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## Clause Reduction in Spanish\*

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0. Introduction

This paper is a report of work in progress on a number of syntactic phenomena in Spanish and Italian that we seek to explain by positing a rule of Clause Reduction that makes dependents of a complement verb dependents of the matrix verb. Here we confine ourselves to data from Spanish, though analogous arguments can generally be made for Italian.<sup>1</sup>

Most of the discussion in this paper is couched in terms of the theoretical framework of relational grammar proposed by Perlmutter and Postal (in preparation). In this framework, the structure of a sentence is regarded as a network of grammatical relations or, more simply, as a relational network. For the purposes of this paper, we need only be concerned about a proper subset of the grammatical relations posited in that theory: the relations subject of, direct object of, and indirect object of. Following Perlmutter and Postal (in preparation), we will refer to these grammatical relations as 1, 2, and 3, respectively, and represent sentence structures as relational networks. For example, the structure underlying the sentence

- (1) Pablo le dio un regalo a Mercedes.  
'Pablo gave a gift to Mercedes.'

is represented as:<sup>2</sup>



This structure consists of a governor (the verb dar) and three nominal dependents - Pablo, un regalo, and Mercedes. The arc between each nominal dependent and dar indicates that the nominal in question bears a grammatical relation to dar, and the numeral on each arc indicates which grammatical relation the nominal in question bears to the governor verb. The relative order of the 1, the 2, and the 3 in (2) is arbitrary, since the relational network represents grammatical relations and not the linear order of elements in surface structure.

In certain cases, it is necessary to make further distinctions. For example, consider the sentences

- (3) a. Los ministros fueron criticados por la prensa.  
'The ministers were criticized by the press.'  
b. Los ministros parecen haber sido criticados por la prensa.

'The ministers seem to have been criticized by the press.'

Traditional grammarians would have said that in (3a), la prensa is the logical subject of criticar and los ministros is the grammatical subject. Transformational grammarians would say that in (3a), la prensa is the deep (structure) subject and los ministros is the derived subject. In Perlmutter and Postal's theory of relational grammar, in (3a) la prensa is the initial 1 of criticar<sup>3</sup> and los ministros is the classic 1.

While Perlmutter and Postal's notion of initial 1 is close to the traditional notion of logical subject and the transformational notion of deep subject, their notion of classic 1 cannot be identified with the transformational notion of derived subject. To see this, consider (3b). In this sentence, la prensa is again the initial 1 of criticar, but los ministros is the classic 1 of parecer, not of criticar. Just as a given nominal can be the initial 1 of only one verb, it can be the classic 1 of only one verb. However, there is another notion of 'subject' that an adequate theory of grammar must capture - one in which los ministros is the 1 of both parecer and criticar in (3b); for example, los ministros triggers plural agreement on both parecen and criticados. Perlmutter and Postal refer to this notion as that of canonical 1, saying that los ministros is the canonical 1 of both of these verbs in (3b). The relational grammar notion of canonical 1 corresponds roughly to the notion of cycle-final subject in a cyclical theory of grammar.

A crucial difference between the notion of classic 1 and that of canonical 1 is that a given nominal can be the canonical 1 of more than one verb in a given sentence, but it can be the classic 1 of only one verb. If a given nominal is the classic 1 of a given verb it is also the canonical 1 of that verb, but the converse of this statement is not necessarily true. A given verb, however, has only one canonical 1. In a sentence in which no rule has created a 1, the same nominal will be the initial 1, the canonical 1, and the classic 1 of the verb. In (1), therefore, Pablo is the initial, canonical, and classic 1 of dar.

## 1. Two Rules of Spanish

### 1.1 Clitic placement

A non-pronominal classic 2 or 3 of a verb generally follows its verb in surface structure, as does el edificio nuevo in:

- (4) Eduardo vio el edificio nuevo.  
'Eduardo saw the new building.'

A pronominal object is in the strong form when it occurs under emphasis and in positions of contrast. In such cases, it is subject to the same word order rules as non-pronominal objects. Therefore it generally follows the verb, as in:

- (5) Eduardo no la vio a ella sino a él.  
'Eduardo didn't see her but him.'

Otherwise, the clitic form of the pronoun is used.

Spanish has a rule of Clitic Placement that attaches a clitic to the verb of which it is a classic dependent. When a clitic is attached to a finite verb, it precedes the verb:

- (6) Eduardo la vio.  
'Eduardo saw her.'

When a clitic is attached to a non-finite verb form (either an infinitive or a gerund), it follows the verb:

- (7) a. Quiere verla.  
'He wants to see her.'  
b. Sigue viéndola.  
'He continues seeing her.'

Since this contrast in clitic position is predictable from the finiteness (or non-finiteness) of the verb, we will not be concerned with it further here. When clitics are attached to verbs, the combination of clitic plus verb forms a single phonological word. This is reflected in Spanish orthography when the clitic follows the verb, but not when it precedes it.

## 1.2 Subject Pronoun Drop

In general, non-emphatic and non-contrastive subject pronouns do not occur in surface structure in Spanish. They are deleted by a rule we call Subject Pronoun Drop. In the sentences in (7), the third person singular subject pronoun has been deleted by Subject Pronoun Drop.

## 2. Two Classes of Verbs in Spanish

- (8) a. Luis quiere comer las manzanas amarillas.  
'Luis wants to eat the yellow apples.'  
b. Luis trató de comer las manzanas amarillas.  
'Luis tried to eat the yellow apples.'  
c. Luis suele comer las manzanas amarillas.  
'Luis tends to eat (the) yellow apples.'
- (9) a. Luis insistió en comer las manzanas amarillas.  
'Luis insisted on eating the yellow apples.'  
b. Luis soñó con comer las manzanas amarillas.  
'Luis dreamed of eating the yellow apples.'  
c. Luis parece haber comido las manzanas amarillas.  
'Luis seems to have eaten the yellow apples.'

Without attempting to justify this here, we assume that the (a) and (b) sentences in (8-9) involve Equi controlled by the matrix subject, while the (c) sentences involve Subject-to-Subject Raising. A pronominal object of the infinitive cliticizes to the verb, forming a single phonological word with it:

- (10) a. Luis quiere comerlas.  
'Luis wants to eat them.'
- b. Luis trató de comerlas.  
'Luis tried to eat them.'
- c. Luis suele comerlas.  
'Luis tends to eat them.'
- (11) a. Luis insistió en comerlas.  
'Luis insisted on eating them.'
- b. Luis soñó con comerlas.  
'Luis dreamed of eating them.'
- c. Luis parece haberlas comido.  
'Luis seems to have eaten them.'

The point of prime importance for us here is that alongside (10), the following sentences are also grammatical:

- (12) a. Luis las quiere comer.  
'Luis wants to eat them.'
- b. Luis las trató de comer.  
'Luis tried to eat them.'
- c. Luis las suele comer.  
'Luis tends to eat them.'

In (12), the pronominal clitic that is the initial 2 of the complement verb appears on the finite matrix verb. If the matrix verb is one of the matrix verbs in (9), however, this is not possible. Thus, alongside (11), the following examples are ungrammatical:

- (13) a. \*Luis las insistió en comer.  
b. \*Luis las soñó con comer.  
c. \*Luis las parece haber comido.

In brief, two classes of verbs must be distinguished in Spanish according to whether or not they can support a clitic pronoun that originated as a dependent of a complement verb (henceforth complement clitics). We will refer to verbs that can support complement clitics as trigger verbs and to those that cannot as non-trigger verbs. Thus, the matrix verbs of (8) are trigger verbs while those of (9) are non-trigger verbs.

