CONDITIONS ON CLITIC FORMATION

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ABSTRACT

Not all logically possible sequences of clitic pronouns in
Spanish occur. In this thesis, I argue that within the framework
of transformational grammar it is possible to account for which
sequences occur by two compatible conditions on the Clitic Formation
transformation. The main advantage of this solution over previously
proposed solutions is that it accounts for which of two NPs occurs
as a strong pronoun when the two conditions on Clitic Formation
preclude both from being realized as clitics.

In order to formulate the two conditions, it is necessary
to postulate an abstract relational property termed *relative valence*.
It is shown that several other problems in transformational syntax
can also be accounted for by conditions utilizing relative valence,
and that such conditions operate in accordance with Foley's
Inertial Development Principle, which in turn dictates a decision
in certain seemingly arbitrary situations.

In the final section, I discuss how valence operates in
transformational grammar, and some of its implications for linguistic
universals. I argue that valence is an indicator of a constituent's
propensity to be affected by a given transformation, and that
it is only by postulating such an abstract relational property
that it is possible to formulate general, or principle, conditions,
from which particular conditions derive. In concluding, I argue
that if there are universal valence scales, they make no predictions
about what occurs in a specific language, but they do limit the range
of what we can expect to find in different languages.

ACKNOWLEDGMENTS

TABLE OF CONTENTS

0. INTRODUCTION. Spanish is characterized by two sets of object pronouns, traditionally referred to as *strong* and *weak*. Strong pronouns stand apart from the verb, can be stressed for emphasis or contrast, and can undergo movement transformations(c.f. 1a-b, where the strong pronoun is italicized).

(1) a. Se lo di a *él*.   (I gave it to him.)

     b. A *él* se lo di.   (I gave it to him.)

On the other hand, the weak pronouns cannot be stressed for emphasis or contrast, and always occur in conjunction with a verb, coming before finite forms (except affirmative imperatives) and after non-finite forms (c.f. 2a-b, where the weak pronouns are italicized).

(2) a. *Lo* hice.   (I did it.)

     b. Voy a hacer*lo*.   (I am going to do it.)

These weak pronouns are often referred to as *clitics*.

It is possible to have up to three clitics with a single verb. However, not all logically possible sequences of clitics occur. Thus, while the sequence *te lo* in (3a) is acceptable, the reverse sequence, as in (3b), is always   ungrammatical.

(3) a. Te lo hice.   (I did it for you.)

     b. *Lo te hice.   (I did it for you.)

As Perlmutter(1970, 1971) illustrates, the fact that the ordering of clitic pronouns is constrained constitutes a problem for transformational grammar. Perlmutter argues that the standard theory of transformational grammar (Chomsky 1965), in which the transformational component would perform a "filtering function" to block ungrammatical sentences, is incapable of accounting

for the constraints on sequences of clitic pronouns in a natural way. Consequently, he argues that "It is necessary to strengthen grammatical theory by the addition of *surface structure constraints* or *output conditions* which the output of the transformational component must satisfy."(Perlmutter 1971:19)

The disadvantage of postulating output conditions is that they further increase the already excessive descriptive power of grammar by providing filtering mechanisms additional to those already existing in the form of PS rules and transformations. Thus, even Perlmutter (see 1971:123ff) couples his arguments with a recognition of the need to find principles restricting the range of the various proliferating descriptive devices.

In this thesis, I argue that it is possible to account for the observed restrictions on sequences of clitic pronouns without resorting to output conditions. I contend that by postulating an abstract property called *relative valence*, it is possible to account for these restrictions with two conditions on the Clitic Formation transformation; if these two conditions are not met, Clitic Formation does not occur, and the ungrammatical sequences are not generated. As a consequence, the transformational component does perform, in these cases, the filtering function that Perlmutter(1971:19) contends it is incapable of.

As a basic model, I assume a transformational grammar of the type outlined in Chomsky(1965). The important assumptions are that all pronouns are derived transformationally, and that transformations are extrinsically ordered and apply cyclically.

I assume that Clitic Formation, at least in Spanish, is a
copying transformation - rather than a substitution transformation -
since it is possible for a clitic to co-occur with a co-referential
NP in the same sentence (e.g. *se* and *él* in (1a-b)). Therefore,
in sentences in which there is not a NP co-referential with a given
clitic, a second process, deleting the NP, is posited. However,
these points are not crucial, and in sample derivations NP deletion
is assumed rather than stated explicitly.

A further assumption is that Clitic Formation places a clitic
before the verb, as in (2a), rather than after the verb, as in (2b),
with the latter undergoing an additional transformation of "Clitic
Movement." Again, however, this assumption is not crucial. The
proposals made in this thesis for Spanish clitic sequences would not
be affected if it were postulated that clitics are originally
formed in post-verbal position and then moved to pre-verbal position
in the appropriate instances.

Throughout the thesis I use "case" terms such as *nominative*
and *accusative,* and also terms of "grammatical relations" like
subject and *object.* The case terms are used to refer to deep
structure grammatical relations, whereas the others are used to
refer to surface structure functions only. Thus, there is not
an equivalency relationship between the two sets of terms. In (4)
el libro is both accusative and subject.

(4) El libro fue publicado en México.

(The book was published in Mexico.)

The format of the thesis is as follows. In section 1, I outline
the problem of clitic ordering and how it has been handled previously

in transformational grammar. In section 2, I develop a grammar

to account for the facts set forth in section 1. The third section

is a discussion of non-principle-governed rules necessary to account

for certain data. In the fourth section, I discuss how valence

operates in transformational grammar and some of its implications

for linguistic universals.

1. BACKGROUND. In this section I outline the problem of clitic ordering in Spanish and how it has been handled previously within a transformational framework. The procedure will be to review the proposals made by Perlmutter(1970, 1971)[1] and Dinnsen(1972) in sections 1.1 and 1.2 respectively, and point out inadequacies of their solutions in section 1.3.

1.1 PERLMUTTER'S OUTPUT CONDITION. Perlmutter(1971:81) contends that "clitics are arranged in surface structure by *person*, and grammatical function plays no role whatever in determining their surface structure position." He isolates four classes of clitics based on ordering:

     (1)   a. third person reflexive: *se*

           b. second person: *te*

           c. first person: *me, nos*

           d. third person non-reflexive: (i) accusative: *lo, los, la, las*

                                         (ii) dative: *le, les*

No sequence of clitics in a single VP contains more than one clitic from each of these four classes, thus accounting for the unacceptability of the following sentences:

     (2)   a. *Nos me recomendaron.   (They recommended me to us.)

           b. *Me nos recomendé.   (I recommended us to me.)

           c. *Te te recomendó.   (He recommended you to yourself.)

           d. *Se le lo permitió.   (He was   allowed to do so.)

           e. *Se se lo permitió.   (He was   allowed to do so.)

It might be argued that some of these sentences, such as (2a-c), do not have grammatical deep structures. i.e. they would be rejected by a constraint of the type discussed by Perlmutter(1971:1-17).

Nevertheless, as Perlmutter(1971:29-33) shows, the structure underlying

(2d-e) must be grammatical.

There are sequences of two clitics with third person non-reflexive

referents, one being accusative and the other dative. In such an

instance, the restriction that no more than one clitic from

each of the classes in (1) occurs in a single sequence is accounted

for by the Spurious-*se* rule, which transforms a third person dative

clitic into *se* when followed by a third person accusative clitic,

as in (4).

(3) Spurious-*se*: (obligatory)[2]

$$\begin{bmatrix} \text{PRO} \\ \text{III} \\ \text{Dat} \end{bmatrix} \quad \begin{bmatrix} \text{PRO} \\ \text{III} \\ \text{Acc} \end{bmatrix}$$

$$1 \qquad 2 \quad \Rightarrow \quad se, \ 2$$

(4)   a. Le di el libro.   (I gave him the book.)

    b. *Le lo di.   (I gave it to him.)

    c. Se lo di.   (I gave it to him.)

There are three basic ordering relationships between the four

classes in (1):

Se precedes II. The only clitic that can precede *te* is *se*, as in the

following sentences:

(5)   a. Se te escapó.   (He escaped from you.)

    b. Se te rindió los honores.   (PRO gave you the honours.)

However, any sequence of *te se* is ungrammatical. For example,

it is possible to have a sentence with reflexive *te* and benefactive[3]

le, as in (6a). However, if the accusative NP in (6a) is pronominalized

we have the environment for Spurious-*se,* but the result is an

ungrammatical sentence both before and after this rule.

(6)   a. Te le comiste la tortilla. (You ate the tortilla for him.)

       b. *Te le la comiste.   (You ate it for him.)

       c. *Te se la comiste.   (You ate it for him.)

II precedes I. There are Spanish sentences with the clitic sequences

te me and *te nos,*[4] as in (7a-b), but never any with the clitics

in the reverse order.

    (7)   a. Te me recomendaron.   (They recommended me to **you**.)

       b. Te nos recomendaron.   (They recommended us to you.)

One instance in which we might expect the sequence *me te* is when

an inherently reflexive verb like *escaparse* occurs with a benefactive.

If the subject is second person and the benefactive first person,

we get a grammatical sentence as in (8a), but if the subject is

first person, we cannot get a second person benefactive regardless

of whether the benefactive clitic precedes or follows the reflexive

clitic.

    (8)   a. Te me escapaste.   (You escaped from me.)

       b. *Me te escapé.   (I escaped from you.)

       c. *Te me escapé.[5]   (I escaped from you.)

I precedes III. A first person clitic can function as dative,

benefactive or reflexive when it co-occurs with a third person

clitic, but regardless of function it always comes first.

    (9)   a. Me lo recomendaron.   (They recommended it to me.)

       b. Me le recomendaron esa cervecería.

                     (They recommended that pub to him for me.)

       c. Me le escapé.   (I escaped from him.)

The crucial example is (9b). In none of the three persons is there

a distinction between the form of the non-reflexive dative and

benefactive clitics, but if we try to reverse the relationship

between the dative and the benefactive in (9b) by reversing the

order of the clitics, the result is an ungrammatical sentence.

(10) *Le me recomendaron esa cervecería.

(They recommended that pub to me for him.)

Furthermore, the gloss for (10) is not appropriate for (9b).

Because they are irreflexive and transitive in nature, the

three constraints on ordering can be perceived as a set of precedence

relations.

(11) a. *se* ρ II

b. II ρ I

c. I ρ III

By transitivity it should hold that the following precedence relations

apply also.

(12) a. *se* ρ I

b. *se* ρ III

c. II ρ III

This is in fact the case, as attested by the grammaticality of the

sentences in (13).

(13) a. Se me escapó.   (He escaped from me.)

b. Se le escapó.   (He escaped from him.)

c. Te lo di ayer.   (I gave it to you yesterday.)

Furthermore, these relationships are also antisymmetrical, with the

reverse order always resulting in an ungrammatical sentence.

It was originally contended by Chomsky(1965:138-9) that the

transformational component of a transformational grammar would be

instrumental in blocking the derivation of ungrammatical sentences.

If the transformational rules would only generate grammatical sequences of clitics, or if it were not possible for the P-rules to generate a base from which the transformational component could derive ungrammatical sequences, there would be no problem for the theory of transformational grammar. However, Perlmutter argues that this is not the case.

The crux of the problem, Perlmutter argues, is that ungrammatical sequences of clitics are the consequence of the application of necessary transformations on what must be well-formed P-markers. For example, the application of the Spurious-*se* rule in a sentence with a Pro-*se*[6] subject always results in the ungrammatical sequence *se se*. However, the Spurious-*se* rule only applies if Accusative or S-pronominalization occurs also.

> (14) *A mí se me permitió dormir toda la mañana, pero a
>
>   Sarita no se se lo ha permitido.[7]
>
>   (I was allowed to sleep all morning, but
>
>   Sarita was not allowed to do so.)

Sentence (14) is ungrammatical because *dormir toda la mañana* has been pronominalized to *lo* in the second clause, where the indirect-object *le* refers to Sarita,[8] thus creating the environment for Spurious-*se*. However, in (15), where *Sarita* is in the first conjunct, Spurious-*se* does not apply because there is no *le* pronoun preceding *lo* in the second conjunct, with the result that we have a grammatical sentence.

> (15) A Sarita se le permitió dormir toda la mañana, pero
>
>   a mí no se me lo ha permitido.

(Sarita was allowed to sleep all morning,

but I was not allowed to do so.)

Perlmutter perceives two ways the transformational component could block sentences like (14), though he argues that neither is adequate.

(i) constrain an optional transformation.

(ii) cause an obligatory transformation to block.

Regarding the first possibility. the only optional transformation that could account for the difference in grammaticality between (14) and (15) is S-pronominalization. To effectively constrain this rule it would be necessary to refer to rules to be applied subsequently, which information, according to Perlmutter, is not available at the time S-pronominalization occurs.

Regarding the second possibility, the rules which could block include Pro-*se,* Spurious-*se,* and Dative pronominalization. Unable to perceive any systematic manner of deciding which of the three possible rules should block, Perlmutter rejects this possibility as arbitrary.

Another possibility Perlmutter considers is to constrain clitic ordering in the P-S component. However, because of clitic movement (c.f. 16a-c) and the Spurious-*se* rule, he concludes that this is not feasible because it would be impossible to take into account the necessary strict-subcategorization and selectional facts.

(16) a. Quería seguir gritándomelo.[9]

b. Quería seguírmelo gritando.

c. Me lo quería seguir gritando.

(He wanted to continue shouting it at me.)

Because it seems impossible to Perlmutter to adequately

constrain sequences of clitics in either the base or the transformational

component, he concludes that the solution is to generate ungrammatical

sequences of clitic pronouns, and then pass them through a template

that will reject them. The proposed template for Spanish is:

    (17) Output Condition on Clitic Pronouns:

          se   II   I   III

1.2 DINNSEN'S OUTPUT CONDITION. The Output Condition (17) was

intended to filter out all ungrammatical sequences of clitic pronouns.

> If the object pronouns in sentences generated by the
> transformations are in the correct order, the sentence
> is grammatical.[10]

However, as Perlmutter noted, there are certain sentences, such as

(18a-c), with sequences of clitics that are acceptable according

to the Output Condition (17) but are ungrammatical, and the ungrammatic-

ality seems to be due to the sequence of clitics, as in many

instances there is a grammatical equivalent of the same sentence

in which one pronoun is in the strong form, as in (19a-b).

