

Some Notes on Cliticization:

Attract or Greed*

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1. Introduction

Chomsky (1993: 33) states that Move α applies to an element α only if morphological properties of α itself are not otherwise satisfied. Thus this operation cannot apply to α in order to satisfy properties of a different element β . In this respect, Last Resort is taken as “self-serving,” which is generally called *Greed*. In Chomsky (1995: chapter 4), on the other hand, Greed is abandoned on conceptual grounds, and the operation of movement is reinterpreted as “attraction,” which is opposite to Greed in that a landing site (Target) causes another element to move there. This is called *Attract*. It has been suggested in subsequent studies that only Attract derives overt and covert movement of lexical items.¹

In this paper, contrary to the recent trend, we will claim that Greed is still needed and otherwise some elements are not licensed. What we will deal with here is *clitics*. It will also be shown that cliticization cannot be reduced to Case-checking or another type of movement driven by Attract; it cannot be excorporation. Instead, we will propose that clitics are attached to their host in order to satisfy their own property, the [+affix] feature; that once a clitic is attached to its own host, it can move with its host but cannot excorporate. Our proposals are confirmed by the syntactic position of clitics in various kinds of sentences, e. g. causative constructions,

infinitival clauses, restructuring constructions and so on. This paper deals only with clitics which occupy a different position from a position which the corresponding full NPs usually occupy, and does not deal with ‘phonological’ clitics or ‘ambiguous’ clitics for expository purposes.

The organization of this paper is as follows. In section 2, we provide some theoretical assumptions concerning clause structure, checking configurations, feature specification of clitics and so on. Section 3 reviews previous studies of cliticization and points out their problems. Section 4 argues that cliticization is subject to Greed by examining several constructions with clitics. Section 5 contains concluding remarks of this paper.

2. Preliminaries

2.1. Theoretical Assumptions

Throughout this paper, we basically adopt Chomsky’s (1995) Minimalist Program, under which no AGRP’s are assumed. Given this assumption, we roughly have the following clause structure for simple sentences:

- (1) [_{CP} C [_{TP} T [_{vP} Subj *v* [_{vP} V Obj]]]]

Here Subj and Obj are used for referring to subject and object, respectively. We also assume that perfect constructions have an extra functional projection called Aspect Phrase (AspP). This functional projection, which is not assumed in Chomsky (1995), is confirmed by agreement between a perfect participle and its object, as in (3).²

- (2) [_{CP} C [_{TP} T [_{vP} V [_{AspP} Asp [_{vP} Subj *v* [_{vP} V Obj]]]]]]

- (3) Swæ clæne hio wæs oðfeallenu on Angelcynne.

So completely it was decayed in England

(CP 3. 13/Ono and Nakao (1980: 375))

Given that agreement is licensed through the Spec-Head relation within AspP, the subject *hio* ‘it’ and the unaccusative *oðfeallenu* ‘decayed’ in (3)

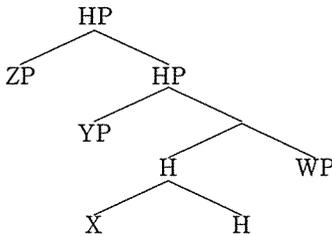
must move up there to establish the checking relation. This is schematically illustrated in (4).

(4) . . . wæs [_{ASpP} hio_i oðfeallenu_j [_{VP} t_j t_i [_{PP} on Angelcynne]]]

If AspP is absent, no Spec-Head relation should be established between the participle and its subject in (4).

Let us next consider the checking domain in (5).

(5)



We assume with Chomsky (1995) that an XP-adjoined position, ZP, which was assumed to be within the checking domain in Chomsky (1993), is not included in the checking domain. Thus, checking only takes place either through the Spec-Head relation or through the Head-Head relation.

Here, we make a remark about the Case feature checking. In general, the Case feature is checked through the Spec-Head relation or less often through the Head-Head relation. This applies to structural Case. How about inherent Case? Chomsky (1995) gives no explicit suggestion. In this paper, we assume that the inherent Case feature, dative or genitive, is checked off when a nominal with it merges with a predicate. This suggests that such nominals never move for Case feature checking.

Last Resort can be understood in two opposite ways: Attract and Greed.³ The difference between them is whether a target or a mover motivates movement. Attract and Greed are defined in (6) and (7), respectively.

(6) Attract

K attracts F if F is the closest feature that can enter into a checking relation with a sublabel of K. (Chomsky (1995: 297))

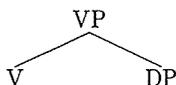
(7) Greed

Move raises α only if morphological properties of α itself would not otherwise be satisfied in the derivation. (Chomsky (1995: 261))

What motivates movement is a feature of a target in Attract (cf. (6)); it is a feature of mover in Greed (cf. (7)). In most cases, whether checking obeys Attract or Greed, features of both a target and a mover are checked off. Cliticization, however, is “greedy” in a strict sense: only features of a mover are erased; it cannot be reduced to any property of a target.

