Clitic-verb non-adjacency and the inertial theory of grammatical change: evidence from the history of European Portuguese

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Although clitic-verb non-adjacency is a minor linear pattern in contemporary European Portuguese (EP), it showed a significant frequency in the Classical and early Modern eras. The aims of the study are twofold. First, an attempt is made to pinpoint the contribution of the cl-X-verb model to the non-morphological attachment of proclitics to their verbal hosts in present-day EP. By means of a corpus analysis conducted in the 17th through 19th century texts, clitic-verb non-adjacency is demonstrated to have helped eliminate clitic-specific allomorphy in the preverbal domain. Its precise role consisted in preventing proclitics from being integrated into their hosts. The second aim is to see how this diagnosis fits in with the inertial model of grammatical change. In line with Longobardi's proposal (2001), innovation in the syntactic processing of preverbal pronouns is claimed to have come about as a side-effect of the changes in more peripheral modules of grammar, i.e. in phonology and morphology.

Keywords: clitic-verb non-adjacency, [n]-onset insertion, European Portuguese, corpus, morphological attachment

Introduction

The paper aims to show how corpus analysis captures the changes in the mapping between morphophonological and syntactic structures. The case in point involves European Portuguese (EP) clitic grammar. The central problem is clitic-verb non-adjacency (schematically: cl-X-verb), whose occurrences are documented right from the outset of EP scriptural tradition. For about 180 years, the *não* negative marker was the only item eligible to disrupt the continuity of clitic-verb sequences (cf. Martins 2016b: 422-423). Thus, two semantically interchangeable models were active: cl-X-verb (also known as 'interpolation') and X-cl-verb (ordinary proclisis).

Present-day EP exhibits a strong asymmetry between preverbal and postverbal clitics. First, while clitic-specific allomorphy fails to occur preverbally, enclitics are involved in an intricate interaction with the verb (Luís & Kaiser 2016: 221-222). In doing so, they

display lexical phonology and affix-like behavior (Gerlach 2002: 63-64). By contrast, proclitics are more loosely tied to the verb. Therefore, they are presumed to be inserted post-lexically. Second, while enclisis is the default position in root clauses, proclisis must be syntactically induced: it arises only after some preverbal expressions ('proclisis triggers'). Negative words, complementizers, contrastive foci, some adverbs and quantifiers, *wh*-words / interrogative pronouns coerce clitic pronouns into appearing preverbally. Yet, morpho-phonological features of clitic-verb combinations have not always been mapped onto sentence organization level that way. The paper aims to identify some of the mechanisms responsible for the shift. The thesis laid out here is that clitic-verb non-adjacency was a prominent factor prompting the change.

The paper is organized as follows: Section 1 traces the significance of clitic attachment in a lexicalist perspective, thereby implying a modular view of speech processing and a clear-cut morphology vs. syntax divide. In Section 2 previous approaches and historical background of the cl-X-verb model are traced. Although stress is laid primarily on the period between the mid-17th up and early 19th centuries, the remaining periods are discussed as well. In Section 3 the results of our corpus search are submitted to a preliminary analysis. The corpus has been compiled on the basis of 44 texts stored in the *Biblioteca Nacional de Portugal – Biblioteca Digital*. At present, it offers 784 examples of both clitic-verb adjacency and non-adjacency (in sentences involving the *não* negative). Section 4 singles out the environments in which cl-X-verb was given preference over X-clitic-verb. This will be a decisive step towards gaining insight into how the present-day clitic system became dominant in the early 19th century. In the concluding remarks the results of the study are matched against some of the assumptions of the Inertial Theory of language change put forward by Longobardi (2001). According to him, syntactic change is only epiphenomenal, which is tantamount to saying that it takes place only in response to the shifts in the remaining modules of the grammar.

1. Morphological vs. non-morphological attachment

Clitic attachment has always been a tricky issue in Romance linguistics. Amid a multitude of attempts to disentangle these matters (e.g. Duarte & Matos 2000), two receive special attention. For Anderson (2005: 22-24), the only difference between clitics and affixes (the division is equated with the morphological and non-morphological attachment divide) is the type of domain to which they attach. While affixes are added to morphological units, i.e. stems or inflected forms, clitics tend to appear in larger syntactic constituents (Gerlach 2002: 61-63). This is consonant with the idea, argued for in diachronic linguistics (Haspelmath 2011: 61-62), that clitics are scattered along a directional axis extending between free morphemes at the input and bound affixes at the output. Obviously, contemporary Romance clitics are not all at the same point of this process.

The remaining discussion has been largely inspired by the criteria worked out by Zwicky & Pullum (1983: 503-504) in their seminal paper on how clitics diverge from affixes. Many arguments evoked in favour of either wordhood or affixhood of EP clitics are reminiscent of the criteria devised by these two scholars to solve the controversy over

English *not* and *n't*. Three of them deserve special attention: (i) unlike clitics, which are moderately sensitive to the category of their host, affixes are highly selective with respect to their stems; (ii) morphophonological anomaly is more easily found in affixed words than in clitic-host pairs; (iii) arbitrary gaps in the set of conceivable combinations arise in affix-stem groups more frequently than in clitic-host ones. Their criteria can be easily extended to Romance clitic pronouns. In what follows, only a sketchy sample of distributional facts is discussed (for a more comprehensive account see Heap, Oliviéri & Palasis 2017; Pescarini 2016).

Irrespective of whether this stance is deemed adequate or not, scholars seem to be in agreement as to the asymmetry of enclitics and proclitics in present-day EP. Let us see how the disjunction between the two classes materializes.

