

A lexical analysis of Italian clitics

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1 Introduction

In this paper, I will propose a lexicalist analysis of Italian cliticization, which is based on the assumption that Italian clitics exhibit affix behavior. I will show that this analysis can deal both with the syntactic properties of cliticization and with their morphophonological properties. In particular, I will suggest that Italian clitics merge together into a morphological unit which combines with the verb. However, this unit is not the result of a word formation process, but it represents the spell out of certain morphosyntactic features of the verb.

I will also consider clitic climbing, which is a peculiar construction in which Italian clitics can occur. In this construction, a clitic which originates as dependent of a complement verb can climb and attach to the trigger verb. I will show that, contrary to what has been argued in the literature, clitic climbing doesn't constitute a problem for a lexicalist analysis of cliticization.

The analysis I propose will be cast within the framework of Head-driven Phrase Structure Grammar (HPSG) Pollard & Sag (1994). In HPSG, the bulk of linguistic information is encoded in the lexicon, leading thus to a richly developed theory of *lexical organization*. Lexical information is not simply listed, in a redundant way, in each lexical entry. On the contrary, lexical principles and lexical rules allow cross-cutting generalizations about words to be expressed in a compact and efficient way. Given the lexical character of the analysis of cliticization which I propose, it seems natural to formulate it within such a framework. Furthermore, HPSG has the advantage of being well suited both for theoretical linguistic work and for computational implementations. In fact, it has been used successfully in large-scale natural language processing applications.

2 General properties of Italian clitics

Italian distinguishes accusative, dative, reflexive, partitive and locative clitics, as shown by the table below:

(1)

	I S	II S	III S	I P	II P	III P
DAT	<i>mi</i>	<i>ti</i>	<i>gli</i> (m) <i>le</i> (f)	<i>ci</i>	<i>vi</i>	<i>loro/gli</i>
ACC	<i>mi</i>	<i>ti</i>	<i>lo</i> (m) <i>la</i> (f)	<i>ci</i>	<i>vi</i>	<i>li</i> (m) <i>le</i> (f)
REFL	<i>mi</i>	<i>ti</i>	<i>si</i>	<i>ci</i>	<i>vi</i>	<i>si</i>
PART	<i>ne</i>					
LOC	<i>ci/vi</i>					

They occur in a special position within the sentence and this is different from the one in which full phrases occur:

- (2) Martina *lo* *legge*.
Martina cl.(acc) reads
'Martina reads it.'

In this case, the accusative clitic *lo* occurs on the left of the finite verb, while usually direct objects occur on the right. The example (2) above shows that Italian clitics must be adjacent to the verb which constitutes their host. In particular, they precede it (*proclitics*) if the verb is finite, while they follow it (*enclitics*) if it is non-finite or imperative. It should be noticed that nothing can intervene between the clitic and the verb.

Clitics occur in a fixed order and this order is usually different from that of the corresponding full phrases:

- (3) a. Martina *me* *lo* *spedisce*.
Martina cl.(dat) cl.(acc) sends
'Martina sends it to me.'
- b. *Martina *lo* *mi* *spedisce*.
Martina cl.(acc) cl.(dat) sends

In Italian, the direct object usually precedes the indirect object if they are both represented by full phrases, while the examples above show that this is not the case if clitics are present.

Another property which is usually associated with clitics is that they cannot be stressed. Furthermore, they cannot be conjoined.

Although these properties are considered the basic characteristics which distinguish clitics from other elements, I have argued in Monachesi (1999a) that even

within a single language like Italian and its dialectal variations, elements which have been traditionally considered clitics deviate from the properties mentioned above in certain ways. In particular, the behavior of Italian clitics shows that they do not constitute a uniform class. Therefore, instead of assuming the existence of a special class *clitics*, the elements of which exhibit different properties, it seems more desirable to assimilate them to other well established categories.

On the basis of the criteria developed in Zwicky (1977), Zwicky & Pullum (1983), Zwicky (1985) to distinguish between clitics and affixes, it can be shown that Italian clitics should be considered lexically attached inflectional affixes, on a par with French clitics (Miller 1992) and Romanian clitics (Monachesi 1998). Motivations come from the following facts:

- Degree of selection with respect to the host, which is always the verb.
- Rigid ordering.
- Clitics do not have wide scope over a coordination of hosts.
- Arbitrary gaps in the combinations.
- Morphophonological idiosyncrasies.
- The phonological behavior of Italian clitics is similar to that of certain affixes (cf. Monachesi (1995)). There is no need to introduce the *Clitic Group* (Nespor & Vogel 1986).

