

Superiority Effect and Clitic Placement in European Portuguese

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I suggest that Clitics in European Portuguese are scope-bearer elements, just like verbs, quantifiers, negation, etc. Therefore they have to deal with two conflicting constraints: the Superiority Effect (SE) and the Obligatory Contour Principle (OCP). The latter wants to move the clitic before the verb, while the former opposes such a movement. When there is a scope-bearer higher than the verb, incorporation offers an escape hatch to the clitic, which can then satisfy both SE and OCP.

1. Introduction

Portuguese clitics show certain features that appear to be the exception in other major Romance languages. Indeed, Romance object clitics are normally proclitics, enclitics being generally restricted to imperative, gerundive, and infinitive verbs. In Portuguese however, clitics are always enclitics unless some special elements are present and precede the verb the clitic is the argument of (cf. Barrie 2000, Crysmann 1997, Luis and Otoguro 2004, Rouveret 1993, etc.). Strikingly, most elements that trigger the placement of the clitic in preverbal position obviously can be thought of as belonging to the same set, namely that of syntactic elements that uncontroversially have scopal properties, e.g., negation, quantifiers and *wh*-elements. As a matter of fact, I will show that Portuguese clitics are vectors (cf. Desouvrey 2008), just like quantifiers and the like, and therefore enter in a rigid scopal relation (superiority effect) with those elements. In the next section, I present two cases of a known scope effect in English and Spanish, while presenting some basic tenets of Desouvrey (2000, 2008, etc.), which this paper is embedded in. In 3, I build on the claim that scope feature invades most paradigms of European Portuguese (EP) grammar, which makes it possible to account for the various cases of clitic placement in this language. In section 4, I conclude the paper.

2. Scope effect

In the theory proposed in Desouvrey (2000), the notion of scope is due to a special feature borne by certain elements. Elements traditionally known to have scope are negation, quantifiers, and

wh-interrogatives, the study of which gives rise to an impressive body of literature. In the Minimalist Program (cf. Chomsky 1995), just like in its predecessors, this notion is usually dealt with by using first-order formulae in what is referred to as the Logical Form. Other syntactic elements like verbs and pronominals cannot be seen as scopal elements, given the nature of their assumption. In Desouvrey (2000) and subsequent work, the syntactic elements mentioned above all bear a scope feature, $[\sigma]$, and are seen as genuine scopal elements to the extent that such elements perhaps cannot exist without such a feature. However, in this novel perspective, if a feature exists in a grammar, it has to interact with other elements,¹ and it may happen that a feature leaks to other class of elements that need not have it by their very nature. Thus it is shown that verbs, adverbs, pronominal clitics, etc., may be specified for $[\sigma]$ in certain languages. For instance, in English, unlike French, all tensed verbs are σ -specified; in Spanish, infinitive verbs and pronominal clitics are σ -specified, but not tensed verbs. Under this new perspective, scope interaction is shown to fall under the realm of two constraints, the Obligatory Contour Principles (OCPs) and the Vector Effects, precisely the Superiority Effect, as formulated in (1) and (2) (cf. Desouvrey 2000, 2007, 2008, etc., and references therein).

- (1) a. Obligatory Contour Principle (OCP)
Two elements with identical features may not stay in the same minimal syntactic domain.
- b. Obligatory Contour Principle-prime (OCP')
Elements with identical features must be adjacent, i.e., normally no element can intervene in between a head and its complement if they bear the same feature.
- (2) Superiority Effect (SE)
The initial linear order of σ -specified elements cannot change in the course of the derivation.

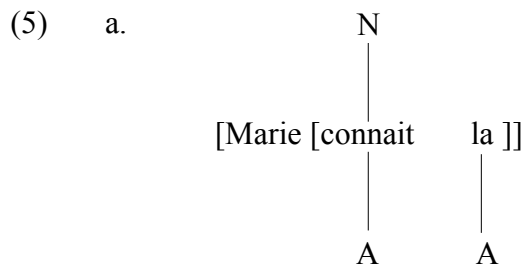
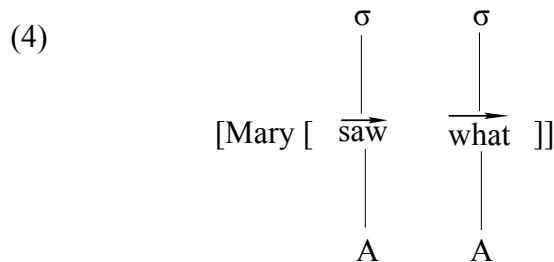
These two constraints can be seen in competition in English interrogatives and in Spanish infinitive verbs with a clitic complement. Consider the simple interrogative sentence in (3). The

¹ We may note that certain features would never be diagnosed if they were to be found in just one class of elements. In the present system, a feature can be seen when its bearer interacts with another bearer, or by its behavior with respect to some process, for instance movement.

matter is to explain why (3b) is not possible and, therefore, what causes the appearance of *do* to be mandatory.