(1) a. *Viram-no* (*Viram-o)
        see.PST.PRF.IND.3.PL ACC.3.M.SG '(They) saw him'
    b. *Nunca o viram* (*Nunca no viram)
        Never ACC.3.M.SG see-PST.PRF.IND.3.PL '(They) have never seen him'
    c. *Viram o vizinho entrar* (**Viram no vizinho entrar*)
        see.PST.PRF.IND.3.PL ART neighbor get-in.inf
        '(They) saw the neighbor getting in'

The basic form of 3rd person direct object clitics is *o*, *a*, *os*, *as* (M.SG, F.SG, M.PL, F.PL). These forms remain intact in the preverbal domain, regardless of sound characteristics of their environment. This is demonstrated in (1b). In (1a), the verb form *viram*, whose last syllable ends in a complex nasal nucleus, induces the ensuing vowel-initial pronoun into taking the [n] onset[1]. This hiatus breaking is obligatory. In this position, no basic variant, such as the one which is recurrently found in proclisis, is allowed to appear after a nasal diphthong. Moreover, onset insertion depicted in (1a) is clitic-specific. In (1c), the definite article, even if homonymous with a clitic pronoun and regardless of the fact that it is preceded by a nasal diphthong, does not undergo allomorphic shift.

These facts are assumed to prove that EP clitics combine with their stems in much the same manner as affixes combine with their stems. In theoretical linguistics, the core of this stance is captured by the Strong Lexicalist Hypothesis (SLH, also known as the Lexical Integrity Hypothesis): No syntactic rule can refer to elements of morphological structure (Dalrymple 2001: 83-84, 97-98). Under the assumption that speech production is sequential and hierarchically ordered (various modules are superimposed onto one another; see Labelle 2001: 156, 161-162), clitics cannot be manipulated (moved, deleted, extraposed, etc.) in syntax. Instead, they start being processed in some previously operating module. Moreover, SLH requires EP speakers' lexical competence to contain two

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[1] According to Luís & Kaiser (2016: 221), the *n*-allomorph is only apparently triggered by the verb-final nasal diphthong. The two scholars say that a closer inspection reveals that before any other nasal-final verb forms, such as 3rd person singular present indicative forms, allomorphy is blocked. As an example, they give *O professor tem-os visitado.* (*tem-nos) 'The professor has paid a visit to them'. Curiously, this observation is not corroborated in other contemporary works. For example, Roberts (2016: 795), dwelling on clitic placement with the auxiliaries (which is the exact parallel of the example produced by Luís & Kaiser), gives the following sentence: *O Pedro* (*a) *tem-na encontrado* 'Peter has met her'.

distinct entries: one for a bare verb and another one for a verb form combined with a clitic pronoun. The reason is that no productive syntactic rule accounts for the properties of clitic-verb/verb-clitic sequences. These sequences must be memorized individually, as stem-affix combinations are claimed to be.

Yet, SLH leaves numerous features of clitic-verb combinations unaccounted for. Therefore, substantial counter-evidence has been presented evoking the properties that clitic share with full-fledged words (Vigário 2003: 131-155). First of all, clitics occupy variable positions with respect to the verb, which affixes normally do not do. Likewise, the paucity of phonological interaction in preverbal clitic-verb sequences defies explanations formulated solely on the basis of what happens in enclisis. Moreover, clitics are not affixal if stress patterns of Ibero-Romance languages are looked into. With certain inflectional forms, object clitics are inserted in defiance of the maximally three-syllable window (Colina 2012: 133; Luís & Kaiser 2016: 214 with special reference to EP). In EP, lexical stress affects at most the third syllable counting from the word's right edge. This rule extends over verb inflection as well (*entregávamos* 'we were handing over' 1.PL.IPFV.IND). Even if enclitics are attached to forms where stress already falls on the antepenultimate, this locus is maintained regardless. If cliticization had really been a lexical process, an onward floating of the stress would have been unavoidable. Yet, there is none (*entregávamo-vo-los* '(we) were handing it over to you.PL').

2. Clitic-verb non-adjacency in EP: historical overview

As far as the Ibero-Romance domain is concerned, there are also attestations of clitic-verb non-adjacency in present-day Galician and in Old Spanish; (see Sánchez Lancis 1992: 325-326; Martins 2014: 42-44). In the remaining Romance-speaking areas, a similar structure is reported to have been active in the history of French (Pollock 2006: 617) and in many of the Italo-Romance dialects (Roberts 2016: 786-787). Likewise, some of the Occitan variants (both old and modern) show this pattern too, although to a limited extent (Kayne 2000: 65).

(2)   *Ils   ont*   été *affligés   de ne **vous   point voir***
      They.SBJ AUX.3.PL be.PST.PTCP sorry.PST.PTCP of NEG ACC.2.PL. not   see.INF
      'They were sorry not to see you' (example by Roberts 2016: 787)
(3)   *..., so es   a ssaber   queno pot   mais*
      DEM be.PRS.IND.3.SG to know.INF COMPL NEG can.PRS.IND.3.SG more
      *testimoni portar de negu fach, ni   **lui   negus hom creire** no deu.*
      testimony bear.INF of no deed, neither DAT.3.SG no man.NOM.SG believe.INF NEG must.PRS.
      IND.3.SG
      '…, that is to say that he can no longer give testimony on any deed, nor should any man
      believe him'(*Costuma d'Agen*; 13th c. Chap. XXI, f. 45v; see sources)

In some of the previous proposals (Hinzelin 2010: 337), clitic-verb non-adjacency has been approached in terms of an enclitic attachment to various items located in the Left-Periphery (Cº). Instances of enclisis on non-verbal linguistic signs (mainly conjunctions and

wh-words, which trigger proclisis in EP) have been extensively documented by Hinzelin (2007: 59-61) for some of the Occitan varieties. According to this line of reasoning, clitics have an affixal character. Therefore, clitic attachment is made via their incorporation into one of the heads, either I^o, or, preferably, C^o. In such circumstances, instances of enclisis, both to a finite verb and to a complementizer, are of essentially the same nature: once the verb is moved to C^o, the clitic surfaces post-verbally as a verbal enclitic. If C^o happens to have already been filled by other expressions, the verb remains in I^o. Clitic is then preverbal and attaches enclitically to one of the items in C^o, e.g. to a complementizer. In other words, clitic pronouns are not moved, thereby being likely to select a non-verbal host. The putative structure of the sentence (so-called 'phase 3' in EP clitic grammar; see below) would be: $[_{CP} [_{C}{}^{o}$ complementizer=clitic $[_{SpecIP}$ Subject $[I^o$ V$_{fin}$ $[_{VP}$ Object$]]]]]$[2]

(4)   *É   o   que **vos   eu dizia**   aqui*
       be.PRS.IND.3.SG DEM REL DAT.2.PL I.SBJ say.IPFV.IND.1.SG here
       'This is what I was talking to you about here' (1842. Garrett Almeida, *O alfageme de Santarém* ... IV, 5; p. 98; http: // purl.pt/53)

Studies devoted to Portuguese medieval and Renaissance clitic-verb non-adjacency (e.g. Fiéis, 2001) point unanimously to the fact that before the middle of the 17th century, virtually any expression was able to follow preverbal pronouns, even those that rarely precede the verb (e.g. infinitival complements in multi-verb series or adjectival predicates; see 5a and 5c below; Martins 2016b: 421-426). The phenomenon is traced back to the fact that medieval EP, like some of its Romance cognates of that era, had a highly non-configurational syntax. This means that hierarchically interrelated units frequently failed to appear next to each other in the linear structure of sentences (Ledgeway 2012). Discontinuities of this kind recorded in medieval Romance languages are termed *hyperbatons* (cf. Powell 2010: 164) in the classical tradition, and *scrambling* in the generative literature (Martins 2011: 139-141).

In medieval EP, cases are documented (Martins 2014: 42-44) where as many as three distinct constituents are aligned to disrupt the unity of clitic-verb groups. This is phase 1 in the history of EP clitic-verb non-adjacency. As suggested above, hardly any constraints on the nature, the syntactic function and the length of linguistic signs filling the X slot in cl-X-verb sequences are found. Still, the ordering of constituents is not entirely random. If subjects belong to a series of preverbal items following a clitic pronoun, they always surface first within a sequence (see 5a, 5b). Correspondingly, *não* always comes last, thereby directly preceding the verb (Fiéis 2001: 205-206; see 5a-b).

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[2] The problem with this analysis is that our data demonstrate that clitic-verb non-adjacency was allowed outside obligatory proclisis contexts. Thus, for want of a proclisis trigger, no linguistic sign was likely to incorporate the pronoun. The contexts in question correspond to the insertion of the *não* negative marker in four structural positions: (i) V1 root declaratives following a coordinating conjunction (e.g. *e*, *mas*, *pois*); ii) V1 root declaratives following a subordinate clause; iii) root declaratives with an overtly expressed preverbal subject; iv) CLLDs. In previous stages of the history of EP, enclisis and proclisis were freely interchangeable in these structural positions. Yet, enclisis went on to become mandatory there nowadays. The second obstacle is related to the lack of contiguity between the pronoun and the proclisis trigger.

(5)   a.   *E sse* **as**   **nos**   **comprar nõ quisermos** *...*
        and if ACC.3.F.PL we.NOM buy.INF NEG want.FUT.SBJV.1.PL
        'And if we do not want to buy them' (1329; example by Martins 2016b: 421)

      b. *(...) que quando* **lhe elle**   **naõ quiſeſſe**   *diffirir a ellas,...*
        COMP when DAT.3.PL he.SBJ NEG want.IPFV.SBJV.3.SG grant.INF to they.F.NOM
        '(Cogeçofar insisted that he should be told once again) (…) that when he did not want concede it to them …' *(*1614. Diogo do Couto. *Decada sexta da Asia.* Cap. VII, col. 2; p. 50) http: // purl.pt/29503

      c. *... todollos   adubyos   que*   **lhes   conpridoiros e**
        all.M.PL=ART fertilizers REL DAT.3.PL accomplish.FUT.PTCP.M.PL. and
        neçesareos forem
        necessary   be.FUT.SBJV.3.PL
        'all the fertilizers that may be useful and necessary to them' (1476; example by Martins 2016b: 421)

Furthermore, calculations show a slight, yet systematic decrease in the frequency of the cl-X-verb model from the 14th until the end of the 16th century (Martins, 2016b: 422). Eventually, the decrease resulted, by the middle of the 17th century, in the *não* negator being left as the only element eligible to appear between a clitic pronoun and the verb (Phase 2). The insertion of multiple constituents was eliminated accordingly.

Phase 3 is under way in some of the literary texts written in the first half (the thirties) of the 19th century (yet, the first attestation in our corpus dates from 1834 in a non-literary text; see 6a). They innovate in that the cl-X-verb model is no longer exclusively negation-based, although *não* continues being privileged (Magro 2010: 116-117). Likewise, the insertion of multiple constituents is again attested. Modern clitic-verb non-adjacency is constrained by the semantic profile of inserted elements. Aside from *não*, only deixis carriers are allowed. 'Deixis carrier' stands for person-related (see 6b), space-related (6a), time-related, as well as some mood and aspect-related expressions (Martins 2016b: 423). Moreover, after a period of popularity in literary writings, the model under discussion seems to have changed its sociolinguistic rank. At present, it is found either in dialectal spoken production (Magro 2010: 117) or, less frequently, in newspapers (Martins 2016b: 425). Still, its frequency has radically dwindled.

(6)   a.   *...; pois todo o mundo sabe*   *que   quem* **os**   **cá**
        so everybody   know.PRS.IND.3.SG COMPL WHO.REL ACC.M.3.PL here
        chamou   *foi*   *a alta politica ...*
        call.PRF.IND.3.SG be.PRF.IND.3.SG ART high politics
        'In point of fact, everybody realizes that it is high politics that called them here' (1834. A. J. F. G. *Horrorosa mortandade feita em todos os presos políticos ...*; p. 23; http://purl.pt/31011)

      b. *... oh! Se* **o**   **eu soubera,**   *se* **o**   **eu**
        if   ACC.3.M.SG I.NOM know.PPRF.IND.1.SG, if ACC.3.M.SG I.SBJ
        adivinhasse *...*
        guess.IPFV.SBJV.1.SG
        'If only I had known that, if only I could have guessed that' (1842. Garrett Almeida. *O alfageme de Santarém ...* IV, 8; p. 109) http: // purl.pt/53

It remains to be seen why, over the course of history, it was *não*, rather than any other constituent, that tended to disrupt the continuity of clitic-verb sequences. Aside from its syllabic structure which will be discussed in more detail in section 4, semantic properties of the negative marker come into play. As repeatedly stressed in the literature (Dryer 1988: 99, 102), negation carries a heavy communicative load. Therefore, it constitutes an essential part of the message: if a hearer fails to recognize it in the flow of an utterance, the intended meaning of a sentence is fundamentally missed. Unlike propositional calculus, in which negation has scope over the entire clause, natural language subjects remain generally immune to sentential negation (Zanuttini 2001: 511). Instead, the proper domain of the latter involves the verb-object combination.

This is the point where generative and functionally-oriented grammars converge. For example, preverbal negative markers are assumed to take scope over the verb provided it has been checked for the features of Tense. In other words, sentential negation extends over the elements into which the negative marker is incorporated. By contrast, preverbal subjects and the remaining preverbal constituents are left out of its scope (Matos 1999: 187-188). Moreover, typological research demonstrates that semantically interrelated units tend to surface next to each other in sentences (Ledgeway 2012). That is how both the persistence of *não* across centuries and its final position in cl-X-Y-verb sequences are accounted for.

3. Corpus data

The corpus, compiled from 44 texts released between 1614 and 1858, contains at present 784 examples of both cl-*não*-verb and *não*-cl-verb sequences (see examples 8a-c below on how the latter model is extended to cover equivalent cases). As the texts stored in the *Biblioteca Nacional de Portugal – Biblioteca Digital* are editable only to a limited extent, no automatic search could be conducted. That is why all the examples have been manually retrieved either from integral texts or from continuous fragments of larger texts. Altogether 13,708 examples of clitic-verb combinations have been recorded in all of the texts.

Table 1: Phase 2: chronological frequency of clitic-verb non-adjacency compared to clitic-verb adjacency

	Clitic-verb sequences	Interpolation-favouring contexts	Clitic-verb non-adjacency vs. clitic-verb adjacency	Clitic-verb non-adjacency (per cent)
17th century (13 texts)	4.130	287	246 : 41	85.71%
18th century (15 texts)	5.317	276	192 : 84	69.56%
19th century (16 texts)	4.261	221	142 : 79	64.25%
Total	13.708	784	580 : 204	73.97%

Now, the principles of conducting the analysis will be discussed in more detail. First, the selection of the texts was narrowed down so as to take into account only those where cl-X-verb relies exclusively on *não*. This criterion helps circumscribe the chronological frames of phase 2 more rigorously. The earliest text which does not satisfy this criterion (two 'medieval-style' items, *melhor* 'better' and *bem* 'well', break the continuity of clitic-verb sequences) dates from 1650 (see 7). Consequently, it had to be left out of the analysis even though in numerous previous 17th-century texts *não* was already the unique expression breaking the unity of clitic-verb combinations. As said above, our corpus analysis also identifies the opposite boundary, thus showing when *não* ceased to be the only eligible item (see 6a above). Accordingly, it had to be excluded, regardless of the fact that in many texts published in later years (up to 1858 in the corpus), *não* is exclusive in cl-X-verb sequences.

(7)   ..., *tomando   o $\tilde{q}$ **lhe**   **melhor pareceo**   com   grande feſta*
       take.PRS.PTCP DEM REL DAT3.SG better   seem.PRF.IND.3.SG with great   feast
       '... with great feast getting hold of what he felt like most' (1650. Bento Teyxeyra Feyo.
        Relaçam do naufragio que fizeram as naos ...; p. 48; http: // purl.pt/28100)

Second, aside from the competition between cl-X-verb and proclisis, the statistics in Table 1 take into account instances of enclisis on the non-finite verb of a complex predicate (i.e. *não*-V$_{fin}$-V$_{inf}$-cl; cf. Luís & Kaiser 2016: 216-217). In these structures clitic climbing fails to materialize. Clitic climbing arises once pronouns become attached to a verb other than the one that subcategorizes for the argument they specify (Martins 2000: 169-171). In Classical EP, clitic climbing is an archaic feature (Martins 2016a: 19-20). Nonetheless, in our corpus, it is still extant, though less frequent than enclisis on non-finite forms in multi-verb series.

(8)   a.   ... *para **se**   **não deixarem**   surprehender delle,* ...
          for REFL.3 NEG let-oneself.INF.3.PL   surprise-INF   by-he-3.sg.m
          'so that they would not to be taken unawares by him' (1834. *Horrosa mortandade* ...;
          p. 24) http: // purl.pt/31011
    b.   ... *conflicto de opiniões ha   tão   acre,   e   irritação de partidos*
          conflict of opinions be-PRS.IND.3.SG such harsh and irritation of party.PL
          *tão inflammada que **não possa**   **arranjar-se**   por compromisso,* ...
          so   heated   that NEG can-PRS.SBJV.3.SG find-INF=REFL.3 by compromise
          'The conflict of opinions is so harsh and the irritation of the parties so high-powered
          that it is unlikely to be settled by compromise' (1832. Guilherme Walton. *A expedição
          de Dom Pedro ou a neutralidade em disfarce*; p. 15) http: // purl.pt/6673
    c.   ... *o   que **não se**   **podia**   evitar,   que   se*
          DEM REL NEG REFL.3 can.IPFV.IND.3.SG avoid.INF COMP REFL.3
          fizesse: ...
          do.IPFV.SBJV.3.SG
          'which might not have been prevented from being done' (1829. Inácio Caetano Xavier.
          Relação das operações militares ...; p. 15) http: // purl.pt/6593

Third, the average ratio of clitic-verb non-adjacency to cases of clitic-verb adjacency is 2.84 : 1 (580 vs. 204 occurrences), with *não* being interpolated in 73.97% of all possible contexts (i.e. the ones where syntactic criteria are met for the *não* negative to follow the pronoun and precede the verb). Yet, in spite of their semantic equivalence, the two models are demonstrated to have not been fully interchangeable. They were different in the type of pronouns given preference in each of them: 3rd person direct objects tended to be paired with clitic-verb non-adjacency at an even larger scale than the remaining pronouns. Table 2 shows that with this series, the discontinuity of clitic-verb reaches 83,52% (147 out of 176 occurrences). By contrast, the remaining pronouns do not depart significantly from the global average or have too poor attestation to draw far-reaching conclusions. After the subtraction of the *o*, *a*, *os*, *as* series, the score is 433 occurrences of cl-*não*-verb versus 175 clitic-verb adjacency, i.e. 71.21% to 28.78%. At first glance, the difference between 83,52 % and 71.21% is not a dramatic one. Yet, if transposed into ratios, it gives the following results: 5,08 : 1 in favour of clitic-verb non-adjacency for the *o*, *a*, *os*, *as* pronouns, and 2.47 : 1 for the remaining ones. The question that calls for an answer at this stage is why particular clitics patterned that way over appropriate contexts.

Table 2: Number of occurrences and frequency of interpolation of particular (classes of) clitic pronouns compared to cases of clitic-verb adjacency (proclisis and enclisis on non-finite verb combined)

		CNV	NCV	NVVC
clusters	19	15 (78.94%)	3 (15.78%)	1 (5.26%)
lhe, lhes	79	61 (77.21%)	14 (17.72%)	4 (5.06%)
me	57	46 (80.70%)	8 (14.03%)	3 (5.26%)
nos	37	28 (75.67%)	7 (18.91%)	2 (5.40%)
te	9	6 (66.6%)	3 (33.3%)	
vos	20	12 (60%)	6 (30%)	2 (10%)
se	387	265 (68.47%)	96 (24.80%)	26 (6.71%)
o, a, os, as	176	147 (83.52%)	20 (11.36%)	9 (5.11%)
	784	580	157	47

In what follows, clitic-verb non-adjacency is discussed mainly in connection with the *o*, *a*, *os*, *as* series. The first clue to their overrepresentation is given once the syllabic structure of both *não* and of direct object pronouns is looked into. The former ends in the [ẽw̃] nasal nucleus with no coda, whereas the pronouns consist only of a rhyme and have an empty onset. In EP, encounters of verb-final nasal diphthongs with postverbal 3rd person pronouns are known to be the loci of obligatory allomorphic variation. In the case under discussion, the [n] onset is added to the pronoun. Even if the same sound material occurs in expressions other than clitic pronouns (e.g. definite articles, prepositions), allomorphy fails to occur (cf. 1a-c reintroduced below as 9a-c).

(9)   a   *Viram-no* (*Viram-o)
         see.PST.PRF.IND.3.PL ACC.3.M.SG
         '(They) saw him'

     b.   *Nunca o viram* (*Nunca no viram)
         never ACC.3.M.SG see-PST.PRF.IND.3.PL
         '(They) have never seen shim'

     c.   *Viram o vizinho entrar* (**Viram no vizinho entrar*)
         see.PST.PRF.IND.3.PL ART neighbor get-in.INF
         '(They) saw the neighbor getting in'

4. The interpretation of data: moving across constraints

The corpus-analysis brings out the relationship between direct object pronouns and the cl-X-verb model. Now, it is time to see how these results advance our knowledge of the mechanisms responsible for the drift from phase 2 to phase 3. In standard modern EP, no clitic-specific phonological change occurs in preverbal position. The only one that is found is independent of the category membership of the segments being juxtaposed. It enables speakers to get rid of a hiatus and involves glide-insertion in sequences made of an [ə] and an ensuing vowel, both word-internally and across word boundaries. As for clitic-verb sequences, [j] is optionally inserted (e.g. *me ofereceram* '(they) offered me' either surfacing as [məɔ] or [mjɔ]). Likewise, phonological liaison may occur after function words followed by 3rd person direct object pronouns (*se a vires* 'if (you) see her', either surfacing as [sɐɐ] or as [s(ə)jɐ]). The optionality of glide insertion is assumed to bear witness to the post-lexical phonology of preverbal clitics (Luís & Kaiser 2016: 220).

Yet, before the advent of phase 3, preverbal direct object pronouns were phonologically better integrated into the preceding non-verbal sound material. All of their hosts were proclisis triggers (see 10a-b below).

(10)   a.   … *ao Ruy Freire encomendou*   *de palaura, que trabalhaſſe*   *por*
         to=ART Rui Freire order.PRF.IND3.SG of word   COMP work.IPFV.SBJV.3.SG for
         lhe   *tornar com a repoſta, por que importaua*   *muito, &*
         DAT.3.SG return.INF with ART answer for=REL care.IPFV.IND.3.SG much (and)
         que   *lhe*   *faria*   *merce,* **pello**   **segurar**.
         COMP DAT.3.SG do.PRS.COND.3.SG favour, for=ACC.3.M.SG guarantee.INF
         'He issued a word-of-mouth order to Rui Freire to make an effort and return with the answer he was so anxious about, and to do him a favour of keeping it safe' (1614. Diogo do Couto. *Decada ... Cap.VI, col.2; p. 47*) http: // purl.pt/29503

     b.   *hũa petiçam aſſinada per duzentos*   *cidadões, em que todos*
         ART petition undersigned by two-hundred citizen.PL in REL all.M.PL
         pediaõ   *o moſteiro,*   *polo*   **naõ auer**   *neſtas*
         ask.IPFV.IND.3.PL ART monastery for-ACC.3.M.SG NEG be.INF in=DEM.F.PL *partes,* …
         side.PL
         'a petition signed by two hundred citizens, in which they asked for a monastery, because there was none in the surroundings' (1640. *Relaçam verdadeira do milagroso portento*; p. 6) http://purl.pt/16740

What these examples demonstrate is the morphological attachment of direct object pronouns in preverbal position. They are phonologically integrated into the items on their left (as are enclitics). 'Phonologically integrated' stands here for the shifts in the preposition (*por o* turns into *pelo* or *polo*). As for the remaining elements that on occasions interacted with direct object pronouns, importantly, the *não* negator and the *wh*-pronoun *quem* 'who' are among the best documented ones (see 11a-b). Both of them end in the [ẽw̃] nasal diphthong, thereby optionally inducing *o, a, os, as* into taking a nasal onset. In other words, they produced the same effect as the one depicted in (1b), that nowadays is obligatory in verb-3rd person direct object sequences (provided the verb's final segment is a nasal diphthong). Finally, the second member of correlative negative coordinate series (Sánchez López, 2017: 649-650), *não … nem* 'neither … nor', could trigger allomorphy in preverbal direct object clitics as well.

(11)   a. **naõ   no   fazendo**   *defde o dia que lhe   puzerem*
          NEG   ACC.3.M.SG do.PTCP.PRS since ART day REL DAT.3.SG put.FUT.SBJV.3.PL
          a dita pena ...
          ART said punishment
          '… not doing this starting from the day when he will receive this punishment' (1639.
          Regimento dos Juizes das Aldeas, e Julgados do Termo; p. 6) http: // purl.pt/30213

       b. *... possa   seer prouado   pella   nota ond(e) foy*
          can.IMP.3.SG be.INF prove.PST.PTCP by=ART note where be.PRF.IND.3.SG
          sacada   [e] aquella **nõna   mostre   nẽna**
          extract.PST.PTCP and DEM   NEG=ACC.F.3.SG show.IMP.3.SG nor=ACC.F.3.SG
          tena   *en logar u   a   ueya   nenhũa*
          have.IMP.3.SG in place where ACC.F.3.SG see.PRS.SBJV.3.SG either.F.SG
          das partes ...
          of=ART side.PL
          '(If by chance it is lost or any doubt over it arises), it must be proved by a note where it was prepared and this note can neither be publicly exposed nor it can be stored in a place where any of the sides can have a look at it' (13th c. *Foro Real*. Book 1, Ch. 8, 79v; Source: CIPM) http: // cipm.fcsh.unl.pt/

If a serial model of syllabification, inspired by X-bar Theory (Hualde 1991), is adopted for EP, then competing realizations of preverbal 3rd person direct object pronouns following the *não* negative item hinge on how many times Rule (iii) is applied. Therefore, the two variants might be depicted as two different outcomes achieved by means of the sequential application of a set of rules (i), (ii) and (iii) below. Under this proposal, a nucleus projects three constituents: N, N′ and N″. The N″ node corresponds to the syllable level. Onset segments are attached directly to N″, whereas nucleus and coda are attached to N and N′ respectively. N′ represents the rhyme. For example, the syllabic representation of *paz* 'peace' runs as in Figure 1.
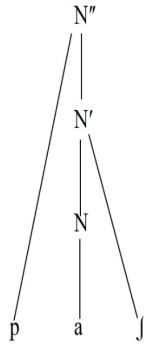
Figure 1. The syllabic representation of *paz*

(13)   The serial model of syllabification of *não o* and *não no*

(i) Identify Nucleus: [- consonantal] segments project a syllable (N, N′ N″).
(ii) Complex Nucleus: attach a postvocalic glide, i.e. to the right of the nucleus under the N′ node, thereby producing a falling diphthong (Freitas 2016: 669-670).
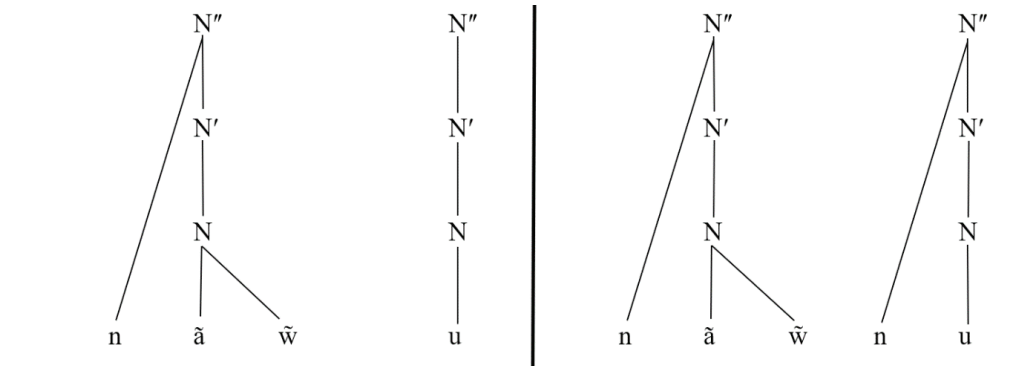(iii) Onset Rule: attach a nasal consonant to the left of the nucleus under the N″ node.

(13a) Rule (i)
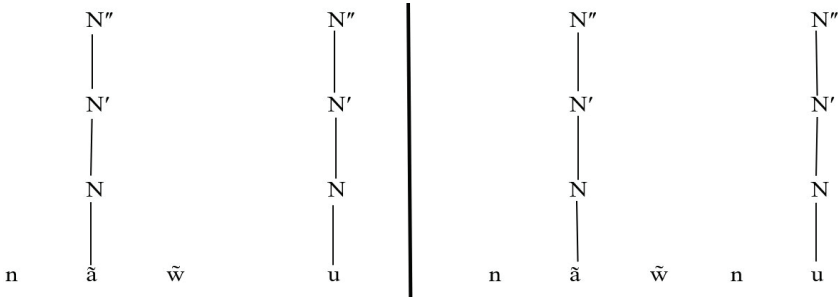
(13b) Rule (ii)
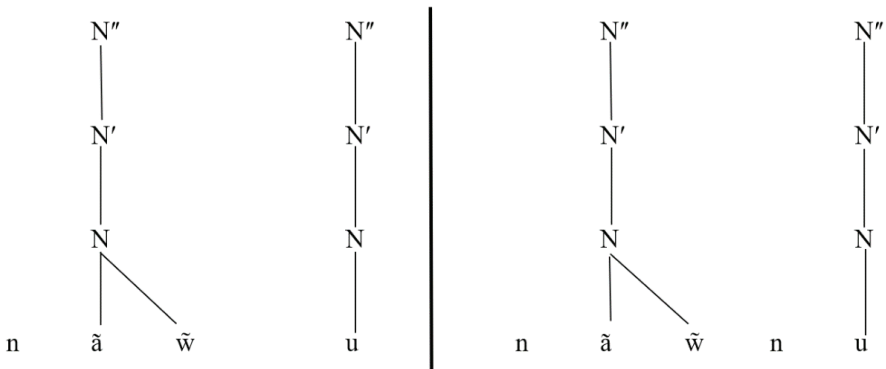
(13c) Rule (iii) applicable once for *não o*, twice for *não no*.

```
        N″              N″      │      N″              N″
        │               │       │      │               │
        N′              N′      │      N′              N′
        │               │       │      │               │
        N               N       │      N               N
       / \              │       │     / \              │
      n   ã   w̃         u       │    n   ã   w̃   n     u
```

Allomorphic variation in preverbal pronouns is recurrent, yet irregular, in phases 1 and 2. As a matter of fact, not after all occurrences of *não*, *nem*, *quem* did pronouns undergo phonological shifts. Thus, it looks as if the decision as to whether or not pronouns should be tied to the preceding lexical material were taken as occurring at speakers' whim.

(14)   a. *... e eſtas   **nem as   hà,   nem as***
        and DEM.F.PL nor ACC.3.F.PL be.PRS.IND.3.SG nor   ACC.3.F.PL
        pòde   haver   ſem   meyos.
        can.PRS.IND.3.SG be.INF without mean.PL
        'There are none of them nor can there be any of them without upkeep' (1735. António Vieira. *Carta CXX. Ao Marquès de Gouvea* (1672); p. 437) https://digital.bbm.usp.br/handle/bbm/4527

    b. *..., ſoccorria   às   necesſidades de **quem o***
        guarantee.IPFV.IND.3.SG to=ART need.PL   of who   ACC.3.M.SG
        auiſauão.
        warn.IPFV.IND.3.PL
        '… he satisfied the needs of those who warned him' (1614. Nicolao Agostinho. *Relaçam summaria da vida do ... Dom Theotonio de Bragãça*. Cap. XIII; pág. 113) http: // purl.pt/11490

Now, reverting to [n]-insertion contexts, complex nasal nucleus preceding empty onset pronouns is a necessary, yet insufficient condition. Indeed, this allomorphic change failed to be induced by some of the proclisis triggers, even if a suitable syllabic configuration arose. Thus, subcategorization restrictions appear to have exerted their influence as well. For example, written records do not mention [n]-insertion subsequent to adverbs and prepositions such as *sem* [sẽj] 'without', *bem* [bẽj] 'well' and *também* [tẽbẽj̃] 'in'. Put otherwise, this means that sentences such as *bem no notei* 'I have well noticed it', *sem no saber* 'without knowing it', are absent, in spite of the fact that *sem*, *bem*, *também* induce pronouns into appearing preverbally (see (15a-b)). This *ad hoc* selection of hosts lends further support to Zwicky & Pullum's remark that morphophonological idiosyncrasies are inherent in affixed words.

(15)   a. ...; *e eu* **tambem o achey**   *nos Athlas*, ...
            and I.NOM also   ACC.3.M.SG find-PRF.IND.1.SG in=ART atlas.PL
            'and I found it as well in the atlases' (1759. Pedro Norberto de Aucourt e Padilha.
            Raridades da natureza ... Ch. XXXV. Plantas viventes; p. 247) http: // purl.pt/13915
        b. *... ſem* **o** *ſaber entrou no apoſento*, ...
            without ACC.3.M.SG know.INF get-in.INF in-DEF.M.SG chamber
            '… he got into the room unawares' (1614. Nicolao Agostinho. *Relaçam summaria da
            vida do ... Senhor Dom Theotonio de Bragãça*. Cap. XIV; p. 124) http: // purl.pt/11490

All in all, rather than being dictated by syntax or phonology, the selection of hosts for preverbal pronouns was an entirely unpredictable matter of lexicon. For want of an internalized, fixed list of allomorphy-inducing lexemes at their disposal, speakers might have been at a loss trying to reconstruct under what form object clitics should actually be inserted after the *não* negative. Therefore, they had to rely either on rote learning or on their intuition. Obviously, these methods produced very unsteady results with various authors coming up with various provisional solutions. This is a plausible explanation of why divergent realizations – *quem o / quem no*, *não o / nãono*, *nem o / nem no* – were so persistent.

In such circumstances, allomorphy-avoidance in preverbal position (which is normative nowadays), might have prompted the systematic interpolation of *não* in 17th through mid-19th centuries. That is how the prominence of *o*, *a*, *os*, *as* in cl-*não*-verb sequences interpreted. All of the remaining pronouns and clitic clusters were less troublesome and did not run the risk of being affected by allomorphic variation. There were no doubts as to the form they should take, regardless of how they were placed with respect to the verb. It comes as no surprise, then, that they had lower frequency in cl-*não*-verb sequences than 3rd person direct objects. The strength of all these factors reached a point where the cl-X-verb model was commonly found, even at the expense of the 'clitic by the verb' principle[3].

In diachronic linguistics, allomorphy-avoidance has been frequently evoked with reference to paradigm-internal organization. Recently, its relevance has been called into question by Da Tos (2013: 64) who suggests that the evolution of inflectional paradigms is not goal-oriented. Yet, the very use of one of the two (or more) freely interchangeable variants (e.g. Fr. 1.SG.PRS.IND *m'assieds* and *m'assois* '(I) take a sit'), means that the other fails to occur. Thus, 'allomorphy-avoidance' may come into effect as a mere by-product of the preference for one of the two possible forms. Usage-based theories of grammar stress the importance of recurring uses of certain variants in producing a new pattern (see, for example, Poplack 2001: 405-406). If some critical number of their occurrences is attained, a durable change may eventually come about. Temporal developments along these lines entail no purposefulness.

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[3]   Yet, in one type of context, even the interpolation of *não* did not automatically obviate preverbal allomorphy. The case involves the preposition *por*. In modern EP, it surfaces as *pelo* (*pela*, *pelos*, *pelas*; the phenomenon is known as 'contraction') if preceding the definite article. In previous stages of EP (the last attestation in our corpus dates back to 1804), contracted forms appeared likewise if *por* was followed by 3rd person direct object pronouns, which are homonymous with the definite article (cf. (10a-b) above).

Therefore, each of the three equivalent sequences discussed thus far (e.g. *que o não viu*, *que não no viu* and *que não o viu*) is associated with the dominance of at least one of the three general constraints organizing EP clitic grammar. Variation stems from the fact that these constraints were unlikely to be satisfied all at once. In pursuit of their communicative goals, speakers privileged one or two of them. The other they would play down or ignore altogether.

Table 3: Characteristics of clitic-verb non-adjacency, standard clitic-verb sequence, and [n]-onset preverbal pronouns with reference to the constraints on clitic placement in Classical and early Modern EP

Realization of preverbal 3rd person direct object pronouns	Dominant principle		
	homogeneous realizations both in preverbal and postverbal position	clitic-verb adjacency	phrasal attachment (excluding allomorphy) in preverbal position
proclisis trigger – *não* – clitic – verb (with clitic allomorphy)	+	+	–
proclisis trigger – *não* – clitic – verb (with no allomorphy)	–	+	+
(proclisis trigger) – clitic – *não* – verb	–	–	+

Concluding remarks: allomorphy-avoidance and inertial grammatical change

The present account invokes the usefulness of certain quantitative shifts in grammar for communicative purposes. In order to circumvent the difficulties posed by a given structure, speakers went on to privilege an alternative one. Yet, being useful must not be equated with being carried out on purpose. Thus, interpolation can be thought of as an intuitive reaction to clitic-specific allomorpy in preverbal position: by inverting the ordering of syllables, speakers got rid of sequences likely to induce allomorphic variation. As for the intuitive character of the preference for the *o não* order, it is corroborated by the purely random distribution of different variants of proclisis (*não o* vs. *não no*). As no rule underlying the choice of one of them over its competitor can be found, the ultimate processing method is presumed to have been intuitive.

Although invoking the usefulness of grammatical restructurings for speakers' communicative aims has a functionalist flavor, the above findings will be used to make the appraisal of one of the minimalist views of the mechanics of grammatical change. G. Longobardi's inertial theory of grammatical change is the framework in question. This theory proves significant for the present considerations because of the concept of Universal Grammar (UG). UG is recurrent in various generative theories of language: if the grammar of a given language is compatible with UG (which must be the case, as other-

wise that language would not exist), then this grammar should be diachronically intact. Therefore, Longobardi's proposal seems to have been worked out as a device aimed at reconciling a fundamental stability of syntax with the evidence for the changes it occasionally undergoes. If syntax is conceived of as the core module of grammar, then the puzzle could be solved by saying that diachronic change originates in other, peripheral modules of grammar, e.g. in morphology, phonology, or in the lexicon.

Longobardi himself (2001: 277-278) formulates his claims by means of three tenets:

(i) 'syntactic change should not arise, unless it can be shown to be caused – that is, to be a well-motivated consequence of other types of change (phonological and semantic changes, including the disappearance of whole lexical items) or, recursively, of other syntactic changes'; (ii) 'linguistic change proper [...] may only originate as an interface phenomenon'; (iii) 'syntax, by itself, is diachronically completely inert'

Without going as far as to assess this theory's overall adequacy (see e.g. Walkden 2012 for very critical remarks), it might be interesting to see whether Longobardi's stance is consonant with the evolution outlined in the preceding sections. The syntactic change characterized in the present paper consists in the disappearance of the morphological attachment of preverbal clitics to their triggers. The change was concomitant to the dominance of the clitic-X-verb model. The latter helped get rid of the morphological ties between the *não* negative item and the ensuing empty onset pronouns. Once the loss had been sufficiently fixed, clitic-X-verb began to recede.

This interpretation lends support to Longobardi's view on the merely secondary status of syntactic change. The latter extended over word order and the segmentation of units making up the sentence. It came about only in response to the shifts that had taken place in another (morphophonological) module of grammar. More precisely, the syllabic structure of the *não*-vowel initial clitic sequences proved difficult to process. Speakers were at a loss, trying to ascertain how many times the Onset Rule should apply. Therefore, the inertial theory of grammatical change is assumed to circumscribe adequately the variation in this aspect of clitic attachment in the history of EP.

Acknowledgements

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