I refer to Monachesi (1999a) for a detailed discussion of the affixal properties of Italian clitics.

3 A lexical approach to cliticization

The lexical analysis which I propose in the case of Italian object clitics is supported by the fact that these elements exhibit the behavior of inflectional affixes, as suggested in the previous section. Clitics are not considered lexical items which are located in a specific position by the rules of syntax, but featural information which is provided in the lexicon and used in morphophonology for the realization of the cliticized verb form.

3.1 Object clitics and simple tenses

I will assume that cliticization is a lexical operation which has both a syntactic/semantic effect and a morphophonological one (cf. also Monachesi (1996), Monachesi (1999a), Miller & Sag (1997)). The former is reflected in the fact that Italian clitics satisfy the subcategorization requirements of the verb they are an argument of. In Italian, clitics are generally in complementary distribution

with full complements; a sentence like the following is not grammatical:¹

- (4) * Martina lo legge il libro.
Martina cl.(acc) reads the book
'Martina it reads the book.'

The syntactic/semantic properties of Italian cliticization can be accounted for by means of a lexical rule:²

- (5) Complement Cliticization Lexical Rule (CCLR)

$$\left[\begin{array}{ll} \text{word} & \\ \text{HEAD} & \text{verb} \\ \text{VAL} \mid \text{COMPS} & \boxed{1} \bigcirc \boxed{2} \\ \text{CLTS} & \text{elist} \end{array} \right] \rightarrow \left[\begin{array}{ll} \text{VAL} \mid \text{COMPS} & \boxed{1} \\ \text{CLTS} & \boxed{2} \text{ list (cl-ss)} \end{array} \right]$$

The rule establishes a relation between non cliticized and cliticized verbal forms.³ In particular, it relates verbs which subcategorize for certain complements with other ones which share the same properties except for the fact that have some complements realized as clitics (cf. the tag $\boxed{2}$, in the rule above). Therefore, the effect of the rule is that complements are removed from the COMPS list of the verb and added as members of the CLTS list. This feature acts as interface to morphophonology since it contains information which is relevant for the realization of the cliticized verb form.

The lexical rule presented above plays a key role in the analysis of cases like the ones represented by sentences in simple tenses:

- (2) Martina lo legge.
Martina cl.(acc) reads
'Martina reads it.'

The CCLR applies to words which are licensed by the lexical entry for *leggere*, the relevant part of which is shown below:

- (6) $\left[\text{COMPS} \langle \text{NP}[\text{acc}] \rangle \right]$

¹ If the full complement is left (or right) dislocated, its cooccurrence with a clitic pronoun is possible. For an analysis of this type of construction, in Italian, which is compatible with the treatment of cliticization proposed here, I refer to Sanfilippo (1998).

² This lexical rule is similar to the one proposed for the analysis of French clitics in various versions of a paper by Miller and Sag (cf. Miller & Sag (1993) and Miller & Sag (1995) and adopted by Monachesi (1993b) and Monachesi (1993a) for Italian.

³ In the rule, \bigcirc is the shuffle operator defined in Reape (1994). Note, that the input and output descriptions in the lexical rule are connected via " \rightarrow ", while in the case of implicational constraints " \rightarrow " will be used.

The effect of the rule is that the direct object is removed from the COMPS list and it is added as member of the CLTS list:

$$(7) \quad \left[\begin{array}{l} \text{VAL} \mid \text{COMPS } \textit{elist} \\ \text{CLTS} \langle \text{NP}[\textit{acc}]_{[\textit{3sgm}]} \rangle \end{array} \right]$$

The necessary featural information is thus available for the spell out of the cliticized verb form in phonology. Furthermore, it is possible to account for the complementary distribution of the clitic and the related phrasal complement in a sentence like (4). As can be seen in (7), the COMPS list of the verb *leggere* is empty because the direct object is a member of the CLTS list, therefore it is not possible for a phrasal argument to be present, if the corresponding clitic is also present.