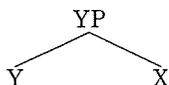
As for the status of projections, we suppose that it is determined from the structure in which the projection appears. This means that projections are not inherent to categories, but relational properties of them. For instance, a category that does not project any further is a maximal projection XP; a category that is not a projection at all is a minimal projection X^{min} . Any other projection is an X' , which is invisible for computation and no element can attach to.⁴ Standard X-bar theory is largely eliminated, and thus there is no such category as a nonbranching projection. Given this, unaccusative and unergative verbs would have the identical structure:⁵

(8)



One of the notable consequences is that an item can be an X^0 and an XP at the same time. Let us take the structure in (9) for illustration.

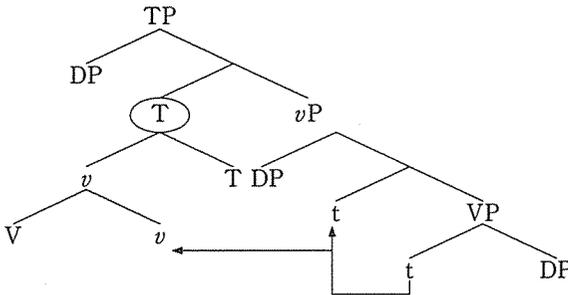
(9)



Here, X is a minimal projection in the sense that it is not a projection of a category at all; X is also a maximal projection in the sense that it projects no further. A typical instance of this type of projection is clitics. Clitics are generated as an XP in a θ -position, and raised to attach to a head, a minimal projection (their attachment to a head is an essential property of clitics, I assume). In short, a clitic shares both X^0 and XP properties: it is possible that a clitic is attached to a head through the specifier of a projection.

An X^0 category is classified into two types: one is a head and the other a category formed by adjunction to the head X , which projects. The former consists of only one item, while the latter has an adjunction structure, such as T in (10).

(10)



In (10), V is adjoined to v , and the complex $V-v$ is further adjoined to T . The topmost T , circled in (10), is also X^0 , and this is referred to as H^{0max} .

Before concluding this subsection, we make some comments on the formal features of clitics. Clitics are a subcategory of pronominals, which means that they have the $[+D]$ feature just like pronominals. Under the standard minimalist assumption, the $[+D]$ feature of clitics is an interpretable feature and need not be checked off. Similarly, clitics have the Case feature, which is generally assumed to be uninterpretable. Thus, the Case feature of clitics must be erased through the derivation. If the Case

feature of a clitic is not checked off, it yields a violation of the Case Filter. The strength of this feature may vary according to languages. Φ -features of clitics may be inherent. This is supported by the fact that each form of clitics is fixed. Finally, clitics have the [+affix] feature.⁶ This follows from the fact that clitics always require their host. As for the host of clitics, this paper supposes that it is a functional head, following Kayne (1991) among others. Which functional head a clitic is really adjoined to may vary from language to language.

To summarize the formal features of clitics:

- (11) a. categorial feature [+D] [+Interpretable]
- b. Case feature [+Case] [–Interpretable]
- c. affixal feature [+affix] [–Interpretable]

2.2. Syntactic Clitics vs. Phonological Clitics

In the previous subsection, it was shown that clitics are a maximal and minimal projection and that they share both properties. In this section, we will introduce the definition of clitics by Hopper and Traugott (1993) and further distinguish ‘syntactic’ clitics, which is a topic of this paper, from ‘phonological’ ones. The two types of clitics have been regarded as belonging to the same category, but they should be distinguished. Syntactic clitics are those derived syntactically and phonological clitics are licensed in phonological component.

Hopper and Traugott (1993: 5) state that clitics are forms that are not affixes, but are constrained to occurring next to an autonomous word, known as host. Depending on their position relative to the host, clitics can be divided into two groups: enclitics and proclitics. The latter precede their host and the former follow their host. Examples of each type are given in (12)-(13).

(12) Lui parler serait une erreur.
 him.Dat to-speak would-be an error

(13) Parlargli sarebbe un errore.
 to-speak-him.Dat would-be an error.

(Kayne (1991: 648))

(12) and (13) are the French and Italian infinitives, respectively. In (12), *lui* ‘him’ precedes the infinitive *parler* ‘to-speak’ (proclitic); in (13) *gli* ‘him’ follows the infinitive *parlar* ‘to-speak’ (enclitic). In the latter case, the complex verb-clitic is taken as one word.

Hopper and Traugott further make a distinction between “simple” and “special” clitics: simple clitics occur in a position where the full form would occur; special clitics occur in a position where an equivalent full form would not usually occur. This paper focuses only on the special clitics because it is difficult to see whether the simple clitics are ‘syntactically’ cliticized and because we rule out a possibility of ‘phonological’ clitics, as in (14).

(14) a. John has left. → John’s left.

b. Pick them up. → Pick ‘em up.

