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# The Wiley Blackwell Companion to Morphology

Entry title: Clitic cluster restrictions

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## Abstract

Clitic clusters are complex morphological objects that are penetrable by syntactic rules, but behave as (semi)-autonomous morphosyntactic constituents. Clusters are subject to various kinds of restrictions, which fall into three main types: a) Restrictions on linearization: clitic clusters tend to be rigidly ordered; clitics are ordered within a *template* on the basis of grammatical categories (e.g. auxiliary > pronominal clitics), case/function, or person; the interplay of these factors yields a multitude of possible ordering systems, which vary across languages without any clear link with other syntactic or morphological phenomena. b) Restrictions on exponence: certain clitic clusters are morphologically opaque; in particular, combinations of identical clitic exponents are often avoided by dropping one clitic element, whereas combinations of (third person) pronominal clitics are often realized by suppletive exponents or by a single portmanteau morpheme. c) Restrictions on agreement: clusters of clitic pronouns tend to be ungrammatical when they correspond to certain person/case combinations (the so-called Person Case Constraint or PCC); clitic combinations tend to be ungrammatical when a first/second person direct object clitic is combined with a (third person human) “dative” clitic; focusing on Romance data, I argue that i) the PCC is part of a wider set of agreement restrictions that do not target only clitics, but become particularly evident when arguments are cliticised; ii) the PCC is arguably linked to animacy and, more specifically, to the syntactic mechanism whereby animate and non-animate arguments are licensed in the clause and, consequently, mapped into clitics.

## Keywords

clitic; clusters, linearization, suppletion, gaps, Person Case Constraint (PCC)

## Main text

### 1 Introduction

The notion of *clitic* is subject to intense debate. Since Zwicky (1977), linguists distinguish *simple* clitics, i.e. unstressed function words that have the same syntactic distribution as the corresponding non-clitic words (if any), from *special* clitics, i.e. free morphemes that, unlike their strong counterparts, have a “special syntax”. The latter occupy a fixed position in the

clause (or in the determiner/noun phrase):<sup>1</sup> as a first approximation, special clitics are either displaced at the periphery of the clause (so-called *second-position* clitics, *peripheral* clitics) or they must be adjacent to a *host* with a certain grammatical category (e.g. V, which yields *adverbial* clitics).

In what follows I will deal mainly with the morphology of sequences of special clitics (*clitic clusters*, from now on) and, in particular, I will focus on clusters of pronominal clitics, which cross-linguistically are subject to numerous restrictions. Remarks will be primarily illustrated with data from Indo-European languages – above all, from Romance and Slavic – whose clitic systems have been thoroughly investigated since the 19<sup>th</sup> century. I will introduce data from other linguistic families that have been described in sound scholarly works to show that the phenomena we observe in Romance and Slavic are not unparalleled, although in the absence of meticulous cross-linguistic comparison one always runs the risk of being biased towards a Eurocentric view of the problem. In dealing with clitic clusters, I think it is worth taking a calculated risk, because, being at the crossroad between phonology, morphology, syntax, and discourse, clitic systems can be hardly approached without a thorough knowledge of language-specific conditions – including historical ones – that are seldom available to specialists working on less-studied languages/families.

In §§2-5, I will examine some properties of clitic combinations that challenge our understanding of the syntax/morphology interface (§6 concludes):

- i. Integrity (§2): although clitic clusters form a single morpho-phonological constituent, clitics are seldom transparent to syntactic rules (e.g. subject clitic inversion) that *break* the clitic chain;
- ii. Rigidity (§3): when clitics co-occur in the same clausal position, they are rigidly ordered, i.e. given a grammatical combination  $\alpha\beta\gamma$ , then  $*\beta\gamma\alpha$ ,  $*\beta\alpha\gamma$ ,  $*\gamma\alpha\beta$ ,  $*\alpha\gamma\beta$ ,  $*\gamma\beta\alpha$ ; the order is set on a language-specific basis.
- iii. Opacity (§4): clitic sequences are subject to morpho-phonological restrictions, causing systematic allomorphies and suppletion;
- iv. Incompatibility (§5): certain clitic combinations – in particular, combinations of clitic pronouns in ditransitive constructions – are systematically ruled out across non-related languages.

## 2 Partial integrity

A major source of debate in the literature concerns the distinction between clitics and affixes. Part of the literature seeks to reduce clitics to a special form of affixation (see Anderson 2005; Bickel and Nichols 2007: 174–80), running the risk of losing descriptive adequacy. In this respect, empirical tests have been proposed to distinguish affixes from clitics, based on Zwicky and Pullum's (1983) checklist:

- i. Head selectivity: clitics can exhibit a low degree of selection with respect to their hosts, while affixes exhibit a high degree of selection with respect to their stems.
- ii. Arbitrary gaps in the set of combinations are more characteristic of affixes than clitics.
- iii. Morphological idiosyncrasies are more characteristic of affixes than clitics.

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<sup>1</sup> The concept of *clitic* is often used as an umbrella term or explicitly refused (Haspelmath 2007, 2015). Terminological disagreements have either misled or impeded the comparison of phenomena across linguistic families.

- iv. Semantic idiosyncrasies are more characteristic of affixes than clitics.
- v. Lexical integrity: Syntactic processes can affect affixed words, but not clitic groups.
- vi. Clitic-Affix ordering: Clitics can attach to material already containing clitics, but affixes cannot.

The above criteria, however, are not categorical as their formulation is always relative (*more X than . . .*), which means that statements cannot be falsified even if they are contradicted by counterexamples. For instance, (i) is contradicted by languages showing systems of adverbial clitics (e.g. most Romance languages, south Slavic); (ii) and (iii) are challenged by data from countless Italo- and Gallo-Romance dialects that undergo inversion in main interrogatives (unlike agreement affixes), but exhibit extensive gaps and patterns of syncretism, see (1) (Heap 2002; Manzini and Savoia 2005: 69–121; Olivieri 2011; Calabrese 2011). Moreover, the data in (1) show that the shape of proclitics often differ from that of enclitics, contra (iii).<sup>2</sup>

(1)	<i>Declarative</i>		<i>Interrogative:</i>	(Paduan, Benincà 1994: 41-42)
a.	__ magno eat.1SG	→	(cosa) magno-(i)? (what) eat.1SG=1SG.S	
b.	te magni 2SG.S= eat.2SG	→	(cosa) magni-to? (what) eat.2SG=2SG.S	
c.	el/la magna 3SG.M/F.S= eat.3SG	→	(cosa) magne-lo/la? (what) eat.3SG=3SG.M/F.S	
d.	__ magnèmo eat.1PL	→	(cosa) magnèmo-(i)? (what) eat.1PL=1PL.S	
e.	__ magnè eat.2PL	→	(cosa) magnè-o? (what) eat.2PL=2PL.S	
f.	i/le magna 3PL.M/F.S= eat.3PL	→	(cosa) magne-li/le? (what) eat.3PL=3PL.M/F.S	

Semantic idiosyncrasies (iv) are attested as well: for instance, certain subject clitics may act as discourse particles marking focus/background or topic/comment articulation (see Poletto 2000). (vi) is contradicted by patterns of mesoclisism/endoclisism.

It goes without saying that if all of Zwicky and Pullum's tests are convergent, then we have a rather solid diagnosis of cliticness, but in the case of mixed results – as in the vast majority of cases – it seems to me that the tests in (i-vi) do not permit us to reach any solid conclusion.

The most problematic parameter remains the one in (v): “Lexical integrity: Syntactic processes can affect affixed words, but not clitic groups”. In fact, clitic clusters are, to various extents, transparent to syntax, a property that clearly distinguishes clitics from both affixes and words. Clitics usually form tight clusters, which are displaced as single morphological constituents in a dedicated clausal position, but clusters can sometimes be dismembered by syntactic rules. For instance, in French subject pronouns, negation and object pronouns are clustered to the left of verbs in declarative clauses, but in interrogative clauses negation and object clitics move to the left periphery along with the inflected verb, crossing the subject clitic that remains *in situ*:

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<sup>2</sup> In the examples that follow, I try to use glosses such as NOM, ACC, DAT, OBL, etc. for morphological case and S, O, IO for syntactic functions (Subject, Object, Indirect Object). In most examples, I will use either morphological or syntactic glosses (e.g. either ACC or O), depending on the language and the phenomenon under discussion.

- (2) a. **Tu ne me l'** as pas demandé. (French)  
 you= NEG= me.OBL= it.ACC= have NEG asked  
 'You haven't asked me for it.'
- b. Pourquoi [**ne me l'** as]<sub>i</sub> **-tu** t<sub>i</sub> pas demandé ?  
 why NEG= me.OBL= it.ACC= have=you NEG asked  
 'Why haven't you asked me for it?'

The example in (2) shows that the clitic group including negation and object clitics is affected by the same syntactic process, whereas subject clitics do not form a single, inseparable morphological unit with other clitic elements. However, under closer scrutiny, it appears that negation and object clitics do not form a single morphological unit either: in fact, in infinitives, negation and object clitics are separated by the negative adverb *pas*, whereas in imperatives object clitics must be enclitic (i.e. they must follow the verb):

- (3) a. Pourquoi **ne pas me le** demander ? (French)  
 why NEG= NEG me.OBL= it.ACC= to.ask  
 'Why don't ask me for it?'
- b. **Ne** demande **-le -moi** pas !  
 NEG= ask =it.ACC =me.OBL NEG  
 'Don't ask it to me.'

Hence, clitic clusters differ from sequences of affixes in enjoying a higher degree of freedom. Even in languages in which clitics select a host, as in French, they may occur either before or after the host (yielding *proclisis* or *enclisis*, respectively) and – on a language-specific basis – they can be exceptionally separated from their prevailing host, yielding so-called *interpolation*. These possibilities are normally unavailable with affixes.

Evidence that clitic clusters may have an inner syntactic articulation comes from various linguistic groups and families and do not regard only subject and object markers. For instance, Bošković (2004:51-6; see references therein) shows very convincingly that Serbo-Croatian clitics do not form a single morphological unit although they are normally linearized in adjacent positions: VP ellipsis in (4a) can delete pronominal clitics, leaving auxiliary clitics behind (Stjepanović 1998); to a lesser extent, dative clitics in (4b) can be pronounced, but accusative clitics must undergo ellipsis; pronominal clitics can undergo VP fronting as in (4c)<sup>3</sup>, while auxiliary clitics cannot (Wilder and Čavar 1997); parentheticals in (4d) can occur between auxiliary and pronominal clitics; in contexts of clitic climbing such as (4e) – i.e. where clitics can attach to a modal auxiliary – dative clitics can climb, leaving accusatives in the embedded clause, but not vice versa (Stjepanović 1998).

- (4) a. **Mi smo mu ga** dali, a i vi **ste**  
 we =are =3.DAT =3.ACC given and also you =are  
 ... ~~**mu**~~ ~~**ga**~~ ~~**dali**~~ (takodje).  
 =3.DAT =3.ACC given too. (Serbo-Croatian)  
 'We gave it to him, and you did too.'
- b. <sup>?</sup>**Mi smo mu ga** dali, a i vi **ste mu**  
 we =are =3.DAT =3.ACC given and also you =are =3.DAT  
 ... ~~**ga**~~ ~~**dali**~~ (takodje).

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<sup>3</sup> The symbol % signals sentences that are not judged grammatical by all speakers.

- =3.ACC given too  
 ‘We gave it to him, and you did too.’
- c. %Dali **ga** Marija **su** Ivan i Stipe.  
 given =3.ACC Marija.DAT =are Ivan and Stipe  
 ‘Give it to Marija, Ivan and Stipe did.’
- d. Oni **su**, kao što sam vam rekla, predstavili **se** Petru  
 they =are as am =2.DAT said introduced 3.REFL.ACC Petru.DAT  
 ‘They, as I told you, introduced themselves to P.’
- e. ?Marija **mu** želi da **ga** predstavi.  
 Marija =3.DAT wants that =3.ACC introduces  
 ‘Marija wants to introduce him to him.’

