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Restrictions on Clitic Sequences
and
Conditions on the Occurrence of Clitics in Romance

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Abstract[1]

This paper compares how object clitics combine and which clitics are chosen under restricted circumstances in six Romance languages. I will show that clitic sequences form a morphological unit with a fixed order of clitics. For each case, the optimal sequence results from interacting constraints on the morphology and phonology of clitic sequences within an Optimality Theoretic account. Furthermore, certain object clitics cannot combine because of equally high ranked morphological constraints. In these cases, only one of the object clitics, respectively the direct object clitic, is chosen. This choice of clitics is at first glance contradictory to the choice of clitics under morphologically unrestricted circumstances where the indirect object clitic is strongly preferred. However, I will show that a unique account can be given for all instances of object clitics in the Romance languages. The interaction of morphological, phonological, and syntactic constraints is responsible for the different clitic choices. Finally, I will suggest a tentative ranking for these types of constraints.

1 Introduction

This paper deals with the well-known fact that in Romance languages some object clitics can combine and others not. Throughout this paper I take it for granted that the Romance languages distinguish direct and indirect objects. I will examine six Romance languages or varieties (Italian, Piattino - a dialect of Italian spoken in Piatta in Lombardy - French, Romanian, Iberian and Rio de la Plata Spanish). In these languages, the clitic sequence (CS) turns out to be a morphophonological unit. I will show that the restrictions on the combination of clitics within a CS are best formulated as morphological constraints on the CS. These constraints are similar in all examined languages: clitics that realize indirect objects as well as clitics that refer to 1st or 2nd person should take the first (or leftmost) position in a CS. It is easy to see that these requirements may conflict with each other. In such cases the clitics cannot combine and only one of the clitics is chosen.

I suppose that the requirement of clitics results from syntax. However, the relevance of the person feature and the variation in the repair options are obstacles to transformational syntactic approaches, let alone that clitics also organize into CSs. These phenomena rather call for an account in terms of Optimality Theory (OT).

Such an account is even more necessary when we come to the fact that certain expected CSs do not occur for presumably phonological reasons, but are replaced by other, hence 'opaque', combinations. Only an OT account allows the CS to be the outcome of the interaction of phonological, morphological and syntactic conditions in just one evaluation process. In such an account, the strict order of clitics as well as the prohibition of certain clitic combinations should follow from the constraint ranking.

From this observation, the question which of the clitics is chosen instead of the CS, when the clitics cannot combine, directly results (though rather neglected in the literature about clitics). The answer provided by the data is that in such a case the direct object clitic is chosen. This leads to the next question: are direct object clitics generally preferred to indirect object clitics, even when they are not particularly restricted in their combination? The puzzling answer to this question is that the opposite is true. For clitics in isolation, as well as for unrestricted CSs, one can rather generalize that the indirect object clitic is obligatory, while the direct object clitic may (or *must* under certain conditions) be omitted.

This apparent conflict of data can be resolved within one unique OT account. By examining the conditions of clitic doubling, I will show that indirect objects prefer to be realized by clitics due to the transition to a system with clitics as agreement morphemes. That direct object clitics win when the combination with an indirect object clitic is prohibited results from the lexical specification of the involved clitics. Any re-ranking for the single languages is not necessary. Moreover, all examined languages exhibit quite similar constraint rankings. Both morphological and phonological constraints dominate syntactic ones.

The paper is organized as follows: The main properties of CSs are shown in section 2, and the theoretical background is introduced in section 3. Following this the OT account of CSs is presented in section 4. The relevance of the phonological constraints by which opaque clitics become optimal is analysed in subsection 4.3, and the relevance of alignment constraints by which certain CSs are blocked is analysed in subsection 4.4. The empirical data for instances where the CS is blocked are presented in section 5. Finally, section 6 investigates the conditions of clitic doubling, thereby emphasizing the conditions under which a particular clitic is chosen when the CS is prohibited.

2 Clitic Sequences

First, I want to show that the CS must be regarded as a morphological unit. Compare the examples in (1)[2].

(1) a. *Emanuela vuole presentare lei a lui.*
E. want.3SG introduce.INF PRON.3SG.F P(DAT) PRON.3SG
'Emanuela wants to introduce her to him.'

b. *Emanuela **glie- la** vuole presentare.*
E. 3SG.IO 3SG.F.DO want.3SG introduce.INF
'Emanuela wants to introduce her to him.'

c. *Emanuela vuole presentar- **glie- la.***
E. want.3SG introduce.INF 3SG.IO 3SG.F.DO
'Emanuela wants to introduce her to him.'

d. **Emanuela **glie** vuole presentar- **la**.*

	E.		3SG.IO	want.3SG	introduce.INF	3SG.F.DO

e.   *Emanuela   **la**   *vuole*   *presentar-*   **glie**.

       E.   3SG.F.DO   want.3SG   introduce.INF   3SG.IO

f.   *Emanuela   **la**   **glie**   *vuole*   *presentare.*

       E.   3SG.F.DO   3SG.IO   want.3SG   introduce.INF

g.   *Emanuela   *vuole*   *presentare*   **la**   **glie**

       E.   want.3SG   introduce.INF   3SG.F.DO   3SG.IO

The Italian sentence in (1a) consists of a finite modal verb (*volere*) together with the infinitive of a full verb (*presentare*). Direct and indirect object are represented by full pronominal forms. The full pronouns may be replaced by clitics (*la* and *gli*). These clitics have to be positioned either in front of the finite modal verb as in (1b) or behind the infinitive as in (1c). However, the relative freedom of the order holds only as long as the clitics are adjacent, any separation of the clitics as in (1d) or (1e) makes the sentence ungrammatical. Furthermore, there is a strict order of the clitics within the CS, regardless whether the CS is proclitic or enclitic: the indirect object (iO) clitic always has to precede the direct object (dO) clitic, as shown by the ungrammaticality of (1f) and (1g). Thus, the clitics do not form a morphological unit with their host one by one (just like affixes would do) but they first form the CS, which is then joined to the host as a whole. This is strong evidence for considering the CS a morphological unit (for more evidence from diachronic as well as language acquisition data see Monachesi 1995, 1996). As a morphological unit, the CS may be subject to morphological constraints such as 'iO clitics precede dO clitics within a CS'. I will come back to a more formalised way to state these constraints in section 4.2.

The order restriction just observed is valid for all Italian object CSs, as can be seen from the possible combinations listed in (2). The left column of the table shows the dO clitics and the first line shows the iO clitics as they appear in isolation. A cell remains empty when the clitics cannot combine. Only one of the clitics is chosen instead of the CS.

(2)   Italian Object Clitic Sequences

dO \ iO		1sg	2sg	3sgm	3sgf	1pl	2pl	3pl
		mi	*ti*	*gli*	*le*	*ci*	*vi*	*gli*
1sg	*mi*							
2sg	*ti*							
3sg.m	*lo*	*me lo*	*te lo*	*glielo*		*ce lo*	*ve lo*	*glielo*
3sg.f	*la*	*me la*	*te la*	*gliela*		*ce la*	*ve la*	*gliela*
1pl	*ci*							
2pl	*vi*							
3pl.m	*li*	*me li*	*te li*	*glieli*		*ce li*	*ve li*	*glieli*
3pl.f	*le*	*me le*	*te le*	*gliele*		*ce le*	*ve le*	*gliele*

There are quite a lot of empty cells not accounted for by the restriction in grammatical relations. Besides grammatical relations, also the person features of the clitics play a role in the formation of CSs. As the table in (2) shows, no 1O or 2O[3] clitic combines with any iO clitic. Consider example (3).

(3)   a.   *Emanuela   presenta   lui   a   me.*
              E.   introduce.3SG   PRON.2SG   P   PRON.1SG
              Emanuela introduces him to me.

       b.   *Emanuela   **me**   **lo**   presenta*
              E.   1SG.O   3SG.DO   introduce.3SG

       c.   **Emanuela   **lo**   **mi**   presenta*
              E.   3SG.DO   1SG.O   introduce.3SG

Here, the full pronouns from (3a) are replaced by clitics in (3b), so that the 1O clitic precedes the 3dO clitic. The reverse order is impossible as can be seen in (3c). So far this conforms with the observation above about the order of objects within the CS. (The same holds for 2O clitics combined with 3dO clitics.) However, combinations of 1O or 2O clitics with 3iO clitics, on the contrary, are not allowed as can be seen in (4).

(4)   a.   *Emanuela   presenta   me   a   lui.*
              E.   introduce.3SG   PRON.1SG   P   PRON.3SG
              Emanuela introduces me to him.

       b.   **Emanuela   **glie**   **mi**   presenta*
              E.   3SG.IO   1SG.O   introduce. 3SG

       c.   **Emanuela   **me**   **gli**   presenta*

E.   1SG.O   3SG.IO   introduce.3SG

There is no way to replace the full pronouns in (4a) by a CS.

Furthermore, any combination of 1O and 2O clitics in the same CS is prohibited. As we can see in examples (5) and (6), the combination of these clitics is always ungrammatical. A 1O clitic can neither as an indirect object combine with a 2O clitic as a direct object as in (5) nor with the opposite relation as in (6).