For any given speaker, most verbs that govern infinitival or gerund complements fall clearly into one class or the other. However, the membership of each class varies somewhat from speaker to speaker. In this paper we present a hypothesis to account for the difference in syntactic behavior between trigger verbs and non-trigger verbs. This hypothesis does not predict the class any particular verb will belong to for any individual speaker. However, it does offer a means of testing the class membership of a particular verb for any speaker and makes certain predictions about the syntactic behavior of the verb once its class membership is known.<sup>4</sup>

Below is an illustrative list of trigger and non-trigger verbs.

<u>Trigger Verbs</u>	<u>Non-trigger Verbs</u>
sol <span>er</span> 'tend'	parecer 'seem'
acabar (de) 'have just'	deber (de) 'must(epistemic)'
querer 'want'	insistir (en) 'insist'
tratar (de) 'try'	soñar (con) 'dream (of)'
poder 'can, be able'	decidirse (a) 'decide (to)'
deber 'ought, should'	evitar 'avoid'
empezar (a) 'begin'	sugerir 'suggest'
terminar (de) 'finish'	pedir 'ask'
continuar 'continue'	decir 'say'
seguir 'keep on'	afirmar 'affirm'
dejar (de) 'stop'	
volver (a) 're-,again'	
ordenar 'order'	
permitir 'permit'	

### 3. Three Hypotheses Concerning the Difference between Trigger Verbs and Non-Trigger Verbs

#### 3.1 The Clitic Climbing Hypothesis

Under the Clitic Climbing hypothesis, the grammar of Spanish contains a rule of Clitic Climbing that optionally moves clitics from a subordinate clause into a higher clause under certain conditions that need not concern us here. This rule accounts for the position of the clitic pronouns in (12). Under this hypothesis, trigger verbs are characterized as triggering Clitic Climbing, while non-trigger verbs do not trigger this rule.

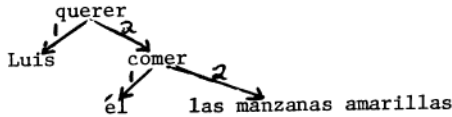
#### 3.2 The Verb Adjunction Hypothesis

The Verb Adjunction hypothesis has been proposed by Rivas (1974) within the framework of transformational grammar. Under this hypothesis, trigger verbs trigger a rule of Verb Adjunction that adjoins the complement verb to the matrix verb. The rule of Clitic Placement is then formulated in such a way that its application to structures in which Verb Adjunction has applied results in complement clitics being moved to the matrix verb. Under this hypothesis, non-trigger verbs do not trigger Verb Adjunction; as a result, complement clitics never appear on a non-trigger matrix verb.

#### 3.3 The Clause Reduction Hypothesis

In this paper, we present the Clause Reduction hypothesis within the general framework of relational grammar proposed by Perlmutter and Postal (in preparation). Under this hypothesis, trigger verbs differ from non-trigger verbs in that they trigger a rule of Clause Reduction that makes dependents of the complement verb dependents of the matrix verb. Consider (8a). Without Clause Reduction, the structure of this sentence is:

(14)



If Clause Reduction is triggered, the structure of (8a) is:

(15)



In (15), the fact that las manzanas amarillas bears the 2-relation to querer is indicated by the arc between it and querer.

Under the Clause Reduction hypothesis, there is no need for a rule of Clitic Climbing. The rule of Clitic Placement attaches each clitic to the verb of which it is a classic dependent. Thus, if instead of las manzanas amarillas the initial 2 of comer is pronominal, and if Clause Reduction is not triggered, as in (14), the pronoun is a classic dependent only of comer and therefore is attached to comer; the resulting sentence is (10a). If, on the other hand, Clause Reduction makes it a dependent of querer, as in (15), Clitic Placement attaches it to querer, and (12a) results. Under the Clause Reduction hypothesis, a clitic ends up attached to the verb of which it is a classic dependent.

Under the Clause Reduction hypothesis, trigger verbs are characterized as permitting Clause Reduction, while non-trigger verbs do not allow this rule. Since both the sentences in (10) and those in (12) are grammatical, Clause Reduction is an optional rule.

### 3.4 Brief Comparison of the Three Hypotheses

The three hypotheses account for the data concerning the distribution of clitics in surface structure in different ways. The Clitic Climbing hypothesis postulates an optional rule of Clitic Climbing, saying that a clitic from a complement can optionally move up to the matrix verb. The Verb Adjunction and Clause Reduction hypotheses, on the other hand, eliminate the rule of Clitic Climbing by saying that trigger verbs trigger another rule as a result of which the independently needed rule of Clitic Placement will be able to account for the surface distribution of clitics. The difference between these two hypotheses lies in the different rules they postulate to achieve this result as well as in the different theoretical frameworks in which they are embedded. The Verb Adjunction hypothesis could probably be formulated in such a way as to account for the facts presented in this paper, but we will not attempt to do that here. In this paper we will simply argue against the Clitic Climbing hypothesis and for the Clause Reduction hypothesis.

#### 4. Evidence for Clause Reduction: Constraints on Clitic Climbing

In §4 we show that the Clause Reduction hypothesis immediately makes two predictions that the Clitic Climbing hypothesis does not make. In each case, a grammar that incorporates a rule of Clitic Climbing will be forced to postulate an additional constraint that is unnecessary in a grammar with Clause Reduction. We conclude that the data in §4 constitutes evidence for rejecting the Clitic Climbing hypothesis in favor of the Clause Reduction hypothesis.

##### 4.1 Multiple Clitic Dependents of a Single Embedded Verb

Consider first the case of a complement verb that has more than one clitic dependent, as in

- (16) Quiero mostrárte<sub>i</sub>los<sub>j</sub>.  
 I+want show+you+them  
 'I want to show them to you.'

In (16), both te and los are clitic dependents of the complement verb mostrar. Under the Clause Reduction hypothesis, (16) results from a structure that has not undergone Clause Reduction. If the underlying structure undergoes Clause Reduction, te and los will become dependents of querer and Clitic Placement will consequently attach them to that verb, producing the sentence

- (17) Te los quiero mostrar.  
 'I want to show them to you.'

Under the Clause Reduction hypothesis, there are only two possibilities: either the structure undergoes Clause Reduction or it does not. The former produces (16), while the latter produces (17); no other sentences can arise from the structure in question.

Under the Clitic Climbing hypothesis, on the other hand, things are different. Since Clitic Climbing is an optional rule, there is nothing to prevent one complement clitic from moving to the matrix verb while the other stays behind. This would produce the following ungrammatical sentences:

- (18) \*Te quiero mostrarlos.  
 (19) \*Los quiero mostrarte.

A grammar that incorporates a rule of Clitic Climbing therefore needs an additional constraint:<sup>6</sup>

- (20) The Multiple Clitic Constraint

If a verb has more than one clitic dependent, then either all clitic dependents of that verb undergo Clitic Climbing or none do.

A grammar that accounts for the phenomenon by means of a rule of Clause Reduction, on the other hand, cannot generate \*(18-19) and thereby automatically predicts that these sentences will be ungrammatical. In other words, the Clause Reduction hypothesis explains why these sentences are ungrammatical. The ungrammati-

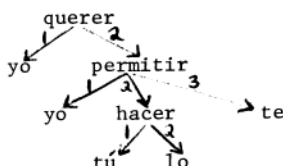


cality of sentences like \*(18-19) constitutes evidence for rejecting the Clitic Climbing hypothesis, which needs an additional device to account for them, in favor of the Clause Reduction hypothesis, which explains them.

#### 4.2 Intersecting Clitic Climbing

Now consider a three-storey structure such as<sup>7</sup>

(21)



in which (i) the second and third verbs each have a pronominal dependent, and (ii) the two higher verbs both optionally trigger Clause Reduction.<sup>8</sup>

The sentence that results from (21) is:

- (22) Quiero permitirte hacerlo.  
'I want to allow you to do it.'

In (22), te is the classic 3 of permitir and lo is the classic 2 of hacer; as a result, te is attached to permitir and lo is attached to hacer in the surface structure of (22).