    (18) a. *Me le recomendó.   (He recommended me to him.)

          b. *Te le recomendó.   (He recommended you to him.)

          c. *Te me escapé.   (I escaped from you.)

    (19) a. Me recomendó a él.   (He recommended me to him.)

          b. Te recomendó a él.   (He recommended you to him.)

Perlmutter(1971:62) concluded that some non-global constraint is

responsible for the ungrammaticality of sentences like those in (18).

    Dinnsen disputes Perlmutter's contention that function plays

no role in the ordering of clitic pronouns. He argues that the

ungrammaticality of the sentences in (18) is due to the violation

of a second output condition, involving function, on the ordering

of clitic pronouns. For those dialects that do not allow (18c),

he argues that the following basic ordering constraints pertain:

Dative precedes Accusative.

 (20) a. Me lo recomendó. (He recommended it to me.)

    b. Te lo recomendó. (He recommended it to you.)

    c. Se lo recomendó. (He recommended it to him.)

    d. Te me recomendó. (He recommended me to you.)

Benefactive precedes Dative.

 (21) a. Me le recomendó esa cervecería.

      (He recommended that pub to him for me.)

      (*He recommended that pub to me for him.)[11]

    b. Te le recomendó esa cervecería.

      (He recommended that pub to him for you.)

      (*He recommended that pub to you for him.)

    c. Te me recomendó esa cervecería.

      (He recommended that pub to me for you.)

      (*He recommended that pub to you for me.)

Reflexive precedes Benefactive. The best example to show that

reflexive clitics are ordered before benefactive is (22).[12]

 (22) Te me le echaste encima.

      (You threw yourself on top of him for me.)

The distinction between benefactive and dative is not always clear cut.

It might be argued that a benefactive following a reflexive is

actually a dative, and that benefactive and reflexive are mutually

exclusive. However, in (22) the reflexive clitic is followed by

both a benefactive and a dative, precluding such a possibility.

The antisymmetricality of the ordering reflexive before benefactive

is illustrated by the grammaticality of (23a) and the ungrammaticality

of (23b)..

(23) a. Te me levantas temprano. (You get up early for me.)

b. *Te me levanto temprano. (I get up early for you.)

As with the ordering relations by person, these ordering relations

are also transitive, with the result that the relations in (24)

also pertain, as illustrated in (25).

(24) a. REF ρ DAT

b. REF ρ ACC

c. BEN ρ ACC

(25) a. Se te dio el coche. (PRO gave you the car.)

b. Te lo comiste. (You ate it.)

c. Te lo compré. (I bought it for you.)

Consequently, Dinnsen concludes that sequences of clitic pronouns

are subject to the output condition (26) also.

(26) REFLEXIVE BENEFACTIVE DATIVE ACCUSATIVE

This output condition accounts for the ungrammaticality of

the sentences in (18), as in all these sentences the ordering

relations specified by (26) are violated.

(18) a. *Me le recomendó. (He recommended me to him.)

b. *Te le recomendó. (He recommended you to him.)

c. *Te me escapé. (I escaped from you.)

In the case of (18a-b), *recomendar* must have a direct object

(i.e. accusative), but only *me* and *te* can be interpreted as such,

as *le* is strictly a dative form. In the case of (18c), the subject is

first person singular,[13] implying that any first person singular

clitic must be reflexive, but in this instance the reflexive clitic

does not come first.

A further consequence of Dinnsen's output condition is that

it accounts for why there are not two interpretations for nearly

every sequence of clitics, which would seem possible if clitics

were ordered by person only.

1.3 FURTHER PROBLEMS AND DATA.   Although Dinnsen's output condition

accounts for the ungrammaticality of (18a-b), it does not account

for why the grammatical equivalents are (19a-b).

     (19) a. Me recomendó a él.   (He recommended me to him.)

          b. Te recomendó a él.   (He recommended you to him.)

In particular, we want to account for why the grammatical equivalents

of (18a-b) are (19a-b), and not (27a-b), in which the dative is a

clitic and the accusative is in the form of a strong pronoun.

     (27) a. *Le recomendó (a) mí.   (He recommended me to him.)

          b. *Le recomendó (a) tí.   (He recommended you to him.)

One difference between Dinnsen's output condition and

Perlmutter's involves universality. It would appear that any sequence

of clitics that would be rejected by Perlmutter's output condition

would be ungrammatical in any dialect of Spanish. However, Dinnsen's

output condition appears to be more dialect particular. For instance,

Dinnsen's constraint does not allow sentences like (18c), but

there are dialects in which this sentence is acceptable. Also,

there are dialects in which II-I clitic sequences can have two

interpretations, as in (28a-b), but Dinnsen's constraint would

only allow the former interpretation.

(28) a. Te me recomendaron.   (They recommended me to you.)

(They recommended you to me.)

b. Te me vendió el coche.   (He sold the car to me for you.)

(He sold the car to you for me.)

Perlmutter also mentions that in some dialects the sequence
te me, as in (28a), is not acceptable. In these dialects the
accusative is manifested as a clitic, and the dative as a strong
pronoun, as in (29a-b).

(29) a. Me recomendaron a tí.   (They recommended me to you.)

b. Te recomendaron a mí.   (They recommended you to me.)

Dinnsen proposes that the absence of II-I sequences in these dialects
is due to a modification of Perlmutter's output condition, in which
first person and second person clitics are mutually exclusive,
as in (30).

(30)   *se* $\begin{matrix} II \\ I \end{matrix}$ III

1.4 SUMMARY. We have seen in this section that there are two types
of constraints, one involving the property of person and the other
the property of case, with which sequences of clitics must be in
accordance. These constraints have previously been accounted for in
transformational grammar by postulating output conditions that reject
sequences of clitic pronouns that are not in accordance with the
two types of constraints. The inadequacy of output conditions is
that they do not account for which of two NPs is manifested as a clitic
and which as a strong pronoun when the constraints preclude both
of them being manifested as clitics. Output conditions are also

incapable of accounting for dual interpretations of II-I sequences, but they can account for the unacceptability of II-I sequences in certain dialects.

In the next section I develop a grammar that allows only grammatical sequences of clitics, and also gives a straightforward explanation of why it is the accusative that is a clitic in sentences like (19a-b). I return to the problem of dual interpretations of II-I sequences in section 3.3, and in section 4.2.1 I propose a principal that predicts that a dialect which does not allow II-I sequences, as in (28a-b), is one of a limited number of linguistic possibilities.

NOTES TO SECTION 1.

1. Perlmutter(1970) is the same as the second chapter of
Perlmutter(1971). Throughout this thesis references will be made
only to the latter.

2. This formulation of Spurious-*se* is from Perlmutter(1971:22).
No motivation for the rule is given here, as this has been handled
by Perlmutter. The effect of Spurious-*se* in the grammar is discussed
in section 3.

3. I use the term "benefactive" here in place of Perlmutter's
"dative of interest."

4. Not all dialects allow these two sequences. This dialectal
variation is discussed in section 4.2.

5. Perlmutter(1971:63) mentions that (8c) is acceptable in some
dialects. For further discussion see   sections 1.2 and 3.

6. "Pro-*se*" sentences are ones with an indefinite third person
human subject, similar to French "on." The only reflex of this subject,
which will be glossed as "Pro," is the clitic *se*.

7. This is Perlmutter's example (39b). My example (15) is Perlmutter's
example (38).

8. The dative clitic in Spanish is normally considered obligatory,
but see note 4, section 2.

9. This is Perlmutter's example (173).

10. Perlmutter(1971:19).

11. The asterisk (*) when used before a gloss is not meant to
indicate that the gloss is ungrammatical, but that it is inappropriate
for the particular example.

12. This is Perlmutter's example (95).

13. Subject pronouns are normally deleted in Spanish. In this
instance the subject can be determined by the verb form.

2. CONDITIONS ON CLITIC FORMATION.

2.1 GENERALIZING THE OUTPUT CONDITIONS. The output conditions proposed

by Perlmutter and Dinnsen are statements of the ordering of clitic

pronouns in relation to one another. However, they do not express

a single, or simple, relation. For example, if we express

Perlmutter's output condition in English we find that there are

three precedence relations involved.

(1)   *Se precedes* II, which *precedes* I, which *precedes* III.

These relations can be derived from a *single* statement of relations,

however, if we postulate that the terms of (1) correlate with

an abstract property that we can term *relative valence,* as follows.

(2)   *se*   II   I   III

      1   2   3   4

The following relationship between clitic pronouns in sequence

now holds:

(3)   For any grammatical sequence of two clitic pronouns,
      the valence of the first is less than the valence
      of the second.

This can be abbreviated as p<q, where *p* is the valence of the

first of any two clitic pronouns, and *q* is the valence of the second.

Likewise, the three relations expressed in Dinnsen's output condition

can also be derived from (3) if we correlate the terms with valence

values as follows:

(4)   REFLEXIVE   BENEFACTIVE   DATIVE   ACCUSATIVE

         1   2   3   4

The valence scales (2) and (4) represent relations between

two different types of properties of constituents, person and

function. In order to distinguish the two types, I will refer

to the valence in (2) as α-valence (or α-strength) and the valence

in (4) as β-valence (or β-strength). i.e. α-strength can be equated

with the property of person, and β-strength with the property

of function.

It might be argued that postulating valence and consequently

generalizing the relationships between terms expressed in the output

conditions constitutes no more than a notational variant of the

output conditions. However, there is a significant difference.

Statements of simple relations like (3) can be incorporated into

the grammar as conditions on the Clitic Formation (CF) transformation,

whereas statements of multiple relations like the output conditions

proposed by Perlmutter and Dinnsen cannot.

Conditions on CF allow us in turn to perceive a way of blocking

the derivation of ungrammatical sequences of clitic pronouns in

the transformational component by a manner that Perlmutter and Dinnsen

did not consider. That is that *any* application of CF can occur

only if the appropriate conditions are satisfied. If these conditions

apply to all occurrences of CF, we can expect not only that a

grammar will not generate ungrammatical sequences of clitics,

but when CF is blocked because the conditions are not satisfied,

the result will be the proper alternative manner of expression

if the particular occurrence of CF is optional, or a blocked

derivation if obligatory. In the next section we develop a grammar

with such consequences.

2.2 A TENTATIVE GRAMMAR. In the preceding section we identified

two types of valence, α and β. It is possible to construct a

grammar which only generates grammatical sequences of clitic pronouns without making reference to β-valence if we have a fixed ordering of the constituents to which CF applies and a consistent procedure for attaching clitics to the verb. In this section we outline the significance of α-valence, and in section 2.3 the role of β-valence is made explicit.

In order to account for the functional ordering of clitics in sequences, I suggest the following order of application of CF

(5) i.   accusative(including S-pronominalization)
     ii. dative
     iii. benefactive
     iv. reflexive(including Pro-*se*)

and the following procedure for placing clitics.

(6) Clitics are placed before the verb and any previously
     derived clitics in the same VP.

We can now propose the following condition on CF:

(7) α-Condition on CF:

     CF can occur if the α-valence of the NP to undergo CF
     is less than the α-valence of any clitic already existing
     in the same VP.

This condition, in conjunction with the valence table (2) and the procedures (5) and (6), will allow sentences such as:

(8) Me lo recomendaste.   (You recommended it to me.)

by the following derivation: [1]

(8')

$$
\begin{array}{c}
S \\
\diagup \quad \diagdown \\
NP \qquad\qquad VP
\end{array}
$$

(tú)   recomendaste el libro$_{\alpha 4}$ a mí$_{\alpha 3}$

lo$_{\alpha 4}$ recomendaste   a mí$_{\alpha 3}$ (accusative CF)

me lo   recomendaste   (dative CF: $\alpha^3 < \alpha^4$)

It will also block sentences like:

(9)   *Le me recomendaste.   (You recommended me to him.)

in the following manner:

(9')

```
              S
       _____/ _____
      NP              VP
      |          _____|_____
     (tú)       V    NP    PP
                |    |    /\
          recomendaste mi_α3  a él_α4

        me_α3 recomendaste        a él_α4        (accusative CF)

           "          "            "   "        (dative CF blocks:
                                                  α^4 ≮ α^3)
```
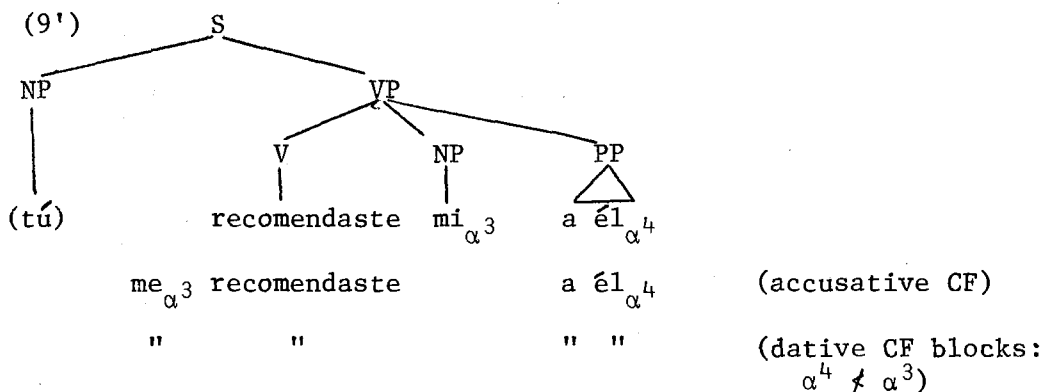
However, as currently formulated, our grammar will not allow sentences

such as:

(10) Se lo diste.   (You gave it to him.)

The derivation of (10) should be as follows:

(10')

```
              S
       _____/ _____
      NP              VP
      |          ___/ |  \___
     (tú)       V    NP    PP
                |   /\     /\
             diste el libro a él
```

        lo diste   a él   (accusative CF)

      le lo diste   (dative CF)

      se lo diste   (Spurious-se)
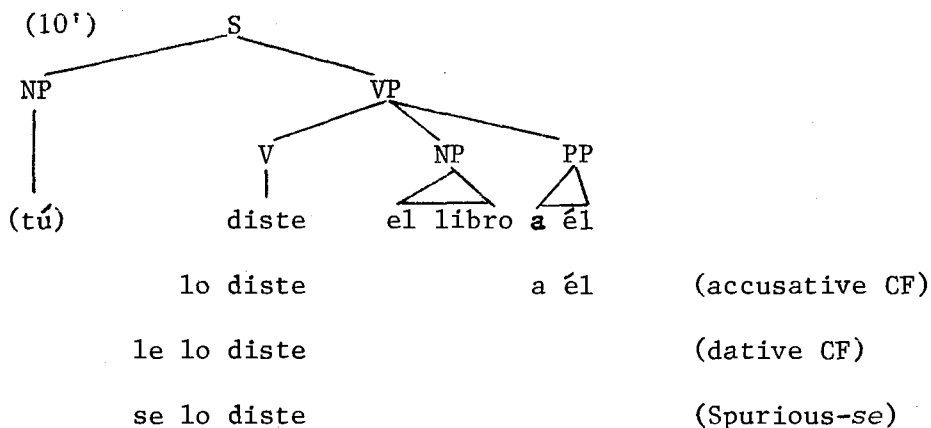
However, as both the accusative and dative NPs would have a valence

of 4 (i.e. third person), dative CF would be blocked by the

α-Condition.