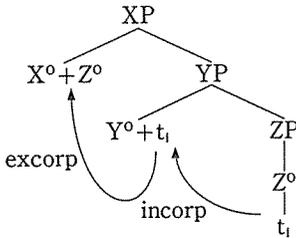
Specifically, ‘weak’ pronouns, as in (14), may be taken as mere phonological reduction. We suggest that cliticization of this type takes place in phonological component, not in syntax; thus this paper is not concerned with clitics like (14).⁷

3. Previous Studies

3.1. Roberts (1991)

This section reviews Roberts (1991) and points out some problems with his analysis. Roberts argues for the possibility of excorporation illustrated in (15).

(15)



(Roberts (1991: 211))

This type of excorporation is ruled out, as mentioned by himself, in the genuine morphological cases, such as affixation. Indeed, Baker (1988) suggests that the derivation in (15) is ruled out in terms of a ban on word-internal traces or in terms of ECP. Under the Minimalist Program adopted here, too, such derivations might be ruled out. Chomsky (1995) suggests the property of Morphology, based on the theory of Halle and Marantz (1993):

(16) Morphology deals only with X^0 categories and their features.

(Chomsky (1995: 319))

At Spell-Out, the structure already formed enters Morphology, located between Spell-Out and PF.⁸

Roberts further argues that cliticization, as in (17), and verb raising, as in (18), are instances of excorporation illustrated in (15).

(17) *La volevo t chiamare t ieri.*

her I-wanted to-call yesterday

'Yesterday I wanted to call her up.'

(18) *Gisteren had ik [mijn vriendin op t] t willen bellen.*

yesterday had I my girlfriend up want call

'Yesterday I wanted to call my girlfriend up.' (ibid. : 212)

Examples like (17) are called clitic climbing. According to his approach, the clitic *la* 'her,' which is associated with the infinitive *chiamare* 'to-call,' is

of the clitic is an uninterpretable feature, it is automatically deleted (or probably erased) if it is adjoined to an X^0 element. Thus, the clitic cannot move out of the complex structure.

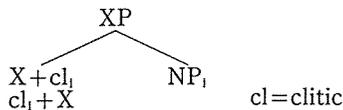
3.2. Toyoshima (1997a, b)

This section briefly reviews Toyoshima's (1997, 1999) approach. In his approach, all lexical elements, whether maximal or minimal projections, move to the specifier position. According to his approach, clitics also move to a specifier position, but this is not theoretically plausible. Given that the affixal feature of clitics is deleted only by adjunction to a head, this feature remains unchecked if a clitic moves to the specifier position. As for cliticization, indeed, he takes a position of a base-generated approach, under which clitics do not move and they are inserted along with their own host. This approach also turns out to be theoretically unmotivated as we will show in the following section.

3.3. Borer (1982)

Borer (1982) proposes a base-generated approach to clitics, especially in clitic-doubling constructions. The structure Borer's proposes is roughly like (21).

(21)



In (21), a clitic is base-adjoined to a host (verb, noun or preposition) as features, and its associating NP is generated in a 'normal' position. Borer's approach appears to properly account for clitic doubling like (22), but it is not plausible in two respects.

(22) a. L'am vazutpe Jon.

[I] him-have seen ACC Jon

b. Lo vimoso Juan.

[we]him saw to Juan (Cardinaletti (1999: 43))

In (22a), *lo* 'him' corresponds to the object of the verb *vimos* 'saw,' and it absorbs Case of the verb. As for an extra NP, a Case-marker is generally present on the NP. In (22a) and (22b), *pe* and *a* are Case-markers for *Jon* and *Juan*, respectively.

A first deficiency is that in clitic-doubling constructions, an extra NP always occurs with its own Case-assigner, as shown in (22). If base-generation of clitics is interpreted as head merge of a clitic and a host, no checking takes place, thereby the Case feature of the host verb remains unchecked. Then, the derivation will crash. If the clitics are generated in the object position, on the other hand, they can check the Case feature of the main verbs on the way to their host (cf. section 4).

A second one is observable in perfect constructions with a clitic. In these constructions, an agreement ending appears on a participle. Given that agreement is a reflex of the Spec-Head relation within AspP (cf. (2)), Borer's analysis could not explain the following contrast concerning participle agreement:

(23) a. Ho letto spesso queste riviste.

[I] have read often these magazines.Fem.Pl

b. Le ho lette spesso.

[I] them.Fem.Pl have read.Fem.Pl often

(Cardinaletti (1999: 43))

In (23a), *queste riviste* 'these magazines' is the object of the verb *letto* 'read' and no agreement ending appears on the participle. By contrast, if the object is a clitic, as in (23b), the participle has the agreement ending *-e* on it. The present analysis based on clitic movement straightforwardly

explains linguistic facts like (23), as we will see below. Because of these two deficiencies, therefore, this paper does not take the base-generated approach to clitics like Borer's.

4. Cliticization as Greed

This section examines various types of constructions involving special (or syntactic) clitics: simple finite clauses, restructuring constructions, nonfinite clauses, and causative constructions.

