller: 1992; Miller and Sag: 1997). This is illustrated in (19).

- (19) R a. *O vād și o invit.*  
 herACC see1SG and herACC invite1SG  
 '(I) see and invite her'
- R b. *\*Îl și i- am văzut*  
 himACC and themACC have1SG seen  
 '(I) have seen him and them'
- F c. *Pierre les voit et les écoute.*  
 Peter themACC see3SG and themACC listens-to3SG  
 'Peter sees and listens to them'
- F d. *\*Pierre les voit et écoute.*

Thus, clitic pronouns pattern just like their auxiliary counterparts, providing additional evidence that both have the same status of not being syntactic constituents. A general PF analysis of clitics (and by extension all functional features as in Legendre: to appear a, b) is a clear departure from the standard generative assumption that inflectional morphology is subsumed under syntax. While popular since Pollock (1989), this assumption raises important, unresolved, theoretical questions about parametric variation in functional projections (e.g. Iatridou: 1990; Dobrovie-Sorin: 1994) and the explanatory value of making V movement dependent on abstract features, i.e. [strong] vs. [weak], that are not tied to actual morphology (see Thráinsson: 1996 for some discussion). For example, Motapanyane (1991) relies on weak agreement in compound tenses vs. strong agreement in simple tenses, translated into different structural representations, to explain the position of adverbs and clitic pronouns in Romanian. Morphologically speaking, the number of distinct agreeing forms in simple and compound tenses, however, is the same (five or six different forms, based on examples in Mallinson: 1986, 274-276). Hence, the morphology is uniformly rich, and the 'strength' of agreement is not motivated independently of the word order problems it is intended to solve.

### 4. CLITICS ARE PHRASAL AFFIXES

Previous morphological analyses of Romanian and more generally, Romance clitic pronouns have assumed that they are word-level affixes (Monachesi: 1998, this volume; Miller: 1992; Miller and Sag: 1997). For example, Monachesi (1998, this volume) invokes the rigid order of clitics in the cluster, the existence of arbitrary gaps, and some morphophonological idiosyncracies, besides the existence of clitic doubling and the coordination facts discussed above, in support of her affixal analysis.

On the realizational view of morphology advocated by Anderson (1992), Stump (1992) and Spencer (this volume), morphology is a set of rules or (in more recent terms) well-formedness constraints, each describing some modification of an existing lexical item that relates it to other forms. Klavans (1985) and Anderson (1992, 1993, 1995) argue, largely on the basis of second-position effects shared by infixes as well as clitics cross-linguistically, that clitics are to a phrase what affixes are to a stem. The difference is not one in kind, but rather of domain of application of the same rules/constraints. While the properties enumerated above are indeed characteristic of affixes (Zwicky and Pullum: 1983), they are compatible with a phrasal, or larger domain of affixation. I argue below, based on a comparative analysis, that Romanian clitic auxiliaries and pronouns, by and large, do not behave like word-level affixes.

#### 4.1. CLITICS ARE MOVEABLE

The first piece of evidence that Romanian clitics are not word-level affixes comes from the fact that the clitic cluster may appear preverbally or postverbally, depending on particular functional features borne by their verbal host. Thus in finite clauses, clitic auxiliaries and pronouns cluster in preverbal position. With gerunds and positive imperatives, a different positioning can be observed. Clitic pronouns appear in postverbal position.

- (20) R a.        *Mi- o dă.*  
                  meDAT itFEM give3SG  
                  ‘(He) gives it to me.’  
       R b.        *Văzîndu-l...*  
                  ‘Seeing him...’  
       R c.        *Lasă-mă!*  
                  leaveIMP meACC  
                  ‘Leave me!’

Word-level affixes have a fixed position with respect to a root or stem. The fact that clitics can change position with respect to a host -- to their right or to their left -- is incompatible with the view that they are word-level affixes. On the present analysis in terms of left alignment with a phrasal domain, the shift in position is the consequence of interacting constraints that favor aligning certain features, [gerund], [imperative] over others [accusative], [dative].

#### 4.2. INFLECTIONAL VS. DERIVATIONAL MORPHOLOGY

The distribution of prefixes versus suffixes in Romanian is regular. All inflectional morphemes are strictly suffixes, as shown in (21a). Derivational morphemes that attach to verbs and create new lexical items within the same word class are prefixal or suffixal, as shown in (21b,c). Some derivational suffixes can change word class membership, as shown in (21d) (Mallinson: 1986,321).

- (21) R a.        *kînt* ‘sing-1sg; *kînt-sj* ‘sing-2sg’  
       R b.        *-bat-* ‘beat’ > *dez-bat* ‘to debate’; *răz-bat* ‘to advance’; *stră-bat* ‘to wander’; *a-bat* ‘to divert’  
       R c.        *stuf* ‘reed’ > *stufar-is* ‘reed thicket’; *stejar* ‘oak’ > *stejar-is* ‘oak forest’  
       R d.        Noun to Verb: *zeu* ‘god’ > *zeu-fica* ‘to deify’  
                  Adjective to V: *perfect* ‘perfect’ > *perfect-a* ‘to perfect’

Clitic auxiliaries and pronouns are, in terms of their content, clearly part of inflectional morphology. They appear preverbally (unless forced otherwise by constraints pertaining to features like [gerund] and [imperative]). Their unmarked preverbal position is inconsistent with the regular pattern of word-level inflectional affixes in the language - exclusively suffixal. On a word-level affix theory of clitics, clitics would constitute an exception to the general pattern in the language.