I have proposed that verbs which have undergone cliticization are enriched with the relevant featural information related to the complements that should be realized as clitics. The crucial issue is then to show how cliticized verb forms are licensed. It is necessary to create a link between the featural information associated with the verb and the morphophonological realization of the clitics. Crucial questions in this respect are how their fixed order can be derived and how it is possible to account for the morphophonological idiosyncrasies (Monachesi 1999a) which characterize Italian clitics.

3.2 A morphophonological analysis of Italian clitics

I will suggest that appropriate constraints relate the information contained in the CLTS list to the actual phonological realization of the pronominal clitic. Clitics are thus the spell out of certain morphosyntactic features of the verb. However, before presenting the relevant constraints, I will introduce the signature assumed, which shares some similarities with that proposed in Bird & Klein (1994). Recall that in HPSG linguistic objects are modeled by *typed feature structures* which encode information in terms of attributes and their values. Types are ordered in a hierarchy and each type can introduce features that are appropriate for it. In what follows I will introduce the types (and subtypes) which play a role in the morphophonological analysis of clitics and their appropriate attributes.

The signature Following Bird & Klein (1994) and most of the work concerned with morphology in HPSG, I suggest that words have more structure than proposed in Pollard & Sag (1994). Therefore, the type *word* has MORPH as additional appropriate attribute, with value *morph*:

$$(8) \quad \begin{array}{l} \textit{word} \\ \text{MORPH } \textit{morph} \end{array}$$

The type *morph* has two subtypes, which are *complex-morph* and *basic-morph*:

$$(9) \quad \begin{array}{c} \textit{morph} \\ \swarrow \quad \searrow \\ \textit{complex-morph} \quad \textit{basic-morph} \end{array}$$

The former plays a role in the analysis of morphological complex words, as in the case of inflection and cliticization. The latter is employed in the analysis of morphological simple words such as roots and uninflected words.

There are certain features which are appropriate for the types introduced above. In particular, *complex-morph* has the attribute AFFIX as appropriate for it:

$$(10) \quad \begin{array}{l} \textit{complex-morph} \\ \text{AFFIX } \textit{affix} \end{array}$$

While *morph* has the attribute STEM as appropriate, which is thus inherited by both of its subtypes (i.e., *complex-morph* and *basic-morph*):

$$(11) \quad \begin{array}{l} \textit{morph} \\ \text{STEM } \textit{stemorword} \end{array}$$

STEM has *stemorword* as value, which is a subtype of *sign*:

$$(12) \quad \begin{array}{c} \textit{sign} \\ \swarrow \quad \searrow \\ \textit{stemorword} \quad \textit{phrase} \\ \swarrow \quad \searrow \\ \textit{stem} \quad \textit{word} \end{array}$$

The type *affix* should be further partitioned in order to distinguish *prefixes* from *suffixes*:

$$(13) \quad \begin{array}{c} \textit{affix} \\ \swarrow \quad \searrow \\ \textit{prefix} \quad \textit{suffix} \end{array}$$

It should also be noticed that the only appropriate attribute for *affix* is PHON:

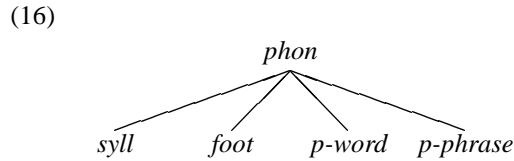
$$(14) \quad \begin{array}{l} \textit{affix} \\ \text{PHON } \textit{phon} \end{array}$$

It is evident that under this approach, clitics and affixes are not considered signs, that is a complex bundle of phonological, syntactic and semantic information, since only phonological information is associated with them.

There are thus similarities with realizational approaches to morphology in which morphemes do not exist as lexical entries, but they represent the phonological realization of certain morphosyntactic properties of the host they combine with. However, in this case a feature is employed to spell out the phonological information and not a function. In this way, it is also possible to encode the prosodic properties of clitics and affixes. In particular, I follow Bird & Klein (1994) in assuming that *phon* should have certain appropriate features which are necessary to distinguish the segmental structure:

- (15)
- phon*
 SKEL list of segments
 CONS list of consonants
 VOW list of vowels

In order to encode prosodic information it is necessary to distinguish (at least) the subtypes: syllable, foot, prosodic word and phonological phrase:



It should be noticed that the partition above encodes a Prosodic Hierarchy similar to that proposed by Nespor & Vogel (1986).