Consider what can happen to (21) under the Clause Reduction hypothesis.

In a structure in which only permitir triggers Clause Reduction, lo will become a dependent of permitir, producing the sentence

- (23) Quiero permitirte lo hacer.  
'I want to allow you to do it.'

In a structure in which both querer and permitir trigger Clause Reduction, both te and lo will become dependents of querer, producing the sentence

- (24) Te lo quiero permitir hacer.  
'I want to allow you to do it.'

In a structure in which querer triggers Clause Reduction but permitir does not, te will become a dependent of querer but lo will remain a dependent of hacer. The result will be the sentence

- (25) Te quiero permitir hacerlo.  
'I want to allow you to do it.'

Finally, if neither querer nor permitir triggers Clause Reduction, te will remain a dependent of permitir and lo will remain a dependent of hacer, resulting in (22). Under the Clause Reduction hypothesis, this exhausts the possibilities.

Under the Clitic Climbing hypothesis, however, there is still another possibility. Since Clitic Climbing is optional, there is

nothing to prevent te from moving to querer and lo from moving to permitir in the same structure. The result, however, is ungrammatical:

(26) \*Te quiero permitirlo hacer.

A grammar that incorporates an optional rule of Clitic Climbing thus needs some device to prevent sentences like \*(26) from being generated. Under the Clause Reduction hypothesis, on the other hand, the ungrammaticality of sentences like \*(26) follows automatically, without any additional devices. Thus, unless it can be shown that the additional device or devices needed by the Clitic Climbing hypothesis to prevent sentences like \*(26) are motivated independently,<sup>9</sup> the ungrammaticality of such sentences constitutes grounds for rejecting the Clitic Climbing hypothesis in favor of the Clause Reduction hypothesis.<sup>10</sup>

## 5. Second Type of Evidence for Clause Reduction: Reflexive Passive

### 5.1 Reflexive Passive

Sentences (27-29) are produced by the rule we call Reflexive Passive, which advances a 2 to 1. This advancement produces sentences in which the clitic se (the third person reflexive pronoun) accompanies the verb. We therefore call this construction by the traditional name of reflexive passive.

(27) Las propiedades se vendieron ayer.

'The pieces of property were sold yesterday.'

(28) Estas canciones se cantan siempre primero.

'These songs are always sung first.'

(29) Esta construcción se emplea con toda clase de sujetos.

'This construction is used with all kinds of subjects.'

In each case, the initial 2 of the verb has advanced to 1. In these examples, las propiedades, estas canciones, and esta construcción are the canonical and classic 1s of their respective verbs.

Spanish thus has two distinct rules that advance a 2 to 1.

(27), produced by Reflexive Passive, contrasts with the sentence

(30) Las propiedades fueron vendidas ayer.

'The pieces of property were sold yesterday.'

produced by Passive. In both (27) and (30), las propiedades, the initial 2 of vender, has advanced to 1. However, (30) has passive morphology, with fueron (a form of the auxiliary verb ser) and vendidas (the past passive participle of vender). In both (27) and (30), the finite verb is plural in agreement with its classic 1, las propiedades. The two constructions differ in another way. In an ordinary passive, the initial 1 can appear as the object of the preposition por 'by' while this is impossible in the reflexive passive:

(31) Las propiedades fueron vendidas por los dueños ayer.

'The pieces of property were sold by the owners yesterday.'

- (32) \*Las propiedades se vendieron por los dueños ayer.

The initial 1 of the construction illustrated by (27-29) is understood to be human. It never appears in surface structure in Spanish. We will refer to it as PRO. It is probably the entity that is realized as on in French and man in German.

The initial 2 that advances to 1 in sentences like (27-29) we will call the pivot nominal.

In § 5.2 we briefly sketch four arguments that the pivot nominals in (27-29) are canonical 1s. In § 5.3 we show that Reflexive Passive operates on the output of Clause Reduction, thus providing further evidence for Clause Reduction in Spanish.

## 5.2 The Subjecthood of the Pivot Nominal in Reflexive Passives

We now briefly sketch four pieces of evidence that the pivot nominal in reflexive passives is the canonical 1 of the verb and not its canonical 2. The first two arguments and the fourth argument are arguments that the pivot nominal is the classic 1 of its verb, from which it follows that it is also its canonical 1. The third argument is a direct argument that it is the canonical 1. Limitations of space prevent us from giving the arguments in full here; for the full arguments, see Aissen and Perlmutter (in preparation).

The first piece of evidence comes from word order. Spanish has considerable freedom of word order, but in the natural order used in many situations the classic 1 precedes the verb. The fact that the pivot nominal precedes the verb in (27-29) is thus evidence that it is the classic 1. It follows that it is also the canonical 1.

The second piece of evidence comes from the pronominal form of the pivot nominal in reflexive passives. Classic 2s appear as accusative pronouns, as in

- (33) Las vendimos ayer.  
'We sold them yesterday.'

But replacement of the pivot nominals in reflexive passives by accusative pronouns results in ungrammaticality:<sup>11</sup>

- (34) \*Se las vendieron ayer.  
(35) \*Se las cantan siempre primero.

Replacement of the pivot nominals in reflexive passives by their pronominal counterparts requires nominative pronominal forms, which are generally deleted by the rule of Subject Pronoun Drop. The resulting sentences are:<sup>12</sup>

- (36) Se vendieron ayer.  
'They were sold yesterday.'  
(37) Se cantan siempre primero.  
'They are always sung first.'

The pronominal form of the pivot nominal in reflexive passives is deleted by Subject Pronoun Drop, just as the pronominal forms of other classic 1s are. This is further evidence that they are classic

1s and hence also canonical 1s.

Third, 1s produced by Reflexive Passive undergo Subject-to-Subject Raising. Thus, the structure that underlies

- (38) Parece que las propiedades se vendieron ayer.

'It seems that the pieces of property were sold yesterday.'

can also be realized as

- (39) Las propiedades parecen haberse vendido ayer.

'The pieces of property seem to have been sold yesterday.'

in which las propiedades, the 1 produced by Reflexive Passive, has become the 1 of parecer, triggering the Verb Agreement rule that results in the plural form parecen. Since canonical 1s undergo Subject-to-Subject Raising, this is evidence that Reflexive Passive produces canonical 1s.

Fourth, 1s produced by Reflexive Passive undergo Head Start, a rule that applies only to classic 1s. As a result of Head Start, the classic 1 of the complement of parecer 'seem' appears in sentence-initial position, ahead of parecer, without triggering agreement on parecer. Head Start produces (40b) from the structure underlying (40a).

- (40) a. Parece que los chicos están cansados.

'It seems that the children are tired.'

- b. Los chicos parece que están cansados.

Note that the verb form parece is singular. That the pivot nominal in reflexive passives is the classic 1 can be seen in the fact that the structure underlying (38) can also be realized as:

- (41) Las propiedades parece que se vendieron ayer.

It follows that the pivot nominal is the canonical 1 of a reflexive passive.