4.1. Finite Clauses

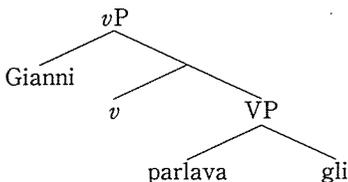
Let us begin by taking Italian example (24) for illustration.

- (24) a. Gianni gli parlava.
 John him.Dat spoke

- b. *Gianni parlavagli. (Kayne (1989: 214))

In (24a), the clitic *gli* 'him' precedes the finite verb *parlava* 'spoke,' while the clitic follows the finite verb in (24b), which is ungrammatical. The initial structure of example (24a) is given below.

(25)



In order to derive the final structure of (24a) from the one in (25), we have some possible derivations. One of them proceeds as follows: V moves up to the small *v* and the small *v* attracts the clitic for checking the [+strong] feature.⁹ There are (at least) two options for the next step. One is to adjoin the clitic to the complex V-*v*, thereby the [+affix] feature of the clitic as

well as the Case feature of it is erased under the natural minimalist assumption. The other option is to move the clitic into the outer spec of the small *v*. In this case only the Case feature is checked off. Both options raise no problem with respect to their categorial status, because of the peculiar property of clitics. If the former option is selected, at the following step the complex clitic-V-*v* moves up to T and the subject also moves to [Spec, TP]. As a result, we have the structure in (24a). This is schematically illustrated in (26).

- (26) a. [_{VP} Gianni gli_j-parlava_i [_{VP} t_i t_j]]
 b. [_{TP} [_T gli_j-parlava_i] [_{VP} Gianni t_{i+j} [_{VP} t_i t_j]]]
 c. [_{TP} Gianni_k [_T gli_j-parlava_i] [_{VP} t_k t_{i+j} [_{VP} t_i t_j]]]

If we select the latter option, on the other hand, the complex V-*v* moves up to T and then the clitic is adjoined to T. After that, the subject is raised to [Spec, TP]. Although this derivation also yields the same structure as (26c), it involves one more step than the first one. This is because in the latter derivation, which is illustrated in (27), Case checking and the affixal feature checking take place separately.

- (27) a. [_{VP} gli_j [_{VP} Gianni parlava_i [_{VP} t_i t_j]]]
 b. [_{TP} parlava_i [_{VP} gli_j [_{VP} Gianni t_i [_{VP} t_i t_j]]]]]
 c. [_{TP} Gianni_k [_T gli_j-parlava_i] [_{VP} t_k t_i [_{VP} t_i t_j]]]

Both derivations converge. Based on the analysis depending on local economy, the two derivations might be equally economical. As opposed with local economy, global economy would lead us to select the derivation of (26). This might be because (26) involves fewer steps than (27). It is not the main purpose of this paper to determine which is better global economy or local economy, and this is left open. As made clear below, however, a derivation of complex constructions should proceed as in (27), though it includes more steps (cf. note 10).

4.2. Restructuring and Causative Constructions

Restructuring and causative constructions are very interesting constructions. In these constructions, a clitic object of an embedded verb is adjoined not to the embedded verb but to the matrix verb. This is called clitic climbing. Let us begin by considering the examples of causative constructions in (28).

(28) a. Elena fa lavoro Gianni.

Elena makes work Gianni

b. Elena lo fa lavorare.

Elena him.Masc.Sg.Acc makes work

'Elena makes him work.'

c. *Elena fa lavorar-lo.

Elena makes work-him.Masc.Sg.Acc (Guasti (1997: 129-130))

In (28a) the embedded subject *Gianni* appears after the embedded verb *lavorare* 'work.' Since *Gianni* is the object of the matrix verb *fa* 'makes,' its Case feature may be checked by the verb. This is confirmed by the clitic form in (28b). As shown in (28b) and (28c), the clitic *lo* 'him' must precede the matrix verb and cannot follow it. This word order is readily accounted for if we assume that clitics are adjoined to the matrix T, which the matrix verb has been attached to. The derivation of (28b) will proceed as in (29).

(29) a. [_{VP} lavorare lo]

b. [_{VP} v [_{VP} fa [_{VP} lavorare lo]]]

c. [_{VP} fa_I-v [_{VP} t_i [_{VP} lavorare lo]]]

d. [_{VP} lo_j [_{VP} fa_I-v [_{VP} t_i [_{VP} lavorare t_j]]]

e. [_{TP} T [_{VP} lo_j [_{VP} fa_I-v [_{VP} t_i [_{VP} lavorare t_j]]]]]

f. [_{TP} fa_I-v-T [_{VP} lo_j [_{VP} t_i' [_{VP} t_i [_{VP} lavorare t_j]]]]]

g. [_{TP} lo_j-fa_I-v-T [_{VP} t_j [_{VP} t_i' [_{VP} t_i [_{VP} lavorare t_j]]]]]

h. [_{TP} Elena lo_j-fa_I-v-T [_{VP} t_j [_{VP} t_i' [_{VP} t_i [_{VP} lavorare t_j]]]]]

The embedded subject has its Case feature checked, and then is adjoined to

T.¹⁰ It should be noted here that in this construction the clitic cannot be adjoined to the small *v* in order to check the Case feature. This is because if it happens the affixal feature of the clitic is also deleted at the same time. Consequently the clitic cannot move any further. In (28c), the clitic is adjoined to the embedded verb. Such adjunction is prohibited probably because it is lowering.