(5)   a.   *Emanuela   presenta   me   a   te.*
           E.   introduce.3SG   PRON.1SG   P   PRON.2SG
           Emanuela introduces me to you.

      b.   *Emanuela   **me**   **ti**   presenta.*
           E.   1SG.O   2SG.O   introduce.3SG

      c.   *Emanuela   **te**   **mi**   presenta.*
           E.   2SG.O   1SG.O   introduce.3SG

(6)   a.   *Emanuela   presenta   te   a   me.*
           E.   introduce.3SG   PRON.2SG   P   PRON.1SG
           'Emanuela introduces you to me.'

      b.   *Emanuela   **me**   **ti**   presenta.*
           E.   1SG.O   2SG.O   introduce.3SG

      c.   *Emanuela   **te**   **mi**   presenta.*
           E.   2SG.O   1SG.O   introduce.3SG

To sum up the Italian data, we have seen that (i) iO clitics have to precede dO clitics, and that (ii) 1O and 2O clitics have to precede 3O clitics. All combinations of 1O and 2O clitics are disallowed, and the same is true for all combinations of 1O or 2O clitics with 3iO clitics. The last two restrictions are reflected in the table in (2) by empty cells. It should be kept in mind that these cells do not remain empty, but that only one of the clitics is chosen. I will come back to the choice of clitics in prohibited combinations in section 5.

Other Romance languages show similar restrictions. The examined CSs in both varieties of Spanish[4] and in Piattino show the order of iO preceding dO clitics, and of 1O or 2O clitics preceding 3O. 1O and 2O do not combine in these languages. However, one also finds exceptions from the clitic order restrictions, particularly in French and in Romanian[5], as shown in (7). ('x > y' symbolizes 'x precedes y', and 'x → y' symbolizes 'x is replaced by y'.)

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[4] See Parodi (1998) for a detailed description.
[5] Romanian CSs are elaborately described by Popescu (1997).

(7) Deviations from order and combinatory restrictions

    a.   French: 3dO > 3iO

        *lui   le   →   le   lui
        SG.IO   SG.DO   SG.DO   SG.IO

    b.   Romanian: 1iO >2sg.dO

        mi-te   *mi-va
        1SG.IO-2SG.DO   1SG.IO-2PL.O

    c.   Romanian: 3iO > 2sg.dO

        *te-i   →   i-te
        2SG.DO-3SG.IO   3SG.IO-2SG.DO

In French, iO clitics generally precede dO clitics, but if two 3O clitics are involved, the order is reversed (see (7a)). In Romanian, the 2sg.dO clitic can be realized in the second position of a CS, so -te can combine with 1iO and 3iO clitics (see (7b,c)). Unlike in French, the order of dO and iO clitics remains unchanged in Romanian.

Another often observed property of CSs is the occurrence of so-called 'opaque' clitics (see Bonet, 1995; Grimshaw, 1997b). Opaque clitics mean that the phonological form of a clitic in combination differs from its form in isolation. In the table in (2) we have already seen some of these opaque clitics in Italian. Firstly, a purely phonological deviation can be found in all the Italian CSs from table (2). Instead of ending in /i/ as isolated iO clitics do (compare the first line of the table), iO clitics end in /e/ as they occur in CSs. Additionally, we find suppletion in some of the Italian CSs. In isolation, the Italian feminine iO clitic is always *le*; but in a CS, the masculine (or, as we will see later, the unmarked) clitic *gli* appears instead (see table (2) and example (8a)). Although the Italian examples just mentioned are not treated as opaque clitics in the literature, they have to be regarded as oblique for at least two reasons. This will become clear by comparison of the examples in (8) and (9).

(8) Opaque clitics in Italian

    a. *le-lo*   →   *glie-lo*
       3SG.F. IO-3SG.M.DO   3SG.M.IO-3SG.M.DO

    b. *si-si*   →   *ci-si*
       IMPS-RFL   1PL/LOC-RFL

(9) Opaque clitics in Spanish

    a. *le-lo*   →   *se-lo*
       3SG.IO-3SG.M.DO   RFL-3SG.M.DO

    b. *se-se*   →   *se*
       IMPS-RFL   IMPS/RFL

First, the morphological context for the *le lo* →*glielo* substitution is the same as for the well-known opaque clitics in other languages. For example, we find suppletion in Spanish when two 3O clitics are expected (see

Bonet 1995; Grimshaw 1997b). Here, always the reflexive clitic appears instead of a 3iO clitic, as shown in (9a). Second, the phonological contexts are similar, too. Note that the phonological form of the predicted but ungrammatical CS is identical in Spanish and Italian. It is the phonological constraints on CSs that require opaque clitics, as I will show in section 4.3. In addition, in Spanish as well as in Italian, the CS is somewhat opaque when two occurrences of the reflexive clitic are expected, namely as an impersonal subject marker on the one hand, and as a reflexive marker on the other. Either suppletion by a less specific clitic takes place, which is the case in Italian (see (8b)), or omission of one of the reflexives, which is the case in Spanish (see (9b)).

Table (10) sums up the data discussed so far.

(10)   Restrictions on CSs in 6 Romance languages

	order	combination	'opaque' clitics and other deviations
Piattino	iO > dO 1/2 > 3	*1/2 1/2	
Italian	iO > dO 1/2 > 3	*1/2 1/2	*3f.iO 3dO $\rightarrow$ 3iO 3dO *si_{imp} $si_{\text{rfl}} \rightarrow ci\ si$
Iberian Spanish	iO > dO 1/2 > 3	*1/2 1/2	*3iO 3dO $\rightarrow$ 3rfl 3dO *se_{imp} $se_{\text{rfl}} \rightarrow se$
Rio de la Plata Spanish	iO > dO 1/2 > 3	*1/2 1/2	*3iO 3dO $\rightarrow$ 3rfl 3dO *se_{imp} $se_{\text{rfl}} \rightarrow se$
French	iO > dO 1/2 > 3	*1/2 1/2	3dO > 3iO
Romanian	iO > dO 1/2 > 3	*1/2pl 1/2pl	1sg.iO > 2sg.dO 3iO > 2sg.dO

This data, though long known, has not been properly analyzed yet. The position of the clitics within the CS poses a severe problem for purely syntactic approaches. The different orderings of iO and dO clitics with respect to the host depending on its finiteness cannot be treated by any transformational means[6], neither can it be derived diachronically[7]. Therefore, most analyses either confine themselves to the placement of only one clitic with respect to the host (see for example Kayne 1991, 1994), or they adopt Perlmutter's (1970) description of CSs in terms of templates (see, for example, Uriagereka 1995; Monachesi 1995; Sportiche 1996). In this tradition, opaque clitics are described in terms of context dependent spell-out rules. This kind of

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[6] To my knowledge, only Warburton (1977) tries to do so. Manzini (1998) hints at an analysis with the syntactic means provided by Sportiche (1996). However, there are severe contradictions to this approach (see also section 4.3, and especially footnote 14).
[7] See also Jeffers & Zwicky (1986) for more comments on this.

analysis is advanced by Bonet (1995) and Harris (1995), among others, who describe opaque clitics in the framework of Distributed Morphology (Halle & Marantz 1993).

A method entirely different from these is Optimality Theory ('OT', see McCarthy & Prince, 1993; Prince & Smolensky, 1993) and its developed version Correspondence Theory (McCarthy & Prince, 1995). In this model, grammar consists of a set of violable ranked constraints; the constraint ranking is language specific. To every given input, an infinite set of output candidates exists, which is evaluated by the constraint ranking. The best (or 'optimal') output candidate is the one with the fewest violations of high ranked constraints. Though first developed for phonological and morphophonological concerns, Optimality Theory is not restricted to these components of grammar; neither are the constraints preconditioned (except for the faithfulness constraints, to which I will come back later), but can be formulated rather freely. In my opinion, this framework is most promising concerning CSs, since syntactic, morphological and phonological requirements are conflicting in CSs, and in some cases satisfying one of them leads to neglecting another one. Hence, violability of constraints must be part of the analysis as well as some kind of ranking. For opaque clitics, Grimshaw's (1997b) analysis already shows how conflicts of syntactic and phonological constraints may be solved in this framework. Legendre's (1996) analysis focuses on positioning Bulgarian clitics with respect to their host. Neither of them handles the positioning of clitics within the CS.

Before I enter my analysis of CSs, I would like to give some background information about the morphological and syntactic assumptions on which the analysis is based, and on which the constraints I will formulate partly rely.

3 The Background

I assume that all morphosyntactic and phonological features of clitics, including case and agreement features, are represented in their lexical entries. First, I will briefly explain the case features taken from Lexical Decomposition Grammar (= 'LDG'; for more details see Wunderlich 1997, Joppen & Wunderlich 1995). Then I will settle the lexical entries for clitics as far as they are relevant for the following analysis.

3.1 Case Features for Clitics

Object clitics are assumed to bear the same relational features as are suggested for structural cases in LDG. These features are given in (11).

(11)   +(-)hr: there is a (no) higher role
        +(-)lr: there is a (no) lower role

These features are part of the LDG linking mechanism, which is sketched in (12).