    There are three conceivable ways of getting around this

problem:

    (i)   we can state that the α-Condition does not pertain

if one of two contiguous clitics is IIIDat and the other is IIIAcc.

However, this is undesirable as it is entirely *ad hoc*.
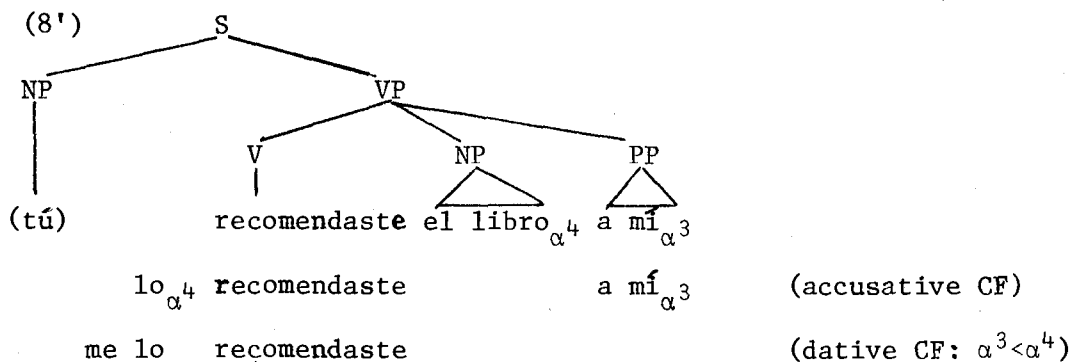
(ii) we can modify the α-Condition as follows:

(11) CF can occur if the α-valence of the NP to undergo CF
is equal to or less than the α-valence of any
clitic already existing in the same VP.

This solves the problem at hand, but is undesirable because now we

have no way of blocking other sequences that are comprised of two

clitics from any one of the other classes in (2).

(iii) we can modify the valence table, attributing a lesser

valence to IIIDat than to IIIAcc. This is the most desirable alternative,

as it does not require any further modification of our grammar,

and will result in our grammar only deriving acceptable sequences

of clitics. The revised valence table is:

(12) *se*   II   I   IIIDat   IIIAcc

1   2   3   4   5

This valence table allows for the occurrence of dative CF in (10')

because the accusative NP is now attributed a valence of 5 and

the dative NP a valence of 4.

Ordering of Spurious-se. As we can see in (10'), Spurious-*se*

must be ordered after dative CF because it is not until that point

in the derivation that the structural description for Spurious-*se*

is satisfied. However, the question that has not been answered

is at what exact point in the derivation it applies. It could

occur after dative, benefactive, or reflexive CF.

An example crucial to resolving this question is one in which

there is a third person accusative, a third person dative, and a

first or second person benefactive, as in (13).

(13)   Te le recomendé esta cervecería.

(I recommended this pub to him for you.)

If the accusative NP in (13) undergoes CF, we have the environment

for Spurious-*se*. If Spurious-*se* does not apply before benefactive

CF, the derivation of the benefactive clitic cannot be blocked,

as the valence of *te* is less than the valence of *le*. Consequently,

when Spurious-*se* does apply, we would have an ungrammatical *te se*

sequence, as in (14).

(14)   *Te se la recomendé.   (I recommended it to him for you.)

Therefore, it seems obvious that Spurious-*se* occurs before benefactive

CF. After Spurious-*se* the derivation of the benefactive clitic

would be blocked, as *te* does not have a lesser valence than *se*,

resulting in the surface structure (15).

(15)   Se la recomendé para tí.   (I recommended it to him for you.)

Optional and Obligatory CF. The remaining question is when does

the blocking of CF result in the blocking of a derivation?

The derivation (9) indicates that this is not the case if

dative CF blocks, as the output of this derivation, (16), is

grammatical.

(16)   Me recomendaste a él.   (You recommended me to him.)

Likewise, the grammaticality of (15) indicates that a derivation

does not block if benefactive CF is blocked. The remaining

possibility is that a derivation blocks if reflexive or Pro-*se*

CF blocks. This is in fact the case, as is illustrated by the

ungrammaticality of the surface structure that our grammar derives

from the structure underlying the second conjunct of (17).

(17)   *A mí se me permitió dormir toda la mañana, pero

        a Sarita no   se lo ha permitido.

(17')

$(\text{Pro}_\alpha 1)$	no	$\text{lo}_\alpha 5$ ha permitido a Sarita$_\alpha 4$	(S-pron.)
$(\text{Pro}_\alpha 1)$	no	$\text{le}_\alpha 4$ $\text{lo}_\alpha 5$ ha permitido	(dative CF: $\alpha^4 < \alpha^5$)
$(\text{Pro}_\alpha 1)$	no	$\text{se}_\alpha 1$ $\text{lo}_\alpha 5$ ha permitido	(Spurious-se: $\alpha^4 \rightarrow \alpha^1$)
"	"	" " " "	(Pro-se blocks: $\alpha^1 \not\rightarrow \alpha^1$)
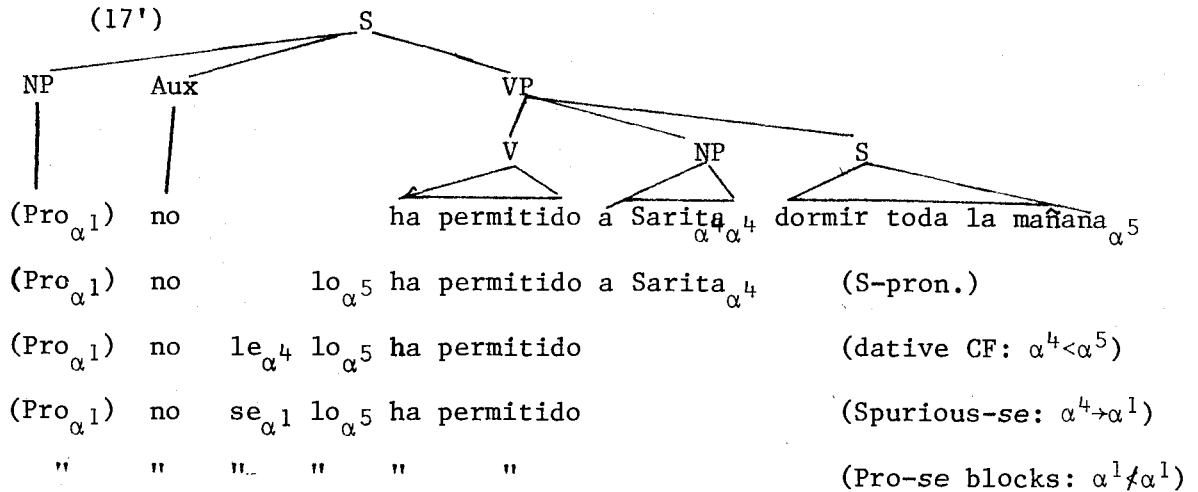
Consequently, in order to account for when a derivation blocks, the particular occurrences of CF must be marked as follows:

(18)   i.   accusative-optional[2]

     ii.   dative-optional[3]

     iii. benefactive-optional

     iv.   reflexive(and Pro-se)-obligatory

Summary.   In this section I have proposed a grammar to account for the grammatical sequences of clitic pronouns in Spanish. Ordering by person has been accounted for by a single condition, the α-Condition, on CF. Functional ordering has been achieved by applying CF in an ordered manner to deep structure constituents and adopting a consistent procedure for the placement of clitics. Evidence has been given indicating that Spurious-se must occur before benefactive CF, and that the only time a derivation is rejected is when reflexive (or Pro-se) CF blocks. As currently formulated, this grammar is

capable of accounting for all sequences of clitics discussed in
section 1 except those II-I sequences with two interpretations
discussed in section 1.3.

2.3 JUSTIFICATION AND REFINEMENT OF THE GRAMMAR. Although our
grammar systematically accounts for only grammatical sequences
of clitics, its construction has involved many arbitrary decisions.
For example, I have postulated that a crucial property in the grammar
is *relative valence,* although this concept is. not part of current
transformational theory. Consequently, my appeal to it may appear
ad hoc, as it apparently serves only to solve the problem at hand.
Likewise, the attribution of valence in (2) could also be· seen as
arbitrary; the valence table (19) would serve our grammar just as
well if the α-Condition is changed to (20).

(19) IIIAcc   IIIDat   I   II   *se*

        1   2   3   4   5

(20) α-Condition on CF:

        CF can occur if the α-valence of the NP to undergo CF
        is   greater than the α-valence of any
        clitic already existing in the same VP.

Another arbitrary decision involved the ordering of the application
of CF(5 above), and the procedure for placement of clitics(6 above).
If we just consider sequences of clitics, the ordering in (5)
could just as easily be reversed to (21) if the procedure outlined in
(6) is changed to (22) and the α-Condition(20) is used in conjunction
with the valence scale (12).

(21) i.   reflexive(and Pro-*se*)
      ii. benefactive
      iii. dative
      iv. accusative(S-pronominalization)

(22) Clitics are placed before the verb and after any previously derived clitics in the same VP.

The purpose of this section is to: (1) motivate our choice of one of the alternative orderings of application of CF; (2) justify the property of relative valence by showing that it allows us to construct principled explanations for syntactic problems unrelated to the ordering of clitic pronouns; (3) motivate a choice between the alternative valence tables (12) and (19); (4) evaluate the role of β-valence in the ordering of clitic pronouns.

2.3.1 ORDERING OF CF. We begin by first considering the ordering of application of CF. A crucial example here is one in which two clitic pronouns cannot co-occur because of the conditions on CF, and yet the sentence is not rejected as ungrammatical. If one NP appears as a clitic and the other in some other form, there are advantages in postulating that the NP manifested as a clitic undergoes CF first. Such an example is (23).

(23) Me recomendó a ella.   (He recommended me to her.)

In this example it is the accusative that appears as a clitic, indicating that accusative CF occurs before dative CF. Assuming that the dative NP referent in deep structure is "María," the derivation would be as follows:

(23')

```
                    S
       NP                    VP
        |            V       NP       PP
        |            |       |       /\
       (él)      recomendo  mí₃   a María₄
```

$$
\begin{array}{llll}
& \text{(él)} & \text{recomendo} & \text{mí}_\alpha 3 & \text{a María}_\alpha 4 \\
& \text{me}_\alpha 3 & \text{recomendó} & & \text{a María}_\alpha 4 & \text{(accusative CF)} \\
& " & " & & " \quad " & \text{(dative CF blocks:} \\
& & & & & \alpha^4 \not\to \alpha^3) \\
& \text{me} & \text{recomendó} & & \text{a ella} & \text{(strong dative pron.)}^4 \\
\end{array}
$$
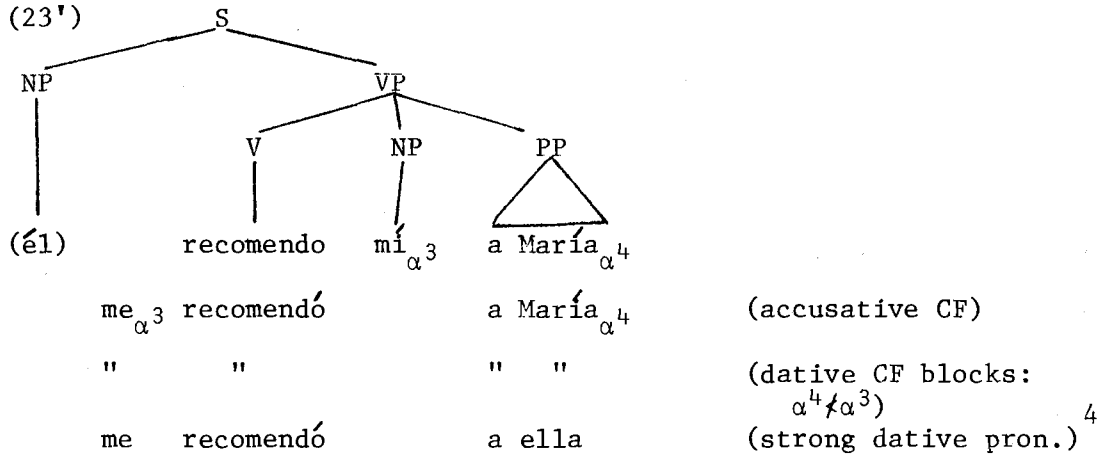
(23') provides a straightforward account of why it is the accusative

that appears as a clitic and the dative as a strong pronoun, as

it does not require any extra rules in our grammar.

Consider now if dative CF were ordered before accusative CF.

The ungrammaticality of (24a) indicates that (23) cannot be alternatively

expressed with the dative as a clitic and the accusative in the

form of a strong pronoun, and we see in (24b) that both NPs cannot

be manifested as clitics with the functional ordering

accusative-dative.

 (24) a. *Le recomendó a mí. (He recommended me to her.)

    b. *Me le recomendó. (He recommended me to her.)

Consequently, if we were to postulate that dative CF occurs before

accusative CF, our grammar would have to include a rule such as (25).

 (25) If a first person accusative and a third person dative
    co-occur, dative CF cannot occur.

As the only motivation for (25) is to preclude sentences like

(24a-b) while allowing (23), the obvious conclusion is that a

grammar that does not require such an *ad hoc* rule (i.e. a grammar

in which accusative CF is ordered before dative CF) is more desirable.

 Another example that indicates an ordering preference for

CF is (26).

 (26) Te recomendé esta cervecería para él.

     (I recommended this pub to you for him.)

In this example we find that the dative occurs as a clitic, while

the benefactive occurs as a strong pronoun. Because of problems

like those mentioned above, the obvious conclusion here is that

dative CF should precede benefactive CF. This conclusion is bolstered

by the fact that we cannot have the benefactive as a clitic and the

dative as a strong pronoun (e.g. 27a), nor is the gloss for (27b)

applicable to (26).