Here let us return to the issue of economy mentioned in the previous section. As far as simple sentences are concerned, the derivation including cliticization to the small *v* and cluster movement (cf. (26)) is more economical than that involving movement from the outer spec of the small *v* to T (cf. (27)). As just demonstrated, however, in causative constructions the latter derivation is preferred. Given the above discussion, it could be concluded that clitics are adjoined to T in simple sentences and complex sentences, such as causative or restructuring constructions. In what follows, T is taken as the clitic position for convenience.¹¹

Next we consider causative constructions with transitives, as in (30).

(30) Elena la fa riparare a Gianni.

Elena it.Fem.Sg.Acc makes repair to Gianni.

(Gausti (1997: 127))

The sentence can be easily accounted for in almost the same way as causative constructions with intransitives in (28). First, the object *la* 'it' moves to the specifier of *riparare* 'repair' in order to check the Case feature. Second, the object clitic moves up to T, as assumed above, after the matrix verb *fa* 'makes' is raised to T.

Let us next turn to restructuring constructions, as in (31).

(31) Giovanni lo vuole leggere.

Giovanni it wants to-read

'Giovanni wants to read it.'

Sentences like (31) also receive a straightforward account just as in the

causative constructions. The clitic *lo* 'it' moves to the specifier of the small *v* and further goes up to T, where the [+affix] feature of the clitic is checked off.¹²

4.3. Nonfinite Clauses

This section is concerned with nonfinite clauses. Italian and French infinitives exhibit a contrast with respect to the relative order between a verb and clitic. In Italian clitics follow infinitives; in French clitics precede infinitives. This contrast is given in (32)-(33).

(32) a. Parlargli sarebbe un errore.
 to-speak him.Dat would-be an error

b. *Gli parlare sarebbe un errore.

(33) a. Lui parler serait une erreur.
 him.Dat to-speak would-be an error

b. *Parler-lui serait une erreur. (Kayne (1991: 648))

According to Kayne (1991), the clitic in (32) is adjoined to T and the infinitive moves up to T'. As stated in section 2, T' is invisible in the computational system under the Minimalist Program adopted here. Thus, we need an alternative account. Before proceeding an argument of infinitives, we examine the following examples:

(34) a. Telefona le!
 call her
 'Call her!'

b. *Le telefona!
 her call
 'Call her!'

(35) a. Faites le!
 do.2Sg.Imp it
 'Do it!'

b. *Le faites!

it do.2Sg.Imp

'Do it!'

(Han (1998: 36))

These examples are imperatives of Italian and French. Unlike infinitives, both Italian and French imperatives exhibit the same behavior concerning clitic placement: clitics must follow imperative verbs. He concludes that the verbs in (34)-(35) move to C⁰ by skipping the empty functional head to which the clitics are adjoined. Given the above discussion, this empty functional head would be T, though it may be dubious whether TP is projected in imperatives.¹³ Under the present analysis, the verbs do not have to bypass T. The verb first moves to T, and then the complex formed further moves up to C. On the other hand, the clitic has still been adjoined to T. Thus, movement of the complex is taken as excorporation, a similar operation as verb raising in Dutch (cf. section 3. 1).

Keeping this in mind, we return to the infinitival clauses in (32). Suppose that the infinitive in (32) moves up to C through T, which the clitic has been adjoined to.¹⁴ The derivation for (32) is illustrated in (36), with irrelevant parts omitted.

- (36) a. [_{DP} v [_{VP} parlar gli]]
 b. [_{DP} parlar_i-v [_{VP} t_i gli]]
 c. [_{TP} parlar_i-v-T [_{DP} t_i' [_{VP} t_i gli]]]
 d. [_{TP} gli_j-parlar_i-v-T [_{DP} t_i' [_{VP} t_i t_j]]]
 e. [_{CP} parlar_i [_{TP} gli_j t_i" [_{DP} t_i' [_{VP} t_i t_j]]]]

Unlike Italian infinitives, French infinitives must be followed by clitics, as shown in (33). This phenomenon is straightforwardly accounted for. The infinitive in (33) moves up to T and the clitic is also adjoined to T, thereby yielding the correct structure in (37d). We provide the derivation for (33a), with irrelevant parts omitted again.

- (37) a. [_{DP} v [_{VP} parler lui]]

- b. [_{VP} parler_I-v [_{VP} t_i lui]]
 c. [_{TP} parler_I-v-T [_{VP} t_i' [_{VP} t_i lui]]]
 d. [_{TP} lui_j-parler_I-v-T [_{VP} t_i' [_{VP} t_i t_j]]]

In order to explain the Italian and French infinitives, we have employed the empty functional head T. Since Italian and French have no infinitival marker, such as *to*, the presence of T might be dubious in infinitival constructions of these languages. In this paper, we simply assume that TP is projected in Italian and French infinitival constructions as well as in English ones.