(12)   a.   *give*   SF: CAUSE(x,BECOME(POSS(y,z)))(s)

AS:　　●z　●y　●x　●s

b. features of the AS positions of canonical verbs

i. intransitive　　　　　ii. transitive　　　　　iii. ditransitive

●x　V(x)　　　　　　●y　　●x　V(x,z)　　　　●z　　　●y　　　●x　V(x,y,z)
-hr　　　　　　　　+hr　-hr　　　　　　+hr　+hr　-hr
-lr　　　　　　　　-lr　+lr　　　　　　-lr　+lr　+lr

c. case features

DAT: [+hr,+lr]　　ACC: [+hr]　　NOM: [　]

d. linking for canonical (nominative-accusative) verbs

i. ●x　V(x)　　　ii. ●y　　●x　V(x,z)　　　iii.　●z　　●y　　●x　V(x,y,z)
-hr　　　　　　+hr　-hr　　　　　　　+hr　+hr　-hr
-lr　　　　　　-lr　+lr　　　　　　　-lr　+lr　+lr
❋　　　　　　❋　❋　　　　　　　❋　❋　❋
NOM　　　　ACC　NOM　　　　　ACC　DAT　NOM

In LDG, the ranking of the argument variables in the Semantic Form (SF, see (12a)) determines the argument structure of the verb (AS). Each position in the AS is characterized by features depending on whether there exists a lower or higher position. The argument positions of canonical verbs acquire the features in (12b). The only argument of an intransitive verb is assigned with the features [-hr, -lr], since there is neither a higher nor a lower role. The direct object of a transitive verb is assigned with [-lr] since there is no lower role, and [+hr] because of the subject being a higher role. The subject is assigned with the reverse feature values. For indirect objects there is a higher role, namely the subject, hence the feature value [+hr], whilst there is a lower role as well, namely the direct object, hence the feature value [+lr]. The same features define the structural cases, with the difference that they are not fully specified; but only assigned with [+]-valued features. Dative is fully specified with [+hr,+lr], accusative only gets the feature [+hr], and nominative remains unmarked [ ] and is thus least restricted. Linking consists in the unification of features. Thus, all structural arguments and only these are associated with a structural linker (Structural Linking). In each context, the most specific compatible linker is chosen (Specificity Principle). Each linker can only be assigned once (Uniqueness Constraint). Resulting from these principles the arguments of canonical verbs are linked to the structural cases as shown in (12d).

I assume that object clitics are assigned the same features as structural cases and that these case features are part of the clitics' lexical entries.

3.1.1 Lexical Entries for Clitics

Besides their case features, clitics have agreement features and categorial features in their lexical entries. (13) shows the paradigm for the Italian object clitic inventory, together with the lexical entries resulting from the morphological analysis. The morphological framework taken as point of departure is Minimalist Morphology (=MM, Wunderlich & Fabri, 1995).

(13)   Italian object clitics

	singular		plural	
	acc	dat	acc	dat
1	*mi*		*ci*	
2	*ti*		*vi*	
3m	*lo*	*gli*	*li*	*gli*
3f	*la*	*le*	*le*	

<u>Lexical entries</u>: [+D];   agr, case/+V

mi	+1,+hr	*ci*	+1,+pl ,+hr
ti	+2,+hr	*vi*	+2,+pl,+hr
lo	+hr,-lr	*li*	+pl,+hr,-lr
la	+f,+hr,-lr	*le*	+f,+pl,+hr,-lr
gli	+hr,+lr	*gli*	+pl,+hr,+lr
le	+f,+hr,+lr		

All clitics have the categorial feature [+D], and thus may saturate the argument positions of the verb or even instantiate an agreement relation with them (see section 6 for more details on this). The output information of the lexical entries consists of the above mentioned case features and agreement information; [+1] and [+2] are the person features, [+pl] is the number feature, and [+f] the gender feature. Clitics are underspecified for agreement features insofar as only [+] values are part of the lexical entries. This can be seen, for example, in the lexical entries for 3sgO clitics, which are assigned only case features. All clitics are subcategorized for verbs. Since the phonological representation of clitics is not part of this analysis, their prosodic defectiveness, which makes them dependent on a prosodic host, is taken for granted.

MM makes extensive use of underspecification. Only those features are specified which are necessary to build up the paradigm; [+]-valued features are part of the lexical entry, while [-] values are added by default. The paradigm in (13) shows that we do not have different clitics for indirect and direct objects in 1st and 2nd person, but only in 3rd person. According to the assumptions of MM, the 3dO clitics in (13) would only get the case feature [+hr], just like 1st and 2nd person ambiguous clitics, while the [-] values have to be filled up by the paradigm structure. Note that therefore, the paradigm structure leads to principled underspecification at the lexicon-syntax interface (see Inkelas, 1994 for principled underspecification in phonology). Forms that are truly ambiguous are differently specified from those that are not because of the paradigm structure. The 1O and 2O clitics are of the former kind. These clitics have to be able to fit in direct and in indirect object positions, and remain therefore underspecified for the feature [lr], getting only the feature [+hr]. 3rd person clitics, in contrast, do not show this kind of syncretism. Here, we have always different clitics for direct and for indirect objects. For these clitics, I suggest that assigning the feature [-lr] takes place at the same time as the paradigm is built. The feature [-lr] is then marked by paradigmatic contrast.[8] 3dO clitics differ from ambiguous 1O or 2O clitics insofar as the feature [-lr] is already part of their morphological representation before linking takes place. This notion of principled underspecification accounts for the strikingly different behavior of both sorts of clitics,

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[8] In my opinion, only case features but not agreement features are subject to paradigm governed principled underspecification.

as will become evident below in section 6.2. Note that the clitic paradigms of all examined languages show a similar behavior with respect to case syncretism in 1st and 2nd person, on the one hand, and case distinction in the 3rd person, on the other.[9]

In addition to the object clitics, Italian has a locative, a partitive and a reflexive clitic, which are listed in (14).

(14)   *ci*   +loc
          ne   +hr, +part
          si   +rfl

Since these clitics may play some role in the morphophonological evaluation of the CSs, they need some shorthand lexical representation. The entries given in (14) are sufficient for the following analysis.

4 An Optimality Theoretic Approach to Clitic Sequences

In OT, grammar consists of a set of violable ranked constraints. The constraint ranking is language specific (notationally, 'x >> y' means that 'x is ranked higher than y'). The (infinite) set of output candidates to a given input is evaluated by the constraint ranking. This evaluation is illustrated by so-called tableaus (see, for example, the tableau (21) below), in which the lines represent the output candidates and the columns the constraints. In these tableaus, the ranking of the constraints is mirrored by their position: constraints on the left are higher ranked than constraints on the right. Equally highly ranked constraints are divided by a dotted line instead of a continuant line. Constraint violations are marked by '*' in the respective cell, fatal constraint violations with '*!'. A fatal constraint violation causes the respective output candidate to be dismissed. The best (hence optimal) output candidate (that is the one with the fewest violations of high ranked constraints) is marked with '☞'. The correspondence relation of input and output candidates is checked by faithfulness constraints, in (15) quoted from McCarthy & Prince (1995).

(15)   Relation of S_1 (input) and S_2 (output) (Faithfulness):

   The M_{AX} Constraint Familiy
      Every segment of S_1 has a correspondent in S_2.

   The D_{EP} Constraint Familiy
      Every segment of S_2 has a correspondent in S_1.

   The I_{DENT}(F) Constraint Family
      Let α be a segment in S_1, and β be any correspondent of α in S_2.

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[9] Only Romanian partly differs from this generalization. In this language, the 1st and 2nd person singular clitics show a case distinction as well. See Popescu (1997) on the Romanian clitic inventory, and Gerlach (1998) for an MM analysis of the clitic paradigms in the Romance languages.

If α is [γF], then β is [γF].

M_{AX} constraints restrict deletion, while D_{EP} constraints restrict epenthesis. Both constraint families together simply state that there is a one-to-one correspondence of segments without regarding which elements are corresponding. Only I_{DENT} makes sure that corresponding elements are identical with respect to their features. For CSs a more elaborated formulation of the constraints is needed and, in addition, some morphological and phonological constraints. Before these constraints are presented in section 4.2. some clarification is needed with respect to the input and the output candidates of CSs.

4.1 Preliminary Remarks on Inputs and Output Candidates

For the evaluation of CSs, we need as input the schematic lexical entry for a verb, together with the intended information for its arguments, given by a choice of suitable clitics (as represented by their lexical entries). This is shown in (16a). Note that the subject agreement information is assumed to be already added lexically by the subject agreement affix. The relevant set of output candidates, i.e., the set of possible clitic sequences formed from elements of the input, is given in (16b).

(16) a. Input for the syntactic evaluation:

$C_a{}^1\ C_b{}^2\ V^3$

with $C_a, C_b \in C(O) = \{/\phi/;\ [+hr, (\alpha lr)], ([+1]), ([+2]), ([+pl])\}$,

and $\bullet z$ $\bullet y$ $\exists x$ $[[V](-agrS)] (x,y,z)$,

b. Output for the syntactic evaluation

set of output candidates =

$CS = \{[C_a{}^1 - C_b{}^2] - V^3;\ [C_a{}^1 - \varnothing_b{}^3\ ] - V^3;\ [\varnothing_a{}^1 - C_b{}^2\ ] - V^3;\ [\varnothing_a{}^1 - \varnothing_b{}^2] - V^3;...\}$

with $C_a, C_b \in C = \{/\phi/;\ [\alpha hr, (\beta lr)]\ v\ [+rfl]\ v\ [+loc], ([+1]), ([+2]), ([+pl])\}$

and $\bullet z$ $\bullet y$ $\exists x$ $[[V](-agrS)] (x,y,z)$,

In (16a), C(O) is the set of object clitics in the respective language. Every object clitic has a phonological representation $/\phi/$, which encodes its phonological form, including a marker indicating why it is prosodically defective. All input clitics share the feature [+hr] because all of them have to relate to objects. Furthermore, the feature [lr] may be specified as [+] or [-], or it may not be specified at all; in the latter case the clitic remains underspecified, as already mentioned in section 3.1.1. Agreement features such as [+1], [+2] and [+pl] may also be part of the lexical entry of the object clitics in the input.