#### 4.3. STEM ALLOMORPHY

A typical property of word-level affixes is that of triggering stem allomorphy (e.g. Spencer: this volume). In Romanian, prefixation never triggers allomorphy on the root (Ioana Chitoran, p.c.). Rather, the prefixes themselves may have different allomorphs (e.g. *în/im-* which derives verbs from nouns). Suffixation, on the other hand, can trigger stem allomorphy, namely palatalization (triggered by a front vowel). This is the case for the diminutive suffix *-el* which attaches to nouns and for the second person suffix which attaches to verbs:

- (22) R a.        *kapak* ‘lid’ > *kăpătS-el*  
       R b.        *băjat* ‘boy’ > *băjetS-el*  
       R c.        *kînt* ‘sing1SG; *kînt-sj* ‘sing2SG’

Note that suffixation can also trigger changes in the stem vowel, as shown in the first example above. These are due to stress shift away from the stem to the suffix (Chitoran: 1995).

In contrast, Romanian clitics never trigger root allomorphy, nor do they ever trigger changes in stem vowel, even when they appear as enclitics, for example with gerunds and positive imperatives (Ioana Chitoran, p.c.). Why shouldn't they if they are word-level affixes? The answer does not seem to be one related to levels of affixation in lexical phonology as Romanian provides no evidence for late level affixation (Ioana Chitoran, p.c.).

Evidence for a non-word level affix status is not simply a failure on the part of clitics to exhibit the relevant morpho-phonological properties of word-level affixes. Clitics exhibit a phonological process of their own, vowel truncation which is never found in Romanian prefixes nor suffixes. For example, if a clitic ending in a schwa (spelled *ă*) or the reflexive clitic *se* precedes a verb beginning with unstressed *a* or *o*, vowel truncation is optional (23a,b).

- (23) R a. *Mă așteaptă / m-așteaptă*  
meACC wait3SG  
'He waits for me'
- R b. *Se așează/ s-așează*  
REFL sit3SG  
'He sits'
- R c. *M-a invitat/ \*mă a invitat*  
meACC have3SG invited  
'He has invited me'

As (23c) shows, vowel truncation in the clitic pronoun is obligatory in the presence of a clitic auxiliary like *a*. As discussed in Monachesi (this volume), its distribution is a bit more complicated than represented here but the pattern in (23) suffices to make two points. One, the phenomenon in (23) is further evidence that the difference in status (clitic vs. lexical verb) matters. Two, regardless of how its restrictions must ultimately be characterized, vowel truncation is found with clitics, never with word-level affixes.

I conclude that clitics are not word-level affixes but rather phrasal affixes. Ample cross-linguistic evidence comes from South Slavic languages (among others) in which the position of clitics is subject to a second-position requirement that can be met by any syntactic category in clause-initial position (Anderson: 1996, in press; Legendre: 1996, 1998a, 1999a, in press a). Moreover, the clause-initial host needs only have the status of prosodic word in Croatian, it needs not be a syntactic phrase (Anderson: 1996; in press).

The overall claim then is that functional features may be realized and aligned at the edge of a phrasal projection of the feature host V (in which case they are called clitics) or aligned at the edge of a stem (in which case they are affixes). Formally, the morphological process of alignment is the same. There is competition among features for realization at the edge, which is resolved by ranking of individual alignment constraints. This optimality-theoretic theory of morphology was articulated very early on in Prince and Smolensky (1993) and further developed in McCarthy and Prince (1993a,b).

This, of course, does not entail that functional features must be realized as clitics. Obviously, auxiliaries head syntactic projections in some languages, including English, French, and Italian, to name only a few. Yet, in other languages the featural content of an auxiliary is expressed as a word-level affix. How are those distinctions to be formally captured?

An obvious approach would be to stipulate the status (clitic or head) of each functional feature in the lexicon of a given language. OT provides an alternative that exploits its only dimension of variation, constraint ranking. Functional features like [perfect], [future], [conditional], [potential], etc. are listed in the lexicon. Their language-particular status is derived from a competition among constraints on realizing features as syntactic heads, as (word-level) affixes on heads, or as phrasal affixes (clitics) on a projection of the head. To take an example, in Romanian the constraint on realizing the feature [potential] as a separate head is higher

ranked than the constraints realizing it as affixes (word-level and phrasal). Hence *a putea* is realized as a syntactic head. For the feature [perfect], however, the constraint realizing it as a phrasal affix outranks the other two constraints. Hence, [perfect] is realized as a clitic. In what follows I focus on positioning clitics with respect to their host and with respect to one another. I take up the OT analysis at the point where the status of a particular feature has already been determined.

## 5. AN OPTIMALITY-THEORETIC ANALYSIS

The conclusion that clitics have the status of phrasal affixes still leaves open the formal question of how affixation takes place. For example, Spencer (this volume) advocates a two step-approach that relies on distinct formal mechanisms. First, he relies on a template that orders the clitics with respect to one another, using Paradigm Function Morphology (Stump: 1992). Then the template is placed at the edge of a syntactic domain, on the basis of violable constraints proposed in Legendre (1998a, 1999a, in press a). Gerlach (1998) also advocates formation of a template, though on the basis of violable constraints rather than Spencer's rules. Gerlach, much like Bonet (1991) and Grimshaw (to appear), is concerned with restrictions on possible combinations of clitics (in Romance) rather than the positioning of clitics in a clause.