- (3) a. What did Mary see?
 b. *What Mary saw?

As discussed in Desouvrey (2007), the normal (or natural) input for (3) is (4), where the operator is generated in the normal object position for English. Both the verb and the operator are represented as vectors, since they are σ -specified. In the inner domain, which includes the verb and the *wh*, OCP is violated since both elements bear the same feature, accusative Case (A) and scope (σ). Movement is the normal way to avoid the OCP violation. For instance, French (5b) results from the movement of the A-specified object pronoun outside the bracketed domain in (5a) (cf. Desouvrey 2005). (*t* is just an expository tool that shows the original position of the clitic, while the symbol '=' indicates the adjunction (or incorporation) of the clitic to the other element.²)



- b. Marie=la [connait *t*]

2 Notice that whether an element targets a higher or a lower destination in the structure, it has to end up to the right edge of the host. There is no other logical possibilities. Furthermore, adjoined elements appear on a different tiers from their hosts and both elements are welded together to the skeletal level, leftmost x-slot to rightmost x-slot, unlike X' adjunction. See Desouvrey (2000, 2005) for details.

Marie 3.FEM.SG.ACC knows.ACC

'Marie knows her.'

Now in (4) movement of the *wh* may not take place, since it would violate SE, as defined in (2). If the verb were not a scope bearer, the operator would move only to the opposite edge of the clause, since another feature, $[\pi]$, prevents such elements from adjoining to another element (cf. Desouvrey 2000, 2007, 2008.). As it happens, English grammar can turn around this problem by using an alternative input with *do*, as seen in (6). Let's see how it works. Modal *do* is always tensed and therefore is an operator, unlike the untensed lexical verb. Given the Accusative OCP (and the σ -OCP in the larger domain) the operator has to move to the front of the structure, where it triggers a violation of SE by outranking the modal verb, (6b). This violation of SE is then readily corrected by incorporation of the modal to the *wh*, as in (6c). The latter is perfect because under adjunction the modal and the *wh* make up a single bimorphemic element, and therefore there is no more scope reranking in the structure.

- (6) a.
$$\begin{array}{c} \sigma \qquad \qquad \sigma \\ | \qquad \qquad | \\ \text{Mary [} \overrightarrow{\text{did}} \text{ [see } \overrightarrow{\text{what}} \text{]}] \\ | \qquad \qquad | \\ \text{A} \qquad \text{A} \end{array}$$
- b. $\overrightarrow{\text{what}} \text{ [Mary [} \overrightarrow{\text{did}} \text{ [see } t \text{]}]}$
- c. $\overrightarrow{\text{what=did}} \text{ Mary see?}$

Analogous phenomena exist in Spanish grammar. Clitics are normally proclitics, unless the verb is infinitival, gerundive, or imperative (for a different reason). Consider the following set of examples. In (7a) the tensed verb is accompanied with a proclitic, whereas in (7b) the infinitive verb requires an enclitic; as seen in (7c,d), an enclitic can be a proclitic to a higher verb (clitic climbing), but never to an infinitive verb.

- (7) a. Lo quiero.
3.MASC.SG.ACC want.1.SG

- 'I want it.'
- b. Quiero verlo.
want.1.SG to-see-3MASC.SG.ACC
I want to see it.
- c. Lo quiero ver.
- d. *Quiero lo ver.

To capture this state of affair, it is proposed in Desouvrey (2000) that clitics and infinitive verbs are σ -specified elements, and therefore their interaction is further constrained by SE. Let's assume that infinitive verbs have a non-overt NP argument, represented as $\overrightarrow{\text{NP}}$, while the null subject of tensed verb results from deletion of a pronoun agreeing with the verb for some reason discussed in Desouvrey (2000). On this view, sentence (7a) is derived by movement of the clitic under OCP to the non-overt pronominal, just like in French (5). In (7b), however, SE blocks the OCP resolution and therefore the clitic remains after the verb, as seen in (8a). Alternatively, the clitic can climb to the higher tensed verb, since it is outside of the domain in which SE holds, (8b).

- (8) a. pro quiero [$\overrightarrow{\text{NP}}$ [$\overrightarrow{\text{ver}}$ $\overrightarrow{\text{lo}}$]]
- b. pro= $\overrightarrow{\text{lo}}$ quiero [$\overrightarrow{\text{NP}}$ [$\overrightarrow{\text{ver}}$ t]]

Interestingly, if another vector precedes the infinitive verb and the clitic, the latter cannot climb past the higher verb. In effect, as expected, the negation operator attracts the clitic (OCP'), as seen in (9b). Attached to negation, the clitic loses its autonomy, hence its scope. This fact, namely blocking of clitic climbing by negation, is heavily discussed in the literature, but this feature based-analysis appears to be clearer and more general, as it is correlated to English *wh*-questions, as in (6) above.