The possible output candidates are shown in (16b). The output consists of all possible combinations of the input elements, but also includes every other combination of the respective verb with (other) clitics or CSs. Therefore, C is considered to be the whole clitic inventory of the respective language. In Correspondence Theory, the function GEN delivers the set of output candidates. Moreover GEN maintains the correspondence relation of input and output elements by coindexing the corresponding elements. In (16), the correspondence relation is marked by super-indices. Note that, in the spirit of OT, every other string of phonemes one can

think of is an element of the set of output candidates, as, for example, *bird cage* or *wrgkrsf*. These candidates are outranked because of the faithfulness violations they bring with them. The tableaus below display only relatively good candidates, already evaluated by highly ranked constraints. The underlying phonological form of these candidates (that is, their phonological form in isolation) is in turn the input for the phonological evaluation of the sequence. How the phonological evaluation takes place within a CS, and how the interaction of phonological and syntactic constraints affects the combination of clitics, is discussed in section 4.3.

4.2   Constraints on Clitic Sequences

The syntactic constraints in (17) induce the appearance of clitics.

(17)   Syntactic constraints: clitic linking is preferred

$\text{M}_{\text{AX}}(\text{C}_{\text{iO}})$	Indirect object positions (+hr,+lr) correspond with clitics.
$\text{M}_{\text{AX}}(\text{C}_{\text{dO}})$	Direct object positions (+hr,-lr) correspond with clitics.
$\text{D}_{\text{EP}}(\text{O}_{\text{C}})$	Object clitics (+hr) correspond with object positions.
$\text{I}_{\text{DENT}}(\text{case})$	Case features of corresponding elements are identical.
$\text{I}_{\text{DENT}}(\text{agr})$	Agreement features of corresponding elements are identical.

Here, $\text{M}_{\text{AX}}(\text{C}_{\text{iO}})$ and $\text{M}_{\text{AX}}(\text{C}_{\text{dO}})$ state that indirect and direct object positions should correspond with clitics. These constraints do not make any statement about the semantic and syntactic conditions on the occurrence of clitics. A detailed examination of these conditions and their interaction with both M_{AX} constraints will be the topic of section 6. For the morphological and phonological evaluation of CSs, which will be the subject of that section, I assume that both clitics have to be there. As long as there is no need to rank the two M_{AX} constraints differently, I will join them into $\text{M}_{\text{AX}}(\text{C}_{\text{O}})$. The $\text{D}_{\text{EP}}(\text{C}_{\text{O}})$ constraint states that clitics only appear if adequate object positions are available. None of the tableaus below show output candidates which violate the $\text{D}_{\text{EP}}(\text{C}_{\text{O}})$ constraint, because this is a higher ranked constraint. Consequently, output candidates violating $\text{D}_{\text{EP}}(\text{C}_{\text{O}})$ are sorted out. Finally, $\text{I}_{\text{DENT}}(\text{case})$ and $\text{I}_{\text{DENT}}(\text{agr})$ require that corresponding elements should bear the same case and agreement features respectively.

At first glance, the philosophy of I_{DENT} constraints seems to conflict with approaches based on underspecification, and - because of the violability of constraints - with approaches based on unification.[10] LDG as well as MM make extensive use of both mechanisms. However, as already mentioned above, I skip radical underspecification in favor of principled underspecification, at least for case features. Even then,

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[10] Note that the requirement of identity of features is violated, when underspecified elements correspond with fully specified elements. Furthermore, violability of $\text{I}_{\text{DENT}}(\text{F})$ means that opposite feature values in corresponding elements are not in general prohibited, which is contradictory to a unification based approach.

underspecified elements remain which obtain a violation either of I_{DENT}(+lr) or of I_{DENT}(-lr). So, more economy in the lexical entry correlates with less economy in the evaluation process. That this price is worth paying will be shown below. Feature clashes, which would be contradictory to a unification based approach, never occur in optimal candidates. Considering that feature clashes would cause two I_{DENT}(F) violations this seems reasonable, too. However, the I_{DENT} constraints will become much clearer below.

The order of clitics within a CS is entirely evaluated by the morphological $A_{LIGNMENT}$ constraints in (18).

(18)   Morphological constraints reflect markedness

A_{LIGN}-L(+1,$_{CS}$)   1st person clitics are leftmost in the CS.

A_{LIGN}-L(+2,$_{CS}$)   2nd person clitics are leftmost in the CS.

A_{LIGN}-L(+lr,$_{CS}$)   Indirect object clitics are leftmost in the CS.

These constraints refer to the CS as a morphological unit and require that elements more marked are positioned left in the CS. Markedness of clitics should be understood in terms of feature specifications in the lexical entries of clitics. Thus, iO clitics and dO clitics are more marked than underspecified object clitics; iO clitics are more marked than dO clitics because of the [+] value for [lr]; moreover, 1st and 2nd person clitics are more marked than 3rd person clitics because of person specification. The $A_{LIGNMENT}$ constraints in (18) only refer to the marked values [+lr], [+1] and [+2], they do not rely on any relation between more and less marked values.

Finally, there are phonological constraints which all originate in an OCP-like requirement of distinct elements within CSs.[11] These constraints are the source of opaque clitics.

(19)   Phonological constraints: the elements of a CS are dissimilar

$*S_{ONORITY}$ $A_{DJACENCY}$ The sonority levels of adjacent elements in a CS are not adjacent on the sonority hierarchy.

$*A_{LLITERATION}$ $*[[X_1...]_{c1} [X_1...]_{c2}]_{CS}$
Clitics in a CS do not have identical onsets.

$A_{NTIHOMOPHONY}$ $*[... \chi \quad \chi ...]_{\omega}$ χ: some stretch of sound,
(Golston,1995) $\quad \downarrow \quad \downarrow$ A,B: some stretch of meaning,
                          A B ω: phonological word
(that is 'homophonous clitics are avoided'.)

The order of the clitics in the CS, the restrictions on the combination of two object clitics, and the occurrence of opaque clitics, depend on the constraint rankings. In the following, I will discuss how different rankings for different languages are able to explain the data summed up in table (10).

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[11] Grimshaw (1997b) expresses the prohibition of identical elements as *XX.

4.3 Interaction of Phonology and Syntax: Opaque Clitics

First, I will demonstrate where the opaque clitics originate from. Let us start with purely phonological changes which usually are not referred to as opaque. From the Italian paradigms above (see (2) and (13)) it is obvious that all iO clitics (*mi, ti, ci, vi, gli*), except for the feminine singular iO clitic *le*, end in a high fronted vowel whenever they occur in isolation. In combinations with dO clitics, however, the [i] is lowered to [e]. I assume that this results from *SONORITY ADJACENCY. Since the sonority level of [i] is the lowest for vowels and the sonority level for [l] is one of the highest for consonants on the sonority hierarchy, [i] and [l] should not be adjacent within the CS. That [i]-lowering within CSs is caused by *SONORITY ADJACENCY is further supported by combinations with other clitics. In (20), the 3iO clitic *gli* is combined with the 3dO clitic *lo* and the partitive clitic *ne*, on the one hand, and with the reflexive clitic *si* and the local clitic *ci*, on the other. Here, the CSs containing *lo* or *ne* with sonorants as onsets show vowel lowering, while the CSs containing *si* or *ci* with obstruents as onsets do not.

(20) *gli lo   →   glielo   vs.   gli si (*glie si)
     *gli ne   →   gliene   gli ci (*glie ci)

The tableau in (21) shows how the evaluation of these CSs takes place. The phonological form of the clitics is given in brackets.

(21) input: $\lambda z\ \lambda y\ \lambda x\ V(x,y,z)$
     clitics: *gli* [ʌi]: +hr,+lr / *lo* [lo]: +hr, -lr

		*Sᴏɴ-Aᴅᴊ	Mᴀx(V)	Mᴀx(ons)	Dᴇᴘ(V)	Iᴅᴇɴᴛ(high)
a.	*gli lo* [ʌilo]	*!				
b.	*gli-e-lo* [ʌielo]				*!	
c. ☞	*glielo* [ʌelo]					*
d.	*gl lo* [ʌ:o]	*!	*			
e.	*gli-o* [ʌio]			*!		

Additionally to *SONORITY ADJACENCY, we need Mᴀx(V)[12], Max(ᴏɴs), Dᴇᴘ(V), and Iᴅᴇɴᴛ(high), constraints that are relevant for phonology in general and not restricted to CSs. The optimal output candidate *glielo* results from the high ranking of *SONORITY ADJACENCY, Mᴀx(V), Mᴀx(ons) and Dᴇᴘ(V) in relation to Iᴅᴇɴᴛ(high). Optimal input-output correspondence as in [ʌilo] (candidate (21a)) violates *SONORITY ADJACENCY and is therefore ruled out. Inserting a vowel as in [ʌielo] (candidate (21b)) violates Dᴇᴘ(V), and deleting either the vowel as in [ʌ:o] (candidate (21d)) or the consonant as in [ʌio] (candidate (21e)) violates

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[12] Max(V) is only relevant for CSs with the clitics *ti*, *ci*, *vi* as indirect object, since leaving out the vowel in *mi* or *gli* is already ruled out by fatal violation of * SONORITY ADJACENCY.

$M_{AX}(V)$ or $M_{AX}(ons)$ respectively. Since in CSs any violation of these constraints is fatal, no ranking can be derived by the competing output candidates. The optimal form [ʎelo] (candidate (21c)) violates none of the higher ranked constraints. In the optimal candidate, however, one of the vowel features of the input (that is [+high]) is not part of the corresponding element in the output, so that this candidate violates $I_{DENT}(high)$. Therefore $I_{DENT}(high)$ must be ranked below the aforementioned constraints. Syntactic constraints are not involved in the evaluation in this tableau, because *$S_{ONORITY}$ $A_{DJACENCY}$ has no effects on the choice of the clitics.

Things are different with the *$A_{LLITERATION}$ constraint. Combining the feminine 3iO clitic *le* with any 3dO clitic never results in the optimal input-output correspondent form *le-lo* nor in a purely phonological change as in the aforementioned case. Instead, the 3f.iO clitic *le* is always replaced by the 3iO clitic *gli*. The evaluation of this combination is shown in the tableau in (22).