The realization of the Italian clitics Assuming the signature introduced above, it is possible to formulate constraints that account for the realization of the cliticized verb form.

Given example (2), in which the cliticized verb form *lo legge* 'he reads it' is present, the following constraint is responsible for the realization of the clitic *lo*:

- (17)
- $$\left[\begin{array}{l} \text{complex-morph} \\ \text{STEM} \mid \text{SS} \mid \text{L} \mid \text{C} \mid \text{CLTS} \left\langle \text{NP} \left[\text{acc} \right]_{[3sgm]} \right\rangle \end{array} \right] \rightarrow \left[\begin{array}{l} \text{affix} \\ \text{AFFIX} \mid \text{PHON} \mid \text{SKEL} \left\langle \text{lo} \right\rangle \end{array} \right]$$

It states that if there is a STEM with a CLTS list with one element which is a third person singular, masculine, accusative NP, it must be realized as a clitic whose phonological form is *lo*.

Certain generalizations can be expressed within this system: for instance, in the ordering constraints that regulate the position of the clitic with respect to the host. In

particular, a constraint like the following states that proclitics should precede finite verbs. This is due to the fact that the phonology of the clitic indicated by tag ① should precede that of the verb, indicated by tag ②:

- (18)
- $$\left[\begin{array}{l} \text{word} \\ \text{MORPH} \mid \text{STEM} \left[\begin{array}{l} \text{complex-morph} \\ \text{word} \\ \text{SS} \mid \text{L} \mid \text{C} \mid \text{H} \left[\begin{array}{l} \text{verb} \\ \text{VFORM fin} \end{array} \right] \end{array} \right] \end{array} \right] \mid \text{PHON} \left[\begin{array}{l} \text{pw} \\ \text{SKEL } \textcircled{1} \oplus \textcircled{2} \end{array} \right] \end{array} \right] \rightarrow \left[\begin{array}{l} \text{complex-morph} \\ \text{STEM} \left[\begin{array}{l} \text{word} \\ \text{PHON} \left[\begin{array}{l} \text{pw} \\ \text{SKEL } \textcircled{2} \end{array} \right] \end{array} \right] \mid \text{AFFIX} \left[\begin{array}{l} \text{prefix} \\ \text{PHON} \left[\begin{array}{l} \text{syll} \\ \text{SKEL } \textcircled{1} \end{array} \right] \end{array} \right] \end{array} \right] \end{array} \right]$$

A similar constraint can be formulated to account for the position of enclitics. It should be noted that the constraints above encode also information about prosodic constituency. In particular, the stem forms a prosodic word to which the clitic combines as syllable in a recursive prosodic word. I refer to Monachesi (1999a) for further details on the motivations behind such representation.

It is through the interaction of the lexical rule in (5) and the constraints in (17) and (18) that a cliticized verb form like *lo legge* 'he reads it' is licensed, as shown by the description in Figure 1. It states that the verb has an empty COMPS list, while the information about the direct object is contained in the CLTS feature: this is a consequence of the lexical rule in (5). The constraint in (17) triggers its spell out as the clitic *lo*. Since the verb *legge* is a finite one, the clitic will precede it, according to the constraint in (18).

In Monachesi (1999a), I have argued at length that Italian clitics merge together into a morphological unit which combines with the verb. However, this unit is not the result of a word formation process such as template morphology (Simpson & Withgott 1986), but it represents the phonological spell out of certain morphosyntactic features of the verb. It is thus possible to account for the ordering of the clitics in the cluster. Under this view, the issue of their ordering doesn't even arise since the combination of two or more clitics is conceived as a new

