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BY

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THÈSE
PRÉSENTÉE
COMME EXIGENCE PARTIELLE
DU DOCTORAT EN LINGUISTIQUE

PAR
STANCA SOMESFALEAN

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TABLE OF CONTENTS

RÉSUMÉ.....	viii
ABSTRACT.....	ix
CHAPTER I	
INTRODUCTION.....	1
1.1. Issue.....	1
1.2. Theoretical framework.....	3
1.3. Two or three classes of pronouns? Delimiting the object of study.....	5
1.3.1. Clitic vs. weak pronouns.....	7
1.3.2. Summary.....	10
1.4. Theories of clitics.....	11
1.4.1. Syntactic theories.....	12
1.4.2. Lexicalist theories.....	23
1.4.3. Phonological theories.....	25
1.5. Clitics : an interface phenomenon ?.....	26
CHAPTER II	
PROPOSAL.....	28
2.1. Introduction	28
2.2. Proposal.....	30
2.3. Semantic and pragmatic properties.....	34
2.3.1 Referentiality.....	34
2.3.2 Syntactic realization.....	36
2.3.3 Referentiality and the [identifiable] feature.....	38
2.4. Category and features.....	50
2.5. Syntactic properties of clitics and strong pronouns.....	61
2.5.1. Distribution.....	61
2.5.2. Binding properties.....	65
2.6. Analysis.....	67

2.6.1. Linearization: FLIP and the notion of «Heaviness» in pronominal constructions.....	75
2.6.2. Link and Agree.....	85
2.6.3. Empirical coverage and predictions.....	91
2.7. Conclusion.....	104
Addendum	
Note on the internal properties of clitics and strong pronouns.....	106
CHAPTER III	
ADDITIONAL CLITIC RELATED PHENOMENA.....	110
3.1 Introduction.....	110
3.2. The analysis of post-verbal clitics.....	110
3.3. Languages where clitics are post-verbal.....	118
3.3.1. Portuguese.....	118
3.3.2. English.....	120
3.4. The analysis of clitic clusters.....	121
3.4.1 Distribution	122
3.4.2. Opacity.....	127
3.4.3. Rigidity of order.....	133
3.4.4. Language variation.....	137
3.4.5. Conclusion.....	151
3.5. The analysis of preverbal strong subjects.....	151
3.6. The analysis of clitic doubling constructions.....	153
3.7. Conclusions.....	161
CHAPTER IV	
A COMPUTATIONAL PERSPECTIVE.....	162
4.1. Purpose.....	162
4.2. Brief review.....	162
4.3. The Asymmetry-based parser.....	164
4.4. Current problems in the automated analysis and interpretation of clitics.....	166
4.4.1. Ambiguity.....	166
4.4.2. Cross-linguistic variation.....	170
4.5. Potential solutions.....	170

4.5.1 The possessive clitic in English.....	172
4.5.2 Clitic clusters.....	177
4.6. Conclusion.....	181
CHAPITRE V	
CONCLUSIONS	183
BIBLIOGRAPHY	186

RÉSUMÉ

Cette thèse présente une nouvelle approche sur les formes pronominales reliées aux arguments, sur la base des données du roumain et d'autres langues romanes, telles que l'italien, le français et l'espagnol. À partir de l'observation que les pronoms forts et les clitiques reliés aux arguments partagent un nombre de propriétés (par exemple, quand ils co-occurrent dans les constructions de redoublement de clitique ils sont tous les deux reliés de manière anaphorique au même antécédent dans le discours précédent) et donc qu'ils ne devraient pas être considérés deux objets complètement non reliés du point de vue syntaxique, nous proposons de saisir ces faits en les plaçant dans la même projection syntaxique dans le domaine fonctionnel. Cette projection fonctionnelle est hôte pour les traits D, phi et les traits d'identifiabilité, qui peuvent être exprimés à la fois par un clitique (i.e. dans la tête de la projection, étant donné que les clitiques sont des D dans notre approche) ou par un pronom fort (i.e. dans le spécifieur de la projection, étant donné que les pronoms forts sont des DPs dans notre approche). L'ordre linéaire des clitiques et des pronoms forts reliés à des arguments par rapport aux autres constituants de la phrase, particulièrement par rapport au verbe, se réduit dans cette approche à l'application d'une opération active à PF, soit Flip (proposée par Di Sciullo, 1999), qui s'applique à des constituants lourds syntaxiquement et qui inverse l'ordre linéaire Spécifieur-tête-complément. Étant donné qu'ils ont des structures lourdes (i.e. ils incluent des compléments), les pronoms forts et les constituants redoublés (des constituants DP et PP) seront post-verbaux en surface, comme conséquence de l'application de Flip. Flip est préférable au mouvement syntaxique car elle réduit la charge computationnelle. L'avantage principal de notre hypothèse est le fait qu'il n'est plus nécessaire de postuler des structures différentes pour les verbes avec des arguments pronominaux (ou l'argument occupe une position basse, postverbale, dans la structure) vs. les verbes avec des arguments exprimés par des clitiques (ou le clitique a une position de surface haute, pré-verbale, dans la structure). De plus, dans les constructions de redoublement de clitique, étant donné que le clitique et l'élément redoublé se trouvent dans la même projection, leur référence à un même antécédent va de soi. De notre point de vue, le phénomène de redoublement de clitique est un phénomène relié au discours. La dernière section de cette thèse porte sur des conséquences possibles de notre proposition. Nous considérons les analyses d'un prototype d'un analyseur syntaxique basé sur la Théorie de l'asymétrie (Di Sciullo et al., 2006), plus particulièrement les constructions avec des clitiques et des pronoms forts. Dans l'analyseur syntaxique basé sur la théorie de l'asymétrie, les relations asymétriques qui s'établissent entre les structures de traits des éléments de l'input permettent l'analyse des constructions pronominales de manière non ambiguë. Cela est réalisé par la prédiction de la structure syntaxique sur la base de la structure des traits des éléments qui entrent dans l'analyse et par la construction de la structure sur la base de la satisfaction de certaines relations entre ces éléments.

clitiques langues romanes roumain pronominaux asymétrie discours parseur syntaxique

ABSTRACT

This thesis presents a novel approach on argument related pronominal forms, supported with data from Romanian and other Romance languages, such as Italian, French and Spanish. Starting with the observation that strong argument related personal pronouns and clitics share a number of semantic and pragmatic properties (for instance, whenever they co-occur in clitic doubling constructions, they are both anaphorically related to the same antecedent in the preceding discourse) and thus they should not be considered two syntactically unrelated grammatical objects, we propose to capture that by placing them in the same syntactic projection in the higher functional field. This functional projection hosts D, phi and [identifiability] features that can be expressed either as a clitic (i.e. the head of the projection, by virtue of the properties of clitics, which are Ds), or as a strong pronoun (i.e. the specifier of the same projection, by virtue of the properties of strong pronouns, which are DPs). The linear order of argument-related clitics and strong pronouns with respect to other constituents in the sentence, in particular the verb, is shown to be the result of the application of a PF operation, Flip (first proposed by Di Sciullo, 1999), which applies to syntactically heavy constituents and which switches the Spec-Head-Complement linear order. Given their heaviness of structure (i.e. they include a complement), heavy pronouns and doubled constituents (as DP or PP constituents) will surface postverbally as a consequence of the application of Flip. Flip is theoretically preferable to overt syntactic movement because it reduces computational load in Narrow Syntax and transfers it to PF. The main advantage of our proposal is the fact that there is no longer a need for different structures for verbs with pronominal arguments (in which the argument occupies a low, postverbal position) vs. verbs with arguments expressed as clitics (in which the clitic surfaces in a high, preverbal position). Moreover, in the clitic doubling constructions, given that the clitic and the double are found in the same projection, their reference to the same antecedent follows without further speculations. Clitic doubling is thus seen as a discourse-related phenomenon in this view. The last section of this thesis bears on the possible consequences of our proposal. We considered the analyses yielded by a syntactic parser prototype based on the Asymmetry Theory (Di Sciullo et al., 2006) specifically the clitic and strong pronouns constructions. In the AT-based parser, the asymmetric relations that establish between the feature structures of the input elements allow the parsing of the pronominal constructions in an unambiguous manner. This is realized by predicting the syntactic structure on the basis of the feature structures of the elements entering the parse and building the structure on the basis of the satisfaction of certain relations between these elements.

clitics Romance languages Romanian pronominals asymmetry discourse syntactic parser

CHAPTER I

INTRODUCTION

1.1 Issue

Clitics have been approached within different frameworks in the literature, as belonging either to the morphological, the syntactic or the phonetic component of the grammar. The fact that they cannot stand alone, that they need to attach to some host, that they have a rigid order, make them comparable to affixes. On the other hand, the fact that they do have a certain independence suggests that pronominal clitics are syntactic units that originate in argument or adjunct positions. For example, in languages like Romanian, there are elements like negation or certain adverbs that may intervene between the clitic and the verbal element (assumed to be its host):

- (1) *Îl mai văd și mâine dimineață.* (Ro.)
3rd-acc again see and tomorrow morning
'I see him tomorrow morning as well.'

Take pronominal argument clitics. Since they are arguments, are they XPs? If they are X⁰s, they must be different types of X⁰s, since they do not take any overt complement and they are non branching. The special status of clitics does not only pertain to their ambiguous grammatical category (affixes, Ds, or other), but also to the way in which they enter the derivation and to the difference of interpretation brought about by a clitic (as opposed to a

full DP). Are they base generated in their PF pre-verbal position, or are they submitted to movement?

The accounts put forth by Zwicky (1977), Klavans (1985), Bonet (1991), Sportiche (1992, 1999), Anderson (1992), Borer (1995), Kayne (1975, 1991, 2000), Jaeggli (1982), Roberge (1990), Auger (1994), Uriagereka (1995), Terzi (1999), Dobrovie-Sorin (1995), among many others, illustrate the fact that the very nature of clitics makes them susceptible of being considered at times independent elements with syntactic import, agreement markers that spell-out phi-features, affixes that only play a role in morphology, by spelling-out the morpho-syntactic features of the verb, or phonetic entities dealt with at PF.

Our goal is to shed some light on the peculiarities of pronominal clitics, particularly the argument related clitics, by highlighting their similarities to strong pronouns, i.e. by emphasising their role as discourse-related elements that differ only slightly in syntax and mainly at PF from their stronger pronominal counterpart. We show that although usually placed in different overt contexts, argumental clitics are not that different from strong pronouns; they are essentially the same element from the point of view of their features and from the point of view of their pragmatic function and they differ only at Spell-out. Our proposed analysis of clitics will recognise the contribution of different modules of grammar to the form an interpretation of clitics, within the fully parallel framework of the Asymmetry Theory (Di Sciullo, 2005a).

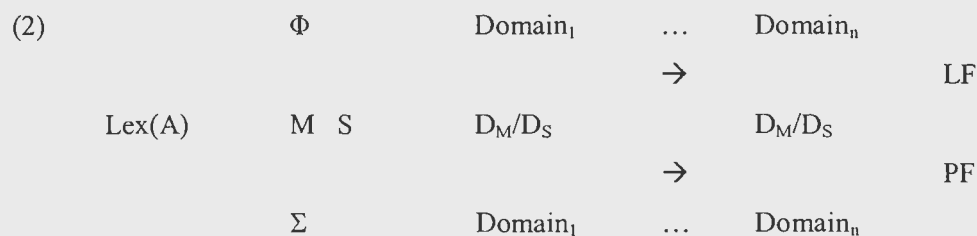
The organisation of this thesis is the following: Chapter 1 presents a brief review of the different theoretical approaches that have marked the theory of clitic status and positioning. It also details the theoretical framework of this study and it sets the limits of the object of study. In Chapter 2, we present our hypothesis, while exploring the formal, semantic and phonetic features of pronominal clitics, within the broader theoretical framework of the Minimalist Theory (Chomsky, 1995-2003) and specifically within the framework of Asymmetry Theory (Di Sciullo, 1998-2006). We argue, on the basis of data from Romance, mainly Romanian, that clitics are D elements generated in a functional projection FP, hosting phi and [identifiability] features. We contrast clitics' vs. strong pronouns' import in the interpretation,

and we argue that the difference between these elements is not crucial at the syntactic level but rather at the PF interface. Chapter 3 is an exploration of the different phenomena related to clitics, such as the phenomena of clitic doubling, clitic clustering and enclisis, among others, approached in view of the proposal presented in Chapter 2. Finally, in Chapter 4, we consider some of the consequences of our proposal in computational linguistics. Conclusions will be presented in Chapter 5.

This chapter begins with a review of the main lines of work concerning pronouns and clitics in generative grammar. This is followed by the detailed presentation of the theory we are adopting in this work, i.e. the Asymmetry Theory (Di Sciullo, 2005a). Finally, we delimit the object of study to a bi-partite class of pronominal forms, i.e. strong vs. weak = clitics, as opposed to the usually adopted tri-partite system, i.e. strong –weak – clitics.

1.2 Theoretical framework

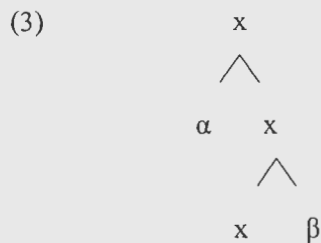
This work is situated within the general framework of the Minimalist Program (Chomsky 1995-2002) and the specific framework of the Asymmetry Theory (Di Sciullo, 2005a). The Asymmetry Theory is a modular theory implementing the Modularity of Computational Space Hypothesis (Di Sciullo, 1996a), stating that “the computational space is partitioned in parallel planes of computations with limited interactions between the derivations”. The general architecture of Grammar is illustrated in (2) below, where the syntactic, morphological, phonological and semantic derivations are mapped onto the interfaces LF and PF in parallel and where lexical insertion must occur before PF and LF:



(Di Sciullo, 2005a : 22)

Both the syntactic and the morphological domains have access to the Lexicon, where underived items are stored. The properties of each component will dictate the way in which they will have access to Lex and the order in which this will take place: thus, for example, M has access to affixes and roots, but not S; this will also determine the precedence of the morphological derivation (D_M) over the syntactic derivation (D_S).

The particularity of AT is given by the assumption that the basic relation of the language faculty is asymmetry, defined as a unidirectional relation between two elements, and that Morphology handles minimal trees only, exemplified in (3) below. While morphology handles only trees as primitives, asymmetric relations must however be derived in syntax, in order for interpretation to occur (Di Sciullo, 2005a).



Uninterpretable features have to be checked and deleted by Spell-out and since the D_M and D_S are different components of the computational space, the features that will be interpretable in one or the other of these planes are not expected to be the same. Features are deleted as a result of movement, which can be part of D_S , but not of D_M . The basic operations at play are a merging operation called Shift and a move/attract operation called Link. Shift and Link operate under asymmetric Agree, a relation that holds between subsets of features. Finally, a linearization operation called Flip is active at PF. These will be detailed with respect to the structures examined in Chapter 2. The drive behind derivations in AT is the necessity of obtaining strict asymmetry, below:

(4) Strict Asymmetry

Every object {head, non-head} introduced in a derivation must be part of an asymmetric relation with another object of the same sort {head, non-head} as early as possible.

(Di Sciullo, 2005a: 33)

In this respect, only asymmetric structures are interpretable at the interfaces, as required by the Legibility condition:

(5) Legibility:

Only interpretable elements in asymmetric relations are optimally legible by the external systems.

(Di Sciullo, 2005a: 34)

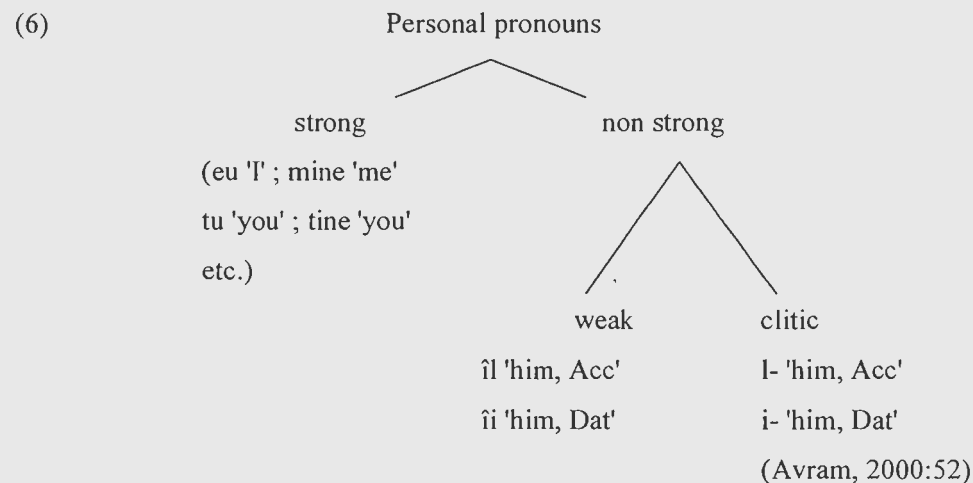
The main reason we adopt the Asymmetry Theory is its minimalist spirit, in that a unique property of the relations in the derivations and at the interfaces, i.e. asymmetry, reduces complexity, which is one of the main concerns of the Minimalist Program (Chomsky 1993, 1995, 2002). Moreover, as it has been shown in various works (Di Sciullo, 2005a, Hill and Roberge, 2005, Di Sciullo and Isac, 2003, Di Sciullo, Paul and Somesfalean, 2002, Tsapkini, Jarema and Di Sciullo, 2004, Di Sciullo et al. 2003, among others), AT finds support in different modules of the grammar, be it morphology, syntax, psycholinguistics, computational linguistics, hence, it has great power of generalization.

1.3 Two or three classes of pronouns? Delimiting the object of study

Since our aim is that of identifying the properties of weak/deficient/clitic pronouns as opposed to the properties of strong pronouns, we will start with the issue of the tripartition generally assumed to exist between pronominal elements (strong pronouns – weak pronouns – clitics, as proposed by Cardinaletti and Starke, 1999). We will present evidence from Romanian showing that this tripartition can be reduced to a bipartition (opposing strong and weak/deficient pronouns). Other studies on different languages attest for the pertinence of

such reduction, including Grohman (2000), Laenzlinger (1998) for Westgermanic, Kupsc (2000) for Polish, Laenzlinger and Shlonsky (1997). Even if this bipartition still allows for a further subdivision of the weak class in some languages, depending on the specific properties of the language in question, we will show that for the interpretive component there are only strong and deficient pronouns, as noted in Grohman (2000).

Based on works such as Kayne (1975) and Cardinaletti and Starke (1999), a three-fold distinction between the personal pronominal categories is often used in the literature to account for the inventory these elements across languages. This distinction is based on differences related to the internal structure of the respective items. The tests used by the above-mentioned authors in order to distinguish between the three classes include the possibility of inserting elements between the two pronominals (no insertion is allowed between clitics and their host), coordination (clitics cannot be coordinated), and others. In such an approach, Romanian pronominal clitics would fit in the following way:



However, in the following we will provide arguments that a three-fold distinction cannot hold as such for Romanian. We will detail the tests proposed by Cardinaletti and Starke (1995) in favour of their three-partite categorisation and we will apply it to Romanian, showing that a bi-partite classification (i.e strong vs. weak pronouns=clitics) is more accurate and more economical.

1.3.1 Clitics vs. weak pronouns

Cardinaletti and Starke (1995) sustain that there are three types of pronouns: strong, weak and clitic pronouns. The last two categories are both deficient, but should still be kept apart according to Cardinaletti and Starke. Below we discuss four properties that are mentioned by Cardinaletti and Starke in support of the need to distinguish between these two classes of deficient pronouns and show that these properties are not universal.

One major difference between the two classes of deficient pronouns concern the clitic doubled constructions: «clitic-doubling, left-dislocation and right dislocation are allowed with clitic pronouns, but not with weak pronouns» (Cardinaletti and Starke, 1995: 281). However, this is not valid crosslinguistically. In Romanian, doubling takes place even with so-called "weak pronouns", which, in principle, should not participate in clitic doubling constructions:

- (7) a. *I - am văzut pe băieți la școală.* (Ro.)
 them have seen PE boys at school
 I have seen the boys at school.
- b. *Îi văd pe băieți la școală.* (Ro.)
 them see PE boys at school
 I see the boys at school.

Second, Cardinaletti and Starke make the point that clitics can double strong pronouns, but no combination of weak and strong pronoun is possible. This is illustrated below, with Italian dative constructions:

- (8) *Gl'el'ho dato loro.* (It.)
 (I) have given it them.
- (9) *Gl'el'ho dato a loro.*
 (I) have given it to them.

- (10) **L'ho dato loro a loro.*
 (I) have given it them to them.

However, in the Romanian equivalent examples, both the clitic + strong pronoun combination (as in 11a) and the weak pronoun + strong pronoun combination (as in 11b) are allowed:

- (11) a. *Mie deseori și chiar și ieri mi - a spus că va veni în vizită.* (Ro.)
 me(Dat) often and even and yesterday me(Dat) have told that will come in visit
 He/She tells me every day and even yesterday that he/she will come to visit.
- b. *Mie în fiecare zi îmi spune că va veni în vizită.* (Ro.)
 me(Dat) in every day me(Dat) tell that will come in visit
 He/she tells me every day that he/she will come to visit.
- c. *Mie și celor de față mi - a promis că va veni în vizită.* (Ro.)
 me(Dat) and those of here me(Dat) have promised that will come in visit
 To me and to the ones present he/she promised that will come to visit.

The examples above show that there is no contrast between the clitic (*mi-*) and the weak pronoun (*îmi*) in Romanian, as they both combine with the strong counterpart (*mie*). Note that the form *mie* is a strong pronoun, since it can be separated by the verb by an adverb, as in (11b), even by a phrase, as in (11a) and it can be coordinated, as in (11c), and it can stand alone as an answer to a question.

Thirdly, Cardinaletti and Starke (1999) argue that only clitics are subject to morpho-phonemic changes, but not weak pronouns. The following Italian examples illustrate this:

- (12) *mi diede un libro* → *me lo diede* (It.)
 me(Dat) given a book me(Dat) it given
 He/she gave to be a book. He/she gave it to me.

However, in languages like Romanian, this change also affects the «weak» class in particular phonetic contexts. As a consequence, the weak forms are reduced to a clitic status. This suggests that the difference between weak and clitic pronouns is actually phonological in nature.

- (13) *îți* *dă o carte* = *ți - a* *dat o carte* (Ro.)
 you(Dat) gives a book you(Dat) has given a book
 He/she gives you a book. He/she has given you a book.

Fourth, Cardinaletti and Starke note that an Acc 1st or 2nd person clitic can never co-occur with a dative 3rd person clitic:

- (14) *****Il me lui présente.*** (Fr.)
 me(Acc) him(Dat) introduces
 He/she introduces me to him/her.

- (15) *****Mă îi prezintă.*** (Ro.)
 me(Acc) him(Dat) introduces
 He/she introduces me to him/her.

This property is consistent across Romance, Slavic and other languages. But no ungrammaticality should result if one of the two forms is a weak pronoun:

- (16) *****Gianni mi gli ha presentato.*** (It.)
 Gianni me(Acc) them(Dat) has introduced.
 Gianni has introduced me to them.

- (17) *Gianni mi ha presentato loro.* (It.)
 Gianni me(Acc) has introduced them(Dat)
 Gianni has introduced me to them.

- (18) ***Gianni mă le - a prezentat.* (Ro.)
 Gianni me(Acc) them(Dat) has introduced.
 Gianni has introduced me to them.
- (19) *Gianni m - a prezentat lor.* (Ro.)
 Gianni me(Acc) has introduced them(Dat)
 Gianni has introduced me to them.
- (20) *Gianni mă prezintă lor.* (Ro.)
 Gianni me(Acc) introduces them(Dat)
 Gianni introduces me to them.

In these examples, there should be a contrast between (19 – with a “clitic”) and (20 – with a “weak pronoun”). There is none. Besides, the grammaticality of (19) and (20) should be due to the presence of a weak pronoun (i.e. *lor*), but *lor* is a strong pronoun, as *mie* in (11) above, so the contrast clitic/weak pronoun is again not evident.

1.3.2 Summary

Given the tests proposed by Cardinaletti and Starke (1999) to contrast strong pronouns, weak pronouns and clitics, we have seen above that – at least in the case of some languages like Romanian – the criteria proposed by the authors are not conclusive in distinguishing between these three classes of pronouns. For the particular case of Romanian, it seems that the only distinction between the so-called ‘weak pronominals’ and ‘clitics’ is of a phonological nature, as noted in Dobrovie-Sorin (1999). Thus, the categories distinguished in Cardinaletti and Starke (1999) as ‘weak pronouns’ and ‘clitics’ coincide in Romanian, and they contrast with the ‘strong’ pronouns.

Given the discussion above, we will consider here only two classes of pronouns: strong (see 23a) and weak (weak pronouns pattern with clitics, be they phonologically reduced, see 23b, or not, see 23c).

- (23) a. *Eu citesc o carte.* (Ro.)
I read a book.
- b. *Îl văd pe Mihai.*
him see PE Mihai
I see him Mihai.
- c. *L-am văzut pe Mihai.*
Him have seen PE Mihai
I have seen him Mihai.

We will thus assume that pronominal elements may be classified in strong forms and deficient forms, with the possibility of a given language to further distinguish two sub-classes within the deficient forms.¹ We agree, in this respect, with positions such as Dobrove-Sorin (1999) that there are two classes of pronouns in syntax, i.e. strong/weak distinction, and there are two classes of forms in phonology, i.e. clitic/weak distinction.

1.4 Theories of clitics

There are two approaches to the clitic theories: lexicalist and syntactic. The following review of the literature is based partially on information from Sportiche (1999), Legendre (1999), Van Riemsdijk (1999), Rouveret (1997), Heap and Roberge (2001).

¹ Roberts (1991) states that there is a universal tendency for pronouns to be reanalysed in a given order: *strong* > *weak* > *clitic*, and this change is irreversible and unidirectional. Thus, clitics are different from weak pronouns, based on syntactic distribution and phonology. With respect to the acquisition of clitics, Roberts proposes that it is this phonetic reduction of clitics vs. weak pronouns that is responsible for the change and the fact that the child finds evidence for the clitic status of the phonologically reduced forms.

1.4.1 Syntactic theories

These theories are motivated by the complementary distribution that can be observed in many Romance languages between the clitic and its corresponding full NP argument, as in (24) below, and are advocated by Kayne (1975, 1991, 2000), Terzi (1999), Uriagereka (1995), Sportiche (1999).

- (24) a. *Je vois Marie.* (Fr.)
 b. *Je **la** vois.*

Thus, clitics are seen as arguments of the verb. The question arises as to the Merging of these elements in the structure of a clause: they can be either generated in the argumental position and then moved by Spell-out in a pre-verbal position adjoined to the verb (tense or mood node), or they can be generated in the Spell-out position. We'll briefly see the two approaches in turn.

1.4.1.1 Base generation approach

This line of investigation, adopted by Jaeggli (1982, 1986), Borer (1981, 1983), Roberge (1986), Sportiche (1983), among others, holds that the clitic is generated in its «surface» position and that the verb's internal argument (herein the XP*) is a *pro* or a PRO bound by the clitic. Data such as the «ethical dative» constructions, where only the clitic is present, but not the corresponding XP*, support such approach.

- (25) *Je t'achèterais un cadeau pour Paul.* (Fr.)
 I will buy you a gift for Paul.

The main advantage of this approach is its ability to capture the clitic doubling constructions. The clitic is assumed to take the case of the verb, the theta-role is assigned to the XP* in the argument position and double constituents' case is assigned by the preposition

that usually accompanies the doubled constituent in languages such as Spanish and Romanian, a fact known as «Kayne's generalization». This approach may face critics in that it predicts the clitic is always preverbal. However, different linearization mechanisms are invoked in order to derive the Spell-out order of clitics (such as the head movement, cf. Travis 1984 or the I-to-C movement, cf. Pollock 1989).

1.4.1.2 Movement approach

This is the line of investigation adopted by Kayne (1975), Borer (1989), Sportiche (1990), among others: it holds that the clitic is generated in the argument position and that it moves to a higher position, leaving behind the XP* trace. The classical counterexample to this approach is the existence of the clitic doubling constructions, where the clitic and the XP* are not in complementary distribution, but both are overtly expressed. A way out of this is to assume that the clitic and the doubled element are actually not the same entity and that the XP in the lexical domain is not in the (Complement, V) position, but rather an adjunct to the XP*. However, Jaeggli (1986) shows that the doubled argument doesn't have the properties of an adjunct; that it has, on the contrary, the same distribution as the XP*, hence it is identical to XP*. In Romance, it is generally assumed that the clitic adjoins to an Infl functional head in the extended projection of the verb (Kayne, 1991; Belletti, 1990, Cardinaletti, 1999). Thus, languages will vary with respect to the functional head hosting the clitic: while generally assumed to be the highest Infl node, Starke (1993) assumes it to be AGR_C for Slavic languages, different authors assume it to be Mood for Romanian (for instance, Cornilescu, 1999).² Below is a brief review on recent approaches on clitic movement.

² The fact of considering the clitic as left-adjoined (Kayne, 1991) implies assuming that clitics are heads. In this respect, there are two theoretical possibilities: i) either clitics are heads, or ii) they are specifiers. If we consider the first option, clitics should take complements and project a structure. This is the position adopted by Sportiche (1999), where clitics head their own functional projections. The problem with this approach is that, as opposed to the strong pronouns, clitics do not take any arguments. Hence, they must be a special kind of X⁰ categories. If clitics are specifiers, the head of the projection should be null (this is essentially the proposal of Dobrovie-Sorin, 1994).

For Sportiche (1992), clitics are heads of functional projections bearing the [+Cl] feature. He combines the movement and the base-generation approaches, proposing that:

- (i) All clitics are generated in pre-existing positions, i.e. in the head X^0 of an XP projection.
- (ii) Clitic constructions can be the result of movement.

Movement is motivated by the following criterion:

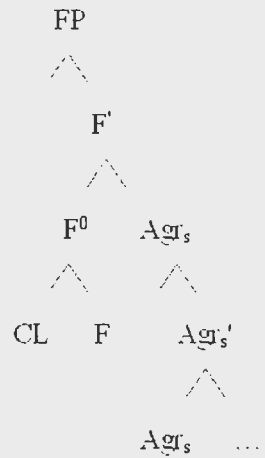
- (26) At LF,
- i. a clitic must be in a Spec-head relation with a XP[+F]
 - ii. an XP[+F] must be in a Spec-head relation with a clitic

These conditions allow different constructions from one language to the other, depending on the specific parameters of each language; the movement may be overt or covert, XP may be overt or covert, etc. For example, if the XP* is overt, we are in the presence of a clitic doubling construction; if XP* is covert, there is no doubling. In Romanian, for instance, the parameters would be: overt XP*, covert movement and overt head of the clitic phrase.

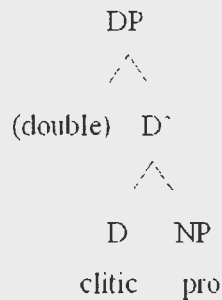
The main issue raised by such a view of clitics is that it predicts that the *pro* (found in the complement position of the verb) and the overt double (XP*) are in complementary distribution, which turns out to be wrong, considering empirical data from clitic doubling languages (i.e. Romanian, River Plate Spanish, some dialects of French and Italian, etc.). Sportiche (1999b) holds that some kind of complementary distribution holds in these languages as well, in the sense that the clitic may be in complementary distribution with a subpart of XP*, such as X^0 .

Uriagereka's (1995) analysis also involves movement of the clitics, but the target is a functional projection F in the left periphery of the sentence, which hosts – in his view – dislocated material, some wh-phrases, emphatic phrases and clitics:

(27) a.

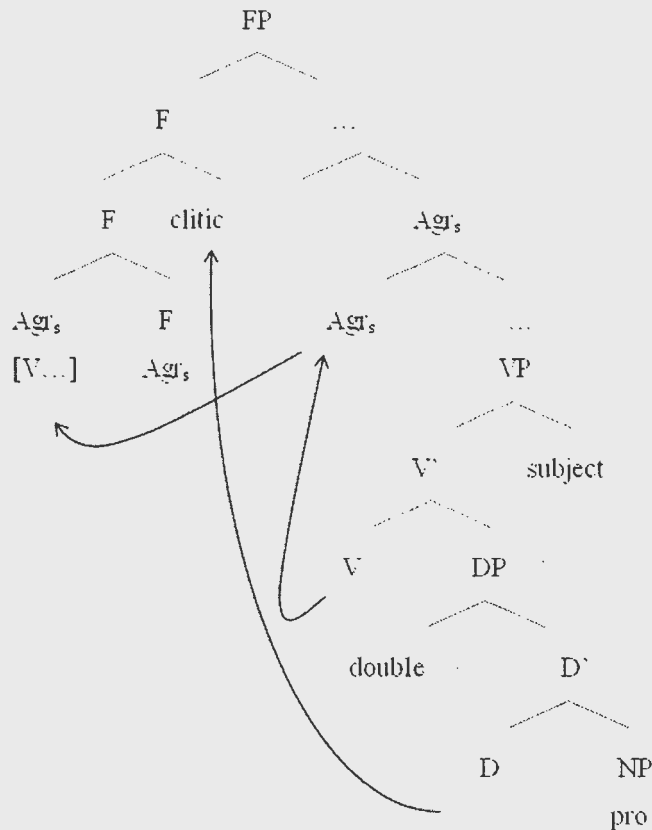


b.



His argument is motivated by the fact that the clitics are specific, referential elements. The F projection, having an abstract focus feature, could well serve as a landing site for the clitic movement, especially in the languages where the focus feature is syntactically active. In clitic doubling constructions, the double element occupies the specifier of a determiner head, as in (27b), found in the complement position of the verb. The clitic will move to F to license its pro, and the verb will also move out of vP (to Agr, giving rise to proclisis, or to F, in infinitival constructions, giving rise to enclisis), as illustrated below:

(28)

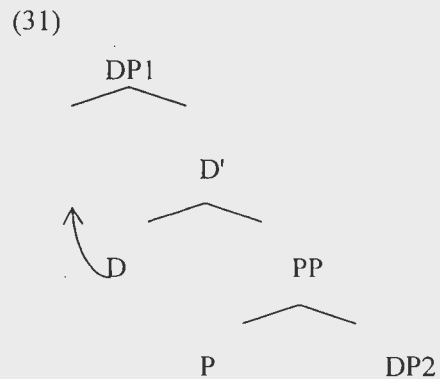
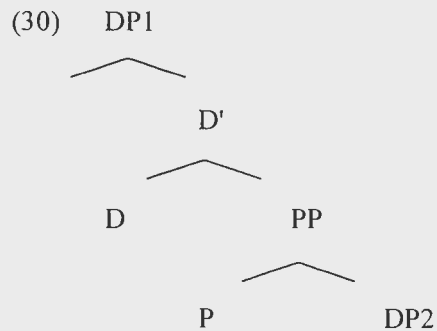


In Belletti's (1999) theory, clitic movement is fundamentally triggered by Case checking. The proclisis and enclisis are handled by different mechanisms, according to the checking of verbal inflectional morphology. Thus, the core assumptions of the analysis are: clitic movement is triggered by strong Case features that need to be checked; the landing site is within the AgrO projection; given the structure, clitics can either X^0 -move onto the AgrO head, or XP-move to (Spec, AgrO). One fact immediately noticeable is that having the Case features as a trigger for the clitic movement cannot be a solution for Romanian, considering other works convincingly arguing that a Romanian DP can get Case by feature-raising, while remaining in-situ (Alboiu, 1999). With respect to the question addressed by the author: does the clitic move as a head or as a maximal projection, she argues that both strategies can be employed by different languages, and even within the same language (for example, in order

to avoid excorporation, the participle agreement clitic constructions such as (29), the clitic moves first as a maximal projection.

- (29) a. *Le ho salutate.* (It.)
 them,fem. have greeted,fem.
 b. **Le ho salutato.*
 them,fem. have greeted,masc.
 I have greeted them.

With respect to the clitic doubling constructions, Belletti argues that the movement of the clitic is not incompatible with such constructions. The difference between the two structures is the presence of a complement in a clitic doubling structure (30) vs. the absence of such complement in the non-clitic doubling structure (31):



With respect to the enclisis/proclisis, she makes the following generalisation:

(32) a. Proclisis

CL on V (within a functional head)

V CL CLV

b. Enclisis

V on CL (within AgrO)

CL V VCL

(Belletti, 1999:560)

The difference between the two cases is thus reduced to the type of movement and type of projection implicated.