I wish to argue here that all aspects of the positioning of clitics (i.e. clustering, rigid order, and need for a host)<sup>7</sup>, regardless of language type (i.e. second-position clitics or verbal clitics), can, and should, be handled with a single formal mechanism: violable constraints. I also believe that the alignment approach to positioning is compatible with an OT treatment of possible combinations of clitics like Grimshaw's or Gerlach's, though details remain to be worked out.

OT's theory of morphology relies heavily on alignment (Prince and Smolensky: 1993), characterized as a general schema, ALIGN (Category<sub>1</sub>, Edge<sub>1</sub>; Category<sub>2</sub>, Edge<sub>2</sub>) in McCarthy and Prince (1993a,b). If violable morphological constraints are at work, as I shall demonstrate shortly, then OT's theory of alignment is a natural place to start.

### 5.1. ALIGNMENT CONSTRAINTS ARE VIOLABLE

The three basic properties of Romanian clitics we seek to explain are: (i) they cluster, (ii) they cluster in a rigid order, and (iii) they cluster in preverbal position. An OT analysis based on alignment automatically captures (ii) and (iii). Prince and Smolensky (1993), McCarthy and Prince (1993a,b) and, in their footsteps Anderson (1996, in press) and Legendre (1996, 1998a, 1999a, in press a) propose individualized alignment constraints belonging to the EDGEMOST constraint family, EDGEMOST (X, LEFT; D, LEFT) where X stands for any feature, and D, for domain of alignment. These individualized constraints are in conflict with one another -- since they favor realizing all features at the left edge of D. The conflict inherent to EDGEMOST constraints is resolved by ranking them relative to one another. Assuming that the domain of alignment is the same for all features or values of X, the ranking determines which feature has priority over others in being realized at the edge of that domain. That is, the optimal candidate is one in which all features other than the one which satisfies the highest ranked EDGEMOST(X<sub>1</sub>) constraint incur minimal violations of lower-ranked EDGEMOST(X<sub>2, 3, etc.</sub>). Abstracting away from dialectal variation, the constraint ranking is fixed for a given language. Hence constraint ranking entails a rigid ordering of clitics and minimal violations of EDGEMOST entail clustering.

EDGEMOST contains a domain specification D which characterizes what the host is and how far from that host the features may be realized. Thus, it explains property (iii). If the domain is specified as V, then features are realized at the left or right edge of V. They are word-level affixes. If the domain is phrasal, then features are realized at the edge of a larger domain; they are clitics. I propose that the domain of alignment of clitics is V' across Balkan (and possibly Romance). As is well-known, V' is not an active level with respect to syntactic movement though it is relevant to coordination and other constituency phenomena. Because phrasal affixation is not syntactic, the usual syntactic objection to making use of V' does not hold. Clitics, in fact, provide evidence for the existence of V', independently of constituency phenomena.<sup>8</sup>

A V' domain has the clear advantage of capturing the traditional characterization of Romanian (and more generally Romance) clitics as verbal clitics (i.e. clitics that take V as a host). It has another big advantage -- demonstrated below --, of also capturing the distribution of second position clitics which are

traditionally considered to be of a separate kind, namely Wackernagel or second-position clitics (Legendre: 1998a, 1999a, in press a). The existence of superficially different clitics within closely related languages (Tomić: 1996), e.g. Bulgarian (second-position clitics) and Macedonian (verbal clitics) does not entail that theoretically, they are different elements subject to different requirements. For example, analyses in terms of Prosodic Inversion (Halpern: 1995) or Morphological Merger (Marantz: 1988) which rely on moving clitics to the front of the clause in the syntax and moving them back away from the clausal edge at PF handle the data, but at a serious theoretical cost. See Anderson (1996) and Legendre (1996, in press a) for further discussion.

On an alignment analysis, second-position clitics and verbal clitics result not from a difference in domain or formal mechanism, but a difference in ranking. As extensively discussed in the relevant OT literature (Anderson: 1996, in press; Legendre: 1996, 1998a, 1999a, in press a), second-position clitics result from the interaction of EDGEMOST with a separate alignment constraint NONINITIAL (essentially the Tobler-Mussafia Law, well known from earlier stages of Romance). When NONINITIAL(X) outranks EDGEMOST(X), a feature X (minimally) violates EDGEMOST(X) in order to satisfy NONINITIAL(X). The result is a second-position of the first clitic in the cluster, as in the Bulgarian example (24a). The formal competition will be displayed in Tableau 2 (T2) in section 5.2.

- (24) B a. Pokazax *mu go*.  
 showed1SG himDAT itACC  
 ‘(I) showed it to him’  
 R b. *Mi-o dă*.  
 meDAT itACC give3SG  
 ‘(He) gives it to me’

In OT, variation solely results from constraint reranking. Reranking EDGEMOST(X) above NONINITIAL(X) yields clitics which occur in initial position: NONINITIAL(X) is violated in order to satisfy EDGEMOST(X). This is, I propose, the basic ranking of Romanian (and other languages with verbal clitics), as shown in (24b). The formal competition will be displayed in Tableau 1 (T1) in section 5.2.

Note that Bulgarian and Romanian are both null-subject languages. In examples (24a,b), the domain of alignment looks clausal. Examples with overt preverbal subjects reveal, however, that this is incorrect. Clitics follow, rather than precede the overt subject in both languages.