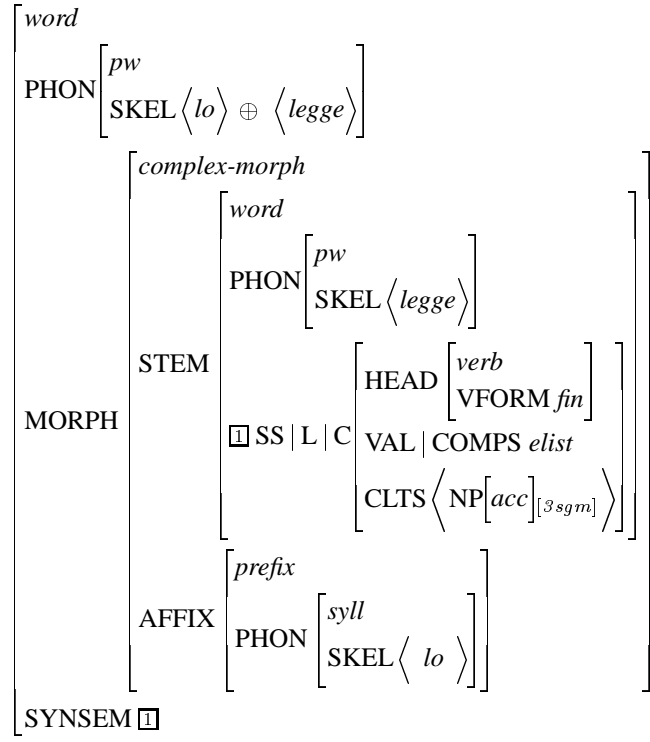


Figure 1: The cliticized verb form *lo legge*

unit, which doesn't result from the combination of two individual forms. It is clear that previous accounts have failed in providing a principled explanation of clitic ordering: a templatic approach is simply a mere description of the facts. It might thus be more reasonable to assume that the different combinations of clitics are new units, which are 'stored' as such in the lexicon. An additional advantage of the approach I propose is that it can provide a straightforward account of the morphophonological idiosyncrasies in which Italian clitics are involved.

It seems thus desirable to adopt the morphophonological analysis already presented to account for a cliticized verb form such as *mi ci porta* 'he brings me there' where two clitics surface. A constraint such as the following can be suggested to deal with the realization of the clitics:

$$\begin{array}{l}
(19) \\
\left[\begin{array}{c} \text{complex-morph} \\ \text{STEM} \mid \text{SS} \mid \text{L} \mid \text{C} \mid \text{CLTS} \langle \text{NP} [dat]_{[1sg]}, \text{NP} [loc] \rangle \end{array} \right] \\
\rightarrow \left[\begin{array}{c} \text{AFFIX} \left[\begin{array}{c} affix \\ \text{PHON} \mid \text{SKEL} \langle mici \rangle \end{array} \right] \end{array} \right]
\end{array}$$

It states that if there is a STEM with a CLTS list with two elements which are a dative, first person NP and a

locative NP, they are realized as a clitic whose phonology is *mici*.

Clitics form thus a unit which combines with the verb. This is particularly evident in those cases of morphophonological idiosyncrasies in which the form of the clitic that surfaces is often different from the form which would occur in isolation. I refer to Monachesi (1999a) for a detailed analysis of these cases within the approach sketched here.

4 Clitic climbing

The lexical analysis I have proposed for Italian clitics can deal with simple cases of cliticization in which the clitic combines with the verb that subcategorizes for it. However, Italian clitics have a peculiar property since they may appear on a verbal head of which they are not an argument:

- (20) Martina lo vuole leggere.
 Martina cl.(acc) wants to read
 'Martina wants to read it.'

This phenomenon which goes under the name of *clitic climbing* is triggered in Italian by modal, aspectual and

motion verbs (i.e. restructuring verbs), auxiliary verbs, as well as causative and perceptual verbs.

It has been claimed in the literature (cf. Sportiche (1996)) that clitic climbing is incompatible with a lexical analysis of cliticization such as the one advocated here because in this construction the clitic bears no lexical relationship to the main verb it is attached to, but instead it is lexically related to the embedded verb. However, I will challenge such a claim by showing that a lexical analysis of clitic climbing is indeed possible and desirable. It is based on the idea of *argument composition* (Hinrichs & Nakazawa 1990), according to which the trigger verb inherits the complements of the embedded verb, including those ones which might be realized as clitics.

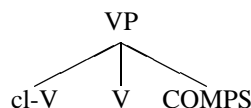
In the rest of the paper I will focus on clitic climbing in the presence of Italian restructuring verbs. I will show that a lexical approach to clitic climbing can properly deal with the relevant Italian data. I refer to Monachesi (1999a) for an account, in terms of argument composition, of the other properties of restructuring verbs such as climbing of the clitic *loro*, long NP-movement, *tough* constructions and auxiliary selection.