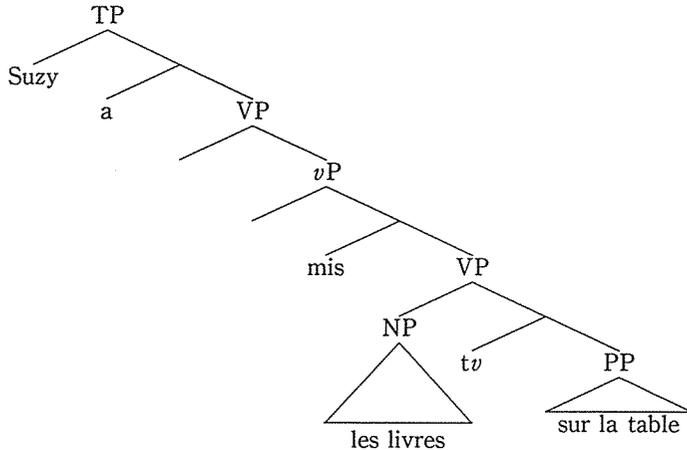
4.4. Double Clitics

So far we have been concerned with sentences involving only one clitic. This subsection focuses on sentences with two clitics. In the sentences, two clitics are presented in the same order as full NPs. Examples are given in (38), which contain the full NPs, and (39), which contain the clitics.

- (38) a. Pierre donnera la fleur à Marie.
 Pierre will-give the flower to Marie
 'Pierre will give the flower to Marie.'
- b. Suzy a mis les livres sur la table.
 Suzy has put the books on the table.
 'Suzy put the books on the table.'
- (39) a. Il la lui donnera.
 He it her will-give
 'He will give it to her.'
- b. Elle les y a mis.
 She them there has put
 'She put them there.' (Jones (1996: 253))

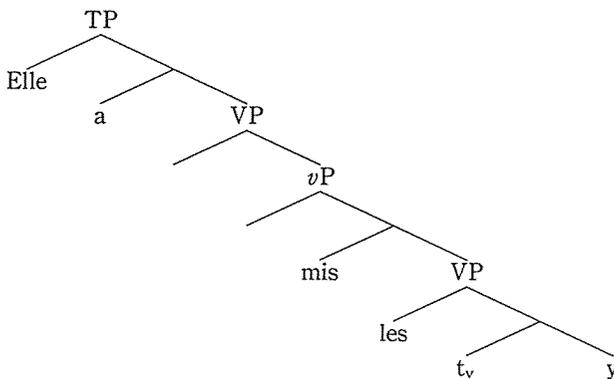
In these sentences the three-place predicates, *donner* 'give' and *mettre* 'put,' are used. The structure of (38b) is roughly like (40).

(40)



Similarly, its corresponding sentence with clitics would have the following structure before cliticization applies:

(41)

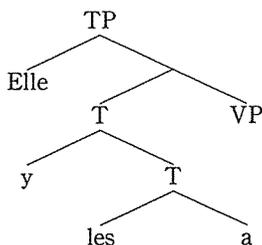


Let us here assume that T has the [+affix] feature to be checked by a clitic, contrary to the present analysis. Given the definition of Attract (cf. (6)), this feature should be checked off by the 'closest' element, in this case *les* 'them.' Then, the clitic *les* moves up and is adjoined to T to check the [+affix] feature. As a result, this feature is deleted or erased. Here a

problem might arise: since erasure of the feature makes that feature inaccessible in the derivation afterwards, there remains no feature to attract another clitic in T, thereby the [+affix] feature of the other clitic cannot be checked by T. This would lead to unconvergence. It might be possible to solve this problem if we assume that feature is deleted rather than erased. However, this will raise another problem.

According to Chomsky's (1995: 280) definition of deletion, a deleted feature is invisible at LF but accessible to the computation. If so, the [+affix] feature of T, deleted by the first clitic, is still available for the second clitic, *y* 'there.' The uninterpretable features of the two clitics are checked off and then the derivation will converge (after all the other uninterpretable features are checked). The derived word order is the following (some irrelevant part is omitted):

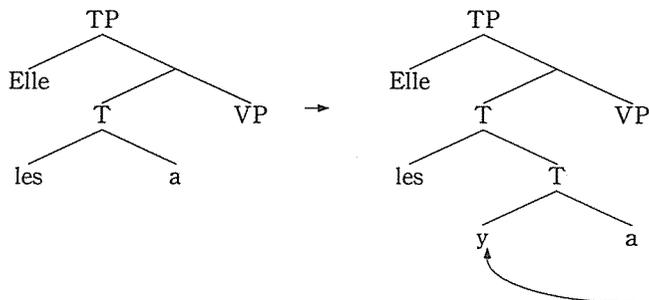
(42)



In (42) the clitic *y* precedes the other clitic *les*, which is unwanted clitic order in French (cf. (39a)).