(22)   input: λz λy λx V(x,y,z)
       clitics:*lo*: +hr,-lr   /   *le*: +f,+hr,+lr;
       additional (elements of C(O) in the output candidates):   *gli*:   +hr,+lr

			$M_{AX}(ons)$	*$A_{LLITERATION}$	$I_{DENT}(ons)$	$M_{AX}(C_O)$	$I_{DENT}(gen)$
a.		*le lo*		*!			
b.	☞	*glie lo*			*		*
c.		*e lo*	*!			*	
d.		*le o*	*!			*	
e.		*Ce lo*			*	*!	
f.		*le Co*			*	*!	

High ranking of *$A_{LLITERATION}$ causes submission of *le lo,* which is the perfect correspondent to the input. Now, the question arises why the optimal candidate does not result from a purely phonological change just as it is the case with violations of *$S_{ONORITY}$ $A_{DJACENCY}$. There are two main reasons for the morphological replacement of one of the clitics instead. First, clitics have to be identifiable as clitics. For Italian, that means that clitics must have the structure CV. Consequently, if the onset were left out, as in the output candidates (22c) and (22d), the violation of $M_{AX}(ons)$ would cause the corresponding elements to be no longer identifiable as clitics. Consequently, a $M_{AX}(C_O)$ violation emerges. Second, the morphosyntactic information of the clitics must be identifiable. Regarding the Italian clitics in (13), we can see that the onset is the distinctive morphophonological information when person/number oppositions are determined. The vowels only determine the gender/number distinction for 3O clitics; all other clitics have the same vowel features. Hence, to identify clitics as belonging to the clitic paradigm also depends on the phonological features of their onsets. Therefore, replacing one of the onsets, thus violating $I_{DENT}(ons)$ as in the output candidates (22e) and (22f), would also

cause a fatal violation of $M_{AX}(C_O)$.[13] Since the ranking of M_{AX}(ons) and I_{DENT}(ons) is as high as *$A_{LLITERATION}$, only morphosyntactic change remains for the optimal output candidate. As we can see, the 3iO clitic *gli* is the best choice for this replacement. The morphosyntactic features of *gli* differ from those of *le* only minimally, in that [+f(eminine)] is absent. Therefore, I_{DENT}(gen) must be ranked lower than *$A_{LLITERATION}$, M_{AX}(ons), and IDENT(ons).

There are several other possible clitics in Italian which could also serve as suppletion forms. First, consider the reflexive clitic *si*, which does not add any conflicting agreement feature, since it is unmarked for person, just like the object clitic to be replaced. Neither does the reflexive clitic add any conflicting case feature - rather, it is less specified than the object clitics, because it also occurs as an impersonal subject marker. Consider the tableau in (23).

(23) input: $\lambda z\,\lambda y\,\lambda x\,V(x,y,z)$

   clitics:*lo*: +hr,-lr   /   *le*: +f,+hr,+lr;   additional: *gli*:   +hr,+lr   /   *si*:   +rfl

		*$A_{LLITERATION}$	I_{DENT}(rfl)	I_{DENT}(case)	I_{DENT}(gen)
a.	*le lo*	*!			
b. ☞	*glie lo*				*
c.	*se lo*		*!	**	*
d.	*le si*		*!	*	*

Replacement of one of the clitics by *si* would cause the case features [+hr] (if *si* replaces the 3dO clitic as in candidate (23d)) and [+hr,+lr] (if *si* replaces the 3f.iO clitic as in candidate (23c)) not to be identical in the corresponding elements. Furthermore, *si* bears at least the feature [+rfl]. This feature is not part of the input representation. The replacement of an object clitic by *si* therefore causes a violation of I_{DENT}(rfl). So replacement of *le* by *gli* leads to the optimal candidate, as can be seen in the tableau (23).

Things are similar with the locative clitic *ci*, which is distinct from the 1pl.O clitic. The locative clitic may also function as an expletive subject, as shown in (24).

(24) a. locative *ci*   b. expletive *ci*

ci	*vado*	i) *ci*	*sono*	ii) *c'*	*é*	iii) *ce*	*l'*	*ha*

LOC	go.1SG	LOC	be.3pl	LOC	be.3SG	LOC	3DO	have.3SG
'I go there'		'there are'		'there is'		'one has it'		

It is reasonable to assume that the locative clitic is unspecified for case features. If it replaces one of the object clitics, an I_{DENT}(case) violation would always arise, and, in addition, an I_{DENT}(loc) violation. So in this case, too, *glielo* remains the optimal output candidate, according to the tableau in (25).

(25) input: $\lambda z\,\lambda y\,\lambda x\,V(x,y,z)$

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[13] To capture this morphological motivation, one might argue for a constraint which requires morphological identifiability instead of using the more general phonological constraints M_{AX}(ons) and I_{DENT}(ons).

clitics: lo: +hr,-lr / le: +f,+hr,+lr; additional: gli: +hr,+lr / ci: +loc

			*ALLITERATION	IDENT(loc)	IDENT(case)	IDENT(gen)
a.		*le lo*	*!			
b.	☞	*glie lo*				*
c.		*ce lo*		*!	**	*
d.		*le ci*		*!	*	*

In Spanish, *ALLITERATION affects the combination of clitics in nearly the same context. However, instead of a less specific 3rd person clitic the reflexive clitic is chosen as a suppletion form, as shown in (26).

(26)   Spanish: *le lo* →   *se lo*

The different solution to the violation of *ALLITERATION result from different sets of clitics in the Spanish respective Italian paradigm. In Spanish, all 3O clitics identically have the onset [l]. Thus, every replacement of one of the clitics within the object clitic paradigm would result in an *ALLITERATION violation.[14] Furthermore, there is no other underspecified clitic in the Spanish clitic paradigm which could serve to replace one of the object clitics. In Spanish, we can therefore derive a constraint ranking for *ALLITERATION and IDENT(rfl), namely *ALLITERATION >> IDENT(rfl), which gives us *se lo* as the optimal output candidate.[15]

As we have seen, phonological constraints may cause deviations from the otherwise syntactically optimal output candidate. Two kinds of violations have been identified: (i) purely phonological changes in which phonological features are omitted, thereby violating IDENT(phonF); (ii) replacements by other clitics in which morphosyntactic features are omitted (or inserted), thereby violating IDENT(morphF). The latter takes place when purely phonological change is prohibited. So far, omission of one of the clitics, thereby violating $MAX(C_O)$, has not been found among the optimal output candidates. In Spanish, however, the ANTIHOMOPHONY violation that results from the combination of impersonal and reflexive *se* is avoided by just this kind of strategy. Only one of the two reflexives is realized in the optimal output candidate. This results from ranking ANTIHOMOPHONY higher than $Max(C_{iS})$[16] or $MAX(C_O)$. Note that in this case it is not possible to decide which of the two clitics is left out.

(27)   input: $\lambda y\, \lambda x\, V(x,y)$
          clitics: *se*: +rfl

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[14] The observation that Italian and Spanish have similar phonologically conditioned suppletion, but only differ in the choice of suppletive forms, strongly contradicts the approaches for the Spanish data suggested by Harris (1995) and Manzini (1998). Both assume that there is only one slot (or functional projection) for 3rd person, therefore two 3rd person clitics may not combine, and the reflexive clitic, which origins from another slot, is chosen instead.

[15] The fact that the iO clitic is replaced, and not the dO clitic, cannot be based on properties of the phonology-syntax interface, neither on those of the morphology-syntax interface, it rather results from morphological ordering constraints (see section 4.4 for a detailed examination of these kinds of constraints).

		ANTIHOMOPHONY	$\text{MAX}(C_{IS})/(C_O)$
a.	*se se*	*!	
b. ☞	*se*		*

In Italian, the combination of identical clitics is prohibited due to ANTIHOMOPHONY, too.[17] But even in this case, the Italian clitics inventory provides a less specified suppletion form, namely the locative ci.[18] From this data, no ranking of ANTIHOMOPHONY and $\text{MAX}(C_O)/\text{MAX}(C_{iS})$ may be derived, as is shown in the tableau (28).

(28)   input: $\lambda y\,\lambda x\, V(x,y)$
             clitics:*si* : +rfl   *ci*: +loc

		ANTIHOMOPHONY	$\text{MAX}(C_O)/\text{MAX}(C_{iS})$	DEP(loc)
a.	*si si*	*!		
b.	*si*		*!	
c. ☞	*ci si*			*

To conclude, we can say that in the evaluation of CSs syntactic and phonological constraints strongly interact. We have seen that highly ranked OCP-like phonological constraints on CSs may cause deviations from the optimal input-output correspondence. These deviations are purely phonological only in cases where phonological change does not affect morphosyntactic information. Otherwise a morphosyntactic change takes place. It then depends on the lexical inventory of the language whether one of the respective clitics is omitted, or replaced by another clitic that does not violate the highly ranked phonological constraints. Presumably, replacement is preferred to omission. However, replacement is only possible with elements which belong to the clitic paradigm of the language, and which are less specific than the clitic to be replaced. So, we can derive that the phonological constraints are higher ranked than the constraints that demand morpho-syntactic identity of (gender and case) features. Even in this case, of course, the constraints demanding phonological identity are violated, because the corresponding elements are entirely distinct. If replacement is impossible, the phonology-syntax conflict is resolved by omission of one of the clitics. That means that not only deviations from the morphosyntactic identity of corresponding elements are caused by phonological constraint, but even the correspondence relation itself. We have to conclude that phonological constraints are ranked higher than

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[16] $\text{MAX}(C_{iS})$ states that impersonal subjects should correspond to clitics. Since this paper focuses on object clitics, I will not go any further into the details of subject clitics.