- (9) a. pro quiero [$\overrightarrow{\text{no}}$ [$\overrightarrow{\text{NP}}$ [$\overrightarrow{\text{ver}}$ $\overrightarrow{\text{lo}}$]]
- b. pro quiero [$\overrightarrow{\text{no=lo}}$ [$\overrightarrow{\text{NP}}$ [$\overrightarrow{\text{ver}}$] t]]

It goes without saying that under this analysis all elements deployed in a syntactic structure, including clitics, are words (i.e., free morphemes). A word can incorporate to another one by adjunction, forming a syntactic compound. Thus in the present theory, the issue as to whether a

clitic is morphology or a phrasal affix disappears (see Desouvrey 2000, and below). More generally, clitics are what they are because of their feature specification and their interaction with verbs. In the next section, I tackle clitics in EP. Under the natural assumption that features and their distribution vary from one language to another and even within a language, all we need is to grab the correct feature specification of the relevant elements in EP.

3. Scope plague in EP

While in Spanish clitics and infinitive verbs are vectors (cf. Desouvrey 2000), in EP all types of verb, as well as clitics are vectors, as I will show. Under this feature-based theory, this is the minimal claim that one can do. Therefore, one must expect both OCP and SE to compete in EP, just like the cases seen above. Consider a simple root sentence like (10) (for the data, see Crysmann 1997, Luis and Otoguro 2004, Rouveret 1993). Unlike Spanish, the tensed verb is a vector and enters in a scope relationship with the clitic. As it is, the structure violates OCP, and any movement to avoid it would violate SE. Since constraints are not ranked, no movement occurs and the structure is acceptable, just like Spanish (8a). One can ask why EP, unlike English, doesn't use an alternative structure with further lexical materials that would allow to circumvent the conflict between OCP and SE. Languages vary according to morpheme inventory and it turns out that Portuguese grammar does not have anything like English *do*. The relativization strategy (see Desouvrey 2008 and below) cannot be used with clitics, since these elements do not have to move to the left edge of their clause.

- (10) O Pedro $\overrightarrow{\text{magôou}}$ \vec{o} .
 The Pedro hurts 3.SG.ACC.
 Pedro hurt him.

However, if negation precedes the verb, movement of the clitic is mandatory, as seen in (11). Here EP shows a striking similarity with English and Spanish. One vector disappears by incorporating to a higher vector, thereby eliminating the constraint violation, just like English (6) and Spanish (9).

- (11) O Pedro $\overrightarrow{\text{não}=\text{o}}$ $\overrightarrow{\text{magôou}}$
 O Pedro not him hurt

Pedro didn't hurt him.

The scope feature seems to have contaminated almost every paradigm in EP. Adverbs apparently have operator-like behavior, which suggest they are scope-specified as well. Luis and Otoguro (2004) provides the following pair of examples (their (26)).

- (12) a. O João raramente me vê.
 The J. rarely 1.SG.DAT sees
 'João rarely sees me.'
 b. *O João raramente vê-me.
 c. O João vê-me raramente.
 d. *O João me vê raramente.

In my view, the verb, the clitic, and the adverb are all scope bearers and therefore enter in a SE relationship. If the vector adverb is generated before the verb, as in (12a), the clitic can satisfy OCP by moving to the adverb without any violation of SE, (13a). If the adverb is generated after the verb, it is most likely in clause final position, that is, in fact, it is computed after the argumental clitic. In this case, the clitic does not have a higher vector host which it can incorporate to, and therefore it remains in situ, (13b).

- (13) a. O João $\overrightarrow{\text{raramente}} = \text{me}$ $\overrightarrow{\text{vê}}$.
 b. O João $\overrightarrow{\text{vê}}$ - $\overrightarrow{\text{me}}$ $\overrightarrow{\text{raramente}}$.