### 5.3 Interaction of Clause Reduction and Reflexive Passive

We have already shown that certain verbs of Spanish, which we call trigger verbs, trigger Clause Reduction, which makes dependents of the complement verb dependents of the trigger verb; this accounts for complement clitics showing up on the trigger verb in surface structure. In § 5 we have shown that Spanish has a rule of Reflexive Passive that advances the 2 of the verb to 1. Taken together, our rule of Clause Reduction and our rule of Reflexive Passive make further predictions. Under Clause Reduction, dependents of a complement verb become dependents of the trigger verb, the 2 of the complement of a trigger verb becoming the 2 of the trigger verb itself. And since Reflexive Passive advances the 2 of a verb to 1, it should advance the original complement 2 (the derived 2 of the trigger verb) to be 1 of the trigger verb. We will now show that this prediction is correct.<sup>13</sup>

Consider the trigger verbs empezar 'begin,' tratar 'try,' and querer 'want.' If the prediction made jointly by Clause Reduction and Reflexive Passive is correct, there should be grammatical sentences in which the initial 2 of a verb embedded beneath one of

the trigger verbs empezar, tratar, or querer undergoes Reflexive Passive and thus becomes the canonical 1 of the trigger verb. The correctness of this prediction is indicated by the following examples:

- (42) Los mapas ya se empezaron a preparar.  
 the maps already began prepare  
 'PRO has already begun to prepare the maps.'
- (43) Las canciones cortas se tratan de cantar siempre primero.  
 the songs short try sing always first  
 'PRO always tries to sing the short songs first.'
- (44) Estas secciones de la ciudad se quieren eliminar sin  
 these sections of the city want eliminate without  
 que nadie lo sepa.  
 that no one it know  
 'PRO wants to eliminate these sections of the city without  
 anyone knowing it.'

In these examples, los mapas, las canciones cortas, and estas secciones de la ciudad are classic and canonical 1s of the the verbs empezaron, tratan, and quieren respectively. Each of these nominals precedes the verb of which it is the classic 1, and in each case the verb is plural in agreement with its classic 1. Further, the pronominal forms that replace these nominals are nominative pronouns that undergo Subject Pronoun Drop, producing the following sentences:

- (45) a. Ya se empezaron a preparar.  
 'PRO has already begun to prepare them.'
- b. Se tratan de cantar siempre primero.  
 'PRO always tries to sing them first.'
- c. Se quieren eliminar sin que nadie lo sepa.  
 'PRO wants to eliminate them without anyone knowing it.'

In addition, los mapas, las canciones cortas, and estas secciones de la ciudad can be shown to be canonical 1s in (42-44) by virtue of the fact that they undergo Subject-to-Subject Raising and classic 1s by virtue of the fact that they undergo Head Start.

(46) Subject-to-Subject Raising

- a. Los mapas parecen haberse empezado a preparar.  
 'PRO seems to have begun to prepare the maps.'
- b. Las canciones cortas parecen haberse tratado de cantar primero.  
 'PRO seems to have tried to sing the short songs first.'
- c. Estas secciones de la ciudad parecen quererse eliminar sin que nadie lo sepa.  
 'PRO seems to want to eliminate these sections of the city without anyone knowing it.'

(47) Head Start

- a. Los mapas parece que ya se empezaron a preparar.
- b. Las canciones cortas parece que se tratan de cantar siempre primero.

- c. Estas secciones de la ciudad parece que se quieren eliminar sin que nadie lo sepa.

Our hypothesis makes another prediction - that if the matrix verb in (42-44) is replaced by a verb that does not trigger Clause Reduction, then such sentences will be ungrammatical. This prediction is also correct. We illustrate this with the verbs insistir en, 'insist on' and soñar con 'dream of,' shown in § 2 to be non-trigger verbs.

Consider the sentences

- (48) Los turistas insistieron en visitar las pirámides.  
'The tourists insisted on visiting the pyramids.'
- (49) Sueño con solucionar esos problemas.  
'I dream of solving those problems.'

If the subjects of (48-49) are replaced by PRO, the sentences that would be produced by Reflexive Passive are ungrammatical:

- (50) \*Las pirámides se insistieron en visitar.  
(51) \*Esos problemas se sueñan con solucionar.

The ungrammaticality of these examples follows automatically under our hypothesis, under which only the 2 of a verb can undergo Reflexive Passive. Since insistir en and soñar con do not trigger Clause Reduction there is no way that las pirámides and esos problemas can become 2s of these verbs, hence they cannot undergo Reflexive Passive. Thus \*(50-51) are ungrammatical.

Finally, note that if several verbs that trigger Clause Reduction are embedded one beneath the other, the initial 2 of a verb several storeys down can become the 2 of a trigger verb several storeys up and can therefore undergo Reflexive Passive. This results in sentences like

- (52) Estas secciones de la ciudad se quieren tratar de eliminar sin que nadie lo sepa.  
'PRO wants to try to eliminate these sections of the city without anyone knowing it.'

Estas secciones de la ciudad, the initial 2 of eliminar, becomes the 2 of querer (two storeys up) by Clause Reduction, and thus becomes the canonical 1 of querer by Reflexive Passive. The result is (52). But if a verb that does not trigger Clause Reduction intervenes, there is no way that the initial 2 of eliminar can become the 2, and hence (by Reflexive Passive) the 1, or querer. As a result, the following sentence is ungrammatical:

- (53) \*Estas secciones de la ciudad se quieren insistir en eliminar sin que nadie lo sepa.  
'PRO wants to insist on eliminating these sections of the city without anyone knowing it.'

In sum, in § 5.3 we have shown that the initial 2 of a complement verb can become the canonical 1 of a matrix verb by Reflexive Passive

in those cases, and only in those cases, where it can become the 2 of that matrix verb by Clause Reduction. This is exactly what our hypothesis predicts.

## 6. Third Type of Evidence for Clause Reduction: Object Raising

### 6.1 Object Raising

Predicates like fácil 'easy,' difícil 'difficult,' and imposible 'impossible' take clausal 1s that can be extraposed, producing sentences like the following:

- (54) *Será difícil componer estas radios.*  
'It will be difficult to fix these radios.'
- (55) *Es fácil entender los resultados.*  
'It is easy to understand the results.'
- (56) *Fue imposible comer el postre.*  
'It was impossible to eat the dessert.'

Spanish has a rule of Object Raising that promotes the 2 of a verb embedded immediately beneath one of these predicates to 1 of the matrix predicate. Object Raising produces sentences like the following:

- (57) *Estas radios serán difíciles de componer.*  
'These radios will be difficult to fix.'
- (58) *Los resultados son fáciles de entender.*  
'The results are easy to understand.'
- (59) *El postre fue imposible de comer.*  
'The dessert was impossible to eat.'

In each of these sentences, the initial 2 of the complement is the canonical and classic 1 of the matrix clause, triggering agreement of the matrix verb and adjective. Thus, in (57) serán and difíciles are plural in agreement with estas radios, and in (58) son and fáciles are plural in agreement with los resultados. Note also that in Object Raising sentences the preposition de appears between the Object Raising trigger and the complement.

In all of the above examples, the 3 of the matrix clause (which is coreferential with the 1 of the embedded clause) is understood as PRO. Non-PRO 3s of the matrix clause appear in surface structure, preferably in clause-initial position:<sup>14</sup>

- (60) *A Francisco le será difícil componer estas radios.*  
'For Francisco it will be difficult to fix these radios.'
- (61) *A Francisco estas radios le serán difíciles de componer.*  
'For Francisco these radios will be difficult to fix.'

In § 6.2 we briefly sketch the evidence that the nominals promoted by Object Raising are canonical 1s. In § 6.3 we show that Object Raising operates on structures produced by Clause Reduction, providing further evidence for Clause Reduction in Spanish.

## 6.2 The Subjecthood of the Promoted Nominal in Object Raising Sentences

In § 6.2 we argue that the promoted nominal in Object Raising sentences is the canonical 1 of the matrix verb and adjective.<sup>15</sup> Under an analysis in which the verb and adjective are each the initial main verb of a clause, the promoted nominal is the classic 1 of the verb and the canonical 1 of the adjective. From this it follows that it is also the canonical 1 of the verb. In this discussion, however, we will ignore this difference between the verb and the adjective, speaking loosely of the promoted nominal as the canonical 1 of both.

In § 6.1 we pointed out that the promoted nominal in Object Raising sentences triggers agreement on the matrix verb and adjective. This is one piece of evidence that it is a canonical 1.<sup>16</sup>

In addition, the kinds of evidence used to show that the pivot nominal in 2-Advancement sentences is the canonical 1 of the verb can also be used to argue for the canonical 1-hood of the promoted nominal in Object Raising sentences.