 (27) a. *Le recomendé esta cervecería a tí.

     (I recommended this pub to you for him.)

   b. Te le recomendé esta cervecería.

     (I recommended this pub to him for you.)

 The above examples indicate that the preferred ordering of

CF is accusative before dative and dative before benefactive, as

in (5), rather than in the reverse order, as in (21). However,

it also raises the question of why accusative NPs should undergo

CF before benefactive NPs. This question, along with motivation

for postulating the property of *relative valence* and the motivation

for choosing between either (12) or (19) constitute the topics

of the next two sections.

2.3.2 THE INERTIAL DEVELOPMENT PRINCIPLE IN SYNTAX. Given that CF

is one process applicable to both accusative and dative NPs,

why should it preferentially affect one element before another?

(I.e. is there a principled basis for valence hierarchy?) For an

explanation, we turn to some data from English. Consider the

following examples:

(28)   a. He wants to be nominated.

       b. He wants himself nominated.

In the Standard Theory of transformational syntax (e.g. Chomsky

1965), (28a) and (28b) are assigned the same deep structure, (28').

(28')

A tree diagram with root S_0 branching into NP and VP. NP dominates He_1. VP branches into V and S_1. V dominates wants. Below NP is a triangle. S_1 branches into NP and VP. VP branches into V and NP. V dominates nominate, NP dominates him_1.
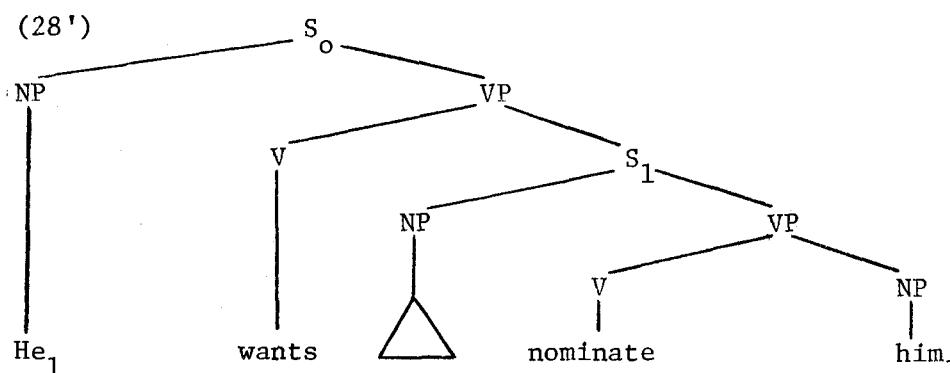
The derivation of both (28a) and (28b) involves the Passive

transformation occurring in S_1. The difference between the two

sentences is accounted for by the occurrence of Equi-NP Deletion(END)

in (28a) only, and Subject Raising(SR) and Reflexivization in

(28b) only.

Now consider the following sentences:

(29)   a. He wants to eat the steak.

       b.?He wants himself to eat the steak.

Although (29a) is well-formed, most speakers find (29b) less

acceptable.

Sentences (29a) and (29b) have the same deep structure, (29').

(29')

```
                          S
                         / o\
                        /    \
                      /        \
                    NP          VP
                    |          /  \
                    |        /      \
                    |       V        S
                    |       |       / 1\
                    |       |      /     \
                    |       |    NP       VP
                    |       |    |       /  \
                    |       |    |      /    \
                    |       |    |     V      NP
                    |       |    |     |      /\
                   he      wants he    eat   /  \
                     1          1          the  steak
```
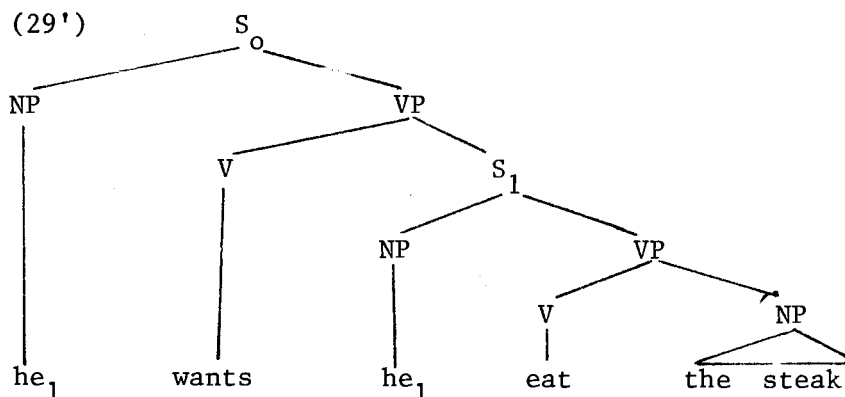
Except that Passive does not occur in S_1, the derivations of (29a)

and (29b) are basically the same as the derivations of (28a) and

(28b) respectively. But whereas END could optionally occur in (28'),

we find that it must obligatorily occur in (29') if (29b) is to be blocked.

There are two conceivable solutions to this problem:

(i) We can postulate that there are two occurrences of the

Passive transformation, and that END applies unconditionally.

By this analysis, Passive would occur before END in (28a), and after

in (28b). END would then obligatorily delete *any* subject NP,

including the one in (29'). It would not apply in (28b) because

the subject node would be empty as a result of Passive not having

applied.

(ii) We can postulate that END obligatorily deletes nominative

NPs, but only optionally deletes accusative NPs.

Both solutions raise further questions. With the first we

want to know why the Passive should occur in (28a) before it occurs

in (28b), and with the second we want to know why END should

preferentially affect nominative NPs.

However, besides there appearing to be no independent motivation

for having Passive occur before END in one instance and after END

in another, solution (i) is fraught with difficulties connected with

the cyclic application of transformations. In the theory of the

transformational cycle, the cycle operates on the lower, or more

deeply embedded, of two sentences first. Passive, END and SR

being cyclic transformations, normally it would be postulated

that Passive occurs in the S_1 cycle in (28'), and END and SR later

in the S_o cycle. To postulate that Passive occurs after END in

(28b) requires that the S_o cycle be interrupted by a transformation

restricted to S_1. As this is in conflict with the theory of cyclic

application of transformations, and as the only motivation for this

is to account for the difference between sentences like (28a)

and (28b), solution (i) is undesirable.

Solution (ii) has little to recommend it either if we just

state in our grammar that END obligatorily affects nominative

NPs, but only optionally affects accusative NPs. This as an

explanation amounts to no more than a restatement of the facts.

However, it is possible to buttress solution (ii) by appeal to

a higher-order principle. Because it is a form of ellipsis, we

can think of END as a weakening process. Constructing the following

scale of relative syntactic strength:

(30)   Nominative   Accusative

                 1   2

we can perceive the preferential deletion of nominative NPs as being

in accordance with Foley's *Inertial Development Principle*(IDP):

(31) INERTIAL DEVELOPMENT PRINCIPLE:

    Weak elements weaken preferentially in relation to strong
    elements; strong elements strengthen preferentially in
    relation to weak elements.

As it stands, we still make reference to the optionality of END.

However, the concept of "optional" can be discarded if we can determine

under what conditions END does not occur. In this instance, it seems that

END does not occur when the NP eligible for deletion is in focus

(i.e. represents new information to the hearer). Thus, we find (28b) to

be a natural response to the question "Who does John want nominated?"

This fact can be incorporated into the theoretical framework being developed

here if we perceive "focus" as constituting a unit of syntactic strength that

combines with the inherent syntactic strength (i.e. valence) of an element

by a process like (32), where *n* refers to the relative valence in (30).

(32) $$NP_n \rightarrow NP_{n+1}$$
$$[+focus]$$

The possibility of focus with either a nominative or accusative NP

now allows four logically possible combinations:

(33) | *Properties* | *Valence* | *E.g.* |
| --- | --- | --- |
| Nom[-focus] | 1 | (29a) |
| Nom[+focus] | 2 | (29a) |
| Acc[-focus] | 2 | (28a) |
| Acc[+focus] | 3 | (28b) |

Of these four possibilities, the only one to which END does not apply is

the last. Consequently, END can be formulated with the condition (34).

(34) The NP to be deleted has a valence ≤ 2.

This constitutes a systematic explanation of why END obligatorily deletes

nominative NPs but appears to only optionally delete accusative NPs.

We find now that solution (ii) is preferable to solution (i)

Because (a) it does not require an unmotivated ordering of rules

in conflict with the theory of the transformational cycle and

(b) it can be constructed in accordance with a higher-order

principle, the IDP.

As further support of a valence solution, consider sentences

with a verb that allows SR, but as (35a) indicates, not END. In this

instance I have used examples from French, as French speakers seem more

certain than English speakers in their judgments of (35b) and (35e).

(35)　a. *Jean considere aimer tout le monde.

(*John considers to like everybody.)

b. Jean considere qu'il est aimé de tout le monde.

(John considers that he is liked by everybody.)

c. Jean se considere aimé de tout le monde.

(John considers himself liked by everybody.)

d. Jean considere qu'il aime tout le monde.

(John considers that he likes everybody.)

e. *Jean se considere aimer tout le monde.

(?John considers himself to like everybody.)

It would be virtually impossible to account for the patterning of SR

in the above examples by a solution like (i) proposed for END. SR raises

a NP from the subject position of an embedded sentence into the predicate

of a higher sentence. However, as (35e) illustrates, SR cannot occur if the

NP *originates* as subject (i.e. is nominative). Accounting for the

ungrammaticality of (35e) and the grammaticality of (35c) by rule

ordering and unconditional SR would require a rule that would move a

nominative NP out of subject position before SR, and then move it back

to the same position in order to account for the grammatical (35d).

Furthermore, as was the case with END, such a rule would have to

occur in the S_o cycle, but would only apply to S_1.

On the other hand, not only can we easily construct an explanation
for the patterning of SR as exemplified in (35) by utilizing the
concept of relative valence, but we use the same table of relative
valence as we found appropriate for accounting for the patterning
of END. We find, however, that SR preferentially affects elements
in the opposite order to END. Whereas we found END to apply
obligatorily to nominative NPs and optionally to accusative NPs,
we find that SR can only affect accusative NPs. As SR only affects
stronger elements, operating contrapositively to END, we may refer
to it as a strengthening process.

Summary. In this section I have tried to justify the concept
of *relative valence* by showing that it allows us to construct
principled explanations for syntactic problems not related to the
sequential constraints on clitic pronouns. In doing so I introduced
the Inertial Develop ment Principle, and defined two types of syntactic
processes operating in accordance with the IDP, strengthenings
and weakenings. In the next section I motivate a choice between
the valence tables (12) and (19).

2.3.3 α-VALENCE OF SPANISH CLITIC PRONOUNS. In section 2.2 I showed
that in order to derive clitic pronouns transformationally we must
adopt a valence table that distinguishes between IIIAcc and IIIDat.
In section 2.3.1, I argued that accusative undergoes CF before dative.
In the previous section, I defined two types of syntactic processes:
one, strengthening processes, preferentially affect strong elements;
the other, weakening processes, preferentially affect weak elements.
The problem now is to justify choosing between the two valence

tables (12) and (19).

Assuming CF operates in accordance with the IDP, we can do this if we can determine whether CF is a strengthening or weakening process. If it is a strengthening, we can argue that because CF applies to accusative before dative, the α-valence of IIIAcc must be stronger than IIIDat, which would lead us to conclude that (12) is the proper valence table. On the other hand, should we conclude that CF is a weakening process, we must postulate that the α-valence of IIIAcc is weaker than IIIDat, which would lead us to conclude that (19) is the appropriate valence table.

In order to determine what type of a process CF is, we begin by first considering a constraint on the subjects of conjoined-Ss. We find that if the subjects of the two conjuncts are different, as in (36a), they can each be manifested as a noun.

(36) a. La religión separaba a los dos amantes y la

intolerancia le impedía a Mario comunicarse efectivamente

con su novia.

(Religion separated the two lovers and intolerance

prevented Mario from communicating effectively

with his sweetheart.)

However, if the two subjects are co-referential, manifestation of both as nouns results in an awkward sentence.

(36) b. ?La religión separaba a los dos amantes y la religión

le impedía a Mario comunicarse efectivamente con

su novia.

(Religion separated the two lovers and religion

prevented Mario from communicating effectively

with his sweetheart.)

A more normal equivalent of (36b) is (36c), where the subject of

the second conjunct has been deleted.

(36)   c. La religión separaba a los dos amantes y le impedía

a Mario comunicarse efectivamente con su novia.

(Religion separated the two lovers and prevented

Mario from communicating effectively with

his sweetheart.)

Now consider a similar constraint on the direct objects of

conjoined-Ss. We find that if the direct objects of the two conjunct

Ss are different, as in (37a), they can each be manifested as a noun.

(37)   a. El niño dejó caer el gallo y la niña acoceó

el pato violentamente.

(The boy dropped the rooster and the girl

kicked the duck violently.)

But the result again is an awkward sentence if the two direct objects

are co-referential, as in (37b).

(37)   b. ?El niño dejó caer el gallo y la niña acoceó

el gallo violentamente.

(The boy dropped the rooster and the girl

kicked the rooster violently.)

However, a more natural equivalent of (37b) is not (37c), where

the direct object has been deleted:

(37)   c. El niño dejó caer el gallo y la niña acoceó violentamente.

(The boy dropped the rooster and the girl

kicked violently.)

but rather (37d), where the direct object is in the form of a clitic.

(37)   d. El niño dejó caer el gallo y la niña lo acoceó violentamente.

(The boy dropped the rooster and the girl

kicked it violently.)

The examples in (36) and (37) indicate a general constraint

in Spanish that limits two co-refential and functionally equivalent

NPs in the conjuncts of a conjoined-S from both being manifested

as nouns.

When we examine sentences containing relative clauses, we

find that this constraint is not restricted to conjoined-Ss.

Sentence (38a) indicates that if the subject of a relative clause

is not co-referential with the subject of the matrix-S, it can

be manifested as a noun.

(38)   a. Mario le mostró a Julio el anillo que Pablo

compró anoche.

(Mario showed Julio the ring Pablo bought

last night.)

However, as (38b) indicates, if the two subjects are co-referential

and are both manifested as nouns, we have an awkward construction.

(38)   b. ?Mario le mostró a Julio el anillo que Mario

compró anoche.

(Mario showed Julio the ring Mario bought

last night.)