- (25) B a. Ivan *ja običa*.  
 John herACC love3SG  
 ‘John loves her’  
 R b. Ion *o apreciază*.  
 John herACC appreciate3SG  
 ‘John appreciates her’

To identify the domain of EDGEMOST it is necessary to make the structure of (25a,b) explicit. On the basis of V2 effects that ignore the status of auxiliaries (syntactic vs. morphological) in languages as diverse as Breton (VSO), Basque (SOV), and Macedonian (SVO), Legendre (to appear a, b) argues that the position of finiteness features is subject to PF alignment rather than to syntactic movement (contra Pollock: 1989). This view entails that, in the absence of any clitic or any discourse effect on other elements, a finite verb in a null subject sentence in Romanian should be in initial position, given the basic ranking EDGEMOST >> NONINITIAL. This is correct, as shown in (26).

- (26) R Citesc *cărți*.  
 read1SG books  
 ‘(I) read books.’

In (26), [F] (which subsumes tense and person/number agreement) violates NONINITIAL(F) in order to satisfy EDGEMOST(F), a subcase of the general ranking pattern underlying PF linearization of functional features.

Combining a morphological analysis of finiteness with the VP-internal subject hypothesis (e.g. Koopman and Sportiche: 1991), declarative clauses in simple tenses or compound tenses with a clitic auxiliary are thus VP constituents rather than IPs.<sup>9</sup> In the absence of an overt subject, they are smaller constituents yet, V', if null subjects are not analyzed as instances of *pro* but rather result from dropping a topical argument (Grimshaw and Samek-Lodovici: 1998). Nothing crucial hinges on this set of assumptions. But they lead to a coherent picture and to a minimal view of phrase structure that follows under violable constraints.<sup>10</sup> The projection of V whose edge is targeted by EDGEMOST in Romanian then is the nearest projection of V, V'. Once again, this accords with the traditional characterization of Romanian clitics as verbal clitics.

The domain of NONINITIAL can reliably be determined in languages with second-position clitics. Consider first the hypothesis that its domain is also V'. A clitic auxiliary is correctly predicted to appear in second position in a null subject context given the basic ranking NONINITIAL >> EDGEMOST in these languages. See (27a) below which satisfies NONINITIAL. The clitic auxiliary, however, is incorrectly predicted to appear in third position in the presence of an overt subject.

(27) B Basic ranking: NONINITIAL >> EDGEMOST

- B a. [V' Pročel *săm* knigata].  
 read be1SG bookDET  
 '(I) have read the book'
- B b. [VP Az [V' *săm* pročel knigata]].  
 I be1SG read bookDET  
 'I have read the book'
- B c. \*[VP Az [V' pročel *săm* knigata]].

Consider why. The clitic auxiliary *săm* is at the edge of V' in (27b), hence it fatally violates the higher-ranked constraint NONINITIAL(PERF) if its domain is V'. (27b) should be ungrammatical and (27c) grammatical, exactly the reverse of the attested pattern. I conclude that the domain of NON-INITIAL is distinct from that of EDGEMOST, contra Anderson (1996, in press).

There is, in fact, empirical evidence that second-position clitics are positioned with respect to the prosodic boundary following a dislocation or parenthetical, for example in Serbo-Croatian (Radanović-Kocić: 1996) and Bulgarian (Legendre: in press a).

(28) Basic Ranking: NONINITIAL(X, LEFT; INTP, LEFT) >> EDGEMOST(X, LEFT; V', LEFT)

- SC a. Ja, tvoja mama, [V'/INTP obečala *sam ti* igračku].  
 I your mom promised be1SG youDAT toy  
 'I, your mom, promised you a toy'
- B b. Knigata, [VP/INTP Penka [V' *ja e* dala na Petko]].  
 book-the Penka itACC be3SG given to Petko  
 'As for the book, Penka gave it to Petko'

Note that when the intonational domain of NONINITIAL is distinct from the syntactic domain of EDGEMOST, there is no conflict among the two constraints. Thus in (28b), the first clitic in the cluster *ja* satisfies higher-ranked NONINITIAL in IntP/VP and lower-ranked EDGEMOST in V'. In a null subject context, the two domains coincide (IntP/V') and the first clitic in the cluster violates the lower-ranked constraint in order to satisfy the higher-ranked one.

In Romanian compound tenses, (in the absence of any other clitic or discourse effect on other elements) the clitic auxiliary immediately follows a parenthetical. This is predicted under the ranking EDGEMOST >> NONINITIAL and the assumption that the domain specification for alignment constraints is the

same as in Bulgarian. In other words, the domain specification is independent of clitic type (i.e. second-position vs. verbal).

(29) Basic Ranking: EDGEMOST(X, LEFT; V', LEFT) >> NONINITIAL(X, LEFT; INTP, LEFT)

- R a. Ion, zice Radu, [<sub>V'/IntP</sub> *a* plecat].  
 John, say3SG R have3SG left  
 'John, Radu says, has left'
- R b. [<sub>VP/IntP</sub> Ion [<sub>V</sub> *a* plecat]].  
 'John has left'

In (29a), the intonational domain coincides with the syntactic domain V'. The conflict between the two constraints is resolved by the clitic auxiliary *a* violating NONINITIAL to satisfy EDGEMOST. In (29b), the two domains do not coincide. There is no conflict: the clitic auxiliary satisfies both NONINITIAL (in IntP/VP) and EDGEMOST (in V').

This is not to say that cross-linguistically, clitics can never be aligned with other domains.<sup>11</sup> From a theoretical point of view, the null hypothesis, however, should be that the domains for each constraint hold across languages, with positional effects -- second-position vs. verbal - resulting from a formal property of the system, i.e. alternative ranking of NONINITIAL and EDGEMOST. (Additional effect may result from the directionality of alignment). It is important to keep in mind that the surface position of clitics in a clause can be affected by discourse properties of syntactic elements as they themselves get aligned because they carry an informational feature like [focus], [contrastive], etc. (e.g. Choi: 1996; Legendre: 1999b; Samek-Lodovici: 1996). Here, I have abstracted away from such effects, in order to isolate alignment properties of clitics.