[17] Though phonological identical elements may be adjacent in Italian, as for example *se* (conditional) and *se* (clitic), they presumably do not belong to the same phonological word.

[18] It is often assumed that the 1pl clitic *ci*, rather than the locative *ci*, replaces one of the reflexives (see Grimshaw 1997b). This assumption is supported by dialectal data from Florence, where the 1pl pronoun *noi* additionally to *ci* is still used in this context (Paola Monachesi, pers. comm.) - this shows that the impersonal subject *si* rather than the reflexive *si* is replaced. However, in Standard Italian, though 1pl *ci* may be the historical source, nowadays the locative *ci* has to be analyzed as the replacing clitic because of the wide range of its use (see the examples in (24) with expletive *ci*).

syntactic constraints. However, these cases are only observed in Spanish. The other Romance languages examined solve conflicts of phonology and syntax similar to the phonological or morphosyntactic replacement cases mentioned above (see Gerlach 1998 for a detailed examination of phonological constraints on CSs).

4.4 Morphology Outranks Syntax

In this section I will illustrate how the morphological alignment constraints affect the order of clitics within a CS. Replacement of clitics does not play a role with conflicts of morphology and syntax. Here, omission of one of the clitics is preferred.

First, A_{LIGN}-L(+lr,CS) requires that an iO clitic is leftmost in the CS, so it has to precede a dO clitic. In the tableau in (29), A_{LIGN}-L(+lr,CS) and $M_{AX}(C_O)$ are ranked equally high. Therefore, leaving out one of the clitics, as in (29c) and (29d), causes a fatal violation of $Max(C_O)$. If the dO clitic precedes the iO clitic, as in (29b), a fatal violation of A_{LIGN}-l(+lr,CS) is caused. Candidate (29a) violates none of the highly ranked constraints, and is thus optimal.

(29)   input: $\lambda z\,\lambda y\,\lambda x\,V(x,y,z)$
        clitics:*gli*:   +hr,+lr   /   *lo*: +hr, -lr

			A_{LIGN}-L(+lr,CS)	$M_{AX}(C_O)$
a.	☞	*glie lo*		
b.		*lo gli*	*!	
c.		*gli*		*!
d.		*lo*		*!

Similarly, A_{LIGN}-L(+1,CS) and A_{LIGN}-L(+2,CS) require that both a 1O clitic and a 2O clitic are leftmost in the CS, so they both have to precede a 3O clitic. This is illustrated in the tableau (30) for a 1O clitic. Since A_{LIGN}-L(+1,CS) is highly ranked, every other order than *ce lo* would cause a fatal violation, and is thus suboptimal.

(30)   input: $\lambda z\,\lambda y\,\lambda x\,V(x,y,z)$
        clitics: *ci*:   +1,+pl,+hr   /   *lo*: +hr, -lr

			A_{LIGN}-L(+1,CS)	$M_{AX}(C_O)$
a.	☞	*ce lo*		
b.		*lo ci*	*!	
c.		*ci*		*!
d.		*lo*		*!

So far, no ranking of the morphological alignment constraints and the syntactic $M_{AX}(C_O)$ constraint is derivable. However, such a ranking is necessary regarding the prohibited combinations mentioned in section 2. Recall that neither a 1O clitic nor a 2O clitic can combine with a 3iO clitic. If such a combination is intended,

the optimal candidate is never a CS, but rather one single clitic. The same holds for combinations of 1O and 2O clitics, regardless which one relates to direct and which one to indirect object. Consider the tableaus (31) and (32).

(31)　　input:　　$\lambda z\,\lambda y\,\lambda x\,V(x,y,z)$
　　　　　clitics:*ci*:　　+1,+pl,+hr　/　glie:　+hr, +lr

			ALIGN-L(+1,CS)	ALIGN-L(+lr,CS)	MAX(C$_O$)
a.		*ci gli*		*!	
b.		*gli ci*	*!		
c.	?☞	*lo*			*
d.	?☞	*ci*			*

(32)　　input:　　$\lambda z\,\lambda y\,\lambda x\,V(x,y,z)$
　　　　　clitics:　*ci*:　　+1,+pl,+hr　/　ti: +2, +hr

			ALIGN-L(+1,CS)	ALIGN-L(+2,CS)	MAX(C$_O$)
a.		*ci ti*		*!	
b.		*ti ci*	*!		
c.	?☞	*ci*			*
d.	?☞	*ti*			*

The tableau in (31) evaluates the combination of the 1pl.O clitic *ci* with the 3iO clitic *gli*, and the tableau in (32) evaluates the combination of the 1pl.O clitic *ci* with the 2O clitic *ti*. In both tableaus the morphological alignment constraints are equally ranked, each of the clitics should appear on the left edge of the CS. This is impossible and the combination fails, provided that there is no higher-ranked constraint that would force it. Instead of the CS only one of the clitics appears. In the tableaus in (31) and (32) it is supposed that any one of them may appear, because no ranking of Max(C$_{iO}$) and Max(C$_{dO}$) has been assumed yet. However, it is not the case that the choice of the clitic is optional, as predicted by the tableaus in (31) and (32). I will come back to this issue in the next section.

We can conclude that not only phonological constraints may cause a violation of syntactic constraints, but also morphological constraints. With morphologial constraints, the violation of syntactic constraints is even stronger, because the optimal output candidate not only deviates from morphosyntactical features of the input, but may also completely leave out some input elements. The constraint ranking summarized in (33) explains both the order of clitics and the combinatory restrictions on CSs in most of the Romance languages.

(33)　　ALIGN-L(+1,CS), ALIGN-L(+2,CS), ALIGN-L(+lr,CS)　　>> MAX(C$_O$)

$\Rightarrow$　　a.　　*1$_{clit}$ + 2$_{clit}$ 　　　　　　　　　　　　　(*ALIGN-L(+1,CS) or *ALIGN-L(+2,CS))
　　　　b.　　*3iO$_{clit}$ + 1/2dO$_{clit}$ 　　　　　　　　　(*ALIGN-L(+lr,CS) or *ALIGN-L(+1/+2,CS))
　　　　c.　　iO$_{clit}$ > dO$_{clit}$ 　　　　　　　　　　　　　　(ALIGN-L(+lr,CS))

The deviations from the order of clitics which are observed in Romanian and French result from partial rankings in the set of alignments constraints (which are all equally ranked in (33)). In Romanian, both 1iO clitics and 3iO clitics may precede 2dO clitics, an order that results from the partial constraint ranking in (34a).[19] Note that this different ranking neither affects the order restriction for iO and dO, nor for 1st and 3rd person. In French, the order of 3dO and 3iO is reversed, compared to the other Romance languages. This order results from the partial ranking in (34b). This ranking has no effect on the restrictions on combinations with 1O and 2O clitics (for more details, see Gerlach 1998).

(34) a. Romanian: A$_{\text{LIGN-L}}$(+1,CS), A$_{\text{LIGN-L}}$(+lr,CS) >> A$_{\text{LIGN-L}}$(+2,CS)
       b. French [20]:   A$_{\text{LIGN-L}}$(+1,CS), A$_{\text{LIGN-L}}$(+2,CS) >> A$_{\text{LIGN-L}}$(+lr,CS)

In the next section, I want to come back to the prohibited CSs and to the question which of both equally good output candidates in the tableaus (31) and (32) is in fact the best one.

5 What Happens When Clitic Sequences Are Outranked?

Let us consider the examples in (35) to (37) from French[21].

(35)   1dO 3iO
    a.   *Tu me lui présenteras.
    b.   Tu me présenteras à lui.
    c.   *Tu lui présenteras moi.
         'You introduce me to him.'

(36)   1dO 2iO
    a.   *Je me vous joins.
    b.   Je me joins à vous.
    c.   *Je vous joins moi.
         'I join you.'

(37)   1iO   2dO
    a.   *Elle me te recommande.
    b.   Elle te recommande a moi.
    c.   *Elle me recommande toi.
         'She recommends you to me.'

---

[19] Only the Romanian 2sg.dO clitic is affected by the constraint ALIGN-L(+2,CS) because the plural object clitic is ambiguous, while the singular clitic is not. See Gerlach (1998) for more details.

[20] That this deviation takes place results from ranking *SONORITY ADJACENCY higher than ALIGN(+lr) as has been shown in Gerlach (1998). Therefore, *lui le respectively *leur le with 3iO are replaced by le lui respectively le leur. From these examples one can also derive that *ALLITERATION does not play a major role in the evaluation of French CSs.

[21] Thanks to Tahar Guellil for contributing the French examples.

The input of (35a) requires a 1st person direct object to be realized in the same sentence as a 3rd person indirect object. The CS in (35a.) is prohibited due to the morphological constraints mentioned above. Therefore only one of the arguments may be realized by a clitic, while the other one has to be realized by a full pronoun. The choice of the clitic is not optional, in contrast to what has been predicted by the tableau (31). Only the direct object may be realized by a clitic, as in (35b), while the reverse case, namely (35c), is ungrammatical. A similar picture arises in (36), with 1st person direct object and 2nd person indirect object. Here, again, the CS is prohibited due to the alignment constraints, and only the direct object may be realized by a clitic, while the indirect object has to be a full pronoun. The same holds for the opposite grammatical relation in sentence (37) where the direct object is 2nd person and the indirect object is 1st person. Even here, only the direct object may be represented by a clitic while the indirect is a full pronoun.