The natural equivalent of (38b) is (38c), where the subject of the

relative clause has been deleted.

(38)   c. Mario le mostró a Julio el anillo que compró anoche.

(Mario showed Julio the ring he bought last night.)

If we examine direct objects in sentences containing a relative

clause and in which the direct objects of the matrix-S and the

relative clause are both manifested as nouns, we find the same constraint.
If they are not co-referential, as in (39a), we get a perfectly
acceptable sentence, but if they are co-referential, the sentence
is unnatural.

(39)   a. Leandra le mostró el anillo al niño que había
           amenazado robarle el coche.

                   (Leandra showed the ring to the child who had

                   threatened to steal the car from her.)

        b. ?Leandra le mostró el anillo al niño que había amenazado
           robarle el anillo.

                   (Leandra showed the ring to the child who had

                   threatened to steal the ring from her.)

Analogous to the situation in conjoined-Ss, we find that a grammatical
equivalent of (39b) is not (39c), where the direct object in the
relative clause has been deleted, but rather (39d), where the
direct object is manifested as a clitic.

(39)   c. Leandra le mostró el anillo al niño que había amenazado
           robarle.

                   (Leandra showed the ring to the child who had

                   threatened to rob her.)

        d. Leandra le mostró el anillo al niño que había amenazado
           robárselo.

                   (Leandra showed the ring to the child who had

                   threatened to rob her of it.)

Thus, the constraint that limits two co-referential and functionally
equivalent NPs from both being manifested as nouns applies in sentences
containing a relative clause also.

Consider also the situation in examples containing a complement-S. Again, if the subjects of the matrix-S and the complement-S are not co-referential, they can both be manifested as nouns, as in (40a).

(40) a. Leandra prometió que Zoila le daría al niño cinco

        centavos para su cumpleaños.

             (Leandra promised that Zoila would give the boy

             five cents for his birthday.)

However, if they are co-referential, we get a less natural sentence, as in (40b).

(40) b. ?Leandra prometió que Leandra le daría cinco centavos

        al niño para su cumpleaños.

             (Leandra promised that Leandra would give

             the boy five cents for his birthday.)

Again, the fully grammatical alternative is a sentence in which one of the subjects has been deleted. In this case it is the subject of the complement-S.

(40) c. Leandra prometió que le daría cinco centavos al niño

        para su cumpleaños.

             (Leandra promised that she would give the child

             five cents for his birthday.)

When we consider predicate NPs, in this case indirect objects, we find the situation analogous to the situation in conjoined-Ss and relative clauses. A perfectly natural sentence results when the indirect objects of a complement-S and its matrix-S are both manifested as nouns if they are not co-referential.

(41) a. Leandra le prometió al nino que le daría cinco centavos

        a la niña para su cumpleaños.

(Leandra promised the boy that she would give

the girl five cents for her birthday.)

However, if they are co-referential, manifestation as full noun phrases

of both indirect objects results in a relatively unnatural sentence.

(41)   b. ?Leandra prometió al niño que le daría cinco centavos

al niño para su cumpleaños.

(Leandra promised the boy that she would give

the boy five cents for his birthday.)

Again, a more natural form does not occur through deletion, as

attested by the ungrammaticality of (41c), but by manifesting the

indirect object as a clitic pronoun, as in (41d).

(41)   c. *Leandra le prometió al niño que daría cinco centavos

para su cumpleaños.

(Leandra promised the boy she would give five

cents for his birthday.)

d. Leandra le prometió al niño que le daría cinco centavos

para su cumpleaños.

(Leandra promised the boy that she would give

him five cents for his birthday.)

We have seen that in conjoined-Ss, sentences containing a

relative clause, and sentences containing a complement-S, two

functionally equivalent and co-referential NPs both manifested as

nouns yield awkward sentences. If the two NPs are subjects, one way

of obtaining a more natural sentence is by deleting one of them.

If the two NPs are predicate NPs, one way of obtaining a more natural

sentence is to manifest one of them as a clitic pronoun. In section

2.3.2, I stated that we can perceive END as being a weakening process

because it involves deletion. To be consistent, we must postulate

that any type of deletion is a weakening. Therefore, whatever process

accounts for the relative difference in grammaticality between

(36b) and (36c), (38b) and (38c), and (40b) and (40c), must be a

weakening process. As the general conditions under which this process

occurs are the same as the general conditions under which CF occurs

in (37d), (39d), and (41d), we can conclude that CF is also a

weakening process, as it would be inconsistent to expect both

a weakening and a strengthening process of the same elements

(here NPs) to occur under the same conditions. Therefore, if we

assume that CF operates in accordance with the IDP, we must conclude

that accusative CF precedes dative CF because accusative is weaker

than dative. From this it follows that: 1) β-strength determines

the ordering of application of CF;[5] 2) the correct α-valence scale

for Spanish must be (19), where IIIAcc has a lesser valence than

IIIDat; and 3) the correct scale of β-valence is not (4), but (42).

(19) α-Valence Scale for Spanish Clitic Pronouns:

IIIAcc	IIIDat	I	II	se
1	2	3	4	5

(42) β-Valence Scale:[6]

Nom	Acc	Dat	Ben	Ref
1	2	3	4	5

The fact that β-strength determines the order of application

of CF can be stated as a second condition.

(43) β-Condition on Clitic Formation:[7]

CF applies to successively stronger elements along
the β-scale.

The significance of (43) is that β-strength has a greater

effect on CF than α-strength. CF preferentially affects weak elements. However, when there are two elements of which one is weaker on the α-scale and the other weaker on the β-scale, it is the β-strength which determines to which one CF applies first.[8]

Summary. In section 2.3.2, I showed how valence conditions operate in accordance with the IDP, which classifies transformations as either weakenings or strengthenings. In this section, I have argued that CF is a weakening. Given this information, the IDP has dictated a choice between two sets of descriptively adequate valence scales, which in turn has determined the exact formulation of the conditions on CF.

NOTES TO SECTION 2.

1. Only details relevant to the topic are indicated in the derivations.

2. Actually, accusative CF is only "optional" in the usual sense of the term in the case of third person NPs; first and second person accusative NPs always undergo CF (see also note 5, this section).

3. In view of the fact that the dative clitic is normally considered obligatory, a more appropriate marking for dative CF might be pseudo-obligatory. In other words, dative CF is obligatory if it does not involve violating the α-Condition, but its blocking does not result in the derivation blocking.

4. The term "strong" pronominalization and its ordering in the derivation will take on more significance when we motivate our choice of α-valence scales in section 2.3.3.

5. It may appear that there is a contradiction in the grammar developed here, as accusative CF optionally affects weak IIIAcc NPs, but obligatorily affects stronger first and second person NPs. However, before concluding that this is an anomoly, it would be necessary to determine under what conditions third person accusative NPs undergo CF, and then see if first and second person accusative NPs do not always occur under the same conditions. Likewise, I believe that the fact that reflexive CF is obligatory is not arbitrary, but due rather to the degree of anaphoricity.

6. Nominative is included on the β-scale here for reasons that will become clearer later. We have already seen that nominative and accusative constitute elements along a common scale, and that accusative and dative constitute elements along a common scale. In section 4, we will consider a problem which involves nominative, accusative and dative NPs.

7. It should be noted that the α- and β-conditions are significantly different from other proposed conditions on transformations, as in Ross(1968). The conditions proposed here are statements of circumstances which must pertain if a transformation is to occur, whereas conditions of the type proposed by Ross are statements of circumstances under which a transformation cannot occur.

8. It might be considered that α-strength, instead of β-strength, determines the ordering of application of CF. Insentences where CF does not block, this proposal is sufficient, but it encounters difficulties in cases where we want CF to block. For instance, consider a sentence with a second person accusative and a third person dative.

Te recomendó ¡a él.   (He recommended you to him.)

8.(cont.) In order to derive this sentence, it would be necessary
to derive the second person clitic before the third person; otherwise,
we would get a sentence like:

> *Le recomendó a ti.   (He recommended you to him.)

However, if second person clitics must be derived before third
person clitics, then *se* must be derived before second person clitics.
But in such a grammar it would be impossible to block the derivation of:

> *A mí se me permitió dormir toda la mañana, pero
> a Sarita no se se lo ha permitido.

> > (PRO allowed me to sleep all morning,
> > but Sarita was not allowed to do so.)

Because it would be the first clitic, there would be nothing to stop
the derivation of the first *se* in the second conjunct. Derivation
of the second *se* could not be blocked either, as this clitic would
originally be derived as *le*(IIIDat referring to *Sarita*), and
changed to *se* by the Spurious-*se* rule, for which the structural
description would not be satisfied until after the derivation
of the clitic *lo*.

3. MINOR RULES. Except for the Spurious-*se* rule, the grammar

developed in section 2 to account for sequences of clitic pronouns

operates in accordance with the IDP. CF applies preferentially

to weaker NPs, with β-strength determining the order in which

NPs are eligible to undergo CF, and α-strength determining whether

a given occurrence of CF can proceed. However, there are certain

dialectal data, as mentioned in section 1.3, that our grammar is

incapable of accounting for. Some of these data, plus certain

other aspects of the grammar as currently developed, are discussed

in this section.

3.1 SPURIOUS-*SE*. Recall Perlmutter's formulation of Spurious-*se*:

(1) $\begin{bmatrix} \text{Pro} \\ \text{III} \\ \text{Dat} \end{bmatrix} \begin{bmatrix} \text{Pro} \\ \text{III} \\ \text{Acc} \end{bmatrix}$

      1   2 $\rightarrow$ *se*, 2

This formulation, which states that a third person dative clitic

becomes *se* when followed by a third person accusative clitic,

accurately portrays the data, but does not explicitly give any

indication of the effect in the grammar of this change, which is

to block any further occurrence of CF. This is illustrated in the

second conjunct of (2a), where the occurrence of Spurious-*se*

blocks the subsequent occurrence of Pro-*se*, resulting in an ungrammatical

sentence, and in (2b), where the occurrence of Spurious-*se*

blocks the subsequent application of CF to the benefactive phrase,

requiring consequently that the benefactive be manifested in a strong

form(see section 2.2).

(2)   a.*A mi se me permitió dormir toda la noche, pero

        a Sarita no se lo ha permitido.

b. Se lo recomendé para tí.

(I recommended it to him for you.)

The reason why Pro-*se* CF in (2a) and benefactive CF in (2b) cannot

occur is because the α-strength of the resulting clitics would

not be greater than the α-strength of the clitic resulting from

Spurious-*se*. In other words, the crucial effect of Spurious-*se*

in the grammar developed here is an increase of α-strength, as

indicated in (3).

(3)   Spurious-*se*: (obligatory)

$$\begin{array}{cc} \text{CL} & \text{CL} \\ [\alpha^2] & [\alpha^1] \end{array}$$

$$1 \qquad 2 \quad \rightarrow \quad [\alpha^5] \, , \quad 2$$

From a theoretical viewpoint, the fact that $[\alpha^5]$ is manifested

as *se* is coincidental.

3.2 REFLEXIVE STRENGTHENING. Because reflexive clitics precede

all others in a sequence, we have postulated that reflexive CF

follows all other occurrences of CF. There is a technicality

here, as reflexive clitics derive from underlying accusative,

dative, or benefactive NPs. To clarify the problem, consider the

following examples.

(4)   a. Se te levantó temprano.

(He got(himself)up early for you.)

b. Te lo levanté temprano.

(I got him up early for you.)

In (4a), the clitic is a copy of the underlying accusative NP,

but being reflexive it precedes the benefactive clitic, whereas

in (4b), where it is non-reflexive, it follows. The reason for

this difference in ordering is that accusative clitics are β^2 and reflexive clitics β^5. As β-strength determines the ordering of CF, and benefactives are β^4, we have a straightforward account for the difference in the ordering of clitics in (4a) and (4b). What we do not have, however, is an account for the fact that β^5 takes precedence over β^2. We need a statement in our grammar indicating that the property of being reflexive negates the effect of being accusative, etc. Otherwise, there is no reason for the derivation of (4a) not proceding as in (5), where benefactive C F blocks.

(5) NP_1 levantó NP_1 para tí.

         se levantó   para tí.   (acc CF)

         "   "   " "   (ben CF blocks: $\alpha^4 \not< \alpha^5$)

Like our reformulation of Spurious-*se*, the rule we need involves valence strengthening. However, strengthening the valence of the clitic only, as with Spurious-*se*, still results in the complications indicated in (5), because such a rule would apply after the clitic has been formed, whereas we want the rule to delay the formation of the clitic. Consequently, the rule would have to apply to NPs, as in (6), before CF.

(6)   REFLEXIVE STRENGTHENING: (obligatory)

$$
\begin{array}{ccccccc}
NP & & NP & & & & \\
[\beta^1] & X & [\beta n] & & & & \\
1 & 2 & 3 & \rightarrow & 1 & 2 & \begin{matrix} NP \\ [\beta^5] \end{matrix}
\end{array}
$$

                                     condition: X does not contain
                                        a S boundary

3.3 DUAL INTERPRETATIONS OF II-I SEQUENCES. Normally, a dative
clitic precedes an accusative clitic, a benefactive precedes a
dative, and a reflexive precedes a benefactive. However, as pointed
out in section 1.3, the reverse of these orderings is sometimes
acceptable when first and second person clitics are involved,
as indicated in (7a-d).

> (7) a. Te me recomendó.   i. (He recommended me to you.)
>
>   ii. (He recommended you to me.)
>
>   b. Te me vendió el coche.   i. (He sold your car to me.)
>
>   ii. (He sold my car to you.)
>
>   c. Te me escapaste.   (You escaped from me.
>
>   d. Te me escapé.   (I escaped from you.)

The problem is that our grammar cannot account for the second
interpretations of (7a) and (7b), nor (7d). Broadly speaking,
there are at least two ways of accounting for these sentences
within the framework developed here: 1) marking the derivation as
being exceptional; 2) postulating a valence changing rule similar
to Spurious-*se* and Reflexive Strengthening that applies
before CF.