First, the fact that it generally appears in preverbal position in surface structure follows automatically if it is a classic 1. From this it follows that it is the canonical 1.

Second, if the promoted nominals are pronominal, they are nominative and undergo Subject Pronoun Drop:

- (62) Serán difíciles de componer.  
'They will be difficult to fix.'
- (63) Son fáciles de entender.  
'They are easy to understand.'

Since classic 1s undergo Subject Pronoun Drop, this is evidence that the promoted nominal is the classic (and hence canonical) 1.

Third, the promoted nominals undergo Subject-to-Subject Raising, which produces the (b)-sentences below from the structures underlying the corresponding (a)-sentences:

- (64) a. Parece que estas radios son difíciles de componer.  
'It seems that these radios are difficult to fix.'  
b. Estas radios parecen ser difíciles de componer.  
'These radios seem to be difficult to fix.'
- (65) a. Parece que los resultados son fáciles de entender.  
'It seems that the results are easy to understand.'  
b. Los resultados parecen ser fáciles de entender.  
'The results seem to be easy to understand.'

Fourth, the promoted nominals can undergo Head Start, which produces the following sentences from the structures underlying (64a) and (65a):

- (66) Estas radios parece que son difíciles de componer.  
(67) Los resultados parece que son fáciles de entender.



### 6.3 Interaction of Clause Reduction and Object Raising

We have shown that Spanish has a rule of Object Raising that promotes the 2 of verbs embedded beneath Object Raising triggers. The rule of Clause Reduction and the rule of Object Raising, taken together, make further predictions. Under Clause Reduction, dependents of a complement verb become dependents of the trigger verb, the 2 of the complement of a trigger verb becoming the 2 of the trigger verb. And since Object Raising promotes the 2 of a verb, it should promote the original complement 2 (the derived 2 of the trigger verb). We will now show that this prediction is correct.

Consider a structure in which difícil has a clausal 1 with a Clause Reduction trigger and a complement embedded beneath it. One such structure can be realized, with Extraposition, as:

- (68) Será difícil empezar a hacer estos mapas.  
'It will be difficult to begin to make these maps.'

Since Clause Reduction makes the 2 of hacer the 2 of empezar, Object Raising should be able to make it the 1 of difícil. And it can:

- (69) Estos mapas serán difíciles de empezar a hacer.  
'These maps will be difficult to begin to make.'

Similarly, if we substitute the trigger verb dejar (de) 'stop' for empezar, the initial 2 of the verb embedded beneath it can be promoted by Object Raising:

- (70) Es casi imposible dejar de comer estas galletas.  
'It's almost impossible to stop eating these cookies.'
- (71) Estas galletas son casi imposibles de dejar de comer.  
'These cookies are almost impossible to stop eating.'

Clause Reduction makes estas galletas the 2 of dejar, and Object Raising makes it the 1 of imposible.

The Clause Reduction hypothesis, together with the rule of Object Raising, further predicts that if a verb that does not trigger Clause Reduction is embedded beneath an Object Raising trigger, then the 2 of an embedded verb will not be able to undergo Object Raising. We will illustrate this with the verbs insistir (en) and soñar (con), which do not trigger Clause Reduction. These verbs can be embedded beneath difícil, as the following sentences show:

- (72) Es difícil insistir en hacer tales cosas.  
'It is difficult to insist on doing such things.'
- (73) Es fácil soñar con componer sinfonías como esa.  
'It is easy to dream of composing symphonies like that one.'

But, exactly as our hypothesis predicts, the corresponding Object Raising sentences are ungrammatical:

- (74) \*Tales cosas son difíciles de insistir en hacer.  
'Such things are difficult to insist on doing.'

- (75) \*Sinfonías como esa son fáciles de soñar con componer.  
'Symphonies like that one are easy to dream of composing.'

Our hypothesis likewise predicts that a nominal initially embedded several storeys down can become the 1 of an Object Raising trigger as long as all the intervening verbs are Clause Reduction triggers. And this is correct:

- (76) Errores como esos son difíciles de seguir tratando de corregir.  
'Mistakes like those are difficult to keep on trying to correct.'

But if one of the intervening verbs is not a Clause Reduction trigger, there will be no way for the embedded nominal to become the 2 of the verb embedded immediately beneath the Object Raising trigger, and the resulting sentence with Object Raising will be ungrammatical:

- (77) \*Errores como esos son imposibles de seguir insistiendo en corregir.  
'Mistakes like those are impossible to keep on insisting on correcting.'

The ungrammaticality of \*(77) follows from the fact that insistir does not trigger Clause Reduction.

In sum, in § 6.3 we have shown that in structures in which Clause Reduction has made the 2 of a verb embedded two storeys below an Object Raising trigger the 2 of the verb immediately beneath the Object Raising trigger, this 2 can become the matrix 1 by Object Raising. But in structures without Clause Reduction this is impossible. This is exactly what the Clause Reduction hypothesis predicts.

## 7. Further Evidence for Clause Reduction: Interaction of Reflexive Passive and Object Raising with Clitic Placement

### 7.0 Introduction

In § 5-6, we argued for Clause Reduction by showing that initial downstairs 2s behave like upstairs 2s by undergoing Reflexive Passive and Object Raising as 2s of the upstairs verb. Our formulation of Clause Reduction, however, makes not only the downstairs 2, but any dependent of the complement verb a dependent of the matrix verb. In this section we provide evidence that 3s of the complement become dependents of the matrix verb.

Crucial to the discussion is the assumption made explicit in § 3.3 that a pronominal dependent cliticizes to the verb of which it is <sup>clitic</sup> dependent. Our argument focuses on the position of clitics corresponding to initial downstairs 3s in sentences with Clause Reduction. The Clause Reduction hypothesis predicts that in a Clause Reduction structure the initial downstairs 3 will cliticize only to the upper verb and not to the lower verb. In § 7 we show that this prediction is correct.

### 7.1 Clitic Placement and Reflexive Passive

Consider the sentences:

- (78) a. Los dueños quieren alquilarles estas casas a los generales.  
 b. Los dueños les quieren alquilar estas casas a los generales.  
 'The owners want to rent these houses to the generals.'

The les in (78) is a clitic copy of the 3 los generales. (See footnote 14.) Since Clause Reduction is optional, there are two grammatical outputs. In (78a), without Clause Reduction, los generales is the classic 3 of alquilar and not of querer, and les consequently cliticizes to alquilar. In (78b), with Clause Reduction, los generales is the classic 3 of querer, and les consequently cliticizes to querer.

Now consider the structure that is like that of (78) except that the initial 1 of querer is PRO instead of los dueños. The structure to be considered has Clause Reduction and Reflexive Passive, with the result that the initial 2 of the complement is the classic 1 of querer. Now, our hypothesis that in sentences with Clause Reduction all dependents of the lower verb become dependents of the upper verb predicts that los generales, the initial 3 of alquilar, is a classic dependent of the upstairs verb, and that les will consequently cliticize to querer, the upstairs verb. And this is correct:

- (79) Estas casas se les quieren alquilar a los generales.  
 'PRO wants to rent these houses to the generals.'

The fact that under Clause Reduction los generales must become a dependent of querer can be seen in the fact that its clitic copy les cannot cliticize to the lower verb:

- (80) \*Estas casas se quieren alquilarles a los generales.

The ungrammaticality of \*(80) is an automatic consequence of our hypothesis. The fact that las casas is advanced to 1 of querer by Reflexive Passive shows that this is a structure with Clause Reduction. This being the case, los generales must be the classic 3 of querer, and as a result its clitic copy les must cliticize to querer rather than to alquilar.