One might argue that a second clitic is adjoined internal to the 'clitic-verb' complex, yielding the adjunction structure in (43).

(43)



Due to this mechanism the surface word order in (39) is obtained correctly, but it could not explain the word order in (44) in the same way. In (44) the embedded subject *lui* 'her' is inside the object of the infinitive *les* 'them.'

(44) Paul les lui laissera manger.

Paul them her will-let eat

'Paul will let her eat them.'

(Jones (1996: 447))

In this case, also, the closest element to the target (T) is the embedded subject *lui* 'her' and this element is first attracted by the uninterpretable feature of T. Next, the other clitic, *les* 'them' is attracted and adjoined to the lowest T in the same way as in (43). This yields the incorrect word order '*lui-les-laissera*.'

The approach based on Attract cannot properly explain such word order of double clitics as in (39) and (44). Under the analysis of Greed, on the other hand, each clitic can move for satisfying its own properties, and both word orders can be captured easily.

5. Concluding Remarks

In this paper, it has been argued that cliticization is not subject to *Attract*, but to *Greed*, and it cannot be reduced to Case-feature checking.

More specifically, we claimed that in cliticization, a feature of the target does not attract a clitic, but that the feature of the clitic itself motivates its movement to a host. Thus, cliticization is 'greedy' in the sense that only the feature of a mover is checked. We discussed several constructions where clitics appear: simple finite clauses, causatives, restructuring constructions, infinitival clauses, and constructions with two clitics. By assuming that clitics are adjoined to T, it was shown that we can correctly account for the occurrence of the order 'clitic-finite-verb' or 'clitic-infinitive,' and that sentences with two clitics cannot be explained by appealing only to Attract. Since Attract raises the closest element first and the second closest element is raised later, the order variation of two clitics cannot be derived under the analysis of Attract. There are apparent counterexamples to our explanation, but we showed that these examples are accounted for by assuming that the verb moves up to C leaving the clitic behind. Along the same lines, it was also shown that relative word order between the imperative form and clitic can be accounted for.

In this paper, we have been restricted to cases of cliticization to T. In order to properly account for the variation of clitic placement in Old English (cf. Van Kemenade (1987), Koopman (1990) and Pintzuk (1996)), we need to examine adjunction to another functional head, i. e. C. If we strictly follow Kayne's LCA, right-adjunction should be banned and an alternative explanation is needed for enclitics. Anyway, these matters will be left open for future work.

Notes

- * I am grateful to three anonymous *IVY* reviewers for their comments and criticisms on an earlier version of this paper. Needless to say, all remaining errors are my own.

¹ In Chomsky (1998) the operation *Attract* is maintained, but covert feature movement is replaced by the operation *Agree*. This paper does not touch upon *Agree* because this operation has no effect on the syntactic position of lexical items.

² The introduction of a new functional category might be against the minimalist spirit. Given that agreement endings are reflexes of the Spec-Head configuration, however, it seems plausible to assume Aspect Phrase in perfect constructions. In Yanagi (1999) AGRP, not AGRoP, is used, but it is essentially identical to Aspect Phrase in this paper. In addition, this functional category is not only motivated syntactically, but it is motivated semantically as well. For a semantic effect of Aspect Phrase, see Yanagi (2000).

³ Lasnik (1995) proposes the *Enlightened Self-Interest*, which is an intermediate interpretation of Last Resort between *Attract* and *Greed*.

⁴ These notations are informally used for expository purposes. See Chomsky (1994).

⁵ The simplest and most pervasive solution to this disadvantage is to adopt the proposal of Hale and Kayser (1993). They propose that unergatives are derived through noun incorporation into a verb.

⁶ This terminology might be misleading. As an anonymous reviewer pointed out, it might be possible that verbal affixes are checked by Merge rather than by Move. However, if every lexical item enters into the computation with fully inflected form, then the affixal feature of verbs (if present) will be checked by movement to a relevant functional head such as Tense.

⁷ Indeed there are a number of tests for clitichood: clitic pronouns cannot be modified, conjoined, contrastively stressed or used in isolation, as shown in order by the following examples. These examples are Italian.

- (i) a. Maria conosce solo lui.
 Maria knows only him.
- b. *Maria lo conosce solo.
- c. Accuseranno loro stessi.
 [they]will-accuse them themselves.
- d. *Li stessi accuseranno.
- (ii) a. Maria conosce[lui e voi]

- Maria knows him and you.
- b. *Maria [lo e vi] conosce.
- (iii) a. Maria conosce LUI, non voi.
 Maria knows him not you.
- b. *Maria LO conosce, non voi.
- (iv) a. Chi conosce, Maria? Lui.
- b. *Chi conosce, Maria? Lo.
- 'Who does Mary know? Him.' (Cardinaletti (1999: 34-35))

In the text, we do not utilize these tests: our purpose is not to determine what element is a clitic, but to claim that cliticization is sensitive to Greed. Thus, the data on clitics cited in this paper all pass these tests. For more detail discussion see Cardinaletti (1999) and the references cited therein.