An example of the first type of solution would be to mark in
our grammar that a β^2 constituent does not undergo CF until after
a β^3 consttiuent if the β^2 constituent is α^4 and the β^3 constituent
is α^3. The undesirable aspect of this type of solution is that it
involves a violation of the β-Condition. Another solution of this
type would be to mark in our grammar that CF can proceed in accordance
with the β-Condition but in violation of the α-Condition if β^2
is α^4 and β^3 is α^3, with the provision that the clitic derived

is placed after, not before, the previously derived clitic. As can
be seen, however, this solution involves both a violation of the
α-Condition and the procedure for attaching clitics to the verb.
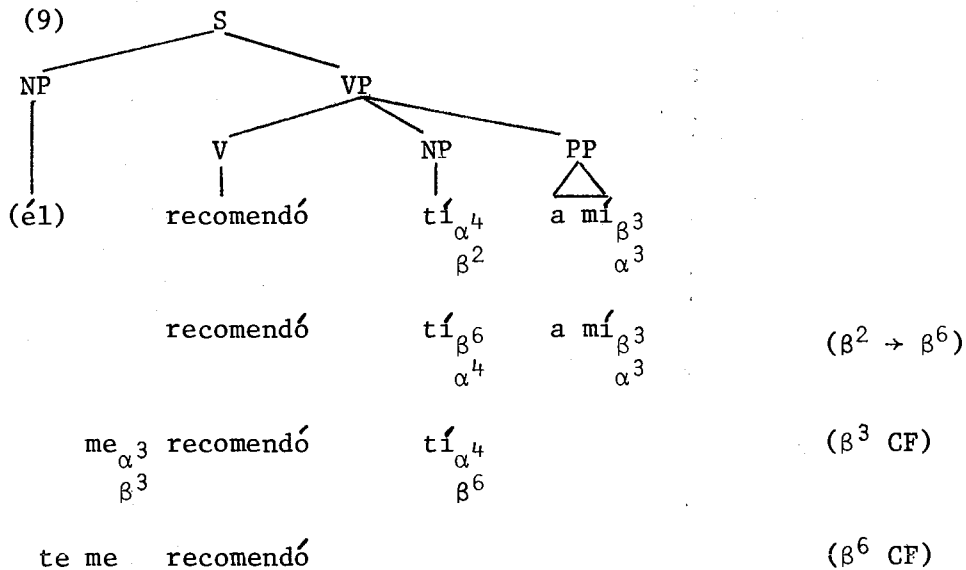
Regarding the second type of solution, we can postulate a rule
that changes the β-strength of either one or both of the NPs involved
in such a manner that CF can procede in accordance with both the
α-Condition and the β-Condition.[1] There are at least two ways in
which this can be done: 1) a rule that reverses the β-strength
of the two NPs; 2) a rule that increases the β-strength of the
α^4 NP beyond the β-strength of the α^3 NP.

Solution (1) would be of the following nature. Suppose in
our underlying structure we have an accusative NP(β^2) that is α^4
and a dative NP(β^3) that is α^3. Our rule would switch the β-strengths
of the two NPs so that the α^3 NP would be assigned the feature β^2,
and the α^4 NP the feature β^3. The derivation of (1a) with its
second interpretation would be as follows:

(8)

$$\text{(él)} \quad \text{recomendó} \quad \text{ti}_{\alpha^4 \beta^2} \quad \text{a mí}_{\alpha^3 \beta^3}$$

$$\text{recomendó} \quad \text{tí}_{\alpha^4 \beta^3} \quad \text{a mí}_{\alpha^3 \beta^2} \qquad (\beta\text{-Permutation})$$

$$\text{me}_{\alpha^3 \beta^2} \text{ recomendó} \quad \text{tí}_{\alpha^4 \beta^3} \qquad (\beta^2 \text{ CF})$$

$$\text{te me } \text{recomendó} \qquad (\beta^3 \text{ CF})$$
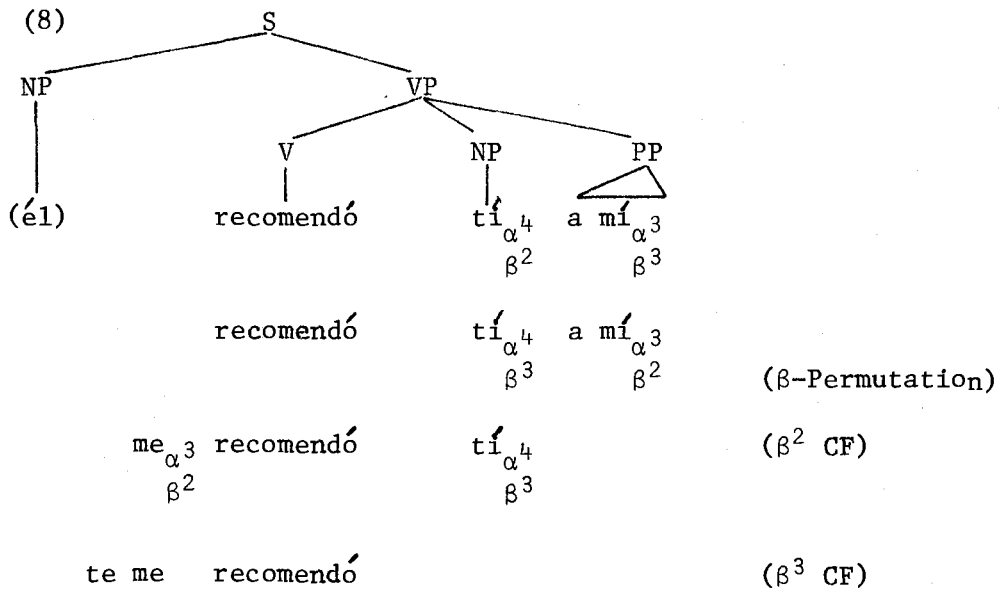
Solution (2) would increase the β-strength of the α^4 NP beyond
the β-strength of the α^3 NP.   As the dual interpretation of II-I

sequences occurs in some dialects with reflexive-benefactive sequences (c.f. 7c-d), the β -strength of the α^4 NP would have to be increased to β^6, in order to allow the derivation of the reflexive clitic in a sentence like (7d). The derivation of (7a) with its second interpretation would then be as follows:

(9)

$$\text{recomendó} \quad \text{tí}_{\beta^6 \; \alpha^4} \quad \text{a mí}_{\beta^3 \; \alpha^3} \qquad (\beta^2 \rightarrow \beta^6)$$

$$\text{me}_{\alpha^3 \; \beta^3} \text{ recomendó} \quad \text{tí}_{\alpha^4 \; \beta^6} \qquad (\beta^3 \text{ CF})$$

$$\text{te me} \quad \text{recomendó} \qquad (\beta^6 \text{ CF})$$

The obvious undesirable aspect of this latter solution is that it requires the *ad hoc* postulation of the feature β^6; consequently, of the two types of solutions, the first is the more desirable. However, any theory which did not require a minor rule to account for this problem would have an advantage over the theory outlined in this thesis.

Scale of II-I Sequences. Another aspect of the problem with II-I sequences involves in which circumstances they can have two interpretations. Although I have no conclusive data, it seems that more Spanish speakers accept (7a) with its second interpretation than accept (7d). The problem deserves more investigation of

dialectal variation to determine if there is not a scale of irregular II-I sequences in which acceptance of one type only occurs if another type is acceptable also, but not vice-versa. For example, it may be that any speaker who accepts (7d) also accepts (7a) with its second interpretation, but not vice-versa.[2]

NOTES TO SECTION 3.

1. It is both impossible and undesirable to resolve this problem
with a rule affecting α-strength. In the first place, the problem
involves functional ordering, which is determined by the β-Condition.
No matter how we alter α-strength, as long as β-strength remains
the same, our grammar will place dative clitics before accusative
clitics, and benefactive clitics before dative clitics. The
undesirable aspect of a rule affecting α-strength is that
α-strength is intimately connected with the property of person.
To change the α-strength of an element is to effectively change the
property of person, which is not wanted.

2. See section 4.3 for more discussion of the type of implication
that is involved here.

4. VALENCE IN TRANSFORMATIONAL GRAMMAR. In this thesis I have

proposed an abstract property termed *valence,* which has been utilized

in statements that have been incorporated into grammar as conditions

on transformations. I have shown that such conditions allow us

to account for the constraints on sequences of clitic pronouns.

Furthermore, the analysis of this problem proposed here accounts

for more data than output conditions are capable of.[1] In this section

I discuss briefly the role of valence in transformational grammar

and some of its implications for universal grammar.

4.1 THE NATURE OF VALENCE CONDITIONS.

4.1.1 PROPENSITY. A major problem in transformational grammar,

as I see it, is to explain why in some instances a given transformation

occurs while in other instances it does not, although in all instances

the structural description for the transformation is satisfied;

i.e. to clarify the nature of conditions on transformations. So far

I have discussed three examples of this problem: CF, END

and SR. These three transformations would traditionally be

considered to be of different types, as CF involves copying, END

involves deletion, and SR involves movement. However, one characteristic

is shared by all of these transformations: there is more than one

constituent in a given deep structure that they can affect. In the

case of END and SR, this characteristic is due to the possibility

of the prior application of Passive; in the case of CF, it is due

to the fact that CF can affect several different NP constituents

of a phrase marker. Where a transformation affects a specific

node of a phrase marker, the valence of the constituent of that node

is an indicator of the propensity of the constituent to be affected
by the transformation; in order for the transformation to occur,
the valence of the constituent must be of a certain value:
sufficiently weak in the case of weakening processes like END,
and sufficiently strong in the case of strengthening processes
like SR. Where a transformation applies more than once in the
same S, as is the case with CF, valence determines the iterative
ordering of the transformation,[2] with weaker constituents being
affected first in the case of weakening processes like CF.

4.1.2 PRINCIPLE CONDITIONS. It would be possible to correctly
derive sequences of clitic pronouns without utilizing valence.
The problem is that for each time CF applied, it would be necessary
to choose the appropriate condition for that particular occurrence
of CF from among a series of conditions. The advantage of utilizing
valence is that it is possible to make one general statement from
which all the more particular conditions can be derived.

For example, consider a sentence with an accusative and a
dative. First, recall that accusative CF must be ordered before
dative CF (see section 2.3); second, CF never blocks on its first
occurrence in a given S. Now assume that the accusative is third
person. In such instances dative CF can occur if the dative is
first person, second person, or third person, as in (1a-c).

    (1)   a. Me lo recomendaron.   (They recommended it to me.)

            b. Te lo recoemndaron.   (They recommended it to you.)

        c. Se lo recomendaron.   (They recommended it to him.)

We can account for (1a-c) without resorting to valence if we have

the following three statements about the occurrence of CF:

    (2)   Dative CF can occur if there is an accusative clitic
           that is third person and the dative NP is:
               (i) first person
               (ii) second person
               (iii) third person

and a scanning procedure that runs through the list of conditions

to see if one is appropriate.

    Now consider the situation if the accusative is first person.

Dative CF cannot occur if the dative NP is first person or third person,

but can if it is second person.

    (3)   a. *Le me recomendaron.   (They recommended me to him.)

           b. *Me me recomendaron.   (They recommended me to myself.)

           c. Te me recomendaron.   (They recommended me to you.)

To account for (3c) we have to specify a further condition on CF.

    (4)   Dative CF can occur if there is a first person accusative
           clitic and the dative NP is second person.

To account for the small amount of data considered in this section

we have specified four conditions, the actual conditions

under which CF occurs.[3]

    Restricting discussion to classes of morphemes with the same

valence, there are ten particular α-conditions in Spanish in all.

For example, given a third person accusative clitic (i.e. $\alpha 1$),

CF can occur again if the α-value of the NP undergoing CF is 2,3,4 or 5.

/ Likewise, given a third person dative clitic($\alpha 2$), CF can occur

with α-values 3,4 or 5. If there is a first person clitic($\alpha 3$),

CF can occur with α-values 4 or 5, and if there is a second person

clitic(α^4), CF can occur if α=5. Given the five values for α, as in
(5), these are the particular conditions that are derived when
particular α-values are inserted for the variables in (6) and the
statement remains true.

    (5)   IIIAcc   IIIDat   I   II   *se*

            1   2   3   4   5

    (6) $p > q$ p = α-strength of NP to undergo CF

                                 q = α-strength of any clitics already derived

We can think of the α-Condition (6), from which the ten particular
conditions derive, as a "principle condition." As far as I can
perceive, it is only by postulating an abstract relational property
like relative valence[4] that it is possible to formulate principle
conditions which account for all the particular conditions on
a given transformation in a given language.

4.2 UNIVERSAL VALENCE SCALES. In this thesis I have proposed two
complementary concepts, *valence* and *valence scale*. Although a
definitive answer is beyond the scope of this thesis, we can ask
the question of what is universal in these concepts.

The strongest hypothesis would be that the particular valence scales
proposed in this thesis are universal syntactic scales. A much weaker
hypothesis would be that valence itself is a universal syntactic
property that accounts for the restricted application of transformations.

The difference between the two hypotheses is one of predictive
power. For example, if we confine our discussion to α-strength
and the ordering of clitics, the first hypothesis implies that
it will always be the case that second person clitics can precede

first person clitics, and never the opposite ordering.[5] The second

claims little more than that we should be able to account for

sequences of clitics in some convenient manner by postulating valence.

The latter would still be an improvement over output conditions, as it

accounts for which of two possible alternative forms will occur when the

conditions on CF preclude a sequence of clitics, as we have found

in Spanish. However, it would not necessarily preclude a I-II

sequence in some language.

Although more desirable, the first hypothesis is too strong,

even for all Spanish dialects. Perlmutter notes that certain

dialects do not allow *te me* sequences as in :
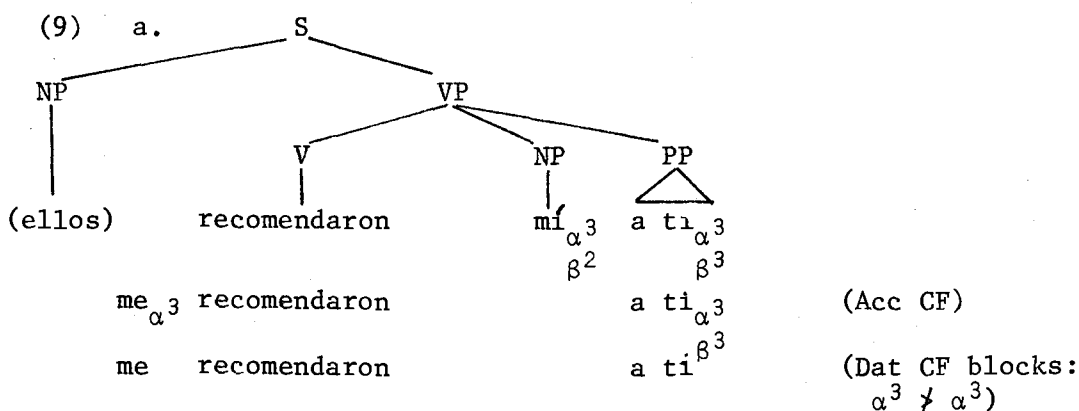
    (7)   *Te me recomendaron.   (They recommended me to you.)

