

## Cliticization as Unselective Attract \*

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### Abstract

The purpose of this article is to provide an explanatory account of the divide between enclisis and proclisis in pronominal clitic constructions in Romance and Semitic languages. The analysis is based on two fundamental assumptions: (i) clitics do not target pre-labelled positions, but take maximal advantage of the available categorial structure; (ii) cliticization patterns are tightly dependent on the inflectional properties on the language, more specifically, on the feature content of the two functional categories, INFL and v. We show that the various asymmetries in clitic behaviour can elegantly be explained in terms of the minimalist theory of movement, combined with certain formal hypotheses about the building of phrase structure and about the relation of morphology to syntax. Relying on recent ideas about uninterpretable features, Attract and Agree, we argue that cliticization patterns can be made to follow from the strategies made available by U.G. to check the uninterpretable feature of the category INFL and from the derivational origin of the tense and person-number features. A principle, the Unselective Attract Principle, is introduced according to which an uninterpretable feature is a potential attractor for all the features which are of the same type as the one which it selectively attracts. In Romance and in Semitic, clitic phi-sets are unselectively attracted by INFL. Two additional principles, the Priority Principle and the Single Licensing Condition, insure that at some point in the derivation, a clitic can incorporate into Infl only if Infl doesn't already host an attracted inflectional morpheme. This idea holds the key for the enclisis/proclisis divide. Enclisis, i.e. clitic incorporation into Infl, is disallowed in Romance finite clauses where the uninterpretable feature of Infl selectively attracts the person-number agreement phi-set; it is legitimate in Semitic and European Portuguese finite clauses in which the same feature is checked through Agree.

**Key words:** clitics, inflectional morphemes, uninterpretable features, Attract, Agree.

## 1. Introduction

One of the empirical insights on which pre-minimalist generative grammar was founded is that a discrepancy can exist between the position in which a lexical item or expression is interpreted and the position in which it is overtly realized. The notion of movement, combined with that of level of representation, played a prominent role in capturing this discrepancy. Movement links two positions in an asymmetric relation and this characterization holds not only for relations involving two argument positions or one argument position and a peripheral position, but also for less transparent relations. Kayne's (1975) fundamental contribution to the theory of clitics was precisely to analyze complement cliticization in French as a syntactic movement process, operating cyclicly and establishing a relation between the direct or indirect object position of the verb, where full noun phrases can legitimately appear, and a position left-adjoined to it. Both the semantic (argumental) role of the clitic and its syntactic (functional) role are entirely dependent on its original position, i.e. on the position in which the pronominal element is base-generated. The major argument in favor of a movement analysis comes from the discovery that the relevant relation obeys standard constraints on movement operations, such as the Specified Subject Condition. Kayne's (1975) analysis, which was couched within the framework of the Extended Standard Theory, was never seriously challenged - the only important departure being represented by Sportiche's (1996) proposal that it is not the clitic that moves, but a pro or a lexical DP which raises to the specifier of the agreement head hosting the clitic. In conclusion, pronominal clitics seem to partake in movement dependencies and, in this respect, behave as syntactically independent elements, although it remains to be determined whether they should be treated as heads or as phrases and whether the relevant dependencies should be identified as A-movement or as A'-movement dependencies.

Pronominal clitics also exhibit another set of properties which motivate the claim that they constitute an autonomous morpho-syntactic class. In their surface position, they clearly don't possess the syntactic, morphological and prosodic autonomy of independent words, of strong and weak pronouns in particular, as the various tests for cliticness elaborated by Kayne (1975) show.<sup>1</sup> At the same time, they have more freedom than real affixes, as Jespersen (1922) and Jakobson (1933) forcefully argue. In Romance at least, contrary to person-number affixes which occupy a

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\* This work which mainly deals with complement clitics in Romance is part of a larger project on phrase structure, inflectional properties and clitic syntax across various language types (cf. Nash & Rouveret (forthcoming)). It was presented, at various stages, jointly or by one of the authors, at the 21<sup>st</sup> GLOW Colloquium held at Tilburg University, at the University of the Basque Country in Vitoria, the University of Geneva, Humboldt-Universität in Berlin, the University of York, Hongo University and Kanda University in Tokyo, Universidade Nova in Lisbon, SOAS in London and MIT. We wish to thank these audiences for their questions and comments, as well as the members of the UMR 7023 of CNRS for their readiness to argue. We are most grateful to Ora Matushansky for many insightful comments and suggestions. This is in all respects a joint work. The authors' names are listed alphabetically.

<sup>1</sup> Clitics (i) obligatorily appear in special positions, (ii) must be adjacent to their verbal host, (iii) cannot be modified, (iv) cannot be stressed, (v) cannot be conjoined, (vi) occur in a fixed and special order.

fixed position with respect to the verbal root (they are systematically realized as suffixes), pronominal clitics can precede or follow the verbal word to which they are attached, depending on the syntactic environment and the type of the clause which contains them. But the fact remains that clitics are more affix-like than independent words. Certain aspects of their distribution, which apparently cannot easily be accounted for in purely syntactic terms, can plausibly be traced back to their quasi-affixal status and to the general principles which govern word-formation. This holds in particular for the relation of clitics to their host category. According to Kayne (1990), the fact that in Romance languages, the affixation of clitics occurs on the left of the host should be viewed as a consequence of the fact that in these languages, the head of morphologically complex words is the rightmost element. Similarly, the fact that the surface order of clitics does not correspond in any way to the underlying order of the corresponding arguments should, Bonet (1991) argues, receive a morphological treatment.<sup>2</sup>

The preceding observations substantiate the claim that cliticization phenomena directly bear upon the nature of the interface between syntax and morphology, which they even appear to call into question, as pointed out by Manzini (1998). This article is directly concerned with clitics at the interface since it intends to establish and derive the empirical theory-neutral generalization formulated in (1):

- (1) There is a link between the inflectional properties of a language and its clitic syntax.

What we want to argue is that cliticization patterns – the targeting of a host head, the selection of enclisis or proclisis – are themselves tightly dependent on the morphological profile of the language and, in each construction, on the inflectional properties of the host category.<sup>3</sup> An adequate account appears difficult to achieve without developing a clear notion of what is accomplished in the syntax and what is done by the morphology.

Since the early 1970's, both the theory of movement and the notion of morphological component have evolved considerably, as the successive grammatical models strove for higher restrictiveness and stricter conceptual economy. Several novel conceptions of the syntax/morphology interface have been developed, as well as new analytical instruments of great sophistication. One of the aims of this article is to confront these recent proposals with the

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<sup>2</sup> More precisely, Bonet (1991) takes that type of property as an argument in favor of a morphological treatment of clitics.

<sup>3</sup> Greenberg (1963) has discovered that there is a correlation across languages between word order and other ordering properties. Working on an impressive sample of languages, Julien (2000) reaches the conclusion that a close relation exists between word order and the order of morphemes within words. The correlation could extend beyond morpheme order and also concern the type of verbal inflection used by various languages. If (1) is correct, these observations could substantiate the claim that clitic syntax in a language is indirectly sensitive to the syntactic type of the language.

properties of cliticization in Romance, concentrating on one of its salient features, the enclisis/proclisis divide, and contrasting it with the Semitic evidence. We will show that various asymmetries in the clitic behavior of these systems can elegantly be explained in terms of the minimalist theory of movement, combined with certain formal hypotheses about the building of phrase structure and about the relation of morphology to syntax.

More precisely, we will adopt (i) Chomsky's (1999) claim that it is uninterpretable features that make categories syntactically active, as well as his assumption that two major operations are available in the syntax to establish a relation between two categories, Move and Agree; (ii) the Distributed Morphology view that the units manipulated by the syntax are not internally complex words, but roots and grammatical morphemes which contain the features relevant to the computational system of syntax, but lack phonological features, the latter being inserted late, in the (morpho)phonology; (iii) the idea that the combination/merger of inflectional morphemes with the root should be conceived of as a syntactic process and that the order of inflectional morphemes, with respect to one another and with respect to the root, is, at least in part, determined by the syntax, just as that of derivational morphemes (cf. Baker, 1988).

These new ideas about uninterpretable features, Move, Agree, Late Lexical Insertion and the nature of the syntax/morphology interface provide the necessary tools to reach a better understanding of cliticization phenomena across languages. Before tackling this investigation, however, it is necessary to introduce some additional assumptions and, in some cases, to modify the existing ones, in order to define a framework in which the interaction between clitics and inflectional morphemes can be appropriately dealt with. Sketching such a framework is the aim pursued in the first part of this article, which doesn't deal with clitics at all. Clitic syntax in Romance and Semitic will be considered in the second part, in the context of these new and independently motivated assumptions.

The existence of some interaction between cliticization and the affixation of inflectional morphemes corresponds to the expected situation if both are syntactic processes. It is overtly manifested, we claim, by the well-formedness or unavailability of enclitic configurations. Only in some languages is enclisis on inflected verbal forms a legitimate option; it is blocked in others. Semitic languages illustrate the first case, Romance languages the second. This asymmetry will ultimately be traced back to the fact that clitics and inflectional morphemes compete for the same position, specifically the position of inner adjunct to the category Infl, in some languages, but not in others.

## 2. Features, categories and movement

### 2.1. Inflectional morphemes and functional categories

Let us first clarify the status of inflectional morphology in the grammar and the way the tense/aspect/mood morphemes associate with verbal roots and person and number affixes. Inflectional dimensions or, in Kurylowicz's (1964) terms, "inflectional categories" such as finiteness, modality, mood, tense, aspect, and agreement are crosslinguistically spelled out either as verbal affixes or as independent words. Two important aspects of inflectional paradigms should be emphasized at the outset. First, a given morpheme may express more than one inflectional dimension: English *would* spells out modality, finiteness and tense features at the same time. Second, a given category may fail to be manifested in some languages: Korean, for example, has no inflectional morphemes corresponding to agreement features, if one abstracts away from the honorific morpheme.

The null hypothesis in current syntactic theorizing consists in proposing that languages instantiate as many hierarchically organized functional categories as there are universally attested individual inflectional features. A corollary of this theory is that many inflectional heads are spelled out as null morphemes: this is the case of the Agr head which is assumed to be present in all Korean sentences. Another consequence is that the original site of many overt morphemes turns out to be difficult to determine: when a morpheme simultaneously spells out two dimensions, which functional head should be identified as its original site? One possible way to solve the issue raised by the various mismatches between the actual morphemes available in a language and the existing functional categories is to insert the morpheme into the hierarchically lower head and then to raise it into the feature compatible upper head. This solution is not compatible with the idea, expressed in Distributed Morphology by the Principle of Underspecification, that the feature specification of a vocabulary item can be a subset of the feature specification of the syntactic head it is inserted into, but not the reverse. Another option consists in assuming that not every inflectional feature (or feature-set) corresponds to an autonomous inflectional head. Rather languages tend to group the universal sets of inflectional features into bundles and each such bundle constitutes a syntactic category. If this view is correct, languages instantiate fewer syntactic heads than there are features (or feature-sets) made available by Universal Grammar.<sup>4</sup>

Robust cross-linguistic observations and general semantic considerations provide precious clues on how languages tend to package the relevant features into the terminal nodes of the syntax. The subject agreement features, which correspond to the copy of the phi-set of the subject argument, can plausibly be assumed to occur in the head that structurally and thematically licenses subjects – v or

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<sup>4</sup> This claim can even be made stronger. Not only do languages tend to group the universally available features in different ways, but they appear to use only a subset of these features to define the feature-sets corresponding to the attested categories.

Voice. The aspect feature should also appear as part of the same bundle. This characterization squares well with what is known about the semantics of aspectual markers. For example, the imperfective aspect, which marks that the process "extends over a segment of time during which other things can happen" (Bloomfield, 1933), also places into the foreground the participation of the Agent in the unfolding of this event. But the functional head which hosts finiteness features and also the modality features which operate in close association with the former should definitely be viewed as a category distinct from v/Voice. We will refer to it as Inflection (henceforth Infl) and assume that it is generated above v/Voice.<sup>5</sup> The question is whether such a parcimonious categorial inventory suffices for our purposes or whether an additional head must be postulated to host the only major inflectional feature that remains to be dealt with, the tense feature. Our claim is that the tense feature is inserted either as part of v/Voice or as part of Infl and that this difference constitutes a major parametric dimension distinguishing inflectional languages. Supporting evidence for each option is easy to come by. It has often been observed that in the aspect-oriented languages, the aspect markers also convey a tense value. In Arabic, the opposition is maximal between perfective forms which are interpreted as expressing the past tense (*qatala* "I killed") and the imperfective forms which serve as vehicles for the present tense (*iaqtulu* "I am killing"). Inversely in Polish, one and the same temporal affix is found on the various verbal forms conveying different aspectual values: *przeczytałam* "I read" (past perfective), *czytałam* "I read" (past imperfective), *czytywałam* "I used to read" (past iterative). These observations confirm that the tense and aspect dimensions are tightly interwoven in these cases and suggest that the corresponding aspectual/temporal feature-sets should be combined as part of the same lower category v/Voice. But the tense feature can also be plainly dissociated from the aspect feature and inserted as part of Infl in combination with finiteness and modality features which appear to always operate in close association. English modals, which exclusively occur in finite contexts, are clearly marked for the present and past tenses (*can/do* vs. *could/did*). In French, the imperfect marker *-i-* expresses the past tense, the suffix *-er-* expresses the future tense, but when combined together, they jointly convey the conditional mood.<sup>6</sup> These facts support the claim that the tense feature may reside in Infl, along with the finiteness and modality features.

To conclude, instead of postulating the existence of several independent heads - Voice, Subject Agreement, Aspect, Tense, Finiteness, Modality -, we claim that most of the cross-linguistic generalizations made so far can be captured by distributing the relevant inflectional feature sets into two major functional categories. A single syntactic category Infl hosts both finiteness and modality (these features, it appears, have a phonetic realization only when they coexist with the tense feature).

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<sup>5</sup> In Arabic, the modality particles are confined to finite configurations.

<sup>6</sup> Ippolito (2001) takes the Romance imperfect to be a mood, not a tense.

Agreement specification are always associated with subject licensing. The variation exclusively concerns the locus of the tense specification. It can either be introduced as part of the feature matrix residing in the higher category and grouped with finiteness and modality features, or be inserted as part of the feature complex defining *v*, together with the subject agreement features.<sup>7</sup> We are thus left with the two options schematized in (2):<sup>8</sup>

(2) **Origin of inflectional morphemes:** either (a) or (b)

- a. [<sub>Infl</sub> tense + modality-finiteness ] ... [<sub>v</sub> person-number] ... V ...
- b. [<sub>Infl</sub> modality-finiteness ] ... [<sub>v</sub> tense + person-number ] ... V ...

One combination is excluded, that in which the tense feature would reside in *v* and the agreement morpheme in Infl, simply because it would make no sense to suppose that Infl, which can be identified with the category Tense in Chomsky (1995), exclusively contains phi-features. In other words, the tense morpheme never stands in the scope of the agreement morpheme, as already implied by Pollock's (1989) functional hierarchy.

The next question to ask is whether the choice between (2a) and (2b) has empirical consequences and detectable effects. When option (2a) is selected, the two morphemes (or feature-sets) must get together before the movement of the verbal root takes place. The obligatory character of the raising of the person-number morpheme to Infl could follow from a general principle

<sup>7</sup> In morphology-oriented approaches, the origin of the agreement morpheme is open to question. A priori, it can either be directly generated in the head which also hosts the tense affix, which implies that all inflectional features are gathered in a single category from the start, or be inserted into a distinct terminal node whose feature content combines with that of Infl at some point in the derivation. Julien (2000) argues in favor of the first analysis, Halle & Marantz (1993) in favor of the second. According to them, the agreement features reside in a separate terminal node that is adjoined to the temporal head, as a result of fusion of the two nodes, a process that exclusively affects sister nodes. This study tries to dispense with node fusion entirely and defends the view that agreement features systematically originate in *v* and that the variation is limited to the choice that each particular language makes concerning the insertion site of the tense feature.

<sup>8</sup> The representation in (2 b) where the tense feature coexists with the agreement features in the same terminal node sets our approach apart from Bobaljik's (2000) analysis and, more generally, from the Distributed Morphology view. The latter takes "morphemes" to be combinations of syntactic/semantic features bundled into a single terminal node of the syntax and "affixes" to be the phonological realizations of these bundles, resulting from the late insertion of phonological features. As Bobaljik (2000) puts it, it recognizes that "it is the terminal nodes of the syntax that correspond to abstract morphemes which may be the locus of lexical insertion", with the result that a given language is expected to have as many inflectional heads at its disposal as its morphology exhibits cooccurring discrete affixes. Although this prediction appears to be correct for the Romance languages, where inflected verbs bear discrete markers of tense and person-number agreement, it doesn't hold for the languages in which the relevant markers are not discrete – Semitic languages, we claim, instantiate such a case –, nor for the verbal forms which simultaneously bear discrete markers for, say, mood and tense. In French, the syntax of the conditional form *chant-er-i-ons* is no more complex than the syntax of the imperfect form *chant-i-ons* or that of the future form *chant-er-ons*. Although morphological analysis isolates two distinct components *-i-* and *-er-*, there is no syntactic reason to assume that these two segments correspond to distinct affixes spelling out distinct morphemes occurring in separate terminal nodes. In our view, a single functional head is involved (Infl or *v*). It should be noted that languages seldom have specialized conditional affixes at their disposal and usually resort to a bundle of features, spelled out as a concatenation of affixes, to express it.

excluding the direct affixation of a root to an agreement morpheme, without a functional head mediating the relation (cf. Rouveret, 1991, for a proposal along these lines). In our approach, it is a direct consequence of a principle forcing the precocious checking of uninterpretable features, cf. (4). In languages selecting option (2b), the tense specification is present at the v level, the verbal root must raise to v for the tense specification to be associated with a lexical root, and eventually to Infl. The inflectional features and the root, which together constitute the finite form, are already combined at the v level.

## *2.2. Uninterpretable and interpretable features*

One of the claims on which this study is founded is that the morpho-syntactic requirements of Infl, together with the variable location of the tense feature (in Infl or in v), are for a large part responsible for the observed variation in clausal structure and in the syntax of clitics across different languages and constructions. The next step in the argumentation consists in identifying these requirements and in specifying the properties of the formal features which represent them in the computational system. But before tackling this topic, it is necessary to be more explicit about our view of features and movement.

The core assumptions of the minimalist theory of movement, as it is developed by Chomsky (1998, 1999), are the following:

- (i) Functional categories and lexical items are introduced into derivations with uninterpretable features (henceforth u-features) which must be checked and eliminated by the end of the syntactic derivation. The relevant u-features are the phi-features – person, number – which are uninterpretable on Infl, but not on D or on N - and the Case features which are uninterpretable everywhere.
- (ii) The u-features of a functional category functioning as a probe are checked and deleted by matching features on a head or phrase functioning as a goal.
- (iii) Agree is the syntactic operation which establishes a connection between two entities bearing matching features.
- (iv) If all functional categories are endowed with at least one u-feature, only in some instances has this feature or the category which bears it the EPP property. When it does, Agree is followed by an operation which copies the material functioning as the goal in the local environment of the probe. The combination of Agree + Copy defines the operation Move. When Move is triggered, the feature of the probe is said to Attract the goal.
- (v) The interpretable features (henceforth i-features) present on functional categories and lexical items do not trigger syntactic operations.

Our approach differs from the minimalist theory in three important respects. First, the necessity to check and eliminate u-features/EPP-feature is not the only force driving movement. Some functional categories, like clausal Infl and nominal Number, also bear an interpretable feature



(which can be assimilated to the categorial feature of previous models). This feature must crucially be associated with a substantive content, and one way to achieve this result is to raise the relevant root to the functional head which selects it. Head movement should thus be viewed as a case of Attract, whose effect is to satisfy a *i*-feature.

Second, uninterpretable features are an exclusive property of the probe. No such features are to be found on the goal.<sup>9</sup>

Third, we endorse Chomsky's (1998) claim that the EPP-feature is an autonomous feature. EPP requires the presence in the local domain of the category which bears it of a referential-like expression. However, in our view, (i) EPP is not the only trigger of phrasal movement; (ii) the establishment of an Agree relation with a *u*-feature is not a necessary precondition on this type of movement (it is obviously not a precondition on head movement either); (iii) EPP is not an uninterpretable feature, but an interpretable one, which receives an interpretation through the movement and the merger of a subject in its domain.

The claim that the EPP-feature should be kept distinct from the *u*-feature associated to the same category predicts that the syntactic entity which is forced to move to satisfy the EPP requirement is not necessarily the one which, through Agree, carries out the checking of the *u*-feature of the probe. This immediately raises the following question: if the EPP-feature does not trigger the movement of the goal involved in the Agree relation, which reason forces it to move when it does? What is at stake is the divide between "pure" Agree and Agree + Move. We will claim that the selection of one option over the other depends on the properties of the goal itself, not on the properties of the probe/target.

To summarize: In the view defended here, *i*-features (categorial features and the EPP-feature) have the same operation-triggering capacity as *u*-features. However, *i*-features can only be satisfied through a movement (or a merger) operation, while the checking of *u*-features may exclusively involve Agree. In different terms: the elimination of a *u*-feature can be performed at a distance, while the interpretation of a *i*-feature requires the local presence of an entity bearing the relevant feature and providing the relevant interpretation. Although the differences are subtle, we hope to show that the phenomena considered in this study lend support to the alternative developed here.

### 2.3. *The featural content of the category Infl*

#### 2.3.1. Infl's *i*-feature.

It is first necessary to be more explicit about the trigger of verb movement. If Infl hosts a morpheme with affixal status, verb movement provides it with a host. But this presentation cannot be extended to the movement of V-Infl to C: although affixal complementizers are attested, V-Infl

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<sup>9</sup> This claim raise the question of the exact status of Case features.

movement to C is generally not driven by the necessity to provide a support for an affixal C. Moreover, verbs move neither to Infl, nor to C, when Infl is realized as a functional word, spelling out tense and finiteness-modality features.

Chomsky (1999) observes that T (Infl in our approach) shares some properties with substantive categories. It functions as a predicate which locates the event denoted by the verb with respect to the time of the discourse.<sup>10</sup> A natural hypothesis at this point is to claim that such a substantive category should indeed be "lexically salient", i.e. be syntactically combined into a complex unit with an uncontroversially lexical root at some point in the derivation. To achieve this result, some languages have specialized words at their disposal, which have both a lexical and a temporal-modal meaning and which correspond to the pre-syntactic bundling of root and inflectional features. English modals are a case in point. But in many languages, Infl is not spelled out as an autonomous temporal lexeme. Rather it is introduced as a functional category which can only achieve substantive status if it merges with a root at some point in the derivation. It is the necessity to combine the functional features of Infl with root features in the syntax which is the driving force behind verb movement. We will push this idea one step further by claiming that there is a unique requirement which Infl must satisfy cross-linguistically: it must be identified as a substantive category at Spell-Out. This requirement, which can be fulfilled through movement or merger, is encoded by an *i*-feature which must be given a value in the course of the syntactic derivation.

What has just been said about Infl also holds for *v*, when it hosts the tense feature, as in (2 b). In this case, *v*'s *i*-feature functions as an attractor with respect to *V*, whose movement to *v* is triggered by the necessity to provide the event/time dimension with a root support. In (2 a), *v* doesn't function as an attractor, only Infl does, which confirms that *V*-movement is systematically triggered by the need to substantivize a tense specification.

### 2.3.2. EPP.

In Romance languages, Infl is *optionally* endowed with an EPP-feature. It can only be satisfied by the raising of a (potentially) referential nominal expression into one of the specifiers available in the local domain of the head which bears it and should be viewed as equivalent to the feature [+ Topic] or [+ Referential].<sup>11</sup>

### 2.3.3. Infl's *u*-feature(s).

Infl's *u*-features consist of *N*-features/*phi*-features and impose the establishment of a relation between Infl and a nominal element or expression endowed with matching interpretable *phi*-

<sup>10</sup> The necessary functional layer associated to this substantive category is provided by the CP system.

<sup>11</sup> This formulation presupposes the correctness of the Proxy Theory of Phrase Structure which is presented below.

features. We propose that languages resort to different strategies to check and eliminate the u-features of Infl. Three options must be distinguished:

(3) **Checking of Infl's u-features**

Infl's u-features may be checked

- a. by overt movement of the DP subject to SpecIP,
- b. by overt movement (Attraction + Incorporation) of (the features of) v to Infl,
- c. through the establishment of an Agree relation between Infl and v.

We will show that the second option and the third one roughly correspond to the strategy used in Romance and in Semitic, respectively, but that the choice between the two can also depend, within a single language, on the inflectional properties of the construction. We will say nothing more about the first one, which is resorted to by verb initial and verb second languages.

Summarizing our proposal so far, Infl bears uninterpretable N-/phi-features which can be eliminated by resorting to one of the strategies made available by U.G.: Attract (phrasal movement), Attract (head movement and incorporation), Agree. We could claim that the interest of (3) mainly lies in its consequences and simply stipulate for each language type which option it selects. A more ambitious approach would aim at showing that the choice made by each language can in part be related to other dimensions. A proposal along these lines is made in section 4.1.

In the preceding sub-section, we claimed that the u-feature of a category and its EPP-feature should really be considered as coding distinct and independent requirements. We will show that Romance Infl lends support to this claim, since the two features are satisfied by distinct entities.<sup>12</sup>

For the sake of simplicity, we will henceforth refer to Infl's u-feature and i-feature, even though in both cases, we may be dealing with bundles of features, rather than isolated ones.

### 3. The syntax of formal features

#### 3.1. *The Priority Principle*

Under the assumption that the licensing of all the formal features of functional categories must take place for the derivation to converge, it is necessary to ask which features of a head are taken care of first. Our claim is that the grammar imposes a very strict temporal ordering on the licensing operations in the derivation, expressed by the Priority Principle.

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<sup>12</sup> In Celtic, the EPP-feature is simply not present on Infl; its u-feature is checked through Attract by the raising of the DP subject to SpecIP. See Nash & Rouveret (forthcoming).

(4) **Priority Principle**

A u-feature must be checked immediately, as soon as the category which contains it is merged at the root and before this category triggers any other syntactic operation.<sup>13</sup>

3.2. *The Single Licensing Condition*

Consider a functional category F whose u-feature is eliminated through Attract. Given (4), the u-feature of F must be marked for deletion as soon as F is merged at the root. To achieve this result, a head or phrase endowed with a matching i-feature must be dragged along with the feature into the checking domain of F. This process occurs before any other operation affecting F. As a result of Attract, the moved i-feature borne by the attracted object coexists with the original i-feature of the host category. Moreover, both the attractor category and the attracted object contain features which do not participate in the checking relation. A single example will suffice to illustrate this situation: the attraction by finite Infl of a DP into its specifier in order to satisfy its uninterpretable N-feature gives rise to a configuration in which the [tense] feature of Infl stands in a local relation with the D-features of DP, such as [specific], [definite] ... This situation simply reflects the fact that Attract/Move affects whole categories, although only a subset of their i-features is attracted. In the general case, the u-feature and the i-feature of a functional category F cannot be satisfied through the attraction (or the merger) of a single head or phrase into the checking domain of the head. The idea we wish to put forth is that the syntactic space made available by a functional category for checking purposes is strictly limited. It is restricted by the following condition:

(5) **Single Licensing Condition** (henceforth, SLC)

A functional category can enter into a licensing relation with the feature content of only one terminal node in its checking domain.

In (5), "licensing relation" refers to the elimination through checking of a u-feature by an attracted matching i-feature, to the substantivization of a i-feature (categorial feature) through head movement and to the satisfaction of the EPP requirement through DP-raising. The overall effect of (5) is to exclude the configurations in which both the specifier and the head of a functional projection have been targeted for checking purposes. We assume that there is only one specifier available per projection. But in the non-lexicalist approach adopted here, a syntactic head may result from the combination of (the feature contents of) several terminal nodes, for example *v*, *V* and Infl. We know that in the derivation corresponding to (2a), the various components of the complex head are each

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<sup>13</sup> As the alert reader has noticed, the Priority Principle assigns to u-features a status similar to that of strong features in earlier models, in particular Chomsky (1995): they must be disposed of immediately.

attracted separately to license a feature of the head: *v* is attracted by Infl to eliminate its nominal *u*-feature, *V* to substantiate its *i*-feature. This option is not excluded by (5). Finally, note that (5) exclusively concerns the cases where a syntactic object has been attracted into the checking domain of a head and says nothing about the situations where a head agrees with an object which stands lower in the tree.

Taken together, (4) and (5) imply that, if the *u*-feature of Infl is checked through the attraction of the agreement features of *v* and/or if its categorial *i*-feature is substantivized through verb raising, its EPP-feature cannot be satisfied locally. They also imply that if Infl's *u*-feature is checked through DP-raising, its *i*-feature cannot be substantivized locally. These restrictions follow from the fact that the syntactic space is limited and is fully occupied by the head or phrase bearing the imported feature(s) checking *F*'s *u*-feature.

Although the SLC might appear to be reminiscent of the Doubly Filled COMP Filter and of its various extensions to categories other than *C*, the effects of the two principles are quite different. Like the Doubly Filled COMP Filter, the SLC prevents the cooccurrence of two lexical units endowed with a checking potential within the same checking domain, but unlike the former, the SLC does not require that only one terminal node be lexically filled. The phrase:

(6) \* the hypothesis which that we defend

is excluded by the Doubly Filled COMP Filter which disallows the coexistence of a filled specifier and of a filled head, but not by the SLC (provided that the head does not result from syntactic incorporation). What is disallowed by the SLC is the coexistence of an "active" specifier and of an "active" head in the same checking domain. It leaves open the possibility that the two positions be lexically occupied, provided that one of them (the specifier) contains material deprived of checking potential.

### 3.3. *Fission and proxies*

The next question to ask is what is the fate of a formal feature which is not licensed on its mother category? (7) and (8) provide a tentative answer:

(7) A feature which cannot be licensed locally fissions.

(8) Feature Fission can be either onto the next "accessible" functional category or onto a proxy head created in the course of the derivation in order to host it.

In Distributed Morphology, Fission is the process whereby the features of some node are split and realized in more than one place (Noyer, 1992). Specifically, in McGinnis's (1995) view, Fission

should be seen as a movement of features from one head to another. In the syntax, Fission is the process by which a feature originating on a (syntactic) category X moves onto a (syntactic) category Y. It distinguishes itself from Attract in that the fissioned feature, when it ends up on a higher category, is not attracted by a higher feature. Attract is triggered by a formal inadequacy of the host functional category – the presence of a u-feature; Fission is forced by a property of the feature undergoing movement, which cannot be satisfied locally. Moreover, contrary to Attract, Fission does not affect a functional category as a whole, but only one or eventually several features of this category. Its effect is to redistribute the original bundle defining the category onto different heads. Given the Priority Principle, the only features which potentially can be affected by Fission are the i-features of functional heads; u-features never fission because they must be checked as soon as they are introduced into the derivation.

(8) states that Fission may either redistribute features among existing available categories or force the projection of a new category. When a feature fissions, it moves either onto an accessible functional category – generally the next c-commanding one – or onto a specially projected head, which is a copy of the original one and which we will refer to as a "proxy category" or "proxies", following Nash & Rouveret (1997). These non-contentive heads are not present in the numeration, but are created in the course of the syntactic computation, in order to host unchecked fissioned features and provide them with a checking domain. We will provisionally assume that, by definition, a proxy is a projection of a single fissioned feature.

The originality of this approach is that it presupposes that not all feature movement can be subsumed under Attract: the movement of an unchecked feature onto a proxy is clearly not triggered by an attractor, but exclusively by the needs of the "mother" category.

For the characterization of "proxy category" to be complete, it must be determined where in the clausal architecture proxies are "grafted". Since the projection of a proxy is a last resort operation, allowing for the delayed checking of a feature which has not been satisfied locally (i.e. in the domain of the category which bears it), it is plausible to assume that a proxy can only be projected at the left edge of the initial local domain, or equivalently, at the juncture between different domains (i.e. immediately above vP, or immediately above IP, or immediately above CP, if the fissioned feature originates on v, or on Infl, or on C). Recall that the process giving rise to the projection of a proxy is pure Fission, i.e. feature movement without Attract (nor Agree). If this movement is to the edge of the "mother" category, pure Fission can be characterized as strictly local.<sup>14</sup>

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<sup>14</sup> An often asked question is whether the projection of proxy categories violates Chomsky's (1995) Inclusiveness Condition. In our view, the answer is unambiguously negative because proxies should be considered as copies of the categories originally bearing the fissioned feature, a possibility also suggested by an anonymous reviewer.

#### 4. Feature-licensing and the Building of Phrase Structure

In order to see how the proposed system of assumptions works, we will briefly consider how the u- and i-features of Infl are licensed in Romance null subject languages and in Semitic, and explore the implications of the choice of a particular licensing strategy for the constituent structure of each language.

##### 4.1. Romance

Let us first enumerate the salient characteristics of Romance declarative affirmative finite clauses which have to be accounted for, taking European Portuguese as an example. We must first determine the scope of verb movement. Paradigm (9) shows that European Portuguese differs from English in that some adverbs can or must occur between the inflected verb and the direct object and differs from French in that a large range of adverbs may intervene between the initial subject and the inflected verb or auxiliary.<sup>15</sup>

- (9) a. O Rui agarrou vivamente o braço do irmão.  
       Rui seized brusquely the arm of-the brother
- b. O João provavelmente resolveu esse problema ao mesmo tempo.  
       João probably solved this problem at the same time

While (9a) confirms that the finite verb raises to the inflectional domain, since manner adverbs systematically follow the verb, (9b) indicates that it doesn't move very far and, in particular, does not reach the higher inflectional head in the clause. Costa's (1996) conclusion is that the finite verb raises to T (Infl in our approach), but not higher. (9b) can also be interpreted as a sure indication that in European Portuguese, the preverbal subject and the finite verb do not stand in a Specifier-Head relation, a conclusion independently reached by Galves (1989), Figueiredo Silva (1994) and Costa (1996).

An additional observation due to Costa (1996) is that in Portuguese, adverbs are legitimate in preverbal position, not only with referential subjects, but also with quantified, hence non topicalizable, subjects :

- (10) Todos provavelmente errarão.  
       'All probably will fail.'

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<sup>15</sup> For additional examples and discussion, see Rouveret (1999).

Although the subject does not stand in a Spec-Head relation with the verb, it is realized in a position internal to the inflectional domain of the clause.<sup>16</sup> This fact argues against the analysis of Subject-Adverb-Verb sequences in Portuguese as clitic-left-dislocated structures, proposed by Barbosa (1994) and adopted for Italian, Spanish and Greek by Alexiadou & Anagnostopoulou (1998). We conclude that the finite verb raises to Infl but not higher, and that the subject argument, when realized in preverbal position, resides in the specifier of the functional head which is immediately higher than Infl.

A second defining characteristic of the Romance languages under consideration (i.e. all the Romance languages except French) is that they allow the non-realization of the argument subject. A third property, tightly connected to the second one, is that the subject argument can be realized in postverbal position (examples from Costa, 1998):

- (11) a.      Comeu o Paulo maçãs  
              ate Paulo apples  
      b.      Comeu a sopa o Paulo  
              ate the soup o Paulo

The analysis made available by our assumptions goes as follows. The Priority Principle requires that Infl's u-feature be disposed of as soon as Infl is merged with vP. We know that among the three available strategies, two involve v, rather than SpecvP: Attract-v and Agree-with-v.<sup>17</sup> It is desirable to be more specific about the choice between these two options. Suppose that the recourse to Attract is obligatory when the content of v defines a full discrete phi-set (including person and number, if not gender), not fused with any other inflectional feature, such as tense. The syntax of clitics confirms that discrete argument-like phi-sets must move to a functional host. The resort to Agree is thus restricted to the configurations in which v contains the tense specification, along with agreement features. We will assume that Agree must be preferred over Attract whenever it can be used. If this analysis is on the right track, the choice between the two licensing options is directly determined by the availability of one of the two inflectional configurations made available by UG. Attract/Move is the only available choice in (2a), Agree is the only available choice in (2b).

Note however that the recourse to one or the other strategy does not produce any detectable

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<sup>16</sup> It must be emphasized that the conclusion reached here for Portuguese does not readily extend to Italian or Catalan. Both Belletti (1990) and Bonet (1990) reject sentences similar to (10), in which an adverb intervenes between a quantified subject and the finite verb. This does not mean, however, that preverbal subjects are systematically clitic-left-dislocated in these languages. As observed by Cardinaletti (1997), full lexical subjects in Italian are legitimate in structures which otherwise exclude Clitic-Left-Dislocation.

<sup>17</sup> The third strategy – attraction of the DP subject in SpecvP – is used in languages which do not display agreement features in v. These include Celtic and Germanic languages. If this characterization is correct, it remains to be determined what is the source of inflection in richly inflected Germanic languages like Icelandic.



difference if Infl is endowed with an i-feature which needs substantivization. Consider the following derivations:

(12) Derivation A.

discrete phi-matrix in v + tense specification in Infl --> Infl's u-feature attracts v / Infl's i-feature attracts the V root for substantivization => derivation of a complex head (V+(v+Infl)).

Derivation B.

phi-matrix and tense specification in v --> Infl's u-feature agrees with v and is marked for deletion / Infl's i-feature attracts the V root for substantivization --> V transits through v => derivation of a complex head ((V+v)+Infl).

None of these derivations violates the SLC. Both satisfy the Priority Principle. Which case is illustrated by Romance null subject languages? The answer directly depends on whether the agreement features in v constitute a discrete morpheme or whether they are fused with the tense specification. Current research on the syntax/morphology interface teaches us that the attested correlations between syntactic variation and morphological variation are better interpreted within "a theory which takes morphology to be not the cause, but rather a reflection of syntactic structure" (Bobaljik, 2000). Contrary to a model in which syntax is driven by morphology, such a theory is compatible with situations in which syntactic variation is found in the absence of morphological variation. If we are right, this is indeed the case within the realm of Romance finite clauses where both "discrete v" and "fused v" are attested, the former in all languages except European Portuguese, the latter in European Portuguese. Note that the inspection of verbal paradigms in Italian, Spanish, but also Portuguese, would suggest that these languages exclusively resort to discrete v.

A second question which has not been tackled yet is which principle determines the positioning of the subject agreement affix with respect to the tense affix within the morphologically complex verbal head. Does the right combination of the tense feature and of person-number features already obtain in the syntax? Or is it produced in the morphological component? Or does it involve both components? The question critically arises in the languages where the two inflectional dimensions originate in distinct categories (derivation 12 A). But it must also receive an answer in languages where they reside in the same category from the start (derivation 12 B). Let us consider the first case. The result of the incorporation of the content of v into Infl is not a v-Infl sequence, but a Infl-v sequence: in a complex form like Italian *canta-va-no* "they sang", the person-number morpheme follows the tense morpheme which we take to reside in Infl. Under Kayne's (1994) restrictive

theory of movement, this is unexpected because adjunction is supposed to always be to the left. It is not clear however whether this fact should be dealt with in syntactic or in morphological terms. The principle formulated in (13), which can be viewed as a linearization principle and strongly recalls Williams's (1981) Right-Hand Rule, proposes a morphology-oriented account:

(13) In a complex word, phi-features are spelled out at the right edge.

It could be argued that one of the advantages of a syntactic approach to word formation should precisely be to dispense with such stipulative principles. The effects of (13) could be derived syntactically by loosening the conditions on adjunction and stating that the incorporation of a phi-feature bundle is always to the right of its host. Note that among the cases studied by Baker (1988), some force the conclusion that syntactic incorporation may be to the right. These are the preposition-into-verb incorporation cases (and also some cases of verb-into-verb incorporation). We will leave the question open for the moment, without any further attempt at a principled explanation. It should be noted that the right-hand rule also holds for languages instantiating derivation (12 B), where tense and phi-features originate in the same category. If one takes Semitic languages to be representative of this class and even if it must be acknowledged that in these systems, the left edge is also a possible site for the realization of some of the phi-features, the right edge defines the position of exponence par excellence for person-number features. This regularity shouldn't be viewed as an exclusively syntactic fact.

If what has been said about the origin of agreement morphemes is correct and if some version of (13) must be integrated into the grammar, the claim expressed by Baker's Mirror Principle must be qualified.<sup>18</sup> In Romance verbal forms, the order of inflectional affixes within words doesn't transparently mirror the structural hierarchy along which the corresponding functional categories are articulated, nor the order in which the affixation processes have taken place. This is so because the agreement person-number morpheme does not originate in a specialized pre-labelled functional category Agreement, but in the category *v* which is lower than Infl. The implication of (13) is that agreement features differ from contentive functional morphemes in that their order with respect to the other morphemes/categories cannot be exclusively accounted for in syntactic terms.

Finally, let us consider the distribution of nominal subjects. An assumption necessary to account for the existence of both postverbal subjects and null subjects is that the assignment of an EPP-feature to Infl is optional.<sup>19</sup> How is it satisfied when it is present? Its licensing in Romance and elsewhere seems to obey a specific condition:

<sup>18</sup> Baker's original formulation exclusively concerned derivational grammatical function changing morphemes, not inflectional morphemes.

<sup>19</sup> In the structures where the subject argument immediately follows the finite verb, as is the case in (11 a), it is

- (14) An EPP-feature forces the projection of an outer specifier position, i.e. the EPP-feature of a head is satisfied last.

(14) should not be viewed as a defining characteristic of the EPP-feature, but as a property directly derivable from the SLC.<sup>20</sup> Given the Priority Principle, the EPP-feature, which is interpretable, cannot be checked first in the local domain of Infl. Given the SLC, it cannot be checked in this domain at all, since its requirement can only be fulfilled by a (potentially) referential phrase and the local domain already contains a head category with checking potential. EPP must fission. A proxy category is projected, the fissioned feature copied onto it, and the DP subject attracted into its specifier. The resulting configuration is a SVO order with an "externalized" subject, which does not stand in a Spec-Head relation with the verb+inflection complex: the latter is incorporated into Infl, the former realized in the specifier of proxy IP. Recall that we defend the view that Infl's u-feature and its EPP-feature should be kept distinct. We thus depart from Anagnostopoulou & Alexiadou's (1998) claim that Romance inflection satisfies the EPP-feature of Infl. On the contrary, it is the phrase realized in the higher specifier of the IP domain which satisfies it and, at the same time, closes off the whole IP projection.<sup>21</sup>

#### 4.2. A note on Semitic

At first sight, the morphological make-up of Semitic verbal forms does not dramatically differ from that of Romance finite forms. In Hebrew, some persons in verbal paradigms are specified for "rich"

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plausible to assume that it occupies the site in which it was first merged, SpecvP. In this position, it shares features with the v head which sanctions its external argument status. Alternatively, one could say that the merger of the argument subject with v fixes the value of the phi-features of v. Later incorporation of v into Infl (or agreement with Infl) guarantees that a link is established between the postverbal subject and Infl. The reason why infinitival clauses, in the general case, exclude postverbal subjects is simply that the relation between the postverbal subject and Infl cannot be established, in part due to the absence of any phi-content in v. We won't comment on VOS configurations like (11 b), which Costa (1998) analyzes as involving right dislocation.

Instead of claiming that Infl's EPP-feature is optional in Romance and can only be satisfied through movement, one could assume that it is obligatory and that the numeration of postverbal subject sentences makes an expletive *pro* available, which is merged into SpecIP, with the effect that the EPP-feature is checked. This alternative analysis, suggested to us by an anonymous reviewer, is not plainly satisfactory, however. First, it fails to capture the difference in informational structure between preverbal and postverbal subject sentences. Second, it is not in the best position to account for the agreement behavior of postverbal subject sentences, which appears to require that expletive *pro* be viewed as a silent equivalent of English existential *there*.

<sup>20</sup> (14) is compatible with the claim that Infl is not endowed with an EPP-feature in verb initial languages.

<sup>21</sup> For lack of space, we cannot show that the proposed analysis properly accounts for the distribution of adverbial modifiers. By definition, an adverb has no checking potential and no argumental properties. Hence, nothing prevents its insertion into a non-checking position. The specifier of the original IP in Romance is such a position. The idea that preverbal adverbs are realized in SpecIP (cf. (9 b)) conforms with Cinque's (1999) claim that adverbials are found in the left specifier positions of various functional heads. However, since we are committed to a parsimonious inventory of functional categories, we have to provide an analysis for the sequences in which several adverbs precede the finite verb. On this, see Nash & Rouveret (forthcoming).

personal affixes, others are not. The verbal forms functioning as third person singular in the present and past tenses are marked neither for person, nor for number; the first and second person are assigned specific endings only in the past. The form of the third person *hu Sar* "he sang", "he sings", recalls that of Italian *canta* "he/she sings".

Yet, this morphological similarity should not be taken as a clue that the structural properties of finite Infl coincide in the two language families. On the contrary, we wish to claim that in Romance, the relative poverty of certain verbal forms is purely morphological and has to do with the economy of morphological paradigms, while in Semitic, this poverty reflects a structural property. Hebrew *v* does not contain any 3<sup>rd</sup> person agreement features and, as a consequence, the language doesn't possess a corresponding discrete affix spelling out these features.

It should be noted however that the person-number affix, when present, is able to identify a null subject. The Semitic languages (other than Hebrew) where these features are present in all persons are fully pro-drop. The fact that in Hebrew, null subjects are licensed only in the presence of an overt person-number affix indicates that Hebrew is not "structurally" pro-drop.

We propose that, although unsystematically, the subject agreement features are present on the category *v* in Hebrew and that they are directly involved in the checking of Infl's uninterpretable phi-feature. More precisely, Hebrew and other Semitic languages illustrate configuration (2b), hence resort to option (3 c) and derivation (12 B). Two consequences follow: in Romance, but not in Semitic, the subject person-number features constitute a discrete morpheme in *v*; in Semitic, but not in Romance, the inflectional morphemes are merged with the root at the vP level.

## 5. Clitics and the Unselective Attract Principle

### 5.1. Some assumptions about pronominal clitics

It is now time to introduce some preliminary assumptions about clitic pronouns. In the view defended here, cliticization amounts to the movement – from the lexical domain onto a contentive or a proxy functional head - of an argument whose content reduces to a set of phi-features and its subsequent spell-out by a clitic pronoun. Since the clitic spells out the phi-set of an argument and since the phi-set exhausts the content of the argument (at least, in the configurations which don't involve clitic doubling), the clitic is the morphological realization of the argument itself.

Second, clitics do not target designated pre-labelled positions, but take maximal advantage of the available categorial structure. This implies that the clauses containing a clitic do not necessarily have a more complex categorial architecture than clitic-less clauses. We endorse Kayne's (1989, 1990, 1991) claim that clitics target functional categories which are independently present in the inflectional domain of the clause, but we will show that the projection of additional categorial material in the course of the derivation is necessary to derive proclitic configurations. This

characterization suffices to distinguish our analysis from the (exclusively) morphological treatments of cliticization, such as Bonet (1991) and Miller (1992), and also from Sportiche (1996) and Manzini & Savoia (1998)'s approach, which takes clitics themselves to be inflectional heads directly merged into the functional domain of the clause, not argument heads, i.e. heads which are part of an argument phrase.

If one follows the minimalist guidelines, syntactic objects move for a reason. If some movement is involved in the derivation of clitic structures, it must be asked what triggers it. The answer, we suggest, lies in the deficient character of clitics. Several characterizations of the relevant deficiency have been proposed – structural deficiency or referential deficiency or both (for different, even opposite, conceptions, cf. Cardinaletti & Starke, 1999, and Uriagereka, 1995). The one we propose is close to Uriagereka's:

(15) Clitics are deficient pronominal arguments with no articulated internal DP/NP structure.

Using the vocabulary of Distributed Morphology, we can say that clitics are pronominal entities with no root layer. They only express the functional part of the argument, the substantive part being absent. This is the reason why clitics have no fixed nominal denotation and why they cannot function as autonomous syntactic entities. Contrary to clitics, strong pronouns (and also, probably, weak ones) contain more structure or spell out more features. In order to clarify why grammatically "light" arguments cannot be licensed *in situ*, we introduce an additional assumption, (16):

(16) Phi-feature bundles are uninterpretable as arguments if they are not linked to some predicative root category at the interfaces.

(16) takes up the view expressed by Marantz (1997) in the following passage:

"All word and all sentence structure has the same ultimate source: the syntactic combination of two sorts of entities, roots (or place-holders for roots) and bundles of grammatical features, which serve as the locus for the insertion of grammatical morphemes."

For example, auxiliary or light verbs cause the derivation to crash if they are not associated with a lexical predicate. Light prepositions must be followed by an argument. In clitic constructions, the argument phi-set cannot be associated with a root in the lexical domain, which means that it cannot be licensed or interpreted locally as a structural argument.

The next step is to ask whether an alternative licensing strategy is available when local licensing is not possible. The answer is positive. The argument phi-features can also be licensed by being

brought into the immediate locality of a functional category, itself endowed with phi-features, as stated in (17):

- (17) In order to be licensed, clitic phi-sets raise from the argument position onto a functional category itself endowed with active phi-features.

The argument phi-set, which is uninterpretable in situ, becomes interpretable and is interpreted on another functional category.<sup>22</sup> This characteristic sets clitics apart from the items containing ordinary u-features. The theory requires that the latter be deleted. The phi-sets spelled out as clitics are intrinsically interpretable and obviously cannot be eliminated because of recoverability. But they cannot be realized locally and have to move. A second distinguishing characteristic of clitic phi-sets is that, although they definitely seem to be attracted by some functional categories, they do not participate in the elimination or in the licensing of an original (u- or i-)feature of the attracting head. The theory of movement must be extended to cover this case.

### 5.2. *Unselective Attract*

Structural conditions aside, which property must a feature  $\alpha$  possess to qualify as an attractor for a feature  $\beta$ ? In the characterization of Attract developed in Chomsky (1995), an attractor feature exclusively picks up the feature on the closest word or phrase which is able to satisfy and eliminate it. In our view, this conception is too restrictive. We propose instead that if  $\beta$  is the designated feature to check feature  $\alpha$ ,  $\alpha$  is also a potential attractor for all the features belonging to the same type as  $\beta$ , provided that they occur in the search domain of  $\alpha$ . This proposal, which will be referred to as the Unselective Attract Principle, is formulated in (18):

- (18) **Unselective Attract Principle** (henceforth, UAP)

If feature  $\alpha$  enters into an Attract or Agree relation with feature  $\beta$ , it is a potential attractor for all the features of the same type as  $\beta$  within its search domain.

(18) presupposes that the search domain of a category  $K$  may contain several attractees. Only one of these directly contributes to the checking of the attractor feature, because its features exactly match those of the attractor. This feature generally belongs to the entity which satisfies a selectional requirement of the functional category it is merged with. The other ones are in principle compatible

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<sup>22</sup> The relevant notion of "licensing" no doubt includes Case assignment, i.e. the assignment of a syntactic role to the clitic, but does not reduce to it. If one claims that clitics are thematically licensed within vP, it remains to be explained why they cannot be Case licensed in the same domain (contrary to nominative DPs which are both Case- and Theta-marked in SpecvP).

with the feature content of the attractor, but they belong to categories which do not enter into a checking relation with the attractor. In other words, we propose that, for a contentive category  $K$  to qualify as a head accessible to a moving feature  $\beta$ , it is sufficient that one of the morpho-syntactic requirements of  $K$  be satisfied through agreement with, or attraction of, a feature of the same type as  $\beta$ .

The next question that arises is whether the Unselective Attract process obeys specific conditions, distinct from those governing Selective Attract. We assume that the two processes obey the same locality conditions, namely the Attract Closest Condition and some version of the Connectedness Condition. The null hypothesis is that Unselective Attract also obeys the general constraints governing feature-licensing. In particular, it should conform to the Single Licensing Condition and to the Priority Principle.

A difficulty arises, however. Recall that the Priority Principle states that the  $u$ -feature of a head must be checked before any other feature is licensed. If checking means immediate non retrievable erasure, we predict that a  $u$ -feature will never be able to attract unselectively once it has attracted selectively. Following Pesetsky & Torrego (2001), we are forced to assume that a feature which is marked for deletion as a result of a syntactic operation, Attract or Agree, does not disappear immediately. We tentatively propose (19):

- (19) A feature  $f$  on a head  $F$  which is marked for deletion as a consequence of an operation – Attract or Agree – disappears (only) when the FP cycle is completed.

The notion of "FP cycle" used here is potentially ambiguous since, in our framework, any  $F$  defining a projection FP may be topped by an additional "proxy" projection, resulting from the fission of one of its feature. We propose that the FP cycle in (19) coincides with the "extended domain" of  $F$ , i.e. to the union of the local checking domains of  $F$  and of its proxies, if any. The implication of (19) is that an unselectively attracted feature may be hosted either by the contentive head  $F$  or by its proxy, because the attracting feature, although marked for deletion, remains active until the larger FP cycle is completed.

The overall picture which emerges is that an unselectively attracted feature cannot be the only feature entering into a relation with a contentive head. When a feature is unselectively attracted by a category  $X$ , at least one original feature of  $X$  must be checked simultaneously. An attracting category cannot do exclusively altruistic work: the licensing of unselectively attracted features is parasitic on that of local features.

### 5.3. *Back to clitics*

The working hypothesis we will explore in the following sections is that pronominal clitics in Romance and Semitic should be analyzed as the lexical realizations of unselectively attracted phi-features. The claim we will argue for is (20):

(20) In Romance and Semitic, clitic phi-sets are unselectively attracted by Infl.

Because Tense selectively attracts, or agrees with, the agreement features in *v*, which correspond to pronominal inflection, it potentially attracts any phi-set in need of licensing. Not only does this way of thinking about cliticization phenomena render accessible a simple explanation of why clitics move and of why they move where, it also opens the way to a simple account of the enclisis/proclisis divide. Combined with (19), (20) implies that unselectively attracted features may move either onto the contentive head *F* bearing the attracting feature or onto the proxy of this head. These two possibilities, we argue, are illustrated by Romance clitic constructions. Enclisis occurs when the unselectively attracted phi-set incorporates into the contentive category bearing the attractor feature, proclisis arises when the relevant features end up on a proxy of this head. The first option is expected to be more economical than the second (which involves the projection of additional categorial material), hence preferred wherever available.

Before proceeding any further, we briefly present the core data which any analysis has to account for. Modern Romance languages resort to both enclisis and proclisis, each in specific morphosyntactic environments. In Italian, Spanish, Catalan, abstracting away from positive imperative clauses where enclisis is generalized, the proclisis/enclisis divide coincides with the finite/non-finite distinction: finite forms display proclisis, non-finite (infinitival, gerundival, participial) ones enclisis.<sup>23</sup>

- (21) a. Gli parlo. [Italian]  
       'I speak to him'.  
       b. Farlo sarebbe un' errore.  
       'To do it would be a mistake'.

There are two major exceptions to this generalization. In European Portuguese, finite affirmative positive declarative root clauses display enclisis:

<sup>23</sup> At some stage in the history of the various mediaeval Romance languages, an additional dimension seems to have been involved. The choice between enclisis and proclisis depended in part on the initial/non-initial position of the verbal host, a restriction on the positioning of clitics known as the Tobler-Mussafia Law: clitics could not occupy the first position in tensed clauses and, in constructions where they would have been first, they generally occurred in second position (cf. Benincà, 1991, Madeira, 1993, Rouveret, 1992, for different analyses).



- (22) O João deu-lhe o livro. [Portuguese]  
'João gave him the book'.

As for French, it resorts to proclisis in non-finite clauses:

- (23) a. Je lui parle. [French]  
'I speak to him'.  
b. Le faire serait une erreur.  
'To do it would be a mistake.'

Semitic languages differ from the Romance ones in that in Semitic, enclisis on verbal forms is generalized to all structures and clause types, cf. (24).<sup>24</sup>

- (24) a. xashavnu ?al-eha. [Hebrew]  
(we) thought about-her  
'We thought about her'.  
b. fhimt-ha. [Palestinian Arabic]  
(I) understood-her

## 6. The enclisis / proclisis divide in Romance

### 6.1. Outline of the proposal

The first step is to determine what makes the derivation of V+CL and CL+V structures possible in the first place. The answer provided by our framework of assumptions is rather straightforward. Clitics can only be unselectively attracted, by a feature residing on the attractor category Infl. Given the Priority Principle, the relevant u-feature must be marked for deletion (as a result of Attract or

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<sup>24</sup> A second major asymmetry between the two language families is that all lexical categories and also some functional ones can host pronominal clitics: clitics can be affixed to nouns ((i)), but also to prepositions, and also to some instances of the categories C and Q (cf. Roberts & Shlonsky, 1996, for examples).

- (i) a. sifr-o [Hebrew]  
book-his  
'his book'  
b. beet-ha [Palestinian Arabic]  
house-her  
'her house'

Agree), as soon as Infl is merged at the root. But the "survival" principle stated in (19) tells us that this feature remains active and retains its attraction potential until the larger IP cycle is completed. The SLC, in the formulation given in (5), does not prevent the successive incorporation to Infl of both the clitic phi-set and of the verb, because these two movements do not result in the two terminal nodes Infl and SpecIP being filled.

The next step is to ask how to draw the required distinction between enclisis and proclisis. Why can't CL+V units be generated in the configurations in which V+CL units are legitimate? What prevents the successive incorporation to Infl first of V, then of the clitic phi-set? With respect to the SLC, these two configurations have exactly the same status as long as only one attracting head is implicated. One possible line of research would be to show that proclisis configurations, in Romance at least, never define a single syntactic head and necessarily involve more than one terminal node. The coordination behavior of enclisis and proclisis structures indeed indicates that the relation of an enclitic to its host is tighter than the relation of a proclitic to its host.<sup>25</sup> However, this characteristic should be derived from more general principles rather than registered as an empirical fact.<sup>26</sup>

The claim we want to put forth is that the availability of enclisis and proclisis and the divide between the two directly reflect the way the attractor u-feature is checked: enclisis is blocked in the languages and constructions resorting to Attract v (option (3 b), derivation (12 A)), it is available in those in which Agree with v is operative (option (3 c), derivation (12 B)). The reason is that the selective attraction of a set of phi-features in the domain of Infl and its subsequent incorporation into Infl blocks the unselective attraction of a clitic phi-set and its incorporation into the same head. Selectively attracted features and unselectively attracted ones cannot be incorporated into the same functional category (and cannot form a single bundle). This restriction is highly reminiscent of the ban on multiple adjunction proposed by Kayne (1994). Can it be derived on a principled basis in our framework? It also recalls the SLC since it blocks the licensing of two sets of features within the same domain - the fact that the incorporated person/number agreement affix wins over the clitic is a direct effect of the Priority Principle. Suppose that the SLC is reformulated so as to include clause (25):

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<sup>25</sup> This is indeed the conclusion imposed by the Italian data discovered and discussed by Benincà & Cinque (1993) and the European Portuguese data studied by Rouveret (1992, 1999).

<sup>26</sup> The possibility that in some languages, CL+X combinations form syntactic units should not be excluded a priori.

(25) **Single Licensing Condition** (extended)

At no stage in the derivation can the u-feature of a functional category F enter into a licensing relation both with selectively attracted phi-features and with unselectively attracted ones.

This formulation achieves the desired result:<sup>27</sup> combined with the Priority Principle, it predicts that a clitic phi-set can be licensed on a head F only if F's u-feature is checked as a result of Agree, not of Attract. Like (5), it exclusively concerns syntactic objects which have been attracted into the checking domain of a head. It also covers the situations where the attracting head hosts a clitic cluster, i.e. several distinct phi-sets, since the relevant distinction is between selectively and unselectively attracted material. Finally, it is plainly compatible with the claim that the clitic and its host in enclitic configurations constitute a single syntactic head.

Up to now, however, we have provided no explanation for the fact that in Romance at least, only V-CL combinations appear to constitute syntactic heads. This result can be achieved through a better understanding of the interaction between the Priority Principle and the UAP and of the order of derivational operations they induce. Suppose that the Priority Principle imposes an earliness condition not only on the checking of the u-feature of a functional category through Agree or Attract, but more generally on all the operations involving this feature, in particular the Unselective Attract processes eventually triggered by this feature. The Priority Principle should be extended to include clause (26):

(26) **Priority Principle** (extended)

All the operations involving the u-feature of a functional category must occur as early as possible.

An effect of this requirement is to favor the derivations which maximalize the number of licensing operations performed locally, without projecting additional categorial structure. Enclitic configurations correspond to the situations where Infl's u-feature is checked through Agree and the unselectively attracted clitic phi-set incorporates into Infl before its i-feature is substantivized by the raising of the V-v head. Proclitic configurations correspond to the situations where Infl's u-feature is checked through Attract. We know that in this case, the incorporation of the clitic phi-set into Infl is blocked by (25) and that, as a result, the substantivization of Infl's i-feature takes place before the unselective attraction of the clitic. The clitic phi-set can still be unselectively attracted at this point,

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<sup>27</sup> It also covers the situations where the u-feature of Infl is checked by a full lexical DP, as is the case in Celtic languages, under the assumption that the interpretable phi-set insuring the checking is represented on the D head of the nominal expression.

however, because Infl's u-feature, although marked for deletion, remains active until the IP cycle is completed. Since it cannot be realized on the original attracting Infl head, its movement gives rise to the projection of a proxy category immediately above Infl. The overall picture which emerges is that derivations aim at licensing the greatest number of features on the local functional category. They do so up to the point where the SLC would be violated. In the situations potentially leading to such a violation, Unselective Attract must ignore the earliness requirement contained in the Priority Principle for the derivation to converge. It operates after all the operations performed at the lower IP level have been performed.

### 6.2. *The derivation of enclisis: Romance infinitival clauses*

In all the major Romance languages except French, enclisis shows up in infinitival clauses. As a working hypothesis, we adopt Belletti's (1990) claim that these domains display generalized verb movement: in Italian, Spanish and Portuguese (but not in French), the verb in non-finite clauses raises as high as inflected forms in finite clauses, which in our approach means that it reaches Infl. Since clitics end up as enclitics on the verb in these contexts, it is safe to conclude that they are also realized on Infl.

The major difference between non-finite contexts and finite ones, we claim, is that in the former, the tense feature, which is "irrealis", resides in v, while it stands in Infl in the latter. A second asymmetry between the two types is that non-finite v is endowed with null or deficient agreement features, which can be thought of as arbitrary person features, cooccurring with a deficient u-feature in Infl. This pair of assumptions allows us to provide the infinitival marker *-r* with a precise status: *-r* corresponds to the spell-out of the infinitival "irrealis" tense feature fused in v with arbitrary person features.<sup>28</sup> As for PRO, we will basically adopt Chomsky & Lasnik's (1993) insight that it is licensed by a null Case made available by irrealis tense. We know that the latter originates in v. PRO, we suggest, corresponds to a discrete phi-set occupying SpecvP.

The analysis of the enclisis phenomenon made available by our approach should now be pretty clear. Although deficient, Infl's u-feature qualifies as a potential attractor for the clitic phi-set, because it is itself a phi-feature. As for Infl's i-feature, it receives a value through the local merger of the verbal complex V + v with Infl. The derivation proceeds as follows:

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<sup>28</sup> It is well-known that the affix *-r* also spells out the irrealis tense feature in Infl when the clause is in the future or in the conditional. In other words, it oscillates between a quasi-nominal and a purely verbal/temporal status. When it spells out the irrealis tense feature of Infl, it is interpreted as future or conditional, when it spells out the irrealis feature of v, it is interpreted as infinitival.

Infl's u-feature agrees with the deficient agreement features in v / it unselectively attracts the clitic phi-set, which merges with Infl / Infl's i-feature attracts infinitival V+v, which left-adjoins to it => Infl's i-feature is substantivized.

The result is an enclitic configuration [ Vinf [ CL [ Infl ]]]. Two features are satisfied at the Infl-level – the clitic phi-set and the i-feature of Infl -, but only one is a phi-set. No violation of the SLC results. Enclisis is more economical than proclisis, because it does not require the projection of an additional category and maximizes the number of features satisfied in a single step.

A crucial feature of the proposed account is that Infl's deficient u-feature is not checked through the attraction of PRO – if it was, the SLC would block the realization of the unselectively attracted phi-set as an enclitic -, but through agreement with the tense+agreement v head. French will be shown to differ from the other Romance languages precisely in this respect.

### 6.3. *The ban on enclisis: Romance finite clauses*

The resort to the more economical strategy does not give rise to a converging derivation in all contexts. Proclisis is the only legitimate option in Romance finite clauses (European Portuguese affirmative root clauses, aside); enclisis is excluded, although less costly.

- (27) a. Gli parlo.  
           to-him I-speak  
           'I speak to him.'
- b. \* Parlo-gli

Why is this so? In search of a principled answer to this question, the first step is to observe that in both proclisis and enclisis configurations, the clitic moves to a syntactic position which is adjacent to the inflected finite verb, a fact which indicates that both items target the same category in the functional domain. If the functional head triggering the movement of inflected verbs is Infl, it is safe to conclude that clitics are Infl-related in these systems. There is however a major difference separating finite Infl from its non-finite counterpart: finite Infl hosts the tense feature, which resides in v in non-finite contexts. A second asymmetry is that finite Infl is endowed with a full set of phi-features, while non-finite Infl only has a deficient set. As soon as it is merged at the root, Infl attracts the matching interpretable set which resides in v, with the result that its own u-feature is marked for deletion. This early attraction of the content of v is forced by the Priority Principle.

Since it selectively attracts an inherently pronominal bundle of features, Infl also qualifies as an unselective attractor for any clitic phi-set originating in a VP-internal argument position. Clitic phi-sets can thus be added to the feature content of Infl. But the revised SLC excludes that a given head

enter into a licensing relation with both selectively and unselectively attracted phi-sets in its checking domain. Since the features endowed with checking potential have absolute priority both in terms of attraction and realization, the clitic features cannot be realized on Infl itself, but are attracted into a proxy domain specially projected to license them. If enclisis corresponds to the situation where the clitic phi-set is directly merged on the Infl category, we conclude that enclisis is blocked in finite clauses.

This account leads to a better understanding of enclisis phenomena and, in particular, allows us to sharpen our analysis of enclisis in non- finite clauses. In these domains, the clitic phi-set really incorporates into non-finite Infl and is realized at the right edge of the resulting unit.<sup>29</sup> Enclisis is available when syntactic incorporation of the clitic to Infl succeeds. Inversely, the ban on enclisis in finite clauses reflects the failure of syntactic incorporation of the clitic into Infl. Incorporation fails because *v* has priority over the clitic in this respect and because *v*-incorporation is followed by the adjunction of the verb to Infl, which results in the creation of a complex unit, saturating the syntactic space made available by the host category. (28) follows as a theorem in our approach:

(28) **Enclisis Generalization**

Enclisis on F is legitimate if, and only if, F's u-feature is not checked through (selective) Attract.

6.4. *The derivation of proclisis: Romance finite clauses*

Proclisis configurations result from the attracted clitic phi-set being realized, not on the attracting head itself, but on a proxy category.

(29) [ CL [ proxy Infl [ V-v [ Infl ]]] ]<sup>30</sup>

The proclisis derivation must be selected whenever the corresponding enclisis derivation does not converge, i.e. when the prior incorporation into Infl of selectively attracted material blocks the incorporation of the clitic. We know that syntactic incorporation of the clitic fails in this case because if the clitic was incorporated into Infl, it would surface as a suffix, not as a prefix. In the

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<sup>29</sup> In this respect, clitics conform to the requirement of the morphological realization principle (13). Note, however, that in this case, this positioning of the clitic follows from the order of operations at the Infl level and doesn't have to be stipulated.

<sup>30</sup> The proxy head present in (29) bears a certain similarity with the Clitic head postulated by Sportiche (1996) and Manzini & Savoia (1998). It differs from it in two respects: first, it is derivationally created; second, it is exclusively projected in proclisis configurations.



## 7. Why is European Portuguese different?

The striking characteristic which distinguishes European Portuguese from the other Romance null subject languages is that it displays enclisis in affirmative declarative root clauses. It also differs from, say Hebrew or standard Arabic, in that both the CL+V order and the V+CL order are found in both finite and non-finite clauses. We intend to show that, although the Portuguese evidence is plainly compatible with the Enclisis Generalization (30), the choice between proclisis and enclisis depends on whether Infl is dependent or not.<sup>32</sup>

### 7.1. A generalization

Let us first concentrate on the cliticization patterns attested in tensed clauses:

Enclisis

- (31) O João deu-lhe esse livro ontem  
'João gave him/her this book yesterday.'

Proclisis

- (32) a. Disseram-me que a Maria lhe deu esse livro ontem.  
'They told me that Maria gave him/her this book yesterday.'
- b. O que lhe deu a Maria ontem?  
'What did Maria give him/her yesterday?'
- c. A Maria não me deu esse livro.  
'Maria did not give me this book.'
- d. Poucos amigos me telefonaram.  
'Few friends called me.'

The V+CL order is found in affirmative declarative root clauses ((31)). The CL+V order surfaces in tensed embedded clauses introduced by the complementizer *que* ((32 a)), in matrix and embedded questions introduced by a *qu*-phrase ((32 b)) (and also in matrix and embedded clauses with a syntactically focalized XP in preverbal position). Finally, it arises in clauses containing the

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<sup>32</sup> Elsewhere in Romance, the effect of Infl-dependency is detected only in imperative clauses, cf. section 9.



negative marker *não* ((32 c)) and in those where a quantifier phrase occurs before the verb ((32 d)).<sup>33</sup>

In Rouveret (1999), it is argued that the enclisis/proclisis divide cannot be traced back to the scope of verb movement and that both V+CL and CL+V configurations are formed at the IP-level. The vast majority of the data reviewed so far can in fact be subsumed under the descriptive generalization (33):

- (33) Elements or expressions with a quantificational force trigger proclisis if they precede and c-command the verbal head at Spell-Out.

But the clitic behavior of embedded declarative contexts which obligatorily select proclisis suggests that (33) should be extended to cover elements with a Modality force. Our proposal is that the patterns of enclisis and proclisis in Portuguese directly reflect the asymmetry between "independent" and "dependent" tense, a distinction which is active and morphologically manifested in some languages. Infl-dependency in Portuguese can be characterized as in (34):

- (34) The category Infl is dependent when it is c-commanded at Spell-Out by a superordinate category with Q-force or Modality-force.

Some languages resort to special verb forms when a tensed verb is within the scope of a sentential operator (the "irrealis" morphology in Moore, Kikuyu, Hausa and Palauan, cf. Haïk, 1990). Traditional grammars of Irish and Scottish Gaelic mention the existence of a small class of irregular verbs which use special forms, called "dependent" forms (as opposed to "independent" or "statement" forms), to express such features as complementation, negation and questioning. With regular verbs, these features are exclusively manifested by the initial particles and complementizers which identify the type of the clause and are themselves marked for the [ $\pm$  past] alternation. Interestingly, Irish resemble Portuguese in that embedded declarative clauses, which do not involve extraction, also show the dependent morphology on the verb, cf. Cottell (1995).

## 7.2. Infl-dependency and cliticization.

It is striking to observe that the set of contexts which force proclisis in tensed clauses in European Portuguese are roughly those which force the use of the "dependent" form of the verb in Irish.<sup>34</sup>

<sup>33</sup> The facts concerning quantifiers are rather complex. Only universal quantifiers and quantified expressions are incompatible with enclisis, existential quantifiers either allow it or require it. For an interpretation of these distributions, cf. Martins (1992). We will ignore the fact that a subclass of adverbs trigger proclisis when they precede the verb: *bem* "well", *sempre* "always", *lá* "there", *cá* "here", *já* "already", *assim* "so", *também* "also".

<sup>34</sup> See Cottell (1995) for examples and discussion.

Although verbal morphology in European Portuguese does not vary in function of whether Infl is, or is not, dependent on an element or expression endowed with Q- or Modality-force, it is natural to interpret the enclisis/proclisis divide as reflecting precisely this distinction. If this view is correct, the fact that ordinary embedded clauses display proclisis in Portuguese and the fact that they show the dependent verb form in Irish can be both traced back to Infl's dependency.

In order to reach a better understanding of why Infl-dependency has an effect on the choice between enclisis and proclisis, it is first necessary to clarify the way it is syntactically represented. In the class of contexts falling under (36), the finite-modality feature does not stand in Infl, as usual, but is part of the feature bundle which defines the superordinate functional category: C or Neg or Focus. The negative head Neg, in particular, should be viewed as the combination of the feature [negation] and of an inflectional feature which is nothing else but [modality]. These various heads – Neg, C, Focus – do not achieve their inflectional status through a feature movement taking place in the derivation, but are drawn directly from the numeration. This hypothesis, however, immediately raises a difficult question. If the modality-finiteness feature which is in some respects the defining feature of the category labelled Infl does not stand in Infl and if the same contentive feature cannot be instantiated twice in the same inflectional domain, is Infl projected in the corresponding structures and if it is, which features constitute it? It is plausible to assume that Infl is indeed projected in these domains, since one of its defining characteristics – which distinguishes it from the other contentive inflectional categories – is to be endowed with a u-feature and since the effects of this feature manifest themselves in dependent contexts. But if Infl is indeed projected, its feature content cannot reduce to a u-feature. It must also be endowed with at least one i-feature. The only candidate to fulfill this requirement is [tense]. This means that in dependent contexts, Portuguese Infl shares the defining characteristic of Romance Infl: the bundle of features defining Infl includes [tense]. But it differs in that this bundle does not contain [modality].

This analysis correctly predicts that proclisis is the only choice in Infl-dependent contexts. In all the configurations where [tense] resides in Infl, the latter's u-feature is checked through Attract. We know that when this option is at work, Unselective Attract and, hence, enclisis are blocked at the Infl level.

But why does Portuguese display enclisis in the environments where Infl is not dependent on an entity with Q- or Modality-force? We propose that in independent contexts, Portuguese is just another language illustrating configuration (2 b) and option (3 c): both the tense feature and the agreement features reside in v; the merger of the verbal root with the inflectional features takes place at the v level; when Infl is merged at the root, it exclusively contains the modality-finite feature. We know that in this inflectional configuration, Infl's u-feature is checked through Agree. Since there is no selective attraction into the checking domain of Infl, the Priority Principle, the SLC and the "survival" principle allow the raising of the clitic-set to Infl and its incorporation into Infl. This is

the reason why Portuguese affirmative declarative root clauses display enclisis, like Semitic finite clauses and non-finite clauses in all the Romance languages except French and unlike finite clauses in the same languages.

There are thus two ways in which Portuguese Infl distinguishes itself from the Infl of the other Romance languages: (i) Infl can be dependent or not; (ii) when it is not, its u-feature is checked through Agree. Should these two characteristics be linked together? Our theory provides an answer to this question and this answer is positive. What it actually predicts is that only in languages where the tense feature does not reside in Infl in root contexts will the Infl-dependency be manifested. Let us grant the claim that the finiteness-modality feature can universally be bundled with Q-related heads. A language in which [tense] is bundled in Infl with [modality]-[finiteness] in independent root contexts is expected to show little or no morphological variation between independent and dependent contexts, the reason being that the modality-finiteness feature seldom has any morphological manifestation. Italian, Spanish, French belong to this class. On the contrary, in a language where the tense specification is fused with the agreement features in *v* in independent root contexts, one expects that Infl-dependent structures differ in morphological and syntactic behavior from independent ones. This is so because both the feature content of Infl and that of *v* will differ from what it is in independent contexts: Infl includes the tense feature, but not the modality-finiteness feature; *v* does not contain the tense feature and, as a consequence, the agreement features constitute a discrete phi-set. We independently know that in constructions where this the case, these features are selectively attracted by Infl to check its u-feature. The conclusion is that only in languages where Infl's u-feature is checked by Agree in independent root contexts will the Infl-dependency effect be observed.<sup>35</sup>

To conclude: We have derived the correlation between Infl dependency and proclisis and between Infl non-dependency and enclisis. This is precisely the goal we had set out to achieve.

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<sup>35</sup> This analysis would lead us to expect that infinitival Infl in Portuguese be specified as dependent in some contexts. Proclisis is indeed obligatory when the infinitival domain contains *não* (examples from Madeira, 1993):

- (i) Eu penso convid'a-la  
I think (to) invite-her
- (ii) Eu penso não a convidar  
I think not her (to) invite

Nothing similar can be observed in contemporary Italian or Spanish.

## 8. Why is French different?<sup>36</sup>

While Romance languages other than French display enclisis in infinitival clauses, French infinitives show proclisis.<sup>37</sup> It is natural to try to link this contrast to an independently motivated difference concerning the scope of verb movement in the two classes of languages. Adopting Belletti's (1990) analysis, we have concluded that in Romance, infinitival verbs reach the Infl level, just like finite forms. French differs in that infinitives do not raise as high as in the other Romance languages and, moreover, in that this partial movement itself seems to be optional, two properties which have been established by Pollock (1989) on the basis of the distribution of adverbs and negation:

- (35) a. ... ne pas souvent lire la Bible ...  
           Neg often read the Bible  
       b. ... ne pas lire souvent la Bible ...  
           Neg read often the Bible

The conclusion forced on us by these examples – it is uncontroversial in the case of (35 a) - is that French infinitives remain within the vP domain in overt syntax. How can such a situation arise? In our framework, the fact that the verb does not reach Infl could be taken as a sure indication that Infl is not endowed with a *i*-feature which could be satisfied through verb movement. But we have assumed in our treatment of Portuguese that a category could not be defined uniquely by a *u*-feature. We thus propose that in French infinitival clauses, Infl is simply not projected, so that the question to substantivize it doesn't even arise and verb movement does not occur. Only two functional categories are projected: *C*, which bears the finiteness-modality features, and *v*, which hosts two features, the irrealis tense feature, just as it does in the infinitival clauses of other

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<sup>36</sup> Other properties distinguish French from Romance null subject languages. First, French is not pro-drop. Second, it absolutely prohibits the interpolation of an adverb between the initial subject and the inflected verb, a fact which indicates that the two entities stand in a Spec-Head relation at Spell-Out:

- (i) \*Jean probablement résoudra le problème demain.  
       John probably will-solve the problem to-morrow  
       'John will probably solve the problem to-morrow.'

Nash & Rouveret (1997) propose to view these two characteristics as related and as reflecting the fact that the agreement set incorporated into Infl in French cannot in and of itself achieve the checking of Infl's *u*-feature because it doesn't correspond to a fully specified *phi*-set. The person feature in *v* is weak - person is not distinctively marked on each form of the verbal paradigm. Infl's *u*-feature is fully checked only when the attracted agreement features are themselves provided with a value. This result is achieved through their entering into a local Spec-Head relation with the DP subject, itself attracted into the Spec of proxy Infl. See Nash & Rouveret (forthcoming) for a more elaborate proposal.

<sup>37</sup> On this contrast, see in particular Kayne (1991), who proposes to relate it to the pro-drop character of Romance languages vs. the non-pro-drop status of French.

Romance languages, and the u-feature which elsewhere resides in Infl. One can speculate that the possibility to combine Infl and v into a single head is made available in French non-finite domains by the extremely deficient character (or even the absence) of agreement features on v. This analysis considerably narrows the range of options for the licensing role of PRO in French. It must be assumed that PRO is merged into the specifier of vP as elsewhere in Romance and that it checks v's u-feature in this position (in other Romance languages, this feature is disposed of through the establishment of an Agree relation between Infl which bears it and v which is specified for admittedly deficient agreement features). As for PRO itself, it is plausibly directly licensed by the irrealis tense feature.

These analytic proposals have an immediate consequence for the analysis of infinitival proclisis. As emphasized by Kayne (1989), the well-formedness of (36 a) indicates that there must be a valid clitic host lower than Infl:

- (36) a. ne pas souvent la lire  
 b. ne pas la lire souvent

In a framework making use of the category Agreement, the host of the clitic should be identified with the head carrying the Agro features. In our approach, it can only be a proxy category projected above vP, making an additional checking domain available. The reason why a proxy category must be projected is that no internal argument which is pronominal and not preposition-dependent can be inserted at the V level or at the v level. Moreover, the version of the SLC given in (25) explicitly precludes the coexistence within the vP domain of the PRO matrix which, although merged, counts as selectively attracted material since it checks a u-feature and of an unselectively attracted clitic phi-set. The derivation goes as follows:

v is merged with VP, v endowed with a tense feature and an uninterpretable phi-feature / PRO is merged into SpecvP => v's u-feature is checked / the SLC blocks the unselective attraction of the clitic phi-set by v / V raises to v which is substantivized / v's u-feature, which is still active, triggers the projection of a proxy v head which unselectively attracts the clitic phi-set.

To conclude: Our theory permits the derivation of proclisis immediately above vP, a welcome result since the French data about cliticization in infinitival clauses show that this option is indeed available in natural languages.

## 9. A short note on imperative sentences

Enclisis configurations in European Portuguese root declarative affirmative clauses illustrate just one of the situations in which an enclitic is hosted by an inflected verbal form. Enclitic ordering is also the rule in positive imperatives throughout the Romance languages, even in French which doesn't otherwise allow clitics to follow the verb.<sup>38</sup> Let us briefly sketch the analysis of imperative sentences made available by our approach.

According to Zanuttini (1997), the distribution of adverbs in positive imperative clauses shows that imperative verbs raise to a head position higher than T (Infl in our approach) and she concludes that they reach C. Let us provisionally assume that they move at least as high as Infl. This means that Infl is indeed projected in imperative sentences and is endowed with at least one interpretable feature. The relevant feature, we claim, should be identified with [command], which replaces the finite/modality feature of declarative Infl. Infl also bears a deficient u-feature which, although deficient, qualifies as an unselective attractor for any local phi-feature matrix. The two features which are later jointly spelled out as imperative inflection originate in v: the tense feature which can be equated with the [irrealis] feature specifying non-finite Infl; the agreement features which only instantiate three combinations of person and number. The properties of imperative subjects are directly linked to the deficient status of imperative morphology.

The generalization of enclisis in positive imperative clauses can now be explained along the same lines as the enclisis patterns in Romance non-finite clauses and in Portuguese root clauses: the agreement features do not constitute a discrete entity, because they coexist in v with the tense feature; their entering into an Agree relation with Infl's u-feature is the only available option for the elimination of the latter. Unselectively attracted phi-sets can thus be realized as enclitics on Infl.

Concerning negative imperative constructions, an important regularity discovered by Rivero (1994) and further elaborated by Zanuttini (1997) is the one formulated in (37):

(37) True imperatives cannot be negated by a preverbal negative marker.

In negative sentences, Romance languages never use a true imperative form but a suppletive one, which is either borrowed from the paradigm of the subjunctive (cf. Spanish and Portuguese) or the indicative (cf. standard Italian) or is simply the infinitive (cf. standard Italian again and some Italian

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<sup>38</sup> Rooryck (1992) asks whether the specific cliticization behavior of imperatives could be subsumed under the same general principle which is responsible for enclitic ordering in infinitival clauses. He concludes that the answer is positive and that the anaphoric status of the agreement morphemes associated with [- realized] tense in both infinitives and imperatives forces the clitic to stay behind. At the same time, he dismisses the possibility that the Portuguese phenomenon be accounted for along the same lines.

dialects).<sup>39</sup> The ban against true imperative forms in negative contexts should be viewed as an anti-dependency effect: imperative forms cannot be dependent. Suppose that in these contexts, Neg is a combination of the negative feature and of the feature [command], the resulting meaning being that of prohibition. If this is correct, Infl in negative imperative clauses is dependent since it doesn't contain the [command] feature, but must contain the tense feature. The relocation of the latter brings about the loss of the imperative inflection. We know that the configurations in which the tense feature resides in Infl and the agreement features in v exclusively allow proclisis.

This explanation covers the negative imperative sentences which resort to a subjunctive form – the latter can be thought of as an inherently dependent form. But it cannot be extended to cover the diversity of cliticization patterns in Italian negative imperative sentences using an infinitive form (cf. *Non lo fare! / Non farlo!* ). As emphasized by Kayne (1992), the occurrence of proclisis is specially unexpected, since Romance infinitives usually display enclisis. This duality, we suggest, directly reflects the status of the negative head as a full-fledged imperative category or as a non-inflectional one. If Neg is a true imperative head expressing prohibition, the dependent infinitive form behaves as a subjunctive one: the tense feature resides in Infl and proclisis is the expected pattern. If it is not, the [command] feature stays in Infl and the infinitive form is the equivalent of a special imperative form, which spells out the tense and agreement features originating in v. We know that enclisis occurs whenever tense and agreement are bundled together in v.

## 10. Concluding remarks: clitics at the interface.

The present theory of clitics employs no clitic-specific constraints or principles, nor does it treat cliticization in any of its observed forms as a marked or special phenomenon. Rather, three general principles essential to the operation of the grammar as a whole – the Priority Principle, the Single Licensing Condition and the Unselective Attract Principle –, combined with the Proxy Theory of Phrase Structure, straightforwardly account for the observed differences in clitic behavior across languages and constructions without allowing for logically possible but actually unobserved cases. The Priority Principle and the SLC are general conditions governing the syntax of features. Initial empirical motivation in favor of them comes from the way inflectional categories associate with roots and the various implications this association has for the building of phrase structure. As for the UAP, its scope is not restricted to clitic syntax. The Attract-all-F property which Boskovic (1999) assigns to the Focus head in Bulgarian resembles Unselective Attract in that a single feature on a single head turns out to be able to attract more than once.

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<sup>39</sup> See Zanuttini (1997) for examples.

At the beginning of this article, we asked whether the various configurations displaying enclisis share some property. The Enclisis Generalization (28) provides a positive answer to this question. Enclisis is not available when, as a result of selective Attract, a syntactic entity containing phi-features with checking potential is merged into the Infl-domain. Enclisis is legitimate when Agree, not Attract, establishes the link between Infl and the interpretable features in *v*.

A characteristic of this account is that the notion of adjacency plays strictly no role. Under an adjacency analysis, the unavailability of enclisis in, say, Romance finite clauses would be traced back to the fact that the intervening clitic disrupts the required adjacency between the relevant feature – here, Infl’s *u*-feature – and the matching material which is designed to check and eliminate it – the verbal affix. This is the line of research developed by Luigi Rizzi in unpublished work, which states that the checking of strong features requires strict immediate adjacency between the checking head and the target head, see Belletti (1999) for further elaboration.<sup>40</sup> Although such an account can no doubt be further sharpened to cover the clitic behavior of Portuguese root clauses and that of Semitic finite clauses by distinguishing different types of verbal affixes with different blocking effects, the claim made by our analysis is that the adjacency effect should be viewed as an epiphenomenon without any grammatical status. It results from two independent considerations, one syntactic, the second morpho-syntactic: first, the clitic phi-set cannot incorporate into Infl when Infl selectively attracts; second, as stated by (13), phi-features are realized at the right edge in complex units.

The explanatory force of the present account clearly depends on the correctness of what was said about the strategies made available by U.G. to check the *u*-feature of Infl and, more generally, about the origin and the checking behavior of the tense and person-number agreement morphemes. It is thus important to ask whether independent evidence exists supporting the assumed divide between the languages in which the pronominal content of *v* is attracted by Infl and those in which the connection between the two is established via an Agree relation. One difference between the two types is that all the inflectional features and the verbal root which jointly constitute the inflected verbal form are present at the *v*-level in languages which use the Agree strategy, while these features are gathered only at the Infl-level in languages which resort to the Attract strategy. This difference is expected to manifest itself in other areas of the grammar. As a matter of fact, it does, as is confirmed by the study of VP-ellipsis phenomena across Romance and Semitic, cf. Rouveret (work in progress). It turns out that only languages in which the Agree-with-*v* strategy is available instantiate VP-ellipsis.

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<sup>40</sup> Belletti (1999) and Duarte & Matos (2000), Rouveret (1999) resort to the adjacency idea to account for the Italian and European Portuguese cliticization patterns.



Our account relies on, and further supports, a particular view of the syntax/morphology interface. The data which we have examined confirm the claim made by Distributed Morphology that morphology, far from being the cause of syntactic structure, reflects and interprets it (cf. Bobaljik, 2000). We have found several cases where syntactic variation is attested in the absence of morphological variation – no contrast at all can be detected between Portuguese verbal paradigms and those of the other Romance languages; Hebrew verbal morphology sometimes follows the same patterns as the Romance one. These observations are inconsistent with morphology-driven approaches to syntax.

There is some disagreement among researchers as to what the scope of morphological rules exactly is. Even if morphological rules are given the ability to alter the structure delivered by the syntax in very limited ways, if for example one grants the existence and morphological nature of processes such as Halle & Marantz (1993, 1994)'s morphological merger <sup>41</sup>, it is safe to assume that these rules do not have the power to create new structural configurations, nor to move units which qualify as syntactic words. This conclusion has a major consequence for our account. If we are right, cliticization proceeds through three clearly distinct phases. The first corresponds to the unselective attraction of the clitic phi-set by Infl. The second one coincides with the stage where the realization site of the clitic-to-be within the extended domain of Infl is determined and whether the clitic is realized on Infl or on proxy Infl. During the third one, the clitic phi-set is phonologically spelled out in its final landing site, which gives an enclitic in the first case, a proclitic in the second. The first stage is clearly syntactic, the third one clearly not. What must be emphasized is that the second one must also be syntactic, if the proxy theory of phrase structure is correct and if, indeed, clitics sometimes occur on proxy categories. The projection of additional categories – even if they are just copies of already existing ones - or the creation of additional positions outside the word being processed falls outside the scope of even the most liberal conception of the morphological component. Both the first stage and the second share the property that they place morphemes in a certain order.

Finally, let us ask whether our account sheds any light on the nature of the difference between clitics and inflectional affixes. One respect in which clitics stand in sharp contrast with person-number agreement features is that the latter are systematically realized at the right edge of the complex unit they are part of, while two realization sites are available to the former within the domain of a single functional head, which points to them as being very exceptional objects. In our approach, the right-peripheral realization of agreement affixes follows from both morphological and syntactic considerations. First, we have proposed to view (13) as a morphological realization

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<sup>41</sup> Our account of Romance inflection implicitly denies that such a process is morphological in nature – the association of Infl and v is not realized through morphological merger, but via syntactic incorporation.

principle. Second, the attraction by Infl of the agreement features in *v* clearly conforms to the requirement of the Priority Principle. The corresponding matrix is attracted first and is spelled out on Infl. It has priority both in terms of syntactic attraction and morphological realization. What this discussion points to is that the morphological realization principle which places incorporated inflectional features at the right periphery of complex words should be viewed as the morphological counterpart of the Priority Principle.

Contrary to inflectional affixes, clitics are never selectively attracted and, as a consequence, have no priority of any sort. They are not inherently marked as affixes, either. Suppose that they bear a feature [ $\alpha$  affix] whose value is left unspecified, meaning that they can be realized either as affixes or as free morphemes, i.e. as enclitics or as proclitics (i.e. as clitics on a proxy). When incorporated into Infl, they are taken care of by (13), since they qualify as phi-features sets. The peripheral realization of attracted inflectional morphemes teach us that the right edge position is saved for incorporated phi-features. But incorporation and peripheral realization are available to clitic phi-sets only when the edge position is accessible, i.e. only when the resulting configuration does not violate the Priority Principle. Selectively attracted morphemes must be incorporated and realized prior to unselectively attracted ones.<sup>42</sup> In other words, the availability of two realization sites for clitics ultimately reflects the fact that they are never selectively attracted by the functional head that hosts them.<sup>43</sup>

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<sup>42</sup> The fact that several enclitics can be lexicalized on the same head (cf. Italian *Voglio dar-gli-lo* "I want to give it to him") proves that the periphery is not constrained to host a single inflectional element. This property in turn simply reflects the fact that there is no limit on the number of elements unselectively attracted by the same head – by definition, only one object can be selectively attracted since one object suffices to eliminate an uninterpretable feature.

<sup>43</sup> It is fair to ask whether the results of this study, whose aim was to deal with the enclisis/proclisis divide, can potentially be challenged by other aspects of the phenomenology of cliticization, such as the rigid and apparently arbitrary ordering of clitics within clusters or clitic climbing. Both phenomena raise a lot of questions which clearly fall outside the scope of this study. As far as clitic climbing is concerned, it is plausible to assume that the structures in which the clitic raises to the matrix clause are functionally poorer than those where it doesn't, i.e. that the former are deprived of any category potentially functioning as an unselective attractor, T or C, while such a category is "active" in the latter. For a partially similar conclusion, based on different phenomena, see Wurmbrand (1998). Clitic climbing is one of the phenomena which show that a clitic can be realized on a lexical head with which it bears no selectional relation - *en*-cliticization is another one. This property corresponds to the expected situation in our approach, since the verbal inflection (or the inflected verb) and the clitic phi-set are attracted separately and are attracted by a functional head.

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