In the minimalist oriented analysis of Avram (2000), clitics may either stay in their merge positions, or move in the functional domain by means of feature identification between the goal and the probe. She goes along the lines of Uriagereka's (1995) analysis, by postulating a position in the left periphery of the sentence where the clitics move to check a strong feature of topic/focus. She demonstrates that the movement of the clitic cannot be motivated neither by the checking of Case features (as proposed in Belletti (1999), nor by the checking of the definiteness/referentiality features of the clitic. She proposes that the driving force of the movement does not rely in the clitic itself, but in the target. The movement becomes an instance of Attract α . This is better able to handle the movement of constituents without the need of introducing traces – forbidden in the Minimalist Program by the Inclusiveness Condition, Chomsky (2001), which bars the introduction of new elements in the course of the computation. Rather, the constituent movement forms a chain of occurrences of the element, i.e. of copies. The question is which one of the copies is to be Spelled-Out. It has been argued (Richards, 1999) that this depends on the strength of the features: if a formal feature is strong, the higher copy will be pronounced, if a formal feature is weak, the lower copy will be pronounced. Alboiu (2000), on the other hand, assumes that a lexical item will be relevant in its head or in its tail position at LF, depending on interpretive requirements. She brings arguments that such a theory of movement, along with a distinction between the selectional

and non-selectional focus features can account for the presence of obligatory prosodic stress on contrastive phrases in Romanian.

The only strong evidence that appears to support a copy theory of movement active in the pronominal clitic positioning in Romanian comes from the constructions involving the feminine 3rd person Acc clitic. As shown in (33), the feminine accusative clitic does not follow the ‘normal’ pattern of pronominal clitics in being preverbal, but is postverbal in constructions employing the auxiliary ‘have’:

- (33) a. *Am văzut-o pe Maria.* (Ro.)
 have seen her pe Mary
 I have seen Mary.
- b. **O am văzut pe Maria.*
- c. *L-am văzut pe Mihai.*
 him have seen pe Mihai
 I have seen Mihai.

(33a.) is the only real problematic evidence for a non-movement approach, since it contains a clitic in a lower, argumental, post-verbal position. Within a theory of base-generation, this construction should not be derived without assuming either right-adjunction of the clitic to the verb, or lowering. Both are solutions that stand against the theoretical assumptions we make here. Within a copy theory of movement, on the other hand, it would be enough to assume that, given PF constraints (avoid the sequence of two vowels), the lower copy will be the one Spelled-Out.

In defence of the base-generated analysis, we have to admit that this particular example of the feminine 3rd person object clitic is the only exception to the Romanian clitic positioning, which may turn out to be an entirely PF-driven phenomenon. If one is willing to accept that phonology has access to the syntax in order to command which one of the copies will be spelled-out, why have a problem accepting that phonology has access to the syntax in

determining the clitic positioning? As a matter of fact, in this case, maintaining a base-generated hypothesis and assuming an important role of PF interface in linearization, as we will detail in Chapter 2, in our view the clitic would be generated in the high position, but would surface at PF in the post-verbal position, for PF active constraints (i.e. avoid a sequence of two unstressed vowels). This is the view we'll maintain here and below are some further considerations in favour of this position.

In Romanian, the auxiliary plus the clitic constitute a single phonetic unit, i.e. a syllable, such that pronominal object clitics typically undergo a disyllabification process including vowel truncation, cf. Legendre (1999), Kok (1989).

- (34)
- | | | | |
|--|---|----------------------------|-------|
| <p><i>a. îi am văzut</i>
them (masc.) have seen
I have seen them.</p> | > | <p><i>i-am văzut</i></p> | (Ro.) |
| <p><i>b. le am vorbit</i>
them (fem.) have talked
I have talked to them.</p> | > | <p><i>le-am vorbit</i></p> | |
| <p><i>c. îl am ascuns</i>
him have hidden
I have hidden it.</p> | > | <p><i>l-am ascuns</i></p> | |
| <p><i>d. *o am cântat</i>
her have sung
I have sung it.</p> | > | <p><i>am cântat-o</i></p> | |

The data on the left column of (34a-d) is not optimal at PF³. But as opposed to (34a-c) where either the weaker vowel (the only vowel, in some cases) of the pronominal clitic can reduce, as long as the clitic preserves some featural information, in (34d), this is not possible,

³ Legendre (1999) suggests that this is so because Romanian imposes restrictions on the number of non-stressed syllables which can precede a prosodic head.

thus, the sequence of two vowels will be avoided by enclisis. What obtains is the post-verbal position of the feminine 3rd person direct object clitic «o». Since the Romanian auxiliary *a avea* ‘to have’ is vowel-initial, we expect all the forms using this auxiliary to have the post-posed «o». On the other hand, note that when the auxiliary begins with a consonant, which is the case for the indicative future forms, see (35), the feminine 3rd person direct object clitic can and will be pre-verbal. Also, constructions such as (36) are possible, with the modal verb *a putea* ‘can’, and the pre-posed «o»:

- (35) a. *o voi vedea* (Ro.)
 her will see
 I will see her.

- (36) a. *o pot vedea* (Ro.)
 her can see
 I can see her.

It should also be noted that in Old Romanian and even contemporary Romanian dating from the end of 1800, beginning of 1900, the feminine 3rd person accusative clitic is attested in a pre-verbal position, see (37) below. On the other hand, post-verbal clitics are attested even nowadays in highly marked constructions, where the postposition is due to rhetoric considerations, see (38)^{4,5}:

- (37) *o a văzut din cer pre ea* (Ro.)
 her has seen from sky on her
 He/she has seen her from the sky.

(Arghezi, 1880-1967)

⁴(37a,b) also has an imperative read and as we detail in Chapter 3, imperative constructions usually result in en-clisis.

⁵ The fact that Romanian auxiliary can be optionally placed after the verbal complement has been noted by Dobrovie-Sorin (1994) and Rivero (1994). This use of the auxiliary may be thought of in terms of stylistic inversion and we won’t enter in the details of such an analysis here.

- (38) a. *mira-v-ați* (Ro.)
 surprise you would
 You would be surprised!
- b. *arde-le-ar focul*
 burn them would fire,the
 May the fire burn them!
- (Olsen,1928:85)
- c. *voi vedea-o*
 will see her
 I will see her

We conclude that the special behaviour of the Romanian feminine accusative clitic is due to phonetic constraints and we won't consider it as a counter-example to our analysis.

We will take the stand that clitics are functional heads that are merged, i.e. base generated, in their Spell-out (pre-verbal) position. It will thus become evident that the work presented here is situated in the line of thinking of Di Sciullo (1990), in that we adopt the idea of clitics as operators. We are also situated in the line of thinking of Sportiche (1992, 1999), in that we also consider clitics as heads of phrases, but from whom we differ, however, in that we assume that no movement is involved in the placement of clitics. We also concur with Uriagereka (1995), in that we also consider clitics as referential elements found in a projection high in the functional field, proper to Topic/Focus material. But we diverge from his analysis by generating strong pronouns and the double constituent in complementary distribution in the Specifier of the same FP projection, with no movement implied. We also diverge from Belletti (1999) and Avram (2000), since we don't adopt the idea of a copy theory of clitic movement, nor the idea that movement is motivated by Case theory.

1.4.2 Lexicalist theories

In this perspective, advocated in Jaeggli (1982), Borer (1984), Suner (1988), Roberge (1990), Auger (1994), Monachesi (1998), Miller and Monachesi (2003), Miller and Sag (1997), clitics are affixes that modify the elements that host them. Specifically, pronominal clitics are agreement markers spelling out phi-features. For example, in (39), the difference between (a) and (b) is given by the fact that in (a) the verb is transitive, while in (b) the verb is intransitive, the clitic being part of its lexical entry.

- (39) a. *voir une fleur* (Fr.)
 see a flower
 b. *la voir*
 her see
 see it

However, while in (39) there is a clear relationship between the verb and the clitic, hence it would be plausible to think that the [clitic+verb] complex would be formed in the lexicon and inserted in syntax, in (40b) the clitic does not have any relation with the verb that hosts him:

- (40) a. *Marie est semblable à son père.* (Fr.)
 Marie is alike to her father
 Marie resembles her father.
 b. *Marie lui est semblable.*
 Marie to him is alike
 Marie resembles him.

The motivation behind such an approach is the occurrence of clitic doubling constructions observed in certain Romance languages such as Romanian, and dialects of Spanish and Italian. The argument position is occupied by an empty category which is c-commanded by the [clitic+verb] complex. Clitics are thus seen as agreement markers. As noted in Legendre

(1999), the resulting s-structure is the same as the one yielded by movement/adjunction of the clitic to a functional head. Hence, Uriagereka (1995), Sportiche (1992, 1999) would have the same result, but by different means: movement and adjunction to a functional projection.

This approach is also compatible with the view advocated by Klavans (1985), Anderson (1992), Monachesi (1988) where clitics are affixes at the word level, i.e. clitics are on a par with inflectional affixes. However, Cardinaletti and Repetti (2002) argue, on the basis of data in North Italian dialects, that enclitic pronouns cannot be either agreement markers or morphological affixes. Specifically, they argue that pronouns found in enclitic positions are the same as the ones found in proclitic positions. In their analysis, the clitics in postverbal positions depend on the scope of verb movement, which also accounts for language variation.

Di Sciullo (1990) shows, on the basis of French and Italian data, why clitics cannot be morphological objects. Clitics show distributional differences from morphemes, evidenced in data such as (41)-(42) below, where clitics have a certain degree of freedom in appearing pre- and post-verbally, contrasting with affixes which can only occupy one and only fixed position. Thus, if clitics were morphological objects, clitic climbing constructions would be impossible to explain.

- (41) a. *Gli scrivero oggi.* (It.)
 him/her write, FUT today
 I will write to him/her today.
 b. *Scrivergli adesso sarebbe opportuno.*
 write,INF. him/her now be,COND. appropriate
 To write to him/her now would be appropriate.

- (42) a. *mangia-bil-i* (It.)
 eat able pl
 eatable, pl
 b. **mangia-i-bil*

(Di Sciullo, 1990:210)

Moreover, clitics do not obey the morphological word formation laws defined in Di Sciullo and Williams (1987), such as the head rule, the theta-role satisfaction and functional composition (the clitic does not contribute to the argument structure of a verb in the same way affixes do, by functional composition). As a matter of fact, both theta-role satisfaction and functional composition would make wrong predictions in clitic structures. Since an argument cannot be satisfied twice, and under the assumption that both the clitic and the double are arguments of the same verb, theta-role satisfaction would predict that no clitic doubling is ever allowed. On the other hand, functional composition would affect the distribution of arguments, which does not take place in clitic structures.

1.4.3 Phonological theories

Approaches to clitics have been known to be purely phonological as well, given the inherent property of clitics recognised since Wackernagel (1892) and beyond, that clitics do not have a stress of their own. The etymology of the word itself (from the Greek *klinein* ‘to lean’) is indicative of the fact that before all other characteristics, what identifies a clitic is its dependency on other elements (related semantically or not).

Thus, from this perspective, clitics are considered elements that are prosodically deficient and researchers debate the issue of considering clitics as part of prosodic words or rather considering them as linked to categories higher than the prosodic word. The phonological approach to clitic analysis involves the prosodic structure theory, where the prosodic constituents (Prosodic Word PW and Prosodic Phrase PPh) are defined on the basis of the morphosyntactic structure of sentences, without being isomorphic to morphosyntactic constituents, cf. Nespor and Vogel (1986), Halpern (1995).

Optimality Theory (Prince and Smolensky, 1993-2004, Grimshaw 1997, 1999) seems to offer the most attractive framework for explaining the clitic properties and behaviour from a phonological point of view and many researchers have contributed to this: Legendre (1999), Anderson (2000). Other approaches include the «Weak syntax» approach of Halpern (1995):

syntax positioning followed by readjustment (Prosodic Inversion at PF) and the «Weak phonology» approach of Bošković (1997), Franks (1999).

1.5 Clitics: an interface phenomenon?

We have seen in the previous section how the existing theories of clitics are limited when it comes to accounting for the particularities of these elements. A purely non-modular account of clitics is often incomplete, as it leaves unexplained some aspects of the clitic behaviour. This is why we aim for an account where different domains are involved, particularly the syntactic, phonological and semantic/pragmatic. As noted by Franks (1999:4),

“to account for clitic placement in terms of some combination of phonological and syntactic requirements is less desirable on theoretical grounds, although perhaps inescapable; the question really boils down to which properties result from requirements in which module, and how the two domains interact”.

We hold here that pronominals are essentially category D elements – an idea that goes back to Abney (1987) in the generative paradigm – which only minimally differ from each other at the syntactic level. Their different realisation is due instead to interface constraints, and is essentially of morpho-phonological nature.

Clitics are best analyzed in an approach that involves different levels of grammatical description, in order to seize their properties, which pertain as much to pragmatics and phonology as they do to syntax, semantics and morphology. This multi-dimensional account of Romance pronominal clitics allows a view of clitics as functional elements on a par with Ds (as in Sportiche, 1999). However, the difference between types of pronominal forms (strong vs. weak) is no longer based on exclusively syntactic grounds (as in Kayne, 1975), nor exclusively morphological (as in Borer, 1984). Rather, they share a number of semantic

and pragmatic properties, and should not be considered two syntactically unrelated elements: both strong pronouns and clitics are related anaphorically to an antecedent in the discourse, as conveyers of old information (in the sense of having an “activated” topic referent, following the terminology of Lambrecht, 1994), and thus they are both merged in the same functional projection FP. The difference between them becomes relevant in the morpho-phonological component of the grammar: while clitics are morpho-phonologically reduced and lack accent, strong pronouns are not morpho-phonologically reduced and can be emphatic. Their difference in structure, on the other hand, will determine their different spell-out positions.

This view of clitics as weak manifestation of the same functional projection as the pronoun allows the generalization of a view of all clitic elements (i.e. deficient) as the weak manifestation of all functional projections, as it turns out to be the case (see Chapter 2): as empirical evidence shows, negation, auxiliaries, modals, etc. are all clitics.

Our proposal – to be detailed in Chapter 2 – tackles the analysis of clitics in general, in relation with strong pronominals, and is not restricted to the particularity of the clitic doubling constructions, as it is often the case in the literature. Our analysis handles general properties of the class of pronominals and links clitics and strong pronouns in a way that has not been previously attempted: they are seen as the same pragmatic entity, this being reflected in their presence in the high functional field of the syntactic representation. Crucially, they are found within the same projection. Their ability of bearing Stress and their structure differs, and along with this, so does their spell-out position. The advantage of our proposal is the fact that it avoids the postulation of different positions for the merging of strong and weak (i.e. clitic) pronouns: they essentially express the same features, and they are the same pragmatic entity, hence they are part of the same functional projection. No distinction is needed for the strong pronouns (with respect to their being merged low, as opposed to the clitics): their post-verbal (low) spell-out position follows from their structure and PF constraints. Also, another important prediction of the present analysis is that a strong pronoun should never be doubled (in other words, clitic doubling is strictly a phenomenon involving clitics). Empirical data of the languages under examination confirms this.

CHAPTER II

PROPOSAL

2.1 Introduction

We have seen in the previous chapter different views with respect to the status and positioning of clitics, i.e. the syntactic vs. lexical approaches, the base-generation vs. the movement analyses. We have also argued – mainly on the basis of Romanian – for a bipartite distinction of pronominal forms into strong vs. weak (i.e. clitics). In this chapter, we focus on the morpho-syntactic and morpho-phonological properties of clitics as opposed to the strong pronouns. The goal is to show that although generally thought of as different entities, clitics and strong pronouns have more in common than generally assumed: they are essentially the same element, at least at some levels of interpretation. Both these elements are functional elements of category D having similar syntactic and semantic/pragmatic properties, but different morpho-phonological properties: this will lead to different realisations at the PF interface.

The specific questions about clitics that we approach here concern: a) their category and features, b) the way they are merged in the derivation, c) their linear order and d) their semantics and pragmatics. We argue that clitics are base-generated in the high functional field, as a direct consequence of them being functional elements. Specifically, clitics are functional heads, as opposed to the strong pronouns that are specifiers, crucially within the same functional projection as the functional projection that hosts pronominal clitics.

Semantically speaking, clitics pick up the reference of a necessarily identifiable antecedent, which in Romanian turns out to be *a participant to the discourse structure*.

In the theory we are adopting, i.e. the Asymmetry Theory (Di Sciullo, 1998-2006), which is consistent with the line of thinking of Cinque (1999), Kayne (2000) and Sportiche (2002), among others, a fundamental distinction is maintained between the field hosting the strictly lexical material (essentially nouns and verbs) and the functional field, hosting all functional material (adjectives, determiners, complementizers, adverbs, prepositions, pronouns, etc.).

(1) The Hierarchy of Homogeneous Projection Hypothesis

Only functional elements head functional projections and sister-contain lexical projections.

(Di Sciullo, 2005a: 26)

We want to maintain this purity of the system and the idea that the two fields are separated because they have different properties. On one hand, lexical words are content words, an ever-expanding class of words where elements can be added by derivation and change of function, for instance: beauty (N) – beautify (V) – beautification (N), whereas functional words form a closed class, with no word-formation possibilities, they are elements that lack substantive content and are generally morphologically and/or phonologically dependent. In semantic terms, we also appeal to the distinction proposed in Diesing (1992), Tenny and Speas (2002), Carlson (2003), among others, on the difference in interpretation associated to the lexical field and the functional field. Thus, elements in the functional field are often operators, such that they take scope over the elements in the lexical field (for instance, determiners take scope over nouns).

This distinction between the two fields is also supported by phonological differences. For instance, Selkirk (1996) notes that English monosyllabic function words may appear in a stressless weak form or a stressed strong form, within different positions in a sentence, but a lexical-class word always appears in a stressed unreduced form. The phonological differences between the two classes are so systematic that she suggests that language learners actually use them in the acquisition process of the syntactic distinction between the lexical and the

functional class. A distinction between lexical and functional classes – and fields – is also sustained by psycholinguistic studies showing that the acquisition of lexical categories precedes the acquisitions of functional categories (Shi and Lepage, 2005).

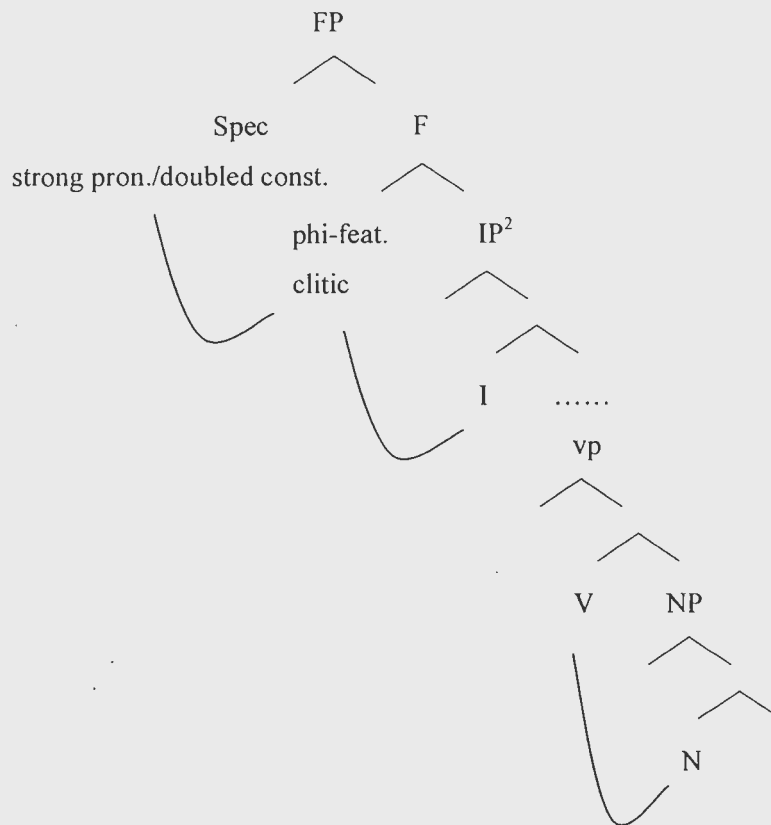
This chapter is structured as follows: we will begin with presenting our proposal, we then establish the similarities between clitics and strong pronouns. This leads to a discussion on their semantics and pragmatics, the way they are merged in the derivation and their linear order. We argue for our proposal on the basis of syntactic and semantic arguments, we evaluate it in view of other studies and we conclude with the consequences for the grammar.

2.2 Proposal

We propose that clitics and strong pronouns are generated in the functional domain – by virtue of them being functional and discourse-related elements – in a projection ¹ F whose head is the clitic itself, as a bundle of phi-features, and whose Specifier is occupied either by the strong pronouns, or by the doubled object (in clitic doubling constructions), in complementary distribution, as in (2) below:

¹ This projection is similar to Uriagereka's (1995) F projection, which he considers to be a point of interface between syntax and pragmatics. However, we differ from Uriagereka when it comes to the assumption of clitic movement and with respect to the merging of strong pronouns.

(2)



In our view, the phi-features, in addition to the D features (since we assume that clitics are Ds) and referentiality/identifiability (as we will see below), will be manifested in this projection, but the PF form that they will take (as strong pronouns or as clitics) will depend on the intension of the speaker: this will explain the choice between a strong pronoun and a clitic, as the clitic will be less emphatic – pragmatically and phonetically – than the full

² For simplification, we label this node IP, but it is essentially the tense-bearing node, since we assume V-to-I movement.

pronoun.³ Note that this is different than what is traditionally assumed to be the result of an economy principle, and is also different from the «Minimise structure» principle of Cardinaletti and Starke (1994), in that the choice between the two pronominal forms (and even between the full lexical coding vs. the pronominal coding) is ultimately due to pragmatics/information structure. Our approach is closer to Uriagereka's (1999), who notes that morphology could be responsible for the choice between strong pronouns and clitics, if we were to think of them as allomorphs of the same category (i.e. each having a different feature make-up). We think of pronominal clitics and strong pronouns as the representation of the same discourse actants, but with different complexity of feature structures.⁴

Interface phenomena play a crucial role in our analysis, as we recognise that since clitics and strong pronouns are both referential entities realised as bundles of phi-features, their difference will be essentially played in phonology⁵. The surface post-verbal order of the strong pronouns is due to a post-syntactic reordering operation (Flip, Di Sciullo, 1999, 2005a) that is sensitive to syntactic heaviness. Thus, this proposal has the advantage of avoiding the postulation of two structures for pre-posed and post-posed pronominal arguments, since they both derive from the same syntactic projection. Reducing linear order differences to the application of a PF operation is desirable in a minimalist system, where all redundancies should be avoided. If the linear order is the result of PF operations, the syntax does not need to encode the same information, cf. Chomsky (1995), Uriagereka (1998), Richards (2004).

³ As for the choice between full lexical coding and pronominal coding, it could be explained in terms of a combination of activation in memory and phonetics, as Lambrecht (1994) proposes: the first is determined by a combination of inactive marking and accentuation, while the second is a combination of active marking and lack of pitch prominence (also equated with a presuppositional structure).

⁴ Papangeli (2004) argues that in Greek there are no significant syntactic and semantic differences between strong pronouns and clitics. Moreover, she cites Horrocks (1997) to the effect that Modern Greek clitic pronouns are derived diachronically from the Ancient Greek pronoun *afion* "him" after the loss of the syllable *af*.

⁵ The role of phonology in the realisation of clitics is widely recognised. However, our analysis differs from analyses such as Boskovich (2001), where the phonological constraints are responsible for the spell out of clitics in one position or another in a syntactic chain. Further details of this analysis are given in Chapter 1.

The importance that phonology takes in our approach is also recognised in other works, such as Boskovich (2002), where purely syntactic approaches to clitic placement are considered fatally flawed and where clitics undergo movement in syntax, but it is phonology that is finally responsible for their surfacing in second position in languages such as Serbo-Croatian⁶. However, our analysis differs from such analyses, where the phonological constraints are responsible for the spell out of clitics in one position or another in a syntactic chain. In our approach, syntax has the role of placing a functional constituent in the functional domain, in the vicinity of the event predicate, but it is the pragmatics/information discourse interface that is responsible for the choice between the PF different clitics and strong pronouns.

In assuming that clitics are generated in the functional domain we crucially differ from the analyses that assume that the clitic is positioned in a projection such as ours (an F projection), but as a landing site for clitic movement, such as Uriagereka (1995), Raposo (1999)⁷. In our analysis, no movement of the clitic is involved. However, the argumental properties of the clitic are still captured by the linking relation that establishes between the clitic and the phonologically empty nominal found in the argument position of the verb, as detailed in a later section.

⁶ Further details of this analysis are given in Chapter 1.

⁷ Raposo's (1999) proposal differs from Uriagereka's (1995) in that the first assumes that both the clitic and the verb move in order to adjoin to the F projection, the clitic being positioned to the 'left edge' of F for principled reasons. Moreover, the functional head F itself is seen as an enclitic who cannot be sentence-initial. Thus, the apparent erratic behaviour of the European Portuguese clitic «o», see (i) and (ii), can be explained to derive from the same form: in the case of proclisis, F is sufficiently strong to be host, and in the case of enclisis, the F incorporates.

(i) a. *os cominhos* (*sao óptimos para a comida indiana*)
"the cummins (are excellent for Indian food)"

b. **os comi*
the-pl I-ate

(ii) a. **já comi* [(*todos*) *os*]
already I-ate all the-pl
"I already ate them all."

b. *comi-os*
I-ate the-pl
"I ate them."

Raposo (1999: 223)

In assuming that strong pronouns are generated in the functional domain, we crucially differ from the standard analyses that assume that strong pronouns are merged low in the structure (i.e. in the postverbal argument position). In our analysis, the pronominal (a strong or a weak pronoun) is hosted by the same syntactic projection, i.e. FP. Since the strong pronoun has the same phi, argumental and referential features as the clitic, it is merged in the same functional projection. Its structure (a DP, as opposed to the clitic, a D) will determine its placement in the Specifier of the FP projection and its subsequent re-ordering at PF, by the interface operation Flip (Di Sciullo, 1999), as we will detail later.

In what follows we show that contrary to standard assumptions, strong pronouns and clitics turn out to share a large number of properties and that the differences that have often been pointed out in the literature between clitics and strong pronouns can be accounted for at the PF interface.

2.3 Semantic and pragmatic properties

2.3.1 Referentiality

Pronominals (clitics and strong pronouns alike) are referential elements⁸. The notion of referentiality we use throughout this thesis is in the sense exposed in Curat (1999): referential expressions are expressions that can be related to one of the entities/ individuals that have been introduced in the discourse⁹. In other words, we will consider that a linguistic

⁸ Bouchard (p.c.) points out the fact that examples such as the ones of Y.-C. Morin in (i) below would indicate that pronominals are not always referential. However, as we will see later in this chapter, we consider that a clitic is referential by its nature, in this case referring to a *situation*.

i) *Marie l'a échappé belle.* (Fr.)

Marie it has escaped beautiful

Marie just barely made it.

expression is referential to the extent that it is possible to relate this linguistic expression to an entity/individual present in the universe of discourse. Pronominals do not denote in themselves, they refer to an antecedent in the discourse: the first person personal pronoun ‘*I, je, eu, io, etc.*’ refers to the speaker, the second person personal pronoun ‘*you, toi, tu*’ refers to the hearer, and so forth. As such, personal pronouns are referential.

Moreover, both clitics and strong personal pronouns are D elements. As shown by Longobardi (1994), the D position turns a nominal expression into an argument, i.e. into a referential expression¹⁰. The same line of thought is also proposed by Carlson (2003: 301): “there is a fundamental asymmetry between the sorts of interpretation major phrases may have before, and after, the addition of their associated functional category”. He reviews different works in the field, such as the one carried out by Vergnaud and Zubizarreta (1992), which propose the ‘Correspondance Law’ shown in (3), the work of Longobardi (1994), which proposes that DPs cannot have type readings, and the one in Chierchia (1998), where NPs denote kinds of things and any notion of individual reference requires the presence of D.

(3) When a DP or NP denotes, the DP denotes a token, and the NP denotes a type.

(Vergnaud and Zubizarreta, 1992)

He sums up this review stating that

“there is a confluence of research which suggests that the notion of an
"individual" is not part and parcel of the semantics of the NP, but is only something

⁹ Curat (1999) also notes that there could be some pronouns that can’t be thought of as referring, such as the impersonals, but cites authors such as Moignet (1974), where the impersonal is still referring to a ‘*personne d’univers*’.

¹⁰ However, as Bouchard (p.c.) notes, a bare nominal may be an argument, given a certain denotation, for instance:

i) *Jean forme un écran.*

ii) *Jean forme écran devant Paul.*

Note however that these constructions could be interpreted as idiomatic. Furthermore, the proposed structure of Longobardi can also be maintained if we analyse this type of examples as having an empty determiner in the head of the DP projection.

that becomes available once the functional projection of the DP is added. That is, "higher" levels of interpretation make available something that is fundamentally unavailable at the "lower" levels which are confined to the expression of types of things alone."

(Carlson, 2001:306)

Thus, individual reference is a function of higher-level functional categories. Carlson shows that the same pattern emerges for the VP and AP phrases. The point he makes in the discussion on VPs is that only weak indefinites can remain within the VP (at the level of LF), any other NP/DP must move to a higher position in order to be interpretable.

Semantically speaking, our proposal follows the line of thinking of Longobardi (1994), Uriagereka (1995), among others, with respect to the nature of the clitic elements, as referential material, in the sense specified above.

2.3.2 Syntactic realization

As indicated above, we propose that both clitics and strong pronouns are merged as the head and specifier of a high functional projection, respectively. In proposing this, we rely on the following converging results obtained in the literature:

- i) The Hierarchy of Homogenous Projection Hypothesis (Di Sciullo, 2005a), according to which only functional elements head functional projections and sister-contain lexical-projections headed by lexical elements.
- ii) Clitics are operators, Di Sciullo (1990), and Ds are also understood as operators binding a variable, whose range is always the extension of the natural kind referred to by the head noun, (Longobardi, 1994).

iii) Clitics and strong pronouns never refer to new information, but they always refer to information previously introduced in the discourse^{11,12}; as such, they can never be part of the postverbal field¹³.

(iv) Assuming a semantic representation that consists of a quantifier, a restrictive clause and a nuclear scope, Diesing (1992) relates phrase structure to semantics: material under VP goes in the nuclear scope and material under IP in the restrictive clause. Thus, according to her Mapping Hypothesis, here in (4), there is a difference in the interpretation of DPs according to the domain where they appear.

(4) Mapping Hypothesis

Material from VP is mapped into the nuclear scope.

Material from IP is mapped into a restrictive clause.

(Diesing, 1992: 10)

Diesing associates structural differences, i.e. syntactic differences, with the existential (i.e. within the VP) or the universal (i.e. within the IP) interpretation. Hence, the presuppositional NPs must move out of VP into the higher IP field in order to become interpretable. Carlson (in press) reduces the elements that can stay within the VP to the ones sharing a single property: their semantics is based on type information only. On the contrary, for the NPs that have to get out of the VP, token information is required.

Based on this fundamental distinction between layers of structure, we propose that clitics, as Ds, hence functional elements, are merged in the functional field. They inherently seem to

¹¹ As noted above in fn. 9, we consider the cases pointed out in Tasmovski and Verluyten (1982) as cases where the clitic refers to an identifiable antecedent that is present in the «situational» context, hence still identifiable.

¹² However, syntactic structure will play a role on the reordering at PF, such that strong pronouns will surface post-verbally, as we will detail later.

¹³ We intend here the canonical position of clitics. We will see in a later section that there are post-verbal clitics found in imperative, gerundive, infinitive constructions, but they are still generated in the functional field.

have a “token” (as opposed to “type”) interpretation, as exemplified below: as opposed to the examples in (5), where objects having a “token” interpretation can be referred to by way of clitics, in (6), it is impossible to refer by way of a clitic to the objects having a “type” interpretation:

- (5) a. *Je la vois.* (Fr)
 b. *Il le sait.* (Fr)
 c. *O cunosce.* (Ro)
 I know her.
- (6) a. *La baleine est un mammifère.* (Fr.)
 the whale is a mammal
 a'. #*Je la vois.*
 I see her.
- b. *L'homme est intelligent.* (Fr.)
 The man is intelligent.
- b'. #*Il m'a parlé hier à l'école.*
 He talked to me yesterday at school.
- c. #*Je lui donne le livre.* (Fr.)
 I give him the book.
- c'. #*Je l'ai vu partir.*
 I saw him leave.

2.3.3 Referentiality and the [identifiable] feature

However, note the construction in (7), which could be taken as a counter-example to our generalisation above, as to the inherent property of clitics to be always specific.

- (7) *La baleine est un mammifère. On la voit dans les eaux du Saint Laurent.* (Fr.)
 The whale is a mammal. We see it in Saint Laurent's waters.

In (7), *la baleine* refers to a kind level individual, but is still referential. Kinds are different from types in that their reference is an individual, as opposed to a set. One thus expects pronouns to be able to resume the reference of such expressions. The problem represented in (7) is only apparent.

Still, it is difficult to sustain that an inherent feature of clitics is “specificity”, even if we were to limit this exploration to the argument-related clitics, because of data such as (8), containing inherently generic clitics:

(8) *On dit souvent qu'il n'est pas facile d'écrire une thèse de doctorat.* (Fr.)

It is often said that it is not easy to write a doctoral dissertation.

This issue of the lack of a straight-cut distinction between “specific” and “generic” that would hold across the board leads us to look for other types of distinctions that may capture these differences, such as Lambrecht’s (1994) cognitive notion of “identifiability”, notion that has correlations to the grammatical notion of definiteness and the pragmatic notion of presupposition:

“ A presupposed proposition is one of which the speaker and the hearer are assumed to have some shared knowledge or representation at the time of utterance. Similarly, an identifiable referent is one for which a shared representation already exists in the speaker and the hearer’s mind at the time of utterance, while an unidentifiable referent is one for which a representation exists only in the speaker’s mind.”

(Lambrecht, 1994: 78)

For him, from the information-structure point of view, an identifiable referent means that the speaker and the hearer share the mental representation of an entity, not the presupposition of existence, i.e. in (9) below, both speaker and hearer are able to identify the referent, even though it must not necessarily exist. Consequently, an unidentifiable referent means that it is brand-new to both speaker and hearer. Note that this is also consistent with the fact that

clitics (and pronouns for that matter) are never new information, they must have been introduced in the previous discourse.¹⁴

(9) *Le roi de Utopia est un homme très honoré. Il ne doit jamais justifier ses actions.* (Fr.)

The king of Utopia is a highly respected man. He never has to justify his actions.

The grammatical category of definiteness, on the other hand, is – for Lambrecht – a formal feature associated with nominal expressions which signals whether or not the referent of a phrase is assumed by the speaker to be identifiable to the addressee. Thus, it lacks precision when it comes to discerning the semantic properties of pronouns.

For Lambrecht, the definite article or the demonstrative determiner count as identifiability markers. Since we consider clitics as D elements, we can generalise that *a clitic is also an identifiability marker*.

Semantic notions of pronouns as presuppositional elements that have a variable which needs to denote have been proposed in Partee (1987), among others. In Curat (1999), reference is also a presupposition of existence. In Longobardi (1994), pronouns need not refer to a kind. They are base-generated in D and never appear in the N position. According to Longobardi, “the N position is interpreted as referring to universal concepts, i.e. to kinds”, while the D position “determines the particular designation of the whole DP, either directly, by being assigned reference to a single individual object, or indirectly, by hosting the operator of a denotational (operator-variable) structure”. Moreover, he assumes that “all D positions are universally generated with an abstract referential +/- R feature and this +R feature is universally checked iff the D is interpreted as being in a chain containing an object-referring expression (i.e. a pronoun or a proper name).” (Longobardi, 1994: 659). D is base-generated as containing a pronoun or a lexical determiner, or it can be empty:

¹⁴ Note that examples such as in Tasmovski and Verluyten (1981) do not contradict this, given that the context of those examples can be thought of as «situational» context, in any case, where the participants to the discourse are able to identify the object.

(10) *noi medici* (It.)
us doctors

(11) *la Maria* (It.)
the Maria

(12) *Maria* (It.)

(Longobardi, 1994 : 660)

Another argument for the 'identifiable' nature of clitics/pronominals involves the behaviour of null arguments. Consider the facts in (13). The object in (13a) is indefinite, but since it is interpreted as identifiable it can easily be referred to by way of a clitic. By the same token, the object in (13b) is identifiable and definite. On the other hand, the null object in (13c, 13d)¹⁵ is interpreted as non-identifiable, and as such it cannot be referred to by the clitic.

(13) a. *Jean lit un très bon livre.* (Fr.)

Jean reads a very good book.

a'. *Aimerais-tu le lire également?*

Would you like to read it too?

b. *Jean lit le livre que tu lui as donné.* (Fr.)

Jean reads the book that you have given him.

b'. *L'avais-tu déjà lu?*

Have you already read it?

c. *J'aime le fait que Jean lit .* (Fr.)

I like the fact that Jean reads .

¹⁵ We expect (13c,d) to have an object position given the argument properties of the verbs, both taking an internal object. Hence, a clitic should be able to recuperate this object. Van Voorst (1996) analyses transitivity in terms of the nature of the interaction between the entity that sets the event in motion and the object of the event, but the types of relations proposed that establish between the process and the object it applies to do not go against the subcategorization of these verbs requiring for a DP argument. We mean here the transitive use of these verbs.

c'. **Aimerais-tu le lire également?*

*Would you like to read it too ?

d. *Jean mangeait _.* (Fr.)

Jean was eating _ .

d'. **J'en voulais aussi.*

*I wanted some too.

The same reasoning applies for the example in (14) below:

(14) a. *Il lit _ une fois, il sait _.* (Fr.)

(Cummins and Roberge, 2004)

b. **Il lit _ une fois, il le sait.*

*He reads _ once, he knows it.

Our analysis is compatible with the typology of null objects of Cummins and Roberge (2004), where all referential null object is recovered by a clitic, but not a non-referential null object, distinction which in our analysis corresponds to the [identifiability] value of the null object. Moreover, in languages like French, not only can identifiable null objects be recovered by a clitic, but they must be recovered by a clitic, as shown in (20):

(20) a. *J'ai appelé Jean, mais je n'ai pas pu le rejoindre .* (Fr.)

b. **J'ai appelé Jean, mais je n'ai pas pu rejoindre.*

(Cummins and Roberge, 2004)

This also holds in the constructions involving null objects as in Rizzi (1986), see (15a,b), which are to be interpreted as part of the same discourse, where the null object is always a [+arbitrary] element, in other words, a non-identifiable referent, and as such, clitics cannot refer to it:

(15) a. *Un buon fotografo fotografa _ seduti.* (It.)

A good photographer photographs _ sited.

b. **Io invece li vorrei fotografare anche in piedi.*

I instead would like to photograph them also standing.

Furthermore, Roberge (p.c.) notes that our analysis can also account for the ‘clitic-drop’ constructions, where the null object is identifiable but no pronominal form is used:

(16) *Tu as aimé _ ?* (Fr.)

You have liked _?

In (16), even though an identifiable object is clearly under discussion (a movie, for instance), the construction can mean that we are talking more about the ‘liking’ event as a whole, and the implication of the agent or experiencer in that event, than the movie itself. This interpretation falls under a non-identifiable type in our analysis and the lack of clitic follows.

In the examples below, any object that is [identifiable] (definite or not) and sets up a specific reference, may be recuperated by a clitic, but not the ones in (19-20), which are non-identifiable. The problem with (19b) and (20b) and essentially in the examples where the clitic cannot be used, is that the quantification is not restricted. The quantifiers such as ‘chaque’ *each*, or ‘tous’ *all*, for example, denote a set of individuals in the discourse, while the clitic needs an individual description. Thus, the clitic cannot pick up a reference that is not of ‘existential’ type.

(17) a. *Je vois les étudiants.* (Fr.)

b. *Je les vois.*

(18) a. *Je vois tous les étudiants.* (Fr.)

b. *Je les vois.*

(19) a. *Je vois chaque étudiant.* (Fr.)

b. **Je le vois.*

- (20) a. *Je vois tout.* (Fr.)
 b. **Je le vois.*

Thus, it is possible to conclude that the type of discourse reference set up by a [non-identifiable] object is not the type of discourse reference that a clitic can pick up. For example, the mass nouns or generics constitute referents of the ‘property’ type, while the clitic seems to be able to pick up only ‘existential’ type of referents. This is also why the clitic can be an argument, as only individuals may be arguments, not properties (cf. Longobardi, 1994).

We extend this assumption to strong pronouns. The fact that we consider pronouns (be they clitic or strong) as [identifiability] markers is also sustained by studies on definiteness: for instance, Farkas (2000) proposes the definiteness scale, here in (21), in which personal pronouns have the highest rank, followed by proper names:

- (21) Personal Pronoun > Proper Name > Definite Descriptions > Partitive, Specific Indefinite Descriptions > Non-specific Indefinite Descriptions

In Romanian, the coverage of [Identifiability] seems to be limited to the higher levels of this scale, namely to Personal Pronouns and Proper Names only, while it may be extended up to Definite Descriptions in Spanish and other Romance languages, as evidenced by the clitic doubling constructions:

- (22) a. *L-am văzut pe el.* (Ro.)
 him have seen PE him
 I have seen him PE him.
 b. *L-am văzut pe Mihai.*
 him I have seen PE Mihai
 I have seen him PE Mihai.
 c. **L-am văzut pe studentul.*
 him have seen PE student, the

I have seen him PE the student.

d. **L-am văzut pe un student.*¹⁶

him have seen PE a student

I have seen him PE a student.

(23) a. *Lo he visto a el.* (Sp.)

him have seen A him

I have seen him A him.

b. *(Lo) he visto a Juan.*

him have seen A Juan

I have seen (him) A Juan.

c. *(Lo) he visto al estudiante.*

him have seen A the student

I have seen (him) A the student.

d. **Lo he visto a un estudiante.*¹⁷

him have seen A a student

I have seen him A a student.

Summing up, we adopt Lambrecht's (1994) notion of "identifiability" in order to seize the inherent property that an argumental clitic/personal pronoun designates. Thus, we can account for the cases where the clitic refers to a specific antecedent, as in (5), for the cases where the clitic refers to a generic antecedent, as in (7), where it is possible to identify the class of individuals that constitute the antecedent, and finally, we can account for the cases where the clitic itself is generic, as it also refers to a class of antecedents (*on* can be thought of as referring to the class of humans). By the same reasoning, data such as (13c' and 13d' and 15b) is excluded, because a null argument is not identifiable, not even as a class, and as such it cannot be referred to by the clitic.

¹⁶ This is possible in a specific reading, «*I have seen a student in particular*».

¹⁷ On a par with the Romanian example above, this is possible in a specific reading, «*I have seen a student in particular*».

In Bouchard (2002), the role of the pronominal clitic is to identify the actor of the temporal event. Specifically for French, this takes place in the domain of the event, and thus the clitic is always adjacent to the Tense-bearing element, V or AUX. The notions of clitics as “event actants” of Bouchard and the identifiability criterion of Lambrecht that we adopted above help us define pronominal clitics as an expression of the identifiable actant of the event. However, Bouchard’s assumption that a pronominal clitic is affixed to a T head could be completed with data from languages such as Romanian, which allow certain (clitic) elements to intervene between the Tense bearing element and the clitic. The question that would arise at this point would be why Romanian allows some other clitic material to intervene between the pronominal clitic and the verb, as opposed to French, as in (24 vs. 25b)^{18,19}

(24) *Îl mai văd și mâine pe profesor.* (Ro.)
 Him again see and tomorrow PE professor
 I see him again tomorrow, the professor.

(25) a. *Je le vois encore demain, le professeur.* (Fr.)
 I him see again tomorrow, the professor.
 I see him again tomorrow, the professor.

¹⁸ Note however that Tellier (1997) gives examples of Old French, where it was equally possible to have an element intervening between the clitic (cluster) and the verb:

- (i) *Le bien lire vaudrait la peine.*
 'It would be worthy to read it well.'
 (ii) *Ne le pas lire serait dommage.*
 'It would be a pity not to read it.' (Tellier, 1997:175)

In view of this type of data, we should not expect however major differences between Romanian and French.

¹⁹ Italian also seems to allow some material between the verb and the clitic cluster, thus it behaves more like Romanian in this respect:

- (i) *Non glielo mai chiesto se voleva andare.*
 not 3rd-dat 3rd-acc never ask if wanted go
 'I have never asked him/her if he/she wanted to go.'
 (ii) *Non glielo mai più spedito.*
 not 3rd-dat 3rd-acc never again send
 'I haven't sent it to him/her ever again.'

b. **Je le encore vois demain, le professeur.*²⁰

I him again see tomorrow, the professor

Romanian is a “discourse-oriented” language, i.e. a language that uses emphasis, topicalisation, as shown in Cornilescu (1999), Alboiu (2000), among others, and thus the possibility of the speaker to express participants to the event into the left-periphery of the structure is much more extensive than in languages such as French, for example. We expect such a language to express a discourse-level interaction between the participants to the event.

The notion of “identifiability” will play not only with respect to the actants (expressed as pronominal clitics), but also with respect to other variables of the event, such as place, manner, etc. (expressed as adverbial and locative clitics). As noted by Bouchard (p.c.) these elements, as identifiers of the event, are still expected to be gathered around the tense-bearing node. The functional projections that identify other variables of the event are expected to be found in the same left-periphery section of the tree as the FP hosting pronominal arguments, and in a language such as Romanian this projection will be able to intervene between the clitic and the pronoun, but not in a language such as French.

Essentially, we propose that pronouns are the spell-out of the [identifiable] feature of the verbal argument: when the verbal argument has [identifiability] features, a discourse-linked FP projection will host the pronominal arguments (both clitic elements, in the head of this projection, and strong pronouns, in the specifier of this projection) that are old information, hence preverbal. The heaviness of structure of strong pronominals will determine their reordering at PF, as we will see in a later section. Also, notice that an F will not be projected for the [non identifiable] arguments, capturing the empirical facts in (15-20).

²⁰ Note that French does allow the auxiliary clitic to intervene between the clitic and the main verb:
 (i) *Je l'ai encore vu hier, le professeur.*
 I him have seen again seen yesterday, the professor
 I have seen him again yesterday, the professor.

Our proposal avoids such criticisms of minimalist approaches to clitics placement as the ones noted in Bouchard (2005) with respect to the fact that more often than not “which elements are clitics in which languages is listed and the hosts of the clitics – Tense bearing elements – is also listed”, with no explanation being provided as to why the Tense bearing element acts as a host and why certain elements are clitics and not others. In our approach, there is no need to stipulate the form of the element that “identifies” an actant, the choice between a strong form and a weak form being dependent on the intension of the speaker (emphasis or not) and the phonological constraints that will allow a realization of a pronominal clitic or of a strong pronoun, as mentioned in the beginning of this chapter.

As for the question regarding why certain languages would produce pronominal clitics but not others, while our analysis could be compatible with the view that feature strength is responsible for the difference (for example, the D feature is strong in Romance but weak in English, cf. Isac 1999), we’ll tend to approach this question in view of the possibility of identifying the event and expressing the participant to the event anaphorically, as Bouchard (2002) does in terms of Number. That way, we’ll avoid further complexifying the feature system by having strength as a feature of a feature. In Bouchard’s analysis, the main difference between English and French is the locus of Number feature realization: English encodes semantic Number on N (hence the possibility of bare nouns in English constructions), while French encodes Number on D²¹. His analysis predicts that in a language which realizes Number on D such as French, a D should be able to stand alone as an argument and given the data such as (26) and the assumption that clitics are “Lone Determiners”, this is considered to be the case: the definite determiners *le, la, les* may appear alone as arguments of a verb.

- (26) a. *Paul mange le radis/la pomme/les pommes.*
 Paul eats the radish.MASC.SING/the apple.FEM.SING/the apples.PLUR.
- b. *Paul le/la/les mange.*

²¹ Romanian, in this sense, is expected to behave on a par with French, and this turns out to be the case. This would mean that in Romanian as well, the Number is expressed on the D.

c. **Paul mange le/la/les.*

(Bouchard, 2002:234)

In other words, we could complete the notion of “identifiability” of Lambrecht with the notion of “Number as requisition of atomisation, hence cliticization” of Bouchard²², which will explain the behaviour of Romanian or other Romance languages vs. English, for example, in terms of predicting which languages will have clitics and which won’t.

In our view, the [identifiability] feature of the verbal internal argument will be the factor determining the spell-out of pronominal argumental forms at PF, confirming that clitics are an interface phenomenon. As for the choice between clitics and strong pronouns, it reduces to the intension of the speaker, as only strong pronouns can be emphatic. Crucially, both clitics and strong pronouns are hosted by the same functional projection.

This proposal is in line with the view in Di Sciullo (1990) that clitics are operators. By having the clitic as a spell-out of the [identifiable] feature of the internal argument, in a position linked with the discourse, we capture the fact that semantically, the clitic is an «anaphoric» operator (Isac, 1999), i.e. the clitic links the internal verbal argument to a set of alternatives in the discourse.

Notice also that the operator status of the clitics is evident in the parasitic gaps constructions (Di Sciullo, p.c.). In languages that do not allow null operators, such as Romanian, this type of construction demands the presence of a clitic instead of the operator. The presence of the clitic thus saves the structure, since the variable has to be bound by an operator.

(27) **Ce articol ai aruncat fără să citești?* (Ro.)

Which article have thrown without read, SUBJ

Which article have you thrown out without reading?

²² As for poor morphology languages, such as Chinese, Bouchard (2002) considers that the atomisation is obtained by means of a classifier system.

- (28) *Ce articol ai aruncat fără să-l citești?* (Ro.)
 Which article have thrown without him read, SUBJ
 Which article have you thrown out without reading it?

The fact that the clitic is an operator allows for the formation of an operator-variable chain, which explains why in such constructions we expect the presence of a variable. The variable in the lexical domain is linked to the focus operator in the functional domain by means of a preposition (*pe*, characteristic of the Romanian clitic doubling constructions). When the preposition and the variable are overt, clitic doubling constructions obtain. But even in the case when neither the preposition, nor the variable is overt, the internal structure of the operator, as proposed by Di Sciullo (2000), predicts that the operator's layered structure will always include a relational element, i.e. a preposition, which will be overt or not, allowing parametric variation²³. The clitic doubling constructions will be discussed in Chapter 3.

The availability of null operators in English, independently motivated (Stowell, 1986, Koopman and Sportiche, 1982) supports our view, since in languages such as English, given the unavailability of clitics, the FP projection will include a Spelled-out Specifier only, i.e. the strong pronoun, while the head of FP will be occupied by an empty operator linked to the empty argument position within vP.

2.4 Category and features

In what follows we intend to show that even though usually assumed to be different linguistic expressions, clitics and strong pronouns are both D elements. Moreover, although they take different complements (i.e. strong pronouns take NP complements and clitics take

²³ In fact, Franco (2000) mentions that there are varieties of Spanish (Southern Cone Spanish) which manifest clitic doubling, without the overt presence of the preposition *a*.

IP/TP/ModP complements), they are both linked to the nominal in the internal argument position of the verb, on one hand, and to the discourse, on the other.

As noted in Abney (1987), Heim and Kratzer (1998), among others, the crucial property that distinguishes pronominal forms from lexical (nominal) forms is that they do not encode concepts, in other words, they refer without describing a linguistic concept. They are essentially bundles of phi features (number, person, case), as they encode differences in number (Fr. *il/ils*), person (It. *io/tu*) and overt case (Rom. acc.*il/dat.lui*). As a matter of fact, pronominals encode person features, as opposed to the full nominals, which are exclusively 3rd person²⁴.

Formally speaking, clitics resemble functional, rather than lexical, categories: pronouns are a limited number class, with no increasing word formation possibilities, as for example the noun class; in the case of clitics, this is so evident that it lead to comparison with affixes²⁵ or other functional elements (such as determiners, adverbs, complementizers): but clitics are much more independent than affixes, as evidenced by the so-called clitic-climbing constructions and most relevantly, they do not obey the morphological laws defined in Di Sciullo and Williams (1987), such as the head of a word rule, the theta-role satisfaction and the functional composition, as briefly seen in Chapter 1.

As shown in Abney (1987) and subsequent works, the general properties of functional heads include the fact that they are closed class items, they are more often than not phonologically and morphologically dependent and they lack substantive content. Given their particularities, clitics are perfect candidates for functional head status. Moreover, as we will detail later, all functional heads are actually clitic (i.e. dependent) forms.

²⁴ We will return in Chapter 3 on the distinction between the 1st and 2nd person, on one hand, and the 3rd person, on the other hand, as it will become essential for the analysis of clitic clusters.

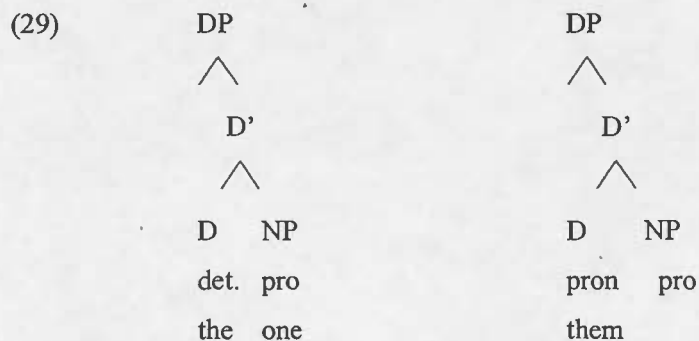
²⁵ Proposals in favour and against this are detailed in Chapter 1.

Since the Greek studies and Port Royal Grammar, an observation has been made to the fact that there seems to exist a grammatical entity that behaves either as a determiner (i.e. when it takes a NP complement) or as a pronoun (i.e. when it doesn't). In other words, an identity of form between clitics and determiners has been noted:

“ The article is a kind of pronoun when it precedes a verb, and as a consequence, when it precedes a noun: *Avez-vu lu la Grammaire nouvelle? Non, je la lirai bientôt.* Why would we want *la* to be different in the two instances? ”

(Arnaud&Lancelot:300, cited in Curat, 1999: 37, our translation)

Within generative grammar, the original idea that pronouns are Determiners was Postal's (1969). He argued that Ds are always transitive: pronominal determiners always have a nominal complement (even if only an empty *pro*).



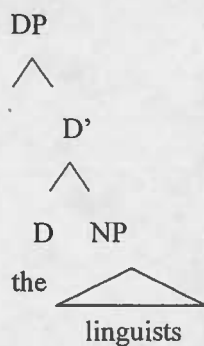
For Abney (1987), on the other hand, pronouns are intransitive determiners. Thus, for him, the difference between a determiner and a pronoun is given by the presence/absence of a nominal complement. As pointed out in Panagiotidis (2002), these assumptions provide a perfect link between the lack of descriptive content of pronouns and the fact that they lack a NP projection (i.e. a carrier of descriptive features). However, data such as (30)-(31) is often used to show that pronominal forms also include a complement position and if we were to sustain a strong intransitive position for pronouns, we would have to assume that *we* in (30) and *we* in (31) are two different lexical entries, which would be undesirable from a theoretical standpoint.

(30) [we linguists] like vacations²⁶

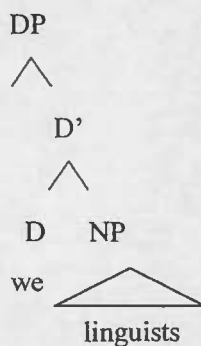
(31) [we] like vacations

Note that the pronouns in (30) and (31) are strong pronouns, which are known to behave on a par with full DP projections. As such, strong pronouns admit a complement, as in:

(32) The linguists



(33) We linguists



²⁶ Postal (1969) notes that even though such examples may be thought of as being derived from appositives, as in

(i) we, who are men => we men

there are reasons to believe that forms like *we men* are accepted in contexts where appositives are not, for instance, as objects in questions:

(ii) *Who wrote a novel, which was published by McGraw-Hill?

(iii) Who insulted you men?

The equivalent examples in Romanian, French and Spanish, where the clitic / strong pronoun difference is not restricted to phonology shows that the only pronominals that admit complements are the strong pronouns:

(34) a. Neither of us professors is quitting.

b. *Nici unul dintre noi profesorii nu abandonează.* (Ro.)
 neither one of us the professors not quit
 Neither of us the professors is quitting.

c. *Aucun de nous professeurs ne quitte.* (Fr.)
 none of us professors not quits
 Neither of us professors is quitting.

d. *Nessuno di noi professori se ne va.* (It.)
 none of us professors Se not quits
 Neither of us professors is quitting.

(35) a. We linguists write long articles.

b. *Noi lingviștii scriem articole lungi.* (Ro.)
 we the linguists write articles long
 We the linguists write long articles.

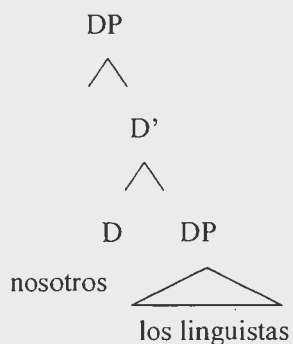
c. *Nosotros los lingüistas escribimos artículos largos.* (Sp.)
 we the linguists write long articles
 We the linguists write long articles.

d. *Noi linguisti scriviamo articoli lunghi.* (It.)
 We linguists write articles long
 We linguists write long articles.

- (36) a. *Voi professori credete che sia facile ma per noi studenti è difficile.* (It.)
 b. *Dumneavoastră profesorii credeți că e ușor, dar după noi elevii este greu.*(Ro.)
 You professors believe that it is easy, but for us, students it is difficult.
 (Giusti, 2002: 76)

The Romanian and Spanish examples in (35) show that the pronoun and the determiner are not in complementary distribution, as opposed to the Italian, see (34d),(35d) and (36a). It follows that in a structure such as (33) above, the complement position in (35b, c) will be occupied by another DP.

- (37) *Nosotros los linguistas* (Sp.)



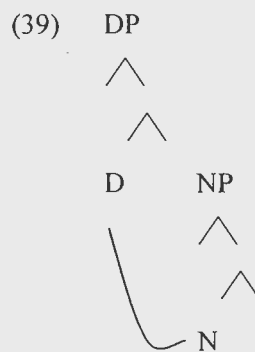
English phonetically reduced clitics also confirm that only strong pronouns can take complements:

- (38) *Neither of 'em professors is quitting.

All these previous analyses considered mostly pronouns and their capacity of taking a complement. Here, we adopt Postal's analysis of pronominals as determiners²⁷ and we extend it to clitics. However, we do make a difference between strong pronouns, which we take to be

²⁷ As noted in Raposo (1999), Postal's theory implies the proclitic properties of clitics, since the pronominal function is derived from the determiner function.

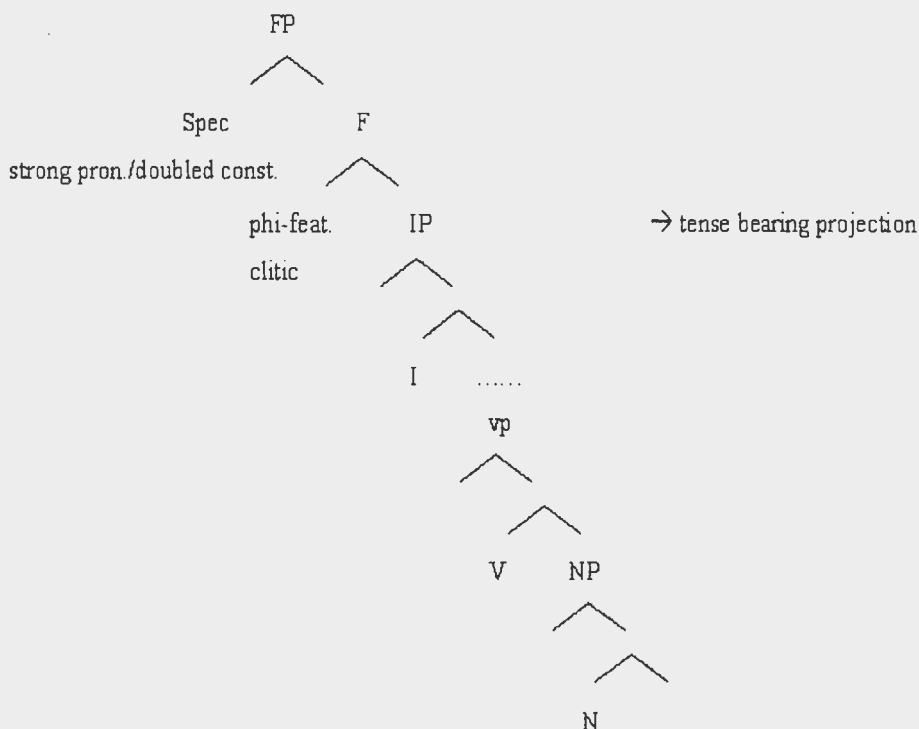
DPs, and clitics (or weak pronouns), which we take to be Ds²⁸. Thus, we are able to maintain the generalisation that pronominals include a complement position, consistent with Zamparelli (1995), Cardinaletti and Starke (1999), and Giusti (2002). The difference between clitics and strong pronouns reduces, in our analysis, to the type of complement they take: while strong pronouns take an NP/DP complement, as in (39), clitics take an IP (essentially the tense-bearing projection) as complement, as in (40). As such, clitics are special type of Ds, i.e. clausal Ds.



²⁸ Evidence from agrammatism (Sanchez, 1997) shows that clitics match the behaviour of determiners and not the behaviour of agreement morphemes, contra Auger (1994). Sanchez (1997) bases this on the fact that clitics undergo omission, on a par with determiners, while agreement does not, as illustrated in (i):

- (i) a. *le chaperon rouge [lui] donne le panier avec les friandises*
 the RRH [him-CI] gives the basket with the goodies
 "LRRH gives him (the wolf) the basket with the goodies"
 Nespoulous et al. (1990)
- b. *je [me] suis occupé à faire à manger*
 I [self-CI] am occupy:PastPart to make:Inf to eat:Inf
 "I busied myself with getting something to eat"
 Nespoulous et al. (1990)

(40)



Essentially, in spite of the selectional differences (strong pronouns select for a complement, clitics do not), strong pronouns and clitics are both linked to the (phonologically empty) nominal in the internal argument position, through the mediation of the verb (as in 40)²⁹. The verb in vP asymmetrically selects³⁰ the head of its complement, here the pro. In the IP domain, the clitic is the spell-out of the argument and phi-features of the verb. The Agree relation established between the clitic and the verb is an identification relation. In languages with no clitics (e.g. English) and in clitic doubling languages (e.g. Romanian), by Spec-head agreement within FP, the strong pronoun or the double constituent is also linked to the verb

²⁹ Notice that the empty nominal in the internal argument position in (40) is not the so called double in the clitic-doubling constructions (in other words, it is not the *XP), as assumed in Sportiche (1992). We'll come back to this later in this chapter and in Chapter 3.

³⁰ For asymmetric selection, see Di Sciullo (2005a) and Collins (2002).

within IP and to pro within vP. The Agree relation established between the clitic and the strong pronoun/the doubled constituent is an emphasis relation.

Note also that we do not assume a syntactic difference between deictic and anaphoric pronouns, since the only distinction between the two is the domain in which they take their antecedent. Generally speaking, it is assumed that deictic pronouns have an antecedent in the discourse context, while anaphoric pronouns have an antecedent in the linguistic context.³¹ Here, on the other hand, given the assumptions of the Asymmetry Theory (AT), the antecedent domain of all pronouns will always be local, dependent on Asymmetric Agree and the selectional properties of the predicate, as proposed in Di Sciullo (2005a).

By assuming that clitics are determiners we capture the diachronic development of Romance clitics from Latin demonstrative pronouns. Romance pronominal clitics (as well as articles) are descendents of Latin demonstratives, i.e. [+specific] expressions, which became increasingly weak phonologically and morphologically. Egerland (2002) links the fact that the development from Latin to Medieval Romance is characterised by a loss of phonetic material in final positions with the fact that the driving force between the historical reduction of pronouns lies in phonology:

“... general phonological processes such as truncation may account for why a weak pronoun in a given grammar may be reanalysed as a clitic in the grammar of a subsequent generation. (...) ...only processes of, say, phonological lengthening or doubling would make the language learner reanalyse a clitic as a weak pronoun.”

(Egerland, 2002:38)

³¹ Tasmovski and Verluyten (1982) point out cases of «absentee-antecedents», i.e. NPs that are not found in the linguistic or discourse context and must somehow be reconstructed.

i) (watching a Frenchman trying to get a large table – *la table* – into his car):

Tu n'arriveras jamais à la faire entrer dans la voiture. (Fr.)

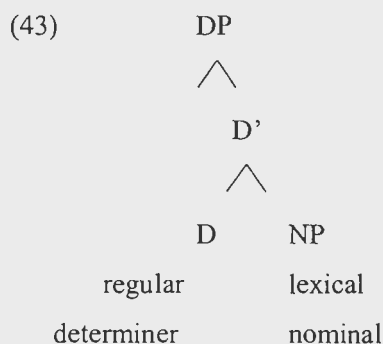
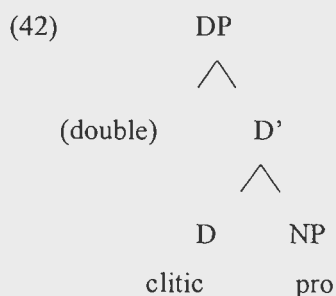
You'll never manage to get it into the car.

Note however that even in this context, the clitic refers to an identifiable antecedent that is present in the «situational» context, hence identifiable (or reconstructed, in the sense of Tasmovski and Verluyten).

Wanner (1987) shows the differences between phonological clitics and syntactic clitics in the evolution from Latin to Romance, but we will not go into these details here.

Uriagereka (1995) also assumes that clitics are determiners: for him, clitics and determiners both project DPs; clitics have NP-pro as complement, while determiners have overt NP as complement. The (Spec, DP) in the case of clitics can be occupied by the doubled element in the clitic doubling structures, such as (41) below.

- (41) *Lo vimos a Juan.* (Sp.)
 him saw, 1p.pl. A John
 We saw John.



His proposal is motivated by the fact that clitics are anchors for specific information and is also supported by diachronic and dialectal facts. As for the driving movement of clitics, he appeals to the restrictions imposed by the Restrictive Mapping Slogan in (44), which requires that clitics move out of VP by Logical form.

(44) Restrictive Mapping Slogan (RMS)

Only and all material assigned VP-external scope is interpreted as specific at Logical Form.

(Uriagereka, 1995:90)

He essentially assumes that specific expressions are signalled as such in the initial phrase marker. Expressions that stay within the VP are presentational and novel, while the ones that are assigned VP-external scope are familiar, since the presentational or familiar status of an expression is related to its having scope over the main assertion. The same intuition is expressed in our analysis, only not in terms of movement, but rather in terms of clitics being merged in the position external to VP from the beginning, by virtue of them being Ds, i.e. functional elements, consistent with the assumptions of AT, in particular HHPH.

An important point made by Uriagereka (1995) is that «although both pronouns (e.g. in some Scandinavian languages) and special clitics (e.g. in Romance) may be assigned VP-external scope, their ultimate landing sites are different». The reason for this, according to Holmberg (1986) and his successors is the availability of systematic object shift that allows pronominal placement. Moreover, authors such as Holmberg (1986), Kemenade (1993), Roberts (1993) hold that early Romance cliticisation and strong pronouns shift are related. Uriagereka himself argues for the placement of clitics in the F projection, which is higher than the projection involved in object shift. In what follows, we will see that our proposal can account for these differences while maintaining the point that clitics and strong pronouns do have in common: after all, as inherently not focussed, both these elements have to be outside the VP domain³². Our hypothesis, according to which both clitics and strong pronouns are found in the same functional projection, thus subsumes clitic movement and Scandinavian Object Shift, avoiding the postulation of a driving force for the movement. The linear order will be achieved by a PF operation.

³² In Holmberg (1999), Object Shift, Scrambling and Clitic movement are driven by the need to licence the [-Foc] feature of unfocussed arguments.

In conclusion, we have seen above that pronominal argumental clitics and strong pronouns are referential D-type elements. In the next section we investigate the syntactic properties of strong pronouns and clitics, in view of our proposal. We show that even though Spell-out differences would indicate otherwise, clitics and strong pronouns are generated in the same projection in the functional field, a projection linked to the discourse, hosting a unique referent features.

2.5 Syntactic properties of clitics and strong pronouns

2.5.1 Distribution

The standard assumption in the literature is that clitics and strong pronouns do not occupy the same syntactic position. Clitics are restricted to tense-adjacent positions, while strong pronouns occupy the argumental post-verbal position and can never surface pre-verbally³³. On the other hand, one characteristic of clitic pronouns is that they can never occur in argumental positions, but only in so-called «derived» positions:

- (45) a. *Jean le regarde.* (Fr.)
 Jean him looks at
 Jean looks at him.
- b. **Jean le seulement regarde.* (Fr.)
 Jean him only looks at
 Jean looks only at him.
- c. *Jean regarde seulement lui.* (Fr.)
 Jean looks only him
 Jean looks only at him.
- d. *Jean seulement le regarde.* (Fr.)

³³ Subject pronouns are strong in languages such as Italian and Romanian, and can appear pre-verbally. This will be discussed in a later section.

Jean only him looks at

Only Jean looks at him.

e. *Ioan îl privește numai pe el.* (Ro.)

Ioan him looks at only PE him

Ioan looks only at him.

f. *Ioan numai pe el îl privește.* (Ro.)

Ioan only PE him him looks at

Ioan looks only at him.

g. **Ioan îl numai privește.* (Ro.)

Ioan him only looks at

Ioan only looks at him.

(46) a. **Jean te et me regarde.* (Fr.)

b. *Jean nous regarde toi et moi.*

Jean looks at me and at you.

c. *?Jean regarde toi et moi.*

d. **Ioan mă și te privește.* (Ro.)

e. *Ioan ne privește pe mine și pe tine.*

Ioan looks at me and at you.

(47) a. *Jean lui parle encore.* (Fr.)

Jean to him/her speaks again

Jean speaks to him/her again.

b. **Jean lui encore parle.*

c. *Jean parle encore à Marie.*

Jean speaks again to Marie.

d. *Ioan încă îi vorbește.* (Ro.)

Ioan still to her/him speaks.

Ioan still speaks to him/her.

e. **Ioan îi încă vorbește.*

f. *Ioan îi vorbește încă lui Mihai.*

Ioan to him speaks still to Mihai.

Ioan still speaks to Mihai.

g. *Ioan îi mai vorbește.*

Ioan to him/her again speaks.

Ioan speaks again to him/her.

Strong pronouns are assumed to behave consistently like full nominal elements, hence, they have a DP-like distribution:

(48) a. *Jean parle depuis longtemps à Marie.* (Fr.)

John talks since long to Mary.

b. *Jean lui parle depuis longtemps.*

John to her talks since long.

c. **Jean parle depuis longtemps à elle.*³⁴

John talks since long to her.

(49) a. *Il m'a présenté à Marie et à Jean.* (Fr.)

He introduced me to Mary and John.

b. *Il m'a présenté à elle et à lui.*

He introduced me to her and to him.

c. **Il m'a elle et lui présenté.*

He to her and him introduced me.

With a contrastive Stress, strong pronouns (and full nominal elements) can be preposed:

(50) a. *À Marie, Jean a raconté l'histoire.* (Fr.)

to Marie, Jean told the story

³⁴ For Kayne (2001), (48c) is excluded because *à elle* – as a structurally Case-marked pronoun – is not clitic doubled. In our analysis, (48c) is excluded on phonetic grounds, as seen in a later section.

b. *À elle, Jean a raconté l'histoire.*

to her, Jean told the story

Note that in this case, the indirect object appears in a topicalized position, i.e. a non-canonical position. As such, they are found in a position higher than the FP projection, a section in the syntactic structure host of topicalization features and where operations such as Flip, relying on syntactic heaviness, will not apply. These structures are on a par with the topicalized subject strong pronouns in Romanian, which also escape the effects of Flip for the same reasons.

Cardinaletti and Starke (1999) present the following summary of the syntactic distinctions between strong and deficient pronouns:

(53) *Syntactic asymmetry:*

A deficient, but not a strong pronoun cannot occur at the surface structure in:

- a. Θ -/ base position
- b. peripheral positions^{35, 36},
- c. c-modification, coordination.

(Cardinaletti and Starke, 1999:152)

With respect to these syntactic differences, we'll see that our proposal is able to maintain these Spell-out differences, even though both clitics and strong pronouns (of the same type) will be generated in the same functional projection.

³⁵ This includes positions like the ones in 'isolation', as in i), which is in fact due to the inability of clitics of existing alone, i.e. without a (verbal) host:

i) *Chi e bella?* (It.)

**Essa. / Lei / Maria.*

Who is beautiful?

She/She/Maria

³⁶ The Romanian subject pronoun is strong and it may occur in a focused left-periphery position, see (i). This issue will be discussed in Chapter 3.

i) *El va reuși la examen.* (Ro.)

He will succeed at the exam

2.5.2 Binding properties

In Di Sciullo (1990), the clitic is subject to Principle A if it is a reflexive and it is subject to principle B if it's not. This is based on a unified theory of Binding, building on the Binding Theory of Chomsky (1981), stated as below:

(54) X-binding:

- A. An anaphor is A-bound.
- B. A pronominal is X-free.
- C. A variable is A'-bound.

(Di Sciullo, 1990:220)

(55) a. *Jean le regarde.* (Fr.)

Jean him looks at

Jean looks at him.

b. *Gianni lo presentera a Maria.* (It.)

Gianni him present, Fut. to Maria

Gianni will present him to Maria.

c. *Jean se regarde.* (Fr.)

Jean himself looks at

Jean looks at himself.

d. *Gianni si presentera a Maria.* (It.)

Gianni himself present, Fut to Maria

Gianni will present himself to Maria.

(Di Sciullo, 1990:220)

Baauw, Escobar and Philip (1997), link the proposal of Delfitto and Corver (1998) to the delay in Principle B-effect in Spanish speaking children, by proposing that only binding (co-indexation) provides the clitic with a value for this feature, i.e. the clitic will inherit the value for [human] feature from its binder. Their proposal according to which pronominal elements

underspecified for the feature [human] must be bound either in syntax or by d-linking is resumed below:

(57)

	bound		unbound	
	syntax	discourse	syntax	discourse
specified				
[+human]	pronouns	pronouns	pronouns	pronouns
or [-human]				(intrasentential coreference)
underspecified				
[+/- human]	clitics	clitics	-	-

(Baauw, Escobar and Philip, 1997:2)

According to the authors, the difference between syntactic binding and discourse binding is that co-indexation and c-command involved in the first, but only co-indexation involved in the other. This proposal comes close to ours, in that we will base both syntactic and discourse binding on the satisfaction of the asymmetric Agree relation (Di Sciullo, 20005a), but without appealing to coindexation, no longer used in Minimalism and AT.

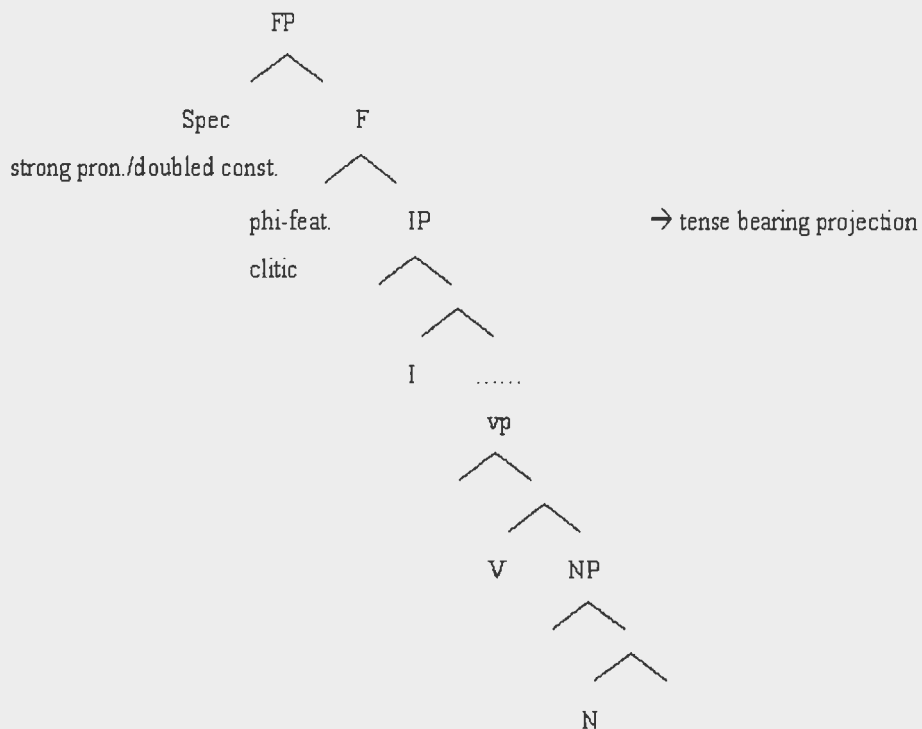
In conclusion, we have reviewed in this section the properties of strong and weak pronominals, showing that the two types of elements have different distributional and binding properties, as it has been assumed for the most part in the literature. However, they do have more in common than what has often been assumed: our proposal intends to unify these

elements in the sense that they are both D-type elements linked to the verbal argument and their realisation as "full" or "deficient" elements is reduced to interface phenomena. In the next section, we will see in detail the mechanisms involved in our proposal and the way it handles the empirical facts in Romance, mostly in Romanian.

2.6 Analysis

As stated above, our proposal is that clitics and strong pronouns are generated in the functional domain – by virtue of them being functional elements – in a projection F whose head is the clitic itself, as a bundle of phi-features, and whose Specifier is occupied either by the strong pronouns, or by the doubled object (in clitic doubling constructions), in complementary distribution, as in (58) below:

(58)



The FP projection that hosts both the clitic and the strong pronouns has D features and a referentiality/identifiability feature, but the PF form that they will take (as strong pronouns or as clitics) will depend on the intension of the speaker: this will explain the choice between a strong pronoun and a clitic, as the clitic will be less emphatic – pragmatically and phonetically – than the full pronoun.

While consistent with the results found in other works, the originality of our proposal consists in the fact that we assume no movement is involved in the clitic and strong pronoun positioning; they are merged in the functional field as a consequence of the architecture of the system which only allows lexical material in the lexical domain and functional material in the functional domain, given their inherent properties. Moreover, strong pronouns and clitics are generated in the same functional projection, host of the same type of phi-features and referential features (but they will be Spelled-out with different PF realisations). Furthermore, the surface order of pronominal elements is no longer the exclusive result of syntactic movement, but the result of an interface operation, i.e. FLIP, on the basis of the asymmetric structure these elements are part of.

Syntactically speaking, the proposal in (58) above builds on works such as Kayne (1975, 1994) and Sportiche (1996, 1999a, b), among others, where the clitic is also a head, and particularly on the work of Uriagereka (1995), where the clitic is also the head of an F projection³⁷. We will assume the XP properties of the strong pronouns, with Cardinaletti and Starke (1995) and Uriagereka (1995), among others, as discussed in Chapter 1 and in previous sections.

³⁷ The point where we diverge from Uriagereka is the movement vs. the base generation approach. We hold that it is precisely this particular inherent property of clitics that sustains the idea that they should not belong to the lexical field, but be merged in the functional field. In a footnote, Uriagereka (1995) tackles the question “*Why are special clitics, but not other determiners, subject to syntactic placement outside VP?*” (fn.33) and considers that determiners cannot move out of VP overtly since they signal morphological case on full NP, which is not necessary for pro. Also, from the point of view of Corver and Delfitto (1993), economy considerations predict the lack of movement in the case of regular determiners. However, if we were to consider that no movement is involved in the placement of clitics, as well as in the placement of regular determiners, we would expect to have similar behaviour for the two elements. The consequences of such a strong position are worth exploring, but this is beyond the scope of this work.

The literature abounds with works in syntax arguing for clitic movement, as an instance of head-movement, on a par with verb movement, as we have seen in Chapter 1. However, there are reasons to believe that there is no movement in the positioning of (pronominal) clitics. Besides the semantic reasons for merging clitics in a high functional head mentioned in the previous sections, there are syntactic arguments that support our analysis of clitics. The syntactic arguments against clitic movement include the parasitic gap constructions and the head movement constraints. Other works on clitics, specifically on Slavic clitics, maintain a base-generation approach, with the only difference on the exact site of the clitic, which is often an adjunction to a Spec position, cf. Schick (1999), Tomic (1999).

The proposal that clitics are base-generated in a high, preverbal position is also supported by language acquisition studies suggesting that clitics are not placed in argument positions. Liceras (1985) argues that L2 learners of Spanish whose L1 is less rich in clitics (such as English) have no difficulties acquiring preverbal clitic placement and they distinguish clitics from post-verbal strong pronouns. White (1996) examined learners of French whose mother tongue was English and found that they produced clitics in clitic positions, rather than post-verbally. Duffield et al. (2002) attempt to determine the extent to which L2 learners are able to acquire new functional projections, and their results show that L2 learners acquire properties of clitic placement even if the L1 lacks clitics. Moreover, L2 learners treat clitics differently from arguments, placing them high in the structure, rather than in argument positions³⁸.

Recall that in movement analyses, a motivation for movement is needed, and usually that is case-feature checking. However, as noted in Isac (1999), as functional categories, clitics are not subject to Case theory: they can be neither Case assigners, nor Case marked³⁹: they

³⁸ I.e. they respond faster to grammatical sentences involving clitics in grammatical clitic positions (cl V; cl aux V) than to ungrammatical sentences with clitics in argument positions (*V cl; *aux V cl).

³⁹ This has also an impact on the analysis of clitic doubling constructions, where the insertion of the preposition in languages such as Romanian and Spanish is most often explained on the basis of the fact that the preposition needs to «rescue» a Caseless XP, given that the clitic absorbs the Case feature of the verb. These constructions will be discussed in Chapter 3.

only realise case, as in Di Sciullo (1990). The difference between case assignment and Case realisation is given in Chomsky (1986):

- (59) a. The city's destruction e.
 b. The destruction of the city.

In the examples above, Genitive⁴⁰ is assigned to e, but realised by 'S in (59a) and by OF in (59b).

The adjunction theories on clitics, which state that clitics are generated in a position adjoined to an Infl head, also seem to be on the wrong path, since adjunction adds another strain to the theory, as pointed out by Dobrovie-Sorin and Galves (2000): they take the adjunction to Infl (or some other functional head hosting the verb) as problematic, because it would imply accepting excorporation as a mechanism of getting the verb in front of the clitic (the verb would get out of the Cl+V complex, an operation not allowed by the minimalist principles). On the other hand, we hold that, within our base-generation theory of clitics, no excorporation assumptions are needed, since the clitic is a head of a projection, not an adjunct to the head of a functional projection.

A strong argument for the generation of clitics in the functional domain is based on the constructions containing possessive clitics⁴¹ in Romanian:

- (60) a. *Îmi arde casa.* (Ro.)
 to me burn house,the
 My house burns.

⁴⁰ Tsimpli (1999) argues that genitive clitics are recursive determiners.

⁴¹We won't tackle the specific analysis of possessives here, given that it implies taking into account the properties of the possession relation, but for the illustration at hand, it suffices to assume that they are functional elements which are merged in the functional field, within the extended DP projection.

- b. *Casa - mi arde.*
house,the to me burn
My house burns.
- c. *??Arde casa - mi.*
burns house,the to me
My house burns.
- (61) a. *Îi citesc lucrarea.* (Ro.)
to him/her read paper
I read his/her paper.
- b. *Lucrarea - i o citesc.*
paper his/her it read
I read it his/her paper.
- c. *??Citesc lucrarea-i.*⁴²
read paper his/her
I read his/her paper.

As shown in other works, Romanian has a pre-verbal landing site that is designed for structures encoding topicalization (Alboiu, 2000, Cornilescu, 1999). Thus, in the a) structures, the clitic is in the functional field, in its Merge position, the subject is in the lexical field. In the b) constructions, the subject is topicalised, and the clitic, even though it is syntactically attached to the verb, it is phonetically attached to the noun (this type of proposal has been put forward by Dobrovie-Sorin, 1999). Finally, in the c) constructions, the clitic is found in a postverbal position, inside the lexical field, and the result is illicit.

Avram (2000)⁴³, which adopts a copy theory of movement, holds that the possessive constructions don't involve movement at all, and the clitics stay in the lexical field, adjoined

⁴² Note that (i) below is allowed, since it involves a strong pronoun that is reordered at PF:
(i) *Profesorul citește lucrarea MEA.* (Ro.)
professor,the reads paper,the my
The professor reads my paper.

to the noun. But then what would explain the agrammaticality of the constructions in c)? On the other hand, if we assume that clitics are generated in the functional field on the basis of their inherent properties, their exclusion from the post-verbal (lexical) position follows⁴⁴.

Note that even if we were to assume, with Avram and Coene (2000) that possessive clitics are actually Merged within DP, given that we do allow DP to have an extended projection including functional heads, the observation here still stands: the clitic – as a functional element – would have to be Merged in the high functional field and the attachment to the noun would be realised only at PF.

An often-cited argument against the base-generation analysis and in favor of a movement analysis comes from the nature of the relation that establishes between the clitic and the argument position. As noted in Sportiche (1999b), under the assumption that the clitic is a head, the possibility of the clitic/XP* dependency as a specifier/head dependency is ruled out by the fact that this kind of dependency is – by its nature – local, and empirical evidence shows that the clitic and the XP* may be separated:

- (62) a. *Dupont a réuni les participants.* (Fr.)
 Dupont resembled the participants.
 b. *Dupont les a réunis XP*.*
 Dupont resembled them.
 (Sportiche, 1999b :692)

⁴³ Note that, while Avram assumes that «clitics are bundles of features which may occupy a position at the operator domain but they are not defined as operators», we assume, with Di Sciullo (1990) and Isac (1999), that clitics are operators.

⁴⁴ We mean here the exclusion from the post-verbal field as far as the canonical order goes. In the cases of imperatives, gerundives, infinitives, where the clitic may appear post-verbally, clitics are still generated in the functional field (preverbally) and the PF en-clitic order is due to the movement of the verb past the clitic. More on these constructions in Chapter 3.

Given constructions such as (62), the only choice left for the clitic/XP* dependency is a movement relation. In our proposal, however, the clitic and the XP* are indeed in a local relation, given that they are both generated in the functional FP projection, in the head and Specifier of this projection, respectively, with the word order derived at PF⁴⁵ (hence the apparent ‘distance’ between the two). No movement is thus needed.

Moreover, note that the movement analysis would be problematic not only with respect to what exactly is its driving force, as noted above, but also with respect to the fact that it has to consist of a combination of head and phrase movement: the clitic would start out as an XP in the object position and end up as an X⁰ in an adjoined position to a functional head. We avoid this by linking the clitic to the empty head of the verbal argument, through the verb.

One theoretical question that may arise is the following: are the features of a functional head always expressed as clitics? We conjecture that the answer is yes, since all functional heads such as infinitival and subjunctive particles, adverbial clitics, modals, auxiliaries, are all clitic (i.e. dependent) forms. However, these clitics are not referential. Also, they do not need to have a correspondent strong form, although they sometimes do have one. Note that all functional elements are essentially phonological clitics, in the sense that they need a host. The rare cases in which these elements do appear alone are exceptionally marked with emphatic accent:

- (63) a. I may go to see her.
 b. MAY? No, you WILL go to see her!

⁴⁵ By the PF active Flip operation, as detailed in section 2.6.1.

Full pronouns are most of the time part of PP constructions⁴⁶, in the languages examined here. The preposition, as a functional element, is expected to be generated in the functional field. Strong pronouns are also functional elements linked to the discourse and as such they are expected to be Merged in the functional field. As we detail in a later section, given specific structure constraints, a reordering operation (i.e. the interface operation FLIP, Di Sciullo, 1999) will apply and the strong pronominal argument will surface post-verbally.

Also, by having the strong pronouns and the doubled constituents generated in the same projection as the clitic, i.e. high in the functional field, in the FP specifier position, we can avoid the restrictions imposed on the double if it were generated in the specifier of the object DP (as in Uriagereka, 1999), given that the (Spec, DP) is usually reserved for Genitives. We equally avoid the restrictions imposed on the double if it were generated in the complement position of the DP (as in Papangeli, 2000), given that a DP does not select for a PP complement and, at least in Romance languages, doubles are consistently prepositional.

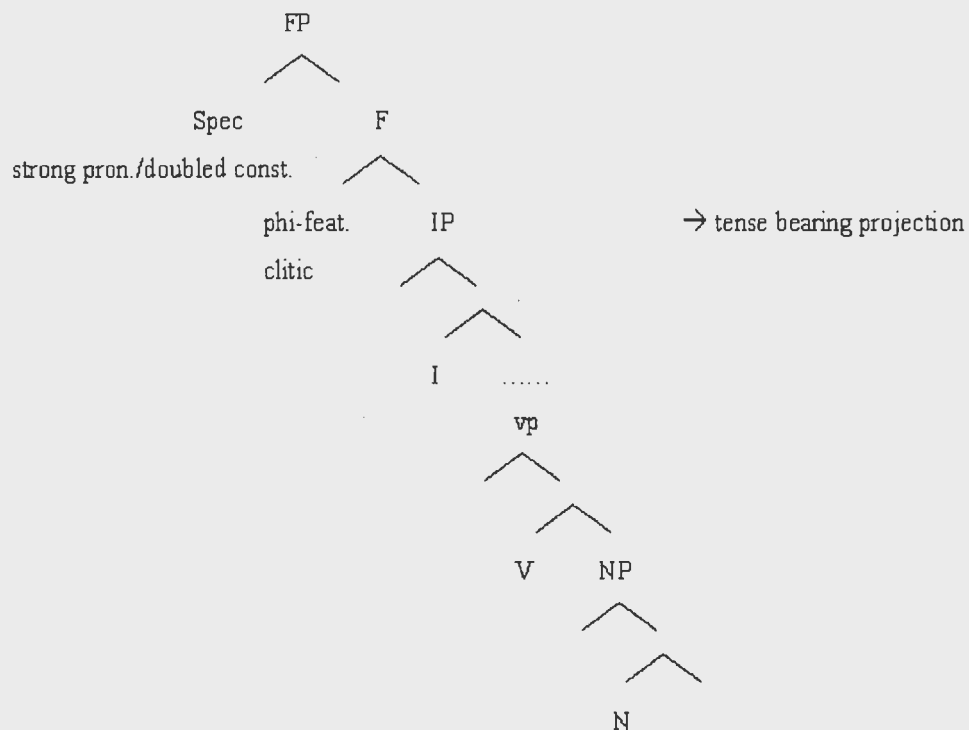
We have shown above why Merging clitics in the functional field without syntactic movement is theoretically preferable. We will turn next to the mechanisms involved in our proposal and detail the analysis of clitic and pronominal argument constructions.

According to our proposal, clitics and strong pronouns are both generated in the functional field in a projection repeated in (64) below:

⁴⁶ There is at least one exception to the PP generalisation: Italian *loro*
i) Daro loro questo libro ... (It.)
 I will give to them this book.

This type of constructions will have to be accounted for, taking into consideration that *loro* can have a heavy structure independently of the preposition.

(64)



In the following sections, we'll detail the linearization mechanism called FLIP and then we'll turn to the empirical coverage of our proposal.

2.6.1 Linearization: FLIP and the notion of «Heaviness» in pronominal constructions

The observation that long, complex phrases tend to occur near the end of their clauses goes back to Behaghel (1909).⁴⁷ The definitions of grammatical weight vary as related to pure string length or more elaborated structural complexity. The validation of this notion of reordering does not come as a surprise, as there are principles of economy active throughout

⁴⁷ As reported in Arnold et al. (2000).

grammar⁴⁸ that show a universal tendency to place lighter elements before heavier ones: prosody prefers light elements before heavy ones, as in (65a); discourse prefers «Nucleus» before «Satellite», as in (65b), and in syntax, Heavy NP-Shift, as in (65c), can be seen as a piece of evidence in favour of the same principle⁴⁹:

(65) (a) VCC vs. CCV syllables

(b) Il est évident [que la Terre est ronde]. vs. [Que la Terre est ronde] est évident.

(c) I sent [the manuscript of the book I just finished writing] to my sister. vs. I sent to my sister [the manuscript of the book I just finished writing].

Moreover, Newmeyer (2005) cites Hawkins (1994, 2004⁵⁰) as to fact that postposing heavy subjects and long relative clauses facilitates constituent recognition. He makes the point that there are a number of cases where the head-dependent relationship is obscured in the service of parsing, essentially that grammars are organised such as to reduce constituent recognition time. The empirical and experimental evidence to support this idea is important (see Di Sciullo and Fong, 2001, 2005, Hawkins, 1994, 2004), among others.

The definition of weight may vary: Wasow (2002) classifies them in ‘categorical’, see (66) and ‘graduated measures’, see (67):

(66) Proposed categorical criteria of weight

- a. An NP is heavy if it ‘dominates S’ [Ross (167), rule3.26]
- b. ‘the condition of complex NP shift is that the NP dominate an S or a PP’ [Emonds (1976:112)]

⁴⁸ Wasow (2002), following Quirk et al. (1972), calls this ‘The principle of End Weight’, which states that «Phrases are presented in order of increasing weight» (2002:3), where he takes «weight» to be a syntactically definable property.

⁴⁹ These instantiations vary with respect to the degree of optionality of application.

⁵⁰ He has a ‘performance theory of order’.

- c. ‘Counting a nominal group as heavy means either that two or more nominal groups ...are coordinated..., or that the head noun of a nominal group is **post**modified by a phrase or a clause’ [Erdmann (1988:328), emphasis in original]
- d. ‘the dislocated NP [in HNPS] is licensed when it contains at least two phonological phrases’ [Zec and Inkelas (1990:377)]
- e. ‘it is possible to formalize the intuition of ‘heaviness’ in terms of an aspect of the meaning of the constituents involved, namely their givenness in the discourse’ [Niv (1992:3)]

(Wasow, 2002: 16)

(67) Proposed Graduated Measures of Weight

- a. Number of words dominated [Hawkins, 1990]
- b. Number of nodes dominated [Hawkins, 1994]
- c. Number of phrasal nodes (i.e. maximal projections) dominated [Rickford et al. (1995:11)]

(Wasow, 2002: 17)

The notion of weight used here – as the one used in Asymmetry Theory, Di Sciullo (2005a:172) – is a structural one, i.e. a heavy structure is a complementation structure.

Based on the analysis of the evaluative and descriptive adjective constructions, Di Sciullo (1999) proposes an operation defined as FLIP (whose dual instantiations, Morphological-Flip and Syntactic-Flip are applied in different aspects of the derivations across grammar) is active at PF and derives the mirror image of a minimal tree, given certain structural conditions. (Syntactic) S-FLIP applies to syntactically heavy constituents occupying the specifier position of certain functional projections. Generic FLIP is defined as in (68) and S-FLIP as in (69).

(68) Flip (T)

Given a minimal tree T, Flip (T) is the tree obtained by creating a mirror image of T.

(Di Sciullo, 2005a: 134)

(69) S-Flip (T)

Given a minimal tree T such that the Spec of T has PF features, S-Flip (T) is the tree obtained by creating the mirror image of the Spec of T.

(Di Sciullo, 2005a:135)

For instance, (70b) is excluded because S-FLIP has not applied.

- (70) a. *un homme [fier de ses enfants]*
 b. **un [fier de ses enfants] homme*

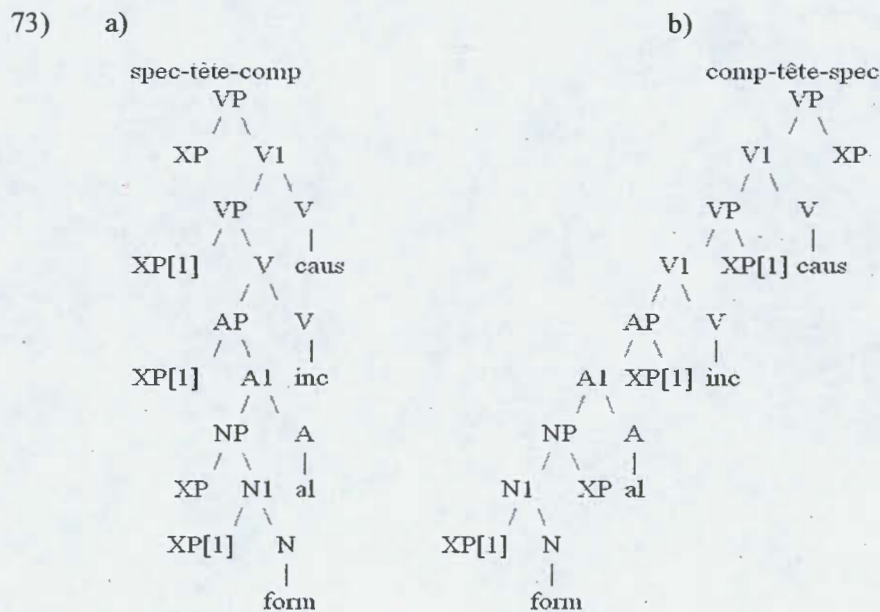
(Di Sciullo, 2005a: 143)

Di Sciullo (2005a) uses other examples to illustrate that ‘heavy’ constituents are normally placed after the verb, while such placement for light constituents is irrelevant⁵¹. We illustrate here with equivalent Romanian examples:

- (71) a. *O știre foarte importantă pentru studenți.* (Ro.)
 une nouvelle très importante pour les étudiants
 A very important piece of news for the students.
 b. **O foarte importantă pentru studenți știre.* (Ro.)
 une très importante pour les étudiants nouvelle
- (72) a. *O lucrare interesantă și completă.* (Ro.)
 An interesting and complete work.
 b. **O interesantă și completă lucrare.* (Ro.)

⁵¹ Different attempts to account for the “No-Complement” restriction on pre-nominal adjectives in terms of filters include Williams (1982), Abney (1987), Di Sciullo and Williams (1987). However, semantic differences are also observed in the interpretation of the pre-nominal and post-nominal adjectives (Wilmet, 1986, Bouchard, 2002, among others). However, no differences in the interpretation of pre-verbal and post-verbal strong pronouns have been noted, other than the effect of emphasis.

Di Sciullo and Fong (2001) show that the effect of (morphological) M-FLIP is reducing derivational complexity, and we expect S-Flip to have the same effect. By measuring the tractability of derived morphological structures, Di Sciullo and Fong (2001) show that derivations such as *form-al-ize*, for instance, are much less complex to process by an LR machine when the structure includes the specifier on the right, rather than on the left, see (73a) and (73b). The parsing of the trees where the specifier is on the right requires significantly less LR actions than the parsing of the trees where the specifier is on the left, namely 21 vs. 96 LR actions respectively. This type of evidence provides support to the existence of an operation that minimises computational complexity.



Evidence for the existence of a PF operation ensuring linearization is also provided in Williams (2003) and also in Wurmbrand (2003), who discusses the effects of a PF-active operation 'Flip' deriving the auxiliary-verb order in Germanic languages.

The theoretical question arises as to why FLIP is preferable to Head Movement (Baker, 1988, Travis, 1984). As pointed out in Di Sciullo (2005a:130), the main motivation suggesting that Head Movement should not be part of the syntax is the fact that it increases

computational load (in Ds), thus running counter the Minimalist Program. Moreover, specifically for Asymmetry Theory, as noted in Di Sciullo (2005a), Head Movement is to be excluded from the morphological, syntactic and phonological derivations because it creates points of symmetry, which have to be eliminated in AT. When points of symmetry are created, supplemental rescuing operations are needed in order to derive asymmetry (required, in AT, by Spell-Out). As a theoretical vehicle, it is also flawed since it violates the Extension Condition and the Inclusiveness Condition (Chomsky, 1995). Also, contrary to Head Movement, Flip applies at PF only. The advantage of having an operation apply to PF rather than in the core of the grammar is reducing the computational load at the syntactic level. FLIP differs from a syntactically-active operation in that it is not driven by feature-checking, it does not obey the Extension Condition⁵² (Chomsky, 1995) and it does not leave a trace or a copy in the derivation. Moreover, as noted by Di Sciullo (p.c.), in a model where the syntactic and morphological derivations feed the interfaces, we expect an operation applying at PF only to have no semantic effects (as opposed to a syntactically active operation such as passive movement, which does have semantic effects⁵³). Empirical evidence shows that the application of FLIP to strong pronouns or doubled constituents does not trigger any change in meaning. FLIP is thus an operation that does not take place in Narrow Syntax, but it takes place at PF. Also, assuming Kayne (1994) and AT, Di Sciullo (2005a), linearization is structure dependent; FLIP contributing to linearization, it is sensitive to asymmetric c-command at PF.

Specifically with respect to the pronominal constructions under examination here, we propose that full pronouns and doubled constituents, given that they are always prepositional in Romance languages, i.e. “heavy” constituents, will be reordered at PF by S-FLIP.

⁵² The requirement that syntactic operations extend the tree at the root.

⁵³ Compare (i) and (ii):

- (i) Many people read few books.
- (ii) Few books were read by many people.

But what counts as “heavy” with respect to the syntactic or morphological structure of pronouns? This issue can be addressed in terms of number of features, morphological structure, syntactic structure, or semantic differences. We will adopt the syntactic notion of heaviness as a necessary and sufficient condition for the application of FLIP at PF, i.e. heavy constituents are structures containing a complement (i.e. PPs and DPs). When found in the Spec position of a functional projection found at the border of the modification/operator layer of the structure, these constituents will be submitted to the reordering operation FLIP.

In the constructions involving pronominals, empirical evidence equally shows that “heavy” elements are consistently post-verbal, in their hierarchical order (i.e. non dislocated), as shown below. We propose that in pronominal constructions, all heavy pronouns are submitted to Flip (hence expected to be spelled-out post-verbally) as a result of their syntactic heaviness. Below are some relevant examples:

- | | | |
|------|--|-------|
| (74) | <p>a. <i>Je lui parle.</i></p> <p>I to him talk</p> <p>b. <i>Je parle à Jean.</i></p> <p>I talk to Jean.</p> <p>c. <i>?Je parle à lui.</i></p> <p>I talk to him.</p> | (Fr.) |
| (75) | <p><i>Îi dau cartea copilului.</i>⁵⁴</p> <p>I give him the book to the child.</p> | (Ro.) |
| (76) | <p><i>Îi dau cartea lui Ion.</i></p> <p>I give him the book to John.</p> | (Ro.) |

⁵⁴ Note that in Romanian, Dative is morphologically marked: we will analyse this as a structure of complementation, where the dative marker is in fact the head of the projection found in the complement of the noun. As such, the structure becomes «heavy».

- (77) *Îi dau cartea lui.* (Ro.)
I give him the book to him.

Evidence from Old French also shows that when the stress were to fall at the beginning of the sentence on a weak pronoun, a change would take place ensuring that the clitic were post-posed to the verb (and hence transformed into a strong pronoun)⁵⁵:

“Il peut arriver que, par suite de l’ellipse ou de l’inversion du sujet, la forme faible du pronom, qui vient normalement après un pronom personnel sujet, un démonstratif, [...], doit se trouver en tête de la phrase, ou à une reprise importante de la phrase. Or, la langue a longtemps répugné à accepter cette conséquence. Pour éviter de faire tomber sur le pronom un accent trop marqué, on préférait de le transposer après le verbe.”

(Foulet, 1965:115)

The application of Flip is relative to the projection to which it applies. Specifically for our FP projection, the application of Flip is obligatory, possibly due to the fact that specifiers in this projection – in the languages under examination here – are consistently PPs, i.e. involving a double level of complementation. The prediction would be that when Flip applies to simple complementation structures it is optional, but when it applies to heavily complex constituents, such as PPs, its application is obligatory. In other words, the level of complexity of the specifier determines the level of optionality of the application of FLIP. When optionality is allowed, the application of Flip is combined with stress and emphasis driven linear ordering.

As for the topicalization structures, such as the one involving subject pronouns in Romanian, see (78), and also the left-dislocated (or right-dislocated) constituents, see (79),

⁵⁵ A great deal of variation exists though in terms of person features (the 3rd person always behaves in an «irregular» way).

they do not act as counterexamples to the generalization above, since dislocation is a strongly discourse-related phenomenon that places the affected constituents in a Topicalised position where they are no longer under the effect of Flip⁵⁶.

(78) *Ei nu vor găsi niciodată strada pe o astfel de vreme.* (Ro.)

them not find never street, the on a such of weather

They will never find their way on such weather.

(79) a. *À Marie, Jean a raconté l'histoire.* (Fr.)

To Marie, Jean has told a story.

b. *À elle, Jean a raconté l'histoire.*

To her, Jean has told a story.

On a final note to this section, we briefly return to the example (48c), repeated here in (80c) and the question as to why it is unacceptable.

(80) a. *Jean parle depuis longtemps à Marie.* (Fr.)

John talks since long to Mary.

b. *Jean lui parle depuis longtemps.*

John to her talks since long.

c. **Jean parle depuis longtemps à elle.*

According to our analysis, both “à Marie” and “à elle” are reordered at PF by Flip, as well as the adverbial constituent “*depuis longtemps*”. Why is it then that “à elle” is not possible? The answer appears to be of phonetic nature. A phonological process of reduction is active in French between “à” and the following phonologically weak element, as in (81):

⁵⁶ We could see our derivation model as including a module that filters the strongly D-linked constituents before PF, in the spirit of Erteschik-Shir (1997). These constituents (essentially focus and topic constituents) would then be immune from any operation active at PF (such as Flip).

- (81) *Je parle à le garçon.* → *Je parle au garçon.* (Fr.)
 I talk to the boy.

In (80c), on the other hand, the same reduction is not possible, because the strong pronoun has strong phonological features, and as such it cannot reduce. In this case, two possibilities seem to arise: either *the preposition + strong pronoun* gets a contrastive stress, as in (82), or the clitic is chosen over the strong pronoun, as in (83):

- (82) *Je parle à ELLE, (pas à LUI).* (Fr.)
 I talk to HER, not to HIM.

- (83) *je lui parle* (Fr.)
 I talk to her/him.

Note that in cases such as (84) the reduction is possible because, since “de” is able to lose the “e”, the strong pronoun does not reduce:

- (84) *je parle de elle* → *je parle d'elle* (Fr.)
 I talk about her.

In conclusion, we have seen above that FLIP is determined by syntactic heaviness (complementation structures, such as PPs and DPs), as in (75) or (76). We have also noted that other operations (topicalization, dislocation, etc.), may play a role in the final Spell-out, as in (78) and (79), but generally, structural heaviness is the necessary and sufficient condition for the application of FLIP. As such, it remains consistent with the conditions of the application of Flip in other parts of the grammar, as explored in Di Sciullo (2005a), as we introduced no new conditions for the applications of Flip specifically for pronouns.

We detail now the other two operations proper to the AT to which we appealed above, Link and Agree and we'll finish with the empirical coverage and the predictions of our proposal.

2.6.2 Link and Agree

2.6.2.1 Link

What is the nature of the relation that is established between the clitic and the specifier of the F projection, and the nature of the relation that establishes between the clitic and the verb in order to capture the argumental properties of the clitic / doubled constituent / strong pronoun?

As we have seen in the previous section, the clitic is a D element, a functional head. However, it is also the Spell-out of the internal argument of the verb and as such, any theory of clitics must account for the way in which the clitic inherits the properties of the internal argument. Given that the verb cannot take D as an argument (Sportiche, 1999, Longobardi, 1994), the only way in which the clitic can eventually come to be interpreted as the argument of the verb is through some linking relation established between the clitic and the internal argument position of the verb. Following Di Sciullo (1990), we propose that the linking relation is actually an operator-variable relation. Moreover, we propose that this relation actually links the internal (phonologically empty) argument of the verb to Discourse.

Notice at this point that the internal argument of the verb is not the so-called doubled object. The latter is merged in the specifier of the high FP projection. The internal argument is an empty *pro*, which is linked to the clitic in F, by the bias of the verb, and is derivatively also linked to the doubled object in Spec of FP, by the Spec-head agreement relation that holds within FP.

2.6.2.2 Agree

The Asymmetric Agreement relation that exists between the Spec and the Head position has particular properties. We propose that the relation established between the clitic and the

doubled element is precisely the Agree-Concord relation proposed in Di Sciullo and Isac (2003) and Di Sciullo (2005a), i.e. a feature matching relation that involves no feature checking. The Agree relation is defined below. Other approaches on agreement, based on coindexation, include Jackendoff (1972), Fauconnier (1974), Chierchia (1987), Bouchard (1984, 1987)⁵⁷.

(85) Agree (φ_1, φ_2)

Given two sets of features φ_1 and φ_2 , Agree holds between φ_1 and φ_2 iff φ_1 properly includes φ_2 , and the node dominating φ_1 sister-contains the node dominating φ_2 .

(Di Sciullo, 2005a:30)

Di Sciullo and Isac (2003) show that even if predicted to be impossible under Chomsky's Agree relation, multiple feature-checking is at play in constructions such as the negative concord (see 86) and definiteness spread (see 87).

- (86) *Nimeni n-a făcut pe nimeni fericit cu nimic.* (Ro.)
 nobody not-has made PE nobody happy with nothing
 Nobody has ever made anyone happy with anything.

- (87) *[delet [beit [morat [ha-kita]]]]* (Hazout 1991)
 door house teacher the-class

(Di Sciullo and Isac, 2003:5)

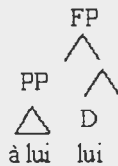
Most important for our purpose is the distinction proposed by Di Sciullo and Isac (2003) with respect to the difference between Agree-Check and Agree-Concord relations. While Agree-Check, a movement relation, can only access the edge of a phase, Agree-Concord, a non-movement relation, can access the non edge as well, which means that it can access the complement position: specifically in our case, the (Comp, vP) position becomes available,

⁵⁷ Coindexation is no longer part of Minimalism or AT, so it is not a notion that we appeal to in this work.

such that a chain between the clitic, the verb and the verbal argument can be established. Consequently, the clitic will capture the argumental properties of the verb.

Since Agree is defined as being a subset relation, the set of features of the c-commanding constituent should constitute a superset of the set of features of the c-commanded constituent. In the structure we are proposing, that means that the features of the doubled element should include the features of the clitic. This prediction is borne out, as we can see in (88)-(90), all examples of the general structure in (91): the clitic DP constitutes a subset of the prepositional strong pronoun constituent, and the doubled constituent is c-commanding the clitics.

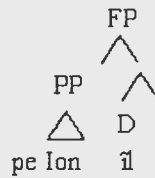
- (88) *je lui parle*
je parle à lui
 I talk to him.



- (89) *il vous parle*
il parle à vous
 He talks to you.

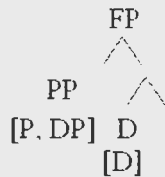


- (90) *îl văd pe Ion*
 him see PE Ion
 [I] see him Ion.



An Agree relation holds between the clitic and the double, where the head of the chain must include the end of the chain: given our proposed structure, the doubled element is the head of the chain, structurally superior, and the PP includes the D (i.e. the clitic), as expected.

(91)



If indeed there is such relation at play, then we should expect that doubling always takes place with an element of the same Case, and phi-features, in order to avoid a feature mismatch. Indeed, empirical evidence shows that there can be no doubling between elements of different phi-features⁵⁸, i.e. doubling is a relation between subsets of features, not different sets.

(92) *Lo/*la vedo a Juan.* (Sp.)

him/her see A Juan
I see him/*her Juan.

(93) *\u0163l/*o v\u0103d pe Ion.* (Ro.)

him/her see PE Ion

⁵⁸ This is also confirmed in Albanian by Kallulli (1995).

I see him/*her Ion.

(94) *Îi/*le văd pe profesorii care nu te-au admis la examen.* (Ro.)

them(masc.)/them (fem.) PE professors which not you have admitted to exam

I see them the professors that have not admitted you to the exam.

According to the present proposal, in constructions where the internal verbal argument is spelled-out by the clitic, the clitic and the empty pro are Linked through the bias of the verb in IP, after V-to-I movement. As we have seen above, the clitic identifies the argument features of the verb, along with the phi-features. The clitic and the verb share Case features, since we assume, with Chomsky (1986) and Di Sciullo (1990), that the clitic absorbs the Case features of the verb, as noted in section 2.6. The verb, on the other hand, asymmetrically selects the head of its complement, i.e. the empty pro, and enters into the Agree-concord relation with the head of pro, since V has D features. Thus, the clitic and the head of pro are also Linked.

In clitic doubling constructions, the Spec-head Agree-Concord relation established within the FP projection ensures that the doubled constituent inherits the phi-features of the internal argument. In other words, the argumental properties are assigned to the empty argument position pro, but inherited by the clitic (the clitic and the pro are linked through the mediation of the verb), and also by the strong pronoun / or the double (through Spec-head agreement within FP).

In constructions where the only argument being expressed is a strong pronoun, the Spec-head agreement relation established within the FP projection and its link with the argument position ensures that the strong pronouns inherits the argument properties of the internal argument of the verb. Thus, our hypothesis correctly accounts for the constructions where these argumental properties are assigned to the clitic alone, where these argumental properties are assigned to the clitic - doubled element chain and the cases where the argumental

properties are assigned to the strong pronoun alone, as shown respectively with Romanian and Italian examples in (95a), (95b) and (95c) below.

(95)

a. *il văd*

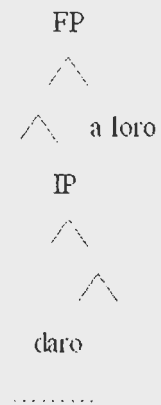
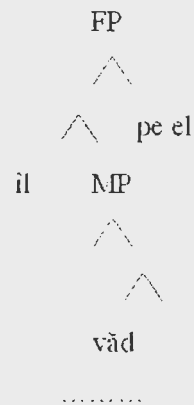
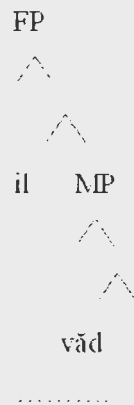
«(I) see him,cl»

b. *il văd pe el*

«(I) see him,cl PE him»

c. *darò a loro*

«(I) will give to them»



A fourth case allowed by this model, one where neither a clitic nor a strong pronoun are expressed and where only *pro* is present, is the case where *pro* gets an arbitrary interpretation, depending on the properties of the verb: if the verb allows for a generic operator, the *pro* can be interpreted as generic, as in (96). Finally, if the verb does not allow a generic operator but can legitimate a null object, it is the existential closure of the verb that allows the interpretation of *pro* (not inherently referential, but interpreted as referential), as in (97). The apparent difficulty in interpretation for the fourth case is thus accounted for.

(96) a. *Cette affiche avertit _ contre les avalanches.* (Fr.)

This poster warns _ against avalanches.

(97) b. *Je lis _.*

I read _.

Being the expression of an [identifiable] participant to the event, a pronominal clitic is an operator over the variable expressed in the argument position of the verb. The adverbial clitics also identify some characteristics of the event, but they have scope over a location variable (in the case of *y* «there», for instance), or a manner variable (in the case of *mai* «again», *și* «even», for instance).

2.6.3 Empirical coverage and predictions

This analysis predicts that a set of features expressed in the functional field will be either a clitic or a maximal projection, i.e. we expect that it is possible for any functional head to be expressed as a clitic.

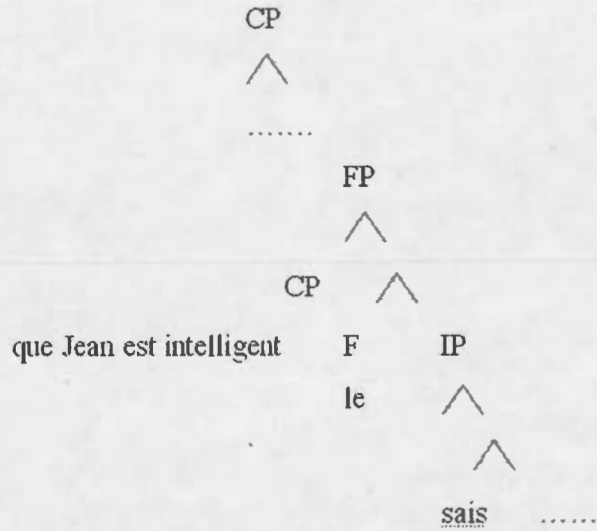
This holds for the Mood projection, whose head will be occupied, in Romanian, by a clitic *a* (infinitive marker), *să* (subjunctive marker). It equally holds for the Adverbial projections à la Cinque (1999): if the adverb is in the Specifier of a functional projection, we expect the adverbial clitic to be the expression of the functional head of that projection, or – potentially – to any functional category, as we illustrate below. Note that the trees are illustrated pre-Flip:

(98) a. *Je sais* [_{FP-spec} *que Jean est intelligent*]. (Fr.)

I know that Jean is intelligent.

b. *Je* [_{FP-head} *le*] *sais*.

I know it.



(99) a. I know [_{CP-spec}whose book is on the table].

b. I know [_{CP-head} it].

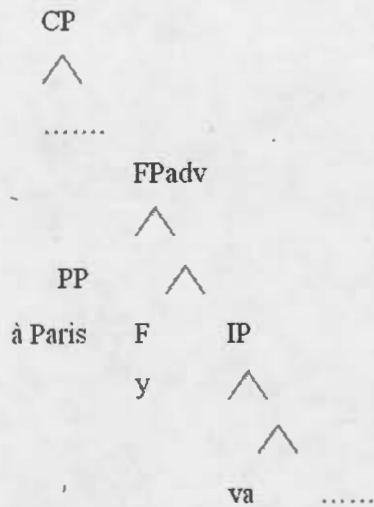
(100) a. *Jean va* [_{FPadv-spec}à Paris].

(Fr.)

Jean leaves for Paris.

b. *Jean* [_{FPadv-head}y] *va*.

Jean leaves for over there.



(101) a. *Je répondrai* [_{FP-spec} *à tes questions*]. (Fr.)

I will answer to your questions.

b. *J'* [_{FP-head} *y*] *répondrai*.

I will answer to this.

(this example from Kayne 1975)

(102) *Marie est intelligente et Jean l'est aussi.*⁵⁹ (Fr.)

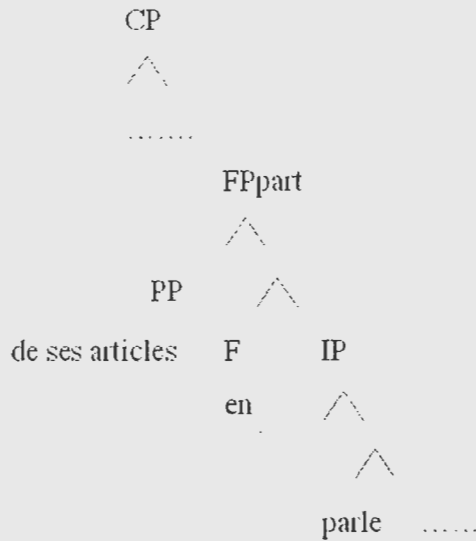
Marie is intelligent and Jean is too.

(103) a. *Marie parle* [_{FP-Spec} *de ses articles*]. (Fr.)

Marie speaks about her articles.

b. *Marie* [_{FP-head} *en*] *parle*.

Marie speaks about it.



⁵⁹ We don't expect the predicative *le* to be found in the same position as the pronominal *le*, as the predicative *le* does not have D features. As noted in Uriagereka (1995), this kind of clitics involve variables ranging over predicates, which is a type of logic discussed in Chierchia (1984).

Our proposal can account for facts such as in (104)-(106): the clitic is seen as the spell-out of the internal argument of the verb and the doubled element is a syntactic adjunct found in the specifier of the same projection, as seen in structure (64). Essentially, the clitic and the double are the manifestation of the same argument features of the verb, and this is captured by the Agree-Concord relation with the pro, on one side, and the Spec-head agreement relation established between the clitic and the double, on the other. In clitic doubling constructions, the doubled element is often prepositional, at least in Romance⁶⁰: Romanian *PE* and Spanish *A* are notorious prepositional elements preceding most of the doubling constituents. Given their heaviness of structure, doubles will undergo Flip at PF, as illustrated below, and this will explain the apparent distance at Spell-out between the clitic and the double.

(104) *Maria o vede pe Ioana.* (Ro.)

Maria her sees PE Ioana.

Maria sees Ioana.

(105) *Maria o vede.* (Ro.)

Maria her sees.

Maria sees her.

(106) *Maria o vede pe ea.* (Ro.)

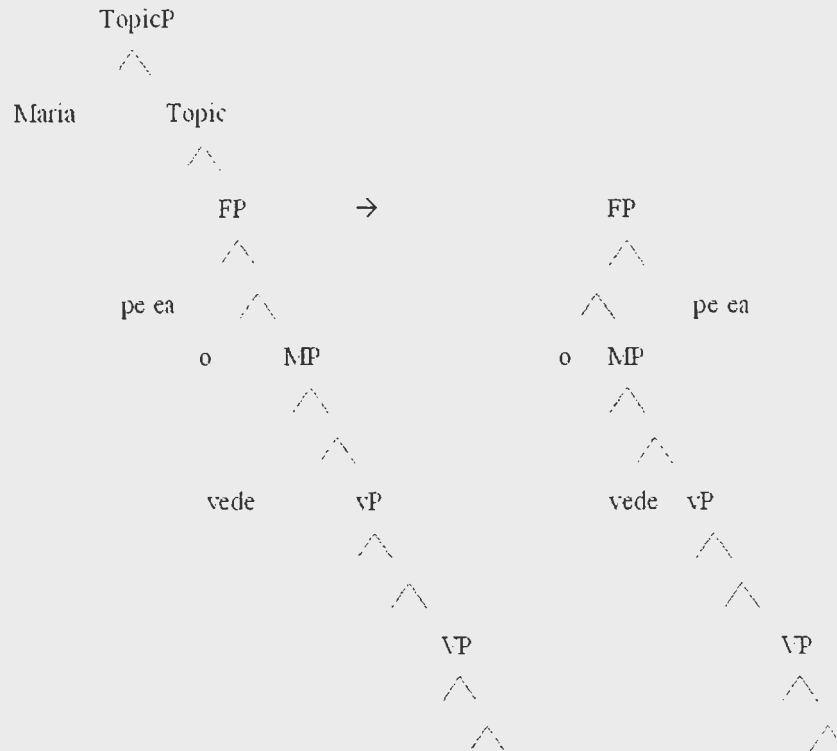
Maria her sees PE her

Maria sees her.

⁶⁰ Notice though that there are languages such as Greek and Albanian, for example, where no preposition is involved in doubling structures. However, in those languages, there seem to be Focus features at play, which may turn out to be the determining factor for the doubled element being merged in a structurally higher position than the clitic, and also for its structure being more complex than the clitic. This is detailed in Chapter 3.

pre-FLIP

post-FLIP:



Given that in AT, multiple specifiers are not allowed, constructions such as (107)-(108) should be excluded, a prediction that is borne out⁶¹. Note that constructions such as (109) below are possible, but they are considered appositions, hence different structures⁶².

(107) **Maria o vede pe ea pe profesoară.* (Ro.)

Maria her sees PE her PE professor.

*Maria sees her PE professor.

⁶¹Multiple specifiers are also banned by Kayne's (1994) LCA: in a configuration of multiple adjunction there is no way of ordering the elements at Spell-out.

⁶²More on appositions in a later section.

(108) **Lucia îi dă ei lui Ioana o carte.* (Ro.)

Lucia to her gives to Ioana a book

*Lucia gives to her to Ioana a book.

(109) *Maria îl întreabă pe el, pe regele Mihai, ce crede.* (Ro.)

Maria him asks PE him, PE king Mihai, what thinks

Maria asks him, king Mihai, what he thinks.

Also, given that clitics are the functional head realisation of a bundle of features, this predicts that there should be no cases where the same features are expressed by more than one head. This prediction is borne out, as seen in (110)-(111) below:

(110) **Maria lo lo vede.* (It.)

Maria sees him him.

(111) **Profesorul le le dă o tema de casă.* (Ro.)

The professor gives them them a homework.

Furthermore, data such as (112) below can be seen as clitic doubling constructions of the clausal argument, also accounted for in our proposal by the presence of the clitic in the head of the functional projection whose Spec is occupied by the CP complement⁶³.

(112) *Maria [FP-head^{lo}] sa [FP-spec^{che non ho finito l'articolo}].* (It.)

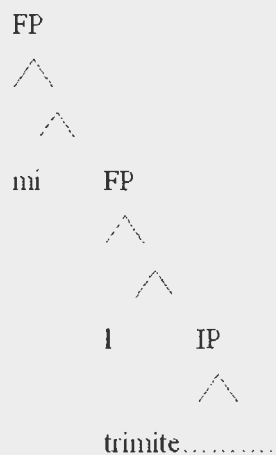
Maria it knows that I did not finish the article.

Another type of data accounted for is constituted by the double argument constructions: given that each set of features is spelled-out as a head or a Spec of a different functional projection, our hypothesis can cover clitic clusters, as seen in (113) below (and further

⁶³ As a heavy constituent, the CP complement will be submitted to Flip at PF.

detailed in Chapter 3) and also constructions such as (114), where one argument is spelled-out as a clitic, while the other is spelled-out as a strong pronominal:

- (113) *El mi-l trimite.* (Ro.)
 he me,Dat it,Acc send
 He sends it to me.



- (114) *Glielo daro il libro a Maria.* (It.)
 I will give the book to Mary.

pre-FLIP:



post-FLIP:



F is a functional head situated in the left periphery of the clause, potentially hosting features such as D, phi and [identifiability]. As such, FP will be projected when the internal argument of the verb is [identifiable]: as we have seen above, this includes – in Romanian –

personal pronouns and proper names, while in Spanish and Italian it extends to definite direct objects.

As Uriagereka's (1995) analysis, our analysis correctly excludes the existence of unspecific clitics. The question arises as to which are the other DPs that will be generated in the F projection? We would expect definite and [identifiable] objects to equally appear there, as they alternate with the clitic expressions, as we saw in section 2.3. Indefinites, for example, are found in a different projection.

As for the other types clitics (adverbial⁶⁴, etc.) since they are also functional, they are also merged in this domain. Data such as (115)-(117) shows that in a sequence of clitics including pronominal and adverbial, the adverbial clitic follows the pronominal clitic, which indicates, first, that the two cannot occupy the same functional head position, as they are not in complementary distribution, and second, that the pronominal clitic projection should be superior to the adverbial projection. Hence, F should host only pronominal clitics, while the other clitics will appear in the projections proper to their own features (adverbial, negation, etc.).

(115) a. *Jean va lire le livre à Paris.* (Fr.)

Jean will read the book in Paris.

b. *Jean l'y lira.* (Fr.)

Jean will read the book over there.

(116) a. *Il l'en informera.* (Fr.)

He will inform him/her about it.

b. *Il l'y conduira.*

He will accompany him/her over there.

c. *Il nous y conduira.*

⁶⁴ Romanian has five adverbial mono or bi-syllabic elements that are often assumed to be clitics (Dobrovie-Sorin, 1994): *mai* 'still', *și* 'even, also', *prea* 'too, quite', *tot* 'still', *cam* 'rather'.

He will accompany us over there.

d. *Il nous en donnera.*

He will give us some.

e. *Nous les y avons rencontrés.*

We have met them over there.

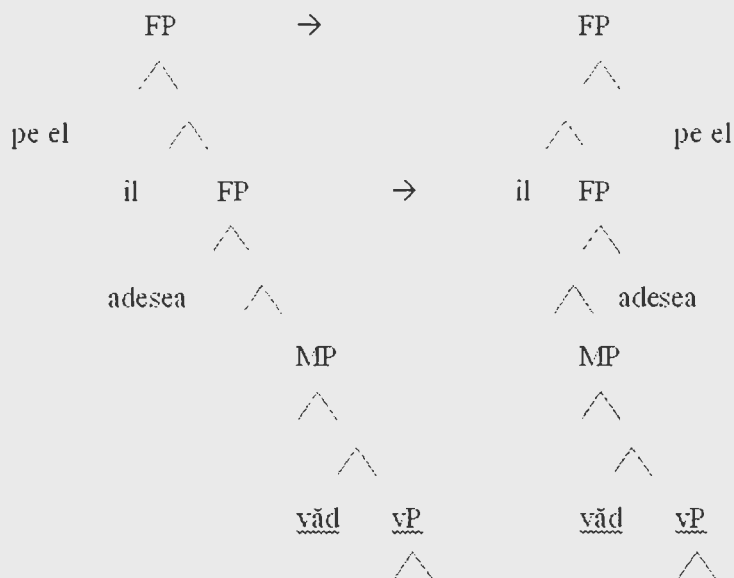
- (117) *îl mai văd* (Ro.)
 him again see
 [I] see him again.

The distributional facts observed in (115-117) above show that the projection hosting the argumental clitic must not always be strictly adjacent to the projection hosting the verb, at least not in Romanian.⁶⁵ The presence of another FP projection hosting the adverbial clitics is not surprising in the extended verbal projection, since this is the layer of structure where modification elements are expected to be merged (locatives, partitives, event modifiers). According to AT, the order of the projections is given by the selectional properties of the heads, realised under asymmetric agreement. Thus a head with a given set of features will select a head whose set of features constitutes a proper subset of its own, such that asymmetric agreement can be satisfied, in relation to relevant features: specifically here, the F head will select the head hosting the set of relevant features, namely in this case the tense features⁶⁶, thus constituting a proper subset of its own set of features and satisfying asymmetric agreement. Thus, the projection hosting the pronominal clitics will be higher than the adverb-hosting projection, such that even after the application of FLIP, the linear order still holds:

⁶⁵ We discussed the semantic justification of cross-linguistic clitic positioning in section 2.4.1.

⁶⁶ We may link this formalism to the semantic/pragmatic interpretation given above, where in terms of information structure, the need of clitic to be adjacent to the tense is given by its property of being a participant to the event.

- (118) *Îl văd adesea⁶⁷ pe el.* (Ro.)
 him see often PE him
 I often see him PE him.



Notice that strong pronouns can also be preposed, in constructions on a par with the topicalised NPs, as exemplified below. Thus, they will move from their canonical position to a Topicalised position structurally superior:

- (119) *Mie, te rog să îmi răspunzi scurt.* (Brătescu-Voinești – *Întuneric și lumină*. 113)
 to me, please subj. to me answer short.
 To me, please answer concisely.

⁶⁷ Note that the application of Flip is obligatory with the adverb *adesea* 'often', probably due to its tri-syllabic status, which renders it heavy. Compare with (i), where the adverb *încă* 'still' is lighter (i.e. disyllabic) and it can be optionally submitted to Flip:

- (i) a. *Încă ne mai cunoaște.* (Ro.)
 still us still knows
 b. *Ne mai cunoaște încă.*
 us still knows still
 (He/she) still knows us (still).

(120) *Liceul, l-a trimis să-l facă la Braşov.* (Gorun. *Lume Necăjită*. 51)

highschool, him sent to do it in Braşov.

Highschool, (they) sent him to do it in Braşov.

(Olsen, 1928:89)

As discussed above, we see pronominal clitics as event/discourse actant identifiers. As such, they are also supposed to be found close to the projection hosting the event, or the projection proper to the discourse. This is in the same spirit as Schick (1999), where

“the binding of the referential argument of the verb takes place in ModP, because the event-related functional projection ModP contains linguistic information about tense, aspect and verbal mood and provides semantic constraints on the reference situation variable (...) indicating the instantiation between situations and propositions (cf. Bierwisch 1988, 1990, Wunderlich 1997, Steube 19997, Maienborn 1997, Frei and Pittner 1998).”

(Schick, 1999: 278)

One important prediction of our proposed structure in (2) is the fact that doubling should never take place with strong pronouns: in other words, clitic doubling should always literally take place involving a clitic. This is due to the fact that the strong pronoun is always found in complementary distribution with the doubled constituent, so no doubling (of the same referent) should be able to take place when strong pronouns are involved. This prediction is confirmed by the empirical data of the languages under examination here. We exemplify with Romanian:

(121) **El/ Îl văd pe Mihai.* (Ro.)

him strong/clitic sees PE Mihai

I see him PE Mihai.

Note that the differing properties of the so-called “subject doubling constructions” as opposed to the clitic doubling constructions have been noted in the literature: Heap and

Roberge (2001), Roberge (1990), for instance, note that the first is missing the preposition that is typical of the clitic doubling constructions, and that seems to hold for all languages:

- (122) **À Jean il mange une pomme.* (Fr.)
 to Jean he eats an apple
 Jean he eats an apple.

(Heap and Roberge, 1991:74)

On the other hand, there are constructions where a strong subject pronoun is involved in doubling constructions:

- (123) *El Gianni el magna.* (Trentino)
 John he eats.

If our hypothesis is on the right track, there is a difference between the (123) above and a clitic doubling construction: while one is a true doubling construction, the other is an apposition.

The analysis of appositions is subject to debate. Usually, they are considered as constituents that are outside the main syntactic structure. Constructions that could be analysed as subject doubling in Romanian, as in (124) below, are in our view appositives, rather than doubling constructions, given the lack of preposition (which, at least in Romanian, is a required for doubling) and the intonation pattern typical of appositives.

- (124) *Pleacă ea, mama, și tu rămâi singur.* (Ro.)
 leaves she, mother, and you remain alone
 She, mother, (will) leave and you (will) be left alone.

Note that even the constructions of QF discussed for example, in Auger (1996), are not contradicting our hypothesis, since Quebec French, on a par with Standard French, has

subject clitics, hence the doubling is done with a clitic and not with a strong pronoun, as predicted.

In Dutch, for instance, two constructions are allowed: one in which a subject clitic is being doubled, and one in which a strong pronoun or a NP is being doubled. Given that these two constructions have different properties, as explored in van Craenenbroeck & van Koppen (2002), we would tend to analyse the first as an instance of real clitic doubling, while the other as an instance of apposition.

- (125) *Ze gaat zie met mij naar Gent.* (Dutch)
 she goes she with me to Ghent.
 'She goes to Ghent with me.'

(De Vogelaer, 2002)

Finally, our analysis accounts for pre-verbal and post-verbal argument clitics, along with the strong object pronouns as part of the same paradigm, while differences in the Spell-out realizations of the clitic and the strong pronouns are due to constraints of syntactic and morphologic nature, combined with PF active constraints. With respect to the unique paradigm of argument clitics (be they pre-verbal or post-verbal) we thus concur with the findings of other authors, such as Cardinaletti and Repetti (2006).

2.7. Conclusion

In conclusion, what we intended to show in this chapter is that many of the properties assumed to distinguish strong and deficient pronouns may be the effect of other phenomena active in a language. We proposed an account where the two have a unified analysis as D-elements and where their distribution is the result of interface operations, given their specific structures at the syntactic (and morphological) levels. Their position in the syntactic

representation (namely, in the same FP projection in the high functional field) captures the fact that these are elements that share semantic and pragmatic properties, as they both are related anaphorically to an antecedent in the discourse. Also, we avoided the postulation on two different structures for the pre-verbal and post-verbal argument-related pronominals, by proposing that the difference in their linear order is the result of an interface (PF) operation.

In the next chapter, we'll also take a look at the constructions involving more than one pronominal clitics, the so-called "clitic clusters", in order to see how the syntactic structure proposed above can handle such constructions. We'll also see how this proposal handles clitic doubling constructions and the cases where clitics are post-verbal.

ADDENDUM

Note to the internal structure of clitics and strong pronouns

Different studies have been proposed in order to account for the difference in internal structure between strong and weak pronominals. Cardinaletti and Starke (1999), Dechaine and Wiltscko (2000) among others, have proposed systems where the visible lack of structure in the clitic form is the reflection of a deficient internal structure. Other proposals, such as Isac (1999) have argued, on the contrary, that the lack of structure is a characteristic of the strong forms, and clitics are the ones having an extended, richer internal structure, because they include operator features. In this section, under the assumptions of the Asymmetry Theory, we propose that these elements have a multi-layered structure, following the proposal of Di Sciullo (2005a) for *wh*-words and *th*-words.

We adopt Di Sciullo's (2005a:209) analysis of the internal clitic structure, which has the bi-partite structure of operators such as *wh*-words and *th*-words, argued for on the basis of cross-linguistic data. Given the strict ordering of the morphemes in these structures and the regularities observed in a wide array of languages, a structure where the operator-variable relation precedes the restrictor relation is proposed. Thus, in (126) below, the first part of the construct (which is common to Italian, French, Spanish and to a certain extent, Romanian) is the operator-variable relation, while the second part of the construct is the restrictor relation, essentially the manifestation of the phi-features (in the D operators) and the human features (in the *th*- or *wh*- operators).

(126)

		Romanian	French	Italian	Spanish
Acc. clitics	(masc.sg.)	(i)l	le	lo	lo
	(fem.sg.)	o	la	la	la
	(masc.pl.)	(i)i	les	li	los
	(fem.pl.)	le	les	le	las
definite art.	(masc.sg.)	-l	le	il/lo	el/lo
	(fem.sg.)	-a	la	la	la
	(masc.pl.)	-i	les	i	los
	(fem.pl.)	-le	les	le	las
strong pron.	(masc.sg.)	el, lui	il, lui	lui	él
	(fem.sg.)	ea, ei	elle, lui	lei	ella
	(masc.pl.)	ei, lor	eux, leur	loro	ellos
	(fem.pl.)	ele, lor	eux, leur	loro	ellas

Thus, there are three sets of features that are interpretable when it comes to pronominal structures:

(127) *clitics* *strong pronouns*

-- person

case case

gender gender

referential referential

-- stress

The fact that deficient pronouns have an impoverished structure is shown by their morpho-phonological form (*l-*, *i-*, etc.), while strong pronouns are more articulated, often including determiner forms (*lui*, *ei*, *noi*, etc.). Since features have a morphological reflex in the theory we are adopting, we should expect then that clitics lack encoding some of the features that will be present in the strong forms. In other words, the features of the clitic should constitute a subset of the features of the strong pronoun. The exact feature argued to be deficient in clitics as opposed to the strong pronouns may differ according to the approach. Firstly, strong pronouns have a richer phonological make up, hence PF independence, hence possibility of bearing stress. Moreover, Uriagereka's (1995) work, among others, suggests that the Romance clitics lack encoding of a [person]-feature. In Cardinaletti and Starke (1999), the difference between strong pronouns and deficient ones is the presence/absence of the Case projection in their structure⁶⁸. Déchaine and Wiltschko's (2002) three-way split in the class of pronouns⁶⁹, is justified on the basis of the sensitivity of these elements to the predicate/argument distinction, their internal structure and their binding theoretic properties.

For Déchaine and Wiltschko (2002), the distributional differences between different pronominal forms is no longer the result of their having different internal structure, (given that the syntax cannot see the internal structure of the DP), but the result of their being different syntactic objects: "attribution of internal structural differences to pronouns does not solve the problem of external differences" (page 409) .

In our proposal, clitics and strong pronouns are similar syntactic objects in the sense that within the same projection they are both inheriting the argument properties of the verb through the linking relation with *pro*. They are realised in the same syntactic projection F and

⁶⁸ Furthermore, the deficient categories can be either «mildly deficient» as in the case of weak pronouns, or «severely deficient» as in the case of clitics.

⁶⁹ I.e. *pro*-DPs, *pro*- ϕ s and *pro*-NPs: *pro*-DPs will always contain ϕ P and NP as subconstituents.

they have the same referent⁷⁰. Their realisation within the FP projection differs however, and this difference has consequences at Spell-out: the clitic is a D, occupying the head of the projection, while the strong pronoun is a DP, occupying the specifier of the projection. The specifier, being a complementation structure, determines the application of Flip, which is sensitive to syntactic heaviness.

Notice that in the end, our proposal does not come as far from the end goal of other proposals such as Cardinaletti and Starke (1995): while their three classes of pronouns are seen as «purely abstract», they recognise that «both deficient and strong elements can refer to human entities and to prominent discourse referents». On the other hand, we take the opposite approach here: given that they do have the same referent, clitics and strong pronouns are the same element under a pragmatic view, but they have different realisations at Spell-out.

⁷⁰ Further pushing the similarity between clitics and strong pronouns, we can see them both as heads, since even though they are in different positions (strong pronoun is in the Spec and the clitic is in the head of the F projection), the strong pronoun is at its turn the head of its projection.

CHAPTER III

ADDITIONAL CLITIC RELATED PHENOMENA

3.1 Introduction

In this chapter, we consider some related aspects in clitic analysis, such as: i) the analysis of clitic clusters – given that these constructions present very rigid constraints of form, ii) the analysis of clitic doubling – given that our proposal must account for such particular data found in Romanian and dialects of Spanish and Italian, and also iii) the analysis of the post-posed clitics – given that our hypothesis predicts that only strong forms (i.e. heavy) may occupy post-verbal positions. We'll also consider the predictions of our hypothesis in a language such as English, where clitics and strong pronouns are not distinguished in the same way as in Romance languages, but where the distinction between them is phonetic: this will constitute support in favour of our analysis that recognises the import of the PF component on the form and the phonetic interpretation of pronominals. We will approach these issues in turn.

3.2 The analysis of post-verbal clitics

Our hypothesis predicts that all clitics should always appear pre-verbally, since they are already merged in the functional (preverbal) domain by virtue of them being functional elements. However, in Romance languages there are cases where clitics appear post-verbally:

namely, in infinitives, gerunds and imperatives. In this section we will take a look at these constructions and offer an account.

(1) *Mi fa sempre piacere vederla.* (It.)

I am always happy to see her.

(2) *Văzându-l de departe, l- am salutat.* (Ro.)

see,gerund him from afar him have greeted

Seeing him from afar, I have greeted him.

(3) *Aide-la!* (Fr.)

help her

Within a movement analysis of clitics, Avram (2000) argues that in the [-Tense] constructions, as in (1-3), there are no features that determine movement, since there is no functional projection higher than Tense. Hence, the clitic does not move from its post-verbal argumental position. However, considering Isac's (1998) proposal according to which Romanian verbs generally move to MoodP and certain elements such as the subjunctive particles, the imperatives and the gerunds move even higher, to a MoodOp projection, proposal that builds on Emonds (1978) and Pollock's (1989) V-to-I movement and that echoes other similar accounts of such data in Romance (Kayne, 1999¹, Roberts, 1997), it is possible to maintain our hypothesis according to which clitics are generated in the functional field, above the verbal projection, and still account for gerunds such as (2) or imperatives such as

¹ According to Kayne (1999), the movement of the infinitive over the clitic accounts for the cross-linguistic variation between French and other Romance languages in constructions such as (i) and (ii):

(i) *Pierre veut le lire.* (Fr.)

Pierre wants to read it.

(ii) *Pierre vuole leggerlo.* (It.)

Pierre wants to read it.

The different position of the infinitive in the two languages will account for the contrast above.

(3), by assuming that the verb moves first to MoodP and then to MoodOp, bypassing the clitics, in order to check strong irrealis features²; the order CI+V is obtained.^{3,4}

Still, languages like Italian or Spanish may present a challenge to our proposal, since they are languages that allow the so called ‘clitic climbing’ constructions, illustrated in (4) below:

- (4) a. *Voglio leggerlo.* (It.)
 want read him
 b. *Lo voglio leggere.*
 him want read
 c. **Voglio lo leggere.*
 want him read
 I want to read it.

Different accounts of this type of data include restructuring analyses involving a biclausal sentence that creates a monoclausal structure with a complex predicate (Rizzi, 1982), or a

² As recently discussed in Cowper (2003), the semantic effects of irrealis features (cf. Hoekstra and Hyams 1998, Duffley. 1992, Stowell 1982) is to change the relation between the proposition and the consciousness it is indexed to (where the consciousness is taken to be a set of propositions). Different languages spell out irrealis features: in English, modal verbs carry this feature, whereas in many other languages it is spelled out by morphological tense forms such as the future, the conditional or the gerund.

³ Other accounts include the hypothesis of the verb moving over the clitic in a Move I-to-C operation: Rivero, 1988, Kayne, 1991, Roberts, 1991.

⁴ Examples such as (i) as opposed to the (ii) below are explained by Isac (2002) as constructions where the force of Negation is the one that will check the features of MoodOp such that no movement of the verb is necessary, given that both the imperatives and the negatives must overtly check similar types of features.

- i. *Nu îl privi!* (Ro.)
 not him look not
 Don't look at him!
 ii. *Privește-!* (Ro.)
 look him
 Look at him!

movement of clitics from one clause to the other (Kayne, 1991, Roberts, 1997, Rouveret, 1997). Cardinaletti and Shlonsky (2004) assume a monoclausal structure where the verb can be either lexical or functional⁵ and in consequence there are two clitic positions: a lexical one and a functional one (which can also interact with negation or other functional elements), as is schematised below:

- (5) $[_{FP} \dots [_{FP} \text{clitic} [_{FP} \dots [_{FP} \dots [_{FP} \text{clitic} [_{VP} [\text{VP}]]]]]]]]$
-
- functional domain lexical domain
- (Cardinaletti and Shlonsky, 2004:525)

Thus, in these terms, clitic climbing amounts to the same as saying that the clitic appears in the clausal clitic position, without the need of appealing to head-to-head movement. The main verb selects a CP constituent, and clausal negation also implies the projection of a full CP. Functional verbs (modals) do not have their own clitic position, hence clitics can climb to the clausal clitic position; quasi-functional verbs (motion, causatives, perception) have instead their own clitic position, in addition to the clausal clitic position and the clitic position associated with the predicate, hence there will be an intermediate position available; lexical clitic position is realised in Italian, by infinitival word-final [e].

- (6) a. *dice di volermi parlare* (It.)
 says of want-to me to talk
 He/she says he/she wants to talk to me.
- b. *mi vuole parlare*
 to me wants to talk
 He/she wants to talk to me.
- (7) a. *è voluto andarsene* (It.)
 is wanted to go.himself.from-there

⁵ Functional verbs such as modals are directly merged in the functional field.

He wanted to leave.

b. *se ne è voluto andare*

(Cardinaletti and Shlonsky, 2004:534)

(8) a. *sarei voluto andare a trovarlo* (It.)

would-be wanted to go to visit.him

I would have wanted to go and visit him.

b. *sarei voluto andar**lo** a trovare*

c. ***lo** sarei voluto andare a trovare*

(Cardinaletti and Shlonsky, 2004:540)

We will adopt part of the proposal made by Cardinaletti and Schlonsky (2004), namely the distinction between different classes of verbs and their availability for a clitic position (i.e. modals will not have a clitic position available⁶). However, given that according to our hypothesis, all clitics are generated in the functional field, we will assume that the ‘lexical’ position of clitics is in fact always in the functional field, only structurally lower than what they call ‘clausal’ position.

The strict adjacency between the modal verb and the main verb is ensured by the assumption that modals always take CP complements. Thus, when the clitic is on the embedded verb, the structure includes a modal that takes a CP complement, which contains a regular clitic FP. When the clitic is on the modal, the clitic has moved from the first FP (i.e. its regular projection) to a higher FP associated with the modal, for reasons that may have to do with emphasis and the interaction between the pragmatics of the discourse (the modal may not be able to have an «actant» in the sense we established in Chapter 2, which is to be expected, as noted above). The exploration on the modal’s contribution to the information

⁶ Note that if we take the presence of the argumental clitic as indicative of the presence of the actant of the event, the fact that modals do not allow a clitic position is linked to the fact that modals do not express an event, but express the modality of the event, hence, they are not expected to have an «actant».

structure and the consequences to the clitic constructions is exhaustive and we leave this issue for further exploration.

A further note is due here, regarding proposals according to which the pre-verbal and the post-verbal clitics are actually not the same entity. Based on coordination structures, Benincà and Cinque (1994) argue that the V+cl combination behaves more like a morphological unit than the cl+V.⁷ Also, Otero (1975) follows Bresnan's (1970) proposal concerning the interaction between phonology and syntax, especially in the case of Galeo-Portuguese and Spanish where the clitic is attached at the end of a verb to form a single word with it. Furthermore, Morin (1979) takes the French imperative examples to show that the pre-verbal pronominal differs from the post-verbal pronominal, as evidenced by the change in morphological form:

- (9) a. *Tu me donnes une fleur.* (Fr.)
 You give me a flower.
 b. *Donne-moi la fleur !*
 Give me the flower !
 c. **Tu moi donne une fleur.*
 d. **Donne-me la fleur !*

We may note that a proposal of that kind fails to capture the fact that the clitic in both the proclitic and the enclitic constructions refers to the same entity, in the terms established in Chapter 2, i.e. the clitic identifies the same actant to the event. The change in the morpho-phonetic form observed by Morin, along with the restrictions on their coordination, as given in Benincà and Cinque (1993), could be seen as the result of the application of certain PF phenomena such as stress, rather than the result of their being inherently different entities.

⁷ Note also that the special relation between the (imperative) verb and its post-verbal pronominal clitic may also be due to phonology: Tomic (1999) argues for example that in languages such as Macedonian the imperative verb and the clitic that follows it form a phonological word.

For example, imperatives do have a stress pattern different than affirmatives, and clitics – as unstressed elements in need of a PF host – are highly sensitive to the stress pattern changes.

In the examples in (10-11) below, data in a. is supposed to fare much better than data in b. However, the examples in a. and b. are quite equivalent in that b. is at least as good as a., as confirmed with different Romanian informants. As for the French examples, the data in (12) is also well handled by our hypothesis: the clitic is found in an F projection structurally superior to the verb, i.e. above the verbal coordination in (12a). In interrogatives, the verbal coordination rises higher than the clitic, as attested in (12c). The case where the clitic is found between the two verbs is not expected and is not attested, as seen in (12b).

- (10) a. *Mă și te vede.* (Ro.)

me,cl-acc and you,cl-acc see
He/she sees me and you.

b. ?*Văzându-mă și te, a plecat.*
seeing me,cl-acc and you,cl-acc has left
Having seen you and me, he left.

- (11) a. *Îl și o vede.* (Ro.)

him and her sees
He sees him and her.

b. ?*Vorbește-ne și le!*
speak to us and to them

- (12) a. *Il chantera et dansera avec vous.* (Fr.)

he will sing and dance with you

b. ?*Chantera-t-il et dansera avec vous?*
will sing-he and dance with you
Will he sing and dance with you?

c. *Chantera et dansera-t-il avec vous?*

- (13) a. *Jean le lit et relit sans cesse*⁸. (Fr.)
 Jean it reads and rereads without stop
- b. **Lis et relis-le!*
 Read and reread-it !
- c. **Lis-le et relis !*
 read it and reread !

Given the semantic implications and the limited acceptance level of these constructions, we leave them for further exploration, but we'll maintain the idea behind our hypothesis that clitics in the preverbal and postverbal position are essentially the same entity. As for the French imperative constructions noted in (9b,d), we offer an alternative account in section 3.4 below.

In the next section, we'll take a look at a couple of languages where clitics are not canonically pre-verbal, as in the Romance languages previously examined, but mostly post-verbal: this is not predicted by our hypothesis and we'll examine some of the properties of the languages in question that may be responsible for the unexpected behaviour.

⁸ Note that (13a) without the adjunct *sans cesse* is not good for many native speakers:

(i) **Jean le lit et relit.* (Fr.)

Jean it reads and reads again.

Kayne (1994) argues that this type of examples hold because there is some kind of semantic link between them, but this is not always the case:

(ii) **Jean le fait et defait.* (Fr.)

Jean makes and brakes it.

(iii) **Jean lui parle et écrit.*

Jean speaks and writes to him/her.

(iv) **Jean le voit et reconnaît.*

Jean sees and recognises it.

Note also that certain adjuncts or prefixes bring about a change in the argument structures of the verbs, as shown in Di Siullo (1997). Kayne sees the extremely rare constructions involving two coordinated clitics for one verb on a par with the constructions with a coordination of clitics as in (v) as support for LCA, as heads cannot be coordinated. This holds as an argument in AT as well, since the coordination structures in AT are also expected to be asymmetrical.

(v) *Jean me et te voit.* (Fr.)

Jean sees me and you.

3.3 Languages where clitics are post-verbal

3.3.1 Portuguese

Portuguese is said to be the only Romance language where the distribution between proclitics and en-clitics is not guided by the tense properties of the verb, as it is the case in the other Romance languages (cf. Rouveret, 1999, Crysmann 2000a,b, Duarte and Matos 2000 – cited in Miller and Monachesi, 2003), see (14). A free alternation between enclisis and proclisis is not expected according to our theory, since we expect clitics to be consistently generated on the left of the verb by virtue of their functional nature. However, we will briefly see below that Portuguese has other properties that may influence clitic placement without affecting the stand of our hypothesis.

- (14) a. *Marina lamentava nao o conhecer.*
 Marina regretted not knowing him.
 b. *Marina lamentava conhece-lo.*
 Marina regretted knowing him.

(Miller and Monachesi, 2003:10)

It seems that European Portuguese still follows the Tobler Mussafia Law, as opposed to the other Modern Romance languages. Salvi (1990) formulates this law in a formal framework: enclisis is obligatory when the verb is the first element of the CP. Thus, proclisis and enclisis are the result of two different structures, respectively: one in which the subject preverbal phrase is in the specifier position of the verbal projection, in this case Comp, see (15a) and one where the preverbal phrase is outside the CP:

- (15) a. [_{CP} XP cl-V [_{IP} ...]]
 b. XP [_{CP} V-cl [_{IP} ...]]

Galves (2000) proposes an analysis where the basic syntactic pattern of European Portuguese is proclisis, while enclisis is the basic pattern from a phonetic point of view. She formulates the basic pattern for European Portuguese as follows:

(16) Be enclitic whenever you need (for phonological reasons) AND you can (for syntactic reasons).

(Galves, 2000: 10)

It has been claimed that, contrary to other Romance languages, clitics in European Portuguese are phonologically enclitic. Studies such as Raposo (1999) argue that even in EP clitics are in fact proclitics and the directionality of phonological attachment is left-to-right. Note also that this is a language with tensed infinitives, hence there are properties of Tense and of Comp that are expected to have an impact on the clitic-verb realisation.

As opposed to the other Romance languages, what seems however to restrict clitic placement in modern EP is not the tense of the verb, but rather the presence of quantified subjects and specific subjects. Galves (2000) exemplifies:

(17) a. *Alguém me viu.* (EP)
 b. **Alguém viu-me.*
 Somebody saw me.

(18) a. *O Paulo viu-me.* (EP)
 b. **Paulo me viu.*
 Paulo saw me.

(Galves, 2000:3)

Specific subjects and the presence of a topic as the first element of the sentence force enclisis, while quantified subjects require proclisis. Unifying the cases of enclisis, namely the topicalization and the infinitival clauses, Galves (2000) argues that clitic placement follows the generalization below:

- (19) a. Clitics adjoin to the verb in a head endowed with an Agr-feature;
 b. Enclisis requires that the verb be at Spell-out in a head which does not contain Agr.
 (Galves, 2000:9)

In other words, we can safely assume that the movement of the verb in EP is constrained by different features than the verb movement in other Romance languages and as a consequence, the cases of enclisis also differ.

3.3.2 English

With respect to English, we mentioned in Chapter 2 that it is a language that has no syntactic clitics, only phonological clitics. Within our analysis, clitics are generated in the functional domain, above the verbal projection. Thus, they should surface pre-verbally. This is not the case in English.

- (20) a. I saw *them* yesterday.
 b. I saw'*em* yesterday.

In both (20a) and (20b), the internal argument is the same strong pronoun «them». However, in (20b), the syntactically strong pronoun is reduced to a clitic (i.e. weak) form at PF. English clitics are phonetic clitics, not syntactic (the «simple clitics» of Zwicky, 1977)⁹. In the current proposal, that means that the strong pronoun is produced and realised syntactically as such until PF, where the intonation pattern / PF constraints will determine the reduction of the strong pronoun into a reduced (i.e. clitic like) form. Note that in this case, the verb has to be emphatic (i.e. phonologically stressed).

⁹ As for the reasons to this unavailability of syntactic argument clitics in a language such as English, we hinted in Chapter 2 that it may have something to do with the possibility of expressing anaphorically an identified actant of the event.

A possible relation between enclisis, proclisis and intonation pattern is to be expected. Otero (1975) cites Delattre (1966) concluding that «the substantially rising intonation of Spanish (and French) is in sharp contrast with the predominantly falling intonation of American English» (1966:91,80). Furthermore, he points out that in English, direct object pronouns without contrastive stress cannot be separated from their verb by an indirect object or a postverbal particle.

With respect to our hypothesis, strong pronouns are expected to be postverbal by virtue of their structure and as a result of them being submitted to Flip, and the English data confirms our predictions, see (20) above.

3.4 The analysis of clitic clusters

Maximal clitic clusters may contain pronominal, as well as adverbial, verbal and other clitics, as the following example from Romanian illustrates:

- (21) *să nu o mai fi văzut* (Ro.)
 SUBJ not 3rd-acc again be seen
 that (I) should not have seen her again

In previous work¹⁰, we have investigated the argumental clitics cluster construction across three Romance languages, i.e. Romanian, Italian and French, essentially data such as (22) below:

- (22) *Je te le donne.*
 1st-nom 2nd-dat 3rd-acc give
 I give it to you.

¹⁰ Somesfalean (2005).

In the languages under investigation, there is a difference in the order of the clitic constituents, namely in the constructions involving 3rd person clitics and also in the imperative constructions. We have shown that the generalised order of the two argumental clitics across the languages we considered is Dat>Acc, which corresponds to the order of the arguments XP in the verbal domain of the languages under consideration, rather than relying on a pre-imposed language-specific template. We have dealt with language variation in terms of features (the 3rd person features seem to be a locus of variation among a great number of languages). We have equally eliminated the apparent problem posed by the Standard French imperatives, by showing that they have in fact a different structure and that they do not involve clusters at all. In the next section, we detail these findings and show how our proposal can accommodate these structures.

3.4.1 Distribution

The data presented in (23-25) has often been used to illustrate the fact that there are differences within the Romance languages with respect to the pronominal argumental clitic order within the clitic cluster.

- (23) *I l – am trimis ieri.* (Ro.)
 3rd-dat 3rd-acc have sent yesterday.
 I have sent it to him/her yesterday.
- (24) *Glielo spedito ieri.* (It.)
 3rd-dat 3rd-acc sent yesterday.
 I have sent it to him/her yesterday.
- (25) *Je le lui ai envoyé hier.* (Fr.)
 I 3rd-acc 3rd-dat have sent yesterday.
 I have sent it to him/her yesterday.

The examples in (23-25) show that in Romanian and Italian, for example, the order of the two object clitics is Dat>Acc, see (23) and (24), but in French it is Acc>Dat, see (25).¹¹ However, a closer look at these types of constructions indicates that the clitic order is not always different in the languages in question. In the following paradigms, the order of the clitics in Romanian, Italian and French is Dat>Acc, with the exception of the French combination involving a 3rd person Dative and Accusative, as in (26c) and (26f):

(26) French:

- | | |
|--|---|
| a. <i>Il me le donne.</i>
He 1 st -dat 3 rd -acc gives
He gives it to me. | d. <i>Il nous le donne.</i>
He 1 st -dat 3 rd -acc gives
He gives it to us. |
| b. <i>Il te le donne.</i>
He 2 nd -dat 3 rd -acc gives.
He gives it to you. | e. <i>Il vous le donne.</i>
He 2 nd -dat 3 rd -acc gives
He gives it to you. |
| c. <i>Il le lui donne. / *Il lui le donne.</i>
He 3 rd -acc 3 rd -dat gives / *3 rd -dat 3 rd -acc
He gives it to him/her. | f. <i>Il le leur donne / *Il leur le donne.</i>
He 3 rd -acc 3 rd -dat gives / *3 rd dat 3 rd -acc
He gives it to them. |

(27) Italian:

- | | |
|---|---|
| a. <i>Lui me lo darà.</i>
He 1 st -dat 3 rd -acc give,fut.
He will give it to me. | d. <i>Lui ce lo darà.</i>
He 1 st -dat 3 rd -acc give,fut.
He will give it to us. |
| b. <i>Lui te lo darà.</i>
He 2 nd -dat 3 rd -acc give,fut.
He will give it to you. | e. <i>Lui ve lo darà.</i>
He 2 nd -dat 3 rd -acc give,fut.
He will give it to you. |
| c. <i>Lui glielo darà.</i>
He 3 rd -dat 3 rd -acc give,fut.
He will give it to him/her. | f. <i>Lui glielo darà.</i>
He 3 rd -dat 3 rd -acc give,fut
He will give it to them. |

¹¹ Roberge and Vinet (1989) study also other Romance dialects where the order of the object clitics is Dat>Acc.

(28) Romanian:

- | | |
|---|---|
| a. <i>El mi-l dă.</i>
He 1 st -dat 3 rd -acc give.
He gives it to me. | d. <i>El ni-l dă.</i>
He 1 st -dat 3 rd -acc gives
He gives it to us. |
| b. <i>El ți-l dă.</i>
He 2 nd -dat 3 rd -acc give.
He gives it to you. | e. <i>El vi-l dă.</i>
He 2 nd -dat 3 rd -dat gives
He gives it to you. |
| c. <i>El i-l dă.</i>
He 3 rd -dat 3 rd -acc give.
He gives it to him/her. | f. <i>El li-l dă.</i>
He 3 rd -dat 3 rd -acc gives
He gives it to them. |

However, yet another type of data comes to show that in imperatives, for example, we find again a difference between French, on one hand, and Romanian and Italian, on the other.

(29) French:

- | | |
|--|--|
| a. <i>Donne-le-moi!</i>
Give 3 rd -acc 1 st -dat
Give it to me! | d. <i>Donne-le-nous!</i>
give 3 rd -acc 1 st -dat
Give it to us! |
| b. <i>Donne-le-toi!</i>
give 3 rd -acc 2 nd -dat
Give it to you! | e. <i>Donne-le-vous!</i>
give 3 rd -acc 2 nd -dat
Give it to you! |
| c. <i>Donne-le-lui!</i>
give 3 rd -acc 3 rd -dat
Give it to him/her! | f. <i>Donne-le-leur!</i>
give 3 rd -acc 3 rd -dat
Give it to them! |

(30) Italian:

- | | |
|---|---|
| a. <i>Spediscimelo!</i>
send 3 rd -dat 3 rd -acc
Send it to me! | d. <i>Spediscicelo!</i>
send 1 st -dat 3 rd -acc
Send it to us! |
| b. <i>Spediscitelo!</i>
send 2 nd -dat 3 rd -acc | e. <i>Spediscivelo!</i>
send 2 nd -dat 3 rd -acc |

- | | | |
|----|--|--|
| | Send it to you! | Send it to you! |
| c. | <i>Spedisciglielo!</i> | f. <i>Spedisciglielo!</i> |
| | send 3 rd -dat 3 rd -acc | send 3 rd -dat 3 rd -acc |
| | Send it to him/her! | Send it to them! |

(31) Romanian:

- | | | | |
|----|--|----|--|
| a. | <i>Dă-mi-l!</i> | d. | <i>Dă-ni-l!</i> |
| | give 1 st -dat 3 rd -acc | | give 1 st -dat 3 rd -acc |
| | Give it to me! | | Give it to us! |
| b. | <i>Dă-ți-l!</i> | e. | <i>Dă-vi-l!</i> |
| | give 2 nd -dat 3 rd -acc | | give 2 nd -dat 3 rd -acc |
| | Give it to you! | | Give it to you! |
| c. | <i>Dă-i-l!</i> | f. | <i>Dă-li-l!</i> |
| | give 3 rd -dat 3 rd -acc | | give 3 rd -dat 3 rd -acc |
| | Give it to him/her! | | Give it to them! |

Examination of the data presented in (26-28) above shows that Romanian, Italian and French realise the order Dat>Acc within the clitic cluster, with the exception of the 3rd person singular and plural Dative paradigms. Furthermore, these languages behave differently in the imperative constructions, as we have seen in (29-31), allowing the grouping of the Romanian, Italian, on the one side, as realising the Dat>Acc order, and Standard French on the other hand, realising the Acc>Dat order. In fact, Morin (1979) notes that Romance languages have preserved clitic sequences so that the order of proclisis and enclisis is identical, Standard French being the only noticeable exception. Furthermore, according to him, Romance languages have been generally submitted to a process of transformation of the original Acc>Dat object clitic order, to the Dat>Acc order observed today, starting in the Middle French period. This change affected different French dialects, and independently, Catalan, Provençal, Southern Italian and some Northern Italian dialects, where the change affected both the enclisis and the proclisis. Standard French is exceptional in the sense that it is the only language that has suffered only a partial change, i.e. the change affected only proclisis

and only the sequences containing 1st and 2nd person Datives and reflexive Datives, but did not affect the 3rd person Dative clitics.

(32) Old French → Modern French :

il me le donne → *donne-le-moi*

il le lui donne → *donne-le-lui*

Note that while in some of the dialects that have changed the order of Acc>Dat to Dat>Acc, the 3rd person Dative still constitutes an exception (in Québec French, e.g., (33)), in other dialects of French the 3rd person Dative precedes the Accusative in imperatives, see (34), i.e. the order of enclitics and proclitics is the same. Furthermore, note that there is no change in the form of the 3rd person Dative.

(33) Québec French (QF) :

Donne-moi-le!

Donne-le-lui! / **Donne-lui-le!*

(34)

a. Lorrain

il me le donne ; donne-me-le Dat>Acc

there is no sequence 'le lui' or 'lui le' in this dialect

b. Vendéen:

il me le donne; donne-me-le Dat>Acc

il lui le donne ; donne-lui-le Dat>Acc

c. Walloon

il me le donne ; donne-me-le Dat>Acc

d. Normand

il me le donne; donne-moi-le (*moi* and *me* are not clearly distinct, since they are both pronounced [me]) Dat>Acc

il lui-le-donne; donne-lui-le Dat>Acc

e. Gallo

il me le donne; donne-moi-le Dat>Acc

il lui le donne; donne-lui-le Dat>Acc

(Morin, 1979 : 307)

3.4.2 Opacity

3.4.2.1 Empirical evidence

One of the most important properties of pronominal clitic clusters is the fact that no element whatsoever can intervene between the two argumental clitics. The Romanian data also shows that no element can intervene between the two clitics involved in a cluster, see (35) and (36). More specifically, there may be certain types of adverbs that intervene between the pronominal clitics and the verb¹², as in (37-38), but there may be no argumental elements between the two clitics of the same type, i.e. between the two pronominal argumental clitics:

(35) a. *ți l - am dat pe două zile* (Ro.)

2nd-dat 3rd-acc have given for two days

I have given it to you for two days.

b. **ți am îl dat pe două zile*

(36) a. *mi - l va aduce mâine* (Ro.)

1st-dat 3rd-acc will bring tomorrow

(He/she) will bring it to me tomorrow.

b. **îmi va îl aduce mâine*

¹² Dobrovie-Sorin (1994) considers these adverbs clitic elements, along with the negation particle and the auxiliary verbs.

- (37) a. *nu ți - l mai dau pentru că...* (Ro.)
 not 2nd-dat 3rd-acc' again give because...
 I do not give it to you any more because...
 b. **nu ți mai îl dau pentru că...*
- (38) a. *nu ți l – aș mai fi dat niciodată...* (Ro.)
 not 2nd-dat 3rd-acc would again be given never
 I would have never given it to you any more.
 b. **nu ți aș mai îl fi dat niciodată....*

Negation can never intervene inside the argumental cluster either:

- (39) a. *Nu mi - l mai dă.* (Ro.)
 not 1st-dat 3rd-acc again give
 He/she does not give it to me any more.
 b. **Mi nu îl mai dă.¹³*

The judgements hold for Italian and French as well. Particularly for these languages, which have not only pronominal argumental clitics, but also locatives and partitives, note that nothing may intervene between the two clitic objects:

- (40) a. *Paul me l'y donnera.* (Fr.)
 Paul 1st-dat 3rd-acc there give,fut.
 Paul will give it to me there.
 b. **Paul m'y le donnera.*

¹³ Note that even if a strong pronoun were to be used here, i.e. 'mie' instead of 'mi' , that still doesn't rescue the construction, since a clitic doubling will be required, giving rise to a cluster:

(i) *Mie nu mi - l mai dă.*
 1st-dat not 1st-dat 3rd-acc again give
 He/she does not give it to me any more.

- (41) a. *Paolo non me lo darà.* (It.)
 Paolo not 1st-dat 3rd-acc give,fut.
 Paolo will not give it to me.
 b. **Paolo me non lo darà.*

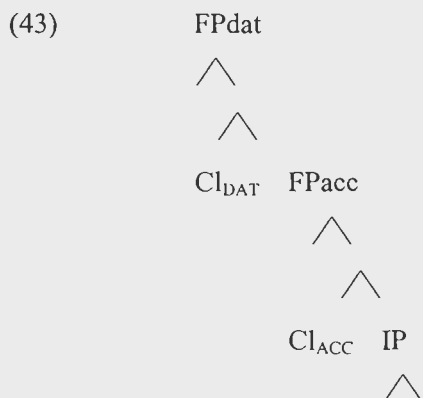
3.4.2.2 Structure: analysis

The facts above would indicate that the two object clitics are part of the same projection. If clitics were adjoined to some functional projection, having them adjoin to the same one implies multiple adjunction; and if Kayne's (1994) LCA holds true, multiple adjunction is excluded (in a structure with multiple specifiers, there would be no way of ordering the elements with respect to one another, since an asymmetric c-command relation does not hold between all the elements to be linearized).

Given that in Romanian, as we have seen in the examples (37-38) above, certain types of clitics may intervene between the pronominal clitics (argumental) and the verb, the clitic projection has to be situated between the projection hosting the verb (i.e. MP for Romanian, as proposed by Cornilescu, 1999 and others) and the negation, which is higher (see 39).

In Somesfalean (2005) several possibilities were explored with respect to the configurational formation hosting the two argumental clitics in the cluster. Within our current proposal however, since clitics are the realization of a functional head, all of the clitics in a cluster (i.e. argumental and not) are the manifestation of a functional head of a different nature: Fsubj > Fneg > Facc > Fadv > Faux. By the same reasoning, within a sequence of pronominal argumental clitics, we are essentially postulating a sequence of two F projections:

- (42) *Maria ni-l dă.* (Ro.)
 Maria 1st-dat. 3rd-acc. gives
 Maria gives it to us.



This structure allows us to account for the cases where the two objects are expressed by clitics, (44a), or the cases where there is a combination of clitic and strong pronoun, (44b), as each set of features can be expressed either by a head or by a maximal projection¹⁴:

- (44) a. Il **me le** donne. (Fr.)
 b. Il **le** donne **à moi**.

¹⁴ However, this prediction interacts with other constraints, such as Bonet's (1991) constraint, here in (i), according to which if there is a dative clitic related to some argument, the clitic related to the direct object has to be 3rd person. It is also constrained by the availability of clitics in a language (there are no strong Acc pronouns in French).

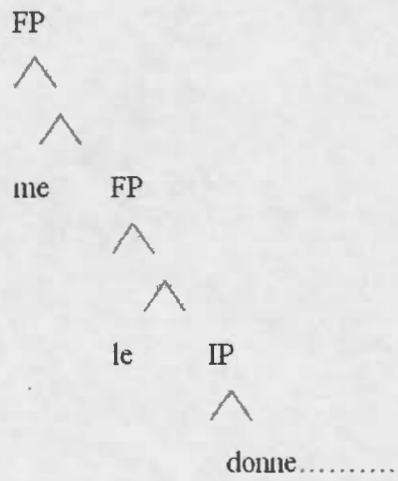
(i) *Me lui /I-II Constraint:

a.STRONG VERSION : the direct object has to be third person.

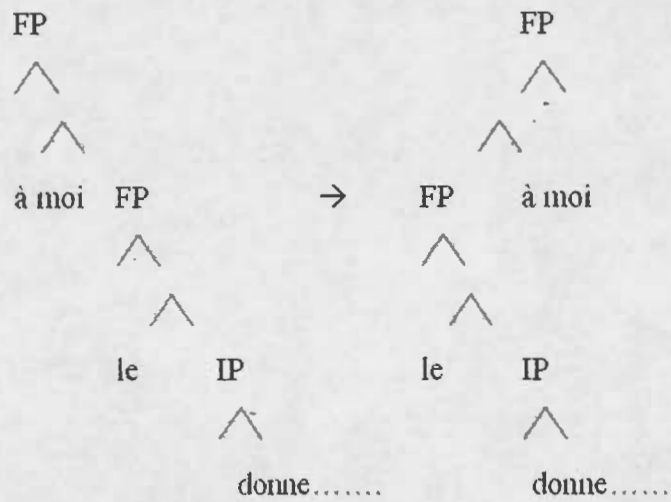
b.WEAK VERSION: if there is a third person it has to be the direct object.

(Bonet, 1991:182)

a.



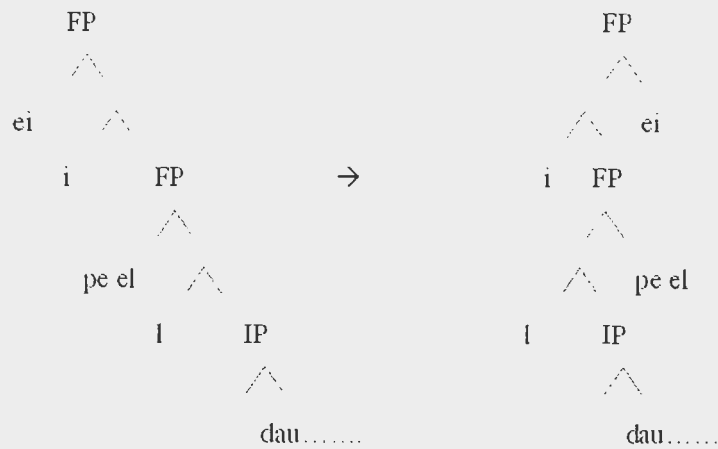
b.



Romanian:

(45) *I-l dau pe el ei.*
 to her him give PE him to her
 I give him to her.

(Ro.)



The part of structure that constitutes the clitic cluster may be thought of as a multi-layered “Shell” structure, as in Di Sciullo (2005a), given that the characteristics of these constructions, i.e. the rigidity of order, the impenetrability, impossibility of extraction, impossibility of bearing stress, etc. allow a certain analogy with morphological words with a complex internal structure, as the ones previously examined by Di Sciullo (2000). The generally observed order (Dat>Acc) is also reminiscent of the External prefix > Internal prefix fixed order also examined in Di Sciullo (1997). In this line of thinking, the Dative would resemble the External prefix, since it is the one argument that is almost always prepositional, and more similar to an adjunct. On the other hand, the accusative would resemble the internal argument / Internal prefix.

Note however that the approach here differs from Somesfalean (2005), where the two clitics were seen as part of the same projection¹⁵ : in the present account, each clitic has its own layer of structure, such that doubling constructions are allowed for each one of the clitics, as we have seen in (43) above. The opacity property of these constructions is captured here by assuming that the two projections are a recursion of the referential FP. The intervention of the adverbial clitic between the clitic cluster and the verb is allowed, but not the intervention of the adverbial clitic within the clitic cluster, as we have seen in (35-39).

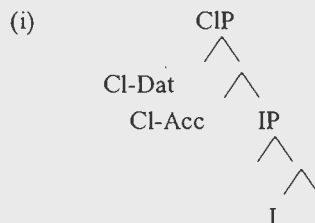
As for the specific order of the clitics within the cluster, we maintain the proposal of Somesfalean (2005), where the order of the clitic is essentially the same as the order of the arguments NP of a given language, as detailed below.

3.4.3 Rigidity of order

3.4.3.1 Previous analyses

We have seen above that in the constructions involving clitic clusters, a rigid order has to be respected. We have also seen that in general, for the languages examined here, the

¹⁵ The structure would have had the form of (i) below:



The solution in (i) was intended to capture the intuition that the two clitics (Accusative and Dative) are different grammatical objects, i.e. there are different properties associated to each one of them: the DO is argumental whilst the IO is less, in the sense that it is more of a locative argument (in an abstract sense of location)¹⁵. It is almost always preceded by a preposition, it is more flexible than the direct object (allows for Dative shift), etc. Also, the IO clitic is involved in doubling in a much more unrestricted manner than the DO clitic. The solution in (i) would also render the impenetrability condition easily accountable for, without further stipulations: there is nothing that may intervene between the specifier and the head of a projection.

order of the two pronominal clitics is Dat>Acc. As to why would that be so, there are different proposals in the literature, proposals that rely mainly on the postulation of some kind of template responsible for the ordering within the cluster. This template may vary in nature from one author to the other: for example, it is mainly based on morphological features in Bonet (1995), but it is based on aspectual features in Manzini and Savoia (1999). In either case, the template essentially imposes an order of the clitics, and differs parametrically from one language to the other.

3.4.3.2 Analysis

The analysis presented here is mainly of a syntactic nature, so we will look at the properties of objects in the languages in question and see how to relate those properties to the clitic positioning in a cluster.

There are different proposals in the literature with respect to the datives being merged in a higher position than the accusatives: Demonte (1995), Pylkkanen (2000), Cuervo (2002). Larson (1988) proposed tests that showed that in terms of argument structure, the recipient role ranges over the theme role. In these terms, the hierarchy of argument structure would be actor/agent>goal/recipient>patient/theme.¹⁶ Cuervo (2001) proposes an analysis of the Spanish ditransitive (Dative) constructions where the surface word order DAT<ACC is determined by the DP goal being merged higher than the DP theme. She bases her analysis on the difference that Pylkkanen (2000) makes between “low applicatives” – that are merged below the lexical verb – and “high applicatives” – that are merged above the verb. According to this view, Datives would be low applicatives, as the low applicative heads have prepositional meaning, relating an individual to the direct object (the interpretation is that of directional possessive relations or benefactives).¹⁷

¹⁶ Parodi, 1998:90.

The tests used in Cuervo (2001) for determining the position of the object within the VP include binding asymmetries and weak cross-over constructions. The judgements she proposes for Spanish hold for Romanian as well. We illustrate here with weak cross-over constructions, parallel to the ones in Cuervo (2001:14).

- (46) a. **Ce_i i-a înapoiat stăpînului său_i t_i Lilus?* (Ro.)
 what 3rd-dat has returned owner-dat 3rd-poss Lilus
 What did Lilus return to its owner?
- b. *Cui_i i-a înapoiat t_i caietul său_i Lilus?*
 who-dat 3rd-dat has returned notebook-acc 3rd-poss Lilus
 Who did Lilus return his notebook?

In (46) above, questioning the low direct object causes ungrammaticality, whilst questioning the high indirect object is allowed, confirming the Dat>Acc order.

In the same line of thought, Bruening (2001) discusses the fact that in English double-object constructions, the direct object cannot have scope over the indirect object. This, according to him, would be due to the Minimal Link Condition¹⁸ (Chomsky, 1995), hence it implies assuming that the dative is structurally higher than the accusative.

¹⁷ Cuervo assumes that when the Acc>Dat object order is realised in Spanish, the further movement of the direct object across the indirect one is motivated by the EPP features on ν (which do not target the closer Dative DP because this already has inherent Case).

¹⁸ The Minimal Link Condition is defined as in (i):
 (i) K attracts α only if there is no β , β closer to K than α , such that K attracts β .
 (Chomsky, 1995:311)

The scope predictions hold for Romanian as well:

- (47) *Maria i-a trimis fiecare carte unui copil.* (Ro.)

Maria 3rd-dat has sent each book a-dat child

Maria has sent each book to a child.

**fiecare > unui*

- (48) *Maria i-a dat o prăjitură fiecărui copil.* (Ro.)

Maria 3rd-dat has given a cake each-dat child

Maria has given a cake to each child.

fiecărui > o

In (47) above, the meaning associated with the quantifier cannot be a distributive one, meaning that the Accusative cannot have scope over the Dative. In (48) on the other hand, the meaning is distributive, since the Dative has scope over the Accusative. This confirms the findings of Cuervo (2001), Bruening (2001) among others, we will thus assume a structure of the Romanian ν P where the Dative is generated higher than the Accusative.

The equivalent Italian examples in (49-50) also confirm this structure, since the indirect object has scope over the direct object:

- (49) *Maria a spedito ogni libro a un bambino.* (It.)

Maria has sent each book to a child.

**ogni > un*

- (50) *Maria a offerto un dolce a ogni bambino.* (It.)

Maria has sent a cake to each child.

ogni > un

As for French, it seems that in this language the same scope constraints apply as in the other languages investigated.¹⁹

- (51) *Marie a envoyé chaque livre à un enfant.* (Fr.)
 Marie has sent each book to a child.
 **chaque>un*

- (52) *Marie a donné un gâteau à chaque enfant.* (Fr.)
 Marie has given a cake to each child.
chaque>un

On the basis of the scope evidence from the languages under consideration, we can assume that the underlying order of the XP arguments within the verbal projection is Dat>Acc. We hold that the order of the pronominal clitics within the clitic cluster corresponds to the order of the XP arguments within the verb, hence the generalised Dat>Acc underlying order. Thus, we avoid the postulation of a language-dependent template in order to account for the order of the argumental clitics within the cluster.

3.4.4 Language variation

As we have seen in the previous section, there is unanimity of order within the cluster in Romanian, Italian and French. The generalisation is that they all realise the order Dat>Acc. However, the combination involving a 3rd person Dative in French no longer respects the Dat>Acc order, as we can see in (53):

¹⁹ Kayne (1975) discusses data involving the quantifier “tous” (all):
 (i) ?*Je les leur ai tous toutes montrés.* (Fr.)
 I 3rd-pl-acc 3rd-pl-dat have all,masc. all,fem. shown,masc.

The interpretation of the construction above is that “*leur*” is associated with “*toutes*” and “*les*” with “*tous*”, hence the dative quantifier has to precede the accusative.

- (53) a. **Je lui le donne.* (Fr.)
 I 3rd-dat 3rd-acc give
 I give it to him.'
- b. *Je le lui donne.*
 I 3rd-acc 3rd-dat give
 I give it to him.

Also, we have seen in (29) above, repeated here in (54), that the imperative forms of French reflect a different order within the cluster: Acc>Dat.

- (54) *Donne-le-moi!* (Fr.)
 give 3rd-acc 1st-dat
 Give it to me!

Note again that in Québec French the inverse order is possible:

- (55) *Donne-moi-le!* (QF)
 give 1st-dat 3rd-acc
 Give it to me!

In the following sections we will take a look at these two issues.

3.4.4.1 The 3rd person

It has been observed that in a number of languages, certain person/number combinations are impossible. For example, the combination of a 1st person singular/plural Accusative and a 3rd person singular/plural Dative renders illicit constructions:

- (56) a. **Mă îi prezintă.* (Ro.)
 1st-acc 3rd-dat introduces
 He/she introduces me to him/her.
- b. **îi mă prezintă*
 3rd-dat 1st-acc introduces
 He/she introduces me to him/her.

The same happens when combining a 1st person singular/plural Accusative and a 2nd person singular/plural Dative:

- (57) **Paul mă le - a prezentat.* (Ro.)
 Paul 1st-acc 3rd-pl-dat has introduced.
 Paul has introduced me to them.
- (58) **mă vă prezint* (Ro.)
 1st-acc 2nd-pl-acc introduce
 I introduce you to me.
- (59) **mi vă prezint* (Ro.)
 1st-dat 2nd-pl-acc introduce
 I introduce myself to you.

This holds in general for French and Italian as well. Examples are given below for Italian:

- (60) a. *Emanuela presenta me a te.* (It.)
 Emanuela introduces me to you.
- b. **Emanuela me ti presenta.*
- c. **Emanuela te mi presenta.*

(Gerlach and Grijzenhout, 2000:11)

- (61) a. *Emanuela presenta me a lui.* (It.)
 Emanuela introduces me to him.
 b. **Emanuela gli mi presenta.*
 (Gerlach and Grijzenhout, 2000:11)

However, these constructions are also subject to much debate as to their acceptability. Wanner (1987), Giusti (p.c.) affirm that there are dialects of Italian where these types of combinations are licit.

- (62) a. I>II; refl>x; Acc>Dat
Non mi vi voglio raccomandare con questi propositi.
 'I don't want to recommend myself to you with these arguments.'
 b. I>II; x>refl; Dat>Acc
Non mi vi volete raccomandare con questi propositi.
 'You don't want to recommend me to you with these arguments.'
 (Wanner, 1987:32)

Roberge and Vinet (1989) give examples of "gévaudanais", where these combinations are also possible:

- (63) *Me le presento.*
 1st-acc 3rd-dat presents
 S/he presents me to him.

- (64) *Soumete li te.*
 submit 3rd-dat 2nd-acc
 Submit you to him.

(Roberge and Vinet, 1989:51)

It is important to note that there is a generalised agreement among the various authors that these controversial examples are rendered acceptable when the Dative clitic is replaced with its strong pronoun correspondent, for example:

- (65) *Non ti puoi raccomandare a noi con questi propositi.* (It.)
 not 2nd-acc can recommend to us with these arguments
 You cannot recommend yourself to us with these arguments.
 (Wanner, 1987:32)

Kayne (1975) also notes that a construction with an Accusative clitic other than the 3rd person is possible, but then the Dative has to be a strong pronoun:

- (66) *Paul me présentera à lui.* (Fr.)
 Paul 1st-acc introduce to 3rd-dat
 Paul will introduce me to him.

Interestingly though, the construction cannot be rescued if the Dative remains a clitic and the Accusative is strong:

- (67) **Paul lui présentera moi.* (Fr.)
 Paul 3rd-dat introduce 1st-acc
 Paul will introduce me to him.

Furthermore, one issue which is not controversial is the fact that under the inverse order (i.e. Dat>Acc) these examples are completely unacceptable.

But leaving aside controversial examples as the ones involving a combination of 1st and 2nd person clitics, we can safely say that descriptively, in a legitimate sequence of argumental clitics, there must be one 3rd person. Different authors have proposed a way of dealing with these constructions and their restrictiveness. Perlmutter (1970) observes that Spanish clitics

are ordered by person, while French clitics are ordered by Case.²⁰ Bonet (1991) proposes the Person-Case constraint, see (68), according to which if there is a dative clitic related to some argument, the clitic related to the direct object has to be 3rd person. She notes that the combination of 1st and 2nd person argument-related clitics is impossible for many speakers of Romance languages.

- (68) *Me lui /I-II Constraint:
 a. STRONG VERSION : the direct object has to be third person.
 b. WEAK VERSION: if there is a third person it has to be the direct object.
 (Bonet, 1991:182)

This constraint, according to her, affects clitic combinations, agreement markers combinations and weak pronoun combinations. Languages have repair strategies in order to escape the constraint, such as the “Spell-out elsewhere” strategy, which essentially allows the pronominal argument to be spelled-out either in the clitics (Infl-adjoined) position, or in the argument (VP-internal) position.²¹

Within a functionalist approach, Haspelmath (2004) argues that the Ditransitive Person-Role Constraint is best explained with reference to systematic and universal properties of language use. Moreover, this is a special case of a larger generalisation, the Ditransitive Topicality-Role Constraint, where the Recipient and Theme are harmonically associated with

²⁰ However, Bonet (1991) rejects the implication of case in the interaction of clitics within the cluster, on the basis of examples such as the following:

- (i) **Cette nouvelle nous lui a fait téléphoner.*
 this news 1st-pl-dat 3rd-dat has made telephone
 This news made us phone him / her. (Kayne, 1975:297)

In this example, the ungrammaticality is not due to Case, since both arguments here are Dative.

²¹ However, even the author acknowledges that examples such as the ones given by Kayne (1975), here in (i), pose problems for this strategy:

- (i) **Paul lui présentera moi.*
 Paul 3rd-dat will introduce 1st-acc
 Paul will introduce me to him.

properties that are correlated with topicworthiness, i.e. the tendency of NP-types to occur as topics.

Farkas et Kazazis (1980) also propose two topicality hierarchies in order to explain these types of restrictions:

(69) Ethical > Goal > Theme; 1st pers. > 2nd pers. > 3rd pers.

These constraints restate the empirical observation that in the majority of the dialects of the Romance languages²² it is impossible to combine two argument-related clitics in 1st and 2nd persons among each other or with a 3rd person Dative clitic. Hence, when two clitics are involved (one Accusative and one Dative), the Accusative is always 3rd person.

Recall that the problematic constructions in the French paradigm presented in (26), repeated here as (70), involve both clitics in the 3rd person:

(70) French:

- | | |
|--|--|
| a. <i>Il me le donne.</i>
He 1 st -dat 3 rd -acc gives
He gives it to me. | d. <i>Il nous le donne.</i>
He 1 st -dat 3 rd -acc gives
He gives it to us. |
| b. <i>Il te le donne.</i>
He 2 nd -dat 3 rd -acc gives.
He gives it to you. | e. <i>Il vous le donne.</i>
He 2 nd -dat 3 rd -acc gives
He gives it to you. |
| c. <i>Il le lui donne. / *Il lui le donne.</i>
He 3 rd -acc 3 rd -dat gives / *3 rd -dat 3 rd -acc
He gives it to him/her. | f. <i>Il le leur donne / *Il leur le donne.</i>
He 3 rd -acc 3 rd -dat gives / *3 rd -dat 3 rd -acc
He gives it to them. |

The behaviour noted for French reflects the fact that the third person has different properties than the 1st and 2nd persons, and this seems to be universally valid. In fact, the 3rd

²² However, an exhaustive examination of all dialects has not been done.

person constructions may be submitted to more variation than their equivalents in the 1st or 2nd person. Uriagereka (1995) holds that the 1st and 2nd person clitics have different properties than the 3rd person clitics. Based on the distinction made by Cardinaletti and Starke (1999) between different classes of pronouns, he considers the 1st and 2nd person clitics as strong and the 3rd person clitics as weak. Also, according to him, strong clitics usually precede weak ones and two strong clitics may not co-occur, while two weak clitics may²³. In terms of Optimality Theory, for example, Gerlach (1998) postulates that the restriction on the combination of 1st and 2nd person clitics is given by the non-existence of a difference in markedness between these elements.

On independent evidence, the existence of a morpho-syntactic split between the 1st and 2nd persons, on one hand, and the 3rd person, on the other hand, has been attested in different languages. For example, Aissen (2000) discusses data from different languages (Dyirbal, Nocte, Lummi) where the 3rd person behaves differently than the 1st and 2nd with respect to the interaction between voice and thematic role. Roberts (2000) mentions this while referring to K'ichee', where agreement is triggered by the 1st or 2nd person argument when one of these competes with a 3rd person argument (Hale and Storto, 1996), and to Basque, where the 1st and 2nd persons show nominative/accusative agreement on the verb, whilst the 3rd person arguments show ergative agreement (Fernandez, 1999). Other works that emphasise the role of person features include Silverstein (1976), Sharma (2001), Grimshaw (1999).

From a semantic point of view, this split is equally justified: the 1st and 2nd are the persons of the speaker and the hearer, the only participants in the speech act to have "true grammatical person features", according to Speas and Tenny (2002), while the 3rd person referent is not a discourse participant. In fact, Speas and Tenny (2002) propose a system where the roles of speaker and hearer (basically manifestations of the 1st and 2nd persons) are configurationally organised. If this holds true and the syntax is sensible to these notions

²³ Note that in Uriagereka's account, the difference in order between the two clitics is a consequence of the different processes they use to move. Hence, he is constrained to postulate two different types of movement for the two clitics involved in the cluster. In our proposal, the order of the two clitics is reflecting the order of the XP arguments in a given language.

previously seen in post-syntactic components, it looks like only the 1st and 2nd person have a representation in syntax, whilst the 3rd person gives rise to variation. Speas (2000) proposes a system in the spirit of Cinque (1999), where syntactic projections bear pragmatically-relevant features.

Given this and the abundance of empirical evidence from different languages, we can generalise the fact that the 3rd person features are a locus of variation within languages. For the case at hand, it may be the case that, given the fact that two 3rd person clitics are involved, and since the 3rd person is the unmarked value for person (as in Benveniste, 1966, Silverstein, 1976, Bonet, 1991), the data we have seen in (53) for French is due to a parametric choice of that language for a prominence of the theme (Accusative) in the discourse. This would be consistent with the theory of Alexiadou and Anagnostopoulou (2002), who propose that in languages like Romanian and Spanish, the relevant split is not as much concerning the person, but the animacy features. Thus, when both clitics are in the 3rd person, the animacy features prevail, determining the precedence of the direct object (as a theme, not animate) over the indirect object (as a beneficiary, animate).

3.4.4.2 Imperatives

The imperatives seem to pose yet another problem to the clitic ordering issues, since it looks like in these constructions the expected order Dat>Acc is inverted. A closer examination of these constructions would allow us to show that we are in the presence of an apparent problem, because in fact we are dealing with two completely different types of structures and we are not in the presence of a cluster at all.

- (71) *Donne-le-moi!* (Fr.)
 give 3rd-acc 1st-dat
 Give it to me!

Note that in the imperatives examples (29) and (71) here, the Dative – Accusative combination is no longer the same as in the affirmatives. The Dative form of the pronoun is not the clitic '*me*' (me,DAT), but the stronger form '*moi*' (me, DAT), fact that is particular for French, but not for Romanian or Italian. Leaving aside the 3rd person constructions, it seems that in the French instances where the Accusative precedes the Dative, the Dative is no longer a clitic, but a different pronominal: as we can see in (72-73) the distribution is not the same:

(72) a. **Je toi le donne.* (Fr.)

I 1st-dat 3rd-acc give.

I give it to you.

b. *Je te le donne.*

(73) a. **Il moi voit.* (Fr.)

He 1st-dat see

He sees me.

b. *Il me voit.*

We have argued in Chapter 1 that the distinction proposed in Cardinaletti and Starke (1999) with respect to the tri-partite distinction between pronominal forms is reduced to a bi-partite distinction. In this case, the fact that the Standard French imperatives combine no longer two clitics but rather a clitic and a strong pronoun, would be an indicator that in this particular case we are then no longer in the presence of a true clitic cluster, but of a simple combination of a clitic-verb construction and an indirect object, in this case a strong pronoun. According to our hypothesis, the strong pronoun indirect object would be submitted to Flip at PF (we have also seen in the examples above that its presence in the preverbal field is not licit²⁴, for both syntactic and pragmatic, i.e. topicality, reasons). The object clitic, on the other hand, is always generated high in the functional field. When the verb raises higher than the clitic for imperative force feature checking, the desired order is derived: VB>ACC>DAT.

²⁴ Except, of course, the dislocation constructions, where the hosting projection is higher than the usual projection hosting clitics.

We conjecture that the reason for the change in the shape of the pronoun is of a phonological nature: while further research is needed in order to support the idea with independent evidence, it may be the case that French 1st and 2nd person pronouns need a phonetic host on the right, while the 3rd person pronoun does not impose such requirement. In this case, given that our proposal allows the expression of the same features within FP to be realised either as a strong pronoun or as a clitic, it is the strong pronoun that is expressed, yielding *moi, toi*, etc.

This analysis avoids the problem of having to postulate a reason for the morpho-phonetic change that would take place between *me* > *moi*, if we were to assume that the two constructions (affirmative and imperative) were derivational variants of the same construction. This often constitutes a critical point in the analysis of clitics, cf. Morin (1979), as we also noted in section 3.2. But as opposed to Morin (1979), which argues for the different nature of the pre-verbal and the post-verbal argument clitics, we assume that they refer to the same referent, and it is not the case that *me* changes into *moi*, but it is more a question of the speaker choosing to express this referent by means of a strong pronoun or a clitic.

A footnote (ft.32) in Cardinaletti and Starke (1999) seems to also recognize the fact that imperative constructions are still opaque in the effects they have on the clitic:

“the relevant difference between “proclisis” and “enclisis” must be that imperatives, for some reason to be determined, render the clitic form impossible, and therefore the choice principle forces the next stronger form, weak pronoun”(p.221).²⁵

However, they take the French ‘*lui*’ to be a weak pronoun, as opposed to ‘à *lui*’, its strong counterpart. This would not be visible in the Accusative paradigm, but in the Dative. The tests they propose for distinguishing the two classes (clitics and weak pronouns cannot

²⁵ This remark is due to Cardinaletti (p.c.).

coordinate, but strong pronouns can) hold for the case at hand. If ‘*lui*’ in (74a) were a strong pronoun, its coordination would be possible and the data in (74b-e) would be acceptable:

- (74) a. *Donne-le-lui!* (Fr.)
 b. **Donne-le-lui et à eux!*
 give 3rd-acc 3rd-dat and to 3rd-dat(strong)
 Give it to them and to them.
 c. **Donne-le-leur et à eux.*
 d. **Donne-le-lui et à Pierre!*
 e. **Donne-le-moi et toi!*

The distinction made between ‘*lui*’ and ‘à *lui*’ seems to be confirmed by the fact that the examples in (75) are rendered grammatical if both pronouns are «strong», i.e. contain a preposition:

- (75) a. *Donne-le à lui et à nous!* (Fr.)
 give 3rd-acc to 3rd-dat and to 1st-dat
 Give it to him and to us.
 b. *Donne-le à lui et à Pierre!*
 c. *Donne-le à moi et à eux.*
 d. *Donne-le à eux et à eux.*

We analyse the data in (74a) on a par with (71), as involving a sequence of a clitic and a strong pronoun. The reason for the impossibility of coordination in (74b-e) is simply due to the restriction on coordinating two constituents of a different nature (a DP and a PP are involved in this case).

The fact that ‘*moi*’ is a strong pronoun is also shown by the fact that it can stand alone as the answer to a question²⁶.

Moreover, as we noted above, the third person is the locus of variation (their argument is based on the element ‘*lui*’, which is also a clitic in French, given that its presence in the preverbal field is licit, cf. *Je lui donne mon livre.*). We will thus maintain the generalization that (exceptionally for the third person) the French form ‘*lui*’/ ‘*leur*’ can be both a clitic and a strong pronoun, and we’ll leave the thorough investigation of this phenomenon for further research.

The issue at hand is the change in form with respect to the 1st and 2nd person: ‘*moi*’ and ‘*toi*’ are not clitic elements and cannot occur in the preverbal field, as we have seen in (72) and (73) above. Since these elements cannot occupy a pre-verbal position and will be submitted to Flip, our intuition is maintained, such that indeed we are no longer dealing with a true clitic cluster, but with a construction formed by the verb and the direct object clitic – occurring preverbally, at PF – and the indirect object – occurring post-verbally, at PF. Basically, the verb will move in front of the two projections given its imperative force (cf. Isac 1998, Laka, 1990, among others), the Dat object will be expressed as a strong pronoun, it will be submitted to Flip, the Acc object will be expressed as a clitic, it will remain in its base preverbal position. The resulting PF order, confirmed by the empirical data, will be:

(76) verb > Acc clitic > Dat strong pronoun

donne le moi!

²⁶ Still, we are faced with a difference between the Accusative form (i) and the Dative form (ii).

i. *Qui parle? Moi.* (Fr.)

Who is speaking? Me.

ii. *À qui parles-tu? *Moi. / À moi.*

To whom are you speaking? *Me. / To me.

We analyse the Dative pronouns in (71) and (74a) as strong pronouns whose full form (*à moi, à lui*) is reduced in imperatives to a prepositionless form, possibly due to the stress change brought about by the imperative construction. Note that imperatives involve the preposition with proper names and full DPs, but in pronominal constructions, even though the strong pronoun is chosen (due to its ability to bear stress), the preposition is lost.

Finally, note that, as mentioned above, in Québec French (and in other French dialects, as noted by Morin, 1979), even though the form of the pronoun changes in the imperatives in the same way as it does in Standard French, the order is preserved²⁷ (i.e. Dat>Acc), see (77). Hence, this language behaves like Romanian and Italian in preserving the order of the clitic sequence whether preceding or following the verb.

(77) *Donne-moi-le!* (Fr.)
 give 1st-dat 3rd-acc
 Give it to me.

(78) **Donne-me-le!*

The way to account for this in Somesfalean (2005) was to assume that in one language (SF) the form of the pronominal argument is a strong pronoun, while in the other (QF) the same form is a clitic: we would thus be in the presence of a true clitic cluster, hence the order Dat>Acc. Such a position would be confirmed with doubling constructions, if they turned out to implicate 'moi' type forms in QF²⁸. This would then allow the assumption that they are indeed clitics in this language, furthermore allowing the distinction between the SF and the QF and our analysis would hold as such. However, this is an issue which we leave open for further research, as there are many particularities of QF (different than SF) that could affect these constructions and an in-depth analysis of the structure of QF would be necessary²⁹.

In conclusion, in this section we have shown that the imperatives involve a different structure than the 'true' clitic clusters for the majority of languages under examination.

²⁷ Note however that there is no unanimity between the informants consulted: both the order Dat>Acc and Acc>Dat are accepted.

²⁸ Recall that in our analysis, only clitics may participate in clitic doubling constructions.

²⁹ This difference between Standard French and Québec French should not come as a surprise, since there are many instances where the two languages differ with respect to syntax and phonology, as truly two distinct languages.

However, the diversity of data found in the different languages and in their dialects make a unified account difficult to obtain. For the time being, the languages that maintain the same order of clitics follow the pattern of Romanian and Italian and are well handled by the present analysis, but the data from SF and QF are subject to further research.

3.4.5 Conclusion

In this section we have approached the issue of clitic clusters in Romance, dealing particularly with the issue of ordering within the cluster and with the impenetrability of such constructions. The generalised order of the two argumental clitics across the languages we considered here is Dat>Acc. We have shown that this corresponds to the order of the arguments XP in the verbal domain of the languages under consideration, rather than relying on a pre-imposed language-specific template. We have dealt with language variation in terms of features (the 3rd person features seem to be a locus of variation among a great number of languages). We have equally attempted to eliminate the apparent problem posed by the Standard French imperatives, by showing that they have in fact a different structure and that they do not involve clusters at all. Finally, the pronominal argument clusters are best analysed as recursive projections of the FP.

3.5 The analysis of preverbal strong subjects

In this section, we take a look at an apparent counter-example to our analysis. Recall that in our analysis, strong pronouns are heavy constituents that occupy the specifier of the FP projection and they are consistently submitted to Flip such that they are postverbal at PF. However, some languages allow strong pronouns to appear preverbally, i.e. they are not submitted to Flip.

At first view, some subject constructions in languages such as Italian or Romanian seem to pose a problem to our analysis: in such languages, the preverbal subject pronouns are

strong. According to our analysis, since they are strong pronouns, they should be submitted to Flip and appear post-verbally. However, empirical evidence shows that they do not:

- (79) *Io ho già' finito il libro di Umberto Eco.* (It.)
Eu am terminat deja cartea lui Umberto Eco. (Ro.)
 I have already finished the book by Umberto Eco.

In many languages, Topic features are responsible for the subject moving in a high position in the left periphery of the phrase. Specifically for Romanian, Alboiu (2000), Avram (2000), Cornilescu (1999), among other, show that the preverbal subject position is a Topicalised position³⁰. We assume, with Cinque (1990), that Topic constituents are base-generated in that position, rather than moved there. As carriers of old information (i.e. information previously introduced in the discourse), pronouns may be Topics. Motapanyane (1994) adopts Rudin's (1992) work on Bulgarian and proposes that the diagnosis test for Romanian topics is the relative position to the adverb 'oare' (if, wonder): the topic always precedes it (as opposed to the focus):

- (80) *Ele, ieri, oare au plecat la timp pentru concert?* (Ro.)
 Them, yesterday, I wonder they left in time for the concert?
 **Ieri, oare ele au plecat la timp pentru concert?*

Thus, strong subject pronouns will be merged in a high Topic projection – structurally superior to the FP projection where object related pronouns usually appear –where they will no longer be submitted to Flip: as defined in Chapter 2, Flip does not apply to the left

³⁰ For the purposes of this work, we do not enter into the detailed Left-periphery syntactic structure, but our assumptions are compatible with an extension of this structure in lines of the work of Kayne (2000), Cinque (1999, 2002), Poletto (2000), Laka (1990) among others.

periphery field, i.e. the constituents that are strongly D-linked are not under the effect of Flip³¹.

3.6 The analysis of clitic doubling constructions

Certain languages (such as Romanian, dialects of Spanish and Italian, Albanian, Berber, etc.) allow the doubling of the argumental object, as exemplified below.

- (81) a. *Îl văd pe copil.* (Ro.)
 him see PE child
 I see him the child.
- b. *Îl văd pe el.* (Ro.)
 him see PE him
 I see him him.
- c. *Îl văd.* (Ro.)
 him see
 I see him.

This type of constructions have been analysed in many different frameworks and are known mainly as agreement theories vs. argument theories. The argument theories, proposed in works such as Kayne 1998b, Baker, 1996, Progovac, 1999, sustain essentially that the

³¹ This of course brings up the question When does Flip apply?. Although we leave this question open for further research, we hint for a solution in the adoption of a model of grammar that also includes a discourse-related module placed before the PF output, as in Erteschik-Shir (1997). Flip, as a mechanism activated by the heaviness of structure and basically a generalised mechanism of avoiding complexity of processing, applies at PF to all heavy (i.e. complementation) structures. The D-related module is placed before the output of PF and hence it filters the material on the way to PF, in other words, the strongly D-linked material that have to be found in the left-periphery of the sentence for information-structure constraints (i.e. topic and focus) are no longer visible to PF, hence no longer visible to Flip. Such constituents will remain pre-verbal at Spell-out.

clitic is the argument of the verb, found in the argument position, and subsequently submitted to a moving operation towards an adjoined position to a functional head. Initially problematic for the argument view, clitic doubling constructions are dealt with by assuming that the double is an adjunct position.

The agreement theories, proposed in different versions in the works of Suner 1988, Franco, 1991, 1993, Davis, 1995, 1998, Sportiche, 1996, Rudin, 1997, sustain that the double is in the argument position of the verb, while the clitic is in the head of an AGR projection.

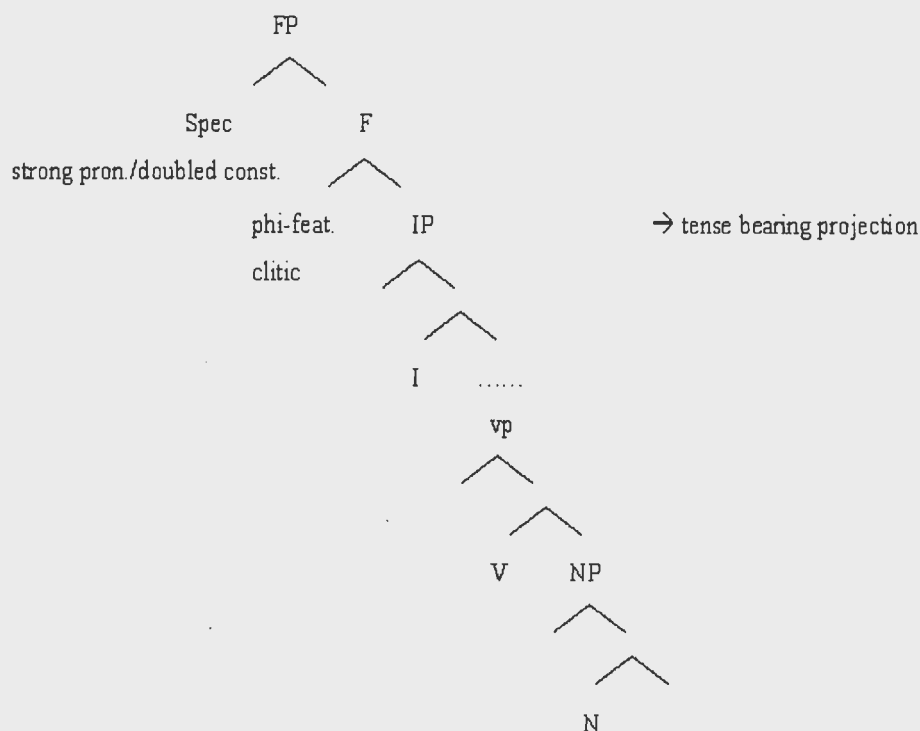
Even though there are different types of pronominal clitic doubling constructions in Romanian³², in this work, we'll only be concerned here with pronominal argumental clitic doubling constructions, such as (82) below.

- (82) *O văd pe Maria.* (Ro.)
 her see PE Maria
 I see her pe Maria.

Syntactically speaking, as we have shown in Chapter 2, clitics and their doublés are found in the same functional projection, in a Spec-head relation that ensures the clitic inherits the properties of the internal argument of the verb. In the doubling constructions, the clitic inherits argumental properties and its phi-features are shared by the adjunct-like double by Spec-head agreement within the FP projection. The coindexation of the clitic and the double are thus achieved without need of further speculations.

³² For instance, these are possible types of constructions in Romanian:
 i. Cl pe + XP* = clitic doubling constructions
 ii. Øpe + XP = presence of the preposition, but no doubling
 iii. Ø Ø + XP = indirect object constructions
 iv. ClØ + Ø = reflexive clitics constructions

(83)



In this structure, that we have seen in Chapter 2 and we repeat here for convenience, the doubled constituent is in an adjunct-like configuration, which is reminiscent of the structures involving prepositions examined in Di Sciullo (1997)³³. As noted in Uriagereka (1995), several authors propose that doubles are adjunctal in some languages (Saito, 1985, Rosen, 1989, Baker, 1991, Speas, 1992, Aoun 1992).

The most striking fact about the clitic doubling constructions is the presence of a preposition, in languages such as Romanian and Spanish. However, note that although the preposition is necessary in all clitic doubling constructions, it can precede the object also in constructions where the clitic is not necessary, as seen in (84) below:

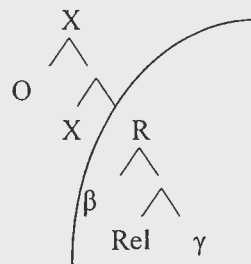
³³ The strong aspectual features characteristic of Romance languages allow the phonetic realisation of a preposition in question words: *pourquoi* (Fr.), *perché* (It.), *pentru ce* (Ro.). Di Sciullo (2003, 2005a) analyses them as constructions where the preposition is an adjunct to the wh-operator structure.

- (84) *Văd PE cineva.* (Ro.)
 see PE someone
 I see PE someone.

According to Brugè and Brugger (1996), the role of the preposition is to mark the fact that the NP following it is D-linked, evidenced by the fact that the doubling constructions always have a specific interpretation. Isac (1999) offers an analysis in the same lines, proposing that the role of the preposition is to indicate the fact that the NP following the preposition is focused (i.e. linked to a focus position in the left periphery).

In our hypothesis, the doubled constituent is already found in a high functional D-linked position, since it occupies the Specifier of the FP projection hosting the clitics. From this projection both the clitic and the double have access to the preceding discourse. The presence of a relational element, i.e. a preposition, is expected in the presence of an operator, i.e. either the clitic itself, as in (86), or a quantificational object, as in (87), if we assume that the structure of an operator is of a Shell-type, where the upper layer includes the operator-variable structure and the lower layer includes the restrictor of the variable, as proposed in Di Sciullo (2000b) and illustrated below:

(85)



(Di Sciullo, 2000b:6)

- (86) *O văd pe Maria.* (Ro.)
 her see PE Maria
 I see her PE Maria.

- (87) a. *Văd pe cineva.* (Ro.)
 see PE someone
 I see PE someone.
- b. **Îl văd pe cineva.*
 him see PE someone
 I see him PE someone.

Within our proposal, the difference between (87a) and (87b) below reduces to a question of Agreement. As specified above, the clitic and the doubled element are found in an agreement relation: thus, we are predicting that clitic doubling will be possible when an Agreement relation can be established between the sets of features of the clitic and the set of features of the double. In terms of semantic features, the properties of the quantifiers may be such that in certain contexts this relation cannot be established: while the clitic is the element identifying the referent, *pe cineva* ‘PE someone’ is an indefinite, not D-linked and not [identifiable]³⁴. Hence, Agree does not hold and the construction is illicit.

On the other hand, in constructions such as (88) below the doubling is possible because the quantifier *careva*³⁵ ‘which-one’ is D-linked and it includes the notion of a set of individuals that are [identifiable].

- (88) *Îl văd pe careva.* (Ro.)
 him see PE which-one
 I see him PE someone.

³⁴ The determining factor in the doubling constructions is assumed to be specificity: Suner (1998) considers that to be the case for Spanish, Dobrovie-Sorin (1992) for Romanian, Sportiche (1992) for French and Kallulli (1995) for Albanian. We assumed the presence of the clitic reduces to the possibility of anaphorically expressing the event actant, so the notion of specificity reduces to the notion of identifiability.

³⁵ Differences between *care* and *cine* are discussed in Dobrovie-Sorin (1995).

Our analysis equally excludes constructions such as (89), where the bare quantifiers *cineva* ‘someone’ and *nimeni* ‘nobody’ are not identifiable, hence clitic doubling is not possible.

- (89) a. **L-am văzut pe cineva.* (Ro.)
 him have seen PE someone
 I have seen him PE someone.
 b. **Nu l-am văzut pe nimeni.*
 not him have seen pe nobody
 I haven’t seen him PE nobody.

In the case of indirect object doubling³⁶, these are also constructions involving a clitic (i.e. operator) that includes in its internal structure a relational element. Given that Dative is morphologically realised in Romanian, we can assume that the relation is expressed by the morphological Dative marker, which is – in its masculine singular form – isomorphic with the preposition “to” in Romanian.

- (89) a. *I - am dat caietul băiatului.* (Ro.)
 lui ai donné livre,le garçon,Dat.
 J'ai donné le livre au garçon.
 b. *I - am dat caietul lui Matei.*
 lui ai donné livre,le à Matei
 J'ai donné le livre à Matei.

Kallulli (1995, 1999) shows that Albanian – and Greek – are languages that violate Kayne’s generalization, in that no preposition is involved in the clitic doubling

³⁶ With respect to dative clitic doubling, Sportiche (1992) treats dative clitics as object agreement markers responsible for Dative case assignment. Kallulli (1995) relates obligatory clitic doubling of dative DPs in Albanian to the need of datives to be morphologically marked.

constructions³⁷. Moreover, the doubling of the direct objects is not restricted to the [+animate], or the [+human] DPs, nor to the [+Def] DPs.

- (90) a. *Do t-a pija me kënaqËsi njË uiski* (Al.)
 fut-it.CL drink with pleasure a wisky
- b. *To pino eukharistos ena ouiskaki* (Gk.)
 it.CL drink with pleasure a whisky
 I would gladly drink a whisky.

(Kallulli, 1999:213)

She argues that direct object clitic doubling in these languages unambiguously marks the affected DPs as [-Focus], which is interpreted as an operator feature. DPs that are marked [+Focus] cannot be clitic doubled. Seen in this way, direct clitic object in Albanian and Greek would be constructions situated somewhere between the clitic doubling constructions of Romanian and Spanish, and the clitic right dislocation constructions in French, Spanish and Italian:

- (91) *La vedo, Maria.* (It.)
 her see Maria
 I see her Maria.

Her analysis does not differ from ours in assuming that clitic doubling is a form of agreement of phi-features between the clitic head and the doubled DP. However, the mechanisms are different: for us, the relation is a subset relation namely the Agree-Concord relation (cf. Di Sciullo, 20005a), while for her, it is a Spec-head licensing (cf. Chomsky, 1995). Furthermore, she notes that the clitic and the doubled NP have to agree not only in phi-features, but in specificity features as well (given that the clitic is diachronically specific). This is captured in our analysis by the fact that both the clitic and the strong pronoun/double

³⁷ Franco (2000) mentions that there are also varieties of Spanish (Southern Cone Spanish) which manifest clitic doubling, without the overt presence of the preposition *a*.

are the manifestation of the same [identifiable] and phi-features in the FP projection and they are found in a spec-head Agreement relation.

The fact that clitic doubling is realised without a preposition is expected to have an effect on our analysis, in that a prediction of our hypothesis is the fact that heavy constituents are found in the specifier of the projection hosting the clitics. Note however that in her analysis, all doubled NPs are interpreted as Topics. If we were to have strong empirical evidence showing that doubled strong pronouns are post-verbal even when not prepositional³⁸, it could be the case that Flip is also triggered by Topicality in languages such as Greek and Albanian where «topichood» is syntactically encoded and induces stress, hence heaviness at PF³⁹.

The hypothesis presented here recognises the role of the interfaces, and coordination structures illustrate the fact that the clitics are an interface phenomenon. Consider the following Romanian data:

- (92) a. *Îi văd [pe Maria și pe fratele ei].* (Ro.)
 them see PE Maria and PE brother,the hers
 I see them PE Maria and PE her brother.
- b. *Îi văd pe [Maria și fratele ei].*
- c. **O și îl văd pe Maria și pe fratele ei.*

In data such as (92a) above, the referent is taken to be a plural object: ‘Mary and her brother’, in which case the coordination phrase occupying the specifier of the FP projection

³⁸ We did not find these types of constructions in the works examined so far.

³⁹ Evidence for the visibility of «extra-syntactic» triggers of Flip are given, for example, in Di Sciullo (2005c), where, in Yekhee (a Niger-Congo family language), the Tone counts as a declanchator for Morphological Flip, under the assumption that it occupies the specifier position of the affixal tree and is PF-legible.

would have a plurality feature. As a consequence, by Spec-head agreement within the FP, the clitic will have a plural form⁴⁰.

In conclusion, note that by having the clitic and the strong pronoun as part of the same projection, we expect clitic doubling to be a discourse-related phenomenon only, i.e. the argument of a verb may be expressed by a clitic or by a strong pronoun / a full DP, and clitic doubling takes place in discourse-oriented languages (such as Romanian) which allow the emphatic expression of an argument by way of doubling (both the clitic and the full pronoun / the full DP). The preposition is the focus indicator, which means that even if there is no clitic, it will be an indicator of the focused nature of the constituent following it.

3.7 Conclusions

We have presented in this chapter different phenomena involving clitics and we have evaluated the ability of our proposal to handle constructions involving post-verbal clitics, clitic clusters or constructions involving clitic doubling. Essentially, we have shown that our hypothesis can be maintained as long as it is able to accommodate parametric variation, for instance the possibility of certain languages to mark Focus by extra-syntactic means, which will have a consequence on the application of Flip. We have also shown that 3rd person is a locus of variation in grammar, given its particular behaviour across languages. Finally, we have seen that in this analysis, clitic doubling reduces to a discourse related phenomenon, specific of discourse-related languages.

⁴⁰Note that PE can also be present only once at the beginning of the coordinated DP :

i. *Îi văd pe [Maria și Ion].* (Ro.)
 them,cl-acc see PE Maria and Ion
 I see them PE Maria and Ion.

CHAPTER IV

A COMPUTATIONAL PERSPECTIVE

4.1 Purpose

The role of this chapter is to emphasise the advantages of one particular approach to natural language processing, namely the one guided by the principles of Asymmetry Theory, developed by Di Sciullo (2000-2006). We essentially look at pronominal and clitic constructions which can be problematic for a syntactic parser, in that they may potentially generate multiple parses. This chapter is organised as follows: in the first part, we briefly review the types of syntactic parsers frequently used in the NLP field. In a second part, we take a look at some characteristics of the asymmetry-based parser and in a third part we see what type of specific problems pronouns pose, all of this from a theoretical perspective.

4.2 Brief review

The natural language processing field has gained increased interest from researchers over the last decades. For a computer scientist, the task is limited to conceiving programs to analyse an input string. For a computational linguist, the task is more constrained: the analysis provided by the parser cannot be just one of the many possibilities, it has to be the one consistent with a theoretical framework, it has to be optimal (in the specific way predicted by the theory). Ideally, the computer should parse natural language the same way that humans do (solve ambiguities, distinguish grammaticality from ungrammaticality, all of

this in a considerably short time). The problem is very complex and the role of the linguist is crucial in the way the parser will function: what the computer is given as an input string is a string of characters that have, per se, no meaning to the computer. The way the computer understands these strings is through the interpretation that the linguist associates with the characters. This is why there is a difference in the parsing results, depending on the basic theoretical assumptions, combined with the ways these theoretical assumptions are fed into the computer (the formal languages and the algorithms used by the computer scientists).

The syntactic parsers used within generative grammar, more specifically, the ones adapted for the implementation of GB oriented theories, are mostly of the «generate and filter» type (e.g. Fong, 1991). They are guided by principles on the basis of which they generate structures that are submitted to the different filters such as the Case Theory, the Theta-role Theory, the Binding Theory, etc. When compared to rule-based parsers, where each construction was associated with a set of formation rules, the principle-based parsers are definitely advantageous, since they allow, with a small number of more abstract principles, combined with different language-specific parameters, the parsing of a variety of languages. The problem associated with such a system is the fact that the sequence of operations that the parser makes (the generation of the derivations and then the filtering in order to decide the optimal one) is time consuming and it may end up with more than one derivation that is considered viable.

The Minimalist Program (Chomsky, 1995) gave rise to the formalization of Minimalist Grammars ¹(Stabler, 1997), where “phrases are derived by applying structure building functions to lexical items and intermediate structures” (Harkema, 2005: 289-290).

¹ Harkema (2005) notes that these grammars are equivalent to Multiple Context-Free grammars, which, in turn, are known to be equivalent to Linear Context-Free Rewriting systems (Vijay-Shanker et al. 1987), Multi-component Tree-Adjoining Grammars (Weir, 1988) and Simple Positive Range Concatenation Grammars (Bouillier, 1988).

4.3 The asymmetry-based parser

The asymmetry-based parser developed by Di Sciullo (1999) is an implementation of the Asymmetry Theory (Di Sciullo, 2000-2006) and, as opposed to the principle-based parsers of the “generate and filter” type, it can be described to be a “check and generate” type. That means that the parser verifies the relations between the elements and only generates the structures when an asymmetrical relation has been identified. This is advantageous because the complexity of the system is reduced: there are only two basic operations, i.e. Shift and Link, that are both conditioned by Agree (i.e. a subset proper relation, as defined in Chapter 2): elements will be subject to Shift and Link only if Agree is realised, in the necessity of obtaining strict asymmetry. The general principles underlying asymmetry-based parsing are summarized below:

(1) Asymmetry-based parsing

- a. The parser makes optimal use of the asymmetrical relations in the grammar.
- b. The operations of the parser are controlled by IUA.
- c. The parser provides an incremental analysis of linguistic expressions.

(Di Sciullo, 2000a:6)

(2) Interpretation Under Asymmetry (IUA)

- a. An interpretation is optimally obtained under a unique local asymmetrical relation.
- b. A local asymmetrical relation optimally supports a unique interpretation.

(Di Sciullo, 2000a:6)

The asymmetry-based parser is a top-down, left-to-right parser², trees are built starting at the top-most functional projection, filling the complement position according to the Shifting and Linking properties of each element, provided Agree is satisfied. The operation Flip is

² The parsing algorithm follows the linear top-down method LL(1). This means that, as opposed to a system such as the one presented in Fong (2005), where no look-ahead and no-lookback is allowed, one symbol is needed to be looked-ahead in this system (hence (1) in LL(1)), allowing a more efficient parse.

also implemented, for linearization. We have seen in Chapter 2 the definition and the detailed conditions of application of these operations.

One other innovation of this type of system is that – in order to obtain the right derivations – it does not rely on subcategorization frames, but rather the operations of the grammar are able to have access to the internal structure of the lexical items and the lexicon is conceived in a way to allow that. Given that AT manipulates relations between sets of structured features, features are also part of the system, i.e. they are part of the lexicon. The lexical entries thus include sets of formal and semantic features that, given their configurations, are accessible to the operations Shift and Link. The lexicon contains the idiosyncratic properties that cannot be derived otherwise from the properties of grammar.

Crucially, this parser no longer manipulates single words, but rather pairs of words, recovering the asymmetric structures that they are a part of, and assembles these structures using Shift and Link. Thus, the structure is derived by merging a tree (a Spec-Head-Complement structure) in the complement position of a preceding tree³, in an incremental manner.

A parser based on the asymmetry theory provides multiple advantages such as reducing the complexity of the computation, eliminating overgeneration, reducing the ambiguity in structures of multiple attachments (by analysing the more local asymmetrical relation as being the optimal one), and handling cross-linguistic variation. Thus, all generic operations are implemented in a way that allows the parametric change between languages. Shift, Link, Agree and Flip have the same form cross-linguistically, but their application will vary according to the parameters of each language.

³ In this respect, this parser resembles the Tree-Adjoining Grammars (Joshi and Shabes, 1997, Joshi, 1985, Joshi, Levi and Takahashi, 1985), which also combines trees. However, the AT-based parser differs from TAG, since it does not allow the Substitution of trees in the structure on the basis of categorical identity. The combination of trees is guided, in AT, by the satisfaction of Agree. Moreover, there is no adjoining operation in AT, contrary to TAG. See Di Sciullo (2005a) for discussion.

An AT-based prototype of a syntactic parser for English has been developed (Di Sciullo et al., 2006) and it handles affirmative, interrogative and passive constructions, integrating extended projections of CP, DP and vP. The illustrations we'll give below are the parses yielded by this prototype, and given that it applies to English, we use English examples, while the French examples are at this stage theoretical, given that a French prototype is still under works.

4.4 Current problems in the automated analysis and interpretation of clitics

As we have shown in Chapter 1, clitics are a source of debate even within theoretical linguistics. In this section we will see what kind of problems these elements can pose to the parser, and we'll concentrate the discussion mainly on pronominal clitics.

4.4.1 Ambiguity

One point made by the computational scientist is the fact that the natural language is ambiguous: in fact, it seems that humans are able to process highly complex structures involving anaphoric relations, movement, parasitic gaps, etc. without problems and without the need of extra time for computation, while the computer often comes to an impasse even when it has to determine whether “light” in (3) is a noun or a verb, or “that” in (4) is a demonstrative or a complementizer.

- (3) a. light a candle
 b. bring light to a conversation
- (4) a. bring that plant in
 b. that the plant was in surprised me

With respect to clitic analysis, the parser may have a problem determining the right category for a word like the French *le*, for example: is it a determiner or is it an Accusative clitic?

- (5) a. *le voir* (Fr.)
 him see
 b. *le sac*
 the bag
 c. *voir l'enfant*
 see the child

How can theoretical assumptions solve the parsing problem? If we consider a lexicalist theory of clitics, the sequences CL+VB are considered as a single entry in the lexicon. More specifically, the verb *voir* in (5a) is an intransitive verb whose lexical entry includes the clitic, while the verb *voir* in (5c) is a transitive verb. When *le* is not found in immediate adjacency with the verb, it is considered to be a determiner by default. This type of approach seems to avoid ambiguity, since there is a diagnosis context in which the element can find itself:

- a) it is adjacent to the verb → it is a pronominal clitic
 b) it is separated from the verb → it is a determiner

However, this type of approach runs into problems when it encounters constructions where the pronominal clitic is separated from the verb by another clitic (or a string of other clitics). For example, as mentioned in Chapter 2, Romanian allows clitic clusters as the one in (6) where there are adverbial clitics and auxiliaries between the pronominal clitic and the verb:

- (6) *nu i - aş mai fi spus nimic* (Ro.)
 not him,Dat. would again be told anything
 I would not have told him anything anymore.

Also, in French, for example, the pronominal Accusative clitic *le* can be separated from the verb by the pronominal dative *lui*.

- (7) *je le lui ai dit* (Fr.)
I told it to him.

In this case, the only way for the parser to analyse correctly the string is if the lexical entry of the verb includes both the direct and the indirect object clitics. This could be the case, considering that *dire* “tell” is a ditransitive verb. On the other hand, since the accusative clitic *le* is not followed by a verb, the parser could interpret it as a determiner. We will see in a later section that this is in fact the actual analysis given by some parsers.

Hence, a system that recognises pronominal clitics solely on the basis of the lexical entries CL+VB would not be able to correctly analyse all possible strings and it would often make the wrong analysis.

Another case of ambiguity with respect to the categorisation comes from examples like the one in (8) (in Romanian), where the parser has to decide, for a. and b. whether the pronominal clitic is the direct pronoun *le* (them,Acc) or the indirect pronoun *le* (to them,Dat):

- (8) a. *le dau o carte* (Ro.)
them give a book
I give them a book.
b. *le - am văzut (pe ele)*
them have seen (pe them)
I have seen them.

The solution for all these cases of ambiguity relies in the fact that – most of the time – the context is enough to determine which one of the ambiguous categories is to be assigned. In order to understand the context, the parser needs (at least one) look-ahead unit. However, even this strategy may not always work. Consider the example:

- (9) a. *avant de le goûter* (Fr.)
 before to it taste
 before tasting it
 b. *avant le goûter*
 before the snack

(Le Guern, 1999)

Here, the clitic is a diagnostic for determining the category of the word that follows, given the possible ambiguity between certain infinitives and nouns in French: *goûter* in (9a) is an infinitive, since it is preceded by the object clitic, while *goûter* in (9b) is a noun, since it is preceded by the determiner.

Thus, there seems to be a circularity problem: either we consider the clitic as a diagnostic for determining the category of the word that follows, in a deterministic manner (left-to-right parse), or we consider the word that follows as the one revealing the category of the clitic, in a non-deterministic manner (a right-to-left parse).

The problem is not trivial. That is why the conceptualisation of the lexical data base is essential. In the lexical data base, the right information has to be expressed. In the asymmetry based lexicon (ABLex), cf. Di Sciullo (2000a), Di Sciullo et al. (2001, 2003a,b), the entries are expressed such that it becomes possible to disambiguate the structures such as the one we have seen, the operator having access to the restrictor of the variable it is linked with in the local domain. In ABLex, the pronouns and the determiners are considered existential operators, but they will differ in the type of restrictor they will look for in the variable they select (see Di Sciullo, 2000a).

In this way, a decision will have to be taken with respect to the structure of the element recovered from the lexicon, by recognising the relation between the input word and the word(s) that follow it. Also, by accessing a word, its internal conceptual structure is accessed, and this renders the semantic information available, minimising ambiguity. The form of the

lexical entries in ABLex ensures a full formal and semantic recovery at each step of the parse, ensuring maximum efficiency.

As for particular cases such as (9) above, in addition to the conceptualization of the lexical data base, in the AT-based syntactic parser, given the left-to-right parsing algorithm, the solution lies within the implementation of an additional level of analysis, such that certain diagnostics for disambiguation (for example, the presence of the preposition *de* in (9a) but not in (9b)) are validated before yielding the parse.

4.4.2 Cross-linguistic variation

Another problem the parsers are faced with generally is cross-linguistic variation. Ideally, the parser has to be able to handle a wide variety of languages, while changing only a small set of language-specific parameters. A parser guided exclusively on the phenomena based on one language only (most of the time that being the case of English), or even on a set of concatenative languages, will not be able to handle phenomena characteristic of polysynthetic languages, for example. In fact, an asymmetric-based morphological parser is already capable of handling both types of languages. (Di Sciullo, 2000).

4.5 Potential solutions

The solution to the problems exposed above lies within the implementation of a theory whose primitives are the properties of the structural and semantic relations established between pairs of constituents, such as the Asymmetry Theory. Thus, the parser guided by such theory would no longer manipulate single words, but rather it would recover asymmetric structures, maintaining in this way the intended structural relations between the constituents in the sentence being parsed. For instance, the presence of a Wh-word that is recognised from the lexicon as an operator whose restrictor is [-hum], i.e. *what*, will create an object position that will be linked to the (Spec,CP) position of the Wh-word, capturing the Wh-movement.

The fact that the parser recovers relations as opposed to single words is especially important in cases such as the ones we have seen above, where the relations existing between pairs of elements help disambiguation. For instance, in the Romance clitic/determiner ambiguity cases, the clitics and the determiners are part of different domains (i.e. the CP / the DP domain, respectively) and as such, they will not give rise to the same derivations, avoiding ambiguities.

We take a look below to some pronominal constructions that are potentially problematic to a syntactic parser, namely the multiple clitic constructions in Romance and the possessive clitic constructions in English. We examine the result given by two freely available on-line syntactic parsers, namely *Machine Syntax*⁴ and *Fips*⁵ and point out some drawbacks of their analysis, while emphasising the advantages of the asymmetry-based parser with respect to the analysis of the same constructions.

Machine Syntax is a full scale dependency parser developed by *Connexor* at the University of Helsinki by Atro Voutilainen, Pasi Tapanainen and Timo Järvinen. It “produces functional dependencies representing relational information in sentences”, identifying the interrelations between events, actions, states and circumstances and assigning to texts a meaning-oriented structure.

Fips is a GB-based parser developed at the University of Geneva by Eric Wehrli⁶. The output of the parser⁷ is a syntactic tree where multiple branching is allowed and possible attachments are treated in parallel.

⁴ Atro Voutilainen, Pasi Tapanainen and Timo Järvinen.

⁵ Eric Wehrli

⁶ Wehrli (1997), Laenzlinger and Wehrli (1991).

⁷ The parsing algorithm follows the right-corner strategy (Wehrli, 1997:220).

4.5.1 The possessive clitic in English

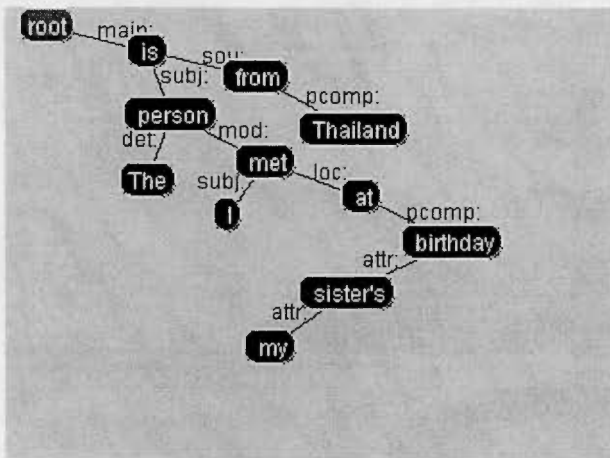
In English, the possession relation can be expressed by the possessive clitic ‘s’, which may or may not be found strictly adjacent to the semantic host. The fact that the clitic may apply to simple or complex constituents is a source of unsolved ambiguity for the existing syntactic parsers.

We tested the two on-line syntactic parsers (*Machine Syntax* and *Fips*) in order to see if they are able to seize the difference between constructions such as (10a-b) and (11a-b) below.

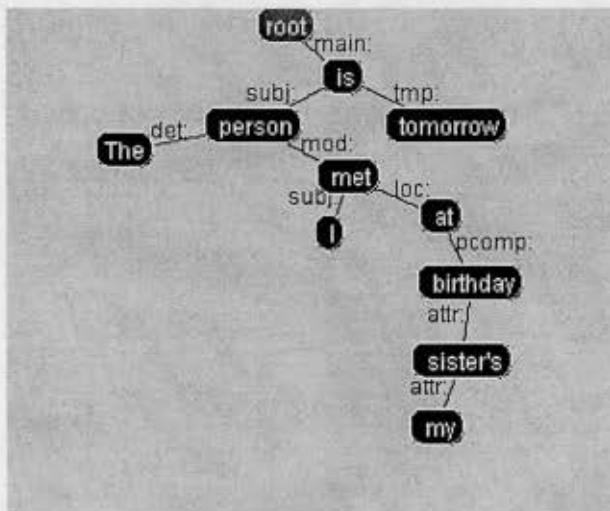
- (10) a. Mary’s brother’s son arrived yesterday.
 b. The son of the brother of Mary arrived yesterday.
- (11) a. The person I met at my [sister]’s birthday is from Thailand.
 b. [The person [I met at my sister]]’s birthday is tomorrow.

The *Machine Syntax* handles (11a) well, in that the correct analysis is executed, see (12) below. However, the same identical analysis is executed in (11b) as well, see (13), which is indicative of the fact that the parser is only able to execute an analysis of the sequential words, hence it is only able to recognise possession as a strictly adjacent relation.

(12)



(13)



The *Fips* analyser does the same erroneous analysis for (11b), as evidenced in the sample parses given below:

(14) The person I met at my [sister]'s birthday is from Thailand.

- a. [TP[DP the [NP person [CP[DP ei][C [TP[DP I][T [VP met [DP ei][AdvP [PP at [DP[DP[DP my][D [NP sister]][D 's [NP birthday]]]]]]]]]]]i][T is [VP [PP from [DP Thailand]]]]]
- b. theDET-SINthe personNOM-SINperson IPRO-PER-1-SIN-INGI metVER-PAS-1-SINmeet atPREat myPRO-POS-1-SIN-INGmy sisterNOM-SIN-FEMsister 'sPoss's birthdayNOM-SINbirthday isVER-IND-SUB-PRE-3-SINbe fromPREfrom ThailandNOM-SINThailand

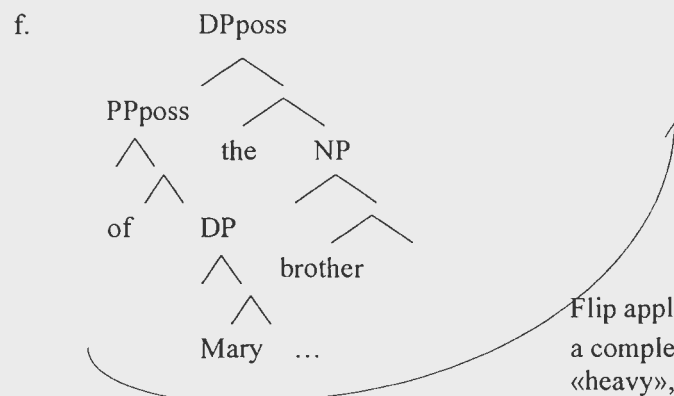
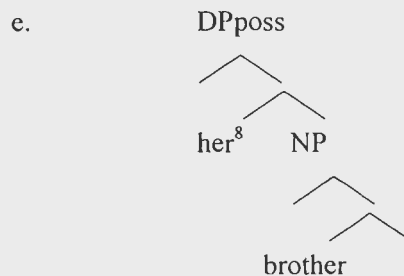
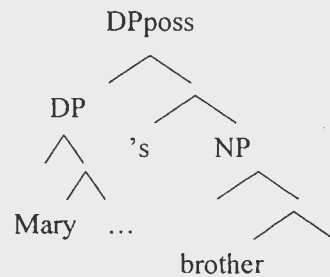
(15) [The person [I met at my sister]]'s birthday is tomorrow.

- a. [DP the [NP person [CP[DP ei][C [TP[DP I][T [VP met [DP ei][AdvP [PP at [DP[DP my]][D [NP sisters [CP[DP ej][C [TP[DP [NP birthday]][T is [VP[AdvP tomorrow][V [DP ej]]]]]]]]]]]]]]]]]]]]]]]i]
- b. theDET-SINthe personNOM-SINperson IPRO-PER-1-SIN-INGI metVER-PAS-1-SINmeet atPREat myPRO-POS-1-SIN-INGmy sistersNOM-PLU-FEMsister birthdayNOM-SINbirthday isVER-IND-SUB-PRE-3-SINbe tomorrowADVtomorrow .PONC-point

The results given by these two parsers show that they execute an analysis where the possessive clitic can only apply to the strictly adjacent word, hence they are missing the possibility of the possessive relation including a complex constituent, such as in (11b) above. An optimal parser has to be able to analyse input phrases where the possessive clitic is not strictly adjacent to the modified noun.

In the AT-based parser, and given the proposed structure for clitics as heads of F projections, we are able to account for the possessive relation in English and we expect a correct analysis for the constructions such as the ones in (11a) and (11b). By creating a Possession Group in the grammar, we are able to account for the fact that the constituents «Mary's», «her» and «of Mary» in the examples below are expressing the same relation of possession:

- (16) a. [[Mary's] brother] left yesterday.
 b. [[Her] brother] left yesterday.
 c. [The brother [of Mary]] left yesterday.
 d.



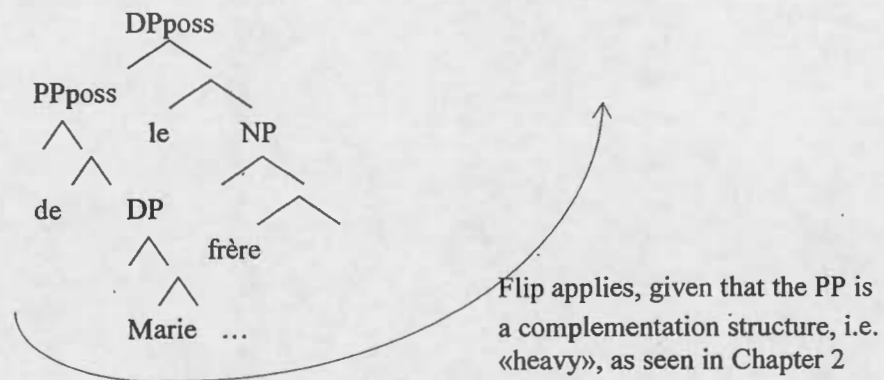
⁸ Note that even if *her* is usually considered to be a strong possessive pronoun (as opposed to the clitic possessive pronoun 's), it is really a clitic as well (in the interpretation we have thus far given to clitics), evidenced by the fact that it cannot stand on its own as an answer to a question, for instance:

- i) Whose car is this?
 *Her.

Thus, as a clitic, it heads the DP_{poss} projection, rightfully in complementary distribution with 's. Note also that a possible answer to the question in (i) above is *hers*, i.e. a predicative form of the pronoun, different from the clitic, hence merged in a different functional projection.

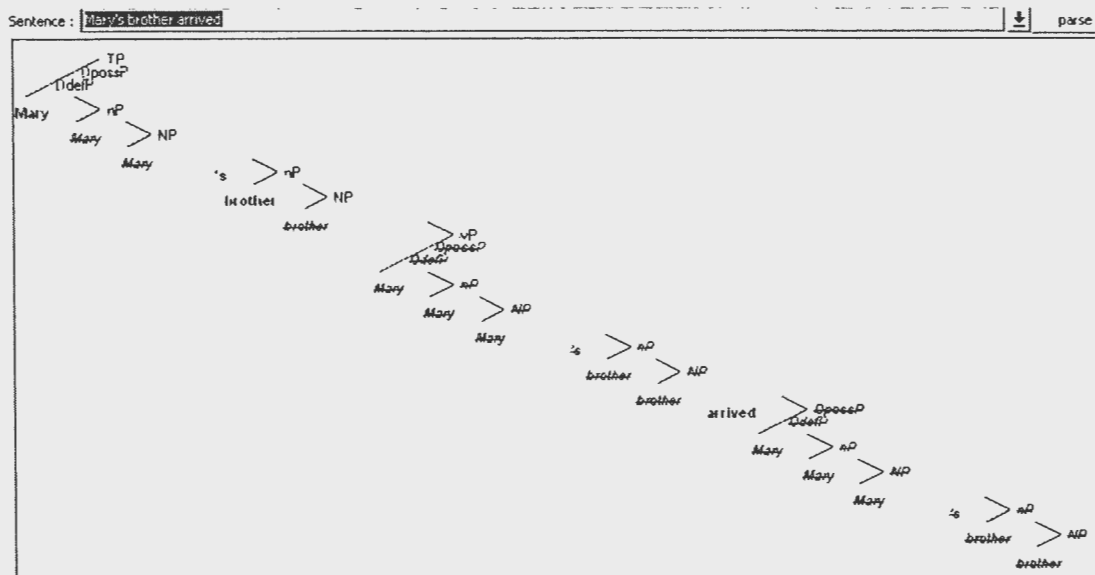
Moreover, this structure allows cross-linguistic variation, given the availability of operations provided by AT such as Flip. We believe this operation is one of the most efficient tools for deriving such sentences and – most importantly – capturing the cross-linguistic variation between English and French, see (17) below.

- (17) *[Le frère [de Marie]] est parti.* (Fr.)
 the brother of Mary left



This allows generalisation structures otherwise impossible to derive in other frameworks, given the difference in the linear order. We illustrate in Figure 1 a sample parse of ‘*Mary’s brother arrived.*’ generated by the AT-based syntactic parser prototype:

Figure 1. Sample parse of a possessive construction involving 's in English



In summary, the biggest advantages of the AT-based parser are the fact that it analyses constituent relations, as opposed to word sequences, in addition to its cross-linguistic potential, i.e. with minimal changes in the parameters of each language, but with the core grammar unchanged, the parser may be applied to different languages.

4.5.2 Clitic clusters

One other evident problematic construction is the one containing more than one pronominal clitic, as in (19) and (20) below.

(19) *Maria i l-a dat.* (Ro.)

Maria to him/her it has given.

Maria has given it to him/her.

- (20) *Marie veut me le demander.* (Fr.)
 Marie wants to me it ask
 Marie wants to ask it to me.

At first, it seems that *Machinese Syntax* renders a correct analysis of this type of data. However, the problem arises when there is homonymy between the clitic and the determiner, as in (21) below, whose parse is given in (22).

- (21) *Marie veut le lui demander.* (Fr.)
 Marie wants to ask it to him/her.

(22)



Here, *le* is erroneously analysed as a determiner, while *lui* is correctly analysed as a dative object. However, this problem does not appear to arise in constructions such as (24-28) below, where *le* could also be taken to be a determiner, but where it is however correctly analysed as an object. In (29), *le* is again erroneously analysed as a determiner:

- (24) *Marie veut le voir.* (Fr.)
 Marie wants to see him.
- (25) *Marie te le donne.*
 Marie gives it to you.

(26) *Marie veut te le donner.*
 Marie wants to give it to you.

(27) *Marie me le passe demain.*
 Marie gives it to me tomorrow.

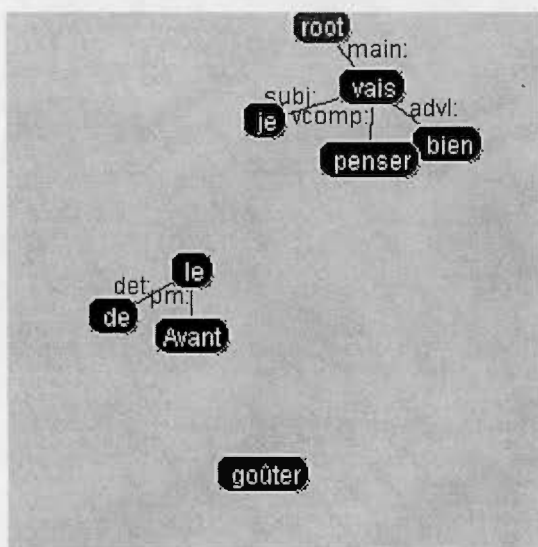
(28) *Donne-le-lui, ton livre!*
 Give it to him, your book!

The parser is able to make the distinction between a determiner and an object clitic, when only one clitic is present, and in a certain type of structure. The problem in the cases presented above is probably due to the manner the word order is implemented. It seems that a Dat>Acc word order for the object clitics has been imposed, such that data as in (25-27) above is correctly analysed. As a matter of fact, as we detailed in Chapter 3, French makes an exception to this order in the 3rd person singular constructions, where, exceptionally, the Acc precedes the Dat, yielding *je le lui donne*. Also, in the imperative constructions, such as (28), the same order is observed. These seem to be the problematic cases for the *Machines Syntax*, but they are sufficient to show that its parser does not take into consideration the properties of the verbs (a ditransitive verb is expected to have two objects), nor the particular properties of French 3rd person constructions and of the imperative constructions.

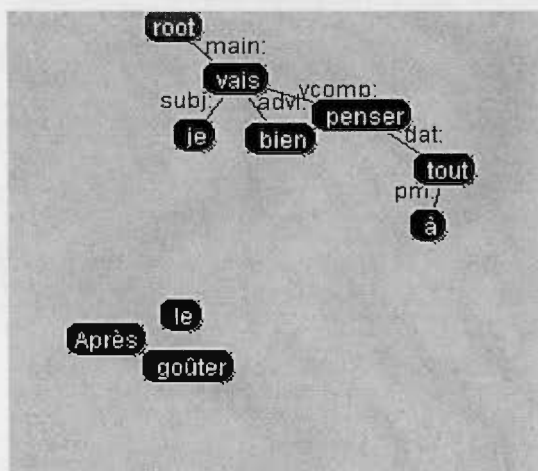
Note however that the distinction between a clitic and a determiner is not always captured, as evidenced by the erroneous analysis given for (29) below. In both constructions, *le* is analysed as an Accusative clitic and *goûter* is analysed as an infinitive verb. Moreover – and surprisingly – *de* in (29a) is analysed as a determiner. The analyses are presented in (30) and (31).

- (29) a. *Avant de le goûter, je vais bien penser.* (Fr.)
 Before tasting it, I will think well.
 b. *Après le goûter, je vais bien penser à tout.*
 After the snack, I will think well of everything.

(30)



(31)



In the AT-oriented parser, on the other hand, the ditransitive property of the verb is indicative of the fact that two object positions are to be expected. Also, the clitics and the determiners, even if homographic, are part of two different domains, namely the CP and the DP domain, respectively. A potential ambiguity clitic/determiner is thus avoided. As for the order of the projections, the canonical Dat>Acc order respecting the object position is overridden by the Acc>Dat order in the French 3rd person constructions and in imperative

constructions⁹. The particular treatment of a 3rd person construction is allowed by the fact that, as mentioned in section 4.4.1, the way the parser is conceived such that it allows the validation of certain «diagnostic» structures at a superior level of analysis and thus, it holds the generation of the parse tree to a moment where the diagnostic (as of a passive construction, for instance) has been confirmed or disconfirmed.

Note also that the *Fips* analyser handles these constructions well, as evidenced by the sample parses given below:

(32) *Marie veut le lui demander.*

- a. TP[DP Marie]i[T veut [VP [TP[DP ei]][T [VP le_j lui_k demander [DP ej]][PP ek]]]]]]
 b. MarieNDefaultMarie veutVDefaultvouloir leProCliDefaultle luiProCliDefaultlui demanderVDefaultdemander .PoncDefault

(33) *Donne-le-lui ton livre !*

- a. [TP[DP e]][T donne le_i lui_j [VP [DP ei]][PP ej]][DP ton [NP livre [PP e]]]]]]
 b. donneVDefaultdonner leProCliDefaultle luiProCliDefaultlui tonDetDefaultton livreNDefaultlivre !PoncDefault

4.6 Conclusion

Incorporating the Asymmetry Theory in a parser has advantageous consequences, some of which have already been explored (i.e. the advantages of a morphological parser based on the identification of the morphological phases, Di Sciullo et al., 2003, the implementation of the Asymmetry-based lexicon, Di Sciullo et al., 2003, the implementation of M-Flip and its efficiency, Di Sciullo and Fong, 2001, etc.). We concentrated here on the advantages obtained in the interpretation and analysis of pronominals by a syntactic parser guided by the

⁹ The linguistic motivation for the order variation is discussed in Chapter 3.

recovery of relations, as opposed to word sequences, and the implementation of the syntactic structure proposed in Chapter 2 for clitics and pronominals. In doing so, we are able to potentially increase the accuracy of analysis and avoid ambiguity, by identifying different domains of interpretation for D-elements.

CHAPTER V

CONCLUSIONS

In this thesis we presented a novel approach on argumental pronominal forms, supported with data from Romanian and other Romance languages, such as Italian, French and Spanish. The main drive behind this work was formalizing the intuition that strong argument-related personal pronouns and clitics share a number of semantic and pragmatic properties (whenever they co-occur in clitic doubling constructions, they are both anaphorically related to the same antecedent in the preceding discourse) and thus that they should not be considered two syntactically unrelated grammatical objects.

We proposed that clitics are base generated in the head of an FP projection in the higher functional field, projection that hosts phi and [identifiability] features. We argued for this on the basis of the inherent properties of clitics as bearers of discourse-old information, as well as specific elements that cannot be found¹ in the post-verbal field. We thus avoided the postulation of a mechanism driving the clitic movement, avoiding the drawbacks of the movement theory and also putting forward a solution to the debate over the generation of clitics.

Moreover, we proposed that the strong pronouns and the double constituents (in clitic doubling languages) are in complementary distribution in the specifier of the same projection FP, given that the strong pronoun / the double carries the same phi and [identifiability]

¹ In their canonical order.

features as the clitic, only syntactically expressed as a DP / PP. One advantage of our proposed structure is that we can account both for the similarities between strong pronouns and clitics (i.e. they are part of the same projection FP), and for the differences between them (i.e. they are not occupying the same position within FP: clitics – as Ds – are heads of FP and strong pronouns – as DPs – are specifiers of FP). Clitic doubling can also be straightforwardly accounted for, as an emphasis possibility offered by Discourse-oriented languages such as Romanian: our analysis places these discourse-related constituents (clitics, strong pronouns and doubled constituents) in a discourse-related projection FP.

We also argued for a novel implementation of the linearization mechanism Flip (Di Sciullo, 2005a) that ensures the surface linear order of the strong pronouns / doubled constituents. Flip is a PF operation driven by syntactic heaviness, and it applies to the DPs and PPs found in the Specifier of the FP projection. It allows the linearization at PF in a less costly manner than the syntactic way of deriving the word order, namely overt movement, which would be needed if we were to assume that the clitic and the double are generated in the same projection, only low in the structure. By applying at PF only, Flip is theoretically preferable as it reduces computational load and contributes to the division of labor between the components of grammar, in that it reduces the load to Narrow Syntax and transfers it to PF.

More generally, the extension to our proposal is that all strong pronouns, whether clitic doubled or not, and all heavy DPs that are [identifiable] are in the Specifier of our FP projection. This means that all [identifiable] strong pronouns and heavy DPs will be Flipped at PF and therefore will surface post verbally. The only exceptions will be cases of strong pronouns and heavy DPs that are focused or topicalized, i.e. the ones hosted by a projection that is higher than FP (such as, for instance, subjects in Romanian). This has consequences for the model of the grammar that one is assuming and forces questions such as When does Flip apply?; Is raising for discourse reasons different from raising for checking a morphosyntactic feature?; Does raising for discourse reasons occur before or after FLIP?; Is FLIP purely PF, or does it take into account information packaging structure (old vs. new

information, focus vs. non focus)? All these issues have only been touched upon and could be expanded upon further research.

Also, other issues linked in a way or another with clitic analysis are still left open for further investigation. We did not tackle the «spurious *Se*» condition (Bonet, 1991, 1995, Harris, 1995, Cuervo, 2002b), nor did we approach in due detail the so-called *Person-Case* constraint (Perlmutter, 1971, Bonet, 1991, Anagnostopoulou, 2004), as these are subjects that could constitute works in themselves. We did not tackle the details of possessives and reflexive clitics, which have much inspired debate – at least within Romance languages – given the peculiarity of their behavior. All these issues are worth exploring in future works.

The last section of this thesis bears on the possible consequences of our proposal. We considered the analyses yielded by a syntactic parser prototype based on the Asymmetry Theory (Di Sciullo et al., 2006), specifically here the clitic and strong pronoun constructions. In the AT-based parser, the asymmetric relations that establish between the feature structures of the input elements allow the parsing of the pronominal constructions in an unambiguous manner. This is realized by predicting the syntactic structure on the basis of the feature structures of the elements entering the parse and building the structure on the basis of the satisfaction of certain relations between these elements.

In the work presented here, we hinted at an analysis of clitics and strong pronouns that we consider optimal: that is, an approach that combines the different modules of grammar, recognizing the role that these pronominal elements play in each and every one of them: thus, along with syntactic and morphological structure, the intention of the speaker has consequences on the Spell-out, while the phonological component has a role that turns out to be more important than what is usually assumed. We also intended an analysis in a minimalist spirit, where syntax is driven by the levels of PF and LF and – in our case – pragmatics as well.

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