The two alignment constraints underlying the positioning of clitics cross-linguistically are formally stated in (30).

- (30) EDGEMOST(X): At PF a feature [X] is left-aligned with the edge of the nearest projection of the head [X] is associated with.  
 NONINITIAL(X): At PF [X] is not realized in intonational phrase-initial position.

## 5.2. CLUSTERING EFFECTS

We now turn to the formal competitions per se in order to examine the clustering of several clitics. As discussed above, the effect of having individualized EDGEMOST constraints for each feature is that they are in conflict with one another as each favors the realization of its feature at the left edge of V'.

In tableaux like T1, the grammatical output is marked optimal (♯). Constraint ranking is indicated by leftmost constraints outranking rightmost ones. Violations of constraints are recorded as \* in individual cells; \*! are fatal violations for sub-optimal candidates while ⊗ are violations incurred by optimal candidates. The input to optimization consists of lexical items, argument structure specification and functional features. Only the latter are indicated for each formal competition. Note that NONINITIAL[X] is used to encapsulate all features other than [F]. It stands for a set of corresponding contiguous NONINITIAL constraints. The features in the order they are realized are given below the optimal candidate.

T1. Procliticization to finite verbs in declarative Romanian clauses; Input: [dat] [acc] [F]

'(He) gives it to me'	E(DAT)	E(ACC)	E(F)	NIN(F)	NIN(X)
♯ a. [ <sub>V</sub> <i>mi-o</i> dă] dat acc F		⊗	⊗⊗		⊗
b. [ <sub>V</sub> <i>mi</i> dă <i>o</i> ]		**!	*		*
c. [ <sub>V</sub> dă <i>mi-o</i> ]	*!	**		*	

As noted earlier, the conflict is resolved by ranking the constraints. In some languages, the ranking mirrors the order of phrasal affixation. This is, for example, the case in Romanian (T1). In other languages, the ranking does not mirror the order of phrasal affixation (see the discussion of T3 below). Hence there is no sense in which the present analysis is a PF implementation of the Mirror Principle (Baker: 1985).

The candidate set in T1 consists of all permutations of the three features of the input, [dat], [acc], and [F]. Each candidate is evaluated for its violations of the relevant constraints. In T1, we see the effect of the gradiency of EDGEMOST constraints. For example, both candidates a and b satisfy the highest ranked constraint but they differ on the next lower one, EDGEMOST(ACC), by one violation. Both violate EDGEMOST(ACC) but candidate b's violation is worse. Hence a is optimal. This illustrates minimal constraint violation. Candidate c is eliminated because of a worse violation, that of a dominating constraint, EDGEMOST(DAT).

Note two important properties of the OT analysis. For a given language/dialect the constraint ranking is fixed. Hence, the resolution of conflicting EDGEMOST constraints entails invariant clitic order. Moreover, minimal constraint violations are achieved if clitics cluster. Note that there is no need for a separate mechanism relying on inviolable rules to generate the clitic cluster and rigid ordering, contra Spencer (this volume).

One important property of constraint ranking is the possibility of reranking. I shall illustrate a few important *types* of rerankings below which confirm the validity of the analysis. To begin with, consider the Bulgarian pattern in (24a), and its formal analysis in T2.

T2. Encliticization to finite verbs in declarative Bulgarian clauses; Input: [dat] [acc] [F]

'(I) showed it to him'	NIN(X)	E(DAT)	E(ACC)	E(F)	NIN(F)
☞ a. [ <sub>V</sub> pokazax mu go] F dat acc		⊗	⊗⊗		⊗
b. [ <sub>V</sub> mu go pokazax]	*!		*	**	
c. [ <sub>V</sub> mu pokazax go]	*!		**	*	

With encapsulated NONINITIAL(X) dominating the individualized EDGEMOST constraints, two candidates out of three, b and c, are easily eliminated. The result is encliticization to a simple finite verb rather than procliticization, as in Romanian.

The ranking in T2 is also the ranking underlying Romanian inverted conjugations. Recall that these inverted conjugations discussed in section 2.3. belong to some dialects and to literary registers of the standard language. That is, there is micro-variation pertaining to geographically and socially defined idiolects that is formally the same as variation across languages (see Legendre: 1998b for an example related to clitic doubling in Colloquial French). Two registers (i.e. literary vs. spoken) can have slightly different grammars or rankings. In the case at hand, variation is limited to a single re-ranking. NONINITIAL(X) is reranked from its low rank in standard Romanian to the highest rank in some dialects and registers.

In the presence of the negative clitic *ne*, Bulgarian clitic pronouns appear preverbally, as shown in candidate a in T3.