                                  (They recommended you to me.)

I agree with Dinnsen(1972:182) that the only practical way of

handling this dialectal difference is to assign the same value to

first person and second person clitics.[6] i.e. the α-valence table

for such dialects would be:

    (8)   IIIAcc   IIIDat $\begin{smallmatrix}I\\II\end{smallmatrix}$ *se*

           1   2   3   4

In such dialects, the derivation of (7), depending on its meaning,

would be either (9a) or (9b).

(9) a.

   me$_{\alpha 3}$ recomendaron   a ti$_{\alpha 3}$ (Acc CF)

   me   recomendaron   a ti$^{\beta 3}$ (Dat CF blocks: $\alpha^3 \not> \alpha^3$)

(9) b.

$$ \text{NP} \quad \text{S} \quad \text{VP} $$

(The tree diagram shows:)

S branches into NP and VP

NP → (ellos)

VP branches into V, NP, PP

V → recomendaron

NP → tí$_{\alpha 3}$ β^2 (written as tí$_{\alpha 3}$, β^2)

PP → a mí$_{\alpha 3}$ β^3

te$_{\alpha 3}$ recomendaron   "   (Acc CF)

  "   "   "   (Dat CF blocks:
                                                    $\alpha^3 \not\equiv \alpha^3$)
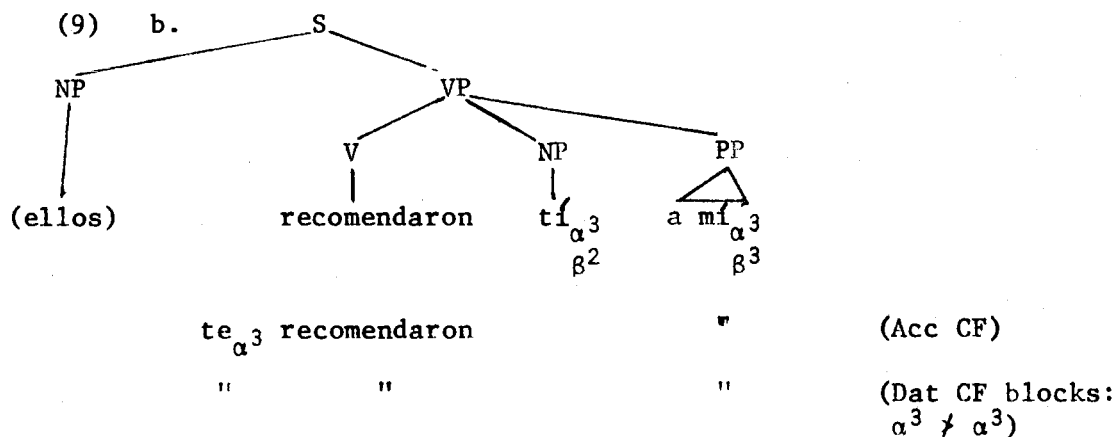
Bonding. The objection to this account of dialect differences might
be that it appears *ad hoc*, as elements are not attributed with an
absolute valence even within a single language, let alone all
languages. However, the modification of the α-scale in (8) indicates
an interesting possibility. Restricting our discussion to
non-reflexive clitics,[7] we might make the following hypothesis:

(10) Bonding Principle:

    If two elements have different values in a particular
    grammar, then their relative values will be in direct
    correlation with the relative values of the same elements
    in a universal valence scale.[8]

(10) assumes that there are universal valence scales, and implies that
if two or more elements on the universal scale have the same valence
in a particular grammar, then these elements must be contiguous
on the universal scale. If we tentatively propose (11) as a
universal scale, then it follows from the Bonding Principle that
(12a) is a possible valence scale in a particular grammar, but not
(12b), because IIIDat and I are contiguous on (11) but IIIAcc and
I are not.

(11) IIIAcc   IIIDat   I   II

      1   2   3   4

(12) a. IIIAcc $\overset{\text{IIIDat}}{\text{I}}$ II

        1   2   3

b. $\overset{\text{I}}{\text{IIIAcc}}$ IIIDat II

        1   2   3

Thus, the proposals of universal valence scales and bonding make no

claims about what we will find in a specific dialect or language,

but they do limit the range of what we can expect to find in different

dialects or languages.

α-Strength and Clitic Pronoun Sequences in French.[9] Perlmutter's

output condition, which makes reference to the category of person,

indicates that α-strength is significant in the ordering of clitic

pronouns in French.   In this section we will test to see if the Bonding

Principle accounts for what sequences occur in this language.

Examining the data, we see that first and second person clitics

can occur with third person accusative non-reflexive clitics.

    (13) a. Il me l'a recommandé.   (He recommended it to me.)

          b. Il nous l'a recommendé.   (He recommended it to us.)

          c. Il te l'a recommendé.   (He recommended it to you.)

          d. Il vous l'a recommendé.   (He recommended it to you.)

We find also that IIIAcc clitics never precede first and second person

clitics(e.g. 14), and first and second person clitics never co-occur

(e.g. 15).

    (14) a. *Il les m'a recommendé   (He recommended them to me.)

          b. *Il le vous a recommendé. (He recommended it to you.)

    (15) a. *Il te m'a recommendé.   (He recommended me to you.)

          b. *Il nous t'a recommendé. (He recommended you to us.)

This data indicates that in a valence treatment, first and second person

clitics must be attributed the same valence, and IIIAcc a different

value, as in (16).

(16) IIIAcc $\begin{matrix} I \\ II \end{matrix}$

         1   2

Assuming that CF in French is subject to the same conditions as

in Spanish, (16) predicts that if a sentence has a first or second

person accusative, any dative pronoun should occur in its strong

form, which, as we see, is the case.

(17) a. Il t'a recommendé a moi. (He recommended you to me.)

       b. Il m'a recommendé a toi. (He recommended me to you.)

The valence scale (16) accounts for the data so far, and is in

accordance with the Bonding Principle. The remaining question

is where IIIDat belongs.

Because a IIIDat clitic can co-occur with a IIIAcc clitic,

as in (18), the two must have different valences.

(18) Je le lui ai donné.   (I gave it to him.)

We see, however, that in surface ordering IIIDat follows IIIAcc.

If this is the order in which the two are originally generated,

then IIIDat should have a weaker α-strength than IIIAcc, as in (19).

(19) IIIDat   IIIAcc

        1   2

This situation, however, creates problems, because our β-condition

on CF specifies that accusative CF precedes dative CF (see sec. 2.3.3).

If (19) is correct, in order for CF to apply twice in sentences

like (18), it would first be necessary to have dative CF precede

accusative CF, and on the second occurrence of CF to relax the

β-condition, as illustrated in the following derivation.

(20)
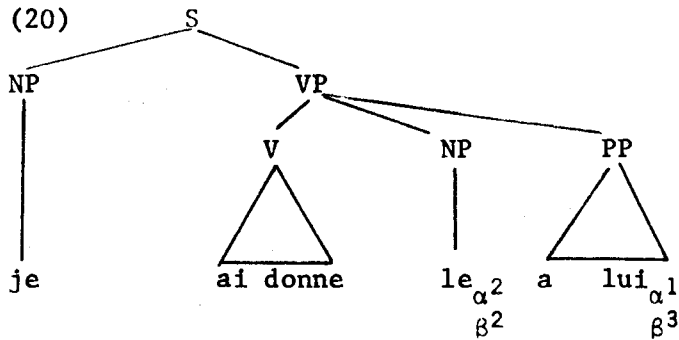
| je | $lui_{\alpha 1}$ ai donné | " | (Dat CF) |

je le lui ai donné   (Acc CF: β-cond.
                                              not applicable)

Furthermore, we should be able to combine (16) and (19) to get (21).

(21)   IIIDat   IIIAcc $\begin{array}{c} I \\ II \end{array}$

             1   2   3

There are two disadvantages to be noted about this valence scale:

(i) it is not in accordance with the Bonding Principle, which

specifies that if IIIDat, IIIAcc and I have different valences,

then the valence of IIIDat should fall between that of IIIAcc and I.

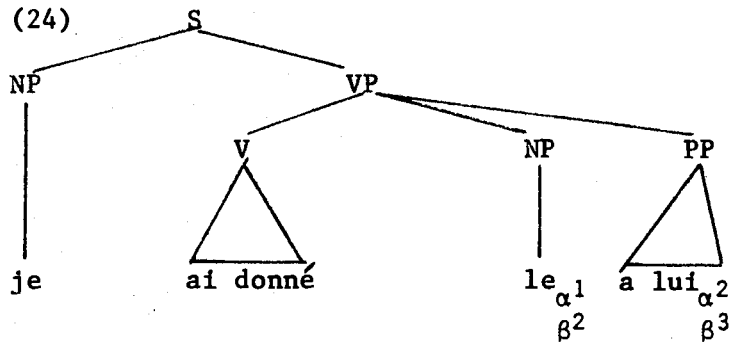(ii) it should be possible to get I-IIIDat sequences.

But, Emonds(1975:12) correctly notes that IIIDat does not generally

co-occur with first or second person clitics. To account for this, he groups

these clitics in the same class, and then applies a permutation rule

to sequences containing a IIIAcc and a IIIDat clitic. Accommodating

this type of solution within the framework developed here would mean

positing a valence table like (22) and a rule like (23).[10]

(22)   I
                             II
            IIIAcc   IIIDat

                    1   2

(23) *Le/lui* Permutation: (obligatory)

            CL   CL
        [IIIDat] [IIIAcc]

            1   2   →   2   1

The derivation of (18) would now be as follows:

(24)
```
              S
           /     \
         NP        VP
          |      /  |  \
          |     V   NP   PP
          |    /\   |   /\
         je  ai donné le_α1  a lui_α2
                       β2      β3
```

"   le_α1 ai donné   "   "   (Acc CF)

" lui le   ai donné   (Dat CF: $\alpha^2 > \alpha^1$)

je le lui ai donné   (*Le/lui* Perm.)

The incorporation of (22) and (23) into the grammar has two

significant consequences:

(i) it is no longer necessary to relax the β-condition in the

derivation of sentences like (18).

(ii) the valence table (22) is in accordance with the Bonding

Principle.

Now consider the following data, from Perlmutter(1971: 64).

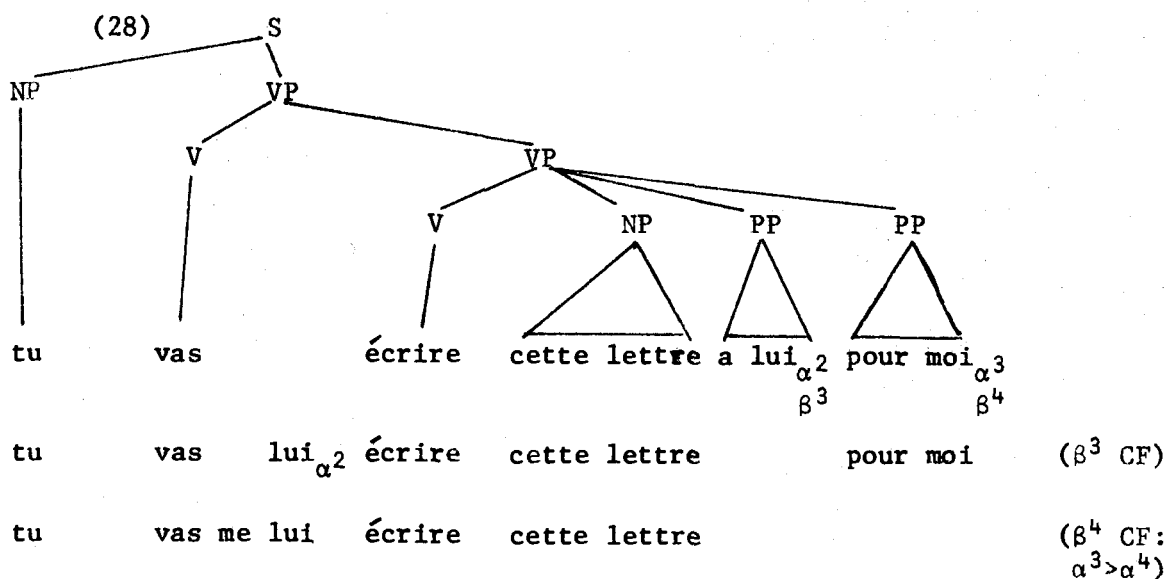(25) Tu vas me lui obéir!   (You are going to obey him for me!)

(26) Tu vas me lui écrire cette lettre!

        (You are going to write that letter to him for me!)

Perlmutter has noted that sentences like (25) and (26) are accepteble when they have imperative force, but this is for *some* speakers only; others reject them at all times. As currently formulated our grammar is incapable of accounting for those dialects in which (25) and (26) are acceptable, as *me* and *lui* have the same α-strength, which would necessitate relaxing the α-condition in the generation of the second clitic, *me*. This problem can be overcome, however, if we postulate a different valence table.[11] Taking into account the procedure for attaching clitics to the verb and the facts that the β-condition states that CF preferentially affects weaker elements along the β-scale and there is this same strength relationship along the α-scale, then on the modified valence table the α-strength of *me* must be greater than that of *lui*, as in (27).

(27)   IIIAcc   IIIDat $\begin{matrix} I \\ II \end{matrix}$

              1   2   3

The derivation of the clitics in (26) would be as follows:[12]

(28)

tu	vas	écrire	cette lettre	a lui$_{\alpha 2}$ $_{\beta 3}$	pour moi$_{\alpha 3}$ $_{\beta 4}$	
tu	vas	lui$_{\alpha 2}$ écrire	cette lettre		pour moi	(β^3 CF)
tu	vas me lui	écrire	cette lettre			(β^4 CF: $\alpha^3 > \alpha^4$)

As can be seen, the modified valence table (27) necessary to account for sentences like (25) and (26) is in accordance with the Bonding Principle. Thus, the concept of universal valence scale and Bonding accounts for both the differences between Spanish and French and certain dialect variations within the two languages.

The purpose of this section has been to consider what is universal about the concepts valence and valence scale. Our comparison of Spanish and French, including dialectal variation, indicates that language-particular valence scales are not universal, but that there may be universal scales (similar to (11) in the case of α-valence) from which language-particular scales are derived by the Bonding Principle. This is a stronger statement than the hypothesis that only the concept of valence is universal, as it specifies that only certain logically **possible** valence scales are linguistic possibilities.