4.1 Argument composition and clitic climbing

As argued in Monachesi (1993a) and in Monachesi (1993b), an analysis of restructuring verbs in terms of argument composition can provide an adequate account of Italian clitic climbing, while being compatible with a lexical approach to cliticization. However, before showing this, I will address the crucial issue of the appropriate syntactic structure of restructuring verbs.

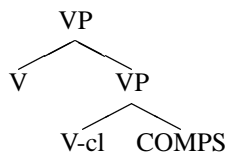
Rizzi (1982) proposed that restructuring verbs are associated with different syntactic structures. He argued that while there is motivation to let the embedded verb and its complements form a constituent if no clitic climbing occurs, this is not the case if clitic climbing is triggered. Therefore, restructuring verbs should be associated with the following structures:⁴

(21) Flat structure



⁴The situation is different at the prosodic level. It can be argued on the basis of the phonological rules of *Raddoppiamento Sintattico*, *Stress Retraction* and *Final Lengthening* (Nespor & Vogel 1986) that the restructuring verb and the embedded one form a Phonological Phrase whether clitic climbing occurs or not. Italian restructuring verbs constitute thus additional evidence in favor of the non-isomorphism between prosodic and syntactic constituents given that two different syntactic structures correspond to a single prosodic configuration. Cf. Monachesi (1999b) for further details.

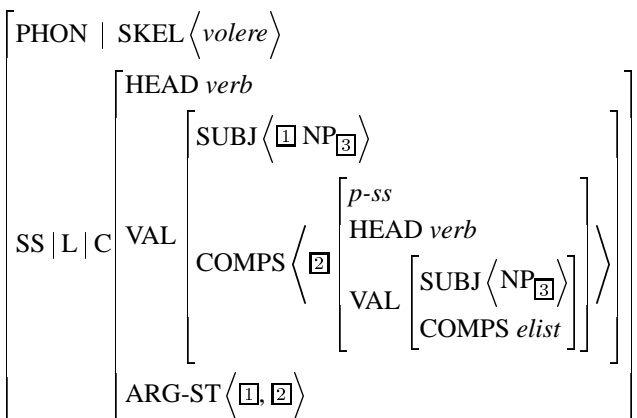
(22) Hierarchical structure



The flat structure is related to the clitic climbing configuration while the hierarchical structure represents those cases where the clitic remains attached to the lower verb.

A restructuring verb such as *volere* subcategorizes thus for a saturated VP (i.e. a VP with an empty COMPS list):

(23)



This lexical entry plays a role in those cases in which clitic climbing doesn't occur.

There is, however, an alternative lexical entry associated with *volere*, which is presented in Figure 2. In this case, the verb subcategorizes for a verbal complement and for the arguments of the latter.⁵ It should be noticed that the notation \oplus stands for the append relation while the tag $\boxed{3}$ indicates structure sharing between the elements in the COMPS list of the infinitival and that of the restructuring verb. This is the mechanism of argument composition which ensures that complements of the embedded verb become complements of the restructuring verb. The condition *CLTS elist* ensures that argument composition occurs only if the embedded verb doesn't constitute a cliticized verb form.

Given the lexical entry in Figure 2, it is possible to account for cases of clitic climbing like those in (20), repeated here:

(20) Martina lo vuole leggere.

Martina cl.(acc) wants to read

'Martina wants to read it.'

⁵Given these different lexical entries, two structures will be created if the subcategorization slots are filled by complements instead of clitics: a flat one and one where the lower verb and its complements form a constituent. However, data concerning long NP-movement, *tough* constructions and auxiliary selection show that they are both necessary also when clitics are not present.

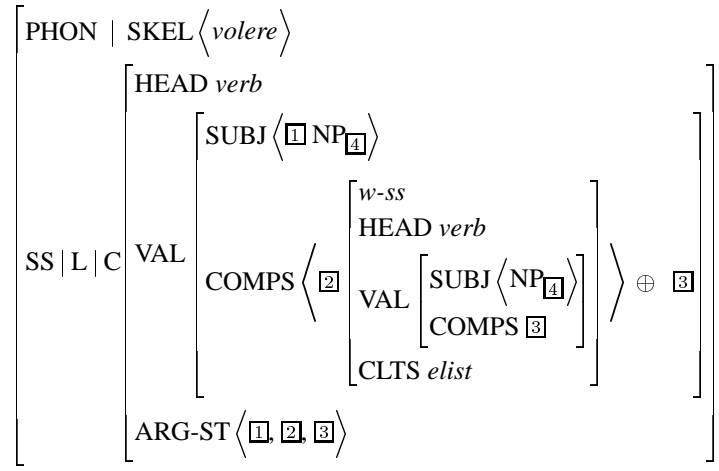


Figure 2: Lexical entry for *volere* with Argument Composition

The verb *vuole* subcategorizes for the verbal complement and for the arguments of the latter, creating thus a clause union effect:

(24)

$$\left[\text{COMPS} \left\langle \text{V} \left[\text{COMPS} \langle \boxed{1} \rangle \right], \boxed{1} \text{NP}[\text{acc}] \right\rangle \right]$$

The Complement Cliticization Lexical Rule presented in (5) can then apply to license cliticized verbs. Recall that the effect of the rule is that the relevant complement is removed from the COMPS list and added as value of the CLTS list:

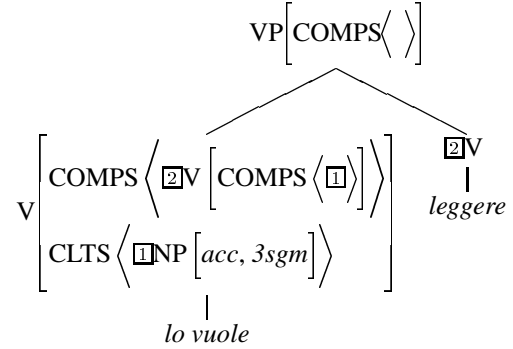
(25)

$$\left[\begin{array}{l} \text{VAL} \mid \text{COMPS} \left\langle \text{V} \left[\text{COMPS} \langle \boxed{1} \rangle \right] \right\rangle \\ \text{CLTS} \langle \boxed{1} \text{NP}[\text{acc}]_{[3sgm]} \rangle \end{array} \right]$$

This information is relevant for the spell out of the cliticized verb form *lo vuole* by means of the realizational constraint presented in (17).

A flat structure is associated with example (20), as illustrated here:

(26)



Cases where the clitic doesn't climb, as in the example below, are parallel to the simple cases of cliticization:

(27)

Martina vuole leggerlo.
Martina wants to read cl.(acc)
'Martina wants to read it.'

The Complement Cliticization Lexical Rule applies to words which are licensed by the lexical entry for *leggere*, the relevant part of which is shown here:

(28)

$$\left[\text{COMPS} \left\langle \boxed{1} \text{NP}[\text{acc}]_{[3sgm]} \right\rangle \right]$$

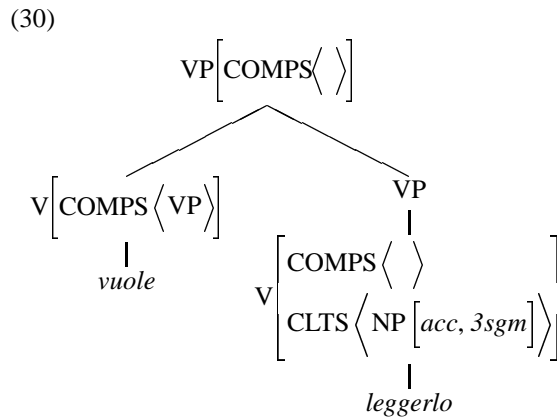
The effect of the rule is that the direct object is removed from the COMPS list and it is added as member of the CLTS list:

(29)

$$\left[\begin{array}{l} \text{VAL} \mid \text{COMPS} \text{elist} \\ \text{CLTS} \left\langle \boxed{1} \text{NP}[\text{acc}]_{[3sgm]} \right\rangle \end{array} \right]$$

The cliticized verb form *leggerlo* is eventually spelled out by means of the constraint presented in (17). Recall, however, that additional constraints are responsible for proclisis and enclisis, accounting thus for the different position of clitic *lo* in (20) and (27).

In this case, the main verb *vuole* subcategorizes for a VP, according to the lexical entry in (23), and there is a structure like the following:



As mentioned before, only a specific set of verbs trigger clitic climbing. An advantage of the argument composition approach is that it is lexically constrained, therefore the mechanism is triggered only by restructuring verbs. Consider a sentence like (31):

- (31) * Martina lo promette di leggere.
 Martina cl.(acc) promises to read
 ‘Martina promises to read it.’