T3. Procliticization to finite verbs in negative Bulgarian clauses; Input: [neg] [dat] [acc] [F]

'(I) did not show it to him'	E(neg)	NIN(X)	E(DAT)	E(ACC)	E(F)	NIN(F)
☞ a. [ <sub>V</sub> ne mu go pokazax] neg dat acc F		⊗	⊗	⊗⊗	⊗⊗⊗	
b. [ <sub>V</sub> ne pokazax mu go]		*	**!	***	*	

c. [ <sub>V</sub> <i>ne mu pokazax go</i> ]		*	*	***!	**	
---	--	---	---	------	----	--

Bulgarian is not a strict second-position clitic language. The negative clitic (and the clitic auxiliary *šte* ‘future’) can appear in initial position and host further clitics to their right (see Legendre: in press a for further discussion). This simply means that EDGEMOST(NEG) outranks NONINITIAL(NEG) (subsumed under NONINITIAL(X) in T3). As a result NONINITIAL(X) is violated by all candidates and the EDGEMOST constraints next in line become decisive. Compared with optimal a, candidate b is eliminated because of an additional violation of EDGEMOST(DAT); candidate c is eliminated because of an additional violation of EDGEMOST(ACC). Crucially, EDGEMOST(F) is lower-ranked still, hence its violations -- worse for optimal candidate a than for its competitors -- do not ‘count’ in T3.

Note an important property of the Bulgarian ranking in T3 (and T2). It does not mirror the surface distribution of [F] as its constraint must be ranked below EDGEMOST(ACC) in T3. Thus, the relative ranking of EDGEMOST constraints need not be based on the most basic sentences of a language and constraint ranking is independent of surface order of affixes.

Generalizing PF alignment to all functional features, in particular finiteness features, makes an important prediction, namely that the clitic cluster could be split by a finite element. This pattern is indeed found, even within Romance (Kayne: 1991). For example, in Franco-Provençal dialects spoken in Switzerland, object clitics (accusative, dative, and partitive) can be separated by a finite auxiliary or a complex verb. Examples (31a,b) are from Olszyna-Marzys (1964:48) while example (31c) cited in Kayne (1991:661) is originally from Chenal (1986). (I have retained the quasi-phonetic spelling of the authors.)

- (31) FP a.      *Si mots ei va se metr kontr a dzuta.*  
                   this fly 3DAT fut3SG reflACC put against the cheek  
                   ‘This fly will land on his cheek’
- FP b.      *Me chei pa ən- chwenaə.*  
                   reflDAT be1SG not PART-remember  
                   ‘I did not remember (of) it’
- FP c.      *T’ an tē deut- lo?*  
                   2DAT have they said 3ACC  
                   ‘Have they told it to you?’

### 5.3. VARIATION WITHIN ROMANIAN

Because the constraint ranking is fixed for a given language/dialect, the relative order of clitics is predicted to hold even when their position changes in the clause. This is correct. See for example the relative order of dative and accusative clitics in positive and negative contexts in Bulgarian.

A similar pattern can be observed in Romanian imperatives and gerunds. The clitics are enclitics but the dative clitic still precedes the accusative clitic, as it does in declarative contexts (T1).

- (32) R a.      *Dă-mi-!*  
                   give meDAT itACC  
                   ‘Give it to me’
- R b.      *Dându-i-!*  
                   giving him/herDAT itMASC/ACC  
                   ‘Giving it to him/her’

On a morphological analysis of functional features, the shift in position with respect to the host results from the presence of an additional feature, [gerund] or [imperative] subject to the same constraint family.<sup>12</sup> The question is merely one of constraint ranking. It is easy to see, based on the formal competition underlying gerunds in T4, that EDGEMOST(GER) must outrank EDGEMOST(DAT, ACC).

## T4. Romanian gerunds; Input: [ger] [acc][dat]

'Giving it to him/her'	E(GER)	E(DAT)	E(ACC)	NIN(X)
☞ a. [ <sub>V</sub> dîndu-i-l] ger dat acc		⊗	⊗⊗	
b. [ <sub>V</sub> îl dîndu-i]	*!	**		*
c. [ <sub>V</sub> i-l dîndu]	*!		*	*

By virtue of encoding various features, including [perfect], [conditional], etc., Romanian clitic auxiliaries and adverbs are assimilated under the analysis above. For example, the sequence (neg) - dat - acc - perf/cond - adverb - host indicates that the relative ranking of EDGEMOST constraints is: EDGEMOST(NEG) >> EDGEMOST(DAT) >> EDGEMOST(ACC) >> EDGEMOST(PERF), EDGEMOST(COND) >> EDGEMOST(INTENS).

The modal verb *a putea*, however, exhibits the phenomenon of clitic climbing, whereby clitics procliticize to the modal verb rather than the lexical verb.

- (33) R           îl pot vedea.  
                  him can1SG see  
                  '(I) can see him'

Because the domain of EDGEMOST is stated as the nearest projection of V in (30), the constraint ranking in fact predicts that clitics should appear on the lexical, rather than modal, verb. The solution must therefore lie not with the positioning of clitics per se but with properties of verbs/constructions that trigger clitic climbing.

Because cliticization is typically a clause-bounded phenomenon, 'upstairs' cliticization has long been put forward as evidence for a monoclausal representation of these 'triggered' constructions. Aissen and Perlmutter (1983) and Rizzi (1982) have argued that clitic climbing constructions in Romance undergo clause union or restructuring at s-structure. Two verbs collapse into one, with the result that arguments of the embedded verb become arguments of the complex verb. See Moore (1991) for a comprehensive discussion and the proposal that restructuring constructions are VPs.

The clause union/restructuring analysis can be reinterpreted in OT terms roughly as follows. Restructuring is alignment, i.e. the effect of constraints requiring two verbs to be aligned with one another (ALIGNVS). The constraints themselves possibly refer to semantic classes of triggering verbs, marked [R] in the input to optimization. Some details remain to be worked out but we may note that a family of constraints is needed because there is variation among Romance languages with respect to which verbs may require or allow restructuring. On this view, clitic climbing is the consequence of ranking ALIGNVS over EDGEMOST(ACC). In other words, the requirement that the two verbs be aligned with one another takes precedence over satisfying the requirement that the clitic be realized at the edge of the nearest projection of the head the corresponding feature is associated with.