In the above example, the subject is a scalar, as opposed to a vector, and it may not trigger proclisis. However, if the subject is a quantifier, which belongs to the set of scopal elements, the clitic must incorporate to it in order to settle the conflict between OCP and SE. This is illustrated in (14) (Rouveret 1993, ex. (11)). In the present perspective, the structure contains three vectors, one of which (the clitic) violates OCP, as seen in (14b). The quantifier has scope over every other elements in the structure, while the verb only outranks the clitic. As usual, the clitic adjoins to the quantifier and disappears as an autonomous scopal element in the structure; nevertheless, the scope relationship between the quantifier and the verb is intact, (14c).³

3 It is important to keep in mind that in this theory we refer to scope as a syntactic feature, linked to a morpheme in the structure, not as a semantic property. From a semantic perspective, one may have the feeling that an

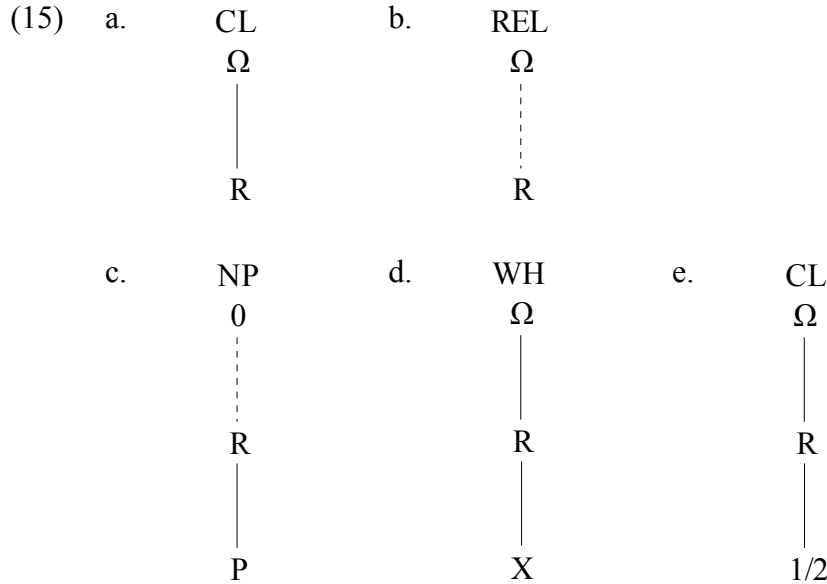
- (14) a. Alguém o assustou.
 Someone _{3.SG.ACC} scared.
 'Someone scared him.'
- b. [$\overrightarrow{\text{Alguém}}$ [$\overrightarrow{\text{assustou}}$ \vec{o}]]
- c. $\overrightarrow{\text{Alguém=o}}$ $\overrightarrow{\text{assustou}}$.

It turns out that subordinate clauses, focus phrases, and moved *wh*-phrases allow the clitic to escape from its post-verbal position. The rest of the paper is devoted to this important point.

3.1 Feature tree

Let us take a look at the feature structure of the elements discussed so far. I take EP referring elements to have the feature structure given in (15). The omega-node, which means that the morpheme is a vector, holds the abstract class node R. The latter represents the reference property of the morpheme. A pronoun has an R-node, while an anaphor has only a bare phi/omega-node. A full referring element, for instance a nominal or a *wh*-operator, bears a terminal node that expands from the R-node (15c,d,e). As usual, this terminal node, or reference feature, is noted with an X for operators and with capital letters, P, Q, etc., for scalar NPs. For first and second person pronouns, the terminal node is a number that indicates the person (1 or 2) (cf. Desouvrey 2003 for details). Regarding EP, I suggest that NPs are neither vector nor scalar, a property ensured by their unspecified root node, noted with 0, (15c); and consistent with Desouvrey (2006), there is no physical association line linking a 0-root node to a R-node (conveniently a dash line is used). Third person pronouns have a bare R-node, (15a,b), which can receive a reference feature from any full referential element. In (15b), REL is the relative pronoun for complementation, which is dubbed a complementizer in traditional analysis; the dashed line means it can be either a pronoun or an anaphor. Notice that these representations are simplified, other features, especially Case, are omitted for simplicity, as well as verb feature structure. The reader is referred to Desouvrey (2000, 2005, 2007, 2008) for more details on feature representation in a nonlinear fashion.

element in the lowest surface position has the widest scope. If a structure contains two scopal elements, say A and B, the linear order generally does not matter in semantics, which may result in an ambiguity. In one reading A has wide scope while in another one B has wide scope. Usually, First-order logic is used to adequately represent both readings.