It is ungrammatical because *promettere* doesn’t belong to the class of restructuring verbs, therefore it can only subcategorize for a saturated VP and not for the arguments of the verbal complement.

In Italian, it is possible to have several restructuring verbs embedded one under the other. In this case the clitic can attach to any of the verbs:

- (32) a. Martina lo vuole poter leggere.
 Martina cl.(acc) wants to can read
 b. Martina vuole poterlo leggere.
 Martina wants to can cl.(acc) read
 c. Martina vuole poter leggerlo.
 Martina wants to can read cl.(acc)
 ‘Martina wants to be able to read it.’

These data receive a straightforward interpretation under the argument composition analysis. In (32a), the first restructuring verb inherits the complement of the verb that follows it, which in turn inherits the complement of the infinitival verb, which is realized as a clitic. The subcategorization requirements of the last verb are thus passed

up to the main verb. As for (32b), the middle verb subcategorizes for the complement of the embedded verb as a consequence of argument composition and this element is then realized as a clitic. The last example is similar to the one presented in (27). In particular, the Complement Cliticization Lexical Rule applies to the lower verb in order to obtain the featural information necessary for the realization of the cliticized verb form *leggerlo*.

Clitic climbing in Italian has an interesting property. If there are two clitics which originate as complements of the same verb, they cannot be separated, they must climb together:

- (33) a. * Vito lo voleva spedirgli.
 Vito cl.(acc) wanted to send cl.(dat)
 b. Vito glielo voleva spedire.
 Vito cl.(dat) cl.(acc) wanted to send
 ‘Vito wanted to send it to him’

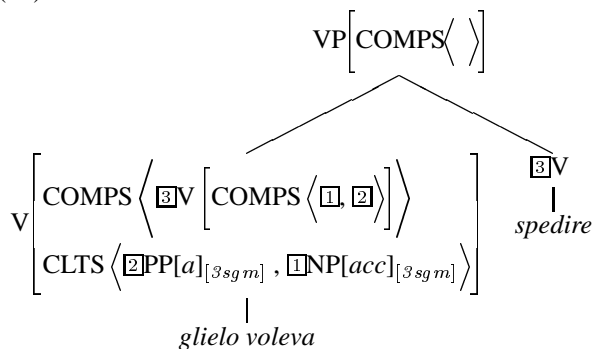
The condition that the CLTS list of the embedded verb must be empty, as stated in the lexical entry in Figure 2, enforces the climbing together of the two clitics. The subcategorization requirements of the embedded verb can be passed up to the main verb only if the verbal complement doesn’t constitute a cliticized verb form. This implies that the CLTS list of the lower verb must be empty while this is not the case in (33a) where it contains the information related to the dative clitic. This is because the Complement Cliticization Lexical Rule applies to the lower verb, removing the complement from the COMPS list and adding the information to the CLTS feature:

- (34)
- $$\begin{array}{c}
 \left[\text{VAL} \mid \text{COMPS} \langle \text{NP} \rangle \right] \\
 \left[\text{CLTS} \langle \text{PP}[a]_{[3sgm]} \rangle \right]
 \end{array}$$

It is thus not possible for the higher verb to subcategorize for the object since the subcategorization requirements of the lower verb cannot be inherited and the sentence is correctly ruled out.

As for the grammatical example (33b), the verb *volere* subcategorizes for the phrasal complements and for the lexical verbal complement, via the mechanism of argument composition. The Complement Cliticization Lexical Rule applies in order to remove the complements from the COMPS list and add them to the CLTS list. This will create the conditions for the realization of the cliticized verb form *glielo voleva*.

The following is the structure associated with example (33b):



Also in this case there is a flat structure where the higher verb has inherited the complements of the lower one which are spelled out as clitics.

5 Conclusions

In this paper, I have proposed a lexical analysis of Italian cliticization, which is based on the assumption that Italian clitics are affixlike elements. Furthermore, I have shown that the analysis in terms of argument composition interacts in the appropriate way with the analysis of cliticization, providing an adequate account of the different aspects of clitic climbing, contrary to Sportiche (1996).

6 References

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