The same thing can be seen in the following examples. Since Clause Reduction is optional, los estudiantes can be the classic 3 of either vender or empezar, with the corresponding differences in the placement of its clitic copy les:

- (81) a. Esa compañía empezó a venderles estos libros a los estudiantes.  
 b. Esa compañía les empezó a vender estos libros a los estudiantes.  
 'That company began to sell these books to the students.'

But in a structure in which Reflexive Passive makes the initial 2 of vender the 1 of empezar, Clause Reduction must have made all dependents of vender dependents of empezar, with the result that the clitic copy of los estudiantes must cliticize to empezar and

cannot cliticize to vender:<sup>17</sup>

- (82) a. Estos libros se les empezaron a vender a los  
estudiantes.  
'PRO began to sell these books to the students.'  
b. \*Estos libros se empezaron a venderles a los  
estudiantes.

Thus, the Clause Reduction hypothesis explains why the advancement of an initial complement 2 by Reflexive Passive in the upper clause restricts the placement of an initial complement clitic to the upper verb.

## 7.2 A Contrast Explained

We have seen that both Equi triggers like querer 'want' and Subject-to-Subject Raising triggers like soler 'tend' that trigger Clause Reduction make it possible for the initial downstairs 2 to become the canonical 1 of the upstairs verb by Reflexive Passive, as in the following examples:

- (83) Secciones de la ciudad como esas se suelen eliminar sin  
que nadie lo sepa.  
'PRO tends to eliminate sections of the city like those  
without anyone knowing it.'  
(84) Secciones de la ciudad como esas se quieren eliminar sin  
que nadie lo sepa.  
'PRO wants to eliminate sections of the city like those  
without anyone knowing it.'

However, there is an interesting contrast between these two classes of verbs. In the case of Subject-to-Subject Raising triggers, the clitic se that results from Reflexive Passive can also appear on the downstairs verb, while in the case of Equi triggers this is not possible:

- (85) Secciones de la ciudad como esas suelen eliminarse  
sin que nadie lo sepa.  
'PRO tends to eliminate sections of the city like those  
without anyone knowing it.'  
(86) \*Secciones de la ciudad como esas quieren eliminarse  
sin que nadie lo sepa.

At first glance, the contrast between (85) and \*(86) might seem mysterious. This contrast, however, follows automatically from our hypothesis. In the case of Subject-to-Subject Raising triggers like soler, Reflexive Passive in the complement can make the initial 2 of the complement the canonical 1 of the complement. As a result of Subject-to-Subject Raising, the canonical 1 of the complement becomes the canonical 1 of the matrix verb. All of this happens in a sentence without Clause Reduction (which is optional). As a result, the initial 2 of the complement is the canonical 1 of the matrix verb, but the se that results from Reflexive Passive in the complement is still in the complement.<sup>18</sup> It consequently cliticizes to the complement verb, and sentences like (85) result. With an Equi trigger

like querer, however, this is impossible. With such verbs, the only way that the initial 2 of the complement can become the 1 of the matrix verb is as a result of the combination of Clause Reduction and Reflexive Passive. And in such cases, since the resulting structure has only one clause no clitics can appear on the complement verb. These sentences like \*(86) are ungrammatical.

Thus, contrasts like that between (85) and \*(86) are an automatic consequence of our hypothesis. At the same time, they provide an additional piece of evidence for the syntactic difference between Equi triggers and Subject-to-Subject Raising triggers that is quite unlike any of the arguments offered in support of the distinction between these two classes of verbs in English.

### 7.3 Clitic Placement and Object Raising

Consider the structure that is actualized as:

- (87) a. Va a ser difícil empezar a hacerles estos mapas a los profesores.  
 b. Va a ser difícil empezarles a hacer estos mapas a los profesores.  
 'It's going to be difficult to begin to make these maps for the professors.'

If empezar does not trigger Clause Reduction, estos mapas and los profesores are classic dependents of hacer, and les (the clitic copy of los profesores) consequently cliticizes to hacer, as in (87a). On the other hand, if empezar triggers Clause Reduction, estos mapas and los profesores are classic dependents of empezar, and les consequently cliticizes to empezar, as in (87b).

If empezar triggers Clause Reduction, estos mapas (as the 2 of empezar) can undergo Object Raising, becoming the 1 of difícil. Since this can happen only in a sentence with Clause Reduction, and since Clause Reduction makes both estos mapas and los profesores dependents of empezar, our hypothesis automatically predicts that the clitic copy les of los profesores cannot cliticize to hacer. And this is correct:

- (88) \*Estos mapas van a ser difíciles de empezar a hacerles a los profesores.  
 'These maps are going to be difficult to begin to make for the professors.'

Thus, our hypothesis automatically explains why, in Object Raising sentences like \*(88), a clitic corresponding to the initial complement 3 cannot appear on the complement verb.

In Object Raising sentences, most speakers relax the requirement that the 3 have a clitic copy. Thus the structure underlying \*(88) is actualized as:

- (89) Estos mapas van a ser difíciles de empezar a hacer a los profesores.  
 'These maps are going to be difficult to begin to make for the professors.'

In sentences that are like (89) except that los profesores has a clitic copy, the clitic should attach to empezar because los profesores is a dependent of empezar. However, the resulting sentence is ungrammatical:

- (90) \*Estos mapas van a ser difíciles de empezarles a hacer a los profesores.

The ungrammaticality of sentences like \*(90) is left unexplained by our hypothesis.

#### 8. Clause Union in Causatives and Clause Reduction

The causative construction in a number of different languages has been the subject of considerable study in recent years. In Spanish, this construction is found with the verbs hacer 'make' and dejar 'let.'<sup>19</sup> In the framework of relational grammar being developed by Perlmutter and Postal, this construction is produced by the rule of Clause Union, which makes all dependents of the embedded verb into dependents of the matrix verb. When the complement is a 2-complement, Clause Union is universally characterized by the following:

- (91) a. If the complement is intransitive, the 1 of the complement verb becomes the 2 of the matrix verb.  
 b. If the complement is transitive, the 2 of the complement verb becomes the 2 of the matrix verb and the 1 of the complement verb becomes the 3 of the matrix verb.

Clause Union produces sentences like the following:

- (92) Los hice caminar toda la noche.  
 'I made them walk all night.'  
 (93) Les hice poner sus nombres en la lista.  
 'I made them put their names on the list.'

The complement 1 is the accusative pronoun los in (92) and the dative pronoun les in (93), indicating their status as classic 2 and 3 of hacer, respectively. With dejar, Clause Union is optional. In sentences with Clause Union, the complement 1 is the canonical 2 or 3 of the matrix verb, as in (92-93). Sentences without Clause Union may undergo Subject-to-Object Raising, which makes the complement 1 the 2 of dejar (regardless of the transitivity of the complement).

The question naturally arises as to the relationship between Clause Union in the causative construction and the process of Clause Reduction that is the topic of this paper. We characterized Clause Reduction by saying that dependents of the complement verb become dependents of the matrix verb. That is also the characterization of Clause Union in the causative construction. Viewed in the framework of relational grammar, the two must be the same rule. We will consequently begin to use the term Clause Union to refer to the process

studied in this paper.

The trigger verbs considered in this paper trigger Clause Union optionally. In this respect, they are like dejar rather than like hacer.

There is another respect in which the trigger verbs studied in this paper differ from both dejar and hacer. Consider what happens with querer. There are grammatical sentences of Spanish in which the 1 of the complement of querer is distinct from the 1 of querer:

- (94) Pilar quiere que mis primos pongan sus nombres en la lista.

'Pilar wants my cousins to put their names on the list.'