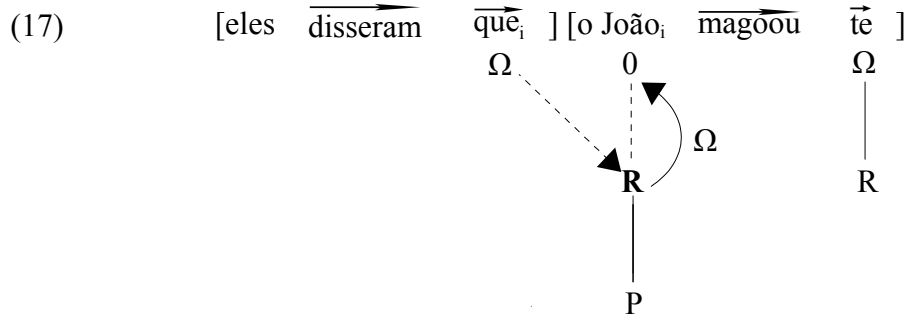


3.2 Scope percolation

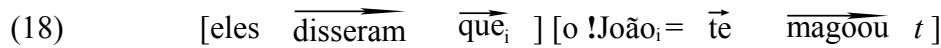
It is often reported in the literature that subordinate clauses triggers proclisis in EP (cf. Crysmann 1997, Luis and Otoguro 2004, Rouveret 1993, etc.). In the present perspective, it turns out that a higher scopal element attracts the clitic; in (16) for instance, the closest vector up to the embedded verb is the so-called complementizer *que*, whose specification is given in (15b) above. Therefore, it is this element that forces the placement of the clitic before the verb, as I show shortly.

- (16) Eles disseram que o João te magoou. (L&O 2004 ex. (30))
 'They said that João hurt you.'

This theory does away with the notion of complementizer. Rather morpheme *que*, just like its counterparts in every language that uses such a construction, is analyzed as a relative pronoun/anaphor (cf. see Desouvrey 1996, 1997, 2000, 2003, 2008). It appears as a relative pronoun in contexts where the no-line-crossing requirement prevents it from being assigned an R-node (see Desouvrey 2008). Under this condition, (16) must be derived from an input that consists of two clauses, as shown in (17). (Here a new convention is introduced in this theory; a vector anaphor points to a scalar R-node, even though it is a receiver, not an assigner.)



This structure displays a case of co-reference relation that has not yet been found. In Desouvrey (2008), the relative anaphor is always a scalar, while its antecedent is either a scalar or a vector, in which case an alternative input must be used to avoid a feature mismatch.⁴ In (17), however, the relative anaphor is a vector, while the antecedent is not specified as vector or scalar; it has a 0-root node. Therefore, there is no mismatch; the Ω -node of the relative anaphor targets the R-node of the nominal and, by an appropriate version of the percolation convention (Lieber 1990), omega flows down to the root node. Now the subject of the embedded verb is itself a vector, and therefore the clitic normally moves to it, avoiding the OCP effect, as seen in (18). (The exclamation mark indicates a vector by percolation, or inheritance.)



Consider now an embedded relative clause, as in (19a). Quite similar to (18), its input consists in two independent structures, a main clause and a relative clause, as seen in (19b). The relative pronoun must incorporate to its head, and in order to do so, it must be at the left edge of its clause, consistent with the treatment of relative clause proposed in Desouvrey (1996, 1997, 2008). However, movement of the relative pronoun within its clause cannot take place without causing a violation of SE. Therefore, the natural input in (19b) is to be rejected for an alternative one that makes room to settle the resolution of SE.

- (19) a. As pessoas a quem o contamos ficaram surpreendidas. (L&O 2004 ex. (35))

4 An R-node can be assigned to a root node if both are compatible. An R-node expanding from a vector (i.e., an Ω -root node) cannot spread to a scalar root node (a Φ -root node); conversely an R-node expanding from a scalar root node cannot spread to a vector root node (cf. Desouvrey 2008).

the people to whom _{3.SG.ACC.M} told were surprised

'The people we told it to were surprised.'

- b. [as pessoas_i $\overrightarrow{\text{ficaram}}$ surpreendidas] [pro $\overrightarrow{\text{contamos}}$ o $\overrightarrow{\text{quem}}_i$]

Indeed, in the alternative input, the relative pronoun is extracted by the relativization strategy (Desouvrey 2008). The relative pronoun, generated as an independent structure, heads the relative clause, where its argument position is filled by another relative pronoun, as seen in (20). Now the relative clause adjoins to the head noun, and the lower relative pronoun incorporates to the higher one, and is then deleted, as seen in (20b).

- (20) a. [as pessoas_i $\overrightarrow{\text{ficaram}}$ surpreendidas] [o $\overrightarrow{\text{quem}}_i$] [pro $\overrightarrow{\text{contamos}}$ $\overrightarrow{\text{que}}_i$]
 b. [as pessoas_i = o $\overrightarrow{\text{quem}}_i$ = $\overrightarrow{\text{que}}_i$ pro $\overrightarrow{\text{contamos}}$ t] $\overrightarrow{\text{ficaram}}$ surpreendidas]

The evidence for this analysis is to be found in non-standard dialects. Generally, when a language has a deletion rule, less conservative dialects generally do not promptly apply it. Although the papers referred to above do not provide any clue on such a variation, a simple Google search for *que* with an appropriate antecedent shows a great deal of such sentences, and it is unlikely that the double occurrence of the relative is due to typos. Thus, the input for sentence (21a) is similar to (20) except that both relatives are identical and the deletion rule does not take place, as seen in (22).