## T5. Clitic climbing in Romanian; Input: [acc] [F] [R]

'(I) can see him'	ALIGNVS	E(ACC)	E(F)	NIN(F)	NIN(X)
☞ a. [ <sub>V</sub> îl pot [ <sub>V</sub> vedea]] acc F		⊗	⊗		⊗
b. [ <sub>V</sub> pot [ <sub>V</sub> îl vedea]]	*!			*	

In Romanian, clitics must precede the modal verb but regular adverbs can intervene between the two verbs.

- (34) R        Ion poate adesea veni lunea.  
               John can3SG often come monday  
               ‘John can often come on Mondays’

Moore (1991:73) reports considerable variation with respect to adverb position in Spanish, depending on speaker, aspect of the verb, the semantics of the adverb, etc. Overall, adverbs may intervene between the trigger and the complement verb in Spanish, as they also do in Italian (Rizzi: 1982, 38). The question is: Why can an adverb intervene if there is an active constraint requiring verbs to align with one another? The answer, of course, lies with violable constraints. In a nutshell, constraints on placing adverbs in the syntax outrank PF alignment constraints on triggering verbs and on clitics.

To sum up, variation is a function of constraint ranking -- which cross-linguistically yields clustering and even splitting -- as well as intervening constraints, such as the one which governs clause union/restructuring. The result is the well-known phenomenon of clitic climbing.

#### 5.4. THE FEMININE SINGULAR ACCUSATIVE CLITIC *o*

One complication in the distribution of Romanian clitics concerns the feminine singular accusative clitic pronoun *o* ‘her, it’. In some contexts, *o* has the same distribution as its non-feminine counterparts. This is the case in simple tenses and modal *a putea* (where it shows up as a proclitic) and in gerunds and imperatives (where it shows up as an enclitic).

- (35) R a.        *O vede.*  
                   ‘(I) see her’  
       R b.        *O pot vedea.*  
                   ‘(I) can see her’  
       R c.        *Văzînd-o...*  
                   ‘Seeing her’

With conditional and perfect auxiliaries, *o*, unlike its non-feminine counterparts in (37), encliticizes to the non-finite verb, as shown in (36).

- (36) R a.        *Aş vedea-o.*  
                   ‘(I) would see her’  
       R b.        *Am văzut-o.*  
                   ‘(I) have seen her’
- (37) R a.        *L-am văzut.*  
                   ‘(I) have seen him’  
       R b.        *Mi l-a dat.*  
                   ‘(He) gave it to me’

There is substantial evidence that this complex distribution of *o* is grounded in phonological properties of the language. As noted in de Kok (1989), Romanian dative and accusative clitics typically undergo desyllabification processes including vowel truncation (*îmi* > *mi-*; *mă* > *m-*; *îi* > *i-*; *îl* > *l-*) and diphthongization (*i-am dat* [iam]) before a following vowel. Romanian appears to impose severe restrictions on the number of non-stressed syllables which can precede a prosodic (verbal) head. Alternatively, it is conceivable that Romanian disfavors hiatus (i.e. two vowels belonging to different syllables) consisting of weak vowels like schwa (spelled *ă*) and the high central non rounded vowel (spelled *i*). Further investigation is needed to conclusively identify the preferred hypothesis. On either analysis, Romanian can be viewed as economizing on phonological material in particular contexts as long as morphemes conveying important featural information are recoverable.<sup>13</sup>

Viewed from this economy perspective, we can make sense of why *o* is problematic in the context where phonological reduction takes place. *O* is the only Romanian clitic pronoun which consists of a single vowel. This means that it cannot undergo phonological reduction without loss of corresponding featural information.

Supporting evidence for this analysis comes from the empirical generalization that *o* surfaces as a proclitic in contexts where no reduction takes place -- i.e., when *o* precedes a verbal head or clitic beginning in a consonant. This is the case in (35a-b). *O* typically precedes the future auxiliary, with all forms starting in [v-]: *O va vedea* '(He) will see her'<sup>14</sup>. (35c) is an irrelevant exception since the relative ranking of EDGEMOST(GER) and EDGEMOST(ACC) is responsible for encliticization (see T3).

All forms of the conditional and perfect clitic auxiliaries, however, start in [a] (Mallinson: 1986), precisely the environment leading to desyllabification. In this context, *o* systematically encliticizes to the prosodic head, as shown in (36). Thus, Romanian resorts to displacement whenever recoverability of featural information is threatened. This suggests that recoverability (PARSE(X)) outranks the constraint(s) favoring phonological reduction.

Additional evidence comes from the behavior of the feminine plural accusative clitic *le*. If the present analysis is correct, the phonological shape of *le* -- i.e., the fact that it includes a consonantal segment -- leads us to expect that its position is completely regular. It is indeed a proclitic in all contexts.

- (38) R a.        *Le-a văzut.*  
                   themFEM/PL have3SG seen  
                   '(He) has seen them '  
       R b.        *Le va vedea.*  
                   'He will see them'

One remaining question is why *o* encliticizes to the prosodic head (*am văzut-o*) rather than intervene between the auxiliary clitic *am* and the prosodic head (*\*am o văzut*). In terms of violations of EDGEMOST(ACC), the latter form, in fact, is better than the former (one violation vs. two). Note, however, that the two ungrammatical patterns *\*o am văzut* and *\*am o văzut* have two weak syllables preceding the prosodic head. The optimal form *am văzut-o* fares better in that respect.