In (94), the complement is introduced by que, which is found in sentences with querer in which the complement and matrix 1s are distinct. But in sentences with querer that undergo Clause Union, the complement 1 has been deleted by Equi. Clause Union with querer is thus subject to the condition that the complement 1 must be deleted in order for Clause Union to be possible. This condition differentiates querer from dejar and hacer, accounting for the fact that sentences like (93) with hacer are not possible with querer:<sup>20</sup>

- (95) \*Pilar les quiere poner sus nombres en la lista a mis primos.

The other Equi triggers that trigger Clause Union that we have discussed in this paper are subject to the same condition as querer.

Since Clause Union is possible with these verbs only if the complement 1 is the victim of Equi, (91) holds with these verbs. Since the complement 1 is out of the picture, the only part of (91) that is relevant is that the complement 2 becomes the 2 of the matrix verb. Evidence that this is correct has already been presented in § 5-6.

It remains to consider the Subject-to-Subject Raising triggers that trigger Clause Union.

We could say that the following characterizes Clause Union with these verbs:

- (96) The 1 of the complement verb becomes the 1 of the matrix verb and the 2 of the complement verb becomes the 2 of the matrix verb.

(96) describes the data. But if we adopt (96), we have it as an additional statement in addition to (91), which is needed independently.

(96) is not needed to make the complement 2 the 2 of the matrix verb, since (91b) does that. (96) is needed only to make the 1 of the complement the 1 of the matrix verb. But we already have a device that makes the 1 of the complement into the 1 of the matrix verb: Subject-to-Subject Raising, which these verbs trigger. Thus, if we say that Clause Union operates on structures produced by Subject-to-Subject Raising, (96) can be eliminated. Then we can say that Equi

triggers like querer 'want' and Subject-to-Subject Raising triggers like soler 'tend' allow Clause Union under exactly the same condition:

- (97) Clause Union is possible with these verbs only if the complement has no 1.

Thus Clause Union will be possible with Equi triggers like querer only upon deletion of the complement 1 by Equi, and with Subject-to-Subject Raising triggers like soler only upon raising of the complement 1 to become the 1 of the matrix verb. Condition (97) governs Clause Union with both of these verb classes. And the fact that they are subject to this condition is what differentiates the behavior of these verbs with respect to Clause Union from that of hacer and dejar, which are not subject to (97).

#### 9. A Proposed Universal of Grammar

We began this study with the observation that with certain matrix verbs, clitics that originate in the complement can appear on the matrix verb. We considered two hypotheses to account for this phenomenon of clitic climbing - one that posited a rule of Clitic Climbing and one that posited a rule of Clause Union. We have given evidence that in Spanish, the clitic climbing phenomenon is due to Clause Union and not to a rule of Clitic Climbing. We now wish to make an additional claim:

- (98) The grammar of no natural language contains a rule of Clitic Climbing that moves clitics from a complement clause into the matrix clause.

We claim that in any language with the clitic climbing phenomenon, this is due to the rule of Clause Union that unites the two clauses into a single clause. Clitic Placement then places a clitic on the verb of which it is a classic dependent.<sup>21</sup> The fact that this happens in Spanish, we claim, is not an accident of Spanish grammar, but the only possibility.

(98) states the claim that Clitic Climbing is not a possible rule of human language. We thus adopt the view that particular languages are not free to make up rules, but rather must select their rules from a restricted inventory of rules put at their disposal by Universal Grammar.<sup>22</sup>

Our claim that the clitic climbing phenomenon is universally due to Clause Union makes certain testable predictions.

First, recall the constraints on placement of more than one clitic dependent of the same verb that were discussed in § 4.1, and the ungrammaticality of sentences with intersecting clitic climbing of the kind that were discussed in § 4.2. Our hypothesis that the clitic climbing phenomenon is universally due to Clause Union predicts that these phenomena will be universal. More specifically, in no language will sentences like those starred in § 4 be grammatical.



Our hypothesis that the clitic climbing phenomenon is universally due to Clause Union has two sides to it. On the one hand, we claim that no language can have a rule of Clitic Climbing. On the other, we propose that in languages in which clitics are placed on the verb, a clitic is placed on the verb of which it is a classic dependent. This makes predictions about the placement of clitics in sentences in which initial dependents of a complement verb become dependents of the matrix verb.

In the framework of relational grammar in which we are working, there are two (and only two) ways that dependents of a complement verb can become dependents of the matrix verb - by raising rules and by Clause Union. Our hypothesis about Clitic Placement predicts that in cases in which complement dependents become matrix verb dependents by a raising rule, the raised nominal, if pronominal, will cliticize in the matrix clause. Other dependents of the complement verb, which do not become dependents of the matrix verb, will cliticize in the complement.

In cases where a given verb triggers Clause Union, however, all dependents of the complement verb will become dependents of the matrix verb. Thus, if they are pronominal, they will cliticize in the matrix clause. There are two aspects of this prediction.

First, our hypothesis predicts that in a language with the clitic climbing phenomenon, the class of verbs that can be shown on other grounds to trigger Clause Union will be the same class of verbs that accepts complement clitics, while those verbs that do not trigger Clause Union will be the verbs that do not accept complement clitics.

Second, our hypothesis predicts that in a given sentence that can be accounted for only on the assumption that Clause Union has been triggered (such as the reflexive passives in Spanish discussed in § 5 and the Object Raising sentences discussed in § 6), clitics originating in a complement that has merged with the matrix clause can be placed only on the matrix verb and not on the complement verb. Any deviations from this will be due to rules or constraints for which there is independent evidence in the language in question.

Stated in the most general terms, our hypothesis predicts that whatever evidence there may be in a particular language to decide between the Clitic Climbing hypothesis and the Clause Union hypothesis will in fact decide in favor of the Clause Union hypothesis.

#### Footnotes

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1. For more extensive discussion of this phenomenon in both Spanish and Italian, see Aissen and Perlmutter (in preparation).
2. This structure ignores a number of things, such as the tense of the verb, the internal structure of the nominal un regalo, and the clitic copy le of the 3 Mercedes. Spanish has a rule that creates pronominal copies of 3s. These pronominal copies appear as clitics attached to the verb in surface structure. This copying rule is generally obligatory. It produces the clitics that are crucial to the argument in § 7.
3. Throughout this discussion, we speak of the grammatical relations that nominals bear to criticar and to parecer, ignoring the verb forms fueron in (3a) and haber and sido in (3b).
4. The class membership of verbs whose indirect objects control Equi is subject to extreme variation from speaker to speaker. For example, for many speakers ordenar 'order' is a trigger verb, while sugerir is a non-trigger verb. But there are many speakers for whom sugerir is a trigger verb, and some speakers for whom ordenar is a non-trigger verb.  
We have noticed that for many speakers there are certain verbs whose class membership is not clear. In such cases, the speaker may have difficulty deciding whether a particular verb behaves like a trigger verb or a non-trigger verb, or may change his or her mind from week to week.
5. Not only do diagrams (14) and (15) ignore tense and the internal structure of nominals, they should not be interpreted as making any claims whatsoever about Equi or the representation of coreference. The complement subject deleted by Equi is represented here as a pronoun simply for convenience, but that does not mean that we claim that it is present in pronominal form in the structure. These diagrams also fail to indicate deletion by Equi.
6. The Multiple Clitic Constraint is not the only device one might use to rule out ungrammatical sentences like \*(18-19) in the framework of transformational grammar. For example, one might postulate a structure in which all clitic dependents of a verb are dominated by a single node and then make Clitic Climbing move that node rather than moving the clitics individually. The point is that under the Clitic Climbing hypothesis, the ungrammaticality of \*(18-19) does not follow automatically. Under the Clause Reduction hypothesis, on the hand, it does.
7. (21) does not indicate the consequences of Equi, which deletes the 1 of permitir and the 1 of hacer. Further, the 3 of permitir is arbitrarily represented in the clitic form te and the 2 of hacer is arbitrarily represented in the clitic form lo. This is done only for convenience and incorporates no claims concerning the actual structures involved.