- (21) a. O homem que que vinha em contraluz era muito velho.⁵
 the man that that came in backlighting was very old.
 b. Quando eu vi o homem a quem que ela teve sido vendido...⁶
 when I saw the man to whom that it had been sold...
 (22) [o homem era muito velho] [que][que vinha em contraluz]

In fact, in (22) the relative pronoun is the subject of the clause, and the relative clause could be adjoined directly to its head without the mediation of the relativization strategy. Use of the relativization strategy in (22) is an effect of the harmonization process, itself a consequence of

5 From: <http://aturmadvdivertida.blogspot.com/2007/01/mais-textos-sobre-o-captulo-viii.html>

6 From: www.portlivros.info/3131393334/ch659.html

the lack of implicational constraints in natural language grammar. If an operation is needed at one place in the grammar, it over-applies in every similar environment, unless another constraint is at stake. In this way, constraints remain context free, non-implicational.

3.3 Wh-interrogatives

Under the present analysis, *wh*-elements in object position must be at odd with OCP and SE, just like clitics, since they are specified for scope and Case. However, *wh*-movement apparently occurs in EP even though there is no other vector to host a fronted operator. This is illustrated in (23); cf. Luis and Otoguro (2004), ex.(23).

- (23) a. O que lhes contaste?
 the what 3.PL.DAT tell.2.SG
 'What did you tell them?'
 b. *O que contaste-lhes?

The natural input for (23) is given in (24a) (both arguments of the verb are Case-specified). The clitic cannot move, since there is no vector host higher than the verb, as seen above. As for the *wh*-operator, it is obvious that if it were to move, it would have to irremediably outrank the verb, assuming that the lexical verb cannot move to incorporate to the operator (cf. Desouvrey 2000). The difference between *wh*-operators and pronominal clitics lays in the feature specifications of these elements; *wh*-operators in EP, as is usually the case in most languages, have a feature, named $[\pi]$, which prevents them from changing tiers by adjunction to another element (cf. Desouvrey 2007, 2008). Thus, by virtue of this feature, the *wh*-operator could only move to the left edge of the clause, what would trigger a violation of SE. I claim that *wh*-movement does not occur from structure (24a), however. To front *wh*-operators without violating another constraint, the grammar has recourse to the relativization strategy, as discussed in Desouvrey (2008). As seen above, the natural input is transformed into a relative clause modifying the *wh*-operator, generated as an independent structure, as shown in (24b). As in any relative clauses, the vector relative pronoun adjoins to its antecedent, however remote it is; the null subject of the verb becomes a vector by feature percolation, and therefore it can host the clitic, as seen in (24c). To

complete the derivation, the 'strategic' relative pronoun is deleted.⁷

- (24) a.
$$\begin{array}{c} \text{O} \quad \text{O} \\ | \quad | \\ \text{pro} \left[\left[\overrightarrow{\text{contaste}} \quad \overrightarrow{\text{lhes}} \right] \text{o} \overrightarrow{\text{que}} \right] \\ | \quad | \\ \text{A} \quad \text{A} \end{array}$$
- b. $[\text{O} \overrightarrow{\text{que}}_i] [\text{pro} \overrightarrow{\text{contaste}} \overrightarrow{\text{lhes}} \overrightarrow{\text{que}}_i]$
- c. $\text{O} \overrightarrow{\text{que}}_i = \overrightarrow{\text{que}}_i [\text{pro} = \overrightarrow{\text{lhes}} \overrightarrow{\text{contaste}} t t]$

However, unlike relative clauses, it seems to be impossible to obtain a well-formed sentence without deleting the strategic relative pronoun in (24c). A Google search gives no result in which a relative pronoun follows the operator in interrogative sentences. In fact, the search reveals that some Portuguese dialect, just like French, uses a dummy matrix clause, *é que*, which is the counterpart of French *c'est que* (cf. Desouvrey 2008). Embedded under a dummy matrix clause, (23a) yields (25).

- (25) $\text{O que é que lhes contaste?}$
the what is that 3.PL.DAT told

The natural input for (25) consists of the dummy matrix clause and the *wh*-clause, as seen in (26). The embedded *wh*-phrase moves to the front of the dummy clause without violating SE, since the latter only holds within the limits of its clause.⁸ Thus the output (26b) is the desired one.

- (26) a. $[\text{pro é que}] [\text{pro contaste lhes o que}]$
b. $\text{o que} [\text{é que}] [\text{!pro=lhes contaste } t t]$

7 Desouvrey (2008) discusses cases where a scalar relative pronoun is deleted under feature mismatch with a vector antecedent, and implicitly assumes that if a relative perfectly agrees with its head, as in Portuguese, deletion may not take place. However, Mohanan (1994) discusses a case in Hindi, where a Case marker is apparently deleted under identity with another element, just as in the proposed analysis for EP, a process she attributes to OCP. Whether or not OCP can induce deletion of morphemes, instead of features, is a question I leave open in this paper.