⁸ This originates in Halle and Marantz (1993). Since their argument is based on the Government and Binding theory, not the Minimalist Program, Morphology is placed between S-structure and PF.

⁹ Chomsky (1998) suggests that Object Shift could be reduced to the EPP feature of the small *v*. For the correlation between Object Shift and overt verb raising see Holmberg (1986, 1999).

¹⁰ Case checking of the embedded subject may take place as part of cliticization, not independently as in (29d). Bošković (1997a: 210n50) suggests that it is more economical for an NP to pass through [Spec, AGRoP] on the way to a higher A-bar position than to undergo direct movement to A-bar position, followed by LF movement for Case checking. See also Bošković (1997b).

¹¹ In fact, some clitics are adjoined to a head different from T. See Haegeman (1996) for West Flemish; Van Kemenade (1987), Koopman (1990) and Pintzuk (1996) for Old English.

¹² As pointed out by an anonymous reviewer, cliticization might not be a syntactic rule but a phonological one in that a clitic is adjoined to a host independently of interpretation (cf. adjacency condition in Radford (1997)). This might not be true. In the causative construction, an element cliticized on a matrix verb is an object of the verb, though it is an argument of an embedded verb. It might be possible to assume that the clitic object is affected by the matrix verb (or the matrix subject). In the restructuring construction, an

element adjoined to a matrix verb is an object of an infinitive. Thus, it might be plausible to assume that the element is the object of the verbal complex. In this respect, the clitic and the matrix verb have some relation with each other. It is in fact assumed in the literature that verb raising takes place in restructuring and causative constructions.

¹³ It might be strange to assume that imperative clauses involve Tense Projection. In the present paper, unspecified T is included in imperatives without any detailed discussion. This is left open for future work.

¹⁴ The assumption that C is included in infinitival clauses is not unproblematic. We tentatively assume that CP is also projected regardless of the clausal type.

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Synopsis

Some Notes on Cliticization: Attract or Greed

Tomohiro Yanagi

Chomsky (1993) suggested that an element moves for satisfying its own properties. This is called *Greed*, a self-serving operation (cf. (1)). In Chomsky (1995), however, this type of operation is thrown away on conceptual grounds. Instead, it has been argued since Chomsky (1995) that every movement is motivated by a version of Last Resort called *Attract*, which is defined in (2).

- (1) Move raises α only if morphological properties of α itself would not otherwise be satisfied in the derivation. (Chomsky (1995: 261))
- (2) K attracts F if F is the closest feature of that can enter into a checking relation with a sublabel of K. (Chomsky (1995: 297))

In this paper, we challenge the approach based on *Attract* and claim that *Greed* should be still required.

Specifically, we consider ‘cliticization’ as an instance of Greed-type movement, and show that cliticization cannot be reduced to other operations, such as Case feature checking or the EPP requirement. Thus, cliticization is more ‘greedy’ in that it takes place only to check off a feature of clitics.

We distinguish ‘syntactic’ and ‘phonological’ clitics. These two types of clitics have been regarded as belonging to the same category, but they are not identical. Syntactic clitics appear in a position which the corresponding full noun phrases do not usually occupy. Phonological clitics, by contrast, appear where normal NPs appear. Both clitics must be adjoined to a host, but syntactic clitics and phonological ones are adjoined in syntax and in phonological component, respectively. We are concerned here only with syntactic clitics, and then we do not deal with phonological clitics in English, as in (3).

- (3) Pick 'em up!

This paper assumes that clitics have the [+D] and Case feature, just like full

NPs. In addition, it is assumed that clitics also have the [+affix] feature. This feature may not be relevant to interpretation, and then it is an uninterpretable formal feature to be checked before LF. Cliticization is a process of checking the [+affix] feature of a clitic by adjunction to a head, not by movement to a specifier position. Once a clitic is adjoined to a head, the feature is automatically erased and then the clitic never moves further. Consequently, excorporation of a clitic, as proposed by Roberts (1991), is theoretically ruled out. On the other hand, excorporation of a host is not theoretically ruled out, and as we will show, in fact, 'verb-clitic' order in French is derived by this operation.

Furthermore, we provide crucial evidence that cliticization is not driven by Attract. In ditransitive constructions of French, the order of the clitics in (4a) is the same as that of (4b).

(4) a. Il la lui donnera

'(lit.) He it-her-will-give.'

b. Pierre donnera la fleur à Marie.

'Pierre will give the flower to Marie.'

(Jones (1996: 253))

If Attract first raises the closest element, the first candidate to be cliticized is the direct object in (4a) and then the indirect object is cliticized on the matrix verb. As a result, the order '*lui-la*' would be derived, contrary to fact. The surface order of clitics is a reflex of the normal order in (4b).