8. As was indicated in § 2, there is a great deal of variation from speaker to speaker with respect to which verbs are trigger verbs, especially in the case of verbs that take an initial 3. Thus, while permitir is a trigger verb for many speakers, there are also speakers for whom it is a non-trigger verb. For such speakers, our argument can be reconstructed using a different verb in the examples.

9. It might be thought that the ungrammaticality of such sentences will follow from the conjunction of the following three things:

- a) a cyclical theory of grammar
- b) a statement that the rule of Clitic Climbing is cyclical
- c) whatever device is used to account for the ungrammaticality of sentences like \*(18-19) in § 4.1.

Thus, it might be thought that once lo moves to permitir on the second cycle, te and lo will have to move together thenceforth, or not move at all, and that \*(26) will therefore not be generated. To see that this will not be sufficient to prevent the generation of ungrammatical sentences, consider:

- (i) \*Jorge dijo que te quiero permitirlo hacer.  
'Jorge said that.....'

Even with a)-c), under the Clitic Climbing hypothesis ungrammatical sentences like \*(i) can be generated in the following way:

- (i) on the querer-cycle, te attaches to quiero.
- (ii) on the cycle of dijo, lo attaches to permitir.

Thus, even with a)-c), it would still be necessary to posit something to prevent sentences like \*(i) from being generated. To accomplish this, one could add:

- d) a condition like the Strict Cycle Condition proposed by Chomsky (1973, 243).

However, this proposal is still untenable because in a cyclical theory of grammar, Clitic Climbing cannot be a cyclical rule. This conclusion was reached by Perlmutter (1973). We give here only one of his arguments, which is based on the Platense dialect of Spanish spoken in the Río de la Plata basin of Argentina and Uruguay.

The Platense dialect has an obligatory rule of Clitic Doubling that creates a pronominal copy of a definite animate 2; as a result of Clitic Placement, the pronominal copy appears on the verb in surface structure. This dialect thus has sentences like

- (ii) Los vi a los chicos ayer.  
'I saw the children yesterday.'

in which the los preceding the verb is a clitic copy of the 2 los chicos. Clitic Doubling in the complement of an Object Raising trigger can be seen in the sentence

- (iii) Es difícil convencerlos a los chicos.  
'It is difficult to convince the children.'

in which the clitic copy los of the 2 of convencer appears on convencer. Now, if Clitic Doubling is a cyclical rule, it will apply in the complement of sentences like (iii) on the first cycle. However, Object Raising might apply on the second cycle, producing the ungrammatical sentence

- (iv) \*Los chicos son difíciles de convencerlos.

The grammatical sentence that must result is

- (v) Los chicos son difíciles de convencer.  
'The children are difficult to convince.'

without a clitic copy. One could propose adding an ad hoc constraint to the grammar preventing Object Raising from applying if Clitic Doubling has applied in the complement, but even that would not work in dialects such as the Platense dialect in which Clitic Doubling is obligatory; with such a constraint in the grammar, (v) could not be generated. It is therefore necessary to conclude that in a cyclical theory of grammar, Clitic Doubling is a post-cyclical rule.

To show that Clitic Climbing cannot be a cyclical rule, it suffices to show that it applies to clitics produced by Clitic Doubling, as in:

- (vi) a. Quiero seguir criticándolos a los candidatos.  
'I want to continue criticizing the candidates.'  
b. Quiero seguirlos criticando a los candidatos.  
c. Los quiero seguir criticando a los candidatos.

Since Clitic Climbing cannot be a cyclical rule and b) states that it is, any account of the ungrammaticality of sentences like \*(26) that depends on b) must be spurious.

For dialects of Spanish that do not have the rule of Clitic Doubling, the interaction of Cliticization and Object Raising can be used to show that Cliticization must be post-cyclical in a cyclical theory of grammar. It then follows that Clitic Climbing cannot be cyclical because it applies to clitics produced by Cliticization. However, limitations of space prevent us from giving the argument here.

10. Note that the Clause Reduction hypothesis also correctly predicts the ungrammaticality of the sentence

- (vii) \*Lo quiero permitirte hacer.

in which lo, the initial dependent of hacer, appears on the matrix verb querer, while te, the initial dependent of permitir, remains on permitir. Under the Clause Reduction hypothesis, the only way that lo can appear on querer in surface structure is if both querer and permitir trigger Clause Reduction. But then te would appear on querer as well, and the result would be (24).

11. (34-35) are actually generated by the grammar as grammatical sentences as a result of the application of the Spurious-se rule discussed by Perlmutter (1971, 20-25) and Aissen and Rivas (1975). This rule produces (34-35) from sentences with the clitic sequences le las or les las by changing the third person dative pronoun le or les to se. Thus (34-35) are grammatical with the meanings 'They sold them to him/her/them yesterday' and 'They always sing them to him/her/them first.' But the se in (34-35) cannot be the se found in reflexive passives, and as a result (34-35) do not have the meanings they would have if they were reflexive passives. Because they are ungrammatical as reflexive passives, we have starred them.

12. Subject pronouns can remain in surface structure only if they are animate and under emphasis or contrast. Since the pivot nominals in the sentences under discussion are inanimate, the nominative pronominal forms they would have cannot appear in surface structure, but rather must be deleted by Subject Pronoun Drop.

13. Arguments similar to these are offered by Rivas (1974) in support of the Verb Adjunction hypothesis.

14. Spanish has a rule doubling a 3 as a clitic pronoun. In most instances, this rule is obligatory. The le in (60-61) is the clitic copy of the 3 (Francisco).

15. Here again, we give the arguments for subjecthood in abbreviated form. To see them spelled out in greater detail, see Aissen and Perlmutter (in preparation).

16. Although we do not wish to argue for any particular analysis of Agreement here, it seems that in Spanish, Adjective Agreement makes a (predicate) adjective agree with its canonical 1, while Verb Agreement makes a verb agree with its classic 1.

17. Some speakers accept sentences such as

- (viii) Estos libros se empezaron a vender a los estudiantes.  
'PRO began to sell these books to the students.'

in which the 3 los estudiantes lacks a clitic copy. In this construction these speakers relax the requirement that the 3 have a clitic copy.

18. In using the phrase "is still in the complement" we are deliberately being imprecise because a discussion of the nature of Reflexive Passive in Spanish lies beyond the scope of this paper. Given our assumption that Clitic Placement places a clitic on the verb of which it is a dependent, it would have to be the case that the se that results from Reflexive Passive is a dependent of the verb. In fact, we claim that this is the case, since we would maintain that Reflexive Passive advances the 2 of a verb to 1, leaving

behind a copy as 2, which reflexivizes. As a result, we get the reflexive pronoun se, which is a dependent of the verb and cliticizes to it. Spanish Reflexive Passive is thus a member of the class of copy advancements postulated by Perlmutter and Postal (in preparation). To justify that here, however, would take us beyond the scope of this paper.

19. For studies of this construction in Spanish, see Aissen (1974a, 1974b) and Bordelois (1974).

20. \*(95) might be grammatical for some speakers with the meaning 'Pilar wants to put their names on the list for my cousins,' but regardless of whether or not it can have this meaning, it definitely is not grammatical with a meaning synonymous with (94). Since this is the only point of relevance here, we have starred it.

21. In languages in which the clitic appears not on the verb itself, but rather in second position in the clause, the clitic will appear in second position in the clause defined by the verb of which it is a classic dependent. In the discussion that follows, we will speak loosely of Clitic Placement as placing clitics "on the verb," not bothering to repeat each time that in some languages clitics actually appear in second position in the clause in surface structure, rather than attached to the verb.

22. On this view of the nature of the options open to particular languages, see Postal (1970), Ross (1970), Bach (1971), Hankamer (1971), and Perlmutter and Orešnik (1973).

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