8 If there were not a dummy matrix clause, movement of the *wh*-operator would be considered to occur within its own clause, by virtue of the ban on string vacuous movement, and SE would be violated.

Any subordinate clause that includes a subordinating marker of cause, tense, etc., triggers proclisis. Therefore, the same analysis holds under the assumption that those elements are σ -specified. Thus in (27) (adapted from L&O 2004, (1)), the null subject of the embedded verb gets a percolated scope from the subordinate marker, allowing the clitic to move past the verb. In the main clause, however, the does not inherit any scope, forcing the clitic to remain in situ.

(27) O Pedro $\overrightarrow{\text{encontrou}}$ -os $\overrightarrow{\text{porque}}$ pro= $\overrightarrow{\text{os}}$ $\overrightarrow{\text{procurou}}$ *t*.

The Pedro brought 3.PL.ACC.M because 3.PL.ACC.M searched.

‘Pedro found them because he searched for them.’

3.4 Mesoclis

We have seen that SE confines the clitic after the verb, in violation of OCP. However, the later can be satisfied whenever the verb itself is preceded by another element the clitic can incorporate to, that is an element bearing scope feature, either inherently or by percolation. As is normally the case, the clitic moves past the verb, but normally remains adjacent to, so as to satisfy OCP'.

Another support for this analysis is provided by the ability of Portuguese clitics to pass through the 'morphology wall', a phenomenon referred to as mesoclis. The present theory is sufficiently flexible to account for mesoclis. As discussed in Desouvrey (2000), the grammar comprises several components, including the lexicon, the morphology, the phonology, and the syntax. Although components are independent from one another, they may use similar operations, and obviously the same constraints. With respect to the building of words and syntactic structures. I take the grammar to include a computational component, more or less like in Chomsky (1995) or the Generator in Optimality Theory (cf. Prince and Smolensky 1993), that assembles bound morphemes in words (morphology level) and then independent morphemes (words) to make up a syntactic structure (syntax level). After or during the computation, certain phonological processes, e.g. assimilation, nasalization, deletion, word stress, etc., may take place within the constructed word. Suppose that bound morphemes enter the morphology with their features, parallel to words in the syntax. During the building of a word, it is likely that OCP applies in the following way. Features that are common to two bound morphemes undergo fusion. The fusion of features has two consequences. It contributes to keep the bound morphemes together, so that they are treated in the syntax as a single element. In addition, once two

occurrences of a feature undergo fusion, they are neutralized, that is, they appear as inactive in the syntax, in the same way that syntactic features are neutralized under fusion.⁹

However, in a morphological sequence AB, where A and B are bound morphemes, or a stem and an affix, if stem A is specified for feature F, while affix B is not specified for that feature, there is no fusion and the feature F will be visible in the syntax. Now, if either A, B or the juncture AB is not damaged beyond recognition by phonological processes or diachronic irregularities, nothing prevents A to interact on its own with another syntactic element specified for the same feature.¹⁰ This appears to be the case in EP, as I show immediately. First of all, let's take Portuguese verb stems to be specified for scope, while all conjugation affixes are scalar. Due to numerous irregularities, it is obvious that verb stems are opaque and therefore come to be assimilated with infinitive verbs, which make up the basis of the conjugation system. Indeed, all tenses and moods but notably future and conditional are derived by replacing the infinitive affix with specific tense affixes. Since verb stems are σ -specified, all verb forms are vectors. Thus, whenever the tensed affix is transparent enough, as is the case of future and conditional affixes, it is reanalyzed as a free scalar morpheme in the syntax (recall they do not undergo fusion with the verb stem). Now when a clitic is the complement of the verb, any future and conditional affix is then seen as an obstacle intervening between two σ -specified element, the verb stem and the clitic. Therefore, the clitic adjoins to the stem under OCP'. Consider the following example (Crysmann 1997, ex. (6) and (7)).

(28) a. O João compra o.

9 Feature neutralization in syntax can be illustrated with French imperative verbs. Standard French shows an irregularity in that a first or second person clitic cannot show up in affirmative imperatives; rather the corresponding strong pronoun must be used: *regarde-moi*/**me*! vs. *ne me*/**moi* *regarde pas*! This is accounted for straightforwardly in the present theory. The clitic is specified for accusative and oblique Cases, while the verb is specified for accusative and nominative Cases. Thus, in affirmative imperative, the accusative Case is neutralized by fusion, while the oblique and the nominative Cases clash. In negated imperatives, however, the negative marker *pas*, specified as nominative, neutralizes the nominative Case of the verb. As a result, the oblique Case of the clitic is alone in the structure and therefore there is no feature clash (see Desouvrey 2000, for details).

10 This is reminiscent of the paradigm uniformity often discussed in the literature in various contexts. For instance, in languages that allow null subject, it has been claimed that all the verb inflectional morphology must be highly regular (cf. Jaeggli and Safir (1989). Crysmann (1997: 5) refers to such a regularity in the case of Portuguese clitics, but only to reject it as a possible cause of mesoclis. In his view, regularity does not matter because clitic can be infixated to irregular verb stems. In my view, however, what matters is the regularity of the tense affix when added to various verb stems, and the feature that the stem shares with the clitic. If scope feature were not on the stem, infixation would never occur, all other thing being equal.

- the J. buys it.
- b. *O João o compra.
- c. O João compra-lo-á.
the J. buy-it-will
'J. will buy it.'
- d. *O João o comprará

In (28a,b), we know the clitic must stay after the verb, since the subject is not a vector. Comparing (28c) to (28d), however, one can see that the future verb induces mesoclisism. The input for (28c) must be as shown in (29a), where the number sign indicates word boundary and the plus sign, affixation. In the bracketed domain, the stem is a vector, unlike the transparent future affix; therefore both OCP and OCP' are violated. OCP cannot be settled, since SE would be violated; however, since the future suffix is not a vector, the clitic directly incorporates to the verb stem in order to avoid an OCP' effect, which is due to the reanalysis of the future affix as a free morpheme, (29b). (A local phonological process, namely the assimilation of the final consonant *r* to *l*, takes place in (29); see Crysmann (1997). If another vector has wide scope over the verb stem, mesoclisism is not possible; rather the clitic normally incorporates to the higher vector, as seen in (30) (Crysmann 1997, (7)). Why is mesoclisism impossible in this case? When the clitic adjoins to the verb stem, it does violate OCP, which opposes morpheme buildups in the syntax (cf. Desouvrey 2000). Thus if another vector outranks the verb, it is natural that the clitic incorporates to it, as usual. Indeed, as seen in (31), both OCP and OCP' are satisfied, unlike (29b), where only OCP' is satisfied.

- (29) a. O João [$\# \overrightarrow{\text{comprar}} +\acute{a}\# \vec{o}$]
b. O João [$\# \overrightarrow{\text{comprar}} = \vec{o} +\acute{a}\# t$] (cf. (28c))
- (30) a. O João não o comprará.
J. not it buy-will
b. * O João não compra-lo-á
- (31) O João $\overrightarrow{\text{não}} = \vec{o}$ [$\# \overrightarrow{\text{comprar}} +\acute{a}\# t$]

To complete this analysis, one must explain why mesoclisism is not possible in Spanish, which is

closely related to Portuguese, as is well-known. In Spanish, clitics are vectors, but unlike EP, verb stems are not vectors. As a result, clitics move past the verb under a Case OCP. However, enclisis occurs with Spanish infinitive verbs, since the infinitive affix is σ -specified, as discussed in Desouvrey (2000). Unlike EP, suppose that the conditional and the future affixes are σ -specified. Since future and conditional affixes are added to the infinitive, their features sigma undergo fusion and are neutralized in the syntax. Therefore, conditional and future verbs are not syntactic vectors, and mesocclisis may not occur.

4. Conclusion

This paper adds a further piece of evidence in favor of the treatment of pronominal clitics argued for in Desouvrey (2000, 2005), and by this very fact it strengthens the theory and the set of assumptions it builds on, namely systematic use of features, simple representations, and the interaction of a few universal constraints. A *wh*-operator and a pronominal clitic receive a similar analysis to the extent that the features they are specified for obey the same constraints, namely OCPs, and SE.

EP departs from other major Romance languages in that scope feature, in the sense discussed above, has a preponderant role in the grammar. While scope is perhaps present in the sole *wh*-paradigm and negation in French grammar, in Spanish it expands to clitics, infinitives and gerunds, so that SE ensures enclisis after those verbal forms. On the other hand, in EP scope feature apparently is found in many paradigms, including pronouns, all verb stems, adverbs, relative pronouns, etc. As a result, clitics are confined to a post-verbal position, unless they can lose their syntactic autonomy by incorporating to a higher scope-specified element.

In this theory, cross-linguistic variation is due to feature variation, feature position in a feature tree, and morpheme inventory. The representation, the constraints, including the process to satisfy them are universal. In other Portuguese dialects, mainly Brazilian, features are expected to be slightly different: the principal feature involved, scope, can be either receding or strengthening by a complete contamination of the NP paradigm. In any event, proclisis would be the default position of clitics.

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