To sum up the discussion of the feminine singular accusative clitic *o*, I have argued that there is nothing idiosyncratic about its encliticizing to its host in some contexts. This is just a further example of splitting resulting from economy of phonological structure competing with recoverability of the input. While some details of the phonological analysis remain to be worked out, encliticization of *o* appears to be the optimal Romanian solution to the conflict: both constraints are simultaneously satisfied.

## 6. CONCLUSION

To conclude, I have argued that Romanian clitic auxiliaries and pronouns do not have the status of autonomous syntactic elements. Rather, they are phrasal affixes despite their traditional characterization as verbal clitics. The evidence is manifold. First, they are syntactically inert with respect to important principles of syntax, such as movement, binding, and the Head Movement Constraint. Second, their behavior in coordinations is affix-like. Third, they by and large do not behave like word-level affixes: They procliticize in some contexts, encliticize in others. Fourth and last, they are subject to the same constraints as South-Slavic second-position clitics which independently have been argued to be phrasal affixes.

The proposed morphological analysis of clitics is grounded in the characteristic clustering and rigid ordering properties of clitics (Anderson: 1992, 1996, in press; Legendre: 1998a, 1999a, in press a). It exploits the simple notion of *alignment* with the edge (right or left) of a particular constituent, well motivated in morpho-phonology.

The main departure from earlier morphological analyses of phrasal affixation lies in the claim that alignment constraints are violable, as proposed in OT. Different alignment constraints regulating the realization of distinct features compete for the left edge of the domain; hence they must be violable. Which

one prevails depends on two factors: the input to optimization which contains the features themselves and thus determines which constraints are applicable in a particular context, as well as the ranking of the alignment constraints themselves.

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1. *Am* belongs to the present tense paradigm of *avea* while *o* is invariable.
2. Throughout the paper, examples are identified by language: R/Romanian, F/French, I/Italian, B/Bulgarian, M/Macedonian, E/English, and FP/Franco-Provencal.
3. SAI is possible with subject clitics but it's clear that the two patterns have very different properties (Kayne: 1972; Legendre: 1998b).
4. For example, *are/o să* is a sequence of clitics that precede their host. They instantiate distinct features that are realized at PF.
5. Regular adverbs may also precede the lexical verb in (9a). This does not affect the argument.

6. The distribution of *mai* is a bit more complex than suggested so far in the main text. As the examples in (11)-(12) show, it is often the last element in the clitic cluster. In the presence of the clitic auxiliary *fi* 'be', however, it precedes *fi* as in (i) *Să nu o mai fi văzut* 'that (I) should not have seen her again' where all the elements preceding the lexical verb *văzut* are clitics. In positive imperatives, however, *mai* breaks from the cluster and appear preverbally while clitic pronouns appear postverbally: (ii) *Mai spune-mi!* 'tell me again!' It behaves like a prefix rather than a clitic. In negative gerunds, *mai* is sandwiched between the negative prefix *ne-* and the root (Dobrovie-Sorin: 1994: 26): (iii) *Nevăzîndu-l* 'not seeing him' (iv) *Nemaivăzîndu-l* 'not seeing him again'. Overall, it appears that *mai* has a dual affix status, phrasal in some contexts, word-level in others.

7. As Anderson (1995, 1996) makes clear, the positioning with respect to a host is not simply a prosodic need. He identifies two independent dimensions of clitics: (i) prosodic deficiency and (ii) special placement. For example, some clitics display both properties while others display only one. Italian *loro* is prosodically full but subject to special placement principles while English 's (*is, has*) is prosodically deficient with no special placement. Romanian auxiliaries fall into the latter category but they clearly have a 'special' syntax.

8. I am assuming a standard V' projection that includes V and a direct object, if relevant. Additional subcategorized complements are presumably adjoined to V' and clitics align at PF with the highest V' projection. The position of fronted direct objects, presumably under compulsion of discourse-based features in the input, is a separate issue.

9. Of course, some clauses do involve verb movement to a higher head position, but only when movement is motivated for reasons other than morphological reasons, for example scope in wh-movement.

10. It is clear that much structure involving functional projections in P&P is there just to get around the fact that constraints are inviolable.

11. Richardson (1997:147) argues that the domain of EDGEMOST and NONINITIAL for Czech second-position clitics is IP. His argument is based on certain assumptions about syntactic structure and the position of clitics in informationally-marked vs. neutral clauses. It is conceivable that an alternative OT account exists that exploits conflict between alignment of informational features (e.g. Choi: 1996; Samek-Lodovici: 1996; Legendre: 1999b) and alignment of phrasal affixes within the nearest projection of V.

12. Note however, that clitic pronouns display a pattern of encliticization in (32a) which reverts to procliticization in negative imperatives. For a discussion of the position of clitics in imperatives see Legendre (in press b).

13. See Popescu (this volume) for a detailed morpho-phonological analysis of Romanian clitics which shares some assumptions with the present analysis.

14. Virginia Motapanyane (p.c.) informs me that *va vedea-o* is possible as a regional variant of standard *o va vedea*. With infinitives, either pattern *de a o vedea/de a vedea-o* is a matter of individual preference according to her. Note that this is not a true pattern of optionality. The alternative forms reflect idiolects or regional dialects. Formally speaking, these are cases of constraint re-ranking, just like the inverted conjugations discussed earlier.