The Spanish examples in (38) to (40) are similar, with the difference that all combinations of 1st and 2nd person are only marginally accepted, see (38b) and (38c). Note that the Spanish preposition *a* is not only a case marker for indirect objects, as *á* in the French examples above, but also marks direct objects with [+animate] reference. In any case, (39b) and (40b) with the direct object as a clitic and the indirect object as a full pronoun are the only possible realizations of 1st/2nd person combinations.[22]

(38)   2dO 3iO
   a.   *Te le recomiendo.*
   b.   *Te recomiendo a la empresa.*
   c.   *Le recomiendo a ti.*
         'I recommend you to her/him.'

(39)   1iO 2dO
   a.   *Me te recomienda.*
   b.   ?*Te recomienda a mi.*
   c.   *Me recomienda a ti·*
         'S/he recommends you to me.'

(40)   1dO 2iO
   a.   *Me te recomienda.*
   b.   *Te recomienda a mi.*
   c.   ?*Me recomienda a ti.*
         'S/he recommends you to me.'

The other languages examined behave in a similar way when CSs are prohibited. The clitic realization of a direct object is strongly preferred to that of an indirect object. Regarding this data, the question arises if it is reasonable to rank the $M_{AX}(C_O)$-constraints as it is suggested in (41).

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[22] Since double *a*-marking of objects is prohibited in Spanish even realizations with two full pronouns are ungrammatical in the examples (38).

(41)   ? $\mathrm{Max}(C_{dO}) \gg \mathrm{Max}(C_{iO})$

This ranking makes the right predictions whenever only one clitic can be realized according to the alignment constraints. However, the conditions on the occurrence of clitics in general and not only in CSs have to be considered to decide whether this ranking is reasonable.

6 Conditions on the Occurrence of Clitics in Romance

Independently of the restrictions on CSs, clitics appear in mainly two contexts in all examined languages. First, object clitics appear in the context of object pro-drop, that is, when the clitic resumes an aforementioned entity in a non-emphatic way and no coreferential DP is present in the same sentence. In these cases, the clitic is obligatory and may not be replaced by a full (that is emphatic) pronoun. This is the unmarked occurrence of clitics in all Romance Languages.

Second, clitics may occur along with a coreferential DP in the same sentence. Clitic doubling is obligatory in certain contexts, determined by grammatical relation, specificity, definiteness, and animacy. Clitic doubling is possible in most Romance languages, except Standard Italian. In the next section, I will show that obligatory object clitic doubling will provide the adequate means for deriving the correct ranking of the $\mathrm{M_{AX}}(C_O)$ constraints.

6.1 Obligatory Object Clitic Doubling in Romance

The table in (42) summarizes the conditions on object clitic doubling in the examined Romance languages. [23]

(42)   a. Conditions on clitic doubling in Romance

	iO-DP			dO-DP		
	pron	+spec	-spec	pron	+spec	-spec
Standard Italian	*	*	*	*	*	*
Piattino	+	+	+	+	+/*[2]	+/*[2]
French	+	+	+/*[1]	+	(+)	*
Spanish, iberic	+	+	+	+	*	*
Spanish, ltam	+	+	+	+	+	*
Romanian	+	+	*	+	+/*[3]	*

'+' means *obligatory*; '(+)' means *optional*; '*' means *not allowed*

[1]depends on person; [2]old/new information; [3][-topic, -human]

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[23] Gerlach (in prep.) delivers more details on object clitic doubling as well as on subject clitic doubling in these languages.

As can be seen, clitic doubling is always prohibited in Standard Italian. Cases of 'optional' clitic doubling with direct objects in Italian are better analyzed as DP dislocation structures than as clitic doubling. In Italian dialects as well as in colloquial Italian, however, clitic doubling is not uncommon and partly even obligatory. Consider Piattino, for example. In this Northern Italian dialect, doubling of indirect objects is always obligatory, while doubling of direct objects is only obligatory for pronominal objects DPs but optional for other DPs. In colloquial French, doubling of indirect as well as direct objects is obligatory for pronominal DPs. All indirect objects may be doubled optionally, while direct objects have to be specific to permit optional clitic doubling. Furthermore, 1st and 2nd person pronouns are more often doubled by clitics than 3rd person pronouns (see Kaiser (1992)). In contrast, doubling is never optional but always obligatory in Iberian and Rio de la Plata Spanish. It is obligatory for indirect objects and pronominal direct objects, and also for specific direct objects in Rio de la Plata Spanish. Other direct object DPs must not be doubled by clitics (for more details see Parodi, 1998). In Romanian, too, optional clitic doubling does not exist. Indirect objects are obliged to double with pronominal or specific DPs, while direct objects are obliged to double with pronominal or specific [+human] DPs in topic position, otherwise doubling is prohibited (see Popescu 1997).

In sum, clitic doubling is mostly obligatory for indirect objects and for pronouns, and it furthermore depends on specificity and animacy. With these data in mind, we can capture the conditions for clitic doubling by a set of implicational scales, given in (43). ('x $\Rightarrow$ y' means that 'if x is doubled in a language then y is also doubled in this language'.)

(43) Implicational scales for clitic doubling

dO	$\Rightarrow$	iO	($\Rightarrow$	Sbj)
	unspecific	$\Rightarrow$	specific	
	indefinite	$\Rightarrow$	definite	
	nominal	$\Rightarrow$	pronominal	
inanimate	$\Rightarrow$	animate	$\Rightarrow$	human
	3	$\Rightarrow$	1/2	

I suppose that clitic doubling, as observed in the Romance languages, characterizes a transitional stage in which pronominal argument realization shifts to agreement morphology, while at the same time cliticized pronouns shift to affixes. Whereas doubling of direct objects is often semantically conditioned, doubling of indirect objects is mostly obligatory. In the spirit of OT, either the doubled or the undoubled form should be optimal, i.e., grammatically conditioned clitic doubling should never be optional. More detailed studies of Romanian (Popescu 1997) and of both varieties of Spanish (Parodi 1998) have shown that 'optional' clitic doubling must be divided into either obligatory or disallowed clitic doubling. Other cases of 'optional' clitic doubling may turn out as instances in which purely pragmatic factors (e.g., emphasis) determine whether a clitic has to appear or not.

To examine the doubling phenomenon more closely, let us compare the possible continuations to the introductory sentence in (44) from Iberian Spanish.

(44)   *He   comprado   un   libro.*
        have.1SG   buy.PART   D   book
        'I have bought a book.'

    a.   **Se**$_i$ **lo**$_j$ *recomiendo*   *(*el   libro$_j$)*   *(a   Juan$_i$).*
        RFL   3SG.DO   recommend.1SG   D   book   P.DAT   J.

    b. $^{??}$***Lo**$_j$ *recomiendo*   *a   Juan.*
        3SG.DO   recommend.1sg   P.DAT   J.

    c.   **Le**$_i$ *recomiendo*   *el   libro.*
        3SG.IO   recommend.1SG   D   book
        'I recommend it/the book to Juan.'

The introductory sentence introduces a new discourse object by means of the indefinite object DP *un libro*. A clitic instead of the DP as well as a clitic in addition to the DP is prohibited in this sentence. In a subsequent sentence, the topicalized object may be realized by a clitic, and, again, doubling is forbidden, as in (44a).[24] In such a case realizing the indirect object by a clitic is strongly preferred - regardless of whether a coreferential DP is present or not. Leaving out the iO clitic, as in (44b), is rather bad, though not completely ungrammatical. However, leaving out the dO clitic in favor of a definite direct object DP, as in (44c), is perfectly grammatical, but this 'emphasizes' the DP and is thus semantically marked.

    If the indirect object is 2nd (or 1st) person instead of 3rd, the picture is still clearer. Comparing the sentences in (45), we can see that, this time, leaving out the iO clitic causes absolute ungrammaticality.

(45) a.   **Te**$_i$ **lo**$_j$ *recomiendo*   *(*el   libro$_j$)*   *(a   ti$_i$).*
        2SG.O   3SG.DO   recommend.1SG   D   book   P.DAT   PRON.2SG

     b.   ****Lo**$_j$ *recomiendo*   *a   ti.*
        3SG.DO   recommend.1SG   P.DAT   PRON.2SG

     c.   **Te**$_i$ *recomiendo*   *el   libro.*
        2SG.O   recommend.1SG   D   book
        'I recommend it/the book to you.'

This data, together with the clitic doubling data from the other Romance languages, shows that if the CS is not restricted morphologically, either the whole sequence or the iO clitic has to be realized. Therefore, $M_{AX}(C_{iO})$ must be ranked higher than $M_{AX}(C_{dO})$, just as in (46).

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[24] Recall that the CS is opaque in this case (*le lo* → *se lo*).

(46) $\qquad$ $M_{AX}(C_{iO}) \gg M_{AX}(C_{dO})$

This ranking leads to the question of how the obviously contradicting data from section 5 can be explained. Before entering this problem in the next section, I will briefly sketch the way in which the doubling conditions can be treated.

Since doubling is not in the core of this paper, I will only give a rough idea of this matter (but see Gerlach in prep. for a detailed analysis). As soon as clitic doubling emerges in a language, clitics shift into agreement morphemes that have to be present in order to conform with the syntactic $M_{AX}(C_O)$ constraints, whereas full DPs may be omitted under certain circumstances. Whether a coreferential DP occurs or not depends on its discourse properties: a topic DP should never occur together with a clitic, while a focused DP always has to occur. This can be captured by the constraints in (47).

(47) Doubling constraints

$D_{ROP}T_{OPIC}$ Leave arguments coreferent with the topic structurally unrealized. (Grimshaw & Samek-Lodovici)

$M_{AX}(foc)$ A focus-DP is structurally realized.