The above data provide evidence that Serbo-Croatian clusters formed by auxiliary clitics, dative clitics, and accusative clitics are penetrable by syntactic operations. The same tests show that in closely-related languages such as Bulgarian and Macedonian clitics cannot be separated as in Serbo-Croatian. In Macedonian in particular, negation markers and clitic pronouns cluster with the auxiliary and nothing can separate the chain of clitics. In interrogative clauses, the whole cluster is moved above the question particle *li*, which is arguably displaced in the left periphery of the clause (Bošković 2004; notice that the mechanism in (5) is similar to the French one illustrated in (2b)):

- (5) [**Ne si mu gi dal**]<sub>i</sub> *li* t<sub>i</sub> parite? (Macedonian)  
 NEG= are= him.DAT= them.ACC given PART money-the  
 ‘Haven’t you given him the money?’

The comparison between Serbo-Croatian and Bulgarian/Macedonian suggests that in the former clitic clusters are not syntactic constituents, although clitics co-occur in adjacent ‘slots’ (cf. §3) in the so-called second position of the clause. The same holds true for Romance negation, subject and object clitics, which appear to form a cluster in finite declaratives, but not in nonfinite clauses and in interrogatives, where object and subject pronouns, respectively, are enclitics. One may therefore conclude that sequences of subject and object clitics never form a cluster, although they are usually adjacent in declarative clauses. This conclusion, however, is not straightforward as in several dialects subject and object proclitics interact in a rather complex way. For instance, in southern Romagnol dialects, third person subject and object clitics exhibit mutual exclusion patterns (for similar phenomena in combinations of object clitics, see §4): when a third person subject clitic co-occurs with a third person object clitic (or with the third person dative *i* or the partitive *ne*), the subject clitic is not pronounced (Manzini & Savoia 2004, 2005:356-357, 363-364). Note that the subject pronoun must be gapped even if the two third person clitics are separated by a non-third person clitic as in (6f).

- (6) a. **el/la te** cema. (Tavullia; Italo-Romance)  
 3SG.M/F.S= 2SG.O= call.3SG  
 ‘He/she calls you.’
- b. **el/la ce** cema.  
 3SG.M/F.S= 1PL.O= call.3SG  
 ‘He/she calls you.’
- c. \*(**el/la el/la**) cema.  
 3SG.M/F.S= 3SG.M/F.O= call.3SG  
 ‘He/she calls him/her.’

- d. **\*(el/la) ne cema.**  
 3SG.M/F.S= PART= call.3SG  
 ‘He/she calls some of them.’
- e. **\*(el/la) i dà quest.**  
 3SG.M/F.S= 3.DAT= gives.3SG this  
 ‘He/she gives this to him/her/them.’
- f. **\*(el/la) m el dà**  
 3SG.M/F.S= 1SG.IO= 3SG.M.O= gives.3SG  
 ‘He/she gives it to me.’

In other northern Italian dialects (e.g. Friulian) and Franco-Provençal dialects (Roberts 1993, 2018: 258-9), subject clitics are dropped when the object clitic is preverbal, regardless of its person (both group of dialects retain, to various extents, the possibility of placing object clitic in enclisis in finite clauses):

- (7) a. Gnunc **l’** a viu-**me.** (Ayas; Franco-Provençal)  
 No one 3SG.M.S= has seen=1SG.O
- b. Gnunc **(\*l)** **m’** a viu.  
 No one 3SG.M.S= 1SG.O= has seen  
 ‘No one has seen me.’

The irregularities exemplified in (6)-(7), which will be extensively discussed in §4, illustrate the dual nature of clitic combinations: on the one hand, they are subject to syntactic rules that can break the integrity of the sequence, but, on the other hand, mutual exclusion patterns and other irregularities indicate that clusters do not result from a simple juxtaposition of independent elements that, by chance, end up co-occurring in adjacent positions.

All the above phenomena show that combinations are transparent to both syntactic and morphological rules at the same time.

### 3 Rigidity (and its exceptions)

When clitics co-occur in the same (or adjacent) position(s), they are rigidly ordered. In Warlpiri, for instance, inflection is expressed by a clitic cluster – usually dubbed ‘auxiliary’ – that is located in the second position in the clause. The cluster is centred on an auxiliary ‘base’ (that can be null), which follows the negator and precedes enclitic pronominal/agreement markers, as illustrated in (8). Enclitics occur after the auxiliary base, with the order Subject > Object (if the verb is ditransitive, the object marker agrees with the indirect object; Hale 1983). (8c) illustrates one of the few combinations that depart from the alleged template (Hale 1973): the exclusive plural marker *-lu*, which modifies subject clitics, is linearized after 1<sup>st</sup>/2<sup>nd</sup> singular clitics *ju*, *ngku*, giving rise to a discontinuous pattern:<sup>4</sup>

- (8) a. (Ngaju) **kula ka -rna** ya-ni. (Warlpiri; Laughren 1999: (5))  
 (I) NEG= AUX =1S go-NONPAST  
 ‘I’m not going/ don’t go.’
- b. Ngaju **ka -rna -ngku** parda-rni nyuntu-ku. (Hale 1983: (18c))  
 I AUX =1S =2O await-NONPAST you-DAT

<sup>4</sup> For similar patterns of *floating* plural in Romance, see §4.

- ‘I am waiting for you.’
- c. Pura mi -nya -rna -ngku -lu nganimpa-rlu-ju?<sup>5</sup>  
 follow PRES =INT =1PL.EX.S (=2SG.O) =1PL.EX.S we.EX-ERG =DEF  
 ‘Shall we follow you?’

The formatives in (8) are rigidly ordered: if, under the same syntactic conditions, the clitic elements in (8) were scrambled, the resulting string would be completely ungrammatical.

The order of clitic elements varies on a language-specific basis. Closely-related languages, which exhibit the same displacement of phrasal arguments and adjuncts, show different orders of clitics: for instance, third person object clitics in Italian and French – in (9) – exhibit the orders dative > accusative and accusative > dative, respectively; Italian and Spanish – in (10) – exhibit opposite orders of the impersonal and dative clitic; French and northern Italian dialects differ with respect to the order of subject clitics and negation: in French subject clitics precede the preverbal negation marker, while in the vast majority of northern Italian dialects that still display a preverbal negator, the order is negation > subject clitic, see (11).

- (9) a. **glie** -**lo** danno. (Italian)  
 3SG.DAT= 3SG.M.ACC= give.3PL  
 ‘They give it/him to him/her/them.’
- b. **ils** **le** **lui** donnent. (French)  
 3PL.NOM= 3SG.M.ACC= 3.DAT= give.3PL  
 ‘They give it/him to him/her.’
- (10) a. **le** **si** parla. (Italian)  
 3SG.F.DAT=IMP= speaks3.SG  
 ‘One speaks to her.’
- b. **se** **le** habla. (Spanish)  
 IMP= 3SG.DAT= speaks3.SG  
 ‘One speaks to him/her.’
- (11) a. **Tu** **ne** manges pas (French)  
 2SG.NOM= NEG eat.2SG NEG
- b. **No** **te** magni mia (Veronese, northern Italo-Romance)  
 NEG= 2SG.NOM= eat.2SG NEG  
 ‘You do not eat.’

The order of clitic formatives is not random as some general tendencies emerge from cross-linguistic comparison. First of all, elements that have features in common are linearized in the same position, e.g. auxiliaries precede or follow pronouns, first/second person pronouns precede or follow third person pronouns, subject pronouns precede or follow object pronouns, datives precede or follow accusatives, ethical datives precede or follow argumental datives (Bošković 2004), bound pronouns precede or follow referential pronouns, etc. Exceptions are frequently found (some will be discussed at the end of the present section), but languages seldom display ‘crazy’ orders, in which all clitics are randomly displaced regardless of grammatical factors. Pronominal clitics, for instance, are usually linearized according to three parameters (mixed systems may arise from the combination of multiple factors):

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<sup>5</sup> Quoted in Mushin and Simpson (2008: (3)).



- i. the order of clitics within the cluster follows argument/case or person/animacy hierarchies (more on this in §5.2);
- ii. the order of clitic formatives is isomorphic to or mirrors that of the corresponding XP;
- iii. the order of clitics depends on extra-syntactic factors such as morpho-phonological properties.

To the best of my knowledge, (i) is a much more frequent option than (ii) and (iii). In Wolof, for instance, pronominal and locative clitics are rigidly ordered in finite clauses within a string formed by (S)<sup>6</sup> > O > Loc (Martinović 2020):

- (12) a. Da **-ma** **-ko** **-fa** gis. (Wolof)  
do.C =1SG.S =3SG.O =LOC see  
‘I saw him/her/it there.’
- b. Xale yi lekk-na **-ñu** **-ko** **-fi**.  
child the.PL eat-C =3PL.S =3SG.O =LOC  
‘The children ate the cake.’
- c. Lek-k-na      **-leen** **-fa**.  
eat-C =3SG.S =3PL.O =LOC  
‘He ate them there.’

In Pashto (Tegey 1975) pronominal clitics follow adverbial/modal clitics<sup>7</sup>, but – unlike in Wolof – clitics are linearized according to person (for singular pronouns, the order is 1 > 2 > 3; plural clitics will be addressed in §4). Up to two clitics can co-occur, pronominalizing the subject, the object of transitive verbs, or a possessor. Since clitics are not linearized according to syntactic functions (S, O, Poss), sentences containing two clitics are always ambiguous:

- (13) a. topak **me** **de** raworə. (Pashto; Tegey 1975)  
gun 1SG 2SG brought  
‘I brought your gun / You brought my gun.’
- b. topak **me** **y** raworə.  
gun 1SG 3SG brought  
‘I brought his gun / He brought my gun.’
- c. topak **de** **y** raworə.  
gun 2SG 3SG brought  
‘You brought his gun / He brought your gun.’

In Tagalog, pronouns are rigidly ordered depending on their prosodic status. Monosyllabic pronouns (*ko* ‘me’, *ka* ‘you.S’, *mo* ‘you.O’) precede disyllabic pronouns, regardless of person or case (Billings & Konopasky 2020): for instance, in (14a) the first person singular object pronoun *ko* ‘me’ precedes the subject pronoun, while in (14b) the first person singular subject *ako* ‘I’ follows the monosyllabic object pronoun *mo* (‘you’):

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<sup>6</sup> The third person singular marker is phonologically null in certain combinations such as (12)c.

<sup>7</sup> Except the modal *de*, which is identical to the 2sg pronoun.

- (14) a. Nakita **ko** **siya**. (Tagalog; from Billings & Konopasky 2020)<sup>8</sup>  
 be.seen 1SG.O 3SG.S  
 ‘I saw him/her.’  
 b. Nakita **mo** **ako**.  
 be.seen 2SG.O 1SG.S  
 ‘You (Sg.) saw me.’

Monosyllabic pronouns cannot co-occur (more on this in §3), whereas disyllabic elements co-occur with a relatively free order that, tendentially, corresponds to the order of XP arguments (Billings & Konopasky 2020).

- (15) a. Nakita **niya** **ako**. (Tagalog)  
 be.seen 3SG.O 1SG.S  
 b. <sup>?</sup>Nakita **ako niya**.  
 ‘He/She saw me.’

### 3.1 Exceptions

Languages display evidence of bona fide clitic formatives that occupy a dedicated position differing from the one that harbours the other clitics. For instance, in Serbo-Croatian, auxiliaries are higher (namely, occur to the left of) pronominal clitics as in (16a), save for the third person singular auxiliary clitic *je*, which follows pronominal clitics as in (16b):

- (16) a. Oni **su** **mu** **ga** predstavili. (Serbo-Croatian)  
 they =AUX.3PL =3SG.DAT =3SG.ACC introduced  
 ‘They introduced him to him.’  
 b. Ona **mu** **ga** **je** predstavila.  
 she =3SG.DAT =3SG.ACC =AUX.3SG introduced  
 ‘She has introduced him to him.’