On further investigation, the proposals made here may prove too strong in that a single universal scale for a certain type of valence may not be universal in the broadest use of the term. However, the concepts of universal scale and bonding, as applied here to Spanish and French, do appear to be useful tools for comparing dialects and related languages. Consequently, if universal scales are not totally universal, different higher-order scales may prove to be characteristics differentiating groups of languages.[13]

The proposals of universal scales and bonding as applied to α-strength, with its subsequent effect on sequences of clitics in Spanish and French, should not be interpreted as implying that

α-strength is always involved in the ordering of clitics. It is
quite conceivable that in some language the α-condition does not
apply to CF. This would appear to be the situation in Walbiri,
an Australian aboriginal language, judging from the data presented
by Perlmutter(1971:89-95).[14] For example, in (29) the two italicized
clitics are in the order I Nom-II Acc, while in (30) the order is
II Nom-I Acc.

(29) nʸa-nʸi ka-*na-ŋku*.   (I see you.)

(30) nʸa-nʸi ka-*npa-t*ʸu   (You see me.)

That the α-condition on CF may not pertain in some languages
also raises the possibility that the β-condition may not apply also.
Although there is no a *priori* reason why this should not be possible,
it seems unlikely that in any language CF should apply unconditionally.
First, it seems that in such a situation sequences of clitics
would be impossible to interpret; second, the unconditional application
of an iterative process would constitute unprincipled (i.e. non-
rule governed) behaviour. In Walbiri it appears that the β-condition
is operant, as nominative clitics always precede accusative and
dative clitics.

The conclusion to be drawn from bonding is that valence is
relative as opposed to absolute. Consequently, what is important
is not the value attributed to a given element, but rather that
its value may be greater, or lesser, or equivalent to, the value
attributed to another element. One implication of this is that
there is not universal direct correlation between valence of an element
in a particular grammar and its semantic properties. Consequently,
the concept of valence in a particular grammar is strictly a syntactic

property. However, this does not imply that elements on a universal

valence scale do not correlate with specific semantic properties.

4.3 IMPLICATION. I have claimed that valence is an indicator of

a constituent's propensity to be affected by a given transformation.

From this it follows that if a given constituent has sufficient valence, then

another constituent with greater valence will also be affected.

For example, if the structural description of a transformation

indicates that it should affect nominatives(β^1), accusatives(β^2),

and datives(β^3), and we know that it affects accusatives, then

a valence condition on this transformation implies that if it a

is a weakening then it affects nominatives also, and if it is a

strengthening then it affects datives also.

Because of these implications, valence conditions place certain

well-defineable restrictions on the range of possible grammars,

although they do not predict what will occur in any particular

language. For example, given a transformation whose structural

description indicates that it can affect constituents that are

β^1, β^2 or β^3, the following table, where X indicates that a constituent

is affected and O that it is not, is a list of all conceivable

combinations of constituents that could be affected. However,

a valence condition on any transformation predicts that it will

never be the case in any language that (e) will occur; furthermore,

if the transformation is a strengthening (b) and (c) will not occur,

and if it is a weakening (f) and (g) will not occur.

(31)

	Nom	Acc	Dat
a.	0	0	0
b.	X	0	0
c.	X	X	0
d.	X	X	X
e.	0	X	0
f.	0	X	X
g.	0	0	X

The types of predictions made by valence conditions are open to empirical testing. One transformation that affects those constituents discussed in this section and that can provide such a test is WH-Movement, the rule that fronts WH-words in sentences like the following.

(32) a. Who likes Margaret?

b. Who does Margaret like?

c. Who did Margaret give the card to?

(33) a. Who do you think likes Margaret?

b. Who do you think Margaret likes?

c. Who do you think Margaret gave the card to?

Perlmutter(1971:99ff) has shown that this same rule operates in French. However, whereas WH-Movement into a higher clause in English affects nominatives, accusatives and datives, in French it never affects nominatives(c.f. 35a-c).[15]

(34) a. Qui aime Marguerite?   (Who likes Margaret?)

b. Qui Marguerite aime-t-elle? (Who does Margaret like.)

c. A qui Marguerite a-t-elle donné la carte.

(35) a. *Qui crois-tu {$\begin{matrix}(qu') \text{ aime}\\ \text{aimer}\end{matrix}$} Marguerite?

(Who do you think likes Margaret?)

b. Qui crois-tu que Marguerite aime?

(Who do you think Margaret likes?)

c. A qui crois-tu que Marguerite a donné la carte?

(Who do you think Margaret gave the card to?)

There are two significant points to be noted about the patterning

of WH-Movement in (35a-c).

(i) this pattern does not contradict what a theory utilizing

valence conditions predicts, although, given that this is the

first real test of WH-Movement, the only pattern that could represent

a contradiction would be (e) in (31), because, except for deletion

processes, until we have an instance of conditional application

of a transformation, we have no sure indication whether it is a

weakening or a strengthening.

(ii) the fact that (35a) is ungrammatical and (35b-c) are

grammatical indicates that WH-Movement is a strengthening.[16]

Within the framework developed in this paper, we can account for

the ungrammaticality of (35a) by a condition on Wh-Movement into

a higher clause that the NP affected have a β-strength ≥ 2.

Perlmutter(1971:100) contends that the ungrammaticality of

(35a) is due to an output condition in French that all sentences

(except imperatives) must have a subject in surface structure.

However, there is evidence indicating that this is wrong, and that

a valence condition is correct.

First, the judgments of grammaticality of (35a-c) do not reflect

the intuitions of all speakers of French. For many, both (35a)

and (35b) are ungrammatical, although, as far as I know, (35c)

is always acceptable. If the ungrammaticality of (35a) is attributed

to the output condition mentioned above, the ungrammaticality of

(35b) must be due to some totally unrelated and as yet unknown

reason. On the other hand, in a theory utilizing valence conditions,

in those dialects in which both (35a) and (35b) are ungrammatical,

the appropriate condition on WH-Movement into a higher clause

is that the NP affected have a β-strength $\geq$ 3. The interesting

point about this condition is that it is the only other condition

allowing for partial application of WH-Movement into a higher clause

that our theory permits once we know that for some speakers (35a)

is ungrammatical but (35b-c) are acceptable.

The second argument in favour of valence conditions is that

it seems that for those speakers for whom (35b) is acceptable,

(36) is acceptable also.

(36) Qui crois-tu être aimé de Marie?

(Who do you believe to be liked by Mary?)

In a grammar utilizing valence conditions, this is just what we

expect, but a grammar that attributes the ungrammaticality of

(35a) to an output condition on subjects predicts just the opposite.

There are at least three different ways in which a valence

condition account of this constraint on WH-Movement in French

differs from an account utilizing output conditions:

(i) It more accuratley portrays the data, in this instance

predicting the grammaticality of (36) for certain speakers, whereas

Perlmutter's output condition predicts that (36) should always

be unacceptable.

(ii)   It predicts that in no language would such a transformation affect accusatives only.

(iii) Given that in French, WH-Movement into a higher clause does not affect weak elements (i.e. nominatives), it further predicts that in no language will it be the case that only nominatives, or nominatives and accusatives, will be affected.

These last two points, which underline the predictive power, or ability to define the range of possible human languages, probably represent the strongest points in favour of valence conditions.

NOTES TO SECTION 4.

1. It might be proposed that a grammar incorporating valence conditions on CF would be notationally equivalent to a grammar of the type proposed by Jackendoff(1972), in which clitic pronouns would be generated in the base and ungrammatical sentences would be rejected as a result of violating well-formedness conditions on interpretation rules. This is not an unreasonable proposal. Such a grammar, with no need for output conditions, would reject all ungrammatical sequences. For example, if we set up the following two valence tables:

se	II	I	III
1	2	3	4

REF	BEN	DAT	ACC
1	2	3	4

and interpret clitics from left to right, we would need only state that in order to be interpreted, any clitic must have a greater valence on both scales than any previously interpreted clitic. Such a grammar would reject sentences like:

       *Te le recomendaron.   (They recommended you to him.)

       *Le te recomendaron.   (They recommended you to him.)

However, there would be difficulties with sentences like:

       *Le recomendaron a tí.

because an interpretive grammar would only reject sentences in which there were at least two clitics.

2. I am grateful to Dr. E.W. Roberts for this point.

3. It is possible to be more specific in our statements of conditions if we mention individual morphemes. In other words, there is still a certain degree of generalization here.

4. Principal conditions can also be stated in terms of a hierarchy, such as the Thematic Hierarchy Condition on Passive and Pronominalization proposed by Jackendoff(1972). The Thematic Hierarchy Condition is a principle condition from which three basic particular conditions derive.

5. In this discussion I assume that the procedure adopted in section 2 for attaching clitics to a verb are universal. For more discussion on this see note 14 of this section.

6. If Perlmutter is correct, the problem here has been simplified

6.(cont.) by both Dinnsen and myself. Perlmutter(1971:26) says
that certain speakers do not accept *te me* sequences in a sentence
like *Manuel quería recomendárteme* (Manuel wanted to recommend you to
me.), but in a footnote he states that these same speakers do accept
sentences like *Quieren arrebatárteme* (They want to steal you away
from me.). If this is correct, then it is an indication of a
varying α-scale within the same grammar, which would indicate a
need for further research to determine under just what conditions
the variations occur. Compare the possibility of a varying α-scale
under different conditions in Spanish with the different α-scales
for French discussed in section 4.2 and note 11 of this section.

7. Discussion here is restricted to non-reflexive clitics because
it seems to me purely accidental that the third-person reflexive
clitic should have an α-value distinct from third-person non-reflexive
clitics, whereas such is not the case with first and second person
clitics. Consequently, it seems conceivable to me that in some
languages third-person reflexive clitics pattern in the same manner
as third-person non-reflexive clitics. However, if the difference
in behaviour of third-person reflexive and non-reflexive clitics
is not accidental, a theory that could account for this difference
in a systematic manner would have an advantage over the theory
outlined here.

8. Universal valence scale can be thought of as a valence scale
with a maximum number of valence distinctions. Such a scale would
not necessarily correspond to a scale in any particular grammar.

9. Discussion here is limited to the French clitics belonging
to the four classes in (11).

10. It seems unusual that the structural description for *Le/lui*
Permutation should be the same as that for Spurious-*se*. I do not
know just what the significance of this fact might be, but if it is
not accidental, it would seem to argue against the claim that
Spurious-*se* is the result of some phonological constraint.

11. In this discussion it should be kept in mind that even speakers
who accept (25) and (26) do so only when the sentences have imperative
force (one speaker who accepted (25) said it would make sense
only if she were mad). Consequently, the modified valence table
necessary to account for (25) and (26) is appropriate only under
certain conditions which seem to be defined emotively.

12. Emonds(1975) does not discuss in detail the problem with
sentences like (25) and (26), but adds in a footnote(p.12) that
these sentences "would...motivate a separate deep structure preverbal
clitic position in the base...." However, it seems to me that
(25) and (26) are not sufficient motivation for a separate clitic
position, considering that one speaker I have checked with does
not accept (25) under any circumstances, but does accept a sentence
like *Tu vas me les manger* (You're going to eat them for me.),
in which the clitic *me* seems to have the same semantic relationship

12(cont.) with the verb as it has in (25), indicating that the unacceptability of (25) and (26) in most circumstances is not due to CF applying to a benefactive NP.

13. Although I have not investigated in detail, I believe that clitics in Italian and Rumanian do not pattern according to the proposals made in this section. It seems that first person clitics precede second person clitics, and that both precede third person clitics. As far as β-strength is concerned, I am not aware of any data that could contradict the   ordering proposed for Spanish (see also note 14).

14. Considering the presumed unrelatedness of Walbiri and the Romance languages, Perlmutter's data from Walbiri indicates some interesting proposals concerning linguistic universals. For example, Perlmutter states that accusative and dative clitics are mutually exclusive in Walbiri. Within the framework developed in this paper, this fact would indicate that accusative and dative have the same β-strength. The Bonding Principle implies that for two elements on a universal valence scale to have the same strength in a particular grammar, they must be contiguous elements on the universal scale. The β-scale worked out for Spanish and French in this thesis places dative and accusative next to one another, which makes them eligible for bonding. The fact that these elements in Walbiri behave as if they had equal β-strength is not only further support for the Bonding Principle, but also that there may be a single universal β-scale.

Consider also the process of clitic affixation. In this paper I have proposed that clitics are attached before the verb and any previously derived clitics, rather than between the verb and any previously derived clitics. In Walbiri, clitics are suffixed to the first constituent of a sentence, be it a NP, as in (a), or a V, as in (b).

(a)   nᵞuntuɭu-ɭu- ka-*npa-t*ᵞu nᵞa-nᵞi ŋatᵞu

       you   ERG T CL CL see-PRES me   (You see me.)

(b)   nᵞa-nᵞi-ka-*npa-t*ᵞu   (You see me.)

If we interpret the procedure of clitic affixation to be that successively derived clitics are never placed between any previously derived clitics and the constituent to which clitics are attached, and we postulate that nominative is universally weaker than accusative and CF is always a weakening process, in a language in which clitics are suffixed we should expect to find that nominative clitics precede accusative clitics, which is just the case in the above examples.

Perlmutter's Walbiri data also brings to mind an interesting proposal concerning substantive universals within the theoretical framework proposed in this paper. If we accept the concept of zero-manifestation, and postulate that it is the weakest type of manifestation, parallel to the postulation that deletion is the most radical type of weakening, we should expect that in a class

14(cont.) of morphemes, those with zero-manifestation would be the
weakest. If this proposal, and the postulation that nominative
is the weakest element on the β-scale and third person is the weakest
on the α-scale are universally valid, any clitics in a paradigm
that have zero-manifestation should include third-person nominative.
This is just what we find in the list of singular clitics given
by Perlmutter(1971:89).

	Nom	Acc	Dat
1st pers	n̥a	tʸu	tʸu
2nd pers	npa	ŋku	ŋku
3rd pers	∅	∅	ḷa

15. WH-Movement also affects adverbial WH-words, but this point
is not relevant here. Furthermore, relative pronouns are subject to the
same restrictions on movement into a higher clause as WH-words.

16. The fact that both WH-Movement into a higher clause and SR are
strengthenings suggests the possibility that all raising transformations
are strengthenings.

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