If no coreferential DP appears in a sentence, the object clitic must be able to saturate the respective argument, in virtue of satisfying the relevant $M_{AX}(C_O)$ constraints. Then additional linking constraints for DPs, such as those stated in (48), ensure that object DPs are linked to the same structural argument position as the coreferential clitics.

(48) Linking Constraints

$M_{AX}(DP_{iO})$ The indirect object of a verb (+hr,+lr) corresponds to a DP.

$M_{AX}(DP_{dO})$ The direct object of a verb (+hr,-lr) corresponds to a DP.

$D_{EP}(DP)$ A DP corresponds to an argument of the verb.

Concerning ranking, all constraints from discourse semantics should be ranked higher than syntactic linking constraints. $M_{AX}(foc)$ must be ranked higher than $Max(C_O)$ because object clitics may be left out in favor of focused object DPs, as examplified by (44) and (45) with direct objects in Spanish.[25] On the other hand, $D_{ROP}T_{OP}$ must be ranked higher than $M_{AX}(DP_O)$ because topic object DPs are always left out in favor of the clitic.

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[25] Here, an additional constraint is at work which prohibits the occurrence of clitics and coreferential DPs at the same time.

6.2 Obligatory Object Clitic Doubling in Prohibited Clitic Sequences

Recall that dO clitics are preferred if the CS is prohibited, whereas iO clitics are preferred if the CS is unrestricted. In order to solve this apparent conflict in the choice of clitics, I would like to suggest the additional constraints in (49). $S_{PEC}(C_{per})$ requires that person agreement features have to be specified by clitics. This requirement follows from their development to agreement markers. The other additional constraint, $I_{DENT}(+lr)$, is a more explicit formulation of $I_{DENT}(case)$. Because of this constraint, fully specified iO clitics are preferred to underspecified O clitics for the indirect object position.

(49)   Additional constraints:

    $S_{PEC}(C_{per})$ Specify person agreement features ([+1] or [+2]) by clitics.

    $I_{DENT}(+lr)$ Corresponding elements have to be identical with respect to (+lr).

Prepared with these constraints we can reevaluate the examples (38) to (40) from section 5 and the contradictory data from (44) and (45). First, consider (50) to (52), which repeat (38) to (40) for convenience. Due to the morphologically alignment constraints, the CS (candidates (50a), (51a), and (52a)) is prohibited. The combination of 2nd person direct object with 3rd person indirect object is shown in (50).

(50)   *2$_{ACC}$ 3$_{DAT}$

    a. *__Te le recomiendo.__

    b. __Te recomiendo a la empresa.__

    c. *__Le recomiendo a ti.__

			ALIGNMENT	$S_{PEC}(C_{per})$	$M_{AX}(C_{iO})$	$M_{AX}(C_{DO})$
a.		*le te*	*!			
b.		*le*		*!		*
c.	☞	*te*			*	

If only the indirect object is realized by a clitic, as in (50b), the person feature for the direct object is not specified by an agreement morpheme, which causes a fatal violation of $S_{PEC}(C_{per})$. The optimal output candidate only violates $Max(C_{iO})$.

If we evaluate the combinations of 1O and 2O clitics in examples (51) and (52), $I_{DENT}(+lr)$ becomes relevant. In contrast to the example just discussed, omitting one of the clitics causes a violation of $S_{PEC}(C_{per})$, because each of them bear person agreement features. However, since both clitics lack the feature [+lr] (because they are underspecified for case), they behave differently with respect to $I_{DENT}(+lr)$, if one is linked to indirect object and the other to direct object. If *me* functions as an iO clitic, it fatally violates $I_{DENT}(+lr)$. So *te*, functioning as a dO clitic, becomes the optimal output candidate.

(51)   1iO 2dO
    a.   *_**Me te** recomienda._
    b.   [?]_**Te** recomienda a mi._
    c.   *_**Me** recomienda a ti._

			ALIGNMENT	SPEC(C$_{per}$)	IDENT(+lr)	MAX(C$_{iO}$)	MAX(C$_{dO}$)
a.		_me te_	*!		*		
b.		_me_		*	*!		*
c.	☞	_te_		*		*	

With the same clitics but the reverse relation to the argument structural position, consequently, _te_ representing the direct object is optimal, while _me_ as the indirect object fatally violates IDENT(+lr).

(52)   1dO 2iO
    a.   *_**Me te** recomienda._
    b.   *_**Te** recomienda a mi._
    c.   [?]_**Me** recomienda a ti._

			ALIGNMENT	SPEC(C$_{per}$)	IDENT(+lr)	MAX(C$_{iO}$)	MAX(C$_{dO}$)
a.		_me te_	*!		*		
b.	☞	_me_		*		*	
c.		_te_		*	*!		*

So far, no ranking of SPEC(C$_{per}$) and IDENT(+lr) can be derived. However, if we consider the examples (44) and (45), here repeated as (53) and (54), we are not only able to derive the ranking of these two constraints, but can also explain the slight difference in grammaticality in one of the candidates. Recall that in both examples the CS is not restricted and therefore optimal. However, leaving out one of the clitics is possible under specific conditions from discourse semantics. If a clitic that bears person agreement features is omitted, the sentence completely deteriorates, as in (53c). Therefore, SPEC(C$_{per}$) must be ranked higher than IDENT(+lr).

(53)   2iO 3dO
    a. _**Te lo** recomiendo._
    b. *_**Lo** recomiendo a ti._
    c. _**Te** recomiendo el libro._

			ALIGNMENT	SPEC(C$_{per}$)	IDENT(+lr)	MAX(C$_{iO}$)	MAX(C$_{dO}$)
a.	☞	_te lo_			*		
b.		_te_			*		*!
c.		_lo_		*!		*	

However, if one of the clitics is omitted when two 3rd persons should combine, none of the higher ranked constraints is violated. In this case, the asymmetries only result from the relative ranking of the $M_{AX}(C_O)$ Constraints.

(54)   3iO 3dO

        a. ***Se lo*** *recomiendo.*
        b. ??***Lo*** *recomiendo a Juan.*
        c.   ***Le*** *recomiendo el libro.*

		ALIGNMENT	MAX(C_{per})	IDENT(+lr)	MAX(C_{iO})	MAX(C_{DO})
a.	☞ *se lo*					
b.	*le*					*!
c.	*lo*				*!	

We can deduce that the feature specification in the lexical entry of clitics is responsible for the choice of clitics, whenever the CS is either prohibited by alignment constraints or rejected by constraints from discourse semantics (i.e., when the DP must be realized due to M_{AX}(foc), but is incompatible with a clitic). Person agreement features should always be realized by a clitic, so a 3iO clitic is left out in prohibited CSs. Moreover, only fully specified iO clitics correspond to indirect objects, so an underspecified 1O or 2O clitic is left out in indirect object position if the direct object is 1st or 2nd person as well. In contrast, if the CS is unrestricted, the indirect object is preferred to the direct object. Either the constraints on specifity are unviolated, as it is the case with two 3O clitics, or the indirect object is 1st or 2nd person (due to the $A_{LIGNMENT}$ constraints). In such a case, only the 3dO clitic may be left out, because of the high ranking of $S_{PEC}(C_{per})$.

7 Conclusions

I have shown that CSs are morphological units by themselves. Therefore, they are subject to morphological alignment constraints that regulate the order of clitics. These morphological constraints are usually not violated and thus outrank the syntactic constraints requiring clitics to be realized. Exceptions from this generalization are found in Romanian and in French. In Romanian, one of the morphological constraints is ranked lower than the syntactic constraints and is thus violable. In French, it is a phonological constraint which outranks another one of the morphological constraints. In both languages, the other morphological constraints show the same ranking as the other Romance languages. From this ranking, they thus may cause the omission of one of the expected clitics. Phonological constraints on CSs usually do not cause omission of one of the clitics, but they may cause that the actual CS deviates from what is predicted by the underlying phonological form of clitics (so giving rise to 'opaque clitics'). This indicates that the phonological constraints and the syntactic constraints rank equally.

At first glance, the choice of clitic in the case where the CS is morphologically outranked contradicts with what one expects from the data of clitic doubling. I have shown that this choice results from additional

constraints that regulate the specificity of feature marking. Ultimately, the observed conflict can be traced back to the particular lexical entries of clitics.

Having in mind that several constraints participate in the evaluation of CSs, one can try to assign these constraints to different modules of the grammar, and then try to rank these modules in terms of the ranking of constraints belonging to these modules. In this respect, the tentative order expressed in (55) can be inferred from the study presented here.

(55) Morphology   >>   Semantics   >>   Syntax, Phonology
       $\text{A}_{\text{LIGNMENT}}$ $\text{M}_{\text{AX}}(\text{foc}), \text{D}_{\text{ROP}}\text{T}_{\text{OP}}$ $\text{S}_{\text{PEC}}(\text{C}_{\text{per}}), \text{M}_{\text{AX}}(\text{C}_{\text{O}}), {}^*\text{A}_{\text{LLITERATION}}$, etc.

The morphologically conditioned $\text{A}_{\text{LIGNMENT}}$ constraints are rarely violated, and they are never violated in favor of semantic or syntactic requirements. So we may conclude that they rank above the constraints that regulate the discourse semantics concepts. In turn, these constraints are never violated in favor of syntactic or phonological constraints, so we may conclude that the discourse-related constraints rank above those that belong to phonology or syntax. Furthermore, we have seen that the phonological constraints may outrank the syntactic ones, so the latter are the weakest ones. This result confirms the estimation that a purely syntactic approach is unable to account for the data of cliticization. Such an account would be unable to predict why different values of person may have influence on the formation of clitic sequences. In fact, syntactic assumptions only constitute the last resort, which can be overridden by several more detailled assumptions from other sources.

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