Bošković (2004: 63) shows very convincingly that, in all syntactic respects, *je* behaves like other auxiliaries – e.g. unlike pronominal clitics, it is not subject to VP ellipsis – although it linearly follows pronominal clitics. According to Bošković (2004: 69), the peculiar displacement of *je* can be accounted for by supposing that it is “in the process of losing its cliticness”. In other words, the auxiliaries *su* and *je* instantiate the same grammatical category, but belong to different functional classes (in the sense of Cardinaletti and Starke 1999), thus occupying different, albeit adjacent positions in the structure of the clause.

This recalls the distribution of clitics and so-called *weak* pronouns in Romance (e.g. the Italian disyllabic pronoun *loro* ‘to them’, Cardinaletti 1991): both clitics and weak pronouns cannot be focalised, coordinated, used in isolation, etc., but the latter enjoy a higher degree of independence from the verb. Unlike clitics, the weak pronoun *loro* never occurs in proclisis, does not climb to the inflected verb of compound tenses and periphrastic constructions, and is not necessarily adjacent to the verb.

- (17) a. **Mi** ha presentato **loro** ieri. (Italian)  
 1SG.OBL= AUX.3SG introduced 3PL.IO yesterday

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<sup>8</sup> The original example is from Schachter & Otnes 1972: 185.

- ‘He introduced me to them yesterday.’
- b. Non ho dato *mai loro* un libro.  
 NEG AUX.1SG given ever 3PL.IO a book  
 ‘I never gave them a book.’

At the same time, the weak *loro* differs from strong pronouns and dative XPs as it must precede the direct object (Cardinaletti 1991):

- (18) Maria ha dato **loro** un libro. (Italian)  
 Maria AUX.3SG given 3PL.IO a book  
 ‘Maria gave them a book.’

Hence, fully-fledged clitics and weak pronouns occupy separate positions in the clausal spine, although they may end up being adjacent in nonfinite clauses or in restructuring environments where clitics do not climb as in (19a). However, (19b) shows that *loro* is not placed in the same position as the dative clitic *gli*, which precedes *lo*:

- (19) a. Vuole presentar **-lo loro**. (Italian)  
 wants.3SG introduce.INF =3SG.M.ACC 3PL.IO  
 ‘He wants to introduce him to them.’
- b. Vuole presentar **-gli -lo**.  
 wants.3SG introduce.INF =3SG.DAT =3SG.M.ACC  
 ‘He wants to introduce him to him.’

Italian *loro* and Serbo-Croatian *je* do not belong to the same cluster as analogous function words (dative pronouns and auxiliaries, respectively). The same kind of explanation can account for the behaviour of Tagalog clitics in (14) and (15). Recall that in Tagalog monosyllabic clitics always precede disyllabic pronouns and further (clitic?) material can be interpolated between the two sets of pronominal elements:

- (20) a. Nakita **ko na siya**. (Tagalog)  
 be.seen 1SG.O already 3SG.S  
 ‘I saw him/her already.’
- b. Nakita **mo yata ako**.  
 be.seen 2SG.O perhaps 1SG.S  
 ‘Perhaps you (Sg.) saw me.’
- c. Nakita **ka ba nila?**  
 be.seen 2SG.S Q 3PL.O  
 ‘Did they see you (Sg.)?’

As in the case of Italian *loro* in (17b), the displacement of monosyllabic and disyllabic pronouns in Tagalog may result from the co-existence of two complementary (i.e. not overlapping) series of pronouns, each with a dedicated nesting site in the functional spine of the clause: the former are phonologically and syntactically clitic, whereas the latter resemble clitics in having a special syntax (Zwicky 1977), but are prosodically independent.

To conclude, certain exceptions to the templatic array of clitic formatives can be accounted for by supposing that clitics are not all created equal. Functional classes, then, are not defined only on the basis of categories/features (e.g. pronominal/auxiliary/locative clitics, first/second/third person, etc.), but also on the basis of their degree of *structural deficiency* (Cardinaletti and Starke’s 1999 term), i.e. elements such as Italian *loro*, Serbo-Croatian *je*,

and Tagalog disyllabic pronouns are supposed to have a more complex inner structure than bona fide clitics such as Italian *gli(e)* in (19b), Serbo Croatian *su* in (16a), or Tagalog monosyllabic clitics. Degrees of structural deficiency, however, seldom have clear empirical correlates cross-linguistically; hence, hypothesizing that clitics with a ‘crazy’ order are not full-fledged clitics may lead to circularity.

### 3.2 Diachronic change

The order of certain clitic clusters sometimes appears to be free. Synchronic variation usually results when two alternative patterns – one receding, the other emerging – are allowed in the same chronological stage, possibly in different registers/sociolects (Aski and Russi 2010). In old Italian, for instance, strings containing first/second person datives and a third person accusative clitic may have either order: IO > DO or DO > IO. The earliest records, dating at the thirteenth century, exhibit the archaic order, as in (21), while in the first half of the fourteenth century both orders were allowed in apparent free variation. Later, the archaic order was progressively replaced by the innovative one, as in (21), which is the only possible order in present-day Italian. French, in (22), shows the same evolution, which dates to the sixteenth century.

- (21) a che [...] voi **la** **mi** concediate.<sup>9</sup> (old Italian)  
 that [...] you.PL 3SG.F.ACC=1SG.OBL= grant  
 ‘That you grant it to me.’  
 b se Egli **me** **la** concede.<sup>10</sup>  
 if he 1SG.OBL= 3SG.F.ACC= grants  
 ‘If he grants it to me.’

- (22) a Je **le** **te** comande. (old French)  
 I= 3SG.M.ACC= 2SG.OBL= order  
 ‘I order you to do it.’  
 b Je **te** **le** comande. (French)  
 I= 2SG.OBL= 3SG.M.ACC= order  
 ‘I order you to do it.’

Analogously, in northern Italian dialects the order of subject clitics and negation was reversed starting from the 16<sup>th</sup> century. In medieval Friulian, for instance, the subject clitic *tu/te* ‘you’ occurred in front of negation, as shown in (23), while in modern varieties the only possible order is negation > *tu/te*:

- (23) **Tu** **no** havarès la bielle fie. (old Friulian)<sup>11</sup>  
 2SG.NOM= NEG= have.FUT the nice girls  
 ‘You will not have nice girls’
- (24) a. No **tu** compre mai meil (Barcis)  
 b. No **to** compra mei mei (Cimolais)

<sup>9</sup> Boccaccio, *Filocolo*.

<sup>10</sup> Boccaccio, *Filocolo*.

<sup>11</sup> From Vanelli (1998:74).

- |    |    |           |         |     |        |                         |
|----|----|-----------|---------|-----|--------|-------------------------|
| c. | No | <b>te</b> | crompa  | mai | mei    | (Claut)                 |
| d. | No | <b>te</b> | compris | mai | pons   | (Cordenons)             |
| e. | No | <b>to</b> | crompe  | mei | pons   | (Erto)                  |
| f. | No | <b>tu</b> | cumpris | mai | melus  | (Moimacco)              |
| g. | No | <b>te</b> | compris | mai | pons   | (Montereale Valcellina) |
| h. | No | <b>tu</b> | compris | mai | melucs | (Nimis)                 |
| i. | No | <b>tu</b> | compris | mai | melos  | (Qualso)                |
| j. | No | <b>tu</b> | ciolis  | mai | miluz  | (Remanzacco)            |
- NEG= 2SG.NOM= buy never apples  
 ‘You never buy apples’

To conclude, variation in the ordering of clitics is allowed as a consequence of diachronic change. Diachronic evidence shows that templates are probably too rigid to account for the linearization of clitics as, in principle, nothing prevents clitic clusters from being inverted *ceteris paribus*, i.e. clitics in old Italian/French were subject to a change that had no evident counterpart in the syntax of the corresponding strong pronouns/XPs (more on this in §3.3). Furthermore, diachronic evidence shows that changes targeted classes of clitic formatives (e.g. first/second person clitics), thus confirming the intuition that clusters set the order of clitic formatives according to grammatical categories and features.

### 3.3 Templates and other explanations

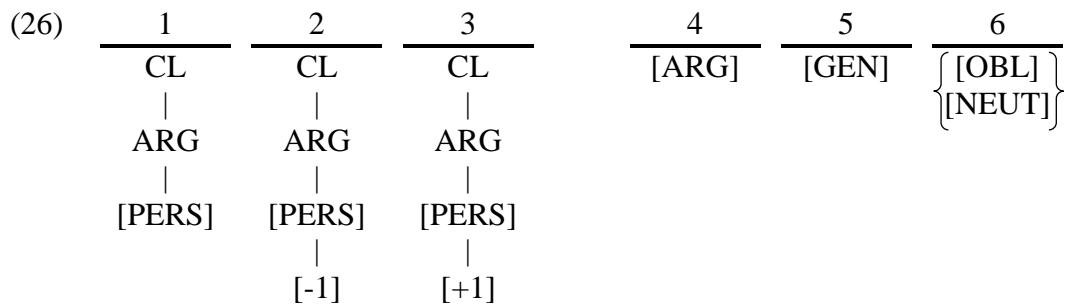
The internal order of clitic sequences is a challenge for syntactic accounts as the mapping between syntactic structures and clitic clusters is often opaque. The nature of clitic clusters is a matter of debate ranging between two opposite standpoints: either we can try to derive the order of clitics from syntactic principles or we can postulate an intermediate level of representation in which syntactic structures are mapped onto linear sequences by means of *templates*.

Templates, which act as filters barring illicit combinations of clitics, may be derived from various theoretical constructs such as *surface constraints* (Perlmutter 1971), *precedence conditions* (Harris 1994), *Optimality Theory constraints* (Heap 1998), etc. The main question regarding the nature of templates is the type of information they rely upon: syntactic, morphological, phonological, etc. It has been a widely held view since the late 60s that templates cannot be derived via syntactic transformations: not only are pronominal clitics not linearized according to the same rules as XP arguments, but grammatical features (e.g. person, case) seem insufficient in setting the order of clitic formatives. For instance, in Perlmutter’s (1971) account of Spanish clitics in (25), the template’s slots are identified by person features (I, II, III), but a dedicated slot is postulated for the impersonal/reflexive clitic *se*:

- (25) *se* II I III

The template in (25) has therefore a mixed nature as *se* does not obey the order set on the basis of person features (the same holds true for the auxiliary *je* in the Serbo-Croatian template, see §3.1). To provide a uniform representation of clitic ordering, Bonet (1991: 102-104) argues that templates always operate on grammatical features, without access to

phonological information.<sup>12</sup> In Bonet’s account, clitics correspond to feature hierarchies, which are accommodated in a template before Spell Out (i.e. before being mapped into phonological exponents). The following scheme shows Bonet’s template of central Catalan clitics: Slot 1 contains the reflexive/impersonal clitic, Slots 2-3 contain second and first person clitics, Slot 4 contains 3<sup>rd</sup> person accusative clitics, Slot 5 the genitive/ablative clitic, Slot 6 the locative clitic and the 3<sup>rd</sup> person neuter accusative clitic.



The features characterising each slot of the template are a subset of those forming the hierarchy that corresponds to each clitic. Consequently, the insertion of clitics in the template is not necessarily a perfect match: some features are irrelevant for linearization (e.g. gender and number) and some clitics have no dedicated slot in the template. In the latter case, hierarchies can be split and their features scattered in various slots. Third person datives, for instance, have no dedicated slot: they are mapped into a compound form that is linearized in Slots 4 and 6. Datives are conceived of as discontinuous elements formed by a third person clitic and an oblique/locative clitic. Evidence for the composite nature of dative clitics comes from sequences formed by a dative clitic and the ablative/genitive clitic: as shown in (27), the former is mapped into a discontinuous exponent separated by the partitive clitic *n* that occupies Slot 5.

(27) De pomes, als nens, no **lz** **-n** **-i** donis! (central Cat.)  
of apples to.the.children NEG 3PL.DAT(PART)3PL.DAT= give  
‘Do not give apples to the children!’

The main innovation in Bonet’s approach consists of theorizing a morphological component that is autonomous from both phonology and syntax. According to Bonet, there are at least two main reasons to pursue a morphological analysis of clitic ordering, rather than deriving the order of clitics from a syntactic machinery. First, closely-related languages exhibit a kaleidoscopic degree of variation in clitic ordering, while they are quite uniform under all other syntactic respects. Second, pronominal clitics are *syncretic* as they pronominalize various types of arguments and adjuncts: for instance, a clitic such as Fr. *me* ‘me’ has a fixed position in the French template, whether or not it pronominalizes a direct/indirect object, an anaphor, an ethical dative, a dative of inalienable possession, etc. As Bonet (1991: 18) puts it, “these distinctions are relevant to the syntax, not the morphology”.

Clitic clusters are key evidence in the debate concerning the nature of linearization. In the current (generative) literature, word order variation is supposed to either result from variation in syntactic movement (e.g. Kayne 1994) or be set at the syntax/phonology interface (whereas syntactic structures are ordered only by dominance; see Chomsky 2001). Evidence

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<sup>12</sup> One might wonder whether the same explanation can account for the ordering of mono- vs disyllabic clitics in Tagalog.

from clitics seems to support the latter approach, as the linearization of clitic formatives appears to be independent of core syntactic phenomena. However, several bona fide word order phenomena exhibit “templatic” properties. Consider for instance nominal modifiers such as determiners, possessives, numerals, adjectives, etc. The order of these elements is normally rigid and subject to a high degree of cross-linguistic variation, in particular when they are placed postnominally. In a reformulation of Greenberg’s Universal 20, Cinque (2005) argues that all and only the attested orders (with their different degrees of markedness) result from various kinds of syntactic movement within the extended structure of the noun phrase. Hence, rigidity *per se* is not sufficient evidence against syntactic approaches, at least within a Cinque-style framework.

Additionally, before discarding a syntactic analysis, it is worth considering that movement is not the sole theoretical construct to derive variation. One can hypothesize that similar clitic forms in different languages bear different sets of features and, for this reason, they are merged in different positions across the clausal spine. Manzini and Savoia (2004) argue that clitics lexicalize a string of syntactic functional heads such as R, Q, P, Loc, N, I, denoting semantic properties such as Referentiality, Quantification, Person, etc. Pronouns that in descriptive grammars are analysed as e.g. “accusative” in fact correspond to different heads in the functional string: for instance, the Italian dialects spoken in Vagli (Tuscany) and Olivetta San Michele (Liguria) exhibit different orders of accusative and dative clitics because the third person accusative clitics *l* and *u* in (28) and (29) lexicalize different heads (N and R, respectively) and, consequently, have different positions in the clitic string with respect to the so-called dative clitic, which in both dialects lexicalizes the same head Q (a similar analysis, within a different framework, has been proposed by Poletto (2000) for subject clitics in northern Italo-Romance):

(28) a. i    **ji**    **l**            ða. (Vagli; Italo-Romance)  
           he= 3.DAT=3.ACC= give.3SG  
           ‘He gives it to him.’

... R Q P Loc N I  
       |        |  
       **ji**     **l**

b. el    **u**        **i**            'duna. (Olivetta San Michele; Italo-Romance)  
       he= 3.ACC= 3.DAT= give.3SG  
       ‘He gives it to him.’

... R Q P Loc N I  
       | |  
       **u i**

Another possible syntactic factor in determining cross-linguistic variation is how languages configure the dominance relations in which clitics are organised: clitic clusters may either exploit a single or multiple syntactic positions (Kayne 1994); in the latter case, each clitic (or class thereof) occupies a dedicated position, whereas in the former scenario some clitics are attached to others (I will elaborate further on this point in §4.4).

In conclusion, morphological templates are essential descriptive tools to capture the array of clitics cross-linguistically. Theoreticians have elaborated on the nature of templates, arguing that templates are either autonomous morphological structures or epiphenomena

resulting from ordinary syntactic computation. In my opinion, fifty years after Perlmutter's (1971) seminal work, the issue is still open.

#### 4 Morpho-phonological restrictions

In many languages, the actual combinations of clitics are a subset of those predicted by language-specific templates. Among potential clusters, some are systematically ruled out by orthogonal restrictions, which yield three possible outcomes:

- i. suppletion: one formative or the entire cluster has a shape that does not correspond to the expected combination;
- ii. gap: one formative (or more) remains unpronounced;
- iii. ungrammaticality: the combination is impossible, regardless of its morphology.

This section deals with the restrictions leading to suppletion and gaps, while ungrammatical combinations will be examined in §5. Before addressing morphological issues, some brief remarks on the phonology of clitic combinations is in order, in §4.1.

##### 4.1 An aside on the phonology of clitic clusters

Clitic elements are not inherently (i.e. lexically) stressed, although they can dislodge the primary stress of a nearby element, the *host*. Stress shift phenomena show that clitics are *prosodically deficient* (see, among others, Selkirk 1995; Anderson 2005: ch. 3). Peperkamp (1996, 1997), Loporcaro (2000) argued convincingly that Romance clitic pronouns, either proclitic or enclitic, are syllables sister to a (lexical) Prosodic Word and dominated by a recursive (post-lexical) Prosodic Word; cf. (29). Stress shift results from post-lexical reassignment of stress to the outer Prosodic Word:<sup>13</sup>

(29) ((host)<sub>PW</sub> clitic)<sub>PW</sub>

A phonological analysis like (29) accounts successfully for why stress is dislodged, but (almost<sup>14</sup>) never falls on the clitic. Second, it explains why stress shift is often conditioned by the stress pattern of the inner word. Third, (29) correctly predicts that clitic clusters are stressed more readily than single enclitics as the former correspond to a foot (see (30)), which is more prone to stress assignment than a single clitic/syllable:

(30) ((host)<sub>PW</sub> (clitic clitic)<sub>FT</sub>)<sub>PW</sub>

Besides stress assignment, other phonological rules can be extended from the lexical to the post-lexical domain. For instance, clitic clusters are often subject to vowel harmony (in the languages in which vowel harmony is already active at the lexical level). In certain dialects of central and southern Italy, for instance, enclitics may trigger regressive harmony, targeting leftmost enclitics and word-final unstressed vowels:

(31) a. 'dite-ʃe → 'ditu-ʃu-lu (Servigliano; Camilli 1929)  
tell=us tell=to.us=it

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<sup>13</sup> By assuming that clitics are dominated by a recursive prosodic constituent, an *ad hoc* prosodic constituent such as the *Clitic Group* can be dispensed with (pace Nespors and Vogel 1986).

<sup>14</sup> For counterexamples, see Torres-Tamarit and Pons-Moll 2019.



b. 'maŋtʃa → 'maŋtʃu-lu (Crotone)  
eat eat=it

In Warlpiri, enclitics are subject to progressive harmony, which is triggered by the word that precedes the clitics (recall that Warlpiri has second-position clitics). Vowel harmony turns *u* into *i* if no intervening *a* occurs (Nash 1980: 86):

- (32) a. Kurdu **kurlu** **-rlu** **-lku** **-ju** **-lu** (Warlpiri)  
child =prop =erg =then=me =they  
b. Maliki **kirli** **-rli** **-lki** **-ji** **-li**  
dog =prop =erg =then=me =they  
c. minija **kurlu** **-rlu** **-lku** **-ju** **-lu**  
cat =prop =erg =then=me =they

Analogously, in Wolof clitics are subject to progressive ATR vowel harmony, which spreads from roots to affixes and clitics (Martinović 2020):

- (33) a. Lekk-na **-leen** **-fa**. (Wolof)  
eat-C =3PL.O =LOC  
'He ate them there.'  
b. Dóor-në **=léen** **=fë**.  
hit-C =3PL.O =LOC  
'He hit them there.'

Once one assumes that clitics have a prosodically deficient status, clitic clusters are then expected to be subject to the same phonological rules taking place within lexical domains (Anderson 2011: 2017), although we cannot predict whether and which phonological rules are extended to the postlexical domain containing clitics.

Phonological processes such as stress shift or vowel harmony are, in principle, independent from the morphological or syntactic make-up of clitic clusters. This does not amount to saying that phonological processes are never affected by morphosyntactic boundaries, but scholars should be warned that, in absence of independent morphological and syntactic evidence, phonological rules are not solid ground to draw conclusions on the morphosyntax of clitic clusters.

A possible further complication regarding the syntax/phonology mapping of clitic clusters is that phonological irregularities may be eventually morphologized. This is arguably what happened in Neapolitan, where enclitics are – apparently – subject to stress shift and metaphony (namely, regressive harmonization of stressed vowels), even if final vowels are all reduced to *-ə*. However, Bafle (1992, 1994) shows that stress shift and metaphony are no longer synchronically active, but result from the presence of a disyllabic stressed allomorph of the accusative clitic (MSG 'illə, FSG 'ellə) that had undergone metaphony before all final vowel were centralized:

- (34) a. 'pɔrta **-t** **-'illə**. (Neapolitan)  
bring.IMP =2SG.DAT =3SG.M.ACC  
'bring him/it.m/them for you'  
b. 'pɔrta **-t** **-'ellə**  
bring.IMP =2SG.DAT =3SG.F.ACC  
'bring her/it.f/them.f for you'

The Neapolitan example shows that the morpho-phonology of clitic clusters is not necessarily transparent as phonological processes that were originally productive may have been morphologized, yielding patterns of allomorphy that nowadays have no plausible phonological motivation.

#### 4.2 Haplology

Having established that there is nothing particularly exceptional in the phonology of clitics and clitic clusters, let us focus on some systematic morpho-phonological irregularities that emerge in clitic combinations across languages and linguistic families.

Many languages tend to avoid sequences of identical clitics. For instance, Pashto (Tegey 1975: 163-164) rules out combinations of identical clitic pronouns and possessive determiners (the two co-occur in the second position of the clause; recall that Pashto clitics are ordered according to person features). The following examples show that certain combinations of pronouns are perfectly grammatical if the object is pronominalized by a strong pronoun (in capital letters after the slash), whereas sequences of identical clitic formatives are ungrammatical:

- (35) a. wror    **me**    **\*me/MA**    wahi. (Pashto; Tegey 1975)  
          brother 1SG 1SG       hits  
          ‘my brother is hitting me.’  
       b. wror    **de**    **\*de/TA**    wahi.  
          brother 2SG 2SG       hits  
          ‘Your brother is hitting you.’  
       c. wror    **ye**    **\*ye/DAY**    wahi.  
          brother 3SG 3SG       hits  
          ‘His brother is hitting him’

Notice that two clitic formatives can be combined – in a rigid order – if they are not identical:

- (36) a. wror    **me de**    wahi. (Pashto; Tegey 1975)  
          brother 1SG 2SG hits  
          ‘My brother is hitting you / You are hitting my brother.’  
       b. wror    **me ye**    wahi.  
          brother 1SG 3SG hits  
          ‘My brother is hitting him / He is hitting my brother.’  
       c. wror    **de ye**    wahi.  
          brother 2SG 3SG hits  
          ‘Your brother is hitting him / He is hitting your brother.’

Analogously, in Italian the locative clitic *ci* is free to combine with any other clitic pronoun, save for the identical first person plural clitic *ci*:

- (37) a **mi**        **ci**        porta Micol. (Italian)  
       b **ti**        **ci**        porta Micol.  
       c **(\*ci)**    **ci**        porta Micol.  
       d **vi**        **ci**        porta Micol.  
          1/2=    LOC=    takes Micol  
          ‘Micol takes me/you/\*us/you.PL there.’

In languages in which the same clitics are not identical—as in French, in (38)—the corresponding combination is possible. It means that the restriction in (37) and (38a) is due to a morphological condition barring identical exponents, regardless of the features/functions of pronouns.

- (38) a (\***ci**) **ci** potete portare? (Italian)  
 1PL= LOC= can.2PL to.take  
 ‘Can you take us there?’  
 b Pouvez-vous **nous y** conduire ? (French)  
 can.2PL=you 1PL= LOC= to.take  
 ‘Can you take us there?’

Similar restrictions are attested in many other languages, although it is worth noting that the avoidance of identical exponents is a tendency more than an exceptionless rule.

Further irregularities obtain when clitic formatives are *partially* identical. Many Romance languages, for instance, disallow combinations of third person clitics, which usually contain an identical formative (e.g. *l-*) since they derive from the same series of Latin determiners. In clusters formed by two third person clitics, one of the two is often dropped (recall the gaps in the distribution of subject clitics exemplified in (6)). More often, however, clitic clusters formed by third person clitics end up having a suppletive form, which result from the amalgamation/impoverishment of the features of the two clitic formatives. The table in (39), for instance, reports some data from the *Atlas linguistique de la France* (Gilliéron and Edmont 1902-1910; the data refers to a randomly selected sample of datapoints). The table illustrates the comparison between the expected transparent shapes of the clusters (with either ordering) and the actual shape of clitic combinations, which is shown in the last column:

(39)

	*DAT > ACC	*ACC > DAT	actual shape
271	<i>i l</i>	<i>l i</i>	<i>i</i>
525	<i>li le</i>	<i>le li</i>	<i>li</i>
902	<i>lyi l</i>	<i>l lyi</i>	<i>li</i>
610	<i>lyi lu</i>	<i>lu lyi</i>	<i>lu</i>
724	<i>li lu</i>	<i>lu li</i>	<i>uli</i>
855	<i>li lu</i>	<i>lu li</i>	<i>lu</i>
866	<i>li lu</i>	<i>lu li</i>	<i>liu</i>

The above data show that combinations of third person clitics are highly opaque. In some varieties we have the impression that one clitic has been dropped, but in the majority of cases the morphology of the cluster is partially or entirely suppletive.

### 4.3 Suppletion

To avoid the co-occurrence of identical or similar clitic formatives, the Romance languages often exhibit suppletion, instead of haplology. For instance, Spanish and Italian do not allow combinations of impersonal and reflexive *se/si*, but while Spanish “repairs” the cluster by dropping one *se*, Italian replaces the leftmost *si* with a suppletive item *ci*:

- (40) a. Cuando **se** come, (\***se**) **se** lava las manos. (Spanish)  
 b. Quando **si** mangia, **ci**/\***si** **si** lava le mani. (Italian)

When one= eats, 3.REFL= one= wash the hands  
 ‘When one eats, one washes one’s hands.’

Analogously, in the western variety of Pashto described in Tegey (1975: 156-157), a clitic is normally dropped in a sequence of two identical formatives (see §4.2). However, when the clitic *mo* referencing a 1/2 person plural element is expected to combine with an identical 1/2 person plural element, the leftmost clitic is pronounced as *am*, which – in the same register/dialect – occurs only in combination with *mo*:

- (41) a. motar **mo/\*am** rawostə. (Pashto; Tegey 1975)  
 car 1/2PL bought  
 ‘We/you bought the car’  
 b. motar **am/\*mo mo** rawostə  
 car 1/2PL 1/2PL bought  
 ‘We/you bought our/your car.’

Suppletion in clitic sequences has been investigated in depth since Perlmutter (1971), who brought attention to Spanish ‘spurious *se*’ phenomena, i.e. suppletion of the third person dative clitic when it is combined with an accusative clitic. The suppletive element corresponds to the impersonal/reflexive clitic *se*:

- (42) Juan **se/\*le lo** comprò. (Spanish)  
 Juan to.him/her=it=bought  
 ‘Juan bought it for him/her/them.’

Romance vernaculars exhibit analogous patterns of suppletion, in which the suppletive item is always a clitic form that is attested in the paradigm of clitics. Besides cases of spurious *se*, in which the suppletive element is a reflexive clitic, Romance exhibits patterns of spurious locatives, in which the etymological third person dative *le/li* is replaced by the (etymologically) locative clitics *ci/bi/y* and, to a lesser extent, *ne/nde*:

- (43) a. **bi/\*li l’** appo datu. (Logd.)<sup>15</sup>  
 3.DAT= 3.ACC= have.1SG given  
 ‘I gave it to him/her/them.’  
 b. **n/\*i u** da. (Rocca Imperiale)<sup>16</sup>  
 3.DAT= 3.ACC= give.3SG  
 ‘He/she gives it to him/her/them.’

Other languages display a rather different mechanism of suppletion, whereby the entire cluster is marked by a suppletive element. In Tagalog, for instance, the two monosyllabic clitics *ko* and *ka* cannot co-occur and the corresponding cluster is marked by a single disyllabic exponent *kita*:

- (44) a. \*Nakita **ko ka** / **ka ko**. (Tagalog)<sup>17</sup>  
 \*be.seen 1SG.O 2SG.S 2SG.S 1SG.O

<sup>15</sup> Jones (1993: 220).

<sup>16</sup> Manzini and Savoia (2005: 291).

<sup>17</sup> Schachter & Otones (1972: 185).

- b. Nakita **kita**.  
 be.seen {1SG.O | 2SG.S}  
 ‘I saw you (Sg).’

The portmanteau formative *kita* occurs in the same position as disyllabic clitics (see §3), i.e. after particle clitics such as the interrogative *ba*: *Nakita ba kita?* ‘Did I see you (Sg.)?’ (Schachter & Otnes 1972: 185).

In other languages, the morphology of the cluster results from an amalgamation of formatives/features of both clitics, as in central Catalan dialects spoken in the Barcelona area<sup>18</sup> (Bonet 1991, 1995; see also Harris 1994, 1997). Whereas Spanish displays a single pattern of suppletion, in (42), most clitic combinations of central Catalan are highly opaque as most clusters are reduced to an exponent that resembles a dative form, e.g. *li* in (45):

- (45) a. Això, **ho** donaré a en Miquel després. (central Cat.)  
 this 3SG.NEUT= give.FUT.1SG to the M. later  
 b. A en Miquel, **li** donaré això després.  
 to the M. 3SG.DAT= give.FUT.1SG this later  
 c. \*Això, a en Miquel, **li ho** donaré després.  
 this to the M. 3SG.DAT= 3SG.NEUT= give.FUT.1SG later  
 d. Això, a en Miquel, **li** donaré després.  
 this to the M. {3SG.DAT | 3SG.NEUT}= give.FUT.1SG later  
 ‘I will give this to Miquel later.’

One might suggest that sequences are opaque because accusative clitics are systematically dropped, but upon closer scrutiny it turns out that central Catalan clusters, as in (46), result from an *amalgamation* of the features of the two clitics as in the Gallo-Romance dialects illustrated in table (39): the plural is *omnivorous* (i.e. it is always expressed, regardless of whether the plural argument is the direct or indirect object), repetitions of the same exponent are avoided (e.g. \**ll*, \**nn*, \**zz*), and gender markers (including neuter<sup>19</sup>) are always deleted.

(46)

	DAT PL ( <i>elzi</i> )	DAT SG ( <i>li</i> )	ACC PL (M <i>els</i> , F <i>les</i> )	ACC SG (M <i>el</i> , F <i>la</i> )	NEU ( <i>ho</i> /u/)	GEN/ABL ( <i>en /n/</i> )	LOC ( <i>hi /i/</i> )
DAT PL ( <i>lzi</i> )	*	*	<i>lzi</i>	<i>lzi</i>	<i>lzi</i>	<i>lzni</i>	<i>lzi</i>
DAT SG ( <i>li</i> )	*	*	<i>lzi</i>	<i>li</i>	<i>li</i>	<i>ni</i>	<i>li</i>
ACC PL (M <i>els</i> , F <i>les</i> )	-	-	*	*	*	<i>lzi</i>	<i>lzi</i>
ACC SG (M <i>el</i> , F <i>la</i> )	-	-	*	*	*	<i>li</i>	<i>li</i>
NEU ( <i>ho /u/</i> )	-	-	-	-	*	<i>li</i>	<i>li</i>
GEN/ABL ( <i>en /n/</i> )	-	-	-	-	-	<i>ni</i>	<i>ni</i>

The three ingredients of central Catalan suppletion (*omnivorous* plural agreement, identity avoidance, and gender neutralization) are found in other Romance varieties. Omnivorous plural agreement is seldom attested in American Spanish and in Sardinian varieties, in which

<sup>18</sup> Some of the linguistic traits exemplified in (45), (46), (51) are not attested in the city dialect (Eulàlia Bonet, p.c.).

<sup>19</sup> The neuter clitic usually refers to events, predicates or clausal antecedents. In keeping with Corbett’s (1991) assumption that the defining characteristic of gender is agreement (and not its semantic value, e.g. sex or animacy), the Catalan (and Romance) neuter can be considered as a third gender.

a plural marker can occur at the end of the cluster when the plural indirect object is replaced by a suppletive exponent (the so-called *parasitic plural*):

(47) Ese vino yo **se lo -s** regalè a mis primos. (Sp. dialects)  
 that wine I 3.DAT= (3.M.ACC) -PL= I.gave to my cousins  
 ‘That wine, I gave it to them (my cousins).’

(48) nara **-bi -lo -s**. (Logudorese Sardinian)  
 tell =3.DAT (3.M.ACC) -PL  
 ‘Tell it to them.’

Gender neutralization targets the dative clitic in present-day Italian: the feminine pronoun *le* ‘to her’ must be replaced by the masculine *gli* when the dative clitic occurs in a true cluster:

(49) Gianni **glie/\*le lo** comprò. (Italian)  
 G. 3.DAT= 3SG.ACC= bought  
 ‘Gianni bought it for her.’

In old Italian, gender neutralization also targeted accusative clitics, which show no gender and number agreement and the cluster ends with an invariable *-e*, e.g. *lile, glile, gliele*:

(50) che **gli le** demo p(er) una inpossta.<sup>20</sup> (old Italian)  
 that 3.DAT= 3PL.ACC= we.gave for a tax  
 ‘that we gave them to him for a tax.’

The data introduced so far show that clitic combinations are subject to constraints of various nature. Not only sequences of identical exponents tend to be avoided, but also gender and number markers are either deleted or linearized in unpredictable ways. Various types of suppletion are attested and the degree of opacity varies significantly across dialects.

Identity-avoidance is not sufficient to account for suppletion. For instance, in Romance sequences formed by a third person dative and partitive clitic often exhibit the same patterns of suppletion as clusters of third person clitics, although in the former no identity-avoiding principle can be responsible for the substitution. In Italian, the feminine dative *le* ‘to her’ can occur neither before the accusative clitic nor before the partitive *ne*. In both contexts, the masculine formative *gli* occurs even if the dative refers to a feminine individual; see (51). Analogously, in central Catalan the partitive clitic *en* cannot combine transparently with a third person clitic, as shown in (51).

(51) a. Gianni **glie/\*le ne** comprò. (Italian)  
 Gianni 3SG.F.DAT= PART= bought  
 ‘Gianni bought it for him/her/them.’  
 b. El jersei, de l’ armari **l i/\*en** trauré. (central Cat.)  
 The sweater, from the wardrobe, 3SG.F.ACC= ABL= take.FUT.1SG  
 ‘I will take the sweater from the wardrobe.’

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<sup>20</sup> *Il libro di amministrazione dell’eredità di Baldovino.*

Identity-avoiding constraints (or any principled variant thereof) cannot account for the morphology of many clitic clusters, which cannot result from trivial morpho-phonological processes such as haplology.

#### 4.4 On the nature of non-trivial suppletion

Perlmutter (1971) first argued that the facts overviewed in §3 (rigidity) and §4 (opacity) are tightly related. Intuitively, opacity arises because clitic clusters are constrained in the narrow space of the template: gaps and opacities arise when two clitic formatives “compete” for the same slot, in particular when the cluster contains two instances of the same clitic.

However, when we deal with rather complex systems like the one of central Catalan, a simple mechanism based on a competition for limited slots does not make the right predictions. Bonet (1991) argues that the template cannot generate all (and only) the attested patterns of suppletion and proposes instead that clusters are subject to morphological operations that prune the feature hierarchies corresponding to clitic elements.

By divorcing linearization issues (i.e. the template) from opacities, we can explain why closely-related languages tend to exhibit the same patterns of suppletion even if they differ widely with respect to the ordering of clitics (at least in the transparent clusters, see §3). Second, it is worth noting that suppletion and other irregularities are properties almost exclusively of pronominal clitics, whereas other function words that, across languages, are rigidly clustered (e.g. auxiliaries, discourse particles, aspectual markers, complementizers, etc.) tend to give rise to transparent combinations. If rigidity were the cause of opacity, one would expect all classes of clitics to be affected by the same degree of opacity, which is not the case.

Hence, the fact that clitics are rigidly ordered and the fact that clusters of (third person) pronominal clitics are often opaque might be related, but the relationship is probably less direct than usually thought. In previous works (for instance, in Pescarini 2017), I argued that variation in clitic ordering does not result from an autonomous morphological template, but from the configuration of the syntactic subtree where clitics are nested. Following Kayne (1994: 19–21), I argued that two clitics can be either *split* or *clustered* in a single syntactic position, as shown in (52a) and (52b), respectively. In the first case, clitics occupy distinct syntactic projections; in the second, they form a complex head.

- (52) a. [clitic ... [clitic ... ]]  
b. [(clitic clitic) ... ]

Opposite orders, such as  $\langle\alpha\beta\rangle$  and  $\langle\beta\alpha\rangle$ , result from different structural configurations of the same clitic material, see (53). Languages *choose* either configuration and, across time, may shift from one to the other (see §3.2). Moreover, I argued that non-trivial opacities (i.e. irregularities that do not result from straightforward phonological principles) are favoured in clusters of the type (53b).

- (53) a. [  $\alpha$  ... [  $\beta$  ... ] ]  
b. [ ( $\beta$   $\alpha$ ) ... ]

The hypothesis is supported by the evidence from various languages such as the Sardinian dialects in (54), in which the etymological dative form *li* occurs in isolation as in (54a) or when it follows another clitic, as in (54b). However, when the dative clitic occupies the leftmost position in the cluster, as in (54c), it must be replaced by the ‘spurious’ exponent *bi*.

- (54) a. **li**            **dana**            **kustu.** (Sardinian dialects)<sup>21</sup>  
           3 SG.DAT= give.3SG    this  
           ‘He/she gives this to him/her.’
- b. **nde**    **li**            **dana.**  
           PART= 3SG.DAT= give.3SG  
           ‘He/she gives some of them to him/her.’
- c. **bi/\*li**            **lu**            **dana.**  
           LOC/3 SG.DAT(IO)= 3.ACC= give.3SG  
           ‘He/she gives it to him/her.’

According to my analysis, (54b) is a split sequence, in which the two clitics occupy separate positions and, therefore, no opacity emerges. By contrast, in (54c) the two clitics are clustered in a single head and, for this reason, the feature bundle of the dative clitic, which is left-adjoined to the other clitic element, becomes suppletive because complex heads are subject to morphological rules of the kind supposed by Bonet (1991).

As previously mentioned in §4.3, the range of possible suppletions appears to be rather constrained as only certain features are systematically affected in clitic clusters; however, further research is needed to verify whether the effect we observe in Romance are robust typological trends or not.

## 5 Morphosyntactic restrictions

Clitic combinations are subject to further restrictions that are independent from linearization and do not yield morphological opacity: certain clitic elements cannot be combined regardless of their order and shape. The most widespread restriction takes place when a third person indirect object is combined with a first/second person direct object, as in the following example from Greek; notice that the same argument configuration is possible if one of the two pronouns is a strong form as in (55b):

- (55) a. \***Tha tu**            **se**            **stílune.** (Greek, Anagnostopoulou 2005)  
           FUT =3SG.M.GEN =2SG.ACC send.3PL
- b. **Tha tu**            **stílune**        **eséna**  
           FUT =3SG.M.GEN send.3PL 2SG.ACC  
           ‘They will send you to him.’

Haspelmath (2004: 7) points out that the restriction in (55) is attested in languages from various linguistic families, e.g. Warlpiri (Hale 1973: 334), although the restriction is not universal as shown by data from Polish (quoted in Haspelmath 2004). Within the same linguistic group, e.g. Romance, languages vary with respect to the types of combinations that are barred (§5.1) and some exhibit no restriction, see (57) (Roberta D’Alessandro, p.c.):

- (56) **Dałbym**            **mu**        **cię**        **za**        **żonę bez wahania.** (Polish)<sup>22</sup>  
           give.COND.1SG 3.DAT 2.ACC for wife without hesitation

<sup>21</sup> This pattern is attested in several Sardinian varieties such as Ittiri, Padria, Luras, Siniscola, Galtellì, and Bosa (see Manzini and Savoia 2005 vol. II: 317–21).

<sup>22</sup> The original example is from Cetnarowska (2003).



‘I would give you to him as a wife without hesitation.’

- (57) a. Giorgə **ji** **t'** a prisindatə. (Ariellese)  
 Giorgio 3.DAT= 2SG.ACC= has introduced  
 ‘Giorgio introduced you to him.’
- b. Ni **mmi** **ji** pozzə assəttà m’baccə.  
 not 1SG.ACC= 3.DAT= can-1sg sit near  
 ‘I cannot sit near him.’
- c. Giorgə **ti** **z'** a ‘ccattatə pi sservə.  
 Giorgio 1SG.ACC= 3.DAT.REFL= has bought forslave  
 ‘Giorgio bought you as his slave.’

The restriction in (55) is usually dubbed Person Case Constraint (or PCC), where *Case* is used as a synonym of syntactic function, not necessarily related to morphological case marking. The PCC is usually found in clusters pronominalizing the direct and indirect objects of ditransitives, but in fact several other syntactic environments may trigger PCC effects cross-linguistically. For instance, in (58a) the PCC is triggered by the third person dative clitic that pronominalizes the complement of the locative preposition *accanto* ‘next to’, while the first person reflexive clitic *mi* is selected by the pronominal verb *sedere-si* ‘sit down’ (compare with the grammatical sentence in (58b), where the reflexive clitic is at the third person):

- (58) a. \*Non **gli** **mi** posso sedere accanto. (Italian)  
 not 3.DAT= 1SG.REFL= can.1SG to.sit next.to  
 ‘I cannot sit next to him.’
- b. Non **gli** **si** può sedere accanto.  
 not 3.DAT= 3SG.REFL= can.3SG to.sit next.to  
 ‘He cannot sit next to him.’

The PCC is found also with psych verbs. In Spanish, for instance, some psych verbs such as sp. *antojarse* ‘to take a fancy’, *olvidar(se)* ‘to forget’, *ocurrir(se)* ‘imagine, think of’ obligatorily require an inherent reflexive clitic to double the theme argument. This gives rise to a violation of the Person Case Constraint when the experiencer is doubled by a first or second person clitic (Rivero 2004; the doubled pronoun is in italics):

- (59) a. A Ana siempre **se** **le** antojan *ellos*. (Spanish)  
 ToAna always 3.REFL= 3SG.DAT= fancy.3PL they  
 ‘Ana always takes a fancy to them.’
- b. \*A Ana siempre **nos** **le** antojamos *nosotros*.  
 To Ana always 1PL.REFL= 3SG.DAT= fancy.1PL we  
 ‘Ana always takes a fancy to us.’
- c. \*A Ana siempre **os** **le** antojais *vosotros*  
 To Ana always 2PL.REFL= 3SG.DAT= fancy.2PL you.PL  
 ‘Ana always takes a fancy to you.’

The above examples show that the PCC is not restricted to the Theme and Recipient arguments of ditransitives, but targets most, but not all clusters containing a dative clitic.

Non-selected adjuncts such as ethical datives<sup>23</sup> tend in fact to escape the restriction (Bonet 1991, 197).

- (60) No        **me**        **li**        diguis    mentides. (Catalan)  
 not        1SG.ACC= 3.DAT= tell.SUBJ lies  
 ‘Don’t tell him/her lies (on me).’

Haspelmath (2004: 8) suggests renaming the PCC *Ditransitive Person-Role Constraint* “because semantic roles are more easily comparable across languages than cases. Thus, the effects of the constraint are by no means restricted to languages such as French whose clitic pronouns can be said to bear dative case (for Recipient) and accusative case (for Theme).” In doing so, Haspelmath adopts a wider definition of semantic roles to account for data such as those in (58) and (59). Semantic roles – at least in a traditional view – are in fact not sufficient to provide a fine definition of the PCC, unless they are conceived of as a combination of a prototypical semantic core (e.g. the Recipients of *give* verbs) plus other “expressions that are coded in the same way” (Haspelmath 2004: fn 8). In fact, what is relevant in the definition of the PCC is not the semantic core, but rather the syntactic conditions under which XP and clitic arguments are *licensed* (this is how Case is conceived in the generative tradition, including Bonet’s definition of the PCC): XPs have the same Case when they are licensed under the same conditions (e.g. by the same preposition/marker or in the same clausal position). In this abstract sense, XPs and pronominal clitics will always have a Case (= uniform licensing conditions) regardless of their semantic/thematic roles and even in languages that lack morphological cases. Additionally, by assuming a syntactic definition of Case (as Bonet does), one can easily compare languages that exhibit PCC effects even if they have different and non-isomorphic systems of case marking. The term PCC can therefore be maintained, provided that we accept the syntactic/structural definition of Case and not the customary morphological one.

### 5.1 *The strong PCC and cross-linguistic variation*

The acceptability of combinations of 1st/2nd person clitics is subject to cross-linguistic variation. In some languages, like Spanish or French (Bonet 1991), these combinations are reported to be completely ungrammatical (although there is no full consensus; see Nicol 2005), while in other languages, like Italian, some clusters are in fact very marginal, but still interpretable, at least when both elements are singular.

- (61) a. %Mario    **mi**    **ti**    ha    presentato.        ‘me to you / you to me’  
 b. ??Mario    **mi**    **vi**    ha    presentato/i.       ‘me to you-pl / you-pl to me’  
 c. ??Mario    **ti**    **ci**    ha    presentato/i.       ‘you to us / us to you’  
 d. \*?Mario    **vi**    **ci**    ha    presentati.        ‘you-pl to us’  
       Mario    1/2= 1/2= has    introduced

In Romanian, some of the combinations that are usually targeted by the PCC are possible (Săvescu 2007). In proclisis, Romanian allows combinations including a second person

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<sup>23</sup> Ethical datives, which in Romance must be clitics, pronominalize an adjunct referencing a human individual that is somehow concerned with the matter in question. Bošković (2004) shows that, in Serbo-Croatian, syntactic tests single ethical datives out (cf. §2).

singular accusative clitic, as in (62), and, to a lesser extent, a first person singular accusative clitic, as in (63).

- (62) a. **Mi** **te-** a prezentat Ion la petrecere. (Romanian)  
 1SG.DAT= 2SG= has introduced John at party.  
 ‘John introduced you to me at the party.’  
 b. **I** **te-** au recomandat ieri.  
 3SG.DAT= 2SG= has recommended yesterday  
 ‘They recommended you to him yesterday.’
- (63) a. \***Ți** **m-** a prezentat Ion la petrecere. (Romanian)  
 2SG.DAT= 1SG= has introduced John at party  
 ‘John introduced me to you at the party.’  
 b. %**I** **m-** au recomandat ieri.  
 3SG.DAT= 1SG= has recommended yesterday.  
 ‘They recommended me to him yesterday.’

Proclitic combinations are ungrammatical when the 3rd person dative clitic is reflexive, as in (64), or when 1st/2nd person clitics are plural, as in (64b):

- (64) a. \***Maria si** **m/te** a luat drept sclav. (Romanian)  
 Mary 3.REFL= 1/2.ACC= has taken as slave  
 ‘Mary has taken me/you to be her slave (for herself).’  
 b. \*<sup>/?</sup>**Ni** **v** a recomandat Maria.  
 1PL.DAT= 2PL.ACC= has recommended Mary  
 ‘Mary has introduced you.pl to us.’

The above data illustrate the extent of variation within a group of closely-related languages. It is found that the PCC is not a single, monolithic restriction (see also Nevins 2007): certain clusters (above all, those formed by a first person accusative and a third person dative clitic) are barred more frequently than others, although also this tentative generalization needs further empirical support from other linguistic families.

## 5.2 *What triggers the PCC?*

After decades of research, the nature of the PCC remains rather mysterious. Two main questions need to be answered:

- i. Why are certain languages immune to the PCC?
- ii. What triggers the PCC?

To the best of my knowledge, the question in (i) has been – surprisingly – less studied than that in (ii). For instance, we do not know whether the PCC correlates with the type of clitics involved in the cluster. In Slavic, for instance, languages with verbal clitics such as Bulgarian and Macedonian exhibit the PCC, while in languages with second position clitics the PCC is absent or relaxed (Runić 2013): Serbo-Croatian, Slovak, Slovenian and other Balkan languages such as Czech and Romanian (cf. §5.1) rule out, with a certain degree of sociolinguistic variation, clusters in which the direct object is a first person clitic, while combinations with the second person clitic are more acceptable. In the light of the discussion in §2, one may suggest that the PCC is triggered when clitics are syntactically clustered to form a single complex head, whereas the constraint does not target sequences of clitic elements that are partially transparent to syntax as in the case of Serbo-Croatian

sentential/second-position clitics. However, in absence of a fine-grained typological analysis on a significant sample of languages, the above hypothesis remains open to future research.

Regarding (ii), the PCC has attracted a rich stream of research. Accounts differ as to whether the constraint is viewed as a morphological or syntactic phenomenon. Morphological accounts argue that the PCC is an extra-syntactic filter preventing the realization/markings of certain argument/agreement configurations. Following this line of research, Perlmutter (1971) suggested that the PCC is linked to the other morphological properties of clitic clusters, namely rigidity and opacity (see §3 and §4). Alternatively, it is argued that the constraint is a syntactic restriction independent from other aspects of cliticization, consisting of a constraint on *multiple agreement*, i.e. a feature sharing/checking operation that involves a single agreement *probe* and two agreement *goals* (Anagnostopoulou 2005).

Early morphological accounts try to derive PCC effects from the templatic organization of clitic clusters (see Miller & Sag 1997: 596 on French). In a nutshell, the idea, which has already been discussed in §4.4 with respect to suppletion, is that certain clitic combinations are impossible because the clitics targeted by the PCC compete for the same slot. Strong evidence against a templatic approach to the PCC is brought by languages in which the PCC is triggered when the third person dative clitic is reflexive: as shown in (65), the reflexive clitic *si* and first/second person clitics do not occupy the same slot as the cluster *ti > si* is fine if the reflexive clitic pronominalizes the direct object as in (65). Conversely, the cluster is ungrammatical if the reflexive clitic is interpreted as a dative pronoun as in (65a). This shows that the two clitic formatives occupy different positions in the template and, in principle, nothing prevents their co-occurrence.

- (65) a. \*Giorgio **ti** **si** è comprato come schiavo. (Italian)  
 Giorgio 2SG.O= 3.REFL.IO= is bought as slave  
 ‘Giorgio bought you as his slave.’  
 b. Giorgio **ti** **si** è presentato come dottore.  
 Giorgio 2SG.IO= 3.REFL.O= is introduced as doctor  
 ‘Giorgio introduced himself to you as a doctor.’

Further evidence against template-based accounts comes from the syntax of courtesy forms, i.e. pronouns that are used to avoid direct reference to the hearer. In Italian, a third person feminine pronoun can be used as a courtesy form referencing the hearer, e.g. the clitic pronoun *la* (lit. ‘her’) may mean ‘you’. Despite having the morphology of a third person, the courtesy form *la* triggers the PCC when it is combined with a third person dative clitic:

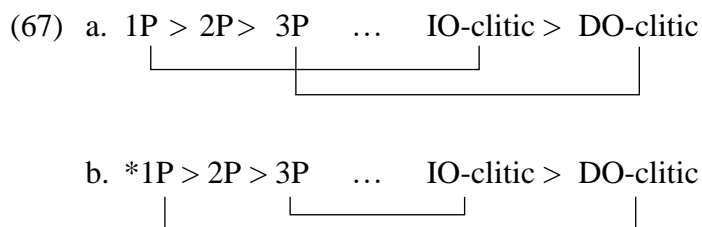
- (66) \*Giorgio **glie** **l’** ha presentata. (Italian)  
 Giorgio 3.DAT= 3SG.F.ACC(‘you’)= has introduced  
 ‘Giorgio introduced you to him.’

Morphologically, the cluster in (66) is perfectly licit: combinations of two third person pronouns are possible – the morphology of the cluster is almost transparent – and the two clitic forms occupy different slots in the template. Nonetheless, if the third person accusative form has the interpretation of a second person pronoun, it is targeted by the PCC.

Data like those in (65) and (66) led scholars to various formulations in which templates result from multiple constraints that determine what precedes what (and what excludes what) on the basis of grammatical features such as person and case. In this view, the PCC results when linearization requirements clash (see Gerlach 2002 among others), e.g. if the first position in the cluster must host either a first/second person clitic or a dative clitic, then clusters in which the dative is third person and the accusative clitic is first or second person

will be disfavored or barred. Under this kind of account, however, languages such as modern French and Italian in which third person dative clitics are placed, respectively, after and before accusative clitics are expected to vary with respect to the PCC, which is not the case.

A more promising way to look at PCC phenomena is in terms of alignment between *feature hierarchies*, rather than *linearization requirements*. The idea, common to both morphological and syntactic approaches, is that the PCC arises because “the case hierarchy [Ethical > Goal > Theme] and the personal hierarchy [1 > 2 > 3] are not supposed to conflict.” (Farkas & Kazazis 1980: 78 quoted in Haspelmath 2004: 21). Several of the most convincing analyses of PCC restrictions share this intuition, which opens the door to a comparison between the PCC and seemingly agreement restrictions in inverse agreement systems (Comrie 1980). In languages with inverse agreement, object-verb agreement is blocked if the subject is lower than the object in the animacy hierarchy: 1 > 2 > 3. This approach has been extended to PCC restrictions by scholars with various backgrounds. Bianchi (2006), for instance, elaborates on a syntactic implementation of inverse agreement within the framework of Rizzi’s (1990) Relativized Minimality. Each clitic – according to Bianchi – is in a dependency relation with a Person head in the left periphery of the clause, where personal, temporal and local deixis is encoded along with other contextual/discourse properties. Since Person projections are rigidly ordered following the animacy hierarchy, the dependency relations in a ditransitive construction may either cross each other as in (67) or be nested as in (67) (notice that what is relevant in (67) is the hierarchical array of the positions, not their linear order). In the latter configuration, the PCC is triggered because Relativized Minimality is violated as the lower clitic checks its features against the most distant person head:



The merits of an analysis like (67) are twofold: on the one hand the PCC is accounted for without making reference to linearization and, on the other, the comparison between inverse agreement provides an independent test bed for the model. Additionally, an analysis like (67) – regardless of technicalities – allows a rapprochement between morphological and syntactic analyses of PCC phenomena (and inverse agreement), possibly in comparison with other agreement restrictions. The Romance languages, for instance, exhibit PCC-like restrictions in causative constructions (cf. (68); Postal 1989; D’Alessandro and Pescarini 2016: 275-277; Sheehan 2020 for a recent analysis) and in impersonal *si* constructions (D’Alessandro 2007: 89-131). In causative constructions, first and second person clitics are barred when the caused subject is a third person clitic or a dative PP, as in (68) and (69), respectively.

(68) \*Je vous lui laisserai voir. (French)  
 I 2PL.OBL= 3SG.DAT= let.1SG.FUT see  
 ‘I will let her see you.’

(69) \*On te laissera connaître à Louise. (French)  
 one 2SG.OBL= let.FUT.3SG know to Louise  
 ‘We will let Louise meet you.’

Also impersonal *si* constructions exhibit an agreement restriction that rules out first/second person Theme arguments in the so-called passive-like construction (i.e. in the impersonal construction in which the Theme becomes the grammatical subject that agrees with the inflected verb), cf. (70)a vs (70)b.

- (70) a. Lui *si* vede spesso in televisione  
 he *s=* see.3SG often on TV  
 b. \*Tu *si* vedi spesso in televisione  
 you *s=* see.2SG often on TV  
 ‘One can often see him/\*you on TV’

Certain Romance languages exhibit a complementary person-driven restriction in the impersonal construction in which the Theme is pronominalized by an accusative clitic. The restriction, when present, targets third person clitics more readily than first and second person clitics:

- (71) a. Finalmente **me/te** **se** vedde. (Genovese)  
 At last 1/2SG.OBL=*s=* sees  
 ‘At last, one sees me.’  
 b. \***I** **se** leza.  
 3PL.ACC=*s=* reads  
 ‘One reads them.’

Analogously, in Spanish, first or second person clitics can freely combine with *se*, see (72), while several restrictions, subject to a certain degree of cross-linguistic variation, target third person clitics: feminine pronouns (*la, las*) are allowed if the cliticised argument is marked by DOM (Differential Object Marking), see (72); the latter condition holds for masculine objects as well, but in this case the accusative clitic *lo/los* must be replaced by the morphologically dative clitic *le/les*, see (72) (Mendikoetxea & Battye 1990; Mendikoetxea 2008; Ordóñez and Treviño 2016):

- (72) a. **Se me/te** llama (Spanish)  
*s=* 1/2SG.OBL= calls  
 ‘One calls me/you’  
 b. \*(A) *las niñas, se las* ha visto contentas  
 To the girls *s=* 3PLF.ACC= has seen happy  
 ‘one has seen the girls happy’  
 c. A *los niños, se les/\*los* veía felices.  
 To the kids, *s=* 3PL.DAT.O/\*3PL.ACC= saw happy  
 ‘one saw them (the kids) happy’

This brief digression about causative constructions and impersonal constructions shows that the PCC is not an isolated agreement restriction on ditransitives and clitic clusters, but a fragment of a more complex mechanism of agreement, setting (more) animate arguments apart from inanimate ones in certain argument configurations.

Concerning the nature of this agreement restriction, Haspelmath (2004) departs from previous accounts in tackling the PCC from a usage-based, “external” perspective. He argues that PCC combinations correspond to infrequent argument configurations and that the corresponding clitic clusters are ungrammatical because they were “too rare to make it through the bottleneck of grammaticalization.” This kind of explanation is challenged by

various counterexamples: for instance, Bonet (1991: 179) notices that in central Catalan the PCC does not target clusters containing a first or second person ethical dative (see (60)), which are rarer than clusters containing a first or second person indirect object clitic. In my opinion, the most controversial aspect of Haspalmath's view is the idea that clitic clusters are grammaticalized entities. In fact, combinations of first/second person clitics do not exhibit the kind of suppletion we observe in clusters of third person clitics (cf. §4). For this reason, clusters containing first/second person clitics are amenable to a compositional analysis in which each formative is analysed as an independent form with its own denotation. Moreover, and most importantly, evidence from causative and impersonal constructions suggests that the PCC is not a morphological restriction on clitics, but a more complex constraint that becomes (more) evident when arguments are cliticized (see Sheehan 2020).

### 5.3 *More on Animacy*

In the previous subsection, I argued that the PCC can be viewed as a constraint on animacy-related features and, on the basis of data from Romance, I showed that the PCC is probably an instantiation of a more general agreement restriction. In this respect, it is worth examining another facet of the problem that frequently goes unnoticed: in many, but not all Romance languages the 3rd person dative clitic has a [+human] reading. This holds true for languages such as French, Catalan, and Italian that, besides clitic personal pronouns, display an oblique pronoun that, etymologically, derives from a locative particle (whence the misleading term 'locative clitic'). The so-called locative clitic pronominalizes various kinds of PPs, including nonhuman datives, as shown in (73b)-(75b) (Rigau 1982). In the same languages, the dative clitic is therefore restricted to human referents, as in (73a)-(75a), while in languages lacking the locative clitic (e.g. Spanish), the dative clitic can pronominalize both kinds of datives, human and nonhuman.<sup>24</sup>

- (73) a. A la meva filla, **li** dedico molt de temps. (Catalan)  
 To the my daughter, 3SG.DAT= I.devote lot of time  
 'As for my daughter, I devote lots of time to her.'  
 b. A això, **hi** dedico molt de temps.  
 To this, LOC= I.devote lot of time  
 'As for this, I devote lots of time to it.'

- (74) a. A mia figlia, **le** dedico molto tempo. (Italian)  
 To my daughter, 3SG.DAT= I.devote lot.of time  
 'As for my daughter, I devote lots of time to her.'

---

<sup>24</sup> In Spanish, where third person dative clitics are not restricted to human referents, third person datives seem to always be subject to the PCC, see (i)a, from Ormazabal & Romero (2007). However, Bonet (2008) shows that (i) is ungrammatical even if the dative clitic is omitted, as in (i)b.

- (i) a. \***Te le** pongo a ti (de pata) a la mesa. (Spanish)  
 2SG= 3SG.DAT= I.put a you (as leg) to the table  
 'I assemble you as a leg of the table.'  
 b. \***Te** pongo a ti (de pata) a la mesa.  
 2SG= I.put a you (as leg) to the table  
 'I assemble you as a leg of the table.'

- b. A questo, **ci** dedico molto tempo.  
 To this, LOC= I.devote lot.of time  
 ‘As for this, I devote lots of time to it.’

- (75) a. Luc **lui** est fidèle (à sa femme). (French)  
 Luc 3SG.DAT= is faithful  
 ‘Luc is faithful to her (his wife).’  
 b. Luc **y** est fidèle (à ceci).  
 Luc LOC= is faithful  
 ‘Luc is faithful to it.’

In connection with the PCC, it is worth noting that speakers of Catalan, French, and Italian allow the locative clitic *ci/hi/y* to reference a human entity when a 1<sup>st</sup>/2<sup>nd</sup> person clitic is present, thus avoiding the PCC:

- (76) a. A en Pere **m’** \***li**→<sup>√</sup>**hi** va recomanar en Josep. (Cat.)  
 To the Pere 1SG 3.DAT→LOC= goes recommendthe Josep  
 ‘Josep recommended me to him (Pere).’  
 b. **ti** \***gli**→<sup>√</sup>**ci** presento io. (It.)  
 2SG 3.DAT→LOC= introduce I  
 ‘I’ll introduce you to him.’  
 c. Pierre **me** \***lui**→<sup>√</sup>**y** présentera, à son oncle. (Fr.)  
 Pierre 1SG 3.DAT→LOC= will.introduce to his uncle  
 ‘Pierre will introduce me to him, his uncle.’

The data in (76) confirms the intuition that the PCC is triggered when the case hierarchy and the person hierarchy are not aligned harmonically (Haspelmath 2004): intuitively, when datives are downgraded in the hierarchy of arguments/thematic roles, the harmonic alignment with the person hierarchy is reestablished, circumventing the PCC even if, semantically, the pronoun references a human entity.

Animacy is arguably related to another peculiar phenomenon that characterizes the morphology of third person dative and accusative clitics in several Romance languages. Several Ibero-Romance, Occitan, and southern Italian dialects exhibit patterns of *loísmo* or *laísmo*, whereby the accusative clitics pronominalize a dative complement if the referent is human. In Neapolitan, for instance, human datives may be expressed by either the dative/locative clitic *ncə* or by an accusative form such as *’o/’a/’e* (‘him/her/them’; see, e.g. Ledgeway 2000). Non-human datives, conversely, do not admit any alternation as they are necessarily pronominalized by the locative exponent, as in (77).

- (77) a. **ncə/’a** rispunnetano, a Maria. (Neapolitan)  
 LOC/3SG.F.ACC(IO)= reply.PST.3PL to Maria  
 ‘They replied to her (Maria).’  
 b. **ncə/\*’a** rispunnetano â lettera.  
 LOC/3SG.F.ACC(IO)= reply.PST.3PL to.the letter  
 ‘They replied to it (the letter).’

Further evidence for the role of animacy in the licensing of dative complements is brought from *leísta* dialects of Spanish, namely those Ibero-Romance dialects in which the dative clitic *le* (pl. *les*) pronominalizes human direct objects. Ormazabal and Romero (2007) notice that in these varieties the clitic *le*, which is morphologically a dative, is subject to the PCC



even if the corresponding argument is a direct object as in (78). In this environment, *leísta* speakers must retreat to the exponent *lo* to avoid a PCC-like restriction, as shown in (78).

- (78) a. \***Te**            **le**            di. (Spanish)  
           2SG(IO)= 3.DAT(O)= give.PST.1SG  
           ‘I give him to you.’  
       b. **Te**            **lo**            di.  
           2SG(IO) 3.ACC(O)= give.PST.1SG  
           ‘I give it/him to you.’

The data in (77) and (78) confirm the hypothesis that animacy plays a crucial role in the licensing of arguments, in the mapping from arguments to clitic formatives, and, consequently, in determining PCC effects. To the best of my knowledge, we still do not have analogous fine-grained descriptions of similar phenomena in other linguistic families, but the few Romance data reported in the last subsections indicate a promising avenue of research into PCC restrictions that deserves further elaboration.

## 6 Conclusion

Clitic clusters are complex morphological objects, that on the one hand are transparent to syntactic rules (see §2) and, on the other, behave as (semi)-autonomous morphological constituents. Clusters are subject to various kinds of restrictions, which fall into three main types:

- Restrictions on linearization (§3): clitic clusters tend to be rigidly ordered. Some cross-linguistic tendencies emerge from cross-linguistic comparison: clitics are ordered within a template on the basis of grammatical categories (e.g. auxiliary > pronominal clitics), case/function (e.g. dative/IO > accusative/O), or person (e.g. 1/2 > 3). The interplay of these factors yields a multitude of possible ordering systems, which vary across languages without any clear link with other syntactic or morphological phenomena.
- Restrictions on exponence (§4): certain clitic clusters are morphologically opaque. In particular, combinations of identical clitic exponents are often avoided by dropping one clitic element. Combinations of pronominal clitics are often irregular – in particular those involving third person clitics – as one of the two arguments may end up being pronominalized by a suppletive exponent or the cluster becomes a single portmanteau morpheme. Fine-grained analyses of single languages allow us to disentangle the irregularities that are due to phonological processes from those that call for a morphological or morphosyntactic explanation, but in many cases a clear boundary between morpho-phonological and morphosyntactic irregularities cannot be established.
- Restrictions on agreement (§5): clusters of clitic pronouns tend to be ungrammatical when corresponding to certain person/case combinations (the so-called Person Case Constraint or PCC). Above all, clitic combinations are ungrammatical in many but not all languages with clitics when a first/second person direct object clitic is combined with a (third person human) “dative” clitic (i.e. a clitic pronominalizing indirect objects and other XPs licensed under the same syntactic conditions). After having overviewed some approaches to the PCC, I focused on Romance data to argue that i) the PCC is part of a wider set of agreement restrictions that do not target only clitics, but become particularly evident when arguments are cliticised; ii) the PCC is arguably

linked to animacy and, more specifically, to the syntactic mechanism whereby animate and non-animate arguments are licensed in the clause and, consequently, mapped into clitics.

## Related Articles (See Also)

[Please use the table below to provide a list of related articles]

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morphcom004
morphcom026
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morphcom047
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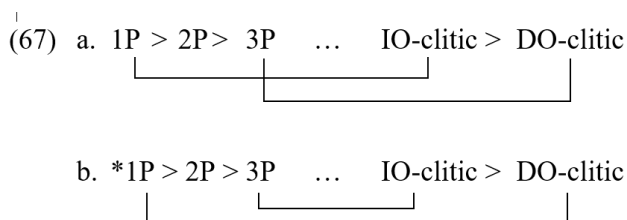
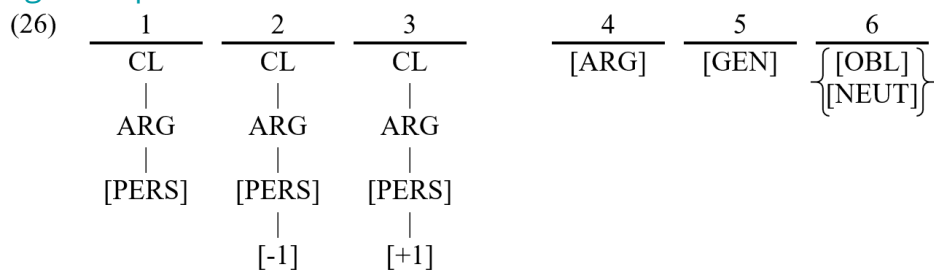
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### Figure captions



### Tables

(39)

	*DAT > ACC	*ACC > DAT	actual shape
271	<i>i l</i>	<i>l i</i>	<i>i</i>
525	<i>li le</i>	<i>le li</i>	<i>li</i>
902	<i>lyi l</i>	<i>l lyi</i>	<i>li</i>
610	<i>lyi lu</i>	<i>lu lyi</i>	<i>lu</i>
724	<i>li lu</i>	<i>lu li</i>	<i>uli</i>
698	<i>l ok</i>	<i>u/ok u</i>	<i>l ok</i>
855	<i>li lu</i>	<i>lu li</i>	<i>lu</i>
866	<i>li lu</i>	<i>lu li</i>	<i>liu</i>

(46)

	DAT PL ( <i>elzi</i> )	DAT SG ( <i>li</i> )	ACC PL (M <i>els</i> , F <i>les</i> )	ACC SG (M <i>el</i> , F <i>la</i> )	NEU ( <i>ho</i> /u/)	GEN/ABL ( <i>en</i> /n/)	LOC ( <i>hi</i> /i/)
DAT PL ( <i>elzi</i> )	*	*	<i>lzi</i>	<i>lzi</i>	<i>lzi</i>	<i>lzni</i>	<i>lzi</i>
DAT SG ( <i>li</i> )	*	*	<i>lzi</i>	<i>li</i>	<i>li</i>	<i>ni</i>	<i>li</i>
ACC PL (M <i>els</i> , F <i>les</i> )	-	-	*	*	*	<i>lzi</i>	<i>lzi</i>
ACC SG (M <i>el</i> , F <i>la</i> )	-	-	*	*	*	<i>li</i>	<i>li</i>
NEU ( <i>ho</i> /u/)	-	-	-	-	*	<i>li</i>	<i>li</i>

GEN/ABL ( <i>en /n/</i> )	-	-	-	-	-	<i>ni</i>	